Manufacturer’s Declaration

This statement is provided to comply with the requirements of the German Sound Emission Directive, from 18 January 1991.

This product has a sound pressure emission (at the operator position) < 70 dB(A).

- Sound Pressure Lp < 70 dB(A).
- At Operator Position.
- Normal Operation.

Herstellerbescheinigung


- Schalldruckpegel Lp < 70 dB(A).
- Am Arbeitsplatz.
- Normaler Betrieb.
GENERAL
This product and related documentation must be reviewed for familiarization with safety markings and instructions before operation. This product has been designed and tested in accordance with IEC Publication 1010, “Safety Requirements for Electronic Measuring Apparatus,” and has been supplied in a safe condition. This instruction documentation contains information and warnings which must be followed by the user to ensure safe operation and to maintain the product in a safe condition.

SAFETY EARTH GROUND
A uninterruptible safety earth ground must be provided from the main power source to the product input wiring terminals, power cord, or supplied power cord set.

CHASSIS GROUND TERMINAL
To prevent a potential shock hazard, always connect the rear-panel chassis ground terminal to earth ground when operating this instrument from a dc power source.

SAFETY SYMBOLS
- Indicates instrument damage can occur if indicated operating limits are exceeded.
- Indicates hazardous voltages.
- Indicates earth (ground) terminal

WARNING
A WARNING note denotes a hazard. It calls attention to a procedure, practice, or the like, which, if not correctly performed or adhered to, could result in personal injury. Do not proceed beyond a WARNING sign until the indicated conditions are fully understood and met.

CAUTION
A CAUTION note denotes a hazard. It calls attention to an operation procedure, practice, or the like, which, if not correctly performed or adhered to, could result in damage to or destruction of part or all of the product. Do not proceed beyond an CAUTION note until the indicated conditions are fully understood and met.
Safety Considerations for this Instrument

WARNING

This product is a Safety Class I instrument (provided with a protective earthing ground incorporated in the power cord). The mains plug shall only be inserted in a socket outlet provided with a protective earth contact. Any interruption of the protective conductor inside or outside of the product is likely to make the product dangerous. Intentional interruption is prohibited.

Whenever it is likely that the protection has been impaired, the instrument must be made inoperative and be secured against any unintended operation.

If this instrument is to be energized via an auto transformer (for voltage reduction), make sure the common terminal is connected to the earth terminal of the power source.

If this product is not used as specified, the protection provided by the equipment could be impaired. This product must be used in a normal condition (in which all means for protection are intact) only.

No operator serviceable parts in this product. Refer servicing to qualified personnel. To prevent electrical shock, do not remove covers.

Servicing instructions are for use by qualified personnel only. To avoid electrical shock, do not perform any servicing unless you are qualified to do so.

The opening of covers or removal of parts is likely to expose dangerous voltages. Disconnect the product from all voltage sources while it is being opened.

Adjustments described in the manual are performed with power supplied to the instrument while protective covers are removed. Energy available at many points may, if contacted, result in personal injury.

The power cord is connected to internal capacitors that may remain live for 5 seconds after disconnecting the plug from its power supply.

For continued protection against fire hazard, replace the line fuse(s) only with 250 V fuse(s) or the same current rating and type (for example, normal blow or time delay). Do not use repaired fuses or short circuited fuseholders.
**CAUTION:** Always use the three-prong ac power cord supplied with this product. Failure to ensure adequate earth grounding by not using this cord may cause product damage.

This product is designed for use in Installation Category II and Pollution Degree 2 per IEC 1010 and IEC 664 respectively. **FOR INDOOR USE ONLY.**

This product has autoranging line voltage input, be sure the supply voltage is within the specified range.

To prevent electrical shock, disconnect instrument from mains (line) before cleaning. Use a dry cloth or one slightly dampened with water to clean the external case parts. Do not attempt to clean internally.

Ventilation Requirements: When installing the product in a cabinet, the convection into and out of the product must not be restricted. The ambient temperature (outside the cabinet) must be less than the maximum operating temperature of the product by 4° C for every 100 watts dissipated in the cabinet. If the total power dissipated in the cabinet is greater than 800 watts, then forced convection must be used.

**Product Markings**

CE - the CE mark is a registered trademark of the European Community. A CE mark accompanied by a year indicated the year the design was proven.

CSA - the CSA mark is a registered trademark of the Canadian Standards Association.
Agilent Technologies Warranty Statement for Commercial Products

1. Agilent Technologies warrants Agilent Technologies hardware, accessories and supplies against defects in materials and workmanship for the period specified above. If Agilent Technologies receives notice of such defects during the warranty period, Agilent Technologies will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or like-new.

2. Agilent Technologies warrants that Agilent Technologies software will not fail to execute its programming instructions, for the period specified above, due to defects in material and workmanship when properly installed and used. If Agilent Technologies receives notice of such defects during the warranty period, Agilent Technologies will replace software media which does not execute its programming instructions due to such defects.

3. Agilent Technologies does not warrant that the operation of Agilent Technologies products will be uninterrupted or error free. If Agilent Technologies is unable, within a reasonable time, to repair or replace any product to a condition as warranted, customer will be entitled to a refund of the purchase price upon prompt return of the product.

4. Agilent Technologies products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

5. The warranty period begins on the date of delivery or on the date of installation if installed by Agilent Technologies. If customer schedules or delays Agilent Technologies installation more than 30 days after delivery, warranty begins on the 31st day from delivery.

6. Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by Agilent Technologies, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.

7. TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTIES ARE EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL IS EXPRESSED OR IMPLIED AND AGILENT TECHNOLOGIES SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE.

8. Agilent Technologies will be liable for damage to tangible property per incident up to the greater of $300,000 or the actual amount paid for the product that is the subject of the claim, and for damages for bodily injury or death, to the extent that all such damages are determined by a court of competent jurisdiction to have been directly caused by a defective Agilent Technologies product.
9. TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS
WARRANTY STATEMENT ARE CUSTOMER’S SOLE AND EXCLUSIVE
REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL AGILENT
TECHNOLOGIES OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR
DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST
PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT,
TORT, OR OTHERWISE.

FOR CONSUMER TRANSACTIONS IN AUSTRALIA AND NEW ZEALAND:
THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO
THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE RESTRICT OR
MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY
RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

ASSISTANCE  Product maintenance agreements and other customer assistance agreements are
available for Agilent Technologies products. For any assistance, contact your
nearest Agilent Technologies Sales and Service Office.
## DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN 45014

**Manufacturer’s Name:** Agilent Technologies, Inc.  
**Manufacturer’s Address:** 24001 E. Mission Avenue, Liberty Lake, Washington 99019-9599, USA

declares that the product  
**Product Name:** CDMA Mobile Station Test Set  
**Model Number:** Agilent Technologies E8285A  
**Product Options:** All

conforms to the following Product specifications:

- **Safety:** IEC 61010-1:1990+A1+A2 / EN 61010-1:1993+A2  
- **EMC:** CISPR 11:1990 / EN 55011:1991 - Group 1, Class A  
  - IEC 61000-3-2:1995 / EN 61000-3-2:1995  
  - IEC 61000-3-3:1995 / EN 61000-3-3:1994  
  - EN 50082-1 : 1992  
  - IEC 801-2:1991 - 4kV CD, 8kV AD  
  - IEC 801-3:1984 - 3 V/m  
  - IEC 801-4:1988 - 0.5 kV Signal Lines, 1 kV Power Lines

**Supplementary Information:**  
This product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the CE-marking accordingly.

Spokane, Washington USA  June 16, 1999  
Vince Roland  
Reliability & Regulatory Engineering Manager
The documentation supplied with your test set is an excellent source of reference, applications, and service information. Please use these manuals if you are experiencing technical problems:

- Applications information is included in the Agilent Technologies E8285A CDMA Mobile Station Test Set Application Guide (Agilent P/N E8285-90019).
- Calibration and repair information are in the Agilent Technologies E8285A CDMA Mobile Station Test Set Assembly Level Repair Manual - this manual (Agilent P/N E8285-90033).

If you have used the manuals and still have application questions, contact your local Agilent Technologies Sales Representative.

Repair assistance is available for the Agilent E8285A CDMA Mobile Test Set from the factory by phone and e-mail.

When calling or writing for repair assistance, please have the following information ready:

- Instrument model number (Agilent E8285A)
- Instrument Serial Number (tag located on the rear panel).
- Installed options - if any (tag located on the rear panel).
- Instrument firmware revision (displayed at the top of the screen when the Test Set is powered up, and is also displayed on the CONFIGURE screen).

Support Telephone Numbers:

1 800 827 3848 (Spokane Division Service Assistance, U.S. only)
1 509 921 3848 (Spokane Division Service Assistance, International)
1 800 227 8164 (Agilent Technologies Direct Parts Ordering, U.S. only)
1 916 783 0804 (Agilent Technologies Service Parts Identification, U.S. & Intl.)

Electronic mail (Internet): Spokane_Service@spk.agilent.com
### Table 1 Regional Sales and Service Offices

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<th>Country</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>Agilent Technologies Test and Measurement Call Center</td>
<td>(tel) 1 800 452 4844</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P.O. Box 4026, Englewood, CO 80155-4026</td>
<td></td>
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</tr>
<tr>
<td>Canada</td>
<td>Agilent Technologies Canada Inc. 5130 Spectrum Way</td>
<td>(tel) 1 877 894 4414</td>
<td></td>
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<tr>
<td></td>
<td>Mississauga, Ontario, Canada</td>
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<td></td>
<td>Europe: Agilent Technologies European Marketing Organization</td>
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<tr>
<td></td>
<td>P.O. Box 999, 1180 AZ Amstelveen, The Netherlands</td>
<td>(tel) (3120) 547 9999</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>Agilent Technologies Japan Ltd. Measurement Assistance Center</td>
<td>(tel) (81) 456-56-7832</td>
<td>(fax) (81) 426-56-7840</td>
</tr>
<tr>
<td></td>
<td>9-1 Takakura-Cho, Hachioji-Shi, Tokyo 192-8510, Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latin America</td>
<td>Agilent Technologies Latin America Region Headquarters</td>
<td>(tel) (305) 267 4245</td>
<td>(fax) (305) 267 4286</td>
</tr>
<tr>
<td></td>
<td>5200 Blue Lagoon Drive, Suite 4050, Miami, Florida 33126, U.S.A.</td>
<td></td>
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</tr>
<tr>
<td>Australia/New</td>
<td>Agilent Technologies Australia Pty Ltd.</td>
<td>(tel) 1 800 629 485</td>
<td>(fax) (61 3) 9272 0749</td>
</tr>
<tr>
<td>Zealand</td>
<td>347 Burwood Highway, Forest Hill, Victoria 3131</td>
<td>(tel) 0 800 738 378</td>
<td>(fax) (64 4) 802 6881</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>Agilent Technologies 24F, Cityscape One, 111 Kings Road, Tai Kok Shing, Hong Kong</td>
<td>(tel) (852) 3197 7777</td>
<td>(fax) (852) 2506 9233</td>
</tr>
</tbody>
</table>


All of the following literature, with the exception of the Instrument BASIC User’s Handbook, is shipped with the Agilent Technologies E8285A on a CD-ROM. The Agilent part number of the CD-ROM is E8285-10004.

Unless a delete option is specified, paper versions of the Application Guide and Condensed Programming Reference Guide are also shipped with each Test Set.

If option OBW is ordered, paper versions of the Reference Guide and the User’s Guide will also be included with the Test Set.

Reference Guide (E8285-90016)  
This guide describes the functions performed by each front panel key, front and rear panel connector, and display screen and field. GPIB command examples for each display field are included.

User’s Guide (E8285-90018)  
This guide provides a tutorial-style overview of operating the Test Set, including a section designed to help you get started. Status reporting, IBI BASIC controller information, and error message descriptions are also included.

Application Guide (E8285-90019)  
This guide contains step-by-step procedures and programming examples for calibrating the Test Set, setting up a call, and making measurements on CDMA and AMPS mobile stations. Tips for increasing measurement throughput are also included, as well as a procedure for logging protocol messages.

Condensed Programming Reference Guide (E8285-90020)  
This pocket-sized guide contains a complete listing of GPIB commands, along with a cross-reference between front-panel display fields and the corresponding commands.

Assembly Level Repair (E8285-90033)  
This guide includes procedures for performing periodic adjustments, verifying performance, troubleshooting, and repairing the Test Set. Block diagrams and a list of replaceable parts are also included.

Instrument Basic User’s Handbook (E2083-90000)  
This guide contains a complete listing of IBASIC commands. This guide is not shipped with the Test Set. For ordering information, contact your nearest regional sales office.

Specifications (5968-8839E)  
This document provides a short description of the Agilent E8285A and lists the operating specifications.

This document also includes the specifications for Agilent Technologies 83217A Option 001, 003, and 004 software.

1. Part numbers listed are Agilent Technologies part numbers unless otherwise stated.
Remote/Local Modes

Control Annunciators

The letters and symbols at the top right corner of the display indicate these conditions:

- **R** indicates the Test Set is in remote mode. The Test Set can be put into the remote mode by an external controller or by an IBASIC program running on the built-in IBASIC controller.
- **L** indicates the Test Set has been addressed to Listen.
- **T** indicates the Test Set has been addressed to Talk.
- **S** indicates the Test Set has sent the Require Service message by setting the Service Request (SRQ) bus line true.
- **C** indicates the Test Set is currently the Active Controller on the bus.
- ***** indicates an IBASIC program is running.
- **?** indicates an IBASIC program is waiting for a user response.
- **-** indicates an IBASIC program is paused.

Remote Mode

In Remote mode all front panel keys are disabled (except for the LOCAL key, POWER switch, Volume control and Squelch control). The LOCAL key is only disabled by the Local Lockout bus command. When in Remote mode and addressed to Listen the Test Set responds to the Data, Remote, Local, Clear(SDC), and Trigger messages. When the Test Set is in Remote mode, the “R” annunciator will be displayed in the upper right corner of the display screen and triggering is set to the state it was last set to in Remote mode (if no previous setting the default is FULL SETTling and REPetitive RETRiggering). When the Test Set is being addressed to Listen or Talk the “L” or “T” annunciators will be displayed in the upper right corner of the display screen.

Local Mode

In Local mode the Test Set’s front panel controls are fully operational. The Test Set uses FULL SETTling and REPetitive RETRiggering in Local mode.

Remote or Local Mode

When addressed to Talk in Remote or Local mode, the Test Set can issue the Data and Status Byte messages and responds to the Take Control message. In addition the Test Set can issue the Service Request Message (SRQ). Regardless of whether it is addressed to talk or listen, the Test Set will respond to the Clear(DCL), Local Lockout, Clear Lockout/Set Local, and Abort messages.
Local To Remote Transitions

The Test Set switches from Local to Remote mode upon receipt of the Remote message (REN bus line true and Test Set is addressed to listen). No instrument settings are changed by the transition from Local to Remote mode, but triggering is set to the state it was last set to in Remote mode (if no previous setting the default is FULL SETTling and REPetitive RETRiggering). The “R” annunciator in the upper right corner of the display is turned on.

When the Test Set makes a transition from local to remote mode all currently active measurements are flagged as invalid causing any currently available measurement results to become unavailable. If the GPIB trigger mode is RETR:REP then a new measurement cycle is started and measurement results will be available for all active measurements when valid results have been obtained. If the GPIB trigger mode is RETR:SING then a measurement cycle must be started by issuing a trigger event.

Refer to “Triggering Analog Measurements in Remote Mode (GPIB Operation)” or “Triggering CDMA Measurements in Remote Mode (GPIB Operation)” in the Measurement Triggering Process chapter of the Test Set’s User’s Guide.

Remote To Local Transitions

The Test Set switches from Remote to Local operation (full front panel control) upon receipt of the Local message (Go To Local (GTL) bus message and Test Set is addressed to listen) or the Clear Lockout/Set Local message (REN bus line false). No instrument settings are changed by the transition from Remote to Local mode, but triggering is reset to FULL SETTling and REPetitive RETRiggering. The “R” annunciator in the upper right corner of the display is turned off.

If it is not in Local Lockout mode the Test Set switches from Remote to Local mode whenever the front-panel LOCAL key is pressed.

If the Test Set was in Local Lockout mode when the Local message was received, front-panel control is returned, but Local Lockout mode is not cleared. Unless the Test Set receives the Clear Lockout/Set Local message, the Test Set will still be in Local Lockout mode the next time it goes to the Remote mode.
Local Lockout

The Local Lockout mode disables the front-panel LOCAL key and allows return to Local mode only by commands from the System Controller (Clear Lockout/Set Local message).

When a data transmission to the Test Set is interrupted, which can happen if the LOCAL key is pressed, the data being transmitted may be lost. This can leave the Test Set in an unknown state. The Local Lockout mode prevents loss of data or system control due to someone unintentionally pressing front-panel keys.

**NOTE:**

Return to Local mode can also be accomplished by setting the POWER switch to OFF and back to ON. However, returning to Local mode in this way has the following disadvantages:

1. It defeats the purpose of the Local Lockout mode in that the Active Controller will loose control of the Test Set.
2. Instrument configuration is reset to the power up condition thereby losing the instrument configuration set by the Active Controller.

Clear Lockout/Set Local

The Test Set returns to Local mode (full front panel control) when it receives the Clear Lockout/Set Local message. No instrument settings are changed by the transition from Remote mode with Local Lockout to Local mode but triggering is reset to FULL SETTling and REPetitive RETRiggering.
Clear Lockout/Set Local
GPIB Command Syntax

Instrument Command Syntax Listings
"Adjacent Channel Power" on page 23.
"AF Analyzer" on page 25.
"AF Generator 1" on page 31.
"AF Generator 2 Pre-Modulation Filters" on page 41.
"AFGenerator2|Encoder" on page 33.
"CALL Process" on page 43.
"CDMA" on page 83.
"CELL" on page 111.
"CSPectrum" on page 125.
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"Oscilloscope" on page 157.
"RF Analyzer" on page 165.
"RF Generator" on page 169.
"Spectrum Analyzer" on page 173.

Instrument Number Setting Command Syntax Listings
"Integer Number Setting Syntax" on page 197.
"Real Number Setting Syntax" on page 199.
"Multiple Real Number Setting Syntax" on page 201.

Measurement Command Syntax Listings
"Measure" on page 139.
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Measurement Number Setting Command Syntax Listings
"Number Measurement Syntax" on page 203.
"Multiple Number Measurement Syntax" on page 205.

Instrument Function Command Syntax Listings
"Configure" on page 113.
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"Program" on page 163.
"Save/Recall Registers" on page 177.
"Status" on page 181.
"System" on page 189.
"Tests" on page 191.

GPIB Only Command Syntax Listings
"Special (GPIB Only Command)" on page 179.
Command Listing Conventions

Command listings are used to define the Test Set's GPIB commands. The listing shows the commands, their hierarchical relationships, related parameters (if any), and associated notes (if any).

The Test Set’s commands are based upon a hierarchical structure, also known as a tree system. In such a system, associated commands are grouped together under a common node in the hierarchy, analogous to the way leaves at a same level are connected at a common branch. This and similar branches are connected to fewer and thicker branches, until they meet at the root of the tree. The closer to the root, the higher a node is considered in the hierarchy.

The command listing is divided into columns, as indicated by light gray vertical lines. The root node is the leftmost column. Lower nodes in the hierarchy are indented one position to the right, below the root node. To obtain a particular command, the full path to it must be specified. For example: to set the low side of the audio input on the Audio Analyzer to float you would generate the following command:

```
:AFANalyzer:AIN 'Float'
```

Square brackets ([ ]) are used to enclose a keyword that is optional when programming the command; that is, the Test Set will process the command to have the same effect whether the option keyword is omitted by the programmer or not.

Letter case (uppercase or lowercase) in listings is used to differentiate between the accepted short form (the uppercase characters) and the long form (the whole keyword). The Test Set accepts only the exact short and the exact long forms. Sending a keyword that is not the exact short form or the exact long form will generate an error.

In the parameter section of the listing a number of characters have special significance. Square brackets ([ ]) are used to enclose one or more parameters that are optional when controlling the Test Set. Braces ({ }), or curly brackets, are used to enclose one or more parameters that may be included zero or more times. The vertical bar (|) can be read as “or” and is used to separate alternative parameter options.
The query form of a command is generated by appending a question mark to the last keyword. However, not all commands have a query form, and some commands exist only in the query form. The listings include, where applicable, the command form and the query form of each command.

**CAUTION:** When changing a field’s setting, a space must always precede the setting value in the command string, regardless of the field type. For example:

```
:RFDC:FRQ"space">500MHZ
:EFG1:ATT"SPACE">'On'
```

Improper punctuation will result in the following error:

**HP-IB Error: -102 Syntax Error.**
Adjacent Channel Power

:ACPower

:CBW|CBAnWidth (See “Real Number Setting Syntax” on page 199, :STAt not included)

This command sets the bandwidth of the carrier and adjacent channels to be measured in adjacent channel power measurements. The channel BW field is found on the adjacent channel power screen.

:COFF|COFFset (See “Real Number Setting Syntax” on page 199, :STAt not included)

This command sets the frequency difference between the Tune freq or RF channel field settings and the center of the adjacent channel to be measured in adjacent channel power measurements. The COFF set field is found on the adjacent channel power screen.

:MEASurement 'Ratio'

'Level'

:MEASurement? (Returns quoted string)

These commands set/query the format for displaying adjacent channel power measurements. The ACP MEAS field is found on the adjacent channel power screen.

:RBW|RBAnWidth '300 Hz'

'1 kHz'

:RBW|RBAnWidth? (Returns quoted string)

These commands set/query the resolution bandwidth for adjacent channel power measurements. The RBW field is found on the adjacent channel power screen.

:RMOD|RMODulation 'Unmod'

'Mod'

:RMODulation? (Returns quoted string)

These commands set/query the carrier reference setting, indicating whether the carrier being measured during adjacent channel power reference measurements will be unmodulated or modulated. The carrier REF field is found on the adjacent channel power screen.
Adjacent Channel Power
AF Analyzer

:S:A:IN 'Gnd'
  'Float'
  '600 to Hi'
:S:AIN? (Returns quoted string)
  These commands set/query the input state of the AUDIO IN (LO) connector. The AUDIO IN LO field is found on the AF Analyzer screen.

:i:Z:ERO
  This command zeroes the DC CURRENT measurement. The DC CURRENT field is found on the AF Analyzer screen.

:DEMphasis '750 ms'
  'Off'
:DEMphasis? (Returns quoted string)
  These commands set/query the state of DE-EMPHASIS NETWORKS in the AUDIO ANALYZER and SPEAKER CIRCUITRY. The DE-EMPHASIS field is found on the AF Analyzer screen.

:i:G:AIN '0 dB'
  '10 dB'
  '20 dB'
  '30 dB'
:i:GAIN? (Returns quoted string)
  These commands set/query the AF ANALYZER DE-EMPHASIS AMPLIFIER GAIN. The DE-EMPH GAIN field is found on the AF Analyzer screen.
**AF Analyzer**

:AFAN

:DETEctor 'RMS'
   'RMS*SQRT2'
   'PK+/
   'PK+/2'
   'PK+ MAX'
   'PK+ HOLD'
   'PK+ HD'
   'PK+ MAX HD'

:DETEctor? (Returns quoted string)

These commands set/query the type of detector used when measuring and displaying AF signal levels. The Detector field is found on the AF Analyzer screen.

:PKLocation 'Filters'
   'De-Emp'

:PKLocation? (Returns quoted string)

These commands set/query the signal source for the peak detector measurements. The PK Det To field is found on the AF Analyzer screen.

:SETTling 'Fast'
   'Slow'

:SETTling? (Returns quoted string)

These commands set/query the settling time for audio measurements. (Use "Fast" when measuring signals greater than 200 Hz). The SETTling field is found on the AF Analyzer screen.

:ELResistor (See "Real Number Setting Syntax" on page 199, :STATe not included, valid range 1 ohm to 1 megohm)

This command sets the external load resistance for measurements using the Audio In connectors. The Ext Load R field is found on the AF Analyzer screen.
AF Analyzer

:AFAN
:FILT1 '20Hz HPF'
:FILT1 '50Hz HPF'
:FILT1 '300Hz HPF'
:FILT1 'C MESSAGE'
:FILT1? (Returns quoted string)

These commands set/query the audio filter 1 selection. The FILTER 1 field is found on the AF Analyzer screen.

:FILT2 '300Hz LPF'
:FILT2 '3kHz LPF'
:FILT2 '15kHz LPF'
:FILT2 '>99kHz LPF'
:FILT2 '6kHz BPF'
:FILT2? (Returns quoted string)

These commands set/query the audio filter 2 selection. The FILTER 2 field is found on the AF Analyzer screen.

:GTIMe (See "Real Number Setting Syntax" on page 199, :STATe not included, valid range 10 mS to 1 S)

This command sets the gate time (how long the AF counter samples the input signal) for the audio frequency counter. The AF CNT Gate field is found on the AF Analyzer screen.

:INPUT 'FM Demod'
:INPUT 'AM Demod'
:INPUT 'SSB Demod'
:INPUT 'Audio In'
:INPUT 'Ext Mod'
:INPUT 'FM Mod'
:INPUT 'AM Mod'
:INPUT 'Audio Out'
:INPUT? (Returns quoted string)

These commands set/query the input to the audio analyzer. The AF LIN IN field is found on the AF Analyzer screen.
AF Analyzer

:AFAN
:GAIN '0 dB'
    '20 dB'
    '40 dB'
:GAIN? (Returns quoted string)

These commands set/query the input gain setting for the audio analyzer. The input gain field is found on the AF Analyzer screen.

:SMPt 'De-Emp'
    'Filters'
    'Input'
    'Notch'
:SMPt? (Returns quoted string)

These commands set/query the signal source for the oscilloscope. The scope To field is found on the AF Analyzer screen.

:NOTCh
:GAIN '0 dB'
    '10 dB'
    '20 dB'
    '30 dB'
    '40 dB'
:GAIN? (Returns quoted string)

These commands set/query the gain of the AF Analyzer's notch filter amplifier (used for making SINAD measurements). The notch gain field is found on the AF Analyzer screen.

:FREQuency (See "Real Number Setting Syntax" on page 199, :STATe not included, valid range 300 Hz to 10 kHz)

This command sets the center frequency for the variable frequency notch filter. The notch Freq field is found on the AF Analyzer screen.

:RANGing 'Auto'
    'Hold'
:RANGing? (Returns quoted string)

These commands set/query the gain control mode of the AF Analyzer's notch filter amplifier (used for making SINAD measurements). The notch gain field is found on the AF Analyzer screen.
These commands set/query the gain control mode of the AF Analyzer. The notch filter amplifier (used for making THD measurements), the notch gain field is found on the AF Analyzer screen.

These commands set/query the speaker volume, which is controlled by the volume knob when "Pot" is selected. The speaker vol field is found on the AF Analyzer screen.
AF Generator 1

:AFGENERATOR1|AFG1

:AM (See "Real Number Setting Syntax" on page 199)
:DESTination 'AM'
    'FM'
    'Audio Out'
:DESTination? (Returns quoted string)

:FM (See "Real Number Setting Syntax" on page 199)

:FREQuency (See "Real Number Setting Syntax" on page 199, :STATe not included)

:OUTPut (See "Real Number Setting Syntax" on page 199)
AF Generator 1
AFGenerator2|Encoder

:AFGENERATOR2|AFG2|ENCoder

:AM (See "Real Number Setting Syntax" on page 199)

:DESTination 'AM'
  'FM'
  'Audio Out'
:DESTination? (Returns quoted string)

:FM (See "Real Number Setting Syntax" on page 199)

:FREQuency (See "Real Number Setting Syntax" on page 199, :STATe not included)

:OUTPut (See "Real Number Setting Syntax" on page 199)

:MODE (See "Integer Number Setting Syntax" on page 197)

:MODE 'Func Gen'
  'DTMF'
  'AMPS-NTACS'
  'NAMP-NTAC'
:MODE? (Returns quoted string)
AFGenerator2|Encoder

:AFG2

P/EMphasis 'On'

P/EMphasis? (Returns quoted string)

P/OLarity 'Norm'

P/OLarity? (Returns quoted string)

SEND

IME/DX 'Single'

IME/DX? (Returns quoted string)

STOP
:AFG2
:AMS|TACS
:BUSY 'Idle'
  'Busy'
  'WS Delay'
  '1stBitDly'
:BUSY? (Returns quoted string)
:DELay (See "Integer Number Setting Syntax" on page 197, valid range: 0 - 254)
:CHANnel 'Cnt1'
  'Voice'
:CHANnel? (Returns quoted string)
:DTTest 'Mobile'
  'Cell'
:DTTest? (Returns quoted string)
:DATA
:AM (See "Real Number Setting Syntax" on page 199)
:FM (See "Real Number Setting Syntax" on page 199)
:LEVel (See "Real Number Setting Syntax" on page 199)
:RATE (See "Real Number Setting Syntax" on page 199, :STATe not included)
:FILLer
:DATA1 '<character_data>' (7 chars required, valid chars: 0123456789ABCDEF)
:DATA1? (Returns quoted string)
:DATA2 '<character_data>' (7 chars required, valid chars: 0123456789ABCDEF)
:DATA2? (Returns quoted string)
:SEND
:STOP
AFGenerator2 Encoder

:AMPS|TACS

:FVCMessage "<character_data>" (7 chars required, valid chars: 0123456789ABCDEF)

:FVCMessage? (Returns quoted string)

:MESSAGE

:DATA1 "<character_data>" (112 chars max in 7 char increments) (valid chars: 0123456789ABCDEF)

:DATA1? (Returns quoted string)

:DATA2 "<character_data>" (112 chars max in 7 char increments) (valid chars: 0123456789ABCDEF)

:DATA2? (Returns quoted string)

:STAT

:AN (See "Real Number Setting Syntax" on page 199)

:FM (See "Real Number Setting Syntax" on page 199)

:FREQuency (See "Real Number Setting Syntax" on page 199, :STATe not included)

:LEVel (See "Real Number Setting Syntax" on page 199)

:STANdard 'AMPS'

:STANdard 'TACS'

:STANdard 'JTACS'

:STANdard? (Returns quoted string)
AFGenerator2|Encoder

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S:\agilent\e8285\QK_REF\BOOK\SECTIONS\afg2.sec

:AFG2

::TIME

::FREQuency

::CDLumn

::ROW

::OFFTime

::ONTime

::SEQuence '<character_data>' (1 6 char max, 1 char min. Valid characters: 0123456789ABCD *#)

::SEQuence? (Returns quoted string)

::STANdard 'Bell'

::STANdard? (Returns quoted string)

::TWIst

::TWIst? (See "Real Number Setting Syntax" on page 199, :STATe and :INCRement not included)

::TWIst

::TWIst? (See "Real Number Setting Syntax" on page 199, :STATe not included)
AFGenerator2|Encoder

:AFG2
:VGENerator

::WAVEform 'Sine'
  'Square',
  'Triangle'
  'Ramp[+]'
  'Ramp[-]'
  'DC[+]'
  'DC[-]'
  'Uni Noise'
  'Gau Noise'

::WAVEform? (Returns quoted string)

::SUNits 'RMS'
  'Peak'

::SUNits? (Returns quoted string)
"AFG2"

:NAME:|NTACs

:BUSY 'Idle'
    'Busy'
    'WS Delay'
    1stBitDly

:BUSY? (Returns quoted string)

:DELay (See "Integer Number Setting Syntax" on page 197,
    valid range: 0-254)

:CHANnel 'Cntl'
    'Voice'

:CHANnel? (Returns quoted string)

:IDAT

:MESSage '<character_data>' (6 chars maximum)

:MESSage? (Returns quoted string)

:SEND

:STOP

{FDC} (See "Real Number Setting Syntax" on page 199)

:AM (See "Real Number Setting Syntax" on page 199)

:FILLer

:DATA1 '<character_data>' (7 chars required, valid chars: 0123456789ABCDEF)

:DATA1? (Returns quoted string)

:DATA2 '<character_data>' (7 chars required, valid chars: 0123456789ABCDEF)

:DATA2? (Returns quoted string)

:SEND

:STOP

{FM} (See "Real Number Setting Syntax" on page 199)

:LEVEL (See "Real Number Setting Syntax" on page 199)

:MESSage

:DATA1 '<character_data>' (112 chars max in 7 char increments)
    (valid chars: 0123456789ABCDEF)

:DATA1? (Returns quoted string)

:DATA2 '<character_data>' (112 chars max in 7 char increments)
    (valid chars: 0123456789ABCDEF)

:DATA2? (Returns quoted string)

:RATE (See "Real Number Setting Syntax" on page 199, :STATe not included)
AFGenerator2|Encoder
:AFG2
:NAMPS|NTACS
:FVC
:AM (See "Real Number Setting Syntax" on page 199)
:FM (See "Real Number Setting Syntax" on page 199)
:LEVEL (See "Real Number Setting Syntax" on page 199)
:MESSAGE "<character_data>" (7 chars required, valid chars: 0123456789ABCDEF)
:MESSAGE? (Returns quoted string)
:RATE (See "Real Number Setting Syntax" on page 199, :STATe not included)
:SEND 'Message'
:'DST'
:SEND? (Returns quoted string)
:STANdard 'NAMPS'
:'NTACS'
:STANdard? (Returns quoted string)
To improve performance, one of four pre-modulation filters is automatically selected for each Encoder Mode. The automatically selected filter can only be changed using GPIB commands; however, we recommend you do not change this setting. In order to change the automatically selected filter, the Filter Mode must be set to ON. Filter Mode ON allows independent selection of filters. The Filter Mode ON command must be executed first to override default settings. Filter Mode OFF is the power up default state. The following error will occur if the user attempts to select an alternate filter without first setting the Filter Mode to ON:

**Entry not accepted.** Auto entries take precedence. The syntax to change or query the premodulation filter is shown below.

AFG2:FILTER:MODE 'ON|OFF'(select one)
AFG2:FILTER:MODE?(query the current mode setting)
AFG2:FILTER 'NONE|20kHz LPF|250Hz LPF|150Hz LPF'(select one)
AFG2:FILTER?(query the current filter setting)

:AFGENERATOR2|AFG2|ENCoder

:FILTer 'NONE'
   '20kHz LPF'
   '250Hz LPF'
   '150Hz LPF'
:FILTer? (Returns quoted string)

:MODE 'On'
   'Off'
:MODE? (Returns quoted string)
AF Generator 2 Pre-Modulation Filters
CALL Process

The following commands control the analog call-processing functions featured in the Test Set. Handoffs from the CDMA call-processing subsystem to the analog call-processing subsystem are performed using the commands listed under the keywords "CDMA CALL:AHAN".

\texttt{:CPRocess CALLP}

\texttt{MODE 'MEAS' 'DATA'}

\texttt{MODE? (Returns quoted string)}

These commands set/query the type of information displayed on the CALL CONTROL screen when an analog call (except System Type NAMP) is connected. This command can be sent during any call-processing state. The display field is found on the \texttt{CALL CONTROL} screen. See \texttt{"CPR:NAMP:NCHMRO"} for NAMP calls.

\texttt{:ACTIVE}

This command activates the analog call-processing forward control channel. When the forward control channel is activated the \texttt{ACTIVE} annunciator found on the \texttt{CALL CONTROL} screen becomes lit. If a call is in any other call-processing state, issuing this command will force a return to the active state. The active field is found on the \texttt{CALL CONTROL} screen.

\texttt{:REGISTER}

This command initiates a registration attempt by the mobile station. The Test Set must be in the active state (\texttt{ACTIVE} annunciator on the \texttt{CALL CONTROL} screen lit) before attempting registration. The Register field is found on the \texttt{CALL CONTROL} screen.

\texttt{:PAGE}

This command initiates a page to the mobile station. The Test Set must be in the active state (\texttt{ACTIVE} annunciator on the \texttt{CALL CONTROL} screen lit) and the MS ID fields (\texttt{PHONE Num/MIN}) must have correct values entered for a page attempt to be successful. \texttt{PHONE Num/MIN} values can be entered via registering the phone (see \texttt{CPR:REGISTER command}). The Page field is found on the \texttt{CALL CONTROL} screen.
CALL Process

:CPR
:HAND-off

This command initiates a handoff to another voice channel. The commands to set the new voice channel, power level, and SAT are "CPR:VCH" | "CPR:VMAC" | "CPR:SAT" respectively. The test set must be in the connected state (Connect annunciator on the CALL CONTROL screen lit) for a handoff attempt to be successful. The handoff field is found on the CALL CONTROL screen.

:RELEASE

This command terminates an active voice channel connection with the mobile station. The test set must be in the connected state (Connect annunciator on the CALL CONTROL screen lit) for a release attempt to be successful. The release field is found on the CALL CONTROL screen.

:TIMOUT <string>, <integer value>

This command selects the timeout period used during pages and/or registrations. The string values allowed are "REGISTER" "PAGE" or "ALL" (both REGISTER and PAGE).
For example, "CPR:TIMOUT ALL,30" sets both the register and page timeouts to 30 seconds. The integer value must be in the range of 20 to 900 seconds. The default timeout value for both registrations and pages is 20 seconds.

:TIMOUT? <string> returns integer value

This command queries the timeout period ("REGISTER" for Telco, or "PAGE" for Trunk). For example, "CPR:TIMOUT? PAGE" returns the integer value of the page timeout.

:SPECifier 'STD'

'BITS'

:SPECifier? (Returns quoted string)

These commands determine how signaling messages are built. The contents can come from industry standards (STD) or bit patterns (BITS) set on the CALL BIT screen. The data spec field is located on the CALL BIT screen.

:CHANNEL (See "Integer Number Setting Syntax" on page 197, valid range: 1-1023)

This command sets the control channel number. The chnl chan field is found on the CALL CONTROL screen.

:SYSTEM 'AMPS'

'TACS'

'JTACS'

'NAMPS'

'NTACS'

:SYSTEM? (Returns quoted string)

These commands set/query the type of cellular system in use. If a call is connected and the system type is set, the call processing state will be forced into the active state. (Call will drop). The system type field is located on the CALL CONTROL screen.
CALL Process

:CALL Process

:CPS?NMODe (See "Integer Number Setting Syntax" on page 197, valid range: 1-1023)

This command sets the voice channel number that the mobile station will be assigned to during the next call setup or handoff. See "CPR:MIN" for performing a handoff. It is not required that the test set be in any particular call processing state when this command is sent, and this command will not cause a change to the current call processing state. The CID field is found on the CALL CONTROL screen.

:CALL Process

:CALL Process

:CPS?SIdentify (See "Integer Number Setting Syntax" on page 197, valid range: 1-4094)

This command sets the (base station) system identification number. It is not required that the test set be in any particular call processing state when this command is sent, and this command will not cause a change to the current call processing state. The SID field is found on the CALL CONTROL screen.

:CALL Process

:CALL Process

:CPS?MIN? (Returns quoted string)

This command sets the output power from the test set's RF generator. The MIN? command is found on the CALL CONTROL screen.

:CALL Process

:CALL Process

:CPS?PNUM? (Returns quoted string)

This command sets the channel number that the mobile station will be assigned to during the next call setup or handoff. It is not required that the test set be in any particular call processing state when this command is sent, and this command will not cause a change to the current call processing state. The CID field is found on the CALL CONTROL screen.

:CALL Process

:CALL Process

:CPS?SWORd (See "Real Number Setting Syntax" on page 199, valid range: 1-4094)

This command sets the output power from the test set's RF generator. The MIN? command is found on the CALL CONTROL screen.

:CALL Process

:CALL Process

:CPS?PHONE NUM' 'MIN2 MIN1'

This command sets the output power from the test set's RF generator. The MIN? command is found on the CALL CONTROL screen.

:CALL Process

:CALL Process

:CPS?NMODe? (Returns quoted string)

This command sets/query the MS ID (mobile station identification) subfield currently displayed. Sending this command is not necessary to enter MS ID values. The "CPR:MIN" command sets the phone num field, and the "CPR:NMODe" command sets the MIN2 MIN1 field. These fields are coupled to allow MIN to be entered via phone number and vice versa. The MS ID field is found on the CALL CONTROL screen.

:CALL Process

:CALL Process

:CPS?NUMber 'character_data' (10 chars max, valid chars: 0123456789)

:CALL Process

:CALL Process

:CPS?NUMber? (Returns quoted string)

This command sets/query the MS ID (mobile station identification) subfield contents using either the phone number or MIN (mobile identification) format. These fields are coupled to allow MIN to be entered via phone number and vice versa. The "CPR:NMODe" command selects which format (phone number or MIN) the test set is currently displayed. The MS ID field is found on the CALL CONTROL screen.

Note: Registering the phone will retrieve these values from the phone and automatically enter/overwrite contents of each MS ID subfield.

:CALL Process

:CALL Process

:CPS?SWORd (See "Real Number Setting Syntax" on page 199, valid range: +18 to -137 dBm)

This command sets the output power from the test set's RF generator. The MIN? command is found on the CALL CONTROL screen.

:CALL Process

:CALL Process

:CPS?VCHannel (See "Integer Number Setting Syntax" on page 197, valid range: 1-1023)

This command sets the voice channel number that the mobile station will be assigned to during the next call setup or handoff. See "CPR:MIN" for performing a handoff. It is not required that the test set be in any particular call processing state when this command is sent, and this command will not cause a change to the current call processing state. The CID field is found on the CALL CONTROL screen.

:CALL Process

:CALL Process

:CPS?SIDentify (See "Integer Number Setting Syntax" on page 197, valid range: 1-4094)

This command sets the (base station) system identification number. It is not required that the test set be in any particular call processing state when this command is sent, and this command will not cause a change to the current call processing state. The SID field is found on the CALL CONTROL screen.
CALL Process

:CPR
:CPRStten '0 dB'
'5 dB'
'10 dB'
'15 dB'
'20 dB'
'25 dB'
'30 dB'
'35 dB'
:CPRStten? (Returns quoted string)

These commands set/query the input attenuation for the RF In/Out and antenna in signal paths when using the analog call processing subsystem. The Input Att field is found on the CALL CONFIGURE screen.

:STOLerance 'Narrow'
'Wide'
:STOLerance? (Returns quoted string)

These commands set/query the SAT tolerance. This setting should be "Wide" if the mobile station's audio is not muted during a call. The SAT Tol field is found on the CALL CONFIGURE screen. See "CPR:SAT" for setting the SAT frequency.

:CMAXimum (See "Integer Number Setting Syntax" on page 197, valid range: 1-4094)

This command sends the (signalize) word entered in the Set Message field. The Set Message field and the Send Word field are found on the CALL BIT screen.

:SMTPCode '5970Hz'
'6000Hz'
'6030Hz'
:SMTPCode? (Returns quoted string)

These commands set/query the SAT (supervisory audio tone) to be used during the next call setup or handoff. See "CPR:HAND" for performing a handoff. The SAT field is found on the CALL CONTROL screen.

:VMACode (See "Integer Number Setting Syntax" on page 197, valid range: 0-7)

This command sets/queries the VMAC (voice mobile attenuation code) to be used during the next call setup or handoff. See "CPR:HAND" for performing a handoff. Integer value is entered in the Pwr Lvl field. The Test Set signals the mobile station to adjust its power level to a value corresponding to VMAC when a call is established or a handoff occurs. It is not required that the Test Set be in any particular call processing state when this command is sent, and this command will not cause a change to the current call processing state. The Pwr Lvl field is found on the CALL CONTROL screen.
CALL Process

:ORDER "Chng PL 0"
  "Chng PL 1"
  "Chng PL 2"
  "Chng PL 3"
  "Chng PL 4"
  "Chng PL 5"
  "Chng PL 6"
  "Chng PL 7"
  "Mainten"
  "Alert"

This command sends an ORDER type mobile station control message on the forward voice channel. A call must be connected (Connect Annunciator lit) in order to send this message. The "Chng PL N" strings will cause the mobile station to change power levels. The "Mainten" string puts the mobile station in maintenance mode. The "Alert" string alerts the mobile station. The ORDER field is found on the CALL DATA screen if the AUTH field on the AUTHENTICATION screen is set to "On".

:ORDER? (Returns quoted string)

These commands select/query a forward control channel or forward voice channel message to be modified. The SET MESSAGEFIELD is found on the CALL BIT screen.

:MESSAGE 'SPC WORD1'
  'SPC WORD2'
  'ACCESS'
  'REG INC'
  'REG ID'
  'C-FILMESS'
  'ME Word 1'
  'MDMWord'
  'ME IntvlCh'
  'FVC O Mes'
  'FVC V Mes'

:MESSAGE? (Returns quoted string)
CALL Process

:CFR  "RECCW A"
    "RECCW B"
    "RECCW C"
    "RECCW D"
    "RECCW E"
    "RVCORDCON"
    "BSCHALORD"
    "AUTHWORD"
    "UNIQCHCON"
    "RVCORD"
    "RVCBSCHAL"
    "NRVCO RD"
    "MRI ORD"
:DATA? (Returns quoted string)

These commands select/query the reverse control channel or reverse voice channel message to be viewed on the CALL DATA screen. The Display Word field is found on the CALL DATA screen.

:RCDDATA1?|RCDD1? (Returns quoted string)
:RCDDATA2?|RCDD2? (Returns quoted string)
:RCDDATA3?|RCDD3? (Returns quoted string)
:RCDDATA4?|RCDD4? (Returns quoted string)
:RCDDATA5?|RCDD5? (Returns quoted string)
:RCDDATA6?|RCDD6? (Returns quoted string)

These commands query the information displayed on the right-hand portion of the CALL CONTROL screen when the Display field is set to "DATA" or "NDATA". Each command corresponds to a non-labeled data field consisting of 1 line of characters.
CALL Process

:CPR

:AVCNumber? (Returns quoted string)

This command queries the voice channel number for the call currently connected. This command is intended to be sent when a call is connected (the connected annunciator is lit). If a call is not connected, the string "CHAN:-" will be returned. To change the voice channel number, see "CPR:HAND". The channel field is found on the CALL CONTROL screen.

:AVCPower? (Returns quoted string)

This command queries the VMAC (Voice Mobile Attenuation Code) for the call currently connected. This command is intended to be sent when a call is connected (the connected annunciator is lit). If a call is not connected, the string "PWR LVL:-" will be returned. To change VMAC, see "CPR:ORD" or "CPR:HAND". The PWR LVL field is found on the CALL CONTROL screen.

:AVCSat? (Returns quoted string)

This command queries the SAT (Supervisory Audio Tone) frequency for the call currently connected. This command is intended to be sent when a call is connected (the connected annunciator is lit). If a call is not connected, the string "SAT:-" will be returned. To change the voice channel number, see "CPR:HAND". The SAT field is found on the CALL CONTROL screen.
CALL Process

:CPR
:RECA

:FWOrd?|F? (Returns quoted string)
:NAMEComing? (Returns quoted string)
:IField?|F? (Returns quoted string)
:SERial?|S? (Returns quoted string)
:EXTended?|E? (Returns quoted string)
:REServed?|RSVD? (Returns quoted string)
:SCMark? (Returns quoted string)
:MINumber? (Returns quoted string)
:PARity? (Returns quoted string)

These commands query the message fields for RECCW A (Reverse Control Channel Word A - Abbreviated Address Word). The message fields for RECCW A are found on the CALL DATA screen.

:RECB

:FWOrd?|F? (Returns quoted string)
:NAMEComing? (Returns quoted string)
:LOCAL? (Returns quoted string)
:ORDERQualifier? (Returns quoted string)
:ORDER? (Returns quoted string)
:LTHT?|LT? (Returns quoted string)
:REServed?|RSVD? (Returns quoted string)
:MINumber? (Returns quoted string)
:PARity? (Returns quoted string)

These commands query the message fields for RECCW B (Reverse Control Channel Word B - Extended Address Word). The message fields for RECCW B are found on the CALL DATA screen.
CALL Process

:CPB
:RREC

[:FWORD?|F?] (Returns quoted string)
[:NAWoming? (Returns quoted string)]
[:Seral? (Returns quoted string)]
[:PARity? (Returns quoted string)]

These commands query the message fields for RECCM C (REVERSE CONTROL CHANNEL WORD C - SERIAL NUMBER WORD). The message fields for RECCM C are found on the CALL DATA screen.

:RECD

[:FWORD?|F?] (Returns quoted string)
[:NAWoming? (Returns quoted string)]
[:DIGIT1?|PG1? (Returns quoted string)]
[:DIGIT2?|PG2? (Returns quoted string)]
[:DIGIT3?|PG3? (Returns quoted string)]
[:DIGIT4?|PG4? (Returns quoted string)]
[:DIGIT5?|PG5? (Returns quoted string)]
[:DIGIT6?|PG6? (Returns quoted string)]
[:DIGIT7?|PG7? (Returns quoted string)]
[:DIGIT8?|PG8? (Returns quoted string)]

These commands query the message fields for RECCM D (REVERSE CONTROL CHANNEL WORD D - FIRST WORD OF THE CALLED-ADDRESS). The message fields for RECCM C are found on the CALL DATA screen.
CALL Process

:CPR
:PRECE

:FWORD?|F? (Returns quoted string)
:NAMEChing? (Returns quoted string)
:DIGIT97?DIG97 (Returns quoted string)
:DIGIT107?DIG107 (Returns quoted string)
:DIGIT117?DIG117 (Returns quoted string)
:PARity? (Returns quoted string)

:RECOmmand

:FWORD?|F? (Returns quoted string)
:NAMEChing? (Returns quoted string)
:TFIELD?|T7 (Returns quoted string)
:LOCAL? (Returns quoted string)
:RVCQualifie7 (Returns quoted string)
:RVCer? (Returns quoted string)
:REServed7|RSVD? (Returns quoted string)

:PRint? (Returns quoted string)

These commands query the message fields for RECCW E (Reverse Control Channel Word E - Second word of the Called-Address). The message fields for RECCW E are found on the CALL DATA SCREEN.

These commands query the message fields for RVCORDC (Reverse Voice Channel Order Confirmation Message). The message fields for RVCORDC are found on the CALL DATA SCREEN.
CALL Process

:CPR
;SPOMESSAGE1|SPOM1

:TYPE 'T1T2' '<character_data>' (2 chars required, valid chars: 01)
:TYPE? 'T1T2?' (Returns quoted string)

:DCCode 'character_data' (2 chars required, valid chars: 01)
:DCCode? (Returns quoted string)

:SIDentify 'character_data' (14 chars required, valid chars: 01)
:SIDentify? (Returns quoted string)

:REServed|RSVD 'character_data' (3 chars required, valid chars: 01)
:REServed?|RSVD? (Returns quoted string)

:NAWComing 'character_data' (3 chars required, valid chars: 01)
:NAWComing? (Returns quoted string)

:OVERhead 'character_data' (3 chars required, valid chars: 01)
:OVERhead? (Returns quoted string)

:PARity? (Returns quoted string)

These commands set/query the message fields for SPC WORD 1.
(System Parameter Overhead Message Word 1). The message fields for SPC WORD 1 are found on the CALL BIT screen.
CALL Process

:SPOMESSAGE2|SPOM2

:TYPE|T1T2 'character_data' (2 chars required, valid chars: 01)
:TYPE?|T1T2? (Returns quoted string)
:DCCode 'character_data' (2 chars required, valid chars: 01)
:DCCode? (Returns quoted string)
:SERial|S 'character_data' (1 char required, valid chars: 01)
:SERial?|S? (Returns quoted string)
:EXTended|E 'character_data' (1 char required, valid chars: 01)
:EXTended?|E? (Returns quoted string)
:REGHome|REGHome 'character_data' (1 char required, valid chars: 01)
:REGHome?|REGHome? (Returns quoted string)
:REGRoam|REGRoam 'character_data' (1 char required, valid chars: 01)
:REGRoam?|REGRoam? (Returns quoted string)
:DTX 'character_data' (2 chars required, valid chars: 01)
:DTX? (Returns quoted string)
:NPAGe|Nfield 'character_data' (5 chars required, valid chars: 01)
:NPAGe?|Nfield? (Returns quoted string)
:RCFiller 'character_data' (1 char required, valid chars: 01)
:RCFiller? (Returns quoted string)
:CPACcess|CPA 'character_data' (1 char required, valid chars: 01)
:CPACcess?|CPA? (Returns quoted string)
:CMAXimum 'character_data' (7 chars required, valid chars: 01)
:CMAXimum? (Returns quoted string)
:END 'character_data' (1 char required, valid chars: 01)
:END? (Returns quoted string)
:OVERhead 'character_data' (3 chars required, valid chars: 01)
:OVERhead? (Returns quoted string)
:PARity? (Returns quoted string)

These commands set/query the message fields for SPC Mod2 (System Parameter Overhead Message Word 2). The message fields for SPC Mod2 are found in the CALL BIT screen.
CALL Process

:S:ACCcess

<table>
<thead>
<tr>
<th>TYPE</th>
<th>T1T2 '&lt;character_data&gt;' (2 chars required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE?</td>
<td>T1T2? (Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DCCode</th>
<th>'&lt;character_data&gt;' (2 chars required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCCode?</td>
<td>(Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACTION</th>
<th>'&lt;character_data&gt;' (4 chars required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTION?</td>
<td>(Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BISTate</th>
<th>BIS '&lt;character_data&gt;' (1 char required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISTate?</td>
<td>BIS? (Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reserved</th>
<th>RSV '&lt;character_data&gt;' (13 chars required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved?</td>
<td>RSV? (Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>END</th>
<th>'&lt;character_data&gt;' (1 char required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>END?</td>
<td>(Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OVERhead</th>
<th>'&lt;character_data&gt;' (3 chars required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERhead?</td>
<td>(Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PARity?</th>
<th>(Returns quoted string)</th>
</tr>
</thead>
</table>

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR ACCESS (ACCESS TYPE PARAMETERS GLOBAL ACTION MESSAGE). THE MESSAGE FIELDS FOR ACCESS ARE FOUND ON THE CALL BIT SCREEN.

:RINCrement

<table>
<thead>
<tr>
<th>TYPE</th>
<th>T1T2 '&lt;character_data&gt;' (2 chars required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE?</td>
<td>T1T2? (Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DCCode</th>
<th>'&lt;character_data&gt;' (2 chars required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCCode?</td>
<td>(Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACTION</th>
<th>'&lt;character_data&gt;' (4 chars required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTION?</td>
<td>(Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RINCrement</th>
<th>'&lt;character_data&gt;' (12 chars required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RINCrement?</td>
<td>(Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reserved</th>
<th>RSV '&lt;character_data&gt;' (4 chars required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved?</td>
<td>RSV? (Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>END</th>
<th>'&lt;character_data&gt;' (1 char required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>END?</td>
<td>(Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OVERhead</th>
<th>'&lt;character_data&gt;' (3 chars required, valid chars: 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERhead?</td>
<td>(Returns quoted string)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PARity?</th>
<th>(Returns quoted string)</th>
</tr>
</thead>
</table>

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR REG INC (REGISTRATION INCREMENT GLOBAL ACTION MESSAGE). THE MESSAGE FIELDS FOR REG INC ARE FOUND ON THE CALL BIT SCREEN.
CALL Process

:CPR

:RIDentify

:TYPE|T1T2 'character_data' (2 chars required, valid chars: 01)
:TYPE?|T1T2? (Returns quoted string)

:DCCode 'character_data' (2 chars required, valid chars: 01)
:DCCode? (Returns quoted string)

:IDENTify|REGID 'character_data' (20 chars required, valid chars: 01)
:IDENTify?|REGID? (Returns quoted string)

:END 'character_data' (1 char required, valid chars: 01)
:END? (Returns quoted string)

:OVERhead 'character_data' (3 chars required, valid chars: 01)
:OVERhead? (Returns quoted string)

:PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR REG ID
(REGISTRATION ID MESSAGE). THE MESSAGE FIELDS FOR
REG ID ARE FOUND ON THE CALL BIT SCREEN.
CALL Process

:CPB

;CFMessage

;TYPE|T1T2 '<character_data>' (2 chars required, valid chars: 01)
;TYPE?|T1T2? (Returns quoted string)

;DCCode '<character_data>' (2 chars required, valid chars: 01)
;DCCode? (Returns quoted string)

;FIELDS|FIELD2|F1 '<character_data>' (6 chars required, valid chars: 01)
;FIELDS?|FIELD2?|F1? (Returns quoted string)

;CMACode '<character_data>' (3 chars required, valid chars: 01)
;CMACode? (Returns quoted string)

;RESERVED1|RES1|RSVD1 '<character_data>' (2 chars req'd, valid chars: 01)
;RESERVED1?|RES1?|RSVD1? (Returns quoted string)

;FIELDS2|FIELD2|F2 '<character_data>' (2 chars required, valid chars: 01)
;FIELDS2?|FIELD2?|F2? (Returns quoted string)

;RESERVED2|RES2|RSVD2 '<character_data>' (2 chars req'd, valid chars: 01)
;RESERVED2?|RES2?|RSVD2? (Returns quoted string)

;FIELDS3|FIELD3|F3 '<character_data>' (1 char required, valid chars: 01)
;FIELDS3?|FIELD3?|F3? (Returns quoted string)

;WFOMessage '<character_data>' (1 char required, valid chars: 01)
;WFOMessage? (Returns quoted string)

;FIELDS4|FIELD4|F4 '<character_data>' (4 chars required, valid chars: 01)
;FIELDS4?|FIELD4?|F4? (Returns quoted string)

;OVERhead '<character_data>' (3 chars required, valid chars: 01)
;OVERhead? (Returns quoted string)

;PARity? (Returns quoted string)

These commands set/query the message fields for C-FLIMES (CONTROL-FILLER MESSAGE). The message fields for C-FLIMES are found on the CALL BIT screen.
CALL Process

:CFR
:MSWord
  :TYPE? T1T2 'character_data' (2 chars required, valid chars: 01)
  :TYPE? T1T2? (Returns quoted string)
  :DCCode 'character_data' (2 chars required, valid chars: 01)
  :DCCode? (Returns quoted string)
  :MINumber 'character_data' (24 chars required, valid chars: 01)
  :MINumber? (Returns quoted string)
  :PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR MS WORD1 (FCC MOBILE STATION CONTROL MESSAGE WORD 1 - ABBREVIATED ADDRESS WORD). THE MESSAGE FIELDS FOR MS WORD1 ARE FOUND ON THE CALL BIT SCREEN.

:MSOrder
  :TYPE? T1T2 'character_data' (2 chars required, valid chars: 01)
  :TYPE? T1T2? (Returns quoted string)
  :SCCode 'character_data' (2 chars required, valid chars: 01)
  :SCCode? (Returns quoted string)
  :MINumber 'character_data' (10 chars required, valid chars: 01)
  :MINumber? (Returns quoted string)
  :RSVD? Reserved 'character_data' (1 char required, valid chars: 01)
  :RSVD? Reserved? (Returns quoted string)
  :LOCAL 'character_data' (5 chars required, valid chars: 01)
  :LOCAL? (Returns quoted string)
  :ORDER? ORDER 'character_data' (5 chars required, valid chars: 01)
  :ORDER? ORDER? (Returns quoted string)
  :PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR MSMESSAGE (FCC MOBILE STATION CONTROL MESSAGE EXTENDED ADDRESS WORD - ORDER). THE MESSAGE FIELDS FOR MSMESSAGE ARE FOUND ON THE CALL BIT SCREEN.
CALL Process

:MSVoice

:TYPE|T1T2 'character_data' (2 chars required, valid chars: 01)
:TYPE?|T1T2? (Returns quoted string)
:SCCode 'character_data' (2 chars required, valid chars: 01)
:SCCode? (Returns quoted string)
:MINumber 'character_data' (10 chars required, valid chars: 01)
:MINumber? (Returns quoted string)
:VMACode 'character_data' (3 chars required, valid chars: 01)
:VMACode? (Returns quoted string)
:CHANnel 'character_data' (11 chars required, valid chars: 01)
:CHANnel? (Returns quoted string)

:PARity? (Returns quoted string)

These commands set/query the message fields for MSINTVC (FCC Mobile Station Control Message Extended Address Word - Voice Channel Assignment). The message fields for MSINTVC are found on the CALL BIT SCREEN.

:FVOrder

:TYPE|T1T2 'character_data' (2 chars required, valid chars: 01)
:TYPE?|T1T2? (Returns quoted string)
:SCCode 'character_data' (2 chars required, valid chars: 01)
:SCCode? (Returns quoted string)
:PSCCode 'character_data' (2 chars required, valid chars: 01)
:PSCCode? (Returns quoted string)
:RServed|RSVD 'character_data' (9 chars required, valid chars: 01)
:RServed?|RSVD? (Returns quoted string)
:LOCa|LCa 'character_data' (5 chars required, valid chars: 01)
:LOCa?|LCa? (Returns quoted string)
:ORDQualifier 'character_data' (3 chars required, valid chars: 01)
:ORDQualifier? (Returns quoted string)
:ORDer 'character_data' (5 chars required, valid chars: 01)
:ORDer? (Returns quoted string)

:PARity? (Returns quoted string)

These commands set/query the message fields for FVC O MS (FCC Mobile Station Control Order Message). The message fields for FVC O MS are found on the CALL BIT SCREEN.
CALL Process

:FP:
:FPVoice:
:TYPE|T1T2 "character_data" (2 chars required, valid chars: 01)
:TYPE?|T1T2? (Returns quoted string)
:SCCode "character_data" (2 chars required, valid chars: 01)
:SCCode? (Returns quoted string)
:FSCode "character_data" (2 chars required, valid chars: 01)
:FSCode? (Returns quoted string)
:REServed|RSVD "character_data" (8 chars required, valid chars: 01)
:REServed?|RSVD? (Returns quoted string)
:VMACode "character_data" (3 chars required, valid chars: 01)
:VMACode? (Returns quoted string)
:CHANnel "character_data" (11 chars required, valid chars: 01)
:CHANnel? (Returns quoted string)

These commands set/query the message fields for FVC VMES (FCC Mobile Station Control Voice Channel Assignment Message). The message fields for FVC VMES are found on the CALL BIT screen.
CALL Process

:CALL :MDL  "S:\agilent\e8285\QK_REF\BOOK\SECTIONS\callproc.sec"

AKEY '<character_data> (26 chars maximum, valid chars: decimal)' (Returns quoted string)
AKEY
AKEY?

This immediate action command generates a new A_KEY for use in the mobile station. The resultant checksum will be displayed in the last 6 digits of the A_KEY field. The A_KEY field is found on the AUTHENTICATION screen. There is no manual (front panel) operation that generates a new A_KEY in this manner.

:ONOFF 'On'

:ONOFF? (Returns quoted string)

These commands select/query the analog authentication state. The AUTHENT field is found on the AUTHENTICATION screen.

:ESNumber '<character_data> (10 chars maximum, valid chars: hex)' (Returns quoted string)

This command sets/queries the ESN (Electronic Serial Number) of the mobile station. Registering the mobile station retrieves ESN and enters it automatically in the ESN field (see "CPR:REG") to register the mobile station. The ESN field is found on the AUTHENTICATION screen.

:CCORder 'SSD Upsd'

'Unique Ch'

:CCORder? (Returns quoted string)

These commands send/query an order type mobile station control message on the forward controls channel to the mobile station. The string "SSD Upsd" performs a SSD (shared secret data) update. The string "Unique Ch" performs a unique challenge. Authentication must be "On" before using these commands. See "CPR:AMPS:AUTH:ONOFF '<ON/OFF>'" to turn authentication on. The CC Order field is found on the CALL CONTROL screen when the AUTHENT field on the AUTHENTICATION screen is "On" and a call is not connected.
CALL Process

:CR
:AMPS

:VCOrder 'Chng PL 0'
'Chng PL 1'
'Chng PL 2'
'Chng PL 3'
'Chng PL 4'
'Chng PL 5'
'Chng PL 6'
'Chng PL 7'
'Mainten'
'Alert'

:VCOrder? (Returns quoted string)

 THIS COMMAND SENDS / QUERIES A VOICE CHANNEL ORDER TO THE MOBILE STATION.
AUTHENTICATION MUST BE ON AND A CALL CONNECTED (CONNECT ANNUNCIATOR
LIT) FOR THIS COMMAND TO BE SUCCESSFUL. THE VC ORDER FIELD IS
FOUND ON THE CALL CONTROL SCREEN WHEN THE AUTHENTIC FIELD ON THE
AUTHENTICATION SCREEN IS "ON" AND THE MOBILE STATION AND TEST SET ARE ON A VOICE CHANNEL.

TO SEND AN ORDER TYPE MESSAGE WHEN AUTHENTICATION IS OFF, SEE
"CPR:ORD" FOR NON-NAMPS CALLS AND "CPR:NAMP:NORD" FOR NAMPS CALLS.

:SSDA '<character_data> (16 chars: hex)'
SSDA? (Returns quoted string)

 THESE COMMANDS SET/QUERY THE 64 MOST SIGNIFICANT BITS OF SHARED
SECRET DATA, SSDA. THERE IS NO FIELD ON THE TEST SET'S DISPLAY FOR
THIS FUNCTION.

:NEW '<character_data> (16 chars: hex)'
NEW? (Returns quoted string)

 THESE COMMANDS SET/QUERY THE 64 MOST SIGNIFICANT BITS OF NEW
SHARED SECRET DATA, SSDA_NEW. THERE IS NO FIELD ON THE TEST
SET'S DISPLAY FOR THIS FUNCTION.

:SSDB '<character_data> (16 chars: hex)'
SSDB? (Returns quoted string)

 THESE COMMANDS SET/QUERY THE 64 LEAST SIGNIFICANT BITS OF SHARED
SECRET DATA, SSDB. THERE IS NO FIELD ON THE TEST SET'S DISPLAY FOR THIS FUNCTION.

:NEW '<character_data> (16 chars: hex)'
NEW? (Returns quoted string)

 THESE COMMANDS SET/QUERY THE 64 LEAST SIGNIFICANT BITS OF NEW
SHARED SECRET DATA, SSDB_NEW. THERE IS NO FIELD ON THE TEST
SET'S DISPLAY FOR THIS FUNCTION.

:ASCProcedure '<character_data> (31 chars: hex)'
:ASCProcedure
:RESULT? (Returns quoted string)
CALL Process

;A 'character_data' (4 chars required: hex)
;A? (Returns quoted string)
THESE COMMANDS SET/QUERY THE 16 MOST SIGNIFICANT BITS OF RAND,
WHICH IS USED IN THE AUTHENTICATION PROCESS. THE RAND_A FIELD
IS FOUND ON THE AUTHENTICATION SCREEN.

;B 'character_data' (4 chars required: hex)
;B? (Returns quoted string)
THESE COMMANDS SET/QUERY THE 16 LEAST SIGNIFICANT BITS OF RAND,
WHICH IS USED IN THE AUTHENTICATION PROCESS. THE RAND_B FIELD
IS FOUND ON THE AUTHENTICATION SCREEN.

;U 'character_data' (6 chars required: hex)
;U? (Returns quoted string)
THESE COMMANDS SET/QUERY RAND_U, A 24-BIT NUMBER ISSUED BY THE BASE
STATION IN A UNIQUE CHALLENGE ORDER. THE RAND_U FIELD IS FOUND ON THE
AUTHENTICATION SCREEN.

;SSD1 'character_data' (6 chars required: hex)
;SSD1? (Returns quoted string)
THESE COMMANDS SET/QUERY THE 24 MOST SIGNIFICANT BITS OF RANDSSD,
ISSUED BY THE BASE STATION DURING A SSD UPDATE ORDER. THE RANDSSD_1 FIELD
IS FOUND ON THE AUTHENTICATION SCREEN.

;SSD2 'character_data' (6 chars required: hex)
;SSD2? (Returns quoted string)
THESE COMMANDS SET/QUERY THE 24 BITS BETWEEN RANDSSD_1 AND RANDSSD_3.
RANDSSD IS ISSUED BY THE BASE STATION DURING A SSD UPDATE ORDER. THE
RANDSSD_2 FIELD IS FOUND ON THE AUTHENTICATION SCREEN.

;SSD3 'character_data' (2 chars required: hex)
;SSD3? (Returns quoted string)
THESE COMMANDS SET/QUERY THE 24 LEAST SIGNIFICANT BITS OF RANDSSD,
ISSUED BY THE BASE STATION DURING A SSD UPDATE ORDER. THE RANDSSD_3 FIELD
IS FOUND ON THE AUTHENTICATION SCREEN.
CALL Process

:TYPE | T1T2  '<character_data>' (2 chars required: binary)
:TYPE? | T1T2? (Returns quoted string)
:DCCode 'character_data' (2 chars required: binary)
:DCCode? (Returns quoted string)
:ACTION 'character_data' (4 chars required: binary)
:ACTION? (Returns quoted string)
:RANDBA 'character_data' (16 chars required: binary)
:RANDBA? (Returns quoted string)
:SEND 'character_data' [1 char required: binary]
:SEND? (Returns quoted string)
:OVERhead 'character_data' (3 chars required: binary)
:OVERhead? (Returns quoted string)
:PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR RANDCHAL A (RANDOM CHALLENGE A GLOBAL ACTION MESSAGE). THE MESSAGE FIELDS FOR RANDCHAL B ARE FOUND ON THE CALL BIT SCREEN.

:RCB
:TYPE | T1T2  '<character_data>' (2 chars required: binary)
:TYPE? | T1T2? (Returns quoted string)
:DCCode 'character_data' (2 chars required: binary)
:DCCode? (Returns quoted string)
:ACTION 'character_data' (4 chars required: binary)
:ACTION? (Returns quoted string)
:RANDB 'character_data' (16 chars required: binary)
:RANDB? (Returns quoted string)
:SEND 'character_data' [1 char required: binary]
:SEND? (Returns quoted string)
:OVERhead 'character_data' (3 chars required: binary)
:OVERhead? (Returns quoted string)
:PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR RANDCHAL B (RANDOM CHALLENGE B GLOBAL ACTION MESSAGE). THE MESSAGE FIELDS FOR RANDCHAL B ARE FOUND ON THE CALL BIT SCREEN.
CALL Process

:SFR
:

:AMPS

:RSD1
:TYPE | T1T2 'character_data' (2 chars required: binary)
:TYPE? | T1T2? (Returns quoted string)
:SCCode 'character_data' (2 chars required: binary)
:SCCode? (Returns quoted string)
:RANDSSD1 'character_data' (24 chars required: binary)
:RANDSSD1? (Returns quoted string)
:PARity? (Returns quoted string)

These commands set/query the message fields for Rand SSD1 (First SSD Update Order Word). The message fields for Rand SSD1 are found on the CALL BIT screen.

:RSD2
:TYPE | T1T2 'character_data' (2 chars required: binary)
:TYPE? | T1T2? (Returns quoted string)
:SCCode 'character_data' (2 chars required: binary)
:SCCode? (Returns quoted string)
:RANDSSD2 'character_data' (24 chars required: binary)
:RANDSSD2? (Returns quoted string)
:PARity? (Returns quoted string)

These commands set/query the message fields for Rand SSD2 (Second SSD Update Order Word). The message fields for Rand SSD2 are found on the CALL BIT screen.

:RSD3
:TYPE | T1T2 'character_data' (2 chars required: binary)
:TYPE? | T1T2? (Returns quoted string)
:SCCode 'character_data' (2 chars required: binary)
:SCCode? (Returns quoted string)
:RSVD1 'character_data' (2 chars required: binary)
:RSVD1? (Returns quoted string)
:RANDSSD3 'character_data' (12 chars required: binary)
:RANDSSD3? (Returns quoted string)
:RSVD2 'character_data' (4 chars required: binary)
:RSVD2? (Returns quoted string)
:PARity? (Returns quoted string)

These commands set/query the message fields for Rand SSD3 (Third SSD Update Order Word). The message fields for Rand SSD3 are found on the CALL BIT screen.
CALL Process

TYPE | T1T2  '<character_data>' (2 chars required: binary)

TYPE? | T1T2? (Returns quoted string)

SCode  '<character_data>' (2 chars required: binary)

SCCode? (Returns quoted string)

RSVD1  '<character_data>' (2 chars required: binary)

RSVD1? (Returns quoted string)

AUTHBS  '<character_data>' (18 chars required: binary)

AUTHBS? (Returns quoted string)

RSVD2  '<character_data>' (4 chars required: binary)

RSVD2? (Returns quoted string)

PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR BSCHALCON (BASE STATION CHALLENGE ORDER CONFIRMATION WORD). THE MESSAGE FIELDS FOR BSCHALCON ARE FOUND ON THE CALL BIT SCREEN.

UCOrder

TYPE | T1T2  '<character_data>' (2 chars required: binary)

TYPE? | T1T2? (Returns quoted string)

SCode  '<character_data>' (2 chars required: binary)

SCCode? (Returns quoted string)

RANDU  '<character_data>' (24 chars required: binary)

RANDU? (Returns quoted string)

PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR UNIQORD (UNIQUE CHALLENGE ORDER WORD). THE MESSAGE FIELDS FOR UNIQORD ARE FOUND ON THE CALL BIT SCREEN.

FVCSSD1

TYPE | T1T2  '<character_data>' (2 chars required: binary)

TYPE? | T1T2? (Returns quoted string)

RANDSSD1  '<character_data>' (24 chars required: binary)

RANDSSD1? (Returns quoted string)

RSVD  '<character_data>' (2chars required: binary)

RSVD? (Returns quoted string)

PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR FVC SSD1 (FIRST SSD UPDATE ORDER WORD). THE MESSAGE FIELDS FOR FVC SSD1 ARE FOUND ON THE CALL BIT SCREEN.
CALL Process

:TPR
:AMPZ

:"FCCSSD2
  :TPFE | TIT2 'character_data' (2 chars required: binary)
  :TPFE? | TIT2? (Returns quoted string)
:RANDSSD2 'character_data' (24 chars required: binary)
:RANDSSD2? (Returns quoted string)
:RSVD 'character_data' (2 chars required: binary)
:RSVD? (Returns quoted string)
:PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR FVC SSD2 (SECOND SSD UPDATE ORDER NO). THE MESSAGE FIELDS FOR FVC SSD2 ARE FOUND ON THE CALL BIT SCREEN.

:"FCCSSD3
  :TPFE | TIT2 'character_data' (2 chars required: binary)
  :TPFE? | TIT2? (Returns quoted string)
:RANDSSD3 'character_data' (24 chars required: binary)
:RANDSSD3? (Returns quoted string)
:RSVD 'character_data' (2 chars required: binary)
:RSVD? (Returns quoted string)
:PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR FVC SSD3 (THIRD SSD UPDATE ORDER NO). THE MESSAGE FIELDS FOR FVC SSD3 ARE FOUND ON THE CALL BIT SCREEN.

:"FCBSC
  :TPFE | TIT2 'character_data' (2 chars required: binary)
  :TPFE? | TIT2? (Returns quoted string)
:RSVD1 'character_data' (4 chars required: binary)
:RSVD1? (Returns quoted string)
:AUTHBS 'character_data' (18 chars required: binary)
:AUTHBS? (Returns quoted string)
:RSVD2 'character_data' (4 chars required: binary)
:RSVD2? (Returns quoted string)
:PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR FVCBSC (BASE STATION CHALLENGE ORDER CONFIRMATION). THE MESSAGE FIELDS FOR FVCBSC ARE FOUND ON THE CALL BIT SCREEN.
CALL Process

:SFR
:AMP
:FPVCUC
  :TYPE | T1T2 '<character_data>' (2 chars required: binary)
  :TYPE? | T1T2? (Returns quoted string)
  :RSVD '<character_data>' (2 chars required: binary)
  :RSVD? (Returns quoted string)
  :RANDU '<character_data>' (24 chars required: binary)
  :RANDU? (Returns quoted string)
  :RAND? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR PVCUCUCh (UNIQUE CHALLENGE ORDER WORD). THE MESSAGE FIELDS FOR PVCUCUCh ARE FOUND ON THE CALL BIT SCREEN.

:BSCOrder
  :FWORD? | F? (Returns quoted string)
  :NAWComing? (Returns quoted string)
  :RANDBS? (Returns quoted string)
  :RAND? (Returns quoted string)
  :RANDS? (Returns quoted string)

THESE COMMANDS QUERY THE MESSAGE FIELDS FOR BSCHALD (BASE STATION CHALLENGE WORD). THE MESSAGE FIELDS FOR BSCHALD ARE FOUND ON THE CALL DATA SCREEN.

:AWORD
  :FWORD? | F? (Returns quoted string)
  :NAWComing? (Returns quoted string)
  :COUNT? (Returns quoted string)
  :RANDC? (Returns quoted string)
  :AUTH? (Returns quoted string)
  :RAND? (Returns quoted string)

THESE COMMANDS QUERY THE MESSAGE FIELDS FOR AUTHORD (AUTHENTICATION WORD). THE MESSAGE FIELDS FOR AUTHORD ARE FOUND ON THE CALL DATA SCREEN.
CALL Process

:CFR
:AMP?

:FMORd? | F? (Returns quoted string)
:NAWComing? (Returns quoted string)
:RVD? (Returns quoted string)
:AUTHU? (Returns quoted string)
:PARity? (Returns quoted string)

These commands query the message fields for UniQChCon (Unique Challenge Order Confirmation mode). The message fields for UniQChCon are found on the CALL DATA screen.

:RVCOrder
:FMORd? | F? (Returns quoted string)
:NAWComing? (Returns quoted string)
:T? (Returns quoted string)
:LOCal? (Returns quoted string)
:ORDQ? (Returns quoted string)
:ORDer? (Returns quoted string)
:RVD? (Returns quoted string)
:PARity? (Returns quoted string)

These commands query the message fields for RVCOrd (Reverse Voice Channel Generic Orders). The message fields for RVCOrd are found on the CALL DATA screen.

:RVCBSC
:FMORd? | F? (Returns quoted string)
:NAWComing? (Returns quoted string)
:T? (Returns quoted string)
:RANDBS? (Returns quoted string)
:PARity? (Returns quoted string)

These commands query the message fields for RVCBSCh (Base Station Challenge Order mode). The message fields for RVCBSCh are found on the CALL DATA screen.
CALL Process

:CPR
:NAMPS:
:NAMPS? (Returns quoted string)

These commands set/query the type of information displayed on the CALL control screen when an analog call is connected and the system type field on the CALL CONTROL screen is set to "NAMPS". This command can be sent during any call processing state. The display field is found on the CALL CONTROL screen. For non-NAMPS calls, see "CPR:MODE".

:CEXTension
:NATual? (Returns quoted string)

This command queries the NAMPS channel location (lower, middle, upper, wide channel) for a call currently connected. The Ch Loc field is found on the CALL CONTROL screen when the system type field on the CALL CONTROL screen is set to "NAMPS".

:SETTing 'Wide'
:SETTing 'Lower'
:SETTing 'Middle'
:SETTing 'Upper'

:SETTing? (Returns quoted string)

This command sets/queries the NAMPS channel location (lower, middle, upper, wide channel) to be used during the next call or handoff. The Ch Loc field is found on the CALL CONTROL screen when the system type field on the CALL CONTROL screen is set to "NAMPS".

:DSAT
:MEASurement? (Returns quoted string)

[:RESULT?] (Returns quoted string)

:SELECT 'DSAT'

:SELECT? (Returns quoted string)

:SETTing <character_data>

:SETTing? (Returns quoted string)

This command sets/queries the NAMPS DSAT (Digital Supervisory Audio Tone) to be used during the next call or handoff. The DSAT field is found on the CALL CONTROL screen when the system type field on the CALL CONTROL screen is set to "NAMPS".

:ACTual? (Returns quoted string)

This command queries the NAMPS DSAT (Digital Supervisory Audio Tone) for a call currently connected. The DSAT field is found on the CALL CONTROL screen when the system type field on the CALL CONTROL screen is set to "NAMPS".
CALL Process

:SFR
:SAMP
:NBST: RSETting 'Imm Resp'
' -75 dBm'
' -80 dBm'
' -85 dBm'
' -90 dBm'
' -95 dBm'
' -100 dBm'
' -105 dBm'

:RBSTetting? (Returns quoted string)

These commands set/query the MRI (Mobile Reported Interference) RSSI threshold. The RSSI threshold field is found on the CALL CONFIGURE screen when the system type field on the CALL CONTROL screen is set to "NAMPS".

:RSSI '<character_data>'
:RSSI? (Returns quoted string)

These commands set/query the BER (Bit Error Rate) threshold. The BER threshold field is found on the CALL CONFIGURE screen when the system type field on the CALL CONTROL screen is set to "NAMPS".

:BERate? (Returns quoted string)

:ORDer 'Chng PL 0'
' Chng PL 1'
' Chng PL 2'
' Chng PL 3'
' Chng PL 4'
' Chng PL 5'
' Chng PL 6'
' Chng PL 7'
' MRI'
' Mainten'
' Alert'

:ORDer? (Returns quoted string)

These commands send/query the ORDER message to a mobile station on a voice channel when the system type field has "NAMPS" selected. The ORDER field is found on the CALL CONTROL screen when the AUTHENT field on the AUTHENTICATION screen is "off".
CALL Process

:ITR
  :NAME
  :DISCConfirm
    :TYPE?  | T1T2? (Returns quoted string)
  :AWComing? (Returns quoted string)
  :LOCal? (Returns quoted string)
  :QUSalifier? | ORDQ? (Returns quoted string)
  :ORDer? (Returns quoted string)
  :DSCCode? (Returns quoted string)
  :VMACode? (Returns quoted string)
  :OEVen? | OE? (Returns quoted string)
  :RSVD? (Returns quoted string)
  :PARity? (Returns quoted string)

These commands query the message fields for NRVC ORD (NARROW ORDER or ORDER CONFIRMATION message). The message fields for NRVC ORD are found on the CALL DATA screen.

:MRIOrder
  :TYPE?  | T1T2? (Returns quoted string)
  :AWComing? (Returns quoted string)
  :RSV1? (Returns quoted string)
  :RSSI? (Returns quoted string)
  :QUSalifier? | ORDQ? (Returns quoted string)
  :ORDer? (Returns quoted string)
  :DSCCode? (Returns quoted string)
  :VMACode? (Returns quoted string)
  :OEVen? | OE? (Returns quoted string)
  :BERate? (Returns quoted string)
  :RSV2? (Returns quoted string)
  :PARity? (Returns quoted string)

These commands query the message fields for MRI ORD (MRI ORDER message). The message fields for MRI ORD are found on the CALL DATA screen.
CALL Process

:CALL Process

:CSNP

::EVTControl | EXT

::TPFE | TIT2 `<character_data>' (2 chars required: binary)

::TPFE? | TIT2? (Returns quoted string)

::SCCode `<character_data>' (2 chars required: binary)

::SCCode? (Returns quoted string)

::MNNumber `<character_data>' (10 chars required: binary)

::MNNumber? (Returns quoted string)

::EFCIndicator | EF `<character_data>' (1 char required: binary)

::EFCIndicator? | EF? (Returns quoted string)

::EPLLength | MEL `<character_data>' (5 chars required: binary)

::EPLLength? | MEL? (Returns quoted string)

::EPMType | MST `<character_data>' (8 chars required: binary)

::EPMType? | MST? (Returns quoted string)

::SCParity? (Returns quoted string)

:THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR EXT PROT (FCC MOBILE STATION CONTROL MESSAGE). THE MESSAGE FIELDS FOR EXT PROT ARE FOUND ON THE CALL BIT SCREEN.

::NEAMessage | NCHA

::TPFE | TIT2 `<character_data>' (2 chars required: binary)

::TPFE? | TIT2? (Returns quoted string)

::DSCCode `<character_data>' (3 chars required: binary)

::DSCCode? (Returns quoted string)

::RSVD `<character_data>' (7 chars required: binary)

::RSVD? (Returns quoted string)

::C13 | C13 `<character_data>' (1 char required: binary)

::C13? | C13? (Returns quoted string)

::C12 | C12 `<character_data>' (12 chars required: binary)

::C12? | C12? (Returns quoted string)

::VMACode `<character_data>' (3 chars required: binary)

::VMACode? (Returns quoted string)

::CHANw1 `character_data' (11 chars required: binary)

::CHANw1? (Returns quoted string)

::SCParity? (Returns quoted string)

:THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR NCH ASN (FCC NARROW CHANNEL ASSIGNMENT MESSAGE). THE MESSAGE FIELDS FOR NCH ASN ARE FOUND ON THE CALL BIT SCREEN.
### CALL Process

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAMP</td>
<td>Call Process</td>
<td>S:\agilent\e8285\QK_REF\BOOK\SECTIONS\callproc.sec</td>
</tr>
<tr>
<td>CPR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These commands set/query the message fields for NMS FVC (FVC Mobile Station Control Message). The message fields for NMS FVC are found on the CALL BIT screen.
CALL Process

:CFP
:NAME Message | MRI
:TYPE | T1T2 "<character_data>" (2 chars required: binary)
:TYPE? | T1T2? (Returns quoted string)
:DSCode "<character_data>" (3 chars required: binary)
:DSCode? (Returns quoted string)
:DPCode "<character_data>" (3 chars required: binary)
:DPCode? (Returns quoted string)
:EFIndicator | EF "<character_data>" (1 char required: binary)
:EFIndicator? | EF? (Returns quoted string)
:RSSI "<character_data>" (3 chars required: binary)
:RSSI? (Returns quoted string)
:BERate "<character_data>" (2 chars required: binary)
:BERate? (Returns quoted string)
:OEVEN | OE "<character_data>" (1 char required: binary)
:OEVEN? | OE? (Returns quoted string)
:ORDer "<character_data>" (5 chars required: binary)
:ORDer? (Returns quoted string)
:PARity? (Returns quoted string)

THESE COMMANDS SET/QUERY THE MESSAGE FIELDS FOR MRI MESSAGE. THE MESSAGE FIELDS FOR MRI MESSAGE ARE FOUND ON THE CALL BIT SCREEN.

S:/agilent/e8285/QK_REP/BOOK/SECTION/SECTIONS/Callproc.asc
### CALL Process

*WNHMessage*

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>:TYPE</td>
<td>'character_data' (2 chars required: binary)</td>
</tr>
<tr>
<td>:TYPE?</td>
<td>T1T2? (Returns quoted string)</td>
</tr>
<tr>
<td>:SECCode</td>
<td>'character_data' (2 chars required: binary)</td>
</tr>
<tr>
<td>:SECCode?</td>
<td>(Returns quoted string)</td>
</tr>
<tr>
<td>:PSCCode</td>
<td>'character_data' (2 chars required: binary)</td>
</tr>
<tr>
<td>:PSCCode?</td>
<td>(Returns quoted string)</td>
</tr>
<tr>
<td>:CTYPe</td>
<td>'character_data' (1 char required: binary)</td>
</tr>
<tr>
<td>:CTYPe?</td>
<td>(Returns quoted string)</td>
</tr>
<tr>
<td>:SCCode</td>
<td>'character_data' (3 chars required: binary)</td>
</tr>
<tr>
<td>:SCCode?</td>
<td>(Returns quoted string)</td>
</tr>
<tr>
<td>:RVD</td>
<td>'character_data' (2 chars required: binary)</td>
</tr>
<tr>
<td>:RVD?</td>
<td>(Returns quoted string)</td>
</tr>
<tr>
<td>:CB12</td>
<td>C12 'character_data' (1 char required: binary)</td>
</tr>
<tr>
<td>:CB12?</td>
<td>C12? (Returns quoted string)</td>
</tr>
<tr>
<td>:CB13</td>
<td>C13 'character_data' (1 char required: binary)</td>
</tr>
<tr>
<td>:CB13?</td>
<td>C13? (Returns quoted string)</td>
</tr>
<tr>
<td>:VMACode</td>
<td>'character_data' (3 chars required: binary)</td>
</tr>
<tr>
<td>:VMACode?</td>
<td>(Returns quoted string)</td>
</tr>
<tr>
<td>:Channel</td>
<td>'character_data' (11 chars required: binary)</td>
</tr>
<tr>
<td>:Channel?</td>
<td>(Returns quoted string)</td>
</tr>
</tbody>
</table>

These commands set/query the message fields for WNH (Wide to Narrow Message). The message fields for WNH MES are found on the CALL BIT screen.
CALL Process

:NAME Message

:TYPE  | T1T2  (2 chars required: binary)
:TYPE? | T1T2? (Returns quoted string)

:DSCCode  '<character_data>' (3 chars required: binary)
:DSCCode? (Returns quoted string)

:FDCCode  '<character_data>' (3 chars required: binary)
:FDCCode? (Returns quoted string)

:CTYPe  '<character_data>' (1 char required: binary)
:CTYPe? (Returns quoted string)

:OEVEN  | OE  (1 char required: binary)
:OEVEN? | OE? (Returns quoted string)

:RSVD  '<character_data>' (2 chars required: binary)
:RSVD? (Returns quoted string)

:C13  | C13  (1 char required: binary)
:C13? | C13? (Returns quoted string)

:C12  | C12  (1 char required: binary)
:C12? | C12? (Returns quoted string)

:VMACode  '<character_data>' (3 chars required: binary)
:VMACode? (Returns quoted string)

:CHANnel  '<character_data>' (11 chars required: binary)
:CHANnel? (Returns quoted string)

:PARity? (Returns quoted string)

These commands SET/QUERY the message fields for NHO MES (Narrow Message). The message fields for NHO MES are found on the CALL BIT screen.
CALL Process

:CALL NTACS

:EXTENSION (returns quoted string)
   This command queries the NTACS CHANNEL LOCATION (NARROW, WIDE CHAN)
   for a call currently connected. The CH LOC FIELD is found on the
   CALL CONTROL screen when the SYSTEM TYPE field on the CALL CONTROL
   screen is set to "NTACS".

:SETTING 'Narrow'
   'Wide Chan'

:SETTING? (returns quoted string)
   This command sets/queries the NTACS CHANNEL LOCATION (NARROW, WIDE
   CHAN) to be used during the next call or handoff. The CH LOC FIELD is
   found on the CALL CONTROL screen when the SYSTEM TYPE field on the
   CALL CONTROL screen is set to "NTACS".

:WNTHMESSAGE

:TYPE | T1T2 '<character_data>' (2 chars required: binary)
:TYPE? | T1T2? (Returns quoted string)

:SSCode 'character_data' (2 chars required: binary)
:SSCode? (Returns quoted string)

:FSCode 'character_data' (2 chars required: binary)
:FSCode? (Returns quoted string)

:CTYPe 'character_data' (1 char required: binary)
:CTYPe? (Returns quoted string)

:DSCode 'character_data' (3 chars required: binary)
:DSCode? (Returns quoted string)

:RSVD 'character_data' (2 chars required: binary)
:RSVD? (Returns quoted string)

:NIT1 'character_data' (1 char required: binary)
:NIT1? (Returns quoted string)

:VMACode 'character_data' (3 chars required: binary)
:VMACode? (Returns quoted string)

:CHANnel 'character_data' (11 chars required: binary)
:CHANnel? (Returns quoted string)

:PARity? (Returns quoted string)

These commands set/query the MESSAGE fields for WNTHO MESS (NTACS
NICE to NARROW HANDOFF MESSAGE). THE MESSAGE FIELDS FOR WNTHO MESS
ARE FOUND ON THE CALL BIT SCREEN.
These commands set/query the message fields for NITRO messages (TACS NARROW handoff messages). The message fields for NITRO messages are found on the CALL BIT screen.
CALL Process

:CFR:
:NTACS

:INITMESSAGE
:T1T2: <character_data>* (2 chars required; binary)
:T1T2?: (Returns quoted string)
:TESCCode ':<character_data>*' (3 chars required; binary)
:TESCCode?: (Returns quoted string)
:TESCCode ':<character_data>*' (3 chars required; binary)
:TESCCode?: (Returns quoted string)
:T888D: '<character_data>*' (3 chars required; binary)
:T888D?: (Returns quoted string)
:GEVEn: '<character_data>*' (1 char required; binary)
:GEVEn? | C13? (Returns quoted string)
:LDCall: '<character_data>*' (1 char required; binary)
:LDCall? (Returns quoted string)
:OQU: '<character_data>*' (3 chars required; binary)
:OQU? (Returns quoted string)
:ORDer: '<character_data>*' (5 chars required; binary)
:ORDer? (Returns quoted string)
:PARity? (Returns quoted string)

These commands set/query the message fields for the HMC FVC and NTMS FVC (FVC MOBILE STATION CONTROL MESSAGE and FVC TACS MOBILE STATION CONTROL MESSAGE). These fields are found on the CALL BIT screen.
CALL Process

:CFG
:NTACS

:NTCMESSAGE

:T1T2 'character_data' (2 chars required: binary)
:T1T2? (Returns quoted string)

:DSCCode 'character_data' (3 chars required: binary)
:DSCCode? (Returns quoted string)

:RSVD 'character_data' (7 chars required: binary)
:RSVD? (Returns quoted string)

:CTYPe 'character_data' (1 char required: binary)
:CTYPe? (Returns quoted string)

:BIT12 'character_data' (1 char required: binary)
:BIT12? (Returns quoted string)

:VMACode 'character_data' (3 chars required: binary)
:VMACode? (Returns quoted string)

:CHANnel 'character_data' (11 chars required: binary)
:CHANnel? (Returns quoted string)

:PARIty? (Returns quoted string)

These commands SET/QUERY the MESSAGE FIELDS for NTCH ASN (FCC TACS NARROW CHANNEL ASSIGNMENT MESSAGE). The MESSAGE FIELDS for NTCH ASN ARE FOUND ON THE CALL BIT SCREEN.
CDMA

CDMA AUTHENTICATE

AKEY (String entry)

This command enters/query the value in the A-KEY field. This value can be up to 20 digits in length. The maximum value is 18446744073709551615. If less than 20 digits are entered, the remainder of the display is padded with leading zeroes.

This field is located on the CDMA AUTHENTICATION screen.

DATA? (Returns quoted string)

This command queries the authentication key check digits. The check digits field is located on the CDMA CALL CONTROL screen.

DATA CLEAR

This command clears the data displayed on the CDMA AUTHENTICATION screen. The Authentication Data Table is located on the CDMA AUTHENTICATION screen. Refer to the Authentication Data Table field description in the Test Set's Reference Guide, Fields Chapter, for a description of data that is cleared by this command.
**CDMA**

:CDMA

[:ANAG: ]

[:BWPower] (See "Real Number Setting Syntax" on page 199 :STATe command not included under optional command [:BWPower])

This command sets the AWGN (Additive White Gaussian Noise) level. The AWGN field is found on the **CDMA GENERATOR CONTROL** and **CDMA MOBILE RECEIVER TEST** screens.

:TX

[:POWer: ]

[:MEASurement 'Chan Power'

'Avg Power'

'Acc Pwr Pwr' 

]:MEASurement? [Returns quoted string]

These commands select/query a power measurement. Acc Pwr Pwr measurements are made during mobile station registration or call attempts. Chan Power and Avg Power measurements are designed to be used when a call is connected. All three choices of power measurements are multiplexed into one field. This field is located on the **CDMA CALL CONTROL**, **CDMA TRANSMITTER POWER RANGE**, and **CDMA CELLULAR MOBILE TRANSMITTER TEST** screens. A query returns the value of the power measurement currently selected.

:RHO

[:MEASurement 'Traffic Rho'

'TM Rho'

]:MEASurement? [Returns quoted string]

]:ERROR 'Freq Error'

'Ampl Error'

'Time Offset'

]:ERROR? [Returns quoted string]

]:ERROR 'Phs Error'

'Carrier'

]:ERROR? [Returns quoted string]

Each of these commands select/query one transmitter modulation quality measurements from three multiplexed fields, collectively referred to as the "RHO SUITE." With the exception of TM Rho (Test Mode Rho), a call must be connected to use these measurements. The three fields that return the Rho suite measurements are located on the **CDMA CELLULAR MOBILE TRANSMITTER TEST** screen. All Rho suite measurements are available at the end of each measurement cycle.

:RFPower? [Returns real value]

:RFPower

[:STATe? [Returns 1 or 0, 1 = ON, 0 = OFF]]

These commands query the contents and state of CDMA Forward Channel RF Power, a display-only field found on the **CDMA GENERATOR CONTROL** and **CDMA CELLULAR MOBILE TEST** screens.

:RFChannel (See "Integer Number Setting Syntax" on page 197)

This command sets the CDMA Forward Channel field. If a call is connected when this command is sent, a CDMA-to-CDMA handoff is performed. The RF channel field is located on the **CDMA CALL CONTROL** screen.
CDMA

:CDMA?
:STNoise? (Returns real value)

This command queries the contents of the E/N field. This command will return an E/N value when the AMCN field is on and the DATA field is not set to ECHO. This field is located on the CDMA CELLULAR MOBILE RECEIVER TEST and CDMA GENERATOR CONTROL screen.

:CALL

:AHAndoff

This command executes a CDMA to ANALOG HANDOFF. A CDMA CALL MUST BE CONNECTED (CONNECTED ANNUNCIATOR LIT) AND THE MOBILE STATION UNDER TEST MUST BE COMPATIBLE WITH THE CURRENT ENTRY IN THE SYSTEM TYPE FIELD (SEE "CDMA:CALL:AHAN:STYP"), found on the CDMA CALL CONTROL screen.

:CHANnel

(See "Integer Number Setting Syntax" on page 197)

This command sets the ANALOG VOICE CHANNEL NUMBER for CDMA to ANALOG HANDOFFS. This setting will be signaled to the MOBILE STATION when the "CDMA:CALL:AHAN:CHAN" command is sent. The CHANNEL field is found on the CDMA CALL CONTROL screen.

:PLEVel

(See "Integer Number Setting Syntax" on page 197, does not include :INCR command, valid range 0 to 7)

This command sets the VMAC (VOICE MOBILE ATTENUATION CODE) for CDMA to ANALOG HANDOFFS. This setting will be signaled to the MOBILE STATION when the "CDMA:CALL:AHAN:PLEV" command is sent. The VMAC LEVEL field is found on the CDMA CALL CONTROL screen.

:SATone

5970hz
6000hz
6030hz

:SATone? (Returns quoted string)

These commands set/query the SAT (SUPERVISORY AUDIO TONE) for CDMA to ANALOG HANDOFFS. This setting will be signaled to the MOBILE STATION when the "CDMA:CALL:AHAN:SATO" command is sent. The SAT field is found on the CALL CONTROL screen.

:STYPe

"NAMPS"
"TACS"
"TSB-74" 'J-STD-008 must be selected in Protocol field
"JTACS" 'Arirb T53 must be selected in Protocol field

:STYPe?

This command sets/query the SYSTEM TYPE for CDMA to ANALOG or CDMA to CDMA INTERBAND HANDOFFS. The SYSTEM TYPE field is found on the CALL CONTROL screen.
CDMA

:CALL

:CDMA:AHANdoff

:DSATone '0 2556CB'
  '1 255B2B'
  '2 256A9B'
  '3 25AD4D'
  '4 26AB2B'
  '5 26B2AD'
  '6 2969AB'

:DSATone?

THESE COMMANDS SET / QUERY THE DSAT (DIGITAL SUPERVISORY AUDIO TONE) FOR CDMA TO ANALOG HANDOFFS. THIS SETTING WILL BE SIGNALED TO THE MOBILE STATION WHEN THE "CDMA:CALL:AHAN" COMMAND IS SENT. THE DSAT FIELD IS DISPLAYED ON THE CALL CONTROL SCREEN WHEN NAMP'S IS SELECTED IN THE SYSTEM TYPE FIELD.

:CSTandard? (returns quoted string)

:CSTandard 'MS AMPS'
  'US PCS'
  'MS TACS'
  'MS JTACS'
  'Japan CDMA'
  'Kor PCS P0'
  'Kor PCS P1'

THESE COMMANDS SET / QUERY THE CHAN TD FIELD. THE CHAN TD FIELD SPECIFIES THE DESTINATION RF CHANNEL STANDARD FOR IS-95B CDMA TO CDMA HARD (INTERSYSTEM) HANDOFFS. THE CHAN TD FIELD IS LOCATED ON THE CDMA CALL CONTROL SCREEN, AND IS DISPLAYED WHEN THE SYSTEM TYPE FIELD IS SET TO TIA/EIA-95B. SEE "CDMA:CALL:AHAN".

:ANSWer

THIS COMMAND ANSWERS A MOBILE STATION ORIGINATED CALL WHEN THE ANWER MODE FIELD ON THE CDMA CELL SITE CONFIGURATION SCREEN IS SET TO MANUAL. AN INCOMING CALL MUST BE PRESENT (ACCESS PHONE ANMBNTRATOR LIT) FOR THIS COMMAND TO COMPLETE THE CALL. AFTER THIS COMMAND IS SENT, THE CONNECTED ANMBNTRATOR WILL LIGHT. THE ANMB KEY ON THE TEST SET’S FRONT PANEL ALSO PERFORMS THIS FUNCTION.

:MODE 'Auto'
  'Manual'

:MODE? (Returns quoted string)

THESE COMMANDS SELECT / QUERY THE TEST SET’S ANSWER MODE, DETERMINING WHETHER OR NOT THE ANMB KEY MUST BE PRESSED TO ANSWER A MOBILE STATION ORIGINATED CALL. THE ANWER MODE FIELD IS LOCATED ON THE CDMA CALL SITE CONFIGURATION SCREEN.

:MAKE

THIS COMMAND CAUSES THE TEST SET TO ATTEMPT A CALL. A MOBILE STATION MUST BE REGISTERED (TO PROVIDE THE MS DATABASE FIELD ON THE CDMA CALL CONTROL SCREEN WITH THE MOBILE STATION IDENTIFICATION) FOR A TEST SET ORIGINATED CALL TO BE SUCCESSFUL. THIS COMMAND PERFORMS THE SAME FUNCTION AS THE CALL KEY.
CDMA

:CDMA
:CALL
:END:

This command causes the test set to end a call that is currently connected, or end a registration attempt. This command performs the same function as the END CALL key.

:SHOType 'Soft'
'Softer'
:SHOType?
:SHOType?

These commands select between Soft or Softer handoff and turn the selected feature on and off. Make "on" the test set signals the mobile station to include sector B in its active set of pilots. The Softer handoff field is located on the CDMA MOBILE REPORTING screen.

Note: A call must be connected and sector B power must be on to turn on softer handoffs.

:LIMIT 'None'
'Page'
:LIMIT?

When "Page" is selected, the test set will not respond to access probes from the mobile station. A call cannot be connected in this state! This feature is used for testing mobile station access probe power. The call limit field is located on the CDMA CELL SITE CONFIGURATION screen.

:DTIMer 'ON'
'OFF'
:DTIMer?

These commands are used to turn off the test set's call drop timer. "OFF" is useful when mobile station power is too low for reliable demodulation of reverse traffic channel signaling messages, but you want the call to remain connected. The drop timer field is located on the CDMA TRANSMITTER POWER RANGE TEST screen.

:TRAFFic
:TYPE 'None'
'Primary'
:TRAFFic

This command sets and queries the Type field. Service option 6 or Service Option 14 must be selected in the Traffic Data Mode field to display the Type field in "CDMA:CALL:TRAFF:DATA:MODE". It sets the FOR TRAFFIC and REV TRAFFIC parameters in the base station to '0' (NONE) or '1' (PRIMARY). This field appears in the CDMA CALL CONTROL, CDMA RX TEST, CDMA TX TEST, and CDMA RANGE TEST screens.
CDMA

:CALL:CDMA
:TRAF
:DATA
:MODE 'Svc Opt 1'
'Svc Opt 2'
'Svc Opt 3'
'Svc Opt 6'
'Svc Opt 9'
'Svc Opt 14'
'SO 32768'
:MODE? (Returns quoted string)

These commands select/query the Traffic Data Mode Field, which determines
the service option used during a call. These commands can be sent before or
after a call is connected. If a call is connected and the service requested
is not supported by the mobile station, the mobile station will reject the
request and an error message will be displayed on the test set. The
Traffic Data Mode field is located on the CDMA CALL CONTROL, CDMA
TRANSMITTER POWER RANGE TEST, CDMA CELLULAR MOBILE RECEIVER
TEST, and CDMA CELLULAR MOBILE TRANSMITTER TEST screens.

:RATE 'Full'
'Half'
'Quarter'
'Eighth'
'Random'
:RATE? (Returns quoted string)

These commands select/query the Data Rate field. Data Rate applies to
variable transmission rates on the Forward Traffic Channel. The mobile
station will transmit the same data rate if service option 2 is selected
and the mobile station is not erasing frames. Data Rate is not
applicable when the Data Type field is set to "Echo". The Data Rate field
is located on the CDMA CALL CONTROL, CDMA TRANSMITTER POWER RANGE
TEST, CDMA CELLULAR MOBILE RECEIVER TEST, and CDMA CELLULAR
MOBILE TRANSMITTER TEST screens.

:TYPE 'PRBS'
'Echo'
'1kHz Tone'
'400Hz'
'Chirp'
:TYPE? (Returns quoted string)

These commands select/query the Data Type field. These commands can be
sent before or after a call is connected. The data type you choose
will determine information data transmitted on the Forward Traffic
Channel at the rate that is selected in the Data Rate field. The
"CDMA(CALL:TRAF:DATA:RATE)", the Data Type field is located on
the CDMA CALL CONTROL, CDMA TRANSMITTER POWER RANGE TEST, CDMA
CELLULAR MOBILE RECEIVER TEST, and CDMA CELLULAR MOBILE
TRANSMITTER TEST screens.
THESE COMMANDS SELECT / QUERY THE ECHO DELAY FIELD. ECHO DELAY IS APPLIED ONLY TO SERVICE OPTION 1 OR 32768 CALLS (SEE "CDMA:CALL:TRAF:DATA:MODE") AND THE DATA TYPE FIELD IS "ECHO" (VOICE LOOPBACK). THE ECHO DELAY FIELD IS LOCATED ON THE CDMA CALL CONTROL, CDMA TRANSMITTER POWER RANGE TEST, CDMA CELLULAR MOBILE RECEIVER TEST, AND CDMA CELLULAR MOBILE TRANSMITTER TEST SCREENS.

These commands select/query the protocol field. Ending this command during a call will cause the call to drop. The protocol field is found on the CDMA CALL CONTROL and CDMA CELL SITE CONFIGURATION screens.

This command sets the cell's network ID. This field is located on the CDMA CELL SITE CONFIGURATION screen.

This command sets the cell's System ID. This field is located on the CDMA CELL SITE CONFIGURATION screen.

This command sets the cell's alternate (registration) network ID. The Hosts NID field is located on the CDMA CELL SITE CONFIGURATION screen.

This command sets the cell's alternate (registration) system ID. The Hosts SID field is located on the CDMA CELL SITE CONFIGURATION screen.
CDMA

:CID (See "Integer Number Setting Syntax" on page 197. :INCREMENT not included valid range 0 to 32767)

This command sets the cell's base station ID. The base ID field is located on the CDMA cell site configuration screen.

:BIN (See "Integer Number Setting Syntax" on page 197. :INCREMENT not included valid range 0 to 15)

This command sets the cell's search-window size for the active and candidate sets. The search win A field is located on the CDMA cell site configuration screen.

:BIN (See "Integer Number Setting Syntax" on page 197. :INCREMENT not included valid range 0 to 15)

This command sets the cell's search-window size for the neighbor set. The search win N field is located on the CDMA cell site configuration screen.

:INC (See "Integer Number Setting Syntax" on page 197. :INCREMENT not included valid range 1 to 15)

This command sets theincrement between pilot PN offsets in the neighbor set. The pilot inc field is located on the CDMA cell site configuration screen.

:BIN (See "Integer Number Setting Syntax" on page 197. :INCREMENT not included valid range 0 to 15)

This command sets the cell's search-window size for the remaining set. The search win R field is located on the CDMA cell site configuration screen.

:INC (See "Integer Number Setting Syntax" on page 197. :INCREMENT not included valid range -8 to 7)

This command sets the nominal transmit power offset to the open loop (power control) estimate. The nom power field is located on the CDMA cell site configuration screen.

:EXT (See "Integer Number Setting Syntax" on page 197. :INCREMENT not included valid range 0 to 1)

This command sets the initial transmit power offset for system access. The init power field is located on the CDMA cell site configuration screen.

:INC (See "Integer Number Setting Syntax" on page 197. :INCREMENT not included valid range 0 to 7)

This command sets the step increase in transmit power between access probes. The power step field is located on the CDMA cell site configuration screen.
:CDMA
:CELL
:CONF

:PNMSize (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range 0 to 15)
This command sets the access channel preamble length. The PN size field is located on the CDMA cell site configuration screen.

:PAGE
:RATE 'Full'
'Half'
:RATE? (Returns quoted string)
These commands set the data rate for the forward channel paging channel. The page rate field is located on the CDMA cell site configuration screen.

:,list step (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range 0 to 15)
This command sets the number of power steps in an access page sequence. The num step field is located on the CDMA cell site configuration screen.

:MAXreqseq (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range 0 to 15)
This command sets the maximum number of access page sequences for an access channel request or response. The max req seq field is located on the CDMA cell site configuration screen.

:PAGEs (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range 1 to 3)
This command sets the number of page attempts the test set will perform when a call is made from the test set. The num pages field is located on the CDMA cell site configuration screen.

:EMODe 'On'
'Off'
:EMODe? (Returns quoted string)
These commands set/query the escape mode. When "On", escape mode eliminates the need to set specific values in the country code and network code fields. The ESC mode field is located on the CDMA cell site configuration screen when IS-95A, TSB-74, or J-STD-008 is selected in the protocol field.

:MSCindex (See "Integer Number Setting Syntax" on page 197)
This field sets/queries the slot cycle used by the test set to page a mobile station. Default value is 0, and the rage is from 0 to 7. Note that a value of 7 causes the cycle to be very long at about 163 seconds.

:BCCode (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range 0 to 999)
This command sets the base station country code. The country code field is found on the CDMA cell site configuration screen when the protocol field is set to IS-95A, TSB-74, or J-STD-008.

S:agilent\e8285\QK_RIF\BOOK\SECTION\SCDMA.txt
CDMA
:CELL
:CONF

:BNCode (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range 0 to 99)

This command sets the base station network code. The network code field is found on the CDMA cell site configuration screen when the protocol field is set to IS-95A, TSB-74, or J-STD-008.

:EXNB 'On'

:EXNB? (Returns quoted string)

These commands set/query the enablement and disablement of the custom neighbor list. When the command is set to "On", the custom neighbor list is enabled.

:NFR (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range 0 to 799)

:NFR? (Returns integer)

These commands set/query the neighbor frequency (channel number) in the custom neighbor list.

:PURegister 'On'

:'Off'

:PURegister? (Returns quoted string)

These commands set/query the power up registration mode. When power up registration is "On", the mobile station will be signaled to autonomously register after it has powered up and found CDMA service. When power up registration is "Off", use the REGISTER field on the CDMA CALL CONTROL screen to register the mobile station. The Power Up Register field is located on the CDMA cell site configuration screen.

:PDRegister 'On'

:'Off'

:PDRegister? (Returns quoted string)

These commands set/query the power down registration mode. When power down registration is "On", the mobile station will be signaled to register autonomously as it is powered down.

:SCPR 'Low'

:'Medium'

:'High'

:'Very High'

:SCPR? (Returns quoted string)

These commands set/query the search priority in the custom neighbor list.

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CDMA

:CONF:

:AUTHenticate

:MODE 'On'

:MODE? (Returns quoted string)

:MODE 'Off'

:RAND (hex string)

:RAND? (Returns quoted string)

:RANDSsd (hex string)

:RANDSsd? (Returns quoted string)

:RANDU (hex string)

:RANDU? (Returns quoted string)

:SNDM 'None

:'AO-AK'

:'AO-NA'

:'GP'

:'AO-AK/GP'

:'AO-NA/GP'

:SNDM? (Returns quoted string)

:TREGister

:MODE 'On'

:MODE? (Returns quoted string)

:TREGister 'Off'

:PERiod (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range 29 to 85)

:PERiod? (Returns quoted string)

:PERiod (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range 29 to 85)

:PERiod? (Returns quoted string)

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CDMA

-ASEctor

[:BWPower] (See "Real Number Setting Syntax" on page 199)

This command sets the total sector A power. If sector A power is changed during a call, the mobile station will adjust its output power following open loop power control formulas. The Sector A power field is located on the CDMA Call Control, CDMA Generator Control, CDMA Cellular Mobile Receiver Test, CDMA Transmitter Power Range Test, CDMA Mobile Reporting, and CDMA Cellular Mobile Transmitter Test screens.

-PIlot

[:POWer] (See "Real Number Setting Syntax" on page 199)

This command sets sector A pilot channel power, relative to the total sector A power (Sector A Power field). The Pilot (Sector A Power) field is located on the CDMA Generator Control Screen.

-SYNC

[:POWer] (See "Real Number Setting Syntax" on page 199)

This command sets sector A sync channel power, relative to the total sector A power (Sector A Power field). The Sync (Sector A Power) field is located on the CDMA Generator Control Screen.

-PAging

[:POWer] (See "Real Number Setting Syntax" on page 199)

This command sets sector A paging channel power, relative to the total sector A power (Sector A Power field). The Paging (Sector A Power) field is located on the CDMA Generator Control Screen.

-TRAFFic

[:POWer] (See "Real Number Setting Syntax" on page 199)

This command sets sector A traffic channel power, relative to the total sector A power (Sector A Power field). The Traffic field for sector A Power is located on the CDMA Generator Control, CDMA Cellular Mobile Receiver Test, CDMA Mobile Reporting, and CDMA Transmitter Power Range Test screens.

-WALSh (See "Integer Number Setting Syntax" on page 197)

This command selects the Walsh code for the sector A traffic channel. The Walsh field for Traffic (Sector A Power) is located on the CDMA Generator Control Screen.
:CDMA
:CELL
:ASEC
:ORTHogonal

<table>
<thead>
<tr>
<th>[:POWer] (Returns real value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This command queries OCNS (Sector A Power) Power. OCNS is not a settable parameter. The OCNS (Sector A Power) field is located on the CDMA Generator Control Screen.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>:WALsh (See &quot;Integer Number Setting Syntax&quot; on page 197, :INCRement not included, valid range 2 to 63 excluding duplicate walsh code settings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This command selects the walsh code for the Sector A OCNS (Orthogonal Channel Noise Source) channel. The Walsh field for OCNS (Sector A Power) is located on the CDMA Generator Control Screen.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>:STAt (Returns 1 or 0, 1 = ON, 0 = OFF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This command queries the state of OCNS (Sector A Power). The OCNS (Sector A Power) field is located on the CDMA Generator Control Screen.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>:PNOFfset (See &quot;Integer Number Setting Syntax&quot; on page 197, :INCRement not included, valid range 0 to 511)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This command sets the PN Offset for the Sector A Code Channels. The PN Offset field for Sector A is located on the CDMA Generator Control Screen.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>:STRength? (Returns integer value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This command queries the expected strength number the Mobile Station should be reporting in the Pilot Strength Message it sends to the Test Set. The Expected Strength field is found on the CDMA Mobile Reported Pilot Strength Screen.</td>
</tr>
</tbody>
</table>
CDMA

:CELL

:BSEC

[:BWPower] (See "Real Number Setting Syntax" on page 199, :STATe command not included under optional command [:BWPower])

This command sets the total sector B power. The sector B PW field is located on the CDMA generator control and CDMA mobile reporting screens.

:Pilot

[:POWer] (See "Real Number Setting Syntax" on page 199)

This command sets sector B pilot channel power, relative to the total sector B power (sector B power field). The pilot (sector B power) field is located on the CDMA generator control screen.

:Traffic

[:POWer] (See "Real Number Setting Syntax" on page 199)

This command sets sector B traffic channel power, relative to the total sector B power (sector B power field). The traffic field for sector B power is located on the CDMA generator control and CDMA mobile reporting screen.

:Walsh

[:POWer] (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range 1 to 63, excluding duplicate walsh code settings)

This command selects the walsh code for the sector B traffic channel. The walsh field for traffic (sector B power) is located on the CDMA generator control screen.

:Orthogonal

[:POWer]? (Returns real value)

This command queries OCNs (sector B power) power. The OCNs (sector B power) field is located on the CDMA generator control screen.

:Walsh

[:POWer] (See "Integer Number Setting Syntax" on page 197, valid range 2 to 63, excluding duplicate settings with other channels)

This command selects the walsh code for the sector B OCNs (orthogonal channel noise source) channel. The walsh field for OCNs (sector B power) is located on the CDMA generator control screen.

:STATe?

(Returns 1 or 0, 1 = ON, 0 = OFF)

This command queries the state of OCNs (sector B power). The OCNs (sector B power) field is located on the CDMA generator control screen.
:CDMA

:MOB

:PNOffset (See "Integer Number Setting Syntax" on page 197, :INCReement not included, valid range 0 to 511)

This command sets the PN offset for the sector B code channels. The PN offset field for sector B is located on the CDMA generator control screen.

:STrength? (Returns integer value)

This command queries the expected strength number the mobile station should be reporting in the pilot strength message it sends to the test set. The expected strength field is found on the CDMA mobile reported pilot strength screen.

:INCLass? (Returns integer value)

:INCLass (See "Integer Number Setting Syntax" on page 197, :INCReement not included, valid range 0 to 4)

These commands set/query the band class field. The band class field is displayed on the CDMA call control screen when the protocol field is set to TIA/EIA-95B and the RF channel std field is set to USER-60.

:MOB

:MPower (See "Real Number Setting Syntax" on page 199, :STATe not included, valid range +30 dBm to -110 dBm)

:MPower? (Returns real value)

These commands set/query the mobile power field. The mobile power field is located on the CDMA transmitter power range test screen, and is displayed when the mobile power mode field is set to "USER".

:MODE 'Normal'

'User'

:MODE? (Returns quoted string)

These commands select/query the mobile power mode field. The mobile power mode field is located on the CDMA transmitter power range test screen.

:IDEAl? (Returns real value)

This command queries the ideal mobile station power level, based on open loop power control. The ideal mobile power field is located on the CDMA call control and CDMA transmitter power range test screen.

:MINimum? (Returns real value)

:MAXimum? (Returns real value)

These commands query the results of the MIN/Max power measurement. The MIN/Max power field is located on the CDMA transmitter power range test screen.

:REGister

This command causes the mobile station to register with the test set. A mobile station must be in the "mobile station idle" state for a successful registration. The register field is located on the CDMA call control screen.

S:/agilent/e8285/QK_RFBS/BOOK/SECTIONS/CDMA.doc
CDMA

:CDMA

:MOB

:REP:ort

:CLEar

THIS COMMAND CLEAR THE NUMBERS DISPLAYED IN THE CDMA MOBILE REPORTING TABLE. THE PILOT MEAS. CLEAR FIELD IS FOUND ON THE CDMA MOBILE REPORTED PILOT STRENGTH SCREEN.

:PIlot

:STrength? (Returns variable length array of real numbers.)

(Numbers are separated by commas. Example: 3,6,8)

THIS COMMAND QUERIES THE FOLLOWING MOBILE REPORTING PILOT VALUES:

STATUS, PN OFFSET, STRENGTH, AND KEEP BIT. REFER TO THE "STATUS" FIELD DESCRIPTION IN THE TEST SET'S REFERENCE GUIDE FOR A PROGRAMMERS EXAMPLE. THE CDMA MOBILE REPORTING TABLE IS LOCATED ON THE CDMA MOBILE REPORTING SCREEN.

:CLEar

THIS COMMAND CLEAR THE CONTENTS OF THE CDMA MOBILE REPORTED PILOT STRENGTH TABLE. THIS PILOT MEAS. (CLEAR) FIELD IS FOUND ON THE CDMA MOBILE REPORTED PILOT STRENGTH SCREEN.

:MSID 'Auto'

'MSISDN' (Available when Protocol field is IS-95)

'Min' (Available when Protocol field is IS-95)

'IMSI' (Available when Protocol field is IS-95A, TSB-74, or J-STD-008)

:MSID? (Returns quoted string)


:IMSI 'MCC'

'MNC'

'MSIN'

:IMSI? (Returns quoted string)

THESE COMMANDS SELECT/QUERY THE DISPLAYED IMSI SUBFIELD. THESE FIELDS ARE AVAILABLE WHEN THE MS ID FIELD IS SET TO IMSI. THE MS ID FIELD IS LOCATED ON THE CDMA CALL CONTROL SCREEN.

:MCC '<character data>' (3 chars required, valid characters: integers)

:MCC? (Returns quoted string)

THIS COMMAND SETS/QUERIES THE IMSI SUBFIELD MCC (MOBILE COUNTRY CODE). THIS FIELD CAN BE DISPLAYED ONLY WHEN THE MS ID FIELD IS SET TO IMSI. THE MS ID FIELD IS LOCATED ON THE CDMA CALL CONTROL SCREEN.

:MNCC '<character data>' (2 chars required, valid characters: integers)

:MNCC? (Returns quoted string)

THIS COMMAND SETS/QUERIES THE IMSI SUBFIELD MNCC (MOBILE NETWORK CODE). THIS FIELD CAN BE DISPLAYED ONLY WHEN THE MS ID FIELD IS SET TO IMSI. THE MS ID FIELD IS LOCATED ON THE CDMA CALL CONTROL SCREEN.
:CDMA

:MSID

:MSIN '<character data>' (up to 10 chars, valid characters: integers)
:MSIN? (Returns quoted string)

This command sets/queries the IMSI subfield MSIN (Mobile Station Identification Number). This field can be displayed only when the MS ID field is set to IMSI. The MS ID field is located on the CDMA Call Control Screen.

:PHONE

[:NUMBER] '<character_data>' (10 chars max, valid chars: 0123456789)
[:NUMBER]? (Returns quoted string)

These commands select/query the phone number used for identifying a mobile station being paged when the MS ID field is set to Phone Num. The protocol field must be set to IS-95 to allow mobile station identification by phone number to use Phone Num. The phone Num field is displayed when Phone Num is selected in the MS ID field, and is located on the CDMA Call Control Screen.

:MIN '<character_data>' (9 chars max, valid chars: 0123456789ABCDEF)
:MIN? (Returns quoted string)

These commands select/query the Min number used for paging when the MS ID field is set to Min. In this mode, the mobile station must be operating non-slotted, and Min numbers obtained during registration will not be used. The Min field is displayed when Min is selected in the MS ID field, and is located on the CDMA Call Control Screen.
CDMA

:CMDA
:INQ
:Database 'ESN' (ALL CHANNEL STANDARDS)
  'MIN1' (IS-95)
  'MIN2' (IS-95)
  'Phone Num' (IS-95)
  'Dual Mode' (ALL CHANNEL STANDARDS)
  'Slot Class' (ALL CHANNEL STANDARDS)
  'Slot Index' (ALL CHANNEL STANDARDS)
  'Prot Rev' (ALL CHANNEL STANDARDS)
  'Pwr Class' (IS-95, IS-95A, TSB-74)
  'TX Mode' (IS-95, IS-95A, TSB-74)
  'Called Num' (IS-95A, TSB-74, J-STD-008)
  'NCC' (IS-95A, TSB-74, J-STD-008)
  'MNC' (IS-95A, TSB-74, J-STD-008)
  'NSM' (IS-95A, TSB-74, J-STD-008)
  'Band Class' (J-STD-008)
  'EIRP Class' (J-STD-008)
  'Op Modes' (J-STD-008)
  'C Max EIRP' (TIA/EIA-95B)
  'P Max EIRP' (TIA/EIA-95B)
  'C Op Modes' (TIA/EIA-95B)
  'P Op Modes' (TIA/EIA-95B)
  'Pwr Step' (TIA/EIA-95B)
  'Clr All*' (ALL CHANNEL STANDARDS)

:Database? (Returns quoted string)

:VALue? (Returns quoted string)
 THIS COMMAND QUERIES THE VALUE OF THE INDICATOR SELECTED FROM THE LIST OF MS DATABASE CHOICES. THE MS DATABASE FIELD IS LOCATED ON THE CDMA CALL CONTROL SCREEN.
CDMA

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PARM? (Returns quoted string)

This command selects/query the mobile station's parameter identifier from the list of mobile parm choices. A mobile station must be on a call to select a mobile station parameter from this list. The set of parameter identifiers available depends on the protocol field setting on the CDMA CALL CONTROL screen. The mobile parm field is located on the CDMA MOBILE REPORTED PILOT STRENGTH screen.

VALUE? (Returns integer)

This command queries the value of the mobile station's parameter identifier selected from the list of mobile parm choices. The mobile parm field is located on the CDMA MOBILE REPORTING screen.

IADD? (Returns integer)

IADD (See "Integer Number Setting Syntax" on page 197, Increment not included, valid range -32 to 31)

These commands set/query the value for ADD Intercept (Add Intercept). The ADD Intercept field is displayed only when TIA/EIA-95B is selected in the protocol field. The ADD Intercept field is located on the CDMA MOBILE REPORTED PILOT STRENGTH screen.

IDrop? (Returns integer)

IDrop (See "Integer Number Setting Syntax" on page 197, Increment not included, valid range -32 to 31)

These commands set/query the value for DROP Intercept (Drop Intercept). The DROP Intercept field is displayed only when TIA/EIA-95B is selected in the protocol field. The DROP Intercept field is located on the CDMA MOBILE REPORTED PILOT STRENGTH screen.

SSLope? (Returns integer)

SSLope (See "Integer Number Setting Syntax" on page 197, Increment not included, valid range 0 to 63)

These commands set/query the value for SOFT SLOPE. The SOFT SLOPE field is displayed only when TIA/EIA-95B is selected in the protocol field. The SOFT SLOPE field is located on the CDMA MOBILE REPORTED PILOT STRENGTH screen.

STAD? (Returns integer, 0 to 63)

This command queries the current value for EXPECTED T_Add. The EXPECTED T_Add field is displayed only when TIA/EIA-95B is selected in the protocol field. The EXPECTED T_Add field is located on the CDMA MOBILE REPORTED PILOT STRENGTH screen.

STDrop? (Returns integer, 0 to 63)

This command queries the current value for EXPECTED T_Drop. The EXPECTED T_Drop field is displayed only when TIA/EIA-95B is selected in the protocol field. The EXPECTED T_Drop field is located on the CDMA MOBILE REPORTED PILOT STRENGTH screen.
CDMA

:SADD

:TADD (See "Integer Number Setting Syntax" on page 197, :INCREMENT not included, valid range 0 to 63)

This command sets the pilot detection threshold T_ADD. The T_ADD field is located on the CDMA Mobile Reporting screen.

:TDROP (See "Integer Number Setting Syntax" on page 197, :INCREMENT not included, valid range 0 to 63)

This command sets the pilot drop threshold T_DROP. The T_DROP field is located on the CDMA Mobile Reporting screen.

:TCOMP (See "Integer Number Setting Syntax" on page 197, :INCREMENT not included, valid range 0 to 63)

This command sets the pilot detection threshold T_COMP. The T_COMP field is located on the CDMA Mobile Reporting screen.

:TDDROP (See "Integer Number Setting Syntax" on page 197, :INCREMENT not included, valid range 0 to 63)

This command sets the handoff drop timer value T_TDROP. The T_TDROP field is located on the CDMA Mobile Reporting screen.

:FERasure? (Returns real value)

This command queries the mobile station reported FER (Frame Error Rate) and the value returned is FER expressed in units of percent. The MS FER field is located on the CDMA Mobile Reported FER screen.

:FERasure

:ERRORs? (Returns real value)

This command queries the number of mobile station reported frame errors reported during the last FER report interval. To cause the mobile station to report frame errors when a given number of errors have been counted, see "CDMA;MOB;FER;REP;BY:ERR" and "CDMA;MOB;FER;REP;BY:ERR;STATE" reported FER. The ERRORS REPORTED field is located on the CDMA Mobile Reported FER screen.

:FRAMES? (Returns real value)

This command queries the number of mobile station reported frames reported during the last FER report interval. To cause the mobile station to report frame errors when a given number of frames have been counted, see "CDMA;MOB;FER;REP;INT" and "CDMA;MOB;FER;REP;BY:FRAM;STATE". The FRAMES REPORTED field is located on the CDMA Mobile Reported FER screen.

:SNDM 'Null'

'PllMeasReqO'

'ExtHoDP1'

'ExtHoDP1P2'

:SNDM? (Returns quoted string)

These commands send/query the selected message (or no message). This field is located on the CDMA Mobile Reported Pilot Strength screen. The selection of messages varies, dependent upon the setting of the protocol field on the CDMA Call Control screen.
:CDMA
:MOB
:FER
:REPORT
:INTERval '5 Frames'
'10 Frames'
'20 Frames'
'40 Frames'
'80 Frames'
'160 Frames'
'320 Frames'
'640 Frames'
'905 Frames'

:INTERval? (Returns quoted string)
These commands select/query the MS FER report interval (the number of frames the mobile station will count before reporting frame error rate). The MS FER report interval field is located on the CDMA mobile reported FER screen.

:BY
:ERRORs (See "Integer Number Setting Syntax" on page 197)
This command sets the number of frame errors that define an FER report interval when the "by # Errors" function is turned "on". This field is located on the CDMA mobile reported FER screen.

:STATe 'ON'
'OFF'
:STATe? (Returns quoted string)
These commands set/query the state of the "by # Errors" FER report interval function. This field is located on the CDMA mobile reporting screen.

:FRAMES
:STATe 'ON'
'OFF'
:STATe? (Returns quoted string)
These commands set/query the state of the "by # Frames" FER report interval function. The by # Frames field is located on the CDMA mobile reported FER screen.

:CLEar
This command clears the mobile station FER report. The FER report field is found on the CDMA mobile reported FER screen.
CDMA

:PCONtrol

:MODE 'Open Loop'
'Closed Loop'
'Always Up'
'Always Down'
'Off'

:MODE? (Returns quoted string)

These commands select/query the Closed Loop Power Control mode. The Closed Loop Power Control field is located on the CDMA Transmitter Power Range Test screen.

:CHANge 'n up'
'n down'
ramp

:CHANge? (Returns quoted string)

These commands select/query the Change field, which determines whether the number of Power Control bits specified by the "CDMA:PCON:STEP" command causes the Mobile Station to go up in power, down in power, or ramp. This change takes effect when a mobile station is on a call and the Execute field is selected (i.e. "CDMA:PCON:EXEC"). This field (and the Execute field) are located on the CDMA Transmitter Power Range Test screen.

:STEPS (See "Integer Number Setting Syntax" on page 197, valid range: 1 to 150)

This command sets the number of Power Control steps to send to the mobile station when the Execute field is selected. This field (and Execute) are located on the CDMA Transmitter Power Range Test screen.

:SIZE? (Returns quoted string)

:SIZE '1 dB'
'0.5 dB'
'0.25 dB'

These commands select/query the Power Control Step size field. The Power Control Step size field is displayed only when T2A/EIA-95B is selected in the protocol field. When an IS-95B call is made, the test set will request the mobile station to use this Power Control step size on the traffic channel.

:EXECute

This command sends power control bits to the mobile station. The number of bits to send are entered in the Steps field, and the direction of power control is entered in the Change field. All of these fields are located on the CDMA Transmitter Power Range Test screen.
THESE COMMANDS SELECT/QUERY THE TRANSACTION COMMUNICATION PARAMETERS. THESE COMMANDS ARE LOCATED ON THE CDMA SHORT MESSAGE SERVICE SCREEN.

**MDMode**

- **'ASCII'**
- | **'Hex'**

**MDMode?** (Returns quoted string)

THESE COMMANDS SELECT/QUERY THE SMS (SHORT MESSAGE SERVICE) DATA MODE FIELD. THE DATA MODE FIELD IS LOCATED ON THE CDMA SHORT MESSAGE SERVICE SCREEN.

**EENCoding**

- **'Octet'**
- | **'7-bit ASCII'**

**EENCoding?**

THESE COMMANDS SELECT/QUERY THE SMS (SHORT MESSAGE SERVICE) ENCODING FIELD. THE ENCODING FIELD IS LOCATED ON THE CDMA SHORT MESSAGE SERVICE SCREEN.

**TERmination**

- **'On'**
- | **'Off'**

**TERmination?** (Returns quoted string)

THESE COMMANDS SELECT/QUERY THE TERMINATION FIELD. THE TERMINATION FIELD IS LOCATED ON THE CDMA SHORT MESSAGE SERVICE SCREEN.

**PRIority**

- **'None'**
- | **'Normal'**
- | | **'Interactive'**
- | | | **'Urgent'**
- | | | | **'Emergency'**

**PRIority?** (Returns quoted string)

THESE COMMANDS SELECT/QUERY THE SMS (SHORT MESSAGE SERVICE) PRIORITY FIELD. THE PRIORITY FIELD IS LOCATED ON THE CDMA SHORT MESSAGE SERVICE SCREEN.

**PRIVacy**

- **'None'**
- | **'No Restrict'**
- | | **'Restricted'**
- | | | **'Confidential'**
- | | | | **'Secret'**

**PRIVacy?** (Returns quoted string)

THESE COMMANDS SELECT/QUERY THE PRIVACY FIELD. THE PRIVACY FIELD IS LOCATED ON THE CDMA SHORT MESSAGE SERVICE SCREEN.

**ADDress** (String entry)

**ADDress?** (Returns quoted string)

THESE COMMANDS ARE USED TO QUERY THE ADDRESS field for SMS messages, or set the current setting. THESE COMMANDS PERFORM THE SAME FUNCTION AS THE ADDRESS field. THE ADDRESS FIELD IS LOCATED ON THE CDMA SHORT MESSAGE SERVICE SCREEN.

**SEND**

**SEND <command>**

THIS COMMAND SENDS THE SMS MESSAGE ENTERED IN THE USER DATA FIELD (SEE "CDMA:SMS:TERM:DATA"). THIS COMMAND PERFORMS THE SAME FUNCTION AS SELECTING THE SEND MSG, EXECUTE FIELD. THE SEND MSG FIELD IS LOCATED ON THE CDMA SHORT MESSAGE SERVICE SCREEN.
**CDMA**

- **Duplicate** (See "Integer Number Setting Syntax" on page 197) **Duplicate?**
  These commands set the maximum number of copies of the SMS message entered in the User Data field that will be sent. These commands perform the same function as the Duplicate User Data field. This field is located on the CDMA Short Message Service screen.

- **Data**
  **ASCII** (string entry) **ASCII?** (Returns quoted string) **HEX** (string entry) **HEX?** (Returns quoted string)
  These commands enter data into or query the User Data (ASCII) or User Data (HEX) fields. The User Data field is located on the CDMA Short Message Service screen.

- **Length?** (Returns quoted string)
  This command returns the length of the SMS message, in bytes. This field performs the same function as the Length field. The Length field is located on the CDMA Short Message Service screen.

- **Cause**
  **Value?** (Returns quoted string)
  This command returns a number representing the MS Ack Cause Code. Sending this query returns the same value displayed in the MS Ack Cause Code field, or a -1 if no value is available. The MS Ack Cause Code field is located on the CDMA Short Message Service screen.

- **Description?** (Returns quoted string)
  This command returns a textual description of the MS Ack Cause Code. Sending this query returns the same value displayed in the MS Ack Cause Code field, or a NULL string if no value is available. The MS Ack Cause Code field is located on the CDMA Short Message Service screen.
CDMA

:CDMA
:GPOWer

:CONTrolls'Main'
'Display'
'CDMA Gen'
'Traffic'

:CONTrolls

THESE COMMANDS SET/QUERY THE CDMA GATED POWER MEASUREMENT'S MENU OF FIELD CHOICES. THE CONTROLS FIELD IS FOUND ON THE CDMA GATED POWER SCREEN.

:NAVG (See "Integer Number Setting Syntax" on page 197, valid range 2 to 1000)

:NAVG? (Returns integer value)

THESE COMMANDS SET/QUERY THE NUMBER OF AVERAGES USED DURING EACH CDMA GATED POWER MEASUREMENT TO PROVIDE AN ENSEMBLE AVERAGE.

:GRID 'on'
'off'

:GRID? (Returns quoted string)

THESE COMMANDS TURN THE CDMA GATED POWER SCREEN GRID (DASHED LINES THAT MAP THE GATED POWER TRADE TO RELATIVE TIMES/LEVELS) ON OR OFF.

:MARKer

:TIME (See "Real Number Setting Syntax" on page 199, :STATe not included, valid range ?? to ?? microseconds)

:TIME? (Returns quoted string)

THESE COMMANDS SET/QUERY THE POSITION OF THE CDMA GATED POWER MEASUREMENT'S MARKER IN UNITS OF MICROSECONDS, RELATIVE TO THE CDMA 20 MS FRAME CLOCK.

:DISP

:[CDMPower] THIS COMMAND DISPLAYS THE CDMA SWEPT POWER MEASUREMENT SCREEN.

:SWEPtmpower

:CONTrolls 'Main'
'Trigger'
'Display'
'Auxiliary'

:CONTrolls? (Returns quoted string)

THESE COMMANDS SET/QUERY THE CDMA SWEPT POWER MEASUREMENT SCREEN MENU OF FIELD CHOICES.

:GRID 'on'
'off'

:GRID? (Returns quoted string)

THESE COMMANDS TURN THE CDMA SWEPT POWER MEASUREMENT SCREEN GRID (DASHED LINES THAT MAP THE SWEPT POWER TRADE TO RELATIVE TIMES/LEVELS) ON OR OFF.

:RLEVel '-25'
'-15'
'-5'
'5'
'15'
'25'
'35'

:RLEVel? (Returns quoted string)

THIS COMMAND SELECTS/QUERIES THE REFERENCE LEVEL FOR THE SWEPT POWER

S:\agilent\e8285\QK_REF\BOOK\SECTIONS\cdma.sec
CDMA

:MEASUREMENT.

:TRIGGER
:AMPLitude "-12 dB"
:AMPLitude "-18 dB"
:AMPLitude "-24 dB"
:AMPLitude? (Returns quoted string)

These commands select/query the setting of the amplitude that will be used to trigger the measurement.

:SLOPE "Rising"
:SLOPE "Falling"
:SLOPE? (Returns quoted string)

These commands select/query the setting of the pulse slope that will be used to trigger the measurement.

:MARKer
:TIME (See "Integer Number Setting Syntax" on page 197. :INCREMENT is included, valid range 0 to 100)
:TIME? (Returns quoted string)

These commands select/query the setting of the marker that will be used on the CDMA Swept Power Measurement screen.
:CDMA

:CDTR

:CDTR 'Main'

:CDTR 'Display'

:CDTR 'CDMA Gen'

:CDTR 'Traffic'

:CDTR? (Returns quoted string)

These commands set/query the OPEN LOOP TIME RESPONSE MEASUREMENT's menu of field choices. The controls field is found on the OPEN LOOP TIME RESPONSE screen.

:STEP '-25 dB'

'20 dB'

'-15 dB'

'-10 dB'

'+10 dB'

'+15 dB'

'+20 dB'

'+25 dB'

:STEP? (Returns quoted string)

These commands set/query the step size for the step change in sector A POWER OUTPUT when an OPEN LOOP TIME RESPONSE MEASUREMENT is executed.

:MARKer

:TIME (See "Real Number Setting Syntax" on page 199, :STATe not included, valid range 0 to ??)

:TIME?

These commands set/query the OPEN LOOP TIME RESPONSE MEASUREMENT's marker in units of milliseconds.
CDMA
CELL

:CELL  :CONFIGure

:RFCHannel (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range: 1-4094)
This command sets the analog voice channel the mobile station will be handed off to when a CDMA to analog handoff is executed. This command changes the channel field found on the CDMA CALL CONTROL screen.

:SATColorcode (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range: 0-2)
0=5970 Hz
1=6000 Hz
2=6030 Hz
This command sets the SAT (Supervisory Audio Tone) for CDMA to analog handoffs. The SAT field is found on the CDMA CALL CONTROL screen.

:VMAC (See "Integer Number Setting Syntax" on page 197, :INCRement not included, valid range: 0-7)
This command sets the power level (voice mobile attenuation code) for CDMA to analog handoffs. The power level field is found on the CDMA CALL CONTROL screen.
Configure

:CONfigure

:TBASe

[:MODE] 'Int'
   'Auto'
[:MODE?] (Returns quoted string)

 These commands set/query the timebase selection mode. The timebase field is found on the CONFIGURE screen.

:STATus?

 (Returns quoted string)

 This command queries the current timebase source, internal or external. The character strings returned by the Test Set is also displayed below the timebase field. The timebase field is found on the CONFIGURE screen. See also: Bit 10 in the operation status register.

:SRLocation

 'INTERNAL'
   'CARD'
   'RAM'
   'DISK'
[:SRLocation?] (Returns quoted string)

 These commands set/query the save/recall memory location. The save/recall field is found on the I/O CONFIGURE screen.

:BADDress

 (See "Integer Number Setting Syntax" on page 197, valid range: 0-30)

 This command sets the GPIB address. The GPIB addr field is found on the I/O CONFIGURE screen.

:BEEPer

 'Off'
   'Quiet'
   'Loud'
[:BEEPer?] (Returns quoted string)

 These commands set the beeper volume. The beeper field is found on the CONFIGURE screen.

:DISPlay

 [:MESSages] 'Yes'
   'No'
[:MESSages?] (Returns quoted string)

 These commands set/query the display/user messages field. This field is found on the CONFIGURE screen.
Configure

:CONF? 'Control'
  'TalkListen'
:CONF? (Returns quoted string)
  These commands set the Test Set's GPIB mode. The GPIB mode is found on the I/O CONFIGURE screen.

:DATE (See "Integer Number Setting Syntax" on page 197, 6 digits, format = MM-DD-YY where MM = month, DD = day, YY = year)
  This command sets the date. The date field is found on the CONFIGURE screen.

:EDISk '<character_data>' (format = :,xxx,y where xxx = GPIB address and y = unit number)
  This command enters a mass storage device specifier in the external disk specification field. The mass storage device specified in this field will be used for data transfer when "DISK" is selected from the list of choices available from the select procedure location field found on the TESTS (MAIN MENU) screen. The external disk specification field is found on the TESTS (EXTERNAL DEVICES) screen.

:EDISk? (Returns quoted string)

:ANNunciate 'On'
  'Off'
:ANNunciate? (Returns quoted string)
  These commands select/query a feature of the Test Set that allows the user to turn off the annunciators R, L, and T that appear on the display. These annunciators indicate whether the Test Set is in R (REMOTE), L (LISTEN), or T (TALK) mode. There is no front panel field for setting this feature.

:MEASure

:INDefinite 'On'
  'Off'
:INDefinite? (Returns quoted string)
  These commands select/query a feature of the Test Set that allows alternate methods of handling measurement queries that cannot be terminated because no measurement results are available. When "On", the Test Set will return the value +1.7976931348623157 e+308 when querying measurements that return real values. When "Off", the Test Set will return the value 2147483647 when querying measurements that return integer values. When "On", the Test Set will hang indefinitely until the bus is cleared. This command does not have an associated field on the Test Set's display screen.

:NOTChmode 'AFGen1'
  'None'
:NOTChmode? (Returns quoted string)
  These commands select/query a feature of the Test Set that allows a coupling to exist between the audio source AF GENERATOR 1 and a notch filter settable on the NOTCH FREQUENCY field. The notch coupling field, found on the CONFIGURE screen, determines whether or not this coupling exists. The Notch Filter field is found on the AF ANALYZER screen.
Configure

:CONF?
:OFLevel
:MODE 'On'
:MODE? (Returns quoted string)

These commands set/query the RF Level Offset field. The RF level offset compensates for path loss between the Test Set and the Mobile Station. Offset values are entered according to the front panel connector being used (see following commands). The RF Level Offset field is found on the CONFIGURE screen.

:ANTenna (See "Real Number Setting Syntax" on page 199, :STATe not included)
valid range: -100.0 to 100.0

:ANTenna? (Returns real value)

These commands set/query the reverse path loss from the Mobile Station to the ANTENNA IN connector. This correction is applied when the RF Level Offset field is "On" and ANT is selected in the Input Port field (this displays the Antenna IN field). The input port, Antenna In, and RF Level Offset fields are found on the CONFIGURE screen.

:DUPLex (See "Real Number Setting Syntax" on page 199, :STATe not included)
valid range: -100.0 to 100.0

:DUPLex? (Returns real value)

These commands set/query the forward path loss from the DUPLEX OUT connector to the Mobile Station. This correction is applied when the RF Level Offset field is "On" and DUP is selected in the Output Port field (this displays the Duplex Out field). The output port, Duplex Out, and RF Level Offset fields are found on the CONFIGURE screen.

:RF

:IN (See "Real Number Setting Syntax" on page 199, :STATe not included)
valid range: -100.0 to 100.0

:IN? (Returns real value)

These commands set/query the reverse path loss from the Mobile Station to the RF IN/OUT connector. This correction is applied when the RF Level Offset field is "On" and RF IN is selected in the Input Port field (this displays the RF IN field). The input port, RF In, and RF Level Offset fields are found on the CONFIGURE screen.

:OUT (See "Real Number Setting Syntax" on page 199, :STATe not included)
valid range: -100.0 to 100.0

:OUT? (Returns real value)

These commands set/query the forward path loss from the RF IN/OUT connector to the Mobile Station. This correction is applied when the RF Level Offset field is "On" and RF OUT is selected in the Output Port field (this displays the RF Out field). The output port, RF Out, and RF Level Offset fields are found on the CONFIGURE screen.
Configure

:CONF

:OFRequency (See "Real Number Setting Syntax" on page 199, :STATE not included)

This command sets the frequency offset between the Test Set’s generator and analyzer, displayed in the (GEN)-(ANL) field when the RF display field (CONF:RFD) is set to "Freq". The RF offset field must be "On" for the frequency offset to be applied. The RF offset and (GEN)-(ANL) fields are found on the CONFIGURE screen.

:OMode 'On' 'Off'

:OMode? (Returns quoted string)

These commands set/query the RF offset field, which enables or disables the frequency offset displayed in the (GEN)-(ANL) field. The RF offset field is found on the CONFIGURE screen.

:OPERation

:AUTO

This command enables autoranging routines in the Test Set. The RANGE HOLD field is found on the CONFIGURE screen.

:HOLD

This command disables autoranging routines in the Test Set. The RANGE HOLD field is found on the CONFIGURE screen.

:PCMCia

:CARd

:STATus? (Returns quoted string)

:TYPE? (Returns quoted string)

:SIZE? (Returns quoted string)

These commands query information found below the PCMCIA field. This information is displayed on the I/O CONFIGURE screen.

:PRINt

:ADDRess (See "Integer Number Setting Syntax" on page 197, valid range: 0-30)

This command sets the printer address used when "HP-IB" is selected in the PRINTER PORT: field. The PRINTER PORT: and PRINTER ADDR: fields are found on the PRINT CONFIGURE screen.

:LINES|LINE (See "Integer Number Setting Syntax" on page 197, valid range: 5-120)

This command sets the number of lines printed per page. The LINES/PAGE field is found on the PRINT CONFIGURE screen.

:DESTination|PORTs 'Serial 9'

These commands set/query the PRINTER PORT: field setting. The PRINTER PORT: field is found on the PRINT CONFIGURE screen.
These commands set/query the FF AT START: field, which determines if there will be a form feed at the start of printing. The FF AT START: field is found on the PRINT CONFIGURE screen.

These commands set/query the FF AT END: field, which determines if there will be a form feed at the end of printing. The FF AT END: field is found on the PRINT CONFIGURE screen.

These commands set/query the PRINT TITLE: field, which determines what will be printed at the top of the printout. The PRINT TITLE: field is found on the PRINT CONFIGURE screen.

These commands set/query the MODEL: field, which determines what model of printer is connected to the test set. The MODEL: field is found on the PRINT CONFIGURE screen.

These commands set/query the RFG VOLTS field. The RFG VOLTS field is found on the CONFIGURE screen.

These commands set/query the RF GENERATOR voltages are expressed across a 50 ohm load or open circuit, and this setting is displayed in the RFGEN VOLTS field. The amplitude field units must be set to V, mV, or dBV for this field to have an effect. The RFGEN VOLTS field is found on the CONFIGURE screen.

These commands set/query the selection in the SERIAL PORT field. The SERIAL PORT field is found on the I/O CONFIGURE screen.
Configure

:CONF | SPORT9 | D9 | SP9
---|---|---|---
:BAUD '150'
'300'
'600'
'1200'
'2400'
'4800'
'9600'
'19200'
:BAUD? (Returns quoted string)
These commands set/query the serial port 9 baud rate. The serial baud field is found on the I/O configure screen.

:PARity 'None'
'Odd'
'Even'
'Always 1'
'Always 0'
:PARity? (Returns quoted string)
These commands set/query the serial port parity. The parity field is found on the I/O configure screen.

:DATA '7 Bits'
'8 Bits'
:DATA? (Returns quoted string)
These commands set/query the number of bits used for each word of serial data when using the serial port. The data length field is found on the I/O configure screen.

:STOP '1 Bit'
'2 Bits'
:STOP? (Returns quoted string)
These commands set/query the number of stop bits used for serial communications when using the serial port. The stop length field is found on the I/O configure screen.

:FCONtrol | FLOW 'Xon'
'Xoff'
:FCONtrol? | FLOW? (Returns quoted string)
These commands set/query the flow control field for serial port 9. This field is found on the I/O configure screen.

:SIN|SINPut 'Inst'
'I BASIC'
:SIN?|SINPut? (Returns quoted string)
These commands set/query the destination of data characters received by the test set via the serial port. 'Inst' allows use of an external keyboard. 'I BASIC' allows the IBASIC controller to read the serial port while a program is running. The serial in field is found on the I/O configure screen.
IBECHO? (Returns quoted string)

These commands set/query the screen and error message echoing from IBASIC. The IBASIC echo field is found on the I/O CONFIGURE screen.

IBECHO 'On' 'Off'
IBECHO? (Returns quoted string)

These commands set/query the character and screen echoing when using an external ASCII RS-232 terminal or computer to enter or edit IBASIC programs. The init echo field is found on the I/O CONFIGURE screen.

SPOR10 | SPORT10 | SB10 | SP10

BAUD '150' '300' '600' '1200' '2400' '4800' '9600' '19200'
BAUD? (Returns quoted string)

PARITY 'None' 'Odd' 'Even' 'Always 1' 'Always 0'
PARITY? (Returns quoted string)

DATA '7 Bits' '8 Bits'
DATA? (Returns quoted string)

STOP '1 Bit' '2 Bits'
STOP? (Returns quoted string)
Configure

:CONFIGure

:SPOR10 | FLOW 'Xon'
:SPOR10 | FLOW 'Xoff'
:FControl? | FLOW? (Returns quoted string)

These commands set/query the flow control field for serial port 9.

This field is found on the I/O CONFIGURE screen.

:TIME (See "Real Number Setting Syntax" on page 199, :DUnits, :INcrement, :UNITS,
:STATe not included)

This command sets the time-of-day. The time field is found on the
CONFIGURE screen.

:INPUT 'RF In'
:INPUT? (Returns quoted string)

These commands set/query the input port field. The input port field is found on the ADJACENT CHANNEL POWER, CONFIGURE, TX TEST, DUPLEX TEST, and RF ANALYZER screens. An un-named version of this field is found on the CDMA REVERSE CHANNEL SPECTRUM and SPECTRUM ANALYZER screens.

:OUTPUT 'RF Out'
:OUTPUT? (Returns quoted string)

These commands set/query the RF output port. The output port field is found on the CONFIGURE, RX TEST, DUPLEX TEST, and RF GENERATOR screen.

:ATTenuator '0 dB'
:ATTenuator? (Returns quoted string)

These commands set/query the amount of input attenuation in the path of the selected input port. Setting the input attenu field to "ON" (CONF:ATT:MODE 'ON') prevents the RF auto-ranging process from changing the attenuation setting. The input attenu field is found on the CONFIGURE, RF ANALYZER, SPECTRUM ANALYZER, and CDMA REVERSE CHANNEL SPECTRUM screens.
These commands set/query the RF auto-ranging mode. Setting the input attenu field to "Hold" (CONF:ATT:MODE 'Hold') prevents the RF auto-ranging process from changing the attenuation setting. The input attenu field is found on the CONFIGURE, RF ANALYZER, SPECTRUM ANALYZER, and CDMA REVERSE CHANNEL SPECTRUM screens.

These commands set/query the RF channel standard (RF CHANNEL STANDARD) field. This setting determines the test set's RF generator and RF analyzer frequency mapping when "Chan" is selected in the RF display field. The RF channel standard field is displayed only when the RF display field on the CONFIGURE screen has "Chan" selected. The RF display field is found on the CONFIGURE and CDMA CALL CONTROL screens.

:CONF
:ATTenuator
 MODE 'Auto'
 'Hold'

:MODE? (Returns quoted string)

These commands set/query the RF auto-ranging mode. Setting the input attenu field to "Hold" (CONF:ATT:MODE 'Hold') prevents the RF auto-ranging process from changing the attenuation setting. The input attenu field is found on the CONFIGURE, RF ANALYZER, SPECTRUM ANALYZER, and CDMA REVERSE CHANNEL SPECTRUM screens.

:RFCStandard 'MS AMPS'
 'US PCS'
 'Kor PCS P0'
 'Kor PCS P1'
 'Japan CDMA'
 'MSL NAMES'
 'MSM NAMES'
 'MSU NAMES'
 'MS TACS'
 'MS ETACS'
 'MS RTACS'
 'MS JTACS'
 'USER-DEF'

:RFCStandard? (Returns quoted string)

These commands set/query the RF channel standard (RF CHANNEL STANDARD) field. This setting determines the test set's RF generator and RF analyzer frequency mapping when "Chan" is selected in the RF display field. The RF channel standard field is displayed only when the RF display field on the CONFIGURE screen has "Chan" selected. The RF display field is found on the CONFIGURE and CDMA CALL CONTROL screens.
Configure

:CONF
:USER :BASE (See "Real Number Setting Syntax" on page 199, :DUNits, :UNITs, :STATE, :INCRement not included)

This command sets the base frequency setting, displayed in the base freq field when the rf display field (CONF:RFD) is set to "chan", and the rf chan std (CONF:RFCS) field is set to "USER-Def" (user-defined). The base freq and rf chan std fields are found on the configure screen.

:SPACING (See "Real Number Setting Syntax" on page 199, :DUNits, :UNITs, :STATE, :INCRement not included)

This command sets the frequency spacing between channels, displayed in the chan space field when the rf display field (CONF:RFD) is set to "chan", and the rf chan std (CONF:RFCS) field is set to "USER-Def" (user-defined). The chan space and rf chan std fields are found on the configure screen.

:DELTA (See "Real Number Setting Syntax" on page 199, :DUNits, :UNITs, :STATE, :INCRement not included)

This command sets the frequency offset between the test set's generator and analyzer, displayed in the (GEN)-(ANL) field when the rf chan std field (CONF:RFCS) is set to "USER-Def" (user-defined), and the rf display field is set to "chan". The (GEN)-(ANL) and rf chan std fields are found on the configure screen.
Configure

```plaintext
:CONF
:RFDisplay 'Freq'
    'Chan'
:RFDisplay? (Returns quoted string)
These commands set/query the format for entering and displaying the test set's RF Generator and RF Analyzer frequency settings (by frequency or by channel number). The RF Display field is found on the CONFIGURE screen.

:EXTERNAL
:FRAME
    [:CLOCK]
        ' 1.25 ms' (Note leading space)
        '20.00 ms'
        '26.67 ms'
        '80.00 ms'
        '2.00 s' (Note leading space)
    [:CLOCK]? (Returns quoted string)
These commands set/query the CDMA FRAME CLOCK OUTPUT FREQUENCY OUTPUT on the rear-panel CDMA CLOCK MUX OUTPUT connector. The FRAME CLOCK field is found on the CONFIGURE screen.

:ACStandard | APMCbands 'None'
    'Cell Bands'
    'PCS Bands'
    'All Bands'
    'MS AMPS'
    'US PCS'
    'Kor PCS F0'
    'Kor PCS F1'
    'Japan CDMA'
    'NML NAMPS'
    'NMT NAMPS'
    'MS TACS'
    'MS ETACS'
    'MS NTACS'
    'MS JTACS'
:ACStandard | APMCbands? (Returns quoted string)
These commands set/query the alternate channel power measurement and access phone power measurement calibration bands. The frequency range(s) that correspond to this selection will be calibrated, along with the frequencies that map to the RF CHAN field when the Power Measure calibration routine is run. The ALT Pow Measure Cal Bands field is found on the CONFIGURE screen.
```
Configure

:CONF?
:APNC: 'None'
'Cell Bands'
'PCS Bands'
'All Bands'
'MS AMPS'
'US PCS'
'Kor PCS P0'
'Kor PCS P1'
'Japan CDMA'
'MSL NAMPS'
'MSU NAMPS'
'MS TACS'
'MS ETACS'
'MS NTACS'
'MS JTACS'

:APNC? (returns quoted string)
These commands set/query the alternate channel power measurement and access probe power measurement calibration bands. The frequency bands(s) that correspond to this selection will be calibrated, along with the frequencies that map to the RF Chan Std field when the Power Meas Calibration routine is run. The Alt Pow Meas Cal Bands field is found on the CONFIGURE screen.

:MMTOFFSET 'Normal'
'5 us'
'-10 us'

:MMTOFFSET? (returns quoted string)
These commands set/query the negative offset at which the Test Set will start looking for a CDMA signal. They correspond to the Time Offset field on the CONFIGURE screen.
The commands set/query the input attenuation for the RF IN/OUT and ANT IN input ports. The Input Attenu field is found on the CONFIGURE screen and the CDMA REVERSE CHANNEL SPECTRUM screen when the Controls field is set to Auxiliary.

```
:ATTenuator '0 dB'
 '5 dB'
 '10 dB'
 '15 dB'
 '20 dB'
 '25 dB'
 '30 dB'
 '35 dB'
```

```
:ATTenuator? (Returns quoted string)
```

These commands set/query the input attenuation for the RF IN/OUT and ANT IN input ports. The Input Attenu field is found on the CONFIGURE screen and the CDMA REVERSE CHANNEL SPECTRUM screen when the Controls field is set to Auxiliary.

```
:MODE 'Auto'
 'Hold'
```

```
:MODE? (Returns quoted string)
```

These commands set/query the RF auto-ranging mode. Setting the Input Attenu field to "Hold" (CONF:ATT:MODE 'Hold') prevents the RF auto-ranging process from changing the attenuation setting. The Input Attenu field is found on the CONFIGURE screen and the CDMA REVERSE CHANNEL SPECTRUM screen when the Controls field is set to Auxiliary.

```
:CONTrol 'Main'
 'CDMA Gen'
 'Marker'
 'Auxiliary'
```

```
:CONTrol? (Returns quoted string)
```

These commands set/query the spectrum analyzer’s menu of choices. The Controls field is found on the CDMA REVERSE CHANNEL SPECTRUM screen.

```
:INPut 'RF In'
 'Ant'
```

```
:INPut? (Returns quoted string)
```

These commands set/query an un-named field that correlates with the Input Port field found on the CONFIGURE screen and others. This un-named field is found on the CDMA REVERSE CHANNEL SPECTRUM screen, and is displayed when "Main" is selected in the Controls field.
CSpectrum

:CSP

:OUTPut 'RF Out'
  |  'Dupl'

:OUTPut? (Returns quoted string)
  |  These commands set/query the RF output port. The output port
  |  field is displayed on the CDMA reverse channel spectrum screen when
  |  "CDMA Gen" is selected in the controls field. (This field is coupled to
  |  the output port field on the configure screen.)

:MARKer

:RLEVel
  |  This command sets the reference level to the level that
  |  the marker is currently positioned. The marker to field is
  |  found on the CDMA reverse channel spectrum screen, and is
  |  displayed when "Marker" is selected in the controls field.

:NPEak
  |  This command moves the marker to the next peak to the right, the
  |  marker to field is found on the CDMA reverse channel spectrum
  |  screen, and is displayed when "Marker" is selected in the controls
  |  field.

:PEAK
  |  This command moves the marker to the highest peak on the display. The
  |  marker to field is found on the CDMA reverse channel spectrum
  |  screen, and is displayed when "Marker" is selected in the controls
  |  field.

:POSITION (See "Real Number Setting Syntax" on page 199, :STATe not included, valid range 0-10)
  |  This command positions the marker. The marker to field is found on the
  |  CDMA reverse channel spectrum screen, and is displayed when
  |  "Marker" is selected in the controls field.

:RLEVel (See "Real Number Setting Syntax" on page 199, :STATe not included, valid range 52 to -54.9 dBm)
  |  This command sets the amplitude reference level for the top
  |  line of the display. The ref level field is found on the
  |  CDMA reverse channel spectrum screen, and is displayed when
  |  "Main" is selected in the controls field.

:SPAN (See "Real Number Setting Syntax" on page 199, :STATe not included, valid range 5 kHz to 5 MHz)
  |  This command sets the span of frequencies displayed on the screen. The
  |  span field is found on the CDMA reverse channel spectrum screen,
  |  and is displayed when "Main" is selected in the controls field.
These commands set/query the peak hold and video averaging functions of the spectrum analyzer. The No Pk/Avg field is found on the CDMA REVERSE CHANNEL SPECTRUM screen, and is displayed when "Auxiliary" is selected in the controls field.

:TRACe
:MBHold 'No Pk/Avg'
 'Pk Hold'
 'Avg 1'
 'Avg 2'
 'Avg 3'
 'Avg 4'
 'Avg 5'
 'Avg 10'
 'Avg 20'
 'Avg 50'
 'Avg 100'
 'Off'

:MBHold? (Returns quoted string)

These commands set/query the normalize function of the spectrum analyzer, which allows display of the difference between two signals. The Normalize field is found on the CDMA REVERSE CHANNEL SPECTRUM screen, and is displayed when "Auxiliary" is selected in the controls field.

:NORMalize 'A Only'
 'A-B'

:NORMalize? (Returns quoted string)

This command saves the currently displayed trace for use in the "A-B" operation (see CSP:NORM 'A-B'). The Normalize field is found on the CDMA REVERSE CHANNEL SPECTRUM screen, and is displayed when "Auxiliary" is selected in the controls field.

:SAVE
Decoder

:DECode

:ARM 'Single'

:MODE 'Single'

:MODE? (Returns quoted string)

:MODE 'Func Gen'

'Tone Seq'

'DTDM'

'CDCCS'

'Digi Page'

'AMPS-TACS'

'NAMP-NTAC'

'MET 1327'

'LTR'

'SDACS'

:MODE? (Returns quoted string)

:POLarity 'Norm'

'Invert'

:POLarity? (Returns quoted string)

:LEVell

:AM (See "Real Number Setting Syntax" on page 199, :STATe not included)

:FM (See "Real Number Setting Syntax" on page 199, :STATe not included)

:VOLT's (See "Real Number Setting Syntax" on page 199, :STATe not included)

:STOP
Decoder

:DEC
:AMPS|TACS

:BLOCKs (See "Integer Number Setting Syntax" on page 197, valid range: 1-18)

:MESSEge 'FOCC A&B'
   'FOCC A'
   'FOCC B'
   'RECC'
   'FVC'
   'RVC'

:MESSEge? (Returns quoted string)

:GATE (See "Real Number Setting Syntax" on page 199, :STATe not included)

:STANdard 'AMPS'
   'TACS'
   'JTACS'

:STANdard? (Returns quoted string)

:TRIGger

:PATTern '<character_data>' (127 chars max, valid chars: .01)

:PATTern? (Returns quoted string)

:DPAGing

:GATE (See "Real Number Setting Syntax" on page 199, :STATe not included)

:STANdard 'GSC'
   'POCSAG'

:STANdard? (Returns quoted string)

:DTMF

:GATE (See "Real Number Setting Syntax" on page 199, :STATe not included)

:EDACs

:DISPlay 'Radio'
   'Repeater'

:DISPlay? (Returns quoted string)

:DELay '2 slots'
   '3 slots'
   '5 slots'
   '8 slots'

:DELay? (Returns quoted string)

:STANdard '9600'
   '4800'

:STANdard? (Returns quoted string)
Decoder

:DEC

:FGENERator

:GATE [See "Real Number Setting Syntax" on page 199, :STATe not included]

:LTR

:DISPlay 'Radio'

:DISPlay? (Returns quoted string)

:STANdard 'LTR'

:STANdard? (Returns quoted string)

:MPT132?

:TIME

:MODE 'SLOT'

:MODE? (Returns quoted string)

:MRT

:FFNumber (See "Integer Number Setting Syntax" on page 197, valid range: 1-5000)

:STANdard 'STD450'

'FRANCE'

'AUSTRIA'

'SPAIN'

'TURKEY'

'THAILAND'

'MALAYSIA'

'SAUDI1'

'SAUDI2'

'CRO-SLOV'

'HUNGARY'

'BULGARIA'

:STANdard? (Returns quoted string)
Decoder

:DEC

:SNM

:TEST

:ENTer "<character_data>" (20 chars max, valid chars: A-Z0-9_~@%^()*+-<>/;:'",.?["] [space])

:ENTer? (Returns quoted string)

:LOCation 'CARD'

:LOCation? (Returns quoted string)

:NAME "<character_data>"

:NAME? (Returns quoted string)

:RUN

:STOP

:NAMP|NTACs

:CHANnel 'Cntl'

:CHANnel? (Returns quoted string)

:DTMF

:GATE (See "Real Number Setting Syntax" on page 199. :STATe not included)

:GATE (See "Real Number Setting Syntax" on page 199. :STATe not included)

:RVC 'DSAT'

:RVC 'DATA'

:RVC (Returns quoted string)

:RVC? (Returns quoted string)

:STANdard 'NAMPS'

:STANdard? (Returns quoted string)

:TRIGger

:PATTern "<character_data>" (127 chars max, valid chars: .01)

:PATTern? (Returns quoted string)
::DEC
::TSEquential
::GATE [:See "Real Number Setting Syntax" on page 199, ::STATe not included]
::STANDARD 'CCIR1'
  'CCIR2'
  'CCITT'
  'EEA'
  'EIA'
  'Euro'
  'NATEL'
  'ZVEI1'
  'ZVEI2'
::STANDARD? (Returns quoted string)
Decoder
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANChor</td>
<td>displays the ANALOG SCREENS: CALL CONTROL screen</td>
</tr>
<tr>
<td>ACPower</td>
<td>displays the ANALOG SCREENS: ADJACENT CHANNEL POWER screen</td>
</tr>
<tr>
<td>APAnalyzor</td>
<td>displays the ANALOG SCREENS: AF ANALYZER screen</td>
</tr>
<tr>
<td>AUTHenticat</td>
<td>displays the ANALOG SCREENS: CALL CONTROL: AUTHENTICA TION screen</td>
</tr>
<tr>
<td>CAUThenicate</td>
<td>displays the CDMA AUTHENTICA TION screen</td>
</tr>
<tr>
<td>CBIT</td>
<td>displays the ANALOG SCREENS: CALL BIT screen (p/o CALL CONTROL)</td>
</tr>
<tr>
<td>CCNTrol</td>
<td>displays the CDMA CALL CONTROL screen</td>
</tr>
<tr>
<td>CCONfig</td>
<td>displays the CDMA CALL SITE CONFIGURATION screen</td>
</tr>
<tr>
<td>CGGenerator</td>
<td>displays the CDMA SCREENS: CDMA GENERATOR CONTROL screen</td>
</tr>
<tr>
<td>CGPower</td>
<td>displays the CDMA GATED POWER screen</td>
</tr>
<tr>
<td>CDAta</td>
<td>displays the ANALOG SCREENS: CALL DATA screen (p/o CALL CONTROL)</td>
</tr>
<tr>
<td>CFER</td>
<td>displays the CDMA MOBILE REPORTED FER screen</td>
</tr>
<tr>
<td>CMESasure</td>
<td>displays the ANALOG SCREENS: ANALOG MEAS screen (p/o CALL CONTROL)</td>
</tr>
<tr>
<td>CMOBreport</td>
<td>displays the CDMA MOBILE REPORTING screen</td>
</tr>
<tr>
<td>CONFIGure</td>
<td>displays the CONFIGURE screen</td>
</tr>
<tr>
<td>COLT</td>
<td>displays the CDMA OPEN LOOP TIME RESPONSE screen</td>
</tr>
<tr>
<td>CRXTest</td>
<td>displays the CDMA CELLULAR MOBILE RECEIVER TEST screen</td>
</tr>
<tr>
<td>CSMessage</td>
<td>displays the CDMA SHORT MESSAGE SERVICE screen</td>
</tr>
<tr>
<td>CSPerpromise</td>
<td>displays the CDMA REVERSE CHANNEL SPECTRUM screen</td>
</tr>
<tr>
<td>CTXRange</td>
<td>displays the CDMA TRANSMITTER POWER RANGE TEST screen</td>
</tr>
<tr>
<td>CTXTest</td>
<td>displays the CDMA CELLULAR MOBILE TRANSMITTER TEST screen</td>
</tr>
<tr>
<td>DECoder</td>
<td>displays the ANALOG SCREENS: SIGNALING DECODER screen</td>
</tr>
</tbody>
</table>
Display

:DISP
  DISPLAY?
  :FERasure
  :INTerim
  [:RESults] 'YES'
  [:RESults]? (Returns quoted string)

These commands set/query the method of displaying FER test.
results. When “Yes” is selected, interim results will be displayed. When “No” is selected, only the final results will be displayed. The Display Interim Results field is found on the CDMA CELLULAR MOBILE RECEIVER TEST screen.
Measure

:MEASure

:RESET

This command restarts all measurements that are in progress.
This function is also performed by pressing the MEAS
RESET key

:ACTPower

:LRATio? (Returns real value)

This command queries the adjacent channel power measurement, specifically
the ratio of signal power at a frequency below the DUT’s (Device-Under-
Test’s) channel frequency to signal power at the DUT’s selected channel
frequency. The lower ACP Ratio field is displayed on the adjacent
channel power screen.

:LRATio (See “Number Measurement Syntax” on page 203)

:URATio? (Returns real value)

This command queries the adjacent channel power measurement, specifically
the ratio of signal power at a frequency above the DUT’s (Device-Under-
Test’s) channel frequency to signal power at the DUT’s selected channel
frequency. The upper ACP Ratio field is displayed on the adjacent
channel power screen.

:URATio (See “Number Measurement Syntax” on page 203)

:LLEVel? (Returns real value)

This command queries the absolute signal power at a frequency below the test
set’s tune frequency. The lower ACP Level field is displayed on the
adjacent channel power screen.

:LLEVel (See “Number Measurement Syntax” on page 203)

:ULEVel? (Returns real value)

This command queries the absolute signal power at a frequency above the test
set’s tune frequency. The upper ACP Level field is displayed on the
adjacent channel power screen.

:ULEVel (See “Number Measurement Syntax” on page 203)
Measure

:MEAS?

:AFRequency

:ACLevel? (Returns real value)

This command queries the AC level measurement. The AC level field is displayed on the AF Analyzer, RF Analyzer, TX Test, and Duplex Test screens when one of the following audio sources is selected from the AF Anal In field: SSB Demod, Audio In, Radio Int, Ext Mod, Mic Mod, or Audio Out. (Use the "AFAN:INPUT "" command).

:ACLevel (See "Number Measurement Syntax" on page 203)

:AM? (Returns real value)

This command queries the AM depth of modulation. The AM depth field is displayed on the AF Analyzer, RF Analyzer, TX Test, and Duplex Test screens when AM Demod or AM Mod are selected from the AF Anal In field. (Use the "AFAN:INPUT "" command) and SNR (Signal-To-Noise) is not selected from the audio frequency measurements.

:AM (See "Number Measurement Syntax" on page 203)

:CURRent? (Returns real value)

This command queries the current measurement. Current is displayed in an unnamed field on the AF Analyzer, RF Analyzer, TX Test, and Duplex Test screens when the current measurement is selected (Use the "MEAS:AFREQUENCY:SELECT 'CURRent'" command).

:CURRent (See "Number Measurement Syntax" on page 203)

:DCAM? (Returns real value)

This command queries the DC AM measurement. The DC AM measurement is displayed in an unnamed field on the AF Analyzer, RF Analyzer, TX Test, and Duplex Test screens when DC Level is selected (Use the "MEAS:AFREQUENCY:SELECT 'DC Level'" command) and AM Demod or AM Mod are selected from the AF Anal In field. (Use the "AFAN:INPUT "" command).

:DCAM (See "Number Measurement Syntax" on page 203)

:DCFM? (Returns real value)

This command queries the DC FM measurement. The DC FM measurement is displayed in an unnamed field on the AF Analyzer, RF Analyzer, TX Test, and Duplex Test screens when DC Level is selected (Use the "MEAS:AFREQUENCY:SELECT 'DC Level'" command) and FM Demod or FM Mod are selected from the AF Anal In field. (Use the "AFAN:INPUT "" command).

:DCFM (See "Number Measurement Syntax" on page 203)
This command queries the DC voltage measurement. The DC voltage measurement is displayed in an unnamed field on the AF ANALYZER, RF ANALYZER, TX TEST, and DUPLEX TEST screens when DC Level is selected (use the "MEAS:AFR:MEAS 'DC Level'") command and one of the following audio sources are selected from the AF ANALYZER in field: SSB DEMOD, AUDIO IN, RADIO INT, EXT MOD, MIC MOD, or AUDIO OUT. (Use the "AFAN:INPUT" command).

:DCVolts? (Returns real value)

This command queries the distortion measurement. DISTN is displayed in an unnamed field on the AF ANALYZER, RF ANALYZER, TX TEST, and DUPLEX TEST screens when DISTN is selected (use the "MEAS:AFR:MEAS 'DISTN'") command).

:DISTortion?|DISTN? (Returns real value)

This command queries the FM deviation measurement. The FM deviation measurement, which is sometimes dupplexed with the SAT deviation measurement on the same field, is available on the CALL CONTROL, AF ANALYZER, RF ANALYZER, TX TEST, and DUPLEX TEST screens when FM MOD or FM DEMO is selected from the AF ANALYZER in field (use the "AFAN:INPUT" command) and SNR (SIGNAL-TO-NOISE) is NOT selected from the audio frequency measurements.

:FM? (Returns real value)

This command queries the audio frequency measurement. AF FREQ is displayed in an unnamed field on the AF ANALYZER, RF ANALYZER, TX TEST, and DUPLEX TEST screens when AF FREQ is selected (use the "MEAS:AFR:MEAS 'AF FREQ'") command).

:FREQuency? (Returns real value)

This command queries the audio frequency measurement. AF FREQ is displayed in an unnamed field on the AF ANALYZER, RF ANALYZER, TX TEST, and DUPLEX TEST screens when AF FREQ is selected (use the "MEAS:AFR:MEAS 'AF FREQ'") command).

:FREQuency (See "Number Measurement Syntax" on page 203)

:SELect 'SINAD'

These commands select the audio frequency analyzer measurement. The unnamed field that displays these measurements is located on the AF ANALYZER, RF ANALYZER, TX TEST, and DUPLEX TEST screens.

:SELect 'Distn'

:SELect? (Returns quoted string)

This command queries the audio frequency analyzer measurement. The unnamed field that displays these measurements is located on the AF ANALYZER, RF ANALYZER, TX TEST, and DUPLEX TEST screens.
Measure

:MEAS

:SINAD? (Returns real value)

This command queries the SINAD measurement. SINAD is displayed in an
unnamed field on the AF Analyzer, RF Analyzer, TX Test, and
DUPLEX Test screens when SINAD is selected (use the
"MEAS:AFR:SELECT 'SINAD'") command.

:SINAD (See "Number Measurement Syntax" on page 203)

:SNR? (Returns real value)

This command queries the SNR (SIGNAL-TO-NOISE) measurement. SNR is
displayed in an unnamed field on the AF Analyzer, RF Analyzer, TX
Test, and DUPLEX Test screens when SNR is selected (use the
"MEAS:AFR:SELECT 'SNR'") command.

:SNR (See "Number Measurement Syntax" on page 203)

:MODulation

:SELect 'SAT Deviation'

:FM Deviation'

:SELect?

These commands select the FM deviation and SAT deviation
measurements. The unnamed field that provides these choices is displayed
on the AF Analyzer, RF Analyzer, TX Test, ANALOG TX Test,
ANALOG CALL CONTROL, and DUPLEX Test screens when FM Dev is
selected in the AF AUL in field.

:SATDeviation?

This command queries the SAT deviation measurement. The unnamed field
that displays this measurement is found on the AF Analyzer, RF
Analyzer, TX Test (ANALOG), CALL CONTROL, and
DUPLEX Test screens when FM Dev is selected in the AF AUL in field
and SAT deviation is selected.
Measure

:SMEAS
:DOC
:WAV
:LEvel
:*AM? (Returns real value)
This command queries the instantaneous AM depth of modulation at the
OSCILLOSCOPE. The Marker LVL field on the
OSCILLOSCOPE screen displays AM at the marker location when AM
Demo or AM Mod are selected from the AF Anl In field (Use the
"AFAN:INPUT """ command).
:*AM (See "Number Measurement Syntax" on page 203, :METer not included)
:*FM? (Returns real value)
This command queries the instantaneous FM deviation at the
OSCILLOSCOPE. The Marker LVL field on the
OSCILLOSCOPE screen displays FM at the marker location when FM
Demo or FM Mod are selected from the AF Anl In field (Use the
"AFAN:INPUT """ command).
:*FM (See "Number Measurement Syntax" on page 203, :METer not included)
:*VOLT? (Returns real value)
This command queries the voltage level at the OSCILLOSCOPE
Marker location. The Marker LVL field on the OSCILLOSCOPE
screen displays voltage at the marker location when one of the
following audio sources are selected from the AF Anl In field:
SSB Demo, Audio In, Radio 1st Ext Mod, Mic Mod, or Audio
Out (Use the "AFAN:INPUT """ command).
:*VOLTs (See "Number Measurement Syntax" on page 203, :METer not included)
:*TIME? (Returns real value)
This command queries the time elapsed from the trigger point to
the current OSCILLOSCOPE marker location. The Time Maker is
displayed on the OSCILLOSCOPE screen.
:*TIME (See "Number Measurement Syntax" on page 203, :METer not included)
:*TRACe? (Returns array of 417 real values)
0=first value (left side of trace display)
416=last value (right side of trace display)
Measure

:MEAS
:RFFrequency
:ABSolute? (Returns real value)

This command queries the absolute transmitter frequency. A field named Tx Frequency displays the absolute transmitter frequency when the Tune Mode field is set to Auto (use the "RFAN:TMOD 'AUTO'" command). (The Tune Mode field is displayed when the RF Display field on the Configure screen has "Freq" selected). The Tx Frequency field is displayed on the RF Analyzer, RF Generator, TX Test, and Duplex Test screens.

:ABSolute (See "Number Measurement Syntax" on page 203)

:ERROR? (Returns real value)

This command queries the transmitter frequency error measurement, relative to the Tune Frequency field setting. A field named Tx Freq Error displays frequency error when the Tune Mode field is set to Manual (use the "RFAN:TMOD 'Manual'" command). (The Tune Mode field is displayed when the RF Display field on the Configure screen has "Chan" selected). The Tx Freq Error field is displayed on the RF Analyzer, RF Generator, TX Test, and Duplex Test screens.

:ERROR (See "Number Measurement Syntax" on page 203)

:POWer? (Returns real value)

This command queries the transmitter power measurement. The TX Power field is displayed on the RF Analyzer, RF Generator, TX Test, and Duplex Test screens.

:POWer (See "Number Measurement Syntax" on page 203)
Measure

:MEASure
:SAAnalyze
:MARKer
[:NORMal] :FREQuency? (Returns real value)
This command queries the frequency at the current SPECTRUM ANALYZER
FREQ marker position. The FREQ marker is displayed on the SPECTRUM
ANALYZER screen.

:FREQuency (See "Number Measurement Syntax" on page 203, :METer not
included)

:LEVel? (Returns real value)
This command queries the RF level at the current SPECTRUM ANALYZER
LEV marker position. The LEV marker is displayed on the SPECTRUM
ANALYZER screen.

:LEVel (See "Number Measurement Syntax" on page 203, :METer not included)

:DELTa :FREQuency? (Returns real value)
This command queries the frequency at the current SPECTRUM ANALYZER
FREQ marker position. The FREQ marker is displayed on the SPECTRUM
ANALYZER screen.

:FREQuency (See "Number Measurement Syntax" on page 203, :METer not
included)

:LEVel? (Returns real value)
This command queries the RF level at the current SPECTRUM ANALYZER
LEV marker position. The LEV marker is displayed on the SPECTRUM
ANALYZER screen.

:LEVel (See "Number Measurement Syntax" on page 203, :METer not included)

:TRACe? (Returns array of 417 real values)
0-first value (left side of trace display)
416-last value (right side of trace display)
Measure

:MEAS

:DECoder

:AMPS|TACS

:NBITS? (Returns integer value)

:DATA? (Returns quoted string)

:CDATS? (Returns quoted string)

:CDCC\s

:BITS? (Returns quoted string)

:CDDes? (Returns quoted string)

:RATE? (Returns real value)

:RATE (See “Number Measurement Syntax” on page 203, :METer not included)

:SPADING

:DATA? (Returns quoted string)

:PAGE (See “Integer Number Setting Syntax” on page 197, valid range: 1-5000)

:CHAR (See “Integer Number Setting Syntax” on page 197, valid range: 1-5000)

:RATE? (Returns real value)

:RATE (See “Number Measurement Syntax” on page 203, :METer not included)
Measure

:MEAS
:DEC
:LDW

:FREQuency
:ABSolute? (Returns up to 19 real values)
:ABSolute (See "Multiple Number Measurement Syntax" on page 205)
:ERRor? (Returns up to 19 real values)
:ERRor (See "Multiple Number Measurement Syntax" on page 205)
:DISPlay 'Freq'
 'Freq Err'
:DISPlay? (Returns quoted string)

:HIGH
:FREQuency
:ABSolute? (Returns up to 19 real values)
:ABSolute (See "Multiple Number Measurement Syntax" on page 205)
:ERRor? (Returns up to 19 real values)
:ERRor (See "Multiple Number Measurement Syntax" on page 205)
:DISPlay 'Freq'
 'Freq Err'
:DISPlay? (Returns quoted string)

:TIME
:OFF? (Returns up to 19 real values)
:OFF (See "Multiple Number Measurement Syntax" on page 205)
:ON? (Returns up to 19 real values)
:ON (See "Multiple Number Measurement Syntax" on page 205)
:SYMbol? (Returns quoted string)

:EDACs
:DATA? (Returns quoted string of 74 characters)

:FGENerator
:FREQuency? (Returns real value)
:FREQuency (See "Number Measurement Syntax" on page 203)
Measure

:MEAS

:DEC

:LTR

:S:DATA? (Returns quoted string)

:DISPlay 'Radio'

:DISPlay 'Repeater'

:DISPlay? (Returns quoted string)

:RATE? (Returns real value)

:RATE (See "Number Measurement Syntax" on page 203, :MEter not included)

:M:F132?

:T:IME? (Returns integer value)

:N:SLOTS? (Returns integer value)

:N:UFFer?|SLOTs? (Returns quoted string)

:S:DATA? (Returns quoted string)

:RATE? (Returns real value)

:RATE (See "Number Measurement Syntax" on page 203, :MEter not included)

:N:F

:N:FRAMES? (Returns integer value)

:S:T:ORed? (Returns integer value)

:S:FRAME? integer value (Returns quoted string)

:ESTatus? (Returns quoted string)
Measure

:MEAS

:NAME|NTACs
:NBITS? (Returns integer value)

:DSAY
:DATA? (Returns quoted string)

:DTMF
:LOW
:DISPLAY 'Freq'
     'Freq Err'
:DISPLAY? (Returns quoted string)

:FREQency
:ABSolute? (Returns up to 17 real values)
:ABSolute (See "Multiple Number Measurement Syntax" on page 205)

:ERRor? (Returns up to 17 real values)
:ERRor (See "Multiple Number Measurement Syntax" on page 205)

:HIGH
:DISPLAY 'Freq'
     'Freq Err'
:DISPLAY? (Returns quoted string)

:FREQuency
:ABSolute? (Returns up to 17 real values)
:ABSolute (See "Multiple Number Measurement Syntax" on page 205)

:ERRor? (Returns up to 17 real values)
:ERRor (See "Multiple Number Measurement Syntax" on page 205)

:SYMBol?
:TIME

:ON? (Returns up to 17 real values)
:ON (See "Multiple Number Measurement Syntax" on page 205)

:OFF? (Returns up to 17 real values)
:OFF (See "Multiple Number Measurement Syntax" on page 205)

:RECC
:DATA? (Returns quoted string)

:RVC
:DATA? (Returns quoted string)
Measure

:MEAS
  :SEQ
    :FREQ
      :ABSolute? (Returns up to 19 real values)
      :ABSolute (See "Multiple Number Measurement Syntax" on page 205)
    :ERRor? (Returns up to 19 real values)
    :ERRor (See "Multiple Number Measurement Syntax" on page 205)
  :TIME
    :OFF? (Returns up to 19 real values)
    :OFF (See "Multiple Number Measurement Syntax" on page 205)
    :ON? (Returns up to 19 real values)
    :ON (See "Multiple Number Measurement Syntax" on page 205)
  :SYMBOL? (Returns quoted string)
Measure

:MEASure

:CDManalyzer

:FERasure? (Returns real value)

This command queries the FER (Frame Error Rate) ratio. A test result is available after a triggered FER test has passed, failed, reached max frames, or at any time during an FER test if the display interim results field is set to yes (use the "DISPLAY:FERASURE:INTERIM:RESULTS YES" command). The FER field is displayed on the CDMA CELLULAR MOBILE RECEIVER TEST screen.

:FERasure (See "Number Measurement Syntax" on page 203, :METer not included)

:ERRors? (Returns integer value)

This command queries the number of frame errors counted. A test result is available after a triggered FER test has passed, failed, reached max frames, or at any time during an FER test if the display interim results field is set to yes (use the "DISPLAY:FERASURE:INTERIM:RESULTS YES" command). The errors counted field is displayed on the CDMA CELLULAR MOBILE RECEIVER TEST screen.

:FRAMes? (Returns integer value)

This command queries the number of frames counted. A test result is available after a triggered FER test has passed, failed, reached max frames, or at any time during an FER test if the display interim results field is set to yes (use the "DISPLAY:FERASURE:INTERIM:RESULTS YES" command). The frames counted field is displayed on the CDMA CELLULAR MOBILE RECEIVER TEST screen.

:MAXimum

:FRAMes (See "Integer Number Setting Syntax" on page 197, :INCRement not included)

This command sets the maximum number of frames to test before ending a frame error rate test. The frames counted field is displayed on the CDMA CELLULAR MOBILE RECEIVER TEST screen.

:CONFidence

:INTerval (See "Real Number Setting Syntax" on page 199, :INCRement:MODE not included)

This command sets the confidence interval to apply to frame error rate tests. The confidence interval is nominally 95%. The confidence field is displayed on the CDMA CELLULAR MOBILE RECEIVER TEST screen.

:LIMit [:VALue] (See "Real Number Setting Syntax" on page 199, :INCRement:MODE and :STATe not included)

This command sets the frame error rate specification. The test set will apply confidence interval testing to the FER specified in this field. The FER spec field is displayed on the CDMA CELLULAR MOBILE RECEIVER TEST screen.
Measure

:MEAS

:AVG:Power

[:EXE] = 1

This command executes a test of the mobile station's minimum and maximum transmitted power levels. The min/max power field is displayed on the CDMA TRANSMITTER POWER RANGE TEST screen.

:AVG:Power? (Returns real value)

[:EXE] = 0

This command queries the transmitter average power measurement if a value is available (field displays a value, not four dashes). The avg Power field is displayed on the CDMA CELLULAR MOBILE TRANSMITTER TEST, CDMA CALL CONTROL, and CDMA TRANSMITTER CLOSED LOOP RANGE TEST screens when the Avg Power measurement is selected (use the "CDMA:TX:POWER:MEASUREMENT:AVG Power" command).

:AVG:Power (See "Number Measurement Syntax" on page 203)

:ZERO

This command zeroes the transmitted average power measurement. The zero field is displayed on the CDMA CELLULAR MOBILE TRANSMITTER TEST, CDMA CALL CONTROL, and CDMA TRANSMITTER CLOSED LOOP RANGE TEST screens when the Avg Power measurement is selected (use the "CDMA:TX:POWER:MEASUREMENT:AVG Power" command).

:CHAN:power

[:EXE] = 1

This command queries the transmitter channel power measurement if a value is available (field displays a value, not four dashes). The chan power field is displayed on the CDMA CELLULAR MOBILE TRANSMITTER TEST, CDMA CALL CONTROL, and CDMA TRANSMITTER CLOSED LOOP RANGE TEST screens when the Chan Power measurement is selected (use the "CDMA:TX:POWER:MEASUREMENT:Chan Power" command).

:CHAN:power (See "Number Measurement Syntax" on page 203)

:UCalibrated? (Returns 0 or 1)

[:EXE] = 1

This command queries the "ucalibrated," which indicates that the channel power measurement needs to be calibrated. The "ucalibrated" annunciator is displayed under the channel power field when Chan power is selected on the CDMA CELLULAR MOBILE TRANSMITTER TEST, CDMA CALL CONTROL, and CDMA TRANSMITTER CLOSED LOOP RANGE TEST screens when the Chan Power measurement is selected (to select channel power measurements, use the "CDMA:TX:POWER:MEASUREMENT:Chan Power" command).

:CALibrate

This command calibrates the channel power measurement (the average power measurement is reset as part of this calibration process). The Calibrate field is displayed on the CDMA CELLULAR MOBILE TRANSMITTER TEST, CDMA CALL CONTROL, and CDMA TRANSMITTER CLOSED LOOP RANGE TEST screens when the Chan Power measurement is selected (to select channel power measurements, use the "CDMA:TX:POWER:MEASUREMENT:Chan Power" command).
Measure

:CHAN

:INTerval (See "Real Number Setting Syntax" on page 199)

:INTerval?

This command sets the interval for the channel power measurement.

:APPower? (Returns real value)

This command queries the access probe power measurement if a value is available (field displays a value, not four dashes). The access probe field is displayed on the CDMA cellular mobile transmitter test, CDMA call control, and CDMA transmitter closed loop range test screens when the access probe measurement is selected for the "CDMA:TX:POWER:MEASUREMENT" command.

:APPower (See "Number Measurement Syntax" on page 203)

:RHO? (Returns real value)

This command queries the traffic rho measurement. The traffic rho field is displayed on the CDMA cellular mobile transmitter test screen if traffic rho is selected (use the "CDMA:RHO:MEAS "Traffic Rho" command).


:FREQuency

:ERRor? (Returns real value)

This command queries the transmitter frequency error measurement. The frequency error field is displayed on the CDMA cellular mobile transmitter test screen if frequency error is selected (use the "CDMA:RHO:MEAS:FERR "Frequency Error" command).

:ERRor (See "Number Measurement Syntax" on page 203, :METer not included)
Measure
:MEAS
:CDM
:AMPlitude
:ERRor? (Returns real value)

This command queries the transmitter AMPLitude Error Measurement. The AMPL
Error Field is displayed on the CDMA Cellular Mobile Transmitter
TEST screen if AMPL Error is selected (use the "CDMA:RHO:MEAS:AMP
ERROR" command).

:ERRor (See "Number Measurement Syntax" on page 203, :REFERENCE:DUNits,
:ANUnits, :HLIMIT:DUNits, :LLIMIT:DUNits,
:EUntis, :METER not included)

:PHASE
:ERRor? (Returns real value)

This command queries the transmitter PHase Error Measurement. The PHAS
ERROR Field is displayed on the CDMA Cellular Mobile Transmitter TEST
screen if PHAS Error is selected
(use the "CDMA:RHO:MEAS:PHAS ERROR" command).

:ERRor (See "Number Measurement Syntax" on page 203, :REFERENCE:DUNits,
:ANUnits, :HLIMIT:DUNits, :LLIMIT:DUNits,
:EUntis, :METER not included)

:TIME
:OFFSet? (Returns real value)

This command queries the transmitter TIME Offset Measurement. The TIME
OFFSet Field is displayed on the CDMA Cellular Mobile Transmitter
TEST screen if TIME Offset is selected
(use the "CDMA:RHO:MEAS:TIME OFFSET" command).

:OFFSet (See "Number Measurement Syntax" on page 203, :REFERENCE:DUNits,
:ANUnits, :HLIMIT:DUNits, :LLIMIT:DUNits,
:EUntis, :METER not included)

:CARrier
:FEEDthrough? (Returns real value)

This command queries the transmitter Carrier FEEDthrough Measurement. The
Carrier Field is displayed on the CDMA Cellular Mobile Transmitter
TEST screen if Carrier is selected
(use the "CDMA:RHO:MEAS:CARrier" command).

:FEEDthrough (See "Number Measurement Syntax" on page 203, :REFERENCE:DUNits,
:ANUnits, :HLIMIT:DUNits, :LLIMIT:DUNits,
:EUntis, :METER not included)
Measure

`:MEAS:

`:CSPectr:uM

`:FREQency? (Returns real value)

This command queries the frequency count at the CDMA REVERSE CHANNEL SPECTRUM marker, the FREQ marker is displayed on the CDMA REVERSE CHANNEL SPECTRUM screen.

`:FREQency (See “Number Measurement Syntax” on page 203, :METer not included)

`:LEVel? (Returns real value)

This command queries the power level at the CDMA REVERSE CHANNEL SPECTRUM marker, the LEVEL marker is displayed on the CDMA REVERSE CHANNEL SPECTRUM screen.

`:LEVel (See “Number Measurement Syntax” on page 203, :METer not included)

`:TRACe? (Returns array of 417 real values)

`:GPOWer:MARKer

`:LEVel? (Returns real value)

This command queries the CDMA GATED POWER measurement's LEVEL value. The LEVEL field is displayed on the CDMA GATED POWER screen.

`:TRACe? (Returns array of 400 real values)

This command queries the CDMA GATED POWER measurement's trace values. The first value returned represents the level at the left side of the display and the last value represents the level at the right side of the display.

`:ATTack[:TIME]?

This command queries the CDMA GATED POWER measurement's ATTACK time. The ATTACK time field is displayed on the CDMA GATED POWER screen.

`:RELease[:TIME]?

This command queries the CDMA GATED POWER measurement's RELEASE time. The RELEASE time field is displayed on the CDMA GATED POWER screen.

`:BURSt[:TIME]?

This command queries the CDMA GATED POWER measurement's BURST time. The BURST time field is displayed on the CDMA GATED POWER screen.
Measure

:MEAS
:SWEEP:power
:TRACe
:CLEar
This command clears the measurement trace from the display.

:MEAS?
:LEVel?
This command queries the marker level for the measurement.

:OLTR:
:MEAS
:LEVel (See "Number Measurement Syntax" on page 203)
This command queries the Open Loop Time Response measurement power level in dB, relative to the 0 dB point, at the display marker position. The level field is displayed on the OPEN LOOP TIME RESPONSE screen.
:LEVell? (Returns real value)

:TRACe? (Returns array of 417 real values)
This command queries the Open Loop Time Response measurement’s trace values. The first value returned represents the level at the left side of the display and the last value represents the level at the right side of the display.

:EXECute
This command executes an Open Loop Time Response test of the mobile station’s output power. The execute field is displayed on the OPEN LOOP TIME RESPONSE screen.
Oscilloscope

`Oscilloscope`

`:CONTroll:Main`
- `:Trigger`
- `:Marker`

`:CONTroll?` (Returns quoted string)

These commands select/query the analog oscilloscope menu. The controls field is located on the OSCILLOSCOPE screen.

`:MARKer`

`:NPEAK` This command causes the marker to move to the minimum value of the average level measured on the display. The marker to field is found on the OSCILLOSCOPE screen when marker is selected in the controls field.

`:PPEAK` This command causes the marker to move to the maximum value of the average level measured on the display. The marker to field is found on the OSCILLOSCOPE screen when marker is selected in the controls field.

`:POSITION` (See "Real Number Setting Syntax" on page 199, :STATE not included, valid range 0 to 10)

This command positions the marker according to the number of scale divisions from the left side of the screen. The position to field is found on the OSCILLOSCOPE screen when marker is selected in the controls field.
Oscilloscope

:SCALe

:TIME '200 ms'
  '100 ms'
  '50 ms'
  '20 ms'
  '10 ms'
  '5 ms'
  '2 ms'
  '1 ms'
  '500 us'
  '200 us'
  '100 us'
  '50 us'
  '20 us'
  '10 us'
  '5 us'
  '2 us'
  '1 us'

:TIME? (Returns quoted string)

These commands select/query the horizontal sweep time-per-division. The time/div field is displayed on the oscilloscope screen. The time/div field is located on the oscilloscope screen when main is selected in the controls field.

:VERTical

:AM '50%
  '20%
  '10%
  '5%
  '2%
  '1%
  '0.5%
  '0.25%
  '0.125%
  '0.0625%

:AM? (Returns quoted string)

These commands select/query the vertical axis amplitude-per-division when AM MOD or AM DEMOD are selected in the AF Anal Input field, located on the AF analyzer screen. The vert/div field is located on the oscilloscope screen when main is selected in the controls field.
Oscilloscope

:SOLT

:SCAL

:VERTical

:ZV '50 kHz'

 '20 kHz'

 '10 kHz'

 '5 kHz'

 '2 kHz'

 '1 kHz'

 '500 Hz'

 '200 Hz'

 '100 Hz'

 '50 Hz'

 '20 Hz'

 '10 Hz'

:FM? (Returns quoted string)

 THESE COMMANDS SELECT/QUERY THE VERTICAL AXES AMPLITUDE-PER-DIVISION WHEN FM MOD OR FM DEMOD ARE SELECTED IN THE AF AMPL IF INPUT FIELD, LOCATED ON THE AF ANALYZER SCREEN. THE VERT/DIV FIELD IS LOCATED ON THE OSCILLOSCOPE SCREEN WHEN MAIN IS SELECTED IN THE CONTROLS FIELD.

:OFFSet (See "Real Number Setting Syntax" on page 199, :STATE not included, valid range -4 to +4)

 THIS COMMAND SELECTS THE VERTICAL AXIS (DC) OFFSET, MOVING THE DISPLAYED SIGNAL ABOVE OR BELOW THE OSCILLOSCOPE'S FIXED CENTERLINE. THE VERT OFFSET FIELD IS LOCATED ON THE OSCILLOSCOPE SCREEN WHEN MAIN IS SELECTED IN THE CONTROLS FIELD.

:VOLTs '20 V'

 '10 V'

 '5 V'

 '2 V'

 '1 V'

 '500 mv'

 '200 mv'

 '100 mv'

 '50 mv'

 '20 mv'

 '10 mv'

 '5 mv'

 '2 mv'

 '1 mv'

 '500 uv'

 '200 uv'

 '100 uv'

 '50 uv'

 '20 uv'

:VOLTE? (Returns quoted string)

 THESE COMMANDS SELECT/QUERY THE VERTICAL AXES AMPLITUDE-PER-DIVISION WHEN ANY CHOICE OTHER THAN FM MOD, FM DEMOD, AM MOD, OR AM DEMOD IS SELECTED IN THE AF AMPL IF INPUT FIELD. THE AF AMPL IF INPUT FIELD IS LOCATED ON THE AF ANALYZER SCREEN. THE VERT/DIV FIELD IS LOCATED ON THE OSCILLOSCOPE SCREEN WHEN MAIN IS SELECTED IN THE CONTROLS FIELD.

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Oscilloscope

:TRIGger

:LEVEL (See "Real Number Setting Syntax" on page 199, :STATE, :DUNits, :UNITs, :INCREMENT:MODE, :INCREMENT:DUNits, not included)

This command selects the vertical axis (DC) offset, moving the displayed signal above or below the oscilloscope's fixed centerline. The VERT OFFSET field is located on the OSCILLOSCOPE screen when MAIN is selected in the Controls field.

:MODE 'Cont' 'Single'

:MODE? (Returns quoted string)

These commands select/query the oscilloscope trigger mode. If the currently selected trigger mode is SINGLE, use the "TRIG" command to trigger each new measurement. The Cont/SINGLE field is located on the OSCILLOSCOPE screen when TRIGGER is selected in the Controls field.

:DELAY (See "Real Number Setting Syntax" on page 199, :STATE, :DUNits, :UNITs, :INCREMENT:MODE, :INCREMENT:DUNits, not included, valid range depends on Time/Div setting)

This command selects the trigger delay. Positive values delay the measurement trigger, negative values apply a pre-trigger function to each measurement. The TRIG-Delay field is located on the OSCILLOSCOPE screen when TRIGGER is selected in the Controls field.

:PRETrigger (See "Real Number Setting Syntax" on page 199, :STATE, :DUNits, :UNITs, :INCREMENT:MODE, :INCREMENT:DUNits not included)

This command applies a pre-trigger function to each measurement.

:RESet

This command triggers a measurement. The RESET field is displayed on the OSCILLOSCOPE screen when TRIGGER is selected in the Controls field.

:SENSe 'Pos' 'Neg'

:SENSe? (Returns quoted string)

These commands select/query whether triggering occurs on the positive or negative-going slope of the input signal. The POS/Neg field is located on the OSCILLOSCOPE screen when TRIGGER is selected in the Controls field.

:SOURCE 'Internal' 'Ext (TTL)' 'Encoder'

:SOURCE? (Returns quoted string)

These commands select/query the trigger source. The Internal field is
Oscilloscope

LOCATED ON THE OSCILLOSCOPE SCREEN WHEN TRIGGER IS SELECTED IN THE CONTROLS FIELD.

TYPE 'Auto'

'Norm'

TYPE? (Returns quoted string)

These commands select/query how the trigger level is set. Auto triggers a measurement if a triggering signal is not detected within approximately 50 ms of the last trigger. Normal requires a specific triggering signal before triggering. The Auto/Norm field is located on the OSCILLOSCOPE screen when Trigger is selected in the Controls field.
Oscilloscope
Program

The PROGRAM subsystem provides a set of commands which allow an external controller to generate and control an IBASIC program within the Test Set.

:PROGRAM
[:SELected]
:DEFINE <#0><program><NL><END> (if length of program is not known)
  <#><number of digits in count field><count field: number of data bytes in program><program data bytes> (if length of program is known)
This command is used to download an IBASIC program into the TEST SET. The program must be transferred as IEEE 488.2 ARBITRARY BLOCK PROGRAM DATA. Refer to the IEEE Standard 488.2-1987 for detailed information on this data type.

:DEFINE? (Returns <program>)

:EXECute <program_command>
This command executes, from an external controller, an IBASIC command in the TEST SET's built-in IBASIC controller.

:STATe CONTinue
PAUSE
RUN
STOP
These commands set, from an external controller, the execution state of the IBASIC program currently loaded in the TEST SET.

:STATe? (Returns program state)
This command queries, from an external controller, the current execution state of the IBASIC program currently loaded in the TEST SET.
Program

[:SELECTed]

:NUMBer <varname>{,<nvalues>}

This command sets, from an external controller, the value of numeric variables or arrays in the IBASIC program currently loaded in the test set.

:NUMBer? <varname> (Returns value of <varname>)

This command queries, from an external controller, the value of numeric variables or arrays in the IBASIC program currently loaded in the test set.

:STRING <varname>{,<svalues>}

This command sets, from an external controller, the value of string variables or string arrays in the IBASIC program currently loaded in the test set.

:STRING? <varname> (Returns value of <varname>)

This command queries, from an external controller, the value of string variables or string arrays in the IBASIC program currently loaded in the test set.

:WAIT

:WAIT? (Returns integer value)

:DELETE

:ALL

This command deletes the IBASIC program currently loaded in the test set.
RF Analyzer

:RFANalyzer

:ATTenuator '0 dB'
 '5 dB'
 '10 dB'
 '15 dB'
 '20 dB'
 '25 dB'
 '30 dB'
 '35 dB'

:ATTenuator? (Returns quoted string)

These commands set/query the amount of input attenuation in the path of the selected input port. Setting the INPUT ATTEN field to "Hold" (CONF:ATT:MODE 'HOLD') prevents the RF AUTO-RANGING process from changing the attenuation setting. The INPUT ATTEN field is found on the CONFIGURE, RF ANALYZER, SPECTRUM ANALYZER, and CDMA REVERSE CHANNEL SPECTRUM screens.

:MODE 'Auto'
 'Hold'

:MODE? (Returns quoted string)

These commands set/query the RF AUTO-RANGING mode. Setting the INPUT ATTEN field to "Hold" (CONF:ATT:MODE 'HOLD') prevents the RF AUTO-RANGING process from changing the attenuation setting. The INPUT ATTEN field is found on the CONFIGURE, RF ANALYZER, SPECTRUM ANALYZER, and CDMA REVERSE CHANNEL SPECTRUM screens.

:FREQuency (See "Real Number Setting Syntax" on page 199, :STATe not included)

This command sets tune frequency for the RF Analyzer. The TUNE FRQ field is found on the RF ANLYzer screens when the RF DISPLAY field on the CONFIGURE screen is set to "PRD". The CENTER FRQ field is found on the SPECTRUM ANALYZER and CDMA REVERSE CHANNEL when the CONTROLS field is set to "MA", and the RF DISPLAY field on the CONFIGURE screen is set to "PRD".
RF Analyzer

:RFAN

:GT 10μs. [See "Real Number Setting Syntax" on page 199, :DUNits, :UNItS only]

This command sets the gate time for the RF frequency counter. The RF Gate
Field is found on the RF ANALYZER screen.

:IFBW '15 kHz'

'230 kHz'

:IFBW? [Returns quoted string]

These commands set/query the IF (Intermediate Frequency) Filter
Bandwidth. The IF Filter Field is found on the RF ANALYZER screen.
RF Analyzer

:RFAN

:INF: 'RF In'

:INF? (Returns quoted string)

:ANT

:ANT? (Returns quoted string)

These commands set/query the RF input port. The input port field is found on the CONFIGURE, TX TEST, and RF ANALYZER screens. This field is coupled to the RF In/Ant input field on the CDMA REVERSE CHANNEL SPECTRUM AND SPECTRUM ANALYZER screens.

:PMMeasure

:DETector 'Peak'

:DETector? (Returns quoted string)

These commands set/query the way analog transmitter power measurements are made. The TX PWR MEAS field is found on the RF ANALYZER AND TX TEST screens.

:MELevel '-10.0 dBm'

'-5.0 dBm'

'0.0 dBm'

:MELevel? (Returns quoted string)

These commands set/query the expected input power level for analog measurements. Setting higher values for minimum input level speeds up analog power measurements. The MIN IMP LVL field is found on the RF ANALYZER, ANALOG MEAS, AND TX TEST screens.

:ZERO

This command establishes a 0.0000 W reference for measuring RF power at the RF IN/OUT port. The TX PWR ZERO field is found on the RF ANALYZER AND TX TEST screens.

:MODE 'Auto'

'Manual'

:MODE? (Returns quoted string)

These commands set/query the auto zero mode field. This field is found on the RF ANALYZER screen.

:SENSitivity 'Normal'

'High'

:SENSitivity? (Returns quoted string)

:SQUelch 'Pot'

'Open'

'Fixed'

:SQUelch? (Returns quoted string)

:TKEY 'On'

'Off'

:TKEY? (Returns quoted string)

:TMODe 'Auto'

'Manual'
RF Analyzer

:RFAN
:THRE? (Returns quoted string)

:RFCH (See "Integer Number Setting Syntax" on page 197)
RF Generator

:RFGenerator

:ATTenuator 'On'

'Off'

:ATTenuator? (Returns quoted string)

These commands set/query the attenuator hold function. The attenu hold field is displayed on the RF GENERATOR, RX TEST, or DUPLEX TEST screens. The output attenu hold field is found on the COMA TRANSMITTER POWER RANGE TEST screen.

:AMPLitude (See "Real Number Setting Syntax" on page 199)

This command sets the RF generator amplitude. The amplitude field is found on the RF GENERATOR, RX TEST, or DUPLEX TEST screens. The amplitude field is found on the SPECTRUM ANALYZER screens when the controls field is set to "RF GEN".

:FM

:COUPling 'AC'

'DC'

:COUPling? (Returns quoted string)

These commands set/query the type of coupling between the MODULATION INPUT rear-panel connector and the RF GENERATOR's FM modulator. The FM coupling field is displayed on the RF GENERATOR, DUPLEX TEST, and various ENCODER screens.

:DCZero

This command offsets any DC bias that exists when "DC" is selected in the command above. The DC zero field is found on the RF GENERATOR screen.
RF Generator

:RFQ
:FREQuency

This command sets the RF generator frequency. The frequency entered using this command is applied when the RF Display field on the CONFIGURE screen is set to "FREQ". The RF Gen Freq field is found on the CDMA CALL CONTROL, RX TEST, and DUPLEX TEST screens when the RF Display field on the CONFIGURE Screen is set to "FREQ". The RF Gen Freq field is found on the CDMA REVERSE CHANNEL SPECTRUM screen when the Controls field is set to "CDMA GEN", and the RF Display field on the CONFIGURE Screen is set to "FREQ". The RF Gen Freq field is found on the SPECTRUM ANALYZER screen when the Controls field is set to "RF GEN" and the RF Display field on the CONFIGURE screen is set to "FREQ".

:OUTPut 'RF Out'
   'Dupl'

:OUTPut?

These commands set/query the RF output port. The Output Port field is found on the CONFIGURE, RF GENERATOR, DUPLEX TEST, and RX TEST screens. The Output Port field is found on the SPECTRUM ANALYZER screen when the Controls field is set to "RF GEN". The Output Port field is found on the CDMA REVERSE CHANNEL SPECTRUM screen when the Controls field is set to "CDMA GEN".
THESE COMMANDS SET / QUERY THE TYPE OF COUPLING BETWEEN THE DEMODULATED AUDIO AND THE AUDIO OUT FRONT-PANEL CONNECTOR. THE AUDIO OUT FIELD IS FOUND ON THE RF GENERATOR SCREEN.

:EXTernal

:AM (See "Real Number Setting Syntax" on page 199)
This command sets the AM sensitivity of the RF generator when AM is applied through the modulation input rear-panel connector. The Mod In To field is found on the RF generator screen.

:DESTination 'AM (/Vpk)'
'FM (/Vpk)'
:DESTination? (Returns quoted string)
These commands set/query the type of modulation that will be applied to the RF generator, using the modulation input rear-panel connector as a modulation source. The Mod In To field is found on the RF generator screen.

:FMM (See "Real Number Setting Syntax" on page 199)
This command sets the FM sensitivity of the RF generator when FM is applied through the modulation input rear-panel connector. The Mod In To field is found on the RF generator screen.

:PEMPhasis 'On'
'Off'
:PEMPhasis? (Returns quoted string)
These commands set/query the microphone pre-emphasis state. The Mic Pre-Em field is found on the RF generator screen. The Mic Pre-Em Mode, (see command below) must be set to "Hold" to turn pre-emphasis off.

:MODE 'Auto'
'Hold'
:MODE? (Returns quoted string)
These commands set/query the microphone pre-emphasis mode. The Mic Pre-Em field is found on the RF generator screen. The Mic Pre-Em Mode, must be set to "Hold" to turn pre-emphasis off (see command above).
RF Generator

:RFG :RFCHannel (See "Integer Number Setting Syntax" on page 197): This command sets the RF channel, which maps to an RF generator/analyser frequency pair. The channel number entered using this command is applied when the RF Display field on the Configure screen is set to "Chan". The RF channel field is found on the CDMA Call Controls, RX Test, and Duplex Test screens when the RF Display field on the Configure screen is set to "Chan". The RF channel field is found on the CDMA Reverse Channel Spectrum screen when the Controls field is set to "Main" or "CDMA Gen", and the RF Display field on the Configure screen is set to "Chan". The RF channel field is found on the Spectrum Analyzer screen when the Controls field is set to "Main" or "RF Gen" and the RF Display field on the Configure screen is set to "Chan".

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Spectrum Analyzer

:SANalyzer

:ATTenuator '0 dB'
  '10 dB'
  '15 dB'
  '20 dB'
  '25 dB'
  '30 dB'
  '35 dB'

:ATTenuator? (Returns quoted string)

:MODE 'Auto'
  'Hold'

:MODE? (Returns quoted string)

:CFFrequency (See "Real Number Setting Syntax" on page 199, :STATe not included)

:CONTrol 'Main'
  'RF Gen'
  'Marker'
  'Auxiliary'

:CONTrol? (Returns quoted string)

:DISPlay

:SCALe '1 dB/div'
  '2 dB/div'
  '10 dB/div'

:SCALe? (Returns quoted string)

:INPut 'RF In'
  'Ant'

:INPut? (Returns quoted string)

THESE COMMANDS SET/QUERY AN UNNAMED FIELD THAT CORRELATES WITH THE INPUT PORT FIELD FOUND ON THE CONFIGURE SCREEN AND OTHERS. THIS UNNAMED FIELD IS DISPLAYED ON THE SPECTRUM ANALYZER SCREEN WHEN "MAIN" IS SELECTED IN THE CONTROLS FIELD.
Spectrum Analyzer

:SANE
:MARKer
:MODE 'Norm' 'Delta'

These commands set/query the controls, Norm/Delta field. This field is found on the Spectrum Analyzer screen.

:DELTa
:CFrequency
This command sets the Delta marker at the center frequency of the Spectrum Analyzer’s measurement trace. The Marker To, Center Freq field is found on the Spectrum Analyzer screen.

:NPF
:NEEk
This command sets the Delta marker at the next peak of the Spectrum Analyzer’s measurement trace. The Marker To, Next Peak field is found on the Spectrum Analyzer screen.

:NPL:LEVEL (See "Real Number Setting Syntax" on page 199, :STATe not included)

:NPL
:LEVEL
These commands set/query the level of the next signal peak signal at the Delta marker. The LVL field is found on the Spectrum Analyzer screen.

:P
:PEAK
This command moves the Delta marker to the highest peak of the signals on the Spectrum Analyzer display trace. The Marker To, Peak field is found on the Spectrum Analyzer screen.

:P:POS
:POSITION (See "Real Number Setting Syntax" on page 199, :STATe not included)

:P:POS
:POSITION?
These commands set/query the position of the Delta marker on the Spectrum Analyzer. The Position field is found on the Spectrum Analyzer screen.

:P:LE
:LEVEL
This command moves the signal at the Delta marker to the Reference Level position of the Spectrum Analyzer.
Spectrum Analyzer

:CFrequency
    This command sets the marker at the center frequency of the spectrum analyzer’s measurement trace. The marker to, center freq field is found on the spectrum analyzer screen.

:CFPeak
    This command sets the marker at the next peak of the spectrum analyzer’s measurement trace. The marker to, next peak field is found on the spectrum analyzer screen.

:PEAK
    This command moves the marker to the highest peak of the signals on the spectrum analyzer display trace. The marker to, peak field is found on the spectrum analyzer screen.

:POSITION
    These commands set/query the position of the marker on the spectrum analyzer. The position field is found on the spectrum analyzer screen.

:LEVEL
    This command moves the signal at the marker to the reference level position of the spectrum analyzer.

:RFGenerator 'Track'
    'Fixed'

:RFLevel?
    (Returns quoted string)

:RFLevel (See "Real Number Setting Syntax" on page 199, :STATE not included)

:SPAN
    (See "Real Number Setting Syntax" on page 199, :STATE not included)

:TGenerator

:AMPLitude
    (See "Real Number Setting Syntax" on page 199)

:DESTination 'RF Out'
    'Dupl'

:DESTination?
    (Returns quoted string)

:OFFrequency
    (See "Real Number Setting Syntax" on page 199, :STATE not included)

:SNKe 'Norm'
    'Invert'

:SNKe?
    (Returns quoted string)
Spectrum Analyzer

:SAN
:TTRACE:
:TRACe:MHOLd 'No Pk/Avg'
 'Pk Hold'
 'Avg 1'
 'Avg 2'
 'Avg 3'
 'Avg 4'
 'Avg 5'
 'Avg 10'
 'Avg 20'
 'Avg 50'
 'Avg 100'
 'Off'
:TRACe:MHOLd? (Returns quoted string)

:NORMalize 'A-Only'
 'A-B'
 :NORMalize? (Returns quoted string)

:SAVE
Save/Recall Registers

[:REGister]

[:CLEar <integer_value>|'<character_data>']

[:ALL]

[:RECa ll <integer_value>|'<character_data>']

[:SAVE <integer_value>|'<character_data>']

[:LIST? (Returns quoted string)]
Save/Recall Registers
Special (GPIB Only Commands)

:SPECIAL

:DLY 'LOCKED'
    'UNLOCKED'

:DLY? (Returns quoted string)

These commands are used to speed up remote operation by "locking" the display. Refer to "Increasing Measurement Throughput" in the Operating Overview chapter of the Agilent Technologies 8924C User's Guide for more information.
Special (GPIB Only Commands)
Status

;STAT
;FREEset
;CALibration
;CONDition? (Returns integer value)
;ENABle <integer_value>
;ENABle? (Returns integer value)
;[\:EVENt]? (Returns integer value)
;NTRansition <integer_value>
;NTRansition? (Returns integer value)
;PTRansition <integer_value>
;PTRansition? (Returns integer value)

;COMMunicate
;CONDition? (Returns integer value)
;ENABle <integer_value>
;ENABle? (Returns integer value)
;[\:EVENt]? (Returns integer value)
;NTRansition <integer_value>
;NTRansition? (Returns integer value)
;PTRansition <integer_value>
;PTRansition? (Returns integer value)
Status

:STAY

::CONDition? (Returns integer value)

::ENABLE <integer_value>

::ENABLE? (Returns integer value)

::EVENt? (Returns integer value)

::NTRansition <integer_value>

::NTRansition? (Returns integer value)

::PTRansition <integer_value>

::PTRansition? (Returns integer value)

::SERIAL1|SER1

::CONDition? (Returns integer value)

::ENABLE <integer_value>

::ENABLE? (Returns integer value)

::EVENt? (Returns integer value)

::NTRansition <integer_value>

::NTRansition? (Returns integer value)

::PTRansition <integer_value>

::PTRansition? (Returns integer value)

::SERIAL2|SER2

::CONDition? (Returns integer value)

::ENABLE <integer_value>

::ENABLE? (Returns integer value)

::EVENt? (Returns integer value)

::NTRansition <integer_value>

::NTRansition? (Returns integer value)

::PTRansition <integer_value>

::PTRansition? (Returns integer value)
Status

:S:STAT
 :HARDWARE1 | HARD1
  | :CONDition? (Returns integer value)
  | :ENABLE <integer_value>
  | :ENABLE? (Returns integer value)
  | [:EVENt]? (Returns integer value)
  | :NTRansition <integer_value>
  | :NTRansition? (Returns integer value)
  | :PTRansition <integer_value>
  | :PTRansition? (Returns integer value)

:HARDWARE2 | HARD2
  | :CONDition? (Returns integer value)
  | :ENABLE <integer_value>
  | :ENABLE? (Returns integer value)
  | [:EVENt]? (Returns integer value)
  | :NTRansition <integer_value>
  | :NTRansition? (Returns integer value)
  | :PTRansition <integer_value>
  | :PTRansition? (Returns integer value)
Status

:STAT
:OPERation

:CONDition? (Returns integer value)
:ENABLE <integer_value>
:ENABLE? (Returns integer value)
[:EVENt]? (Returns integer value)
:NTRansition <integer_value>
:NTRansition? (Returns integer value)
:PTRansition <integer_value>
:PTRansition? (Returns integer value)

:DISABLE
:DISABLE? (Returns integer value)

:CONDition? (Returns integer value)
:DISABLE <integer_value>
:DISABLE? (Returns integer value)
[:EVENt]? (Returns integer value)
:NTRansition <integer_value>
:NTRansition? (Returns integer value)
:PTRansition <integer_value>
:PTRansition? (Returns integer value)

:CALibrating

:CONDition? (Returns integer value)
:ENABLE <integer_value>
:ENABLE? (Returns integer value)
[:EVENt]? (Returns integer value)
:NTRansition <integer_value>
:NTRansition? (Returns integer value)
:PTRansition <integer_value>
:PTRansition? (Returns integer value)
Status

:STAT

?QUESTIONable

?CONDITION? (Returns integer value)

?ENABLE <integer_value>

?ENABLE? (Returns integer value)

?EVENT? (Returns integer value)

?NTRansition <integer_value>

?NTRansition? (Returns integer value)

?PTRansition <integer_value>

?PTRansition? (Returns integer value)

?MEASuring

?CONDITION? (Returns integer value)

?ENABLE <integer_value>

?ENABLE? (Returns integer value)

?EVENT? (Returns integer value)

?NTRansition <integer_value>

?NTRansition? (Returns integer value)

?PTRansition <integer_value>

?PTRansition? (Returns integer value)
Status

:STAY

:CALLProc

:CONDition? (Returns integer value)

:ENABLE <integer_value>

:ENABLE? (Returns integer value)

:CONDition? (Returns integer value)

:PTRansition <integer_value>

:PTRansition? (Returns integer value)

:CONDition? (Returns integer value)

:CDMA1

:CONDition? (Returns integer value)

:ENABLE <integer_value>

:ENABLE? (Returns integer value)

:CONDition? (Returns integer value)

:PTRansition <integer_value>

:PTRansition? (Returns integer value)

:CONDition? (Returns integer value)

:CDMA2

:CONDition? (Returns integer value)

:ENABLE <integer_value>

:ENABLE? (Returns integer value)

:CONDition? (Returns integer value)

:PTRansition <integer_value>

:PTRansition? (Returns integer value)
Status

:SSTAT
:CAUTION?

:CONDition? (Returns integer value)

:ENABLE <integer_value>

:ENABLE? (Returns integer value)

[:EVENt]? (Returns integer value)

:PREensation <integer_value>

:PREensation? (Returns integer value)

:PTPilation <integer_value>

:PTPilation? (Returns integer value)

:CMService

:CONDition? (Returns integer value)

:ENABLE <integer_value>

:ENABLE? (Returns integer value)

[:EVENt]? (Returns integer value)

:PREensation <integer_value>

:PREensation? (Returns integer value)

:PTPilation <integer_value>

:PTPilation? (Returns integer value)

:GPOWer

:CONDition? (Returns integer value)

:ENABLE <integer_value>

:ENABLE? (Returns integer value)

[:EVENt]? (Returns integer value)

:PREensation <integer_value>

:PREensation? (Returns integer value)

:PTPilation <integer_value>

:PTPilation? (Returns integer value)
Status

:STAT
:OLTR:
:CONDition? (Returns integer value)
:ENABLE <integer_value>
:ENABLE? (Returns integer value)
:EVENT? (Returns integer value)
:NTTransition <integer_value>
:NTTransition? (Returns integer value)
:PTTransition <integer_value>
:PTTransition? (Returns integer value)
System

:SYSTem [:ERRor]? (Returns integer value followed by quoted string)

:REStart

This command forces all microprocessors in the test set to reboot and as a result, reinitialize controlled hardware. This function is similar to turning on the power (switching power state from standby to on).
Tests

;TESTs

;COMMENT1 | COMM1 '<character_data>' (50 chars max, valid chars:)
ABCD...EFGHIJKLMNOPQRSTUVWXYZ_012
3456789abcdefghijklmnopqrstuvwxyz
"$%&'()*+,-./:;<=>?@[\]^\']~"
;COMMENT1? | COMM1? (Returns quoted string)

;COMMENT2 | COMM2 '<character_data>' (50 chars max, valid chars:)
ABCD...EFGHIJKLMNOPQRSTUVWXYZ_012
3456789abcdefghijklmnopqrstuvwxyz
"$%&'()*+,-./:;<=>?@[\]^\']~"
;COMMENT2? | COMM2? (Returns quoted string)

;CONFIGure | CNFG <integer_value>, '<character_data>', '<character_data>',
<integer_value>, '<character_data>'
;CONFIGure? | CNFG? <integer_value> (Returns unquoted string consisting of
5 elements separated by commas)

;EXECution

;DESTination 'Crt'
;DESTination? (Returns quoted string)

;FAILure 'Continue'
;FAILure? (Returns quoted string)

;HEADING1 | HEAD1 '<character_data>' (50 chars max, valid chars:)
ABCD...EFGHIJKLMNOPQRSTUVWXYZ_012
3456789abcdefghijklmnopqrstuvwxyz
"$%&'()*+,-./:;<=>?@[\]^\']~"
;HEADING1? | HEAD1? (Returns quoted string)

;HEADING2 | HEAD2 '<character_data>' (50 chars max, valid chars:)
ABCD...EFGHIJKLMNOPQRSTUVWXYZ_012
3456789abcdefghijklmnopqrstuvwxyz
"$%&'()*+,-./:;<=>?@[\]^\']~"
;HEADING2? | HEAD2? (Returns quoted string)

;RESULTS 'All'
;RESULTS 'Failures'
;RESULTS? (Returns quoted string)

;RUN 'Continuous'
;RUN 'Single Step'
;RUN? (Returns quoted string)
Tests

:TESTs

:FREQuency <integer_value>,<real_value>,'<character_data>',<real_value>,
     '<character_data>','YES|NO','YES|NO'

:FREQuency? <integer_value> (Returns unquoted string consisting of
    7 elements separated by commas)

:LIBrary? (Returns unquoted string consisting of 3 elements
     separated by commas)

:PARMameter|PARameter

[:NUMBer] <integer_value>,<real_value>
[:NUMBer]? <integer_value> (Returns unquoted string consisting of
     2 elements separated by commas)

:STRing '<character_data>',<real_value>
:STRing? '<character_data>' (Returns unquoted string consisting of
     2 elements separated by commas)

:PROCedure

:AUTostart|AUTO 'ON'
     'OFF'

:AUTostart?|AUTO? (Returns quoted string)

:LOCation 'RAM'
    'ROM'
    'CARD'
    'Disk'

:LOCation? (Returns quoted string)

:NAME '<character_data>' (10 chars max, valid chars: )
    ABCDEFGHIJKLMNOPQRSTUVWXYZ_0123456789

:NAME? (Returns quoted string)

:RUN

:RUNTest

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Tests

[:TESTs]
[:SEQNumber] <integer_value>, '<character_data>' (249 chars max, valid chars: 0123456789, YN)
[:SEQNumber]? <integer_value> (Returns unquoted string consisting of 3 elements separated by commas)

[:SPEC]
[:SPEC] <integer_value>, <real_value>, <real_value>, 'Upper|Lower|Both|None'
[:SPEC]? <integer_value> (Returns unquoted string consisting of 4 elements separated by commas)

[:STRing] '<character_data>', <real_value>, <real_value>, 'Upper|Lower|Both|None'
[:STRing]? '<character_data>' (Returns unquoted string consisting of 4 elements separated by commas)
For a description of active measurements and the measurement triggering process, refer to "Measurement Triggering Process" in the Operating Overview chapter of the E8285A User’s Guide.

`:TRIGger [IMMediate]
This command triggers all active measurements.

In performing the CEMA SWEPT POWER MEASUREMENT, it is necessary to send the command "TRIGger:MODE:RETrigger:SINGLE" once before arming the measurement.

`:ABORT
This command ends a measurement cycle in progress.

`:ASTate 'Arm'
'Disarm'
These commands trigger/abort all active measurements.

`:ASTate? (Returns quoted string)

`:MODE

`:RETrigger REpetitive
SINGLE

`:RETrigger? (Returns unquoted string)

These commands set/query the trigger mode. REPETITIVE TRIGGER MODE CAUSES THE TEST SET TO AUTOMATICALLY BEGIN A NEW MEASUREMENT CYCLE EACH TIME A MEASUREMENT CYCLE ENDS. SINGLE TRIGGER MODE CAUSES THE TEST SET TO WAIT FOR A TRIGGER (TRIG) COMMAND BEFORE BEGINNING A NEW MEASUREMENT CYCLE.

`:SETTling FAST
FULL

`:SETTling? (Returns unquoted string)

These commands set/query the transient settling mode. These commands do not affect CEMA measurements.
Integer Number Setting Syntax

:Previous Syntax <integer_value>
? (Returns integer value)

#B<binary integer_value> (Max 32 bits, ex.: #B10101010)
#O<octal integer_value>
#H<hexadecimal integer_value>

:INCREment UP|DOWN
:INCREment? (Returns integer value)
Integer Number Setting Syntax
Real Number Setting Syntax

Previous Syntax <real_value>[display unit_of_measure] (ex: -75 or -75dBm)

? (Returns real value)

:DUNits <display unit_of_measure>
:DUNits? (Returns display units)

:UNits <GPIB unit_of_measure>
:UNits? (Returns GPIB units)

:STATe 1|ON
0|OFF
:STATe? (Returns 1 or 0)

:INCRement <incr_value>[display unit_of_meas] (Ex:3.5 or 3.5dBm)
:INCRement UP|DOWN
:INCRement? (Returns increment value)

:DUNits <display unit_of_measure>
:DUNits? (Returns INCRement display units)

:MODE LINear|LOGarithm
:MODE? (Returns LIN or LOG)

:MULTiply (Multiplies current setting by 10)

:DIVide (Divides current setting by 10)
Real Number Setting Syntax
Multiple Real Number Setting Syntax

:Previous Syntax <integer_value>,<real_value>[display unit_of_measure]
  ? <integer_value> (Returns real value)
  :DUNits <integer_value>,<display unit_of_measure>
  :DUNits? <integer_value> (Returns display unit_of_measure)

:UNITs <integer_value>,<GPIB unit_of_measure>
  :UNITs? <integer_value> (Returns GPIB unit_of_measure)

:INCRement <integer_value>,<incr_value>[display unit_of_meas]
  :INCRement <integer_value>,UP|DOWN
  :INCRement? <integer_value> (Returns increment value)

  :SUPer <integer_value>,<display unit_of_measure>
  :SUPer? <integer_value> (Returns display unit_of_measure)

:MODE <integer_value>,LINear|LOGarithm
  :MODE? <integer_value> (Returns LIN or LOG)

:MULTiply <integer_value>
  :DIVide <integer_value>
Multiple Real Number Setting Syntax
Number Measurement Syntax

:PREvious Syntax

:STATe 1|ON
  0|OFF
:STATe? (Returns 1 or 0)

:DUNits <display unit_of_measure>
:DUNits? (Returns display unit_of_measure)

:UNIts <GPIB unit_of_measure>
:UNIts? (Returns GPIB unit_of_measure)

:AUNits <Attribute unit_of_measure>
:AUNits? (Returns attribute unit_of_measure)

:AVERage[:VALue] <real_value>
:AVERage[:VALue]? (Returns number of averages setting)

:RESet

:STATe 1|ON
  0|OFF
:STATe? (Returns 1 or 0)

:REFERENCE

:REFERENCE[:VALue] <real_value>[GPIB unit_of_measure for relative level]
:REFERENCE[:VALue]? (Returns reference value)

:DUNits <display unit_of_measure>
:DUNits? (Returns display unit_of_measure)

:STATe 1|ON
  0|OFF
:STATe? (Returns 1 or 0)

:HLIMit

:HLIMit[:VALue] <real_value>[display unit_of_measure]
:HLIMit[:VALue]? (Returns real value)

:DUNits <display unit_of_measure>
:DUNits? (Returns display unit_of_measure)

:RESet

:EXCeeded? (Returns 1 or 0)
Number Measurement Syntax

:STATe 1|ON
:STATe 0|OFF
:STATe? (Returns 1 or 0)

:LLIMit
:i:VALUE <real_value>[display unit_ofMeasure]
i:VALUE? (Returns real value)
:i:UNits <display unit_ofMeasure>
i:UNits? (Returns display unit_ofMeasure)

:RESet

:EXCeeded? (Returns 1 or 0)
:STATe 1|ON
:STATe 0|OFF
:STATe? (Returns 1 or 0)

:METer:
:STATe 1|ON
:STATe 0|OFF
:STATe? (Returns 1 or 0)

:HEND <real_value>[display unit_ofMeasure]
:HEND? (Returns real value)

:HEND <real_value>[display unit_ofMeasure]
:HEND? (Returns display unit_ofMeasure)

:LEND <real_value>[display unit_ofMeasure]
:LEND? (Returns real value)

:LEND <real_value>[display unit_ofMeasure]
:LEND? (Returns display unit_ofMeasure)

:interval <integer_value>
:interval? (Returns integer value)
Multiple Number Measurement Syntax

<i>Previous Syntax</i>

```
:IDNuts <display unit_of_measure>
:IDNuts? (Returns display unit_of_measure)

:UNITS <GPIB unit_of_measure>
:UNITS? (Returns GPIB unit_of_measure)
```

```
:STATe 1|ON
    0|OFF
:STATe? (Returns 1 or 0)
```
Multiple Number Measurement Syntax
GPIB Common Commands

IEEE 488.2 Common Commands

The IEEE 488.2 Standard defines a set of common commands which provide for uniform communication between devices on the GPIB. These commands are common to all instruments which comply with the IEEE 488.2 Standard. These commands control some of the basic instrument functions, such as instrument identification, instrument reset, and instrument status reporting.

The following common commands are implemented in the Test Set:

Table 2 Test Set IEEE 488.2 Common Commands

<table>
<thead>
<tr>
<th>Mnemonic</th>
<th>Command Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>*CLS</td>
<td>Clear Status Command</td>
</tr>
<tr>
<td>*ESE</td>
<td>Standard Event Status Enable Command</td>
</tr>
<tr>
<td>*ESE?</td>
<td>Standard Event Status Enable Query</td>
</tr>
<tr>
<td>*ESR?</td>
<td>Standard Event Status Register Query</td>
</tr>
<tr>
<td>*IDN?</td>
<td>Identification Query</td>
</tr>
<tr>
<td>*OPC</td>
<td>Operation Complete Command</td>
</tr>
<tr>
<td>*OPC?</td>
<td>Operation Complete Query</td>
</tr>
<tr>
<td>*OPT?</td>
<td>Option Identification Query</td>
</tr>
<tr>
<td>*PCB</td>
<td>Pass Control Back Command</td>
</tr>
<tr>
<td>*RCL</td>
<td>Recall Command</td>
</tr>
<tr>
<td>*RST</td>
<td>Reset Command</td>
</tr>
<tr>
<td>*SAV</td>
<td>Save Command</td>
</tr>
<tr>
<td>*SRE</td>
<td>Service Request Enable Command</td>
</tr>
<tr>
<td>*SRE?</td>
<td>Service Request Enable Query</td>
</tr>
<tr>
<td>*STB?</td>
<td>Read Status Byte Query</td>
</tr>
<tr>
<td>*TRG</td>
<td>Trigger Command</td>
</tr>
<tr>
<td>*TST?</td>
<td>Self-Test Query</td>
</tr>
<tr>
<td>*WAI</td>
<td>Wait-To-Continue Command</td>
</tr>
</tbody>
</table>
Common Command Descriptions

*IDN? (Identification Query)

The *IDN? query causes a device to send its identification information over the bus. The Test Set responds to the *IDN? command by placing its identification information, in ASCII format, into the Output Queue. The response data is obtained by reading the Output Queue into a string variable of length 72. The response data is organized into four fields separated by commas. The field definitions are described in table 3.

<table>
<thead>
<tr>
<th>Field</th>
<th>Contents</th>
<th>Typical Response from Test Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manufacturer</td>
<td>Agilent Technologies</td>
</tr>
<tr>
<td>2</td>
<td>Model</td>
<td>E8285A</td>
</tr>
<tr>
<td>3</td>
<td>Serial Number</td>
<td>US12345678</td>
</tr>
<tr>
<td>4</td>
<td>Firmware Revision Level</td>
<td>A.02.04</td>
</tr>
</tbody>
</table>

**NOTE:**

* The Serial Number is formatted as follows:

```
AAXXXXXXXX
```

where

- **A** = alpha character
- **X** = numeric character

**Example BASIC program**

```
10 DIM A$[72]
20 OUTPUT 714;"*IDN?"
30 ENTER 714;A$
40 PRINT A$
50 END
```

**Example response**

```
Agilent Technologies,E8285A,US12345678,A.02.31
```
*OPT? (Option Identification Query)
The *OPT? command tells the Test Set to identify any reportable device options or filters installed in the unit. The Test Set responds to the *OPT? command by placing information which describes any reportable installed options into the Output Queue. The data is in ASCII format. The response data is obtained by reading the Output Queue into a string variable. The response data is organized into fields separated by commas.

Example BASIC program
```basic
10 DIM A$[255]
20 OUTPUT 714;"*OPT?"
30 ENTER 714;A$
40 PRINT A$
50 END
```

Example response
```
SPECTRUM ANALYZER,CMESSAGE,6KHZBPF,0
```

**NOTE:** At the time of this printing, the fourth field is reserved for a future option and will always return a 0 (zero).

*RST (Reset)*
The *RST command resets the Test Set. When the *RST command is received the majority of fields in the Test Set are “restored” to a default value; some fields are “maintained” at their current state and some are “initialized” to a known state. Other operational characteristics are also affected by the *RST command as follows:

- All pending operations are aborted.
- The Test Set’s display screen is in the UNLOCKED state.
- Measurement triggering is set to TRIG:MODE:SETT FULL;RETR REP.
- Any previously received Operation Complete command (*OPC) is cleared.
- Any previously received Operation Complete query command (*OPC?) is cleared.
- The power-up self-test diagnostics are not performed.
- The contents of the SAVE/RECALL registers are not affected.
- Calibration data is not affected.
- The GPIB interface is not reset (any pending Service Request is not cleared).
- All Enable registers are unaffected: Service Request, Standard Event, Communicate, Hardware #1, Hardware #2, Operation, Calibration, and Questionable Data/Signal.
- All Negative Transition Filter registers are unaffected: Communicate, Hardware #1, Hardware #2, Operational, Calibration, and Questionable Data/Signal.
- All Positive Transition Filter registers are unaffected: Communicate, Hardware #1, Hardware #2, Operational, Calibration, and Questionable Data/Signal.
- The contents of the RAM memory are unaffected.
- The contents of the Output Queue are unaffected.
- The contents of the Error Queue are unaffected.
Common Command Descriptions

*TST? (Self-Test Query)
The *TST? self-test query causes the Test Set to execute a series of internal self-tests and place a numeric response into the Output Queue indicating whether or not the Test Set completed the self-test without any detected errors. The response data is obtained by reading the Output Queue into a numeric variable, real or integer. Upon successful completion of the self-test the Test Set settings are restored to their values prior to receipt of the *TST? command. The numeric response definition is as shown in table 4.

<table>
<thead>
<tr>
<th>Detected Error</th>
<th>Returned Error Code (Decimal)</th>
<th>Error Code Displayed on Test Set's CRT (Hexadecimal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None (all self-tests passed)</td>
<td>0</td>
<td>0000</td>
</tr>
<tr>
<td>68000 Processor Failure</td>
<td>2</td>
<td>0002</td>
</tr>
<tr>
<td>ROM Checksum Failure</td>
<td>4</td>
<td>0004</td>
</tr>
<tr>
<td>Standard Non-Volatile System RAM Failure</td>
<td>8</td>
<td>0008</td>
</tr>
<tr>
<td>Non-Volatile System RAM Failure</td>
<td>16</td>
<td>0010</td>
</tr>
<tr>
<td>6840 Timer Chip Failure</td>
<td>32</td>
<td>0020</td>
</tr>
<tr>
<td>Real-time Clock Chip Failure</td>
<td>64</td>
<td>0040</td>
</tr>
<tr>
<td>Keyboard Failure (stuck key)</td>
<td>128</td>
<td>0080</td>
</tr>
<tr>
<td>RS-232 Chip (I/O option installed and not functioning correctly)</td>
<td>256</td>
<td>0010</td>
</tr>
<tr>
<td>Serial Bus Communications Failure with a Standard Board</td>
<td>512</td>
<td>0200</td>
</tr>
<tr>
<td>Signaling Board Self-Test Failure</td>
<td>1024</td>
<td>0400</td>
</tr>
<tr>
<td>CRT Controller Self-Test Failure</td>
<td>2048</td>
<td>0800</td>
</tr>
<tr>
<td>Miscellaneous Hardware Failure</td>
<td>4096</td>
<td>1000</td>
</tr>
</tbody>
</table>

**NOTE:** Refer to the Agilent Technologies E8285A Assembly Level Repair Manual for further information on Power-Up Self Test failures.

Example BASIC program

```basic
10 INTEGER Slf_tst_response
20 OUTPUT 714;**TST?*
30 ENTER 714;Slf_tst_response
40 PRINT Slf_tst_response
50 END
```

Example response

```
512
```
**Common Command Descriptions**

*OPC (Operation Complete)*

The *OPC command allows for synchronization between the Test Set and an external controller. The *OPC command causes the Test Set to set bit 0, Operation Complete, in the Standard Event Status Register to the TRUE, logic 1, state when the Test Set completes all pending operations. Detection of the Operation Complete message can be accomplished by continuous polling of the Standard Event Status Register using the *ESR? common query command. However, using a service request eliminates the need to poll the Standard Event Status Register thereby freeing the controller to do other useful work.

**NOTE:**

The *OPC command does not necessarily cause bit 0 in the Standard Event Status Register to be set true immediately following a measurement completion or the completion of a state or condition change in the Test Set. The instrument control processor is able to query the signal measurement instrumentation to determine if a measurement cycle has completed. However, the instrument control processor is not able to query the signal generation instrumentation to determine if the signal(s) have settled. In order to ensure that all signals have settled to proper values, the instrument control processor initiates a one-second delay upon receipt of the *OPC, *OPC? and *WAI commands. In parallel with the one-second timer the instrument control processor commands all active measurements to tell it when the measurement(s) are done. If an active (on) measurement displays four dashes (----) and the Test Set is configured with a PCS Interface, the *OPC, *OPC? and *WAI commands are never “done”. Turn off any measurements that may cause this condition, or command the Test Set to single trigger mode. If the Test Set is not configured with a PCS Interface, and an active measurement displays four dashes (----), the conditions required to satisfy *OPC, *OPC? and *WAI commands may be satisfied, but a valid measurement result will not be obtained. It is only when all active measurements are done and the one-second timer has elapsed, that the *OPC, *OPC? and *WAI commands are satisfied. Many state changes or measurement cycles take much less than one second. For this reason, *OPC should not be used when program execution speed is an issue.

**CAUTION:**

The *OPC command should not be used for determining if a call processing state command has completed successfully. Using the *OPC command with a Call Processing Subsystem state command results in a deadlock condition. For example, the following command sequence should not be used:

```
OUTPUT 114;"CALLP:ACTive;*OPC"
```

The *OPC command should not be used with any of the following Call Processing Subsystem commands: :ACTive, :REGister, :PAGE, :HANDoff, :RELease. The *OPC command should not be used with any of the following CDMA:CALL subsystem commands: :ANSWert, :MAKE, END, :HANDoff.

The CDMA Status Register Group and the Call Processing Subsystem Status Register Group should be used to control program flow. Refer to “Controlling Program Flow” chapter in the Test Set’s Application Guide for information on controlling program flow using the Call Processing Subsystem Status Register Group.
Example BASIC program: Using *OPC to generate a Service Request

10 OUTPUT 714;"*OPC 12" ! Enable SRQ on events in the Standard Event Status Register
20 OUTPUT 714;"*ESE 1" ! Enable Operation Complete bit in Standard Event Status Register
30 ON INTR 7,15 CALL Service_interrupt ! Set up interrupt
40 ENABLE INTR 7,15 ! Enable SRQ interrupts
50 OUTPUT 714;"*SRE 5" ! Enable Service Request Enable Register
60 LOOP ! Dummy loop to do nothing
70 DISP "* " & in a dummy loop."
80 END LOOP
90 END
100 SUB Service_interrupt
110 PRINT "All operations complete." ! Note: This interrupt service routine is
120 ! not complete. Refer to "Status Byte/Service Request Enable Register" in
130 ! Status Reporting in the Test Set’s User’s Guide for complete information.
140 SUBEND

The above program enables bit 0 in the Standard Event Status Enable Register and also bit 5 in the Service Request Enable Register so that the Test Set will request service whenever the OPC event bit becomes true. After the service request is detected the program can take appropriate action.

Refer to “Status Byte/Service Request Enable Register” in Status Reporting chapter of the Test Set’s User’s Guide for further information.

Example BASIC program: Using *OPC through polling of the Standard Event Status Register

10 INTEGER Stdevnt_reg_val
20 OUTPUT 714;"DISP RFG;RFG:OUTP 'Dupl';AMPL 0 dBm;FREQ 320 MHz;*OPC"
30 LOOP
40 OUTPUT 714;"*ESR?" ! Poll the register
50 ENTER 714;Stdevnt_reg_val
60 EXIT IF BIT(Stdevnt_reg_val,0) ! Exit if Operation Complete bit set
70 END LOOP
80 PRINT "All operations complete."
90 END
Common Command Descriptions

*OPC? (Operation Complete Query)

The *OPC? query allows for synchronization between the Test Set and an external controller by reading the Output Queue or by polling the Message Available (MAV) bit in the Status Byte Register. The *OPC? query causes the Test Set to place an ASCII character, 1, into its Output Queue when the Test Set completes all pending operations. A consequence of this action is that the MAV bit in the Status Byte Register is set to the 1 state.

**NOTE:**
The Test Set contains signal generation and signal measurement instrumentation. The instrument control processor is able to query the signal measurement instrumentation to determine if a measurement cycle has completed. However, the instrument control processor is not able to query the signal generation instrumentation to determine if the signal(s) have settled. In order to ensure that all signals have settled to proper values, the instrument control processor initiates a one-second delay upon receipt of the *OPC, *OPC? and *WAI commands. In parallel with the one-second timer the instrument control processor commands all active measurements to tell it when the measurement(s) are done. When all active measurements are done and the one-second timer has elapsed, the *OPC, *OPC? and *WAI commands are satisfied.

**CAUTION:**
The *OPC? command should not be used for determining if a Call Processing Subsystem state command has completed successfully. Call Processing Subsystem states do not complete, a state is either active or not active. Using the *OPC? command with a Call Processing Subsystem state command results in a deadlock condition. The control program will continuously query the Output Queue for a 1 but the 1 will never be placed in the Output Queue because the command never ‘completes’.

For example, the following command sequence should not be used:

```
OUTPUT 7:14;"CALLP:ACTive;*OPC?"
```

The *OPC? command should not be used with any of the following Call Processing Subsystem commands: ACTive, REGister, PAGE, HANDoff, RELEASE.

The Call Processing Subsystem Status Register Group should be used to control program flow. Refer to “Controlling Program Flow” chapter in the Test Set’s Application Guide for information on controlling program flow using the Call Processing Subsystem Status Register Group.
Common Command Descriptions

Using the *OPC? query by reading Output Queue

Bit 4 in the Service Request Enable Register is set to a value of zero (disabled). The *OPC? query is sent to the Test Set at the end of a command message data stream. The application program then attempts to read the *OPC? query response from the Test Set’s Output Queue. The Test Set will not put a response to the *OPC? query into the Output Queue until the commands have all finished.

**NOTE:** Reading the response to the *OPC? query has the penalty that both the GPIB bus and the Active Controller handshake are in temporary holdoff state while the Active Controller waits to read the *OPC? query response from the Test Set.

Example BASIC program

```
10 INTEGER Output_que_val
20 OUTPUT 714;"*SRE 0"; Disable Service Requests
30 OUTPUT 714;"DISP RFG;RFG:OUTP 'Dupl';AMPL 0 dBm;FREQ 320 MHz;*OPC?"
40 ENTER 714;Output_que_val ; Program will wait here until all
50 ; operations complete
60 PRINT "All operations complete."
70 END
```

Using the *OPC? query to set the MAV bit in the Status Byte Register

Bit 4 in the Service Request Enable Register is set to a value of 1 (enabled). The *OPC? query is sent to the Test Set at the end of a command message data stream. The Test Set will request service when the MAV bit in the Status Byte register is set to the TRUE, logic 1, state. After the service request is detected the application program can take appropriate action.

Refer to “Status Byte/Service Request Enable Register” in Status Reporting chapter of the Test Set’s User’s Guide for further information.

Example BASIC program

```
10 OUTPUT 714;"*SRE 16" ; Enable SRQ on data available in
20 ; Output Queue (MAV bit)
30 EN DUTY 7,15 CALL Service_INTERRUPT ; Set up interrupts
40 ENABLE INTR 7,2 ; Enable SRQ interrupts
50 OUTPUT 714;"DISP RFG;RFG:OUTP 'Dupl';AMPL 0 dBm;FREQ 320 MHz;*OPC?"
60 LOOP ; Dummy loop to do nothing
70 DISP "I am in a dummy loop."
80 END LOOP
90 END

100 SUB Service_INTERRUPT
110 ENTER 714;Output_que_val ; Read the 1 returned by the *OPC?
120 PRINT "All operations complete."
130 ! query command
140 ! Note:
150 ! This interrupt service routine is not complete.
160 ! Refer to "Status Byte/Service Request Enable Register" in
170 ! Status Reporting in the Test Set’s User’s Guide.
180 SUBEND
```
The *WAI command stops the Test Set from executing any further commands or queries until all commands or queries preceding the *WAI command have completed.

Example BASIC statement
```
OUTPUT 714;"DISP RFU;RFG:OUTP 'Dupw';*WAI;AMPL 0 dBm"
```

**NOTE:**
The Test Set contains signal generation and signal measurement instrumentation. The instrument control processor is able to query the signal measurement instrumentation to determine if a measurement cycle has completed. However, the instrument control processor is not able to query the signal generation instrumentation to determine if the signal(s) have settled. In order to ensure that all signals have settled to proper values, the instrument control processor initiates a one-second delay upon receipt of the *OPC, *OPC? and *WAI commands. In parallel with the one-second timer the instrument control processor commands all active measurements to tell it when the measurement(s) are done. When all active measurements are done and the one-second timer has elapsed, the *OPC, *OPC? and *WAI commands are satisfied.

**CAUTION:**
The *WAI command should not be used for determining if a Call Processing Subsystem state command has completed successfully. Call Processing Subsystem states do not complete, a state is either active or not active. Using the *WAI command with a Call Processing Subsystem state command results in a deadlock condition. The Test Set will not process any further GPIB commands until the Call Processing Subsystem command preceding the *WAI command completes but the command never ‘completes’. For example, the following command sequence should not be used:
```
OUTPUT 714;"CALLP:ACTive;*WAI;:CALLP:REGister"
```

The *WAI command should not be used with any of the following Call Processing Subsystem commands: :ACTive, :REGister, PAGE, :HANDoff, :RELease.

The Call Processing Subsystem Status Register Group should be used to control program flow. Refer to “Controlling Program Flow” chapter in the Test Set’s Application Guide for information on controlling program flow using the Call Processing Subsystem Status Register Group.
Common Command Descriptions

*CLS (Clear Status)
The *CLS command clears the contents (sets all bits to zero) of all Event Registers summarized in the Status Byte. The *CLS command also empties all queues (removes all current messages) which are summarized in the Status Byte, except the Output Queue. The following Event Registers are affected:

- Hardware 1 Status Register
- Hardware 2 Status Register
- Questionable Data/Signal Register
- Standard Event Status Register
- Operational Status Register
- Calibration Status Register
- Communicate Status Register

The following message queues are affected:

- Error Message Queue

*NOTE:* The *CLS command does not clear the contents of the Message screen which is displayed on the CRT when SHIFT, RX is selected. This display is only cleared when the unit is powered on.

*ESE (Standard Event Status Enable)*
The Test Set responds to the *ESE* command. See "Standard Event Status Register Group" in Status Reporting chapter of the Test Set’s User’s Guide for a detailed explanation of the *ESE* command.

*ESE? (Standard Event Status Enable Query)*
The Test Set responds to the *ESE?* command. See “Standard Event Status Register Group” in Status Reporting chapter of the Test Set’s User’s Guide for a detailed explanation of the *ESE?* command.

*ESR? (Standard Event Status Register Query)*
The Test Set responds to the *ESR?* command. See “Standard Event Status Register Group” in Status Reporting chapter of the Test Set’s User’s Guide for a detailed explanation of the *ESR?* command.

*PCB (Pass Control Back)*
The Test Set accepts the *PCB* command. Refer to “Passing Instrument Control” in Operating Overview chapter of the Test Set’s User’s Guide.

*SRE (Service Request Enable)*
The Test Set responds to the *SRE* command. See “Status Byte/Service Request Enable Register” in Status Reporting chapter of the Test Set’s User’s Guide for a detailed explanation of the *SRE* command.
Common Command Descriptions

*SRE? (Service Request Enable Query)
The Test Set responds to the *SRE? command. See “Status Byte/Service Request Enable Register” in Status Reporting chapter of the Test Set’s User’s Guide for a detailed explanation of the *SRE? command.

*STB? (Status Byte Query)
The Test Set responds to the *STB? command. See “Status Byte/Service Request Enable Register” in Status Reporting chapter of the Test Set’s User’s Guide for a detailed explanation of the *STB? command.

*TRG (Trigger)
The *TRG command is equivalent to the IEEE 488.1 defined Group Execute Trigger (GET) message and has the same effect as a GET when received by the Test Set. The Test Set responds to the *TRG command by triggering all currently active measurements.

*RCL (Recall Instrument State)
The *RCL command restores the state of the Test Set from a file previously stored in battery-backed internal memory, on a memory card, on a RAM disk, or on an external disk. The *RCL command is followed by a decimal number in the range of 0 to 99 which indicates which Test Set SAVE/RECALL file to recall. The mass storage location for SAVE/RECALL files is selected using the SAVE/RECALL field on the I/O CONFIGURE screen.

The *RCL command cannot be used to recall files with names which contain non-numeric characters or a decimal number greater than 99. To recall SAVE/RECALL files saved with names which contain non-numeric characters or a decimal number greater than 99, use the REG:RECall filename command (“Programming RECALL” in Keys chapter of the Test Set’s Reference Guide).

*SAV (Save Instrument State)
The *SAV command saves the present state of the Test Set into a file in battery-backed internal memory, on a memory card, on a RAM disk, or on an external disk. The *SAV command is followed by a decimal number in the range of 0 to 99 which indicates the name of the stored SAVE/RECALL file. The mass storage location for SAVE/RECALL files is selected using the SAVE/RECALL field on the I/O CONFIGURE screen.

The *SAV command cannot be used to save the present state of the Test Set to a file with a name which contains non-numeric characters or a decimal number greater than 99. To save the present state of the Test Set to a file with a name which contains non-numeric characters or a decimal number greater than 99, use the REG:SAVE filename command (“Programming SAVE” in Keys chapter of the Test Set’s Reference Guide).
Remote Capabilities

Remote Operating Capabilities

Remote Operating Configurations

The General Purpose Interface Bus (GPIB) is Agilent Technologies’s implementation of the IEEE 488.1-1987 Standard Digital Interface for Programmable Instrumentation. Incorporation of the GPIB into the Test Set provides several valuable remote operating configurations:

- Programs running in the Test Set’s built-in IBASIC Controller can control all the Test Set’s functions using its internal GPIB. This capability provides a single-instrument automated test system. (The Agilent Technologies 83217A Radio Test Software utilizes this capability.)
- Programs running in the Test Set’s built-in IBASIC Controller can control other instruments connected to the external GPIB.
- An external controller, connected to the external GPIB, can remotely control the Test Set.
- A GPIB printer, connected to the external GPIB, can be used to print test results and full screen images.
### Remote Interface Functions

#### Interface Functions

The interface functions that the Test Set implements are listed in **Table 5**.

**Table 5**  
Test Set IEEE 488.1 Interface Function Capabilities

<table>
<thead>
<tr>
<th>Function</th>
<th>Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talker T6</td>
<td>No Talk Only Mode</td>
</tr>
<tr>
<td>Extended Talker T0</td>
<td>No Extended Talker Capability</td>
</tr>
<tr>
<td>Listener L4</td>
<td>No Listen Only Mode</td>
</tr>
<tr>
<td>Extended Listener L4</td>
<td>No Extended Listener Capability</td>
</tr>
<tr>
<td>Source Handshake SH1</td>
<td>Complete Capability</td>
</tr>
<tr>
<td>Acceptor Handshake AH1</td>
<td>Complete Capability</td>
</tr>
<tr>
<td>Remote/Local RL1</td>
<td>Complete Capability</td>
</tr>
<tr>
<td>Service Request SR1</td>
<td>Complete Capability</td>
</tr>
<tr>
<td>Parallel Poll PP0</td>
<td>No Parallel Poll Capability</td>
</tr>
<tr>
<td>Device Clear DC1</td>
<td>Complete Capability</td>
</tr>
<tr>
<td>Device Trigger DT1</td>
<td>Complete Capability</td>
</tr>
<tr>
<td>Controller C1</td>
<td>System Controller</td>
</tr>
<tr>
<td>C3: Send REN</td>
<td></td>
</tr>
<tr>
<td>C4: Respond to SRQ</td>
<td></td>
</tr>
<tr>
<td>C11: No Pass Control to Self, No Parallel Poll</td>
<td></td>
</tr>
<tr>
<td>Drivers E2</td>
<td>Tri-State Drivers</td>
</tr>
</tbody>
</table>

S:/agilent/e8285/QK_REPHOOK/CHAPTER5/intercap.fb
Remote Interface Functions

Interface Messages

The remote interface message capabilities of the Test Set and the associated IEEE 488.1 messages and control lines are listed in table 6.

<table>
<thead>
<tr>
<th>Message Type</th>
<th>Implemented</th>
<th>Response</th>
<th>IEEE 488.1 Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data</td>
<td>Yes</td>
<td>All front-panel functions, except as listed in “Non-Programmable Front-Panel Keys and Functions” in Keys chapter of the Test Set’s Reference Guide, are programmable. The Test Set can send status byte, message and setting information. All measurement results (except dashed “- - - -” displays) and error messages are available through the bus.</td>
<td>DAB END MTA MLA OTA</td>
</tr>
<tr>
<td>Remote</td>
<td>Yes</td>
<td>Remote programming mode is entered when the Remote Enable (REN) bus control line is true and the Test Set is addressed to listen. The “R” annunciator will appear in the upper right corner of the display screen when the Test Set is in remote mode. All front panel keys are disabled (except for the LOCAL key, POWER switch, Volume control and Squelch control). When the Test Set enters remote mode the output signals and internal settings remain unchanged, except that triggering is reset to the state it was last set to in remote mode (Refer to “Measurement Triggering Process” chapter in the Test Set’s User’s Guide.)</td>
<td>REN MLA</td>
</tr>
<tr>
<td>Local</td>
<td>Yes</td>
<td>The Test Set returns to local operation (full front-panel control) when either the Go To Local (GTL) bus command is received, the front panel LOCAL key is pressed or the REN line goes false. When the Test Set returns to local mode the output signals and internal settings remain unchanged, except that triggering is set to TRIG MODE:SETT FULL RETR REP. The LOCAL key will not function if the Test Set is in the local lockout mode.</td>
<td>GTL MLA</td>
</tr>
<tr>
<td>Local Lockout</td>
<td>Yes</td>
<td>Disables all front panel keys including the LOCAL key. Only the System Controller or the POWER switch can return the Test Set to local mode (front panel control).</td>
<td>LLO</td>
</tr>
<tr>
<td>Clear Lockout/</td>
<td>Yes</td>
<td>The Test Set returns to local mode (front panel control) and local lockout is cleared when the REN bus control line goes false. When the Test Set returns to local mode the output signals and internal settings remain unchanged, except that triggering is set to TRIG MODE:SETT FULL RETR REP.</td>
<td>REN</td>
</tr>
<tr>
<td>Set Local</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Remote Interface Functions

Table 6  Test Set IEEE 488.1 Interface Message Capability (Continued)

<table>
<thead>
<tr>
<th>Message Type</th>
<th>Implemented</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Request</td>
<td>Yes</td>
<td>The Test Set sets the Service Request (SRQ) bus line true if any of the enabled conditions in the Status Byte Register, as defined by the Service Request Enable Register, are true.</td>
</tr>
<tr>
<td>Status Byte</td>
<td>Yes</td>
<td>The Test Set responds to a Serial Poll Enable (SPE) bus command by sending an 8-bit status byte when addressed to talk. Bit 6 will be true, logic 1, if the Test Set has sent the SRQ message.</td>
</tr>
<tr>
<td>Status Bit</td>
<td>No</td>
<td>The Test Set does not have the capability to respond to a Parallel Poll.</td>
</tr>
<tr>
<td>Clear</td>
<td>Yes</td>
<td>Clears the Input Buffer and Output Queue, clears any commands in process, puts the Test Set into the Operation Complete idle state and prepares the Test Set to receive new commands. The Device Clear (DCL) or Selected Device Clear (SDC) bus commands do not change any settings or stored data (except as noted previously), interrupt front panel IO, interrupt any Test Set operation in progress (except as noted previously), or change the contents of the Status Byte Register (other than clearing the MAN* bit as a consequence of clearing the Output Queue). The Test Set responds equally to DCL or SDC bus commands.</td>
</tr>
<tr>
<td>Trigger</td>
<td>Yes</td>
<td>If in remote programming mode and addressed to listen, the Test Set makes a triggered measurement following the trigger conditions currently in effect in the instrument. The Test Set responds equally to the Group Execute Trigger (GET) bus command or the *TRG Common Command.</td>
</tr>
<tr>
<td>Take Control</td>
<td>Yes</td>
<td>The Test Set begins to act as the Active Controller on the bus.</td>
</tr>
<tr>
<td>Abort</td>
<td>Yes</td>
<td>The Test Set stops talking and listening</td>
</tr>
</tbody>
</table>
Remote Interface Functions

Conformance to the IEEE 488.1-1987 Standard
For all IEEE 488.1 functions implemented, the Test Set adheres to the rules and procedures as outlined in that Standard.

Conformance to the IEEE 488.2-1987 Standard
For all IEEE 488.2 functions implemented, the Test Set adheres to the rules and procedures as outlined in that Standard with the exception of the "OPC Common Command. Refer to ""OPC (Operation Complete)" on page 211.

Extended Addressing
Extended addressing (secondary command) capability is not implemented in the Test Set.

Multiple Addressing
Multiple addressing capability is not implemented in the Test Set.
Remote Interface Functions
GPIB Examples

Alphabetical list of fields with GPIB example

Abort Print

GPIB Example
Abort Print is not directly programmable over the GPIB.

Acc Prb Pwr

GPIB Example
"DIG CCNT:CDMA:TX:POW:MEAS 'Acc Prb Pwr'"
displays the CDMA CALL CONTROL screen and selects Access Probe Power measurements.
"MEAS:CDM:APP?"
queries the Access Probe Power measurement.

Access (annunciator)

GPIB Example
"STATUS:CALLP:CONDITion?"
queries the analog Call Processing condition register. Bit four will be true (BCD 16) when an analog call is in the Access state. Also, the Access annunciator on the CALL CONTROL screen is lit when an analog call is in the Access state.

Access Probe (annunciator)

GPIB Example
"DIG CCNT,STATUS:CDMA:CONDITion?"
queries the CDMA condition register. Bit 0 will be set when the Access Probe annunciator is lit.
Alphabetical list of fields with GPIB example

AC Level

GPIB Example
"DISP AFAN\AFAN\INPUT 'SSB Demod';:MEAS:AFR:ACLevel;"
displays the AF ANALYZER screen, selects single-sideband demod from
the AF Anl In field, then queries the AC Level field.

Active

GPIB Example
"CALLP:ACTive"
turns on the forward control channel.

Active (annunciator)

GPIB Example
"STATus:CALLP:COND?"
queries the analog Call Processing condition register. Bit zero will be true
(BCD 1) when the forward channel is turned on. Also, the Active
annunciator on the CALL CONTROL screen is lit when the forward control
channel is on.

ACP Meas

GPIB Example
"DISP ACP;MEAS:ACP:LRATIO;"
displays the ADJACENT CHANNEL POWER screen and queries the
Lower ACP Ratio field.

Add Intcpt

GPIB Example
"DISP CNOS:CDMA:MOBILE:PARM:IADD 5"
displays the CDMA MOBILE REPORTED PILOT STRENGTH screen
and sets the Add Intcpt field to 5.
Alphabetical list of fields with GPIB example

**AF Anl In**

**GPIB Example**

```
"DISP TX; AFAN:INPUT 'FM DEMOD'"
```

displays the TX TEST screen and selects FM Demod in the AF Anl In field.

Measurement displayed dependent on choice

- "AC Level" on page 226
- "AM Depth" on page 229
- "FM Deviation" on page 249

**AF Cnt Gate**

**GPIB Example**

```
"DISP AFAN; AFAN:GTIME .08"
```

displays the AF ANALYZER screen and sets the AF Cnt Gate field to 80 ms.

**AF Freq**

**GPIB Example**

```
"DISP AFAN; MEAS:AFR:SELect 'AF Freq'; FREQuency?"
```

displays the AF ANALYZER screen, selects the AF Freq measurement, and queries the AF Freq field.

**AF Freq**

**GPIB Example**

```
"DISP ACNT; MEAS:AFR:FREQuency?"
```

displays the CALL CONTROL screen and queries the AF Freq field.

**AFGen1 Freq**

**GPIB Example**

```
"DISP RFGenerator; AFGenerator1:FREQuency 1kHz"
```

displays the RF GENERATOR screen and sets the AFGen1 Freq field to 1.000 kHz.
Alphabetical list of fields with GPIB example

AFGen1 Lvl

GPIB Example
"DISP TXJ(AFGenerator1:OUTPut 50MV"
displays the TX TEST screen and sets the AFGen1 Lvl field to 50 mV.

AFGen1 To

GPIB Example
"DISP RFGenerator; AFGenerator1:DESTination ‘AM’"
displays the RF GENERATOR screen and sets the AFGen1 To field to “AM”.

AFGen2 To

GPIB Example
"DISP RFGenerator; AFGenerator2:DESTination ‘AM’"
displays the RF GENERATOR screen and sets the AFGen2 To field to “AM”.

AFGen2 Freq

GPIB Example
"DISP RFGenerator; AFGenerator2:FREQuency 1KHZ"
displays the RF GENERATOR screen and sets the AFGen2 Freq field to 1.000 kHz.

A-key

GPIB Example
"DISP CAUT; CDMA:AUTHenticate:AKEY ‘0’"
dispays the CDMA AUTHENTICATION screen and sets the A-key to 0.

A_Key

GPIB Example
"CALLP:AMPS:AUTH:AKEY ‘12345678901234567890123456’"
enters an authentication key into the A_KEY field (AUTHENTICATION screen)
"CALLP:AMPS:AUTH:AKEY:GEN"
generates a new authentication key
Alert

GPIB Example
"DISP CONFi:CDMA:TERM:ALER "On""
displays the CDMA SHORT MESSAGE SERVICE screen and sets the Alert parameter to “On”.

Alt Pwr Ms Cal Bands

GPIB Example
"CONF:APMC 'MS AMPS'"
selects MS AMPS in the Alt Pwr Ms Cal Bands field (CONFIGURE screen).

AM Depth

GPIB Example
"DISP AFAN;AFAN:INPut 'AM DEMOD';:MEAS:AFR:AM?"
displays the AF ANALYZER screen, selects “AM Demod” in the AF Anl In field, and queries the AM Depth field.

Ampl Error

GPIB Example
"DISP CTXT;MEASure:CDMAanalyzer:AMPL:ERRor?"
displays the CDMA CELLULAR MOBILE TRANSMITTER TEST screen and queries the CDMA amplitude error measurement result.

Amplitude

GPIB Example
"DISP RX;RFGenerator:AMPLitude '-40'"
displays the RX TEST screen and sets the Amplitude field to -40 dBm.

GPIB Example
"DISP CALL;RFGenerator:AMPLitude '-40'"
displays the CALL CONTROL screen and sets the Amplitude field to -40 dBm.
GPIB Example

"DISP CONN;CDMA:SWEETpower;TRIGger:AMPLitude '-12 dB'"

displays the CDMA SWEPT POWER MEASUREMENT screen and sets the Amplitude field to -12 dB.

Answer Mode

GPIB Example

"DISP CONN;CDMA:CALL:ANSWmer:MODE 'MANUAL'"

selects “Manual” answer mode.

"DISP CONN;CDMA:CALL:ANSWmer"

answers a mobile station originated call when the Answer Mode field is set to “Manual”.

Antenna In

GPIB Example

"DISP CONN;CONF:INP 'Ant';:CONF:OFLevel:ANTenna -3"

displays the CONFIGURE screen, selects “Ant” in the Input Port field, and sets the RF Level Offset for the Antenna In field (CONFIGURE screen) to -3 dB. The Antenna In field is displayed only when the Input Port field is set to Ant.

Arm

GPIB Examples

"DISP CRXT;TRIG:MODE:RETR SINGLE"

sets the remote operation trigger mode to “Single”.

"DISP CRXT;TRIGger:IMMediate"

triggers all active measurements.

Attack Time

GPIB Example

"MEAS:GPOWer:ATTack:TIME?"

queries the CDMA gated power attack time.

Atten Hold

GPIB Example

"DISP RXl:RFGenerator:ATTenuator 'ON'"

displays the RX TEST screen and sets the Atten Hold field to “On”.
Alphabetical list of fields with GPIB example

Audio In Lo

GPIB Example
"DISP AFAN; AFAnalyzer:AIN 'FLOAT'"
displays the AF ANALYZER screen and sets the Audio In Lo field to "Float".

Audio Out

GPIB Example
"DISP RFG; RFGenerator:MODulation:AOUT 'DC'"
displays the RF GENERATOR screen and sets the Audio Out field to “DC”.

Authen

GPIB Example
"DISP CAUT; CDMA:CELL:CONF:AUTH:MODE 'On'"
displays the CDMA AUTHENTICATION screen and turns the CDMA authentication “ON”.

Authen Data

GPIB Example
"DISP CAUT; CDMA:AUTH:DATA:CLE"
displays the CDMA AUTHENTICATION screen and “CLEars” the data from the Authentication Data Table. (Table includes Parameter, Expected, Received and Status data).

Authent

GPIB Example
"CALLP:AMPS:AUTH:ONOFF 'ON'"
turns authentication “On”

Auto/Norm

GPIB Example
"DISP OSC; OSC:TRIGger:TYPE 'NORM'"
sets the Controls - Trigger Auto/Norm field to “Norm”
Alphabetical list of fields with GPIB example

**Auto Zero**

GPIB Example

```
"DISP RFAN;RFAN:PME:ZERO:MODE 'Manual'"
```

displays the RF Analyzer screen and selects Manual in the Auto Zero field.

**Averages**

GPIB Example

```
"DISP CGP;CGPA:GPOWer:NAVG 100"
```

displays the CDMA GATED POWER screen and sets the Num Averages field to 100 averages.

**Avg Power**

GPIB Examples

```
"DISP CTXT;CDMA:TX:POW:MEAS 'Avg Power'"

"DISP CTXT;MEAS:CDM:AVGP?"

"DISP CTXT;MEAS:CDM:AVGP:ZERO"
```

selects the average power measurement.

queries the average power measurement.

zeroes the average power measurement.

**AWGN**

GPIB Examples

```
"CDMA:AWGN:SNPower -75dBm"

"CDMA:AWGN:STATe ON"
```

sets the AWGN generator’s level to −75 dBm.

**Band Class**

GPIB Example

```
"DISP CCONT;CDMA:CELL:BCLass 0"
```

sets the Band Class field value to 0.

**Base ID**

GPIB Example

```
"DISP CCON;CDMA:CELL:CONFigure:BID 0"
```

sets the base identification of the simulated CDMA cell site to 0.
Alphabetical list of fields with GPIB example

Base Freq (User Defined)

GPIB Example

```
"CONF:RFChNd 'USER-DEF',USER:BASE 870MHZ"
```

sets the RF Chan Std field (CONFIGURE screen) to USER-DEF (User Defined) and sets the Base Freq field to 871 MHz.

Beeper

GPIB Example

```
"CONF:BEEPER 'QUIET'
```

sets the Beeeper field (CONFIGURE screen) to “Quiet”.

BER Thresh

GPIB Example

```
"CALLC:SYS 'NAMPS'; NAMPS:BMT:BSET 20"
```

selects “NAMPS” in the System Type field (CALL CONTROL screen) and sets the BER Thresh field (CALL CONFIGURE screen) to 20.

Burst Time

GPIB Example

```
"MEAS:GPOW:BURST:TIME?"
```

queries the latest CDMA gated power measurement burst time.

by # errors

GPIB Example

```
```

causes the mobile station to report FER whenever the number of errors counted by the mobile station reaches the value entered by the command below.

```
"DISC:CDMA:MOB:FER:REPORT:BY:ERRORS 5"
```

causes the mobile station to report FER if the FER count reaches 5 within the number of frames specified in the MS FER Report Interval.

by # frames

GPIB Example

```
```

causes the mobile station to report FER based on frame count.
Call Limit

GPIB Syntax
"DISP CCON/CDMA:CALL:LIMIT 'PAGE'"

limits call progress to the paging channel.

Carrier

GPIB Example
"DISP CTXT;MEAS:CDManalyzer:CARrier:FEEDthrough?"

queries the carrier feedthrough measurement result.

Carrier Ref

GPIB Example
"DISP ACP;ACPower:RMOdulation 'Mod'"

displays the ADJACENT CHANNEL POWER screen and selects “Mod” in the Carrier Ref field.

CC Order

GPIB Example
"CALLP:AMPS:AUTH:ONOFF 'ON';CCOR 'SSD UPD'"

selects “On” in the Authent field (AUTHENTICATION screen) and selects “SSD Upd” (shared secret update) on the CALL CONTROL screen.

Center Freq

GPIB Example
"DISP SAN;SANalyzer:CFRequency 4MHZ"

displays the SPECTRUM ANALYZER screen and sets the Center Freq field to 4 MHz.

Center Freq

GPIB Example
"DISP CSP;RFAN:FREQ 850MHZ"

displays the CDMA REVERSE CHANNEL SPECTRUM analyzer and sets the Center Freq field to 850 MHz. The RF Display field on the CONFIGURE screen must be set to “Freq” to display the Center Freq field.
Alphabetical list of fields with GPIB example

Change

GPIB Example
"DISP CTXR; CDMA:PCONtrol:CHANge "n up""
selects “n up” power control steps.

Chan:

GPIB Example
"CALLP:VCHannel 215"
sets the Chan: - field (CALL CONTROL screen) to 215.

Channel

GPIB Example
"DISP CCNT; CELL:CONF:RFCH  1"
displays the CDMA CALL CONTROL screen and sets the Channel field to 1.

Channel BW

GPIB Example
"DISP ACP; ACPower:CBANdwidth 9KHZ"
displays the ADJACENT CHANNEL POWER screen and sets the Channel BW field to 9 MHz.

Chan Power

GPIB Examples
"DISP CTXT; CDMA:TX:POW:MEAS "Chan Power"
"DISP CTXT; MEAS:CDM:CHAN:CAL"
displays the CDMA CELLULAR MOBILE TRANSMITTER TEST screen and selects the Channel Power measurement.
displays the CDMA CELLULAR MOBILE TRANSMITTER TEST screen and queries the channel power measurement.
displays the CDMA CELLULAR MOBILE TRANSMITTER TEST screen and calibrates channel power measurements.
Alphabetical list of fields with GPIB example

Chan Std

GPIB Example

"DISP CCNT;CDMA:CALL:AHAndoff:CSTandard  "MS AMPS""

displays the CDMA CALL CONTROL screen and enters MS AMPS in the Chan Std field.

Check Digits

GPIB Example

"DISP CAUT;CDMA:AUTH:CDIG?"

displays the CDMA AUTHENTICATION screen and returns the Check Digits value.

Ch Loc:

GPIB Example

"CALLP:CSYS "NAMPS";NAMPS:CEXT:SETT  "LOWER"

selects “NAMPS” in the System Type field (CALL CONTROL screen) and sets the Ch Loc: - field to “Lower”.

GPIB Example

"CALLP:CSYS "NTACS";NTACS:CEXT:SETT  "NARROW"

selects “NTACS” in the System Type field (CALL CONTROL screen) and sets the Ch Loc: - field to “Narrow”.

GPIB Example

"CALLP:CSYS "NTACS";NTACS:CEXT:SETT:ACT?

verifies “NTACS” in the System Type field (CALL CONTROL screen), queries, then returns the setting of the Ch Loc: - field.

Ch Offset

GPIB Example

"DISP ACP;ACPower:CDFFreq  200kHz"

displays the ADJACENT CHANNEL POWER field and sets the Ch Offset field to 200 kHz.
Alphabetical list of fields with GPIB example

Chan Space (User Defined)

GPIB Example
"CONF:RF3:standard 'USER-DEF';USER:SPacing 25KHZ"
sets the RF Chan Std field (CONFIGURE screen) to USER-DEF (User Defined) and sets the Chan Space field to 25 kHz.

Closed Loop Pwr Cntl

GPIB Example
"DISP CTKR,CDMA:PContr:MODE 'Open Loop'"
displays the CDMA TRANSMITTER POWER RANGE TEST screen and selects “Open Loop” power control mode.

CMAX

GPIB Example
OUTPUT 714,"CALLP:CMAX 21"
sets the CMAX field (CALL, CONFIGURE screen) to 21.

Cntrl Chan

GPIB Example
OUTPUT 714,"CALLP:CH 333"
sets the analog control channel to 333 in the Cntrl Chan field (CALL CONTROL screen).

Cntry Code

GPIB Syntax
"CDMA:CELL:PROT 'IS-95A'; CONF:BCC 2"
selects IS-95A in the Protocol field (CDMA CELL SITE CONFIGURATION screen) and sets the Cntry Code (base station’s country code) field to 2.

Confidence

GPIB Example
"DISP CXT,MEASure:CDManalyzer:FERasure:CONFidence:INTerval 95"
displays the CDMA CELLULAR MOBILE RECEIVER TEST screen and sets a confidence interval of 95%.
Alphabetical list of fields with GPIB example

**Connect (annunciator)**

**GPIB Example**

```
"STAT:CALLP:COND?"
```

queries the analog Call Processing condition register. Bit five will be true (BCD 32) when an analog call is connected. Also, the “Connected” annunciator on the CALL CONTROL screen is lit when an analog call is connected.

**Connected (annunciator)**

**GPIB Example**

```
"DISP CNXL:STAT:CDMA:COND?"
```

queries the CDMA condition register. Bit 4 will be set when the mobile station is ringing, and Bit 3 will be set when the Connected annunciator is lit (call was answered).

**Controls (CDMA Reverse Channel Spectrum Analyzer)**

**GPIB Example**

```
"DISP CSP:CSPect:CONT 'Auxiliary'
```

displays the CDMA REVERSE CHANNEL SPECTRUM screen and selects “Auxiliary” in the Controls field.

**Controls (Spectrum Analyzer)**

**GPIB Example**

```
"DISP SAN:SAN:CONT 'RF Gen'
```

displays the SPECTRUM ANALYZER screen and selects “RF Gen” in the Controls field.

**Controls (Oscilloscope)**

**GPIB Example**

```
"DISP OSC:OSC:CONT 'Marker'
```

displays the OSCILLOSCOPE screen and selects “Marker” in the Controls field.
Alphabetical list of fields with GPIB example

Controls (Open Loop Time Response)

GPIB Example

"CDMA:OLTR:CONTrol 'Main'"

selects “Main” in the OPEN LOOP TIME RESPONSE screen Control field.

Controls (CDMA Gated Power)

GPIB Example

"CDMA:GPOWer:CONTrol 'Main'"

selects “Main” in the CDMA GATED POWER screen Controls field.

Controls (CDMA Swept Power)

GPIB Example

"DISP CSWP; CDMA:SWEPtpower:CONTrol 'Main'"

selects “Main” in the CDMA SWEPT POWER MEASUREMENT screen Controls field.

Cont/Single

GPIB Example

"DISP OSC; OSC:CONTrol 'TRIGGER'; TRIGger:MODE 'SINGLE'"

displays the OSCILLOSCOPE screen, selects “Trigger” in the Control field, and selects “Single” triggering.

Data Length

GPIB Example

"CONF:SPOR:DATA '8 BITS'"

selects “8 bits” in the Data Length field (I/O CONFIGURE screen).

Data Mode

GPIB Example

"DISP CMOG;CDMA:SMS:MDM 'ASCII'"

displays the CDMA SHORT MESSAGE SERVICE screen and sets the Data Mode field to ASCII. Selecting ASCII causes the User Data (ASCII) field to be displayed.
Alphabetical list of fields with GPIB example

Data Rate
GPIB Example
"DISP CCNT;CDMA:CALL:TRAFFIC:DATA:MODE  'Svc Opt 2'; RATE  'FULL'"
displays the CDMA CALL CONTROL screen, selects “Svc Opt 2” in the
Traffic Data Mode field, and selects “Full” (full-rate data transmission) in
the Data Rate field.

Data Spec
GPIB Example
"CALLP:DSPP  'STD'"
selects “Std” in the Data Spec field (CALL BIT screen).

Data Type
GPIB Example
"DISP CCNT;CDMA:CALL:TRAFFIC:DATA:MODE  'Svc Opt 1'; TYPE  'PRBS'"
displays the CDMA CALL CONTROL screen, selects “Svc Opt 1” in the
Traffic Data Mode field, and selects “PRBS” in the Data Type field.

Date
GPIB Example
"CONF:DATE 010298"
sets the Date field (CONFIGURE screen) to January 2, 1998.

DC Level
GPIB Example
"DISP AFAN; MEAS:AFRequency:SELect  'DC LEVEL'; DCVolts?"
displays the AF ANALYZER screen, selects the “Current” measurement,
and queries the “Current” measurement.

De-Emp Gain
GPIB Example
"DISP AFAN;AFAnalyzer:RANGing  'HOLD'; DEMPhasis:GAIN  '10 DB'"
displays the AF ANALYZER screen, selects “Hold” in the Gain Cntl field,
and selects “10 dB” in the De-Emp Gain field.
De-Emphasis

GPIB Example

"DISP AFAN;AFANalyzer:DEMphasis "750 US""

displays the AF ANALYZER screen and selects “750 US” in the De-
Emphasis field.

Detector

GPIB Example

"DISP AFAN;AFANalyzer:DETrector "PK-""

displays the AF ANALYZER screen and selects “Pk-” in the Detector field.

Disarm

GPIB Example

"TRIGger:ASTate 'DISARM'"

stops any active measurements that are currently in progress.

Display

GPIB Example

"DISP ACNT;CALLP:MODE 'DATA'"

displays the CALL CONTROL screen and selects “Data” in the Display
field.

Display Interim Results

GPIB Example

"DISP CSTM;DISPLAY:TERasure:INTerim:RESULTS 'YES'"

displays the CDMA CELLULAR MOBILE RECEIVER TEST screen and
selects “Yes” in the Display Interim Results field.

Display User Mssgs

GPIB Example

"DISP CONF;DISPLAY:MESSages 'YES'"

displays the CONFIGURE screen and selects Yes in the Display User
Mssgs field.
Alphabetical list of fields with GPIB example

Display Word

GPIB Example

```
"CALLP:DATA 'RECCW A'
```

selects “RECCW A” in the Display Word field (CALL DATA screen).

Distn

GPIB Example

```
"DISP AFIN;MEAS:AFRequency:SELECT 'DISTn';DISTortion"
```

displays the AF ANALYZER screen, selects the “Distn” measurement, and
queries the “Distn” measurement.

Drop Intcpt

GPIB Example

```
"DISP CNFG:CDMA:MOBILE:PARAM:DROP; 3"
```

displays the CDMA MOBILE REPORTED PILOT STRENGTH screen
and sets the Drop Intcpt field to 3.

Drop Timer

GPIB Example

```
"DISP CTXR;CDMA:CALL:DTIMER 'OFF'
```

displays the CDMA TRANSMITTER POWER RANGE TEST screen and
selects “Off” in the Drop Timer field.

DSAT

GPIB Example

```
"CDMA:CALL:AHAN:DSAT '0 2556CB'
```

sets the DSAT field (CDMA CALL CONTROL) to 0 2556CB. (Call Control)

DSAT:

GPIB Example

```
"CALLP:CSYSTem 'NAMPS'; NAMP:DSAT:ACTual?"
```

queries the DSAT field (CALL CONTROL screen).
Alphabetical list of fields with GPIB example

**DSAT/DST (hex)**

GPIB Example

```
"CALLP:NAMP:DSAT:MEASurement?"
```

Call Control Screen

**DSAT Meas**

GPIB Example

```
"DISP ACNT;CPRocess:NAMPs:DSAT:MEAS:SEL 'Data'"
```

displays the CALL CONTROL screen and selects “Data” in the DSAT Meas field.

**Duplex Out**

GPIB Example

```
"DISP CONF;CONF:OUTP 'Dupl';:CONF:OFLevel:DUPLex -3"
```

displays the CONFIGURE screen, selects “Dupl” in the Output Port field, and sets the RF Level Offset for the Duplex Out field (CONFIGURE screen) to -3 dB. This field is displayed only when the Output Port field is set to “Dupl”.

**Duplicate User Data**

GPIB Example

```
"DISP CSMS; CDMA:SMS:TERM:DUPL 1"
```

displays the CDMA SHORT MESSAGE SERVICE screen and sets the Duplicate User Data field to 1.

**Eb/Nt**

GPIB Example

```
"DISP CGEN; CDMA:STN?"
```

displays the CDMA GENERATOR CONTROL screen and queries the Eb/Nt field.

**Echo Delay**

GPIB Example

```
"DISP CCNT; CDMA:CALL:TRAFFic:ECHO:DELay '2 SECONDS'"
```

displays the CDMA CALL CONTROL screen and sets the Echo Delay field
Alphabetical list of fields with GPIB example

2 to “2 seconds”. The Traffic Data Mode field must be set to “Svc Opt 1”, “Svc Opt 3”, or “Svc Opt 32768” to display the Echo Delay field.

**Encoding**

GPIB Example

```
"DISP CGIG;CDMA:SMS;ENC 'Octet'"
```

displays the CDMA SHORT MESSAGE SERVICE screen and sets the Encoding field to Octet.

**Errors**

GPIB Example

```
"DISP CMOB;CDMA:MOBILE:FERasure:ERRors?"
```

displays the CDMA CELLULAR MOBILE TRANSMITTER TEST screen and queries the number of errors counted by the mobile station during an FER report interval.

**Errors Counted**

GPIB Example

```
"DISP CRXT;MEASure:CDManalyzer:FERasure:ERRors?"
```

displays the CDMA CELLULAR MOBILE RECEIVER TEST screen and queries the FER errors measurement result.

**Esc Mode**

GPIB Syntax

```
"CDMA:CELL:CONF:EMOD 'On'"
```

selects “On” in the Esc Mode field.

**ESN**

GPIB Example

```
"CALLP:AMPS:AUTH:ESN '12D4E678'"
```

enters the number “12D4E678” into the Authen field (AUTHENTICATION screen).
ESN (dec):

GPIB Example

"DISP ACNT; CALLP:RCDD2?"

displays the CALL CONTROL screen and queries the ESN (dec) line, displayed on the right-hand portion of the screen when the Display field is set to “Data”.

ESN (hex):

GPIB Example

"DISP ACNT; CALLP:RCDD3?"

displays the CALL CONTROL screen and queries the ESN (hex) line, displayed on the right-hand portion of the screen when the Display field is set to “Data”.

Execute

GPIB Example

"DISP CCNT; CDMA:CALL:AHAN;[EXEC]"

displays the CDMA CALL CONTROL screen and executes a CDMA to Analog handoff.

Execute (Closed Loop Power Control Change)

GPIB Example

"DISP CTXR; CDMA:PControl:EXECute"

displays the CDMA TRANSMITTER POWER RANGE screen and causes the Test Set to output the selected number of steps in the direction selected in the Change field over the power control sub-channel.

Execute (Min/Max Pwr)

GPIB Example

"DISP CTXR; MEASURE:CDManalyzer:MMPower[:EXECute]"

displays the CDMA TRANSMITTER POWER RANGE screen and causes the Test Set to execute a Min/Max Power measurement.
Alphabetical list of fields with GPIB example

Expected PN Offset

GPIB Example
"DISP CNBG;CDMA:CELL:ASECTOR:PRPOFFSET?"
displays the CDMA MOBILE REPORTING screen and queries the Sector A Expected PN Offset field.

Expected Strength

GPIB Example
"DISP CNBG;CDMA:CELL:ASECTOR:STRENGTH?"
displays the CDMA MOBILE REPORTING screen and queries the Sector A Expected Strength field.

Expected T_Add

GPIB Example
"DISP CNBG;CDMA:MOBILE:PARM:ETADD?"
displays the CDMA MOBILE REPORTED PILOT STRENGTH screen and queries the Expected T_Add field.

Expected T_Drop

GPIB Example
"DISP CNBG;CDMA:MOBILE:PARM:ETDROP?"
displays the CDMA MOBILE REPORTED PILOT STRENGTH screen and queries the Expected T_Drop field.

External Reference

GPIB Example
"CONF:EXTERNAL:REFERENCE '10.0000 MHZ'"
selects 10 MHz in the External Reference field (CONFIGURE screen).

Ext Load R

GPIB Example
"DISP RX:AFAN:ELRESISTOR 50"
displays the RX TEST screen and selects 50 ohms in the Ext Load R (external load resistor) field.
Ext NGBH

GPIB Example
"DISP CCON;CDMA:CELL:CONF:EXNB "On""
displays the CDMA CELL SITE CONFIGURATION screen and selects
"On" in the Ext NGBH field.

Failed (annunciator)

GPIB Example
"DISP CRXT;STATus:CDMA:CONDition?"
queries the CDMA condition register. If bit 9 is set (a decimal value of 512),
the failed condition is true.

GPIB Example
"STATus:CDMA2:EVENt?"
queries the CDMA_2 status event register. If bit 5 is set, the last gated power
test passed. If bit 4 is set, the last gated power test failed.

FER

GPIB Example
"DISP CRXT; MEASure:CDManalyzer:FERasure?"
displays the CDMA CELLULAR MOBILE RECEIVER TEST screen and
queries the currently displayed FER measurement result.

FER Report (Clear)

GPIB Example
"DISP CFER;CDMA:MOBile:FER:REPort:CLEar"
displays the CDMA MOBILE REPORTED FER screen and clears (sets to
zero) the previous mobile reporting data for Errors Reported and Frames
Reported.

FER Spec

GPIB Example
"DISP CRXT; MEASure:CDManalyzer:FERasure:CONFidence:LIMit 0.5"
displays the CDMA CELLULAR MOBILE RECEIVER TEST screen and
sets the Confidence field to 0.5% (0.005).
Alphabetical list of fields with GPIB example

FF at End

GPIB Example

```
"CONF:PRIN:FFSTart  'YES'"
```

selects “Yes” in the FF at Start: field (PRINT CONFIGURE screen).

FF at Start

GPIB Example

```
"CONF:PRIN:FFENd  'YES'"
```

selects “Yes” in the FF at End: field (PRINT CONFIGURE screen).

Filter 1

GPIB Example

```
"DISP RX; AFAN:FILTER1  'C MESSAGE'"
```

displays the RX TEST screen and selects “C MESSAGE” in the Filter 1 field.

Filter 2

GPIB Example

```
"DISP RX; AFAN:FILTER2  '6KHz BPF'"
```

displays the RX TEST screen and selects “6kHz BPF” in the Filter 2 field.

Flow Cntl

GPIB Example

```
"DISP IOC; Configure:SPOR10:FControl?"
```

displays the I/O CONFIGURE screen and queries the Flow Cntl field.

FM Coupling

GPIB Example

```
"DISP RFG; RFGenerator:FM:COUPling  'DC'"
```

displays the RF GENERATOR screen and selects “DC” in the FM Coupling field.
Alphabetical list of fields with GPIB example

FM Deviation

GPIB Example

"DISP RFAN; MEAS:AFRequency:FM?"
displays the RF ANALYZER screen and queries the FM Deviation field.

Frame Clock

GPIB Example

"CONF:EXTERNAL:FRAMe '80.00 MS'"
selects "80.00 ms" in the Frame Clock field.

Frames

GPIB Example

"DISP CNBR; CDMA:MOBILE:FERasure:ERRors?"
displays the CDMA MOBILE REPORTING screen and queries the Errors field.

Frames Counted

GPIB Example

"DISP CTXT; MEAS:CDManalyzer:FERasure:FRAMes?"
displays the CDMA CELLULAR MOBILE RECEIVER TEST screen and queries the Frames Counted field.

Freq Error (CDMA)

GPIB Example

"DISP CTXT; CDMA:RHO:MEASurement:FERror 'Freq Error'; MEAS:CDManalyzer;FREQuency:ERRor?"
displays the CDMA CELLULAR MOBILE TRANSMITTER TEST screen, displays the Freq Error measurement field, and queries the Freq Error measurement results.

Freq Error (Analog)

GPIB Example

"DISP DUSL; MEAS:RFR:SEL 'Freq Error'; MEASure:RFRequency:FREQuency:ERRor?"
displays the DUPLEX TEST screen, displays the Freq Error measurement field, and queries the Freq Error measurement results.
Alphabetical list of fields with GPIB example

Frequency (Analog)

GPIB Example
"DISP DUPL;MEAS:RF:SEL 'Frequency';:MEASure:RFRequency:FREQuen-cy:ABSolute?"
displays the DUPLEX TEST screen, displays the Frequency measurement field, and queries the Frequency measurement results.

Gain Cntl

GPIB Example
"DISP AFAN; AFAnalyzer:RANGing 'HOLD'"
displays the AF ANALYZER screen and selects “Hold” in the Gain Cntl field.

(Gen)-(Anl)

GPIB Example
"CONF:RFDisplay 'FREQ'; OFRequency 50MHZ"
selects “Freq” in the RF Display field, and selects “50 MHz” in the (Gen)-(Anl) field.

(Gen)-(Anl) (User Defined)

GPIB Example
"CONF:RFDisplay 'CHAN'; RFCStandard 'USER-DEF'; USER:DELTa 50MHZ"
selects “Chan” in the RF Display field, selects “USER-DEF” in the RF Chan Std field, and selects “50 MHz” in the (Gen)-(Anl) field.

Grid

GPIB Example
"DISP CGP; CDMA:GPOWeR:GRID 'Off'"
turns off the display grid.

GPIB Example
"DISP CSWP; CDMA:SWEPtpower:GRID 'Off'"
turns off the display grid.
Handoff

GPIB Example

"DISP CCNT; CDMA:CALL:AHAN: [EXEC] "
displays the CDMA CALL CONTROL screen and selects the Execute
(analog handoff) field.

GPIB Example

"CALL:HANO"

selects the Handoff field on the CDMA CALL CONTROL screen.

Hard Handoff (annunciator)

GPIB Example

"DISP CCNT; STATus:CDMA:CONDition?"

queries the CDMA condition register. Bit 6 will be set when the Hard
Handoff annunciator is lit.

HP-IB Adsrs

HP-IB Example

NOT APPLICABLE.

HP-IB control of this field is not supported.

IBASIC Echo

GPIB Example

"DISP CONF;CONF:SPOR:IBECho "ON"

selects “On” in the IBASIC Echo field (I/O CONFIGURE screen).

Ideal Mobile Power

GPIB Example

"DISP CCNT;CDMA:MOB:POW:IDEA? "

selects the CDMA CALL CONTROL screen and queries the Ideal Mobile
Power field.

IF Filter

GPIB Example

"DISP TX;RFAnalyzer:IPPM '230 kHz'"
selects the TX TEST screen and selects “230 kHz” in the IF Filter field.

**Init Power**

*GPIB Example*

```
"DISP CCON;CELL:CONFigure:INITial:POWer 0"
```

displays the CDMA CELL SITE CONFIGURATION screen and sets the Init Power field to 0.

**Input Att**

*GPIB Example*

```
"DISP CCON;CSFP:CSFP '20 dB':
```

displays the CALL CONFIGURE screen and sets the Input Att field to 20 dB.

**Input Attten**

*GPIB Example*

```
"DISP AFAN:AFANalyzer:ATTenuator '35 DB'"
```

displays the RF ANALYZER screen and selects 35 dB in the Input Attten field.

**Input Attten**

*GPIB Example*

```
"DISP CSP;CSP:ATT:MODE 'HOLD'"
```

displays the CDMA REVERSE CHANNEL SPECTRUM screen and selects attenuator hold mode.

**Input Gain**

*GPIB Example*

```
"DISP AFAN:AFANalyzer:GAIN '0 DB'"
```

displays the AF ANALYZER screen and selects “0 dB” in the Input Gain field.

**Input Port**

*GPIB Example*

```
"DISP CCON;CONF:INPut 'ANT'"
```
displays the CONFIGURE screen and selects “Ant” in the Input Port field.

**Inst Echo**

GPIB Example

```
"DISP CONF;CONF:SPOR:IECHo "ON"
```

selects “On” in the Inst Echo field (I/O CONFIGURE screen).

**Internal**

GPIB Example

```
"DISP OSC;OSC:CONTrol 'TRIGGER';TRIGger:SOURce 'INTERNAL'
```

displays the OSCILLOSCOPE screen, selects “Trigger” in the Controls field, and selects “Internal” for the trigger source.

**Keep**

GPIB Example

```
"DISP CMS;CDMA:MOB:FILE:STB?
```

displays the CDMA MOBILE REPORTING screen and queries the results displayed in the CDMA Mobile Reporting table.

**Level (div)**

GPIB Example

```
"DISP OSC;OSC:CONTrol 'TRIGGER';TRIGger:LEVel 1
```

displays the OSCILLOSCOPE screen, selects “Trigger” in the Controls field, and sets the Level (div) field to 1 division.

**Length**

GPIB Example

```
"DISP CMS;CDMA:SMS:TERM:DATA:LENG?
```

displays the CDMA SHORT MESSAGE SERVICE screen and queries the Length field.

**Lower and Upper ACP (Ratio:Level)**

GPIB Example

```
"DISP ACP;ACP:MEASurement 'RATIO'
```

displays the ADJACENT CHANNEL POWER screen and sets the ACP
Alphabetical list of fields with GPIB example

Meas field to “Ratio”.

**Lvl (Open Loop Time Response)**

**GPIB Example**

```
“MEAS:OLTR:MARKer:LEVel?”
```

queries the level at the current marker position.

**Lvl (CDMA Gated Power)**

**GPIB Example**

```
“MEAS:GPOWer:MARKer:LEVel?”
```

queries the level at the current marker position.

**Marker**

**Freq**

**GPIB Example**

```
“DISP SAN;: MEASure:SANalayzer:MARKer:FREQuency?”
```

displays the SPECTRUM ANALYZER screen and queries the Marker (Freq) field.

**Lvl**

**GPIB Examples**

```
“DISP SAN;: MEASure:SANalayzer:MARKer:LEVel?”
```

displays the SPECTRUM ANALYZER screen and queries the Marker (Lvl) field.

```
“DISP OSC;: MEASure:OSCilloscope:MARKer:LEVel1:VOLTs?”
```

displays the OSCILLOSCOPE screen and queries the Marker (Lvl) voltage field.

**Time**

**GPIB Example**

```
“DISP OSC;: MEASure:OSCilloscope:MARKer:TIME?”
```

displays the OSCILLOSCOPE screen and queries the Marker (Time) field.
Marker
Freq

GPIB Example
"DISP CSP;MEAS:CSP:MARR:FREQ?"
displays the CDMA REVERSE CHANNEL SPECTRUM analyzer and queries the frequency at the marker’s present position.

Lvl

GPIB Example
"DISP CSP;MEAS:CSP:MARR:LEV?"
displays the CDMA REVERSE CHANNEL SPECTRUM analyzer and queries the amplitude at the marker’s present position.

Pos

GPIB Example
"DISP CSP;CSP:MARR:Position 5.0"
displays the CDMA REVERSE CHANNEL SPECTRUM analyzer and positions the marker in the center of the display.

Marker Time (Open Loop Time Response)

GPIB Example
"CDMA:OLTR:MARR:TIME 0"
positions the marker at 0 milliseconds.

"MEAS:OLTR:MARR:LEVat1?"
queries the power level of the last time response to open loop power control test at the current marker position.

Marker Time (CDMA Gated Power)

GPIB Example
"CDMA:GPOW:MARR:TIME 0"
positions the marker at 0 microseconds.

"MEAS:GPOW:MARR:LEVat17?"
queries the gated power ensemble average level at the current marker position.
Alphabetical list of fields with GPIB example

**Marker Time (CDMA Swept Power)**

GPIB Example

```
"DISP CONP;CDMA:SWEPtr:MARKer:TIME "5"
```
positions the marker at 5 milliseconds.

```
"MEAS:SWEPtr:MARKer:LEVEL?"
```
queries the swept power ensemble average level at the current marker position.

**Marker To:**

GPIB Example

```
"DISP OSC;OSCilloscope:MARKer:CONTROL 'MARKER';MARKer:NPEak"
```

displays the OSCILLOSCOPE screen, selects “Marker” in the Controls field, and selects the Marker To (Peak -) field.

**Marker To:**

**Center Freq**

GPIB Example

```
"DISP SAN;SANalyzer:CONTROL 'MARKER';MARKer:CFrequency"
```

displays the SPECTRUM ANALYZER screen, selects “Marker” in the Controls field, and selects the Marker To (Center Freq) field.

**Next Peak**

GPIB Example

```
"DISP SAN;SANalyzer:CONTROL 'MARKER';MARKer:NPEak"
```

displays the SPECTRUM ANALYZER screen, selects “Marker” in the Controls field, and selects the Marker To (Next Peak) field.

**Peak**

GPIB Example

```
"DISP SAN;SANalyzer:CONTROL 'MARKER';MARKer:PEAK"
```

displays the SPECTRUM ANALYZER screen, selects “Marker” in the Controls field, and selects the Marker To (Peak) field.
Alphabetical list of fields with GPIB example

Ref Level
GPIB Example (SA screen)
"DISP SAN;SANalyzer:CONTROL 'MARKER'; MARKer:RLEVel"
displays the SPECTRUM ANALYZER screen, selects “Marker” in the Controls field, and selects the Marker To (Ref Level) field.

Marker To:
Next Peak
GPIB Example
"DISP CSP; CSP:CONTROL 'MARKER'; MARKer:NPEAK"
displays the CDMA REVERSE CHANNEL SPECTRUM ANALYZER screen, selects “Marker” in the Controls field, and selects the Marker To (Next Peak) field.

Peak
GPIB Example
"DISP CSP; CSP:CONTROL 'MARKER'; MARKer:PEAK"
displays the CDMA REVERSE CHANNEL SPECTRUM ANALYZER screen, selects “Marker” in the Controls field, and selects the Marker To (Peak) field.

Ref Level
GPIB Example
"DISP CSP; CSP:CONTROL 'MARKER'; MARKer:RLEV"
displays the CDMA REVERSE CHANNEL SPECTRUM ANALYZER screen, selects “Marker” in the Controls field, and selects the Marker To (Ref Level) field.

Max Frames
GPIB Example
"DISP CRXT; MEASure:CDManalyzer:FERasure:MAXimum:FRAMes 1000"
displays the CDMA CELLULAR MOBILE RECEIVER TEST screen and sets the maximum number of frames for FER measurements to 1000.
Alphabetical list of fields with GPIB example

Max Frames (annunciator)

GPIB Example
"DISP CRXT; STATus:CDMA:CONDition?"
queries the CDMA condition register. If bit 8 is set (a decimal value of 256), the maximum frames condition is true.

Max Power

GPIB Example
"DISP CTXR; MEASure:CDManalyzer:MMPower:[EXECute]"
displays the CDMA TRANSMITTER POWER RANGE TEST screen and executes a Min/Max Power measurement.
"DISP CTXR; CDMA:MOBile:POWer:MAXimum?"
displays the CDMA TRANSMITTER POWER RANGE TEST screen and queries the Max Power measurement value.

Max Req Seq, Max Rsp Seq

GPIB Example
"DISP CCON; CDMA:CELL:CONFigure:MAXReqrspseq 3"
displays the CDMA CELL SITE CONFIGURATION screen and sets the Max Req Seq, Max Rsp Seq field to 3.

Meas Cntl

GPIB Example
"DISP CRXT; TRIGger:MODE:RETrigger SINGle"
displays the CDMA CELLULAR MOBILE RECEIVER TEST screen and sets the remote measurement triggering mode to single.

Min/Max Pwr

GPIB Example
"DISP CTXR; MEASure:CDManalyzer:MMPower:[EXECute]"
displays the CDMA TRANSMITTER POWER RANGE TEST screen and executes a Min/Max Power measurement.
Min Power

GPIB Example
"DISP RFAN; MEASure:CDManalyzer:MMPower:[EXECute]"
displays the CDMA TRANSMITTER POWER RANGE TEST screen and executes a Min/Max Power measurement.
"DISP CTXR; CDMA:MOBILE:POWER:MINimum?"
displays the CDMA TRANSMITTER POWER RANGE TEST screen and queries the Min Power measurement value.

Mobile Parm

GPIB Example
"DISP ONSB; CDMA:MOBILE:PARM 'MUX1_REV_1'"
displays the CDMA MOBILE REPORTING field and identifies the mobile station parameter MUX1_REV_1.
"DISP ONSB; CDMA:MOBILE:PARM:VALUE 0"
displays the CDMA MOBILE REPORTING field and sets the mobile station’s MUX1_REV_1 parameter value to 0.

Mobile Power Mode

GPIB Example
"DISP CTXR; CDMA:MOBILE:POWER:MODE 'User'; MPOWER 0"
selects CDMA power measurements without a call connected, and enters an estimated mobile power level of 0 dBm.

Mobile Pwr

GPIB Example
"DISP CTXR; CDMA:MOBILE:POWER:MODE 'User'; MPOWER 0"
selects CDMA power measurements without a call connected, and enters an estimated mobile power level of 0 dBm.

Mode

GPIB Example
"DISP IOC; CONF:BMODe 'Control'"
displays the I/O CONFIGURE screen and sets the field to Control.
Alphabetical list of fields with GPIB example

**Mod In To**

GPIB Example

```
"DISP RFG;RFG:MODulation:EXTERN:DESTination 'AM (/Vpk)';"
```

displays the RF GENERATOR screen and selects “AM (/Vpk) in the Mod In To field.

**MS Ack Cause Code**

GPIB Example

```
"DISP CSM;CDMA:SMS:TERM:DATA:CCOD:VAL?"
```

displays the CDMA SHORT MESSAGE SERVICE screen and queries the VALUE of the MS ACK CAUSE CODE in integer form.

```
"DISP CSM;CDMA:SMS:TERM:DATA:CCOD:DESC?"
```

displays the CDMA SHORT MESSAGE SERVICE screen and queries a DESCRIPTION of the MS ACK CAUSE CODE in text form.

**MS Ack Rcvd (annunciator)**

GPIB Example

```
"STATus:CSMG:COND?"
```

queries the CDMA SMS Status Register. Bit 1 is assigned to the MS Acknowledge Received condition. The MS Ack Rcvd annunciator is located on the CDMA SHORT MESSAGE SERVICE screen.

**MS Database**

GPIB Example

```
"DISP CCM;CDMA:MOBile:DAT 'ESN';:CDMA:MOBile:DAT:VALue?"
```

displays the CDMA CALL CONTROL screen, selects “ESN” in the MS Database field, and queries the 4-digit value for ESN.

**MS FER**

GPIB Example

```
"DISP CCMG;CDMA:FER?"
```

displays the CDMA MOBILE REPORTING screen and queries the MS FER field.
Alphabetical list of fields with GPIB example

MS FER Report Interval

GPIB Example
"DISP CMOB;CDMA:MOBile:FERasure:REPort:INTerval '160 FRAMES'"
displays the CDMA MOBILE REPORTING screen and sets the mobile station’s FER report interval to 160 frames.

MS Id

GPIB Example
"DISP ACNT; CALLP:PNUM '2222222222'"
displays the CALL CONTROL screen and enters “2222222222” in the Phone Num field.

MS ID

GPIB Examples
"DISP CCNT; CDMA:MOBile:MSID 'AUTO'"
displays the CDMA CALL CONTROL screen and selects “Auto” in the MS ID field.

MS Report

GPIB Examples
"DISP CMOB; CDMA:MOBile:REPort:CLEar"
displays the CDMA Mobile Reporting screen and clears the CDMA Mobile Reporting table.

Network ID

GPIB Example
"DISP CCON; CDMA:CELL:CONFigure:NOMinal:POWer 0"
displays the CDMA CELL SITE CONFIGURATION screen and sets NOM_PWR to 0.

Netwrk Code

GPIB Syntax
"DISP CCON; CDMA:CELL:PROTocol 'IS-95A; CONF:BNC 2"
displays the CDMA CELL SITE CONFIGURATION screen, selects “IS-95A” in the Protocol field, and enters a 2 in the Netwrk Code (base station network code) field.
Alphabetical list of fields with GPIB example

NGBH Fq (Ch)

GPIB Example

"DISP CCON;CDMA:CELL:CONF;NBFR "283""

displays the CDMA CELL SITE CONFIGURATION screen and selects channel 283 in the NGBH Fq (Ch) field.

Nom Power

GPIB Example

"DISP CCON;CDMA:CELL:CONF;POWER 0"

displays the CDMA CELL SITE CONFIGURATION screen and enters a 0 in the Nom Power field.

Nom Pwr Ext

GPIB Example

"DISP CCON;CDMA:CELL:CONF;PROTO;EXT 0"

displays the CDMA CELL SITE CONFIGURATION screen, selects "J-STD-008" in the Protocol field, and selects "0" in the Nom Pwr Ext field.

No Pk/Avg

GPIB Example

"DISP SAN:SAna:CONT;AUXILIARY;MHOLD "NO PK/AVG"

displays the SPECTRUM ANALYZER screen, selects "Auxiliary" in the Controls field, and selects the No Pk/Avg field.

No Pk/Avg

GPIB Example

"DISP CSP:CSP:CONT;AUXILIARY;MHOLD "NO PK/AVG"

displays the CDMA REVERSE CHANNEL SPECTRUM screen, selects "Auxiliary" in the Controls field, and selects the No Pk/Avg field.
Alphabetical list of fields with GPIB example

**Normalize**

GPIB Example

"DISP CFP;/CFP;CONTROL "AUXILIARY";TRACE;NORMAL "A only"

displays the CDMA REVERSE CHANNEL SPECTRUM screen, selects "Auxiliary" in the Controls field, and selects "A only" in the Normalize field.

**Norm/Delta**

GPIB Example

"DISP SAN;/SANalyzer;MARKer;MODE "Delta";MEASURE;SANalyzer;MARKer;DELTa;FREQuency?"

displays the SPECTRUM ANALYZER screen, selects Delta in the Marker, Norm/Delta field and queries the Freq field.

**Notch Freq**

GPIB Example

"DISP AFAN;/AFAN;NOTCh;FREQuency 2KHZ"

displays the AF ANALYZER screen and enters “2.0000 kHz” in the Notch Freq field.

**Notch Gain**

GPIB Example

"DISP AFAN;/AFAN;RANGing "HOLD";NOTCh;GAIN "10 DB"

displays the AF ANALYZER screen, selects “Hold” in the Gain Cntl field, and enters “10 dB” in the Notch Gain field.

**Notch Coupl**

GPIB Example

"DISP CONF;/CONF;NOTChmode "NONE"

displays the CONFIGURE screen and selects “None” in the Notch Coupl field.

GPIB Example

"DISP CGP;/CDMA;GPOWer;NAVG 100"

displays the CDMA Gated Power screen and sets the Num Averages field to 100 averages.
Alphabetical list of fields with GPIB example

Num Pages

GPIB Example
"DISP CCUR;CDMA:CELL:CONF:NPAG 2"
displays the CDMA CELL SITE CONFIGURATION screen and enters a
“2” in the Num Pages field.

Num Step

GPIB Example
"DISP CCUR;CDMA:CELL:CONFIGure:NUMStep 3"
displays the CDMA CELL SITE CONFIGURATION screen and enters a
“3” in the Num Step field.

OCNS (Sector A Power)

GPIB Example
"DISP CGEN;CDMA:CELL:ASECTOR:ORTHogonal:WALsh 17"
displays the CDMA GENERATOR CONTROL screen and sets the OCNS
(Walsh) field to 17 for Sector A.

OCNS (Sector B Power)

GPIB Example
"DISP CGEN;CDMA:CELL:BSECTOR:ORTHogonal:WALsh 17"
displays the CDMA GENERATOR CONTROL screen and sets the OCNS
(Walsh) field to 17 for Sector B.

Offset Freq

GPIB Example
"DISP SAN;SAN:TGEN:OFR?"
displays the SPECTRUM ANALYZER screen and queries the frequency
offset value.

Open Loop Time Response (Execute)

GPIB Example
"MEAS:CDManalyzer:OLTR:EXECute"
exeutes a time response to open loop power control test.
Orig Addr
GPIB Example
"DISP CMS;CDMA;SMS;TERM:OADD?"
displays the CDMA SHORT MESSAGE SERVICE screen and queries the Orig Addr field.

Order
GPIB Example
OUTPUT 714;"CALLP:ORD 'CHNG PL 0'"
OUTPUT 714;"CALLP:ORD?"
ENTER 714;last_ord_sent$
OUTPUT 714;"CALLP:ORD?"
Call Control Screen

Output Atten Hold
GPIB Example
"DISP RFG: RFG:ATT 'ON'"
displays the RF GENERATOR screen and selects “On” in the Atten Hold field.

Output Port
GPIB Example
"DISP CONF;CONF:OUTP 'Rf Out'"
displays the CONFIGURE screen and selects “RF OUT” in the Output Port field.

Page
GPIB Example
"DISP ACNT;CALLP:PAGE"
displays the CALL CONTROL screen and selects the “Page” field.

Page ( annunciator)
GPIB Example
"STATus:CDMA:CALLP:COND?"
queries the analog Call Processing condition register. Bit three will be true (BCD 8) when the “Page” annunciator is lit.
Alphabetical list of fields with GPIB example

Page Send

GPIB Example
"DISP CCON;CDMA:CELL:CONF:PAGE:SNDMode 'GP'"
displays the CDMA CELL SITE CONFIGURATION screen and selects the
General Page Message in the Page Send field.

Page Sent (annunciator)

GPIB Example:
"DISP CNT;STATus:CDMA:CONDition?"
queries the CDMA condition register. Bit 1 will be set when the Page Sent
annunciator is lit.

Page Rate

GPIB Example
"DISP CCON;CDMA:CELL:CONF:PAGE:RATE 'FULL'
"displays the CDMA CELL SITE CONFIGURATION screen and enters
"Full" in the Page Rate field.

Paging (Sector A Power)

GPIB Example
"DISP CGEN;CDMA:CELL:ASECtor:PAGing:POWer -16 dB"
displays the CDMA GENERATOR CONTROL field and enters “-16 dB”
in the Paging field.

Pam Size

GPIB Example
"DISP CCON;CDMA:CELL:CONF:PINcrement 12"
displays the CDMA CELL SITE CONFIGURATION screen and sets the
Pilot Inc field to 12.

Parity

GPIB Example
"DISP CONF;CONF:SPOR:PARity 'ODD'
selects "Odd" in the Parity field (I/O CONFIGURE screen).
Passed (annunciator)

GPIB Example
"DISP CRT; STATus:CDMA:CONDition?"
queries the CDMA condition register. If bit 10 is set (a decimal value of 1024), the passed condition is true.

GPIB Example
"DISP CRT; STATus:CDMA2:Event?"
queries the CDMA_2 status event register. If bit 5 is set, the last gated power test passed. If bit 4 is set, the last gated power test failed.

PCMCIA

GPIB Example
"DISP IOC; CONFIGure:PCMCia:CARd:STATus?"
displays the I/O CONFIGURE screen and queries whether a PCMCIA card is inserted in the slot.

Phone Num:

GPIB Example
"DISP ACNT; CALLP:RCDD1?"
displays the CALL CONTROL screen and queries the Phone Num: line, displayed on the right-hand portion of the screen when the Display field is set to "Data".

Phs Error

GPIB Example
"DISP CTXT; CDMA:RHO:MEAS:ERR 'PHS ERROR'; "MEASURE::CDManalyze::MESSAGE GATE?"
displays the CDMA CELLULAR MOBILE TRANSMITTER TEST screen, selects “Phs Error” as one of the measurement fields, and queries the Phs Error field.

Pilot (Sector A Power)

GPIB Example
"DISP CGEN; CDMA:CELL:ASEctor:PILot:POWer -7"
displays the CDMA GENERATOR CONTROL screen and sets the Pilot field to -7 for Sector A.
Alphabetical list of fields with GPIB example

Pilot (Sector B Power)

GPIB Example

"DISP CEU;CDMA:CELL:SECTOR:Pilot:POWER -7"

displays the CDMA GENERATOR CONTROL screen and sets the Pilot field to -7 for Sector B.

Pilot Inc

GPIB Example

"DISP CCOR;CDMA:CELL:CONFigure:PINcrement 12"

displays the CDMA CELL SITE CONFIGURATION screen and sets the Pilot Inc field to 12.

Pilot Meas (Clear)

GPIB Example

"DISP CNOR;CDMA:MOBILE:Pilot:CLEar"

displays the CDMA MOBILE REPORTED PILOT STRENGTH screen and clears the contents of the CDMA Mobile Reporting table.
Alphabetical list of fields with GPIB example

---

**Pk Det To**

GPIB Example

```
"DISP AFAN;AFAN:DETector:PKLocation 'DE-EMP'"
```

displays the AF ANALYZER screen and selects “De-Emp” in the Pk Det To field.

---

**PN Offset**

GPIB Example

```
"DISP CMOB;CDMA:MOB:PIL:STR?"
```

displays the CDMA MOBILE REPORTING screen and queries the results displayed in the CDMA Mobile Reporting table.

---

**PN Offset (Sector A Power)**

GPIB Example

```
"DISP CGEN;CDMA:CELL:ASEctor:PNOffset 0"
```

displays the CDMA GENERATOR CONTROL screen and sets the pilot PN offset index to 0 for Sector A.

---

**PN Offset (Sector B Power)**

GPIB Example

```
"DISP CGEN;CDMA:CELL:BSEctor:PNOffset 0"
```

displays the CDMA GENERATOR CONTROL screen and sets the pilot PN offset index to 0 for Sector B.

---

**Port /Sweep**

GPIB Example

```
"DISP SAN;SANalyzer:TGENERator:DESTination 'RF Out'; SWEEP 'Norm'"
```

displays the SPECTRUM ANALYZER screen, selects “RF Out” as the connector, and selects “Norm” in the Port/Sweep field.

---

**Position**

GPIB Example

```
"DISP SAN;SANalyzer:CONTrol "MARKer";MARKer:POSITION 5"
```

displays the SPECTRUM ANALYZER screen, selects “Marker” in the Controls field, and selects “5” in the Position field.
Alphabetical list of fields with GPIB example

Power Meas

GPIB Example
"DISP CONT:MEASURE:CDManalyzer:CHANpower:CALibrate"
displays the CDMA CALL CONTROL screen and calibrates Channel Power and Access Probe Power measurements.

Power Step

GPIB Example
"DISP CCON;CDMA:CELL:CONFIGure:STEP:POWer 0"
displays the CDMA CELL CONFIGURATION screen and sets PWR_STEP to 0.

Printer Port:

GPIB Example
"DISP PCON;CONF:PRIN:DESTination 'GPIB'"
displays the PRINT CONFIGURE screen and selects “GPIB” in the Printer Port: field.

Print Title

GPIB Example
"DISP PCON;CONF:PRIN:TITLe 'TEST PRINTOUT'"
displays the PRINT CONFIGURE screen and enters the text string "TEST PRINTOUT" in the Print Title: field.

Priority

GPIB Example
"DISP CSMS;CDMA:SMS:TERM:PRI 'None'"
displays the CDMA SHORT MESSAGE SERVICE screen and sets the Priority field to None.

Privacy

GPIB Example
"DISP CSMS;CDMA:SMS:TERM:PRIV 'None'"
displays the CDMA SHORT MESSAGE SERVICE screen and sets the Privacy field to None.
Alphabetical list of fields with GPIB example

**Protocol**

GPIB Example

"DISP CCON; CDMA:CELL:PROT 'IS-95A'"

displays the CDMA CALL CONTROL screen and selects IS-95A in the Protocol field.

**Pwr Level**

GPIB Example

"DISP CCNT; CDMA:CALL:AHANDOFF:PLEVel 4"

displays the CDMA CALL CONTROL screen and selects “4” in the Pwr Level field.

**Pwr Lvl:**

GPIB Example

"DISP ACNT; CALLP:VMAC 3"

displays the CALL CONTROL screen and enters “3” in the Pwr Lvl field.

**Pwr Up Reg**

GPIB Example

"DISP CCON; CDMA:CELL:CONF:PUR 'On'"

displays the CDMA CELL SITE CONFIGURATION screen and selects “On” in the Pwr Up Reg field.

**Pwr Dwn Reg**

GPIB Example

"DISP CCON; CDMA:CELL:CONF:PDR 'On'"

displays the CDMA CELL SITE CONFIGURATION screen and selects “On” in the Pwr Dwn Reg field.

**RAND**

GPIB Example

"DISP CCON; CDMA:CELL:CONF:AUTH:RAND '34AB05F'"

displays the CDMA CELL SITE CONFIGURATION screen and enters 34AB057 INTO the RAND field.
Alphabetical list of fields with GPIB example

RAND_A

GPIB Example

"DISP AUTH/AMPS:AUTH:RAND:A '4F5A'"

displays the AUTHENTICATION screen and enters “4F5A” in the RAND_A field.

RAND_B

GPIB Example

"DISP AUTH/CALLP:AMPS:AUTH:RAND:B '4F5A'"

displays the AUTHENTICATION screen and enters “4F5A” in the RAND_B field.

RANDSSD

GPIB Example

"DISP CCON/CDMA:CELL:CONF:AUTH:RANDS '4D18EEAA05895C'"

displays the CDMA CELL SITE CONFIGURATION screen and enters 4D18EEAA05895C into the RANDSSD field.

RANDSSD_1

GPIB Example

"DISP AUTH/CALLP:AMPS:AUTH:RAND:SSD1 '4F5A26'"

displays the AUTHENTICATION screen and enters “4F5A26” in the RANDSSD_1 field.

RANDSSD_2

GPIB Example

"DISP AUTH/CALLP:AMPS:AUTH:RAND:SSD2 '4F5A26'"

displays the AUTHENTICATION screen and enters “4F5A26” in the RANDSSD_2 field.

RANDSSD_3

GPIB Example

"DISP AUTH/CALLP:AMPS:AUTH:RAND:SSD3 '4F'"

displays the AUTHENTICATION screen and enters “4F” in the RANDSSD_3 field.

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Alphabetical list of fields with GPIB example

RAND_U

GPIB Example
"DISP AUTH; CALLP:AMPS:AUTH:RAND:U "4F5A26"
" displays the AUTHENTICATION screen and enters “4F5A26” in the RAND_U field.

RANDU

GPIB Example
"DISP CONN; CDMA:CELL:CONF:AUTH:RANDU "5357DF"
" displays the CDMA CELL SITE CONFIGURATION screen and enters 5357DF into the RANDU field.

Range Hold

GPIB Example
"DISP CONF; CONFigure:OPERation:HOLD"
" displays the CONFIGURE screen and selects the Range Hold, Hold All field.

Rcv Pace

GPIB Example
"DISP IOC; CONFigure:SPOR:RPACe "NONE"
" displays the I/O CONFIGURE screen and selects “None” in the Rcv Pace field.

Ref Level

GPIB Example
"DISP SAN; SANalyzer:CONControl "MAIN"; RLEVEL 10 DBM"
" displays the SPECTRUM ANALYZER screen, selects “Main” in the Controls field, and enters “10.0 dBm” in the Ref Level field.

GPIB Example
"DISP CSP; CSP:CONControl "MAIN"; RLEVEL 0"
" displays the CDMA REVERSE SPECTRUM screen, selects “Main” in the Controls field, and enters “0.0 dBm” in the Ref Level field.
Alphabetical list of fields with GPIB example

GPIB Example
"DISP CSWP:CDMA:SWEPTpower:RLEVel 5.0"
displays the CDMA SWEPT POWER MEASUREMENT screen, selects
"Main" in the Controls field, and enters "5.0" in the Ref Level field.

Register
GPIB Example
"DISP ACNT:CALLP:REGISTER"
displays the CALL CONTROL screen and selects the “Register” field.

Register
GPIB Example
"DISP CCNT:CDMA:MOBILE:REGISTER"
displays the CDMA CALL CONTROL screen and selects the Register field.

Register (annunciator)
GPIB Example
"DISP ACNT:STATUS:CDMA:CALLP:COND?"
displays the CALL CONTROL screen and queries the analog Call
Processing condition register. Bit one will be true (BCD 2) when the
“Register” annunciator is lit.

Registering (annunciator)
GPIB Example:
"DISP CCNT:STATUS:CDMA:EVENT?"
queries the CDMA event register. Bit 11 in the CDMA Status Event
Register will be set upon completion of a successful Registration attempt.
No Condition Register is implemented for this bit.

Reg Period
GPIB Example
"DISP CCIN:CDMA:CELL:CONF:TREG:PER 29"
displays the CDMA CELL SITE CONFIGURATION screen and sets the
Reg Period field to 29.
Alphabetical list of fields with GPIB example

Release

GPIB Example
"DISP ACNT; CALL: REL"
displays the CALL CONTROL screen and releases the call that is currently connected.

Release Time

GPIB Example
"MEAS:DPWR:REL:TIME?"
queries the CDMA gated power release time.

Res BW

GPIB Example
"DISP ACP; ACPower:RBW '1 KHZ'
displays the ADJACENT CHANNEL POWER screen and selects ‘1 kHz’ in the Res BW field.

Reset

GPIB Example
"DISP OSC; OSC:TRIGger:RESet"
displays the OSCILLOSCOPE screen and selects the Reset field.

RF Channel

GPIB Example
"DISP RFAN; CONFigure:RFCS 'US PCS' ; RFAN:RFCHannel 283"
displays the RF ANALYZER screen, selects US PCS as the RF Channel standard, and enters “283” in the RF Channel field.

RF Channel

GPIB Example
"DISP CCNT; CDMA:RFChannel 283"
displays the CDMA CALL CONTROL screen and enters “283” in the RF Channel field.
Alphabetical list of fields with GPIB example

RF Chan Std
GPIB Example
"DISP CON:CONF:RFCS 'USER-DEF'"
displays the CDMA CALL CONTROL screen and selects “USER-DEF” in the RF Chan Std field.

RF Cnt Gate
GPIB Example
"DISP RFAN:RFAnalyzer:GTIMe 200MS"
displays the RF ANALYZER screen and enters “200.0 ms” in the RF Cnt Gate field.

RF Display
GPIB Example
"DISP CON:CONF:RFDisplay 'FREQ'"
displays the CONFIGURE screen and selects “Freq” in the RF Display field.

RF Gen Freq
GPIB Example
"CON:RFDisplay 'FREQ';:DISP RFG:RFGenerator:FREQuency 870MHz"
selects “Freq” in the RF Display field (CONFIGURE screen), displays the RF GENERATOR screen, and enters “870.000000 MHz” in the RF Gen Freq field.

RF Gen Freq
GPIB Example
"DISP RFG:RFG:FREQ 815MHZ"
sets the RF generator to 815 MHz.

RF Gen Lvl
GPIB Example
"DISP CON:CONF:RFSource:CALibrate"
selects the RF Gen Lvl (Calibrate) field (CONFIGURE screen).
RF Gen Volts

GPIB Example

"DISP,CONF,CONF:RFIMpedance 'EMF'"

selects “emf” in the RFGen Volts field.

RF In/Ant

GPIB Example

"DISP CSP; CSP:CONTrol 'MAIN'; INPut 'RF In'"

displays the CDMA REVERSE CHANNEL SPECTRUM screen, selects “Main” in the Controls field, and selects “RF In” in the Controls subfield.

"DISP CSP; SAN:CONTrol 'MAIN'; INPut 'RF In'"

displays the SPECTRUM ANALYZER screen, selects “Main” in the Controls field, and selects “RF In” in the Controls subfield.

RF In

GPIB Example

"DISP CONF,CONF:INPut 'RF In'"

displays the CONFIGURE screen and selects RF In in the Input Port field.

RF Level Offset

GPIB Example

"DISP CONF,CONF:OFLevel:MODE 'ON'"

displays the CONFIGURE screen and selects “On” in the RF Level Offset field.

RF Offset

GPIB Example

"DISP CONF,CONF:RFDisplay 'FREQ'; OMODe 'ON'"

displays the CONFIGURE screen, selects “Freq” in the RF Display field, and selects “On” in the RF Offset field.

RF Out

GPIB Example

"DISP CONF,CONF:OUTP 'RF Out';: CONF:OFLevel:RF:OUT -3"

displays the CONFIGURE screen, selects RF Out in the Output Port field,
and sets the RF Level Offset for the RF Out field (CONFIGURE screen) to -3 dB. This field is displayed only when the Output Port is set to RF Out.

### RF Power

**GPIB Example**

```
"CDMA:RFP?"
```

queries the RF Power field (CDMA GENERATOR CONTROL screen).

### Rgstr NID

**GPIB Example**

```
"DISP CCON;CDMA:CELL:Configure:RNID 0"
```

displays the CDMA CELL SITE CONFIGURATION screen and enters “0” in the Rgstr NID field.

### Rgstr SID

**GPIB Example**

```
"DISP CCON;CDMA:CELL:Configure:RSID 0"
```

displays the CDMA CELL SITE CONFIGURATION screen and enters “0” in the Rgstr SID field.

### RSSI Thresh

**GPIB Example**

```
"DISP CALLP;CALLP:NAMPS:MRI:RSET 'Imm Resp'"
```

### SAT:

**GPIB Example**

```
"DISP ACNT;CALLP:SAT 5970HZ"
```

displays the CALL CONTROL screen and selects “5970Hz” in the SAT field.

**GPIB Example**

```
"DISP CCNT;CDMA:CALL:AHAndoff:SAT '6000Hz'"
```

displays the CDMA CALL CONTROL screen and selects “6000Hz” in the SAT field.
SAT Deviation:

GPIB Example

"DISP QDR; AFAN:INPUT 'FM Demod'; MEASURE:AFrequency:MODulation:SELECT 'SAT Deviation'"

displays the DUPLEX TEST screen, selects FM Demod in the AF Anl In field, and selects the “SAT Deviation” measurement.

Sat Tol

GPIB Example

"DISP CALLP; CPR:STOLerance 'NARROW'"

displays the CALL CONFIGURE screen and selects “Narrow” in the Sat Tol field.

Save/Recall

GPIB Example

"DISP IOC; CONF:SRLocation 'CARD'"

displays the I/O CONFIGURE screen and selects “Card” in the Save/Recall field.

SCM:

GPIB Example

"DISP ACNT; CALLP:SCD4?"

displays the CALL CONTROL screen and queries the SCM: line, displayed on the right-hand portion of the screen when the Display field is set to “Data”.

SC Priority

GPIB Example

"DISP CON; CDMA:CELL:CONF:SCPR 'Medium'"

displays the CDMA CELL SITE CONFIGURATION screen and selects “Medium” in the SC Priority field.
Alphabetical list of fields with GPIB example

Scope To

GPIB Example

"DISP AFAN;AFAN:SPPoint 'INPUT'"

displays the AF ANALYZER screen and selects “Input” in the Scope To field.

Sctr A Pwr

GPIB Example

"DISP CGEN;CDMA:CELL:ASEctor:STATE On"

displays the CDMA GENERATOR CONTROL screen and selects the “On” state for the Sctr A Pwr field.

Sctr B Pwr

GPIB Example

"DISP CGEN;CDMA:CELL:BSEctor:STATE On"

displays the CDMA GENERATOR CONTROL screen and selects the “On” state for the Sctr B Pwr field.

Send Msg

GPIB Example

"DISP CSMS;CDMA:SMS:TERM:SEND"

displays the CDMA SHORT MESSAGE SERVICE screen and sends the SMS message that is currently defined in either the User Data (ASCII) or User Data (Hex) message fields. The Data Mode field defines which message is sent (ASCII or Hex).

GPIB Example

"DISP CMGR;CDMA:MOB:SNOM"

displays the CDMA REPORTED PILOT STRENGTH screen and sends the message that is currently defined in the Send Msg field. The message selection varies, Dependent upon the setting of the Protocol field on the CDMA CALL CONTROL screen.

Send Word

GPIB Example

"DISP CBIT;CALLP:SWORd"

displays the CALL BIT screen and selects the Send Word field.
Alphabetical list of fields with GPIB example

Sensitivity

GPIB Example
"DISP RFAN;RFAN:SENSitivity 'HIGH'"
displays the RF ANALYZER screen and selects “High” in the Sensitivity field.

Sensitivity

GPIB Example
"DISP SAN;SANalyzer:CONTrol 'AUXILIARY';RFAN:SENSitivity 'HIGH'"
displays the SPECTRUM ANALYZER screen, selects “Auxiliary” in the Controls field, and selects “High” in the Sensitivity field.

Sensitivity

GPIB Example
"DISP CSP;CSPectrum:CONTrol 'AUXILIARY';RFAN:SENSitivity 'HIGH'"
displays the CDMA REVERSE CHANNEL SPECTRUM screen, selects “Auxiliary” in the Controls field, and selects “High” in the Sensitivity field.

Serial Baud

GPIB Example
"DISP IOC;CONF:SPORT:BAUD '9600'"
displays the I/O CONFIGURE screen and selects “9600” in the Serial Baud field.

Serial In

GPIB Example
"DISP IOC;CONF:SPORT:SINput 'INST'"
displays the I/O CONFIGURE screen and selects “Inst” in the Serial In field.

Set Message

GPIB Example
"DISP CBIT;CALLP:MESS 'SPC WORD1'"
displays the CALL BIT screen and selects “SPC WORD1” in the Set Message field.
Alphabetical list of fields with GPIB example

Settling

GPIB Example

"DISP AFAN:AFAN:DETector:SETTling "FAST"

displays the AF ANALYZER screen and selects “Fast” in the Settling field.

SID MSB

GPIB Example

"DISP ACNT;CALLP:SID 231"

displays the CALL CONTROL screen and enters 231 in the SID field.

SINAD

GPIB Example

"DISP RX:MEAS:AFR:SELECT 'SINAD';SINAD?"

displays the RX TEST screen, displays the “Sinad” field and queries the
SINAD measurement.

GPIB Example

"DISP CRXT;TRIGger:MODE:RETRigger SINGLE"

sets the measurement mode to single.

Slope

GPIB Example

"DISP CDMA:SWEAt:power:TRIGger:SLOPe 'Rising'"

displays the CDMA SWEPT POWER MEASUREMENT screen and sets the Slope field to Rising.

SMS In Progress (annunciator)

GPIB Example

"STATus:CDMSer:CONDition?"

queries the CDMA SMS Status register. Bit 0 is assigned to the SMS In Progress condition. The SMS In Progress annunciator is located on the
CDMA SHORT MESSAGE SERVICE screen.
Alphabetical list of fields with GPIB example

**SNR**

**GPIB Example**

```
"DISP RX; MEAS: AFR; SELECT 'SNR'; SNR?"
```

displays the RX TEST screen, displays the “SNR” field and queries the SNR measurement.

**Softer Handoff**

**GPIB Example**

```
"DISP CCNT; CDMA: CELL: BSECtor: STATe ON; CDMA: CALL: SOFT: HAND 'END'
```

displays the CDMA CALL CONTROL screen, turns on Scrr B Pwr (CDMA GENERATOR CONTROL screen, and begins a softer handoff.

**Softer Handoff (annunciator)**

**GPIB Example**

```
"DISP CCNT; STATus: CDMA: CONDITION?"
```

queries the CDMA condition register. Bit 5 will be set when a CDMA call is in the softer handoff state.

**Soft Slope**

**GPIB Example**

```
"DISP CMOB; CDMA: MOBILE: PARM: SSLope 1"
```

displays the CDMA MOBILE REPORTED PILOT STRENGTH screen and sets the Soft Slope field to 1.

**Span**

**GPIB Example**

```
"DISP SAN; SANalyzer: CONTROL 'MAIN'; SPAN 300KHZ"
```

displays the SPECTRUM ANALYZER screen, selects “Main” in the Controls field, and enters 300 kHz in the Span field.

**Span**

**GPIB Example**

```
"DISP CSP; CSP: SPAN 3 MHz"
```

displays the CDMA REVERSE CHANNEL SPECTRUM screen, and sets the Span field to 3 MHz.
Alphabetical list of fields with GPIB example

Speaker ALC

GPIB Example
"DISP AFAN:AFAN:SPEaker:MODE 'ON'"
displays the AF ANALYZER screen and selects “On” in the Speaker ALC field.

Speaker Vol

GPIB Example
"DISP AFAN:AFAN:SPEaker:VOLUME 'OFF'"
displays the AF ANALYZER screen and selects “Off” in the Speaker Vol field.

Squelch

GPIB Example
"DISP RFAN:RFAN:SQUELch 'OPEN'"
displays the RF ANALYZER screen and selects “Open” in the Squelch field.

Srch Win A

GPIB Example
"DISP CCON;CDMA:CELL:CONFigure:AWIN 5"
displays the CDMA CELL SITE CONFIGURATION screen and enters 5 in the Srch Win A field.

Srch Win N

GPIB Example
"DISP CCON;CDMA:CELL:CONFigure:NWIN 5"
displays the CDMA CELL SITE CONFIGURATION screen and enters 5 in the Srch Win N field.

Srch Win R

GPIB Example
"DISP CCON;CDMA:CELL:CONFigure:RWIN 5"
displays the CDMA CELL SITE CONFIGURATION screen and enters 5 in the Srch Win R field.
SSD Update

**GPIB Example**

"DISP CAU;CDMA:AUTH;SSD"

displays the CDMA AUTHENTICATION screen and executes the SSD (Shared Secret Data) Update field.

**SSD_A=** (annunciator)

**GPIB Example**

"STAT:CAUThen:COND?"

reads the CDMA Authentication Status register. Bit 3 is assigned to the SSD_A=0 annunciator. The SSD_A=0 annunciator is located on the CDMA AUTHENTICATION screen.

**Status** (CDMA Authentication)

**GPIB Example**

"CDMA:AUTHenticate:DATA?"

queries the CDMA Authentication Data Table.

**Status** (CDMA Mobile Reported Pilot Strength)

**GPIB Example**

"DISP CMOB;CDMA:MOB:PIL:STR?"

displays the CDMA MOBILE REPORTED PILOT STRENGTH screen and queries the results displayed in the CDMA Mobile Reporting Table.

**GPIB Example**

"STAT:MEAS:COND?"

queries the MEASuring status condition register. If bit 2 is set, the gated power test is running. If bit 2 is not set, the gated power measurement is idle.

**Steps**

**GPIB Example**

"DISP CTXR;CDMA:PCOntrl:STEPs 100"

displays the CDMA TRANSMITTER POWER RANGE TEST screen and enters 100 in the Steps field.
Alphabetical list of fields with GPIB example

Step Size

GPIB Example
"CDMA:OLTR:STEP '+20 dB'"
selects a step increase of +20 dB when the next time response to open loop power control test is executed.

Stop Length

GPIB Example
"DISP IOC;CONF:SPOR:STOP '1 BIT'"
displays the I/O CONFIGURE screen and selects “1 Bit” in the Stop Length field.

Strength

GPIB Example
"DISP CMDR;CDMA:MOB:(FIL:STR)"
displays the CDMA MOBILE REPORTING screen and queries the results displayed in the CDMA Mobile Reporting table.

Svc Opt 2 (annunciator)

GPIB Example
"DISP CRXT;STAT:CDMA:CONDition?"
queries the CDMA condition register. If bit 7 is set (a decimal value of 128), a Service Option 2 call is connected.

Sync (Sector A Power)

GPIB Example
"DISP CGEN;CDMA:CELL:ASECtor:SYNC:POWER -16dB"
displays the CDMA GENERATOR CONTROL screen and sets the Sync field (Sector A) to -16 dB.

System ID

GPIB Example
"DISP CCON;CDMA:CELL:CONFIGure:SID 0"
displays the CDMA CELL SITE CONFIGURATION screen and enters 0 in the System ID field.
### System Type

**GPIB Example**

```
"DISP ACNT; CALLP:CSYS 'AMPS'
```

displays the CALL CONTROL screen and selects “AMPS” in the System Type field.

**GPIB Example**

```
"DISP ACNT; CALLP:CSYS 'NTACS'
```

displays the CALL CONTROL screen and selects “NTACS” in the System Type field.

**GPIB Example**

```
"DISP CCNT; CDMA:CALL:AHANDoff:STYPe 'AMPS'
```

displays the CDMA CALL CONTROL screen and selects “AMPS” in the System Type field.

### T_Add

**GPIB Example**

```
"DISP CMOB; CDMA:MOBILE:TADD 32
```

displays the CDMA MOBILE REPORTING screen and enters 32 in the T_Add field.

### T_Comp

**GPIB Example**

```
"DISP CMOB; CDMA:MOBILE:TCOMP 3
```

displays the CDMA MOBILE REPORTING screen and enters 3 in the T_Comp field.

### T_Drop

**GPIB Example**

```
"DISP CMOB; CDMA:MOBILE:TDROP 40
```

displays the CDMA MOBILE REPORTING screen and enters 40 in the T_DROP field.
Alphabetical list of fields with GPIB example

**T_Tdrop**

**GPIB Example**

```
"DISP CMOB;CDMA:MOBILE:TNDrop 2"
```

displays the CDMA MOBILE REPORTING screen and enters 2 in the T_TDROP field.

**Testing (annunciator)**

**GPIB Example**

```
"DISP CRXT;STAT:MEAS:COND:?
```

queries the Measuring condition register. If bit 0 (BCD 1) is true, a CDMA FER test is running.

**Time (Configure)**

**GPIB Example**

```
"DISP CONF;CONF:TIME?"
```

displays the CONFIGURE screen and queries the Time field.

**TimeBase**

**GPIB Example**

```
"DISP CONF;CONF:MODE 'AUTO'"
```

displays the CONFIGURE screen and selects “Auto” in the TimeBase field.

**Time/div**

**GPIB Example**

```
"DISP OSC;OSC:SCAL:TIME '1 ms'
```

displays the OSCILLOSCOPE screen, selects “Main” in the Controls field, and selects “1 ms” in the Time/div field.

**Time Offset**

**GPIB Example**

```
"DISP CTXT;CDMA:RHO:MEAS:FERR 'TIME OFFSET';:MEAS:OFFSet?"
```

displays the CDMA CELLULAR MOBILE TRANSMITTER TEST screen, displays the Time Offset measurement field, and queries the Time Offset measurement result.
Alphabetical list of fields with GPIB example

Timer Reg

GPIB Example
"DISP ;CDMA:CELL:CONF:TREG:MODE 'On'"

displays the CDMA AUTHENTICATION screen and sets the Timer REG field to ‘On’.

TM Rho

GPIB Example
"DISP CTXT;CDMA:RHO:MEAS 'TM RHO';:MEASure:CDManalyzer:RHO?"

displays the CDMA CELLULAR MOBILE TRANSmitter TEST screen, displays the TM Rho measurement field, and queries the TM Rho measurement result.

To Screen

These are the GPIB syntax commands to display a screen.

CDMA

- CALL CNTL  - DISP CCntrol
- CELL CONF  - DISP CCONfigure
- CDMA GEN  - DISP CGEnerator
- RX TEST  - DISP CRXTest
- TX TEST  - DISP CTXTest
- MBEL RPT  - DISP CM0Report
- MOBL FER  - DISP CM0Report
- RNG TEST  - DISP CTXRange
- SMS  - DISP CSMService
- AUTHEN - DISP CSMService
- REV SPEC - DISP CSPecrum

Analog

- RX TEST  - DISP RX
- TX TEST  - DISP TX
- DUPLEX  - DISP DUPlex
- RF Gen  - DISP RFGen
- RF ANL  - DISP RFANalyzer
- AF ANL  - DISP AFAnalyzer
- AD CH PWR  - DISP ACPower
- ENCODER  - DISP ENCoder
- DECODER  - DISP DECoder
- SPEC ANL  - DISP SANalyzer
- SCOPE  - DISP OSCilloscope
- CALL CNTL  - DISP ACNtrol
- AUTHEN  - DISP AUTHentication
- CALL BIT  - DISP CBIT
- CALL CSFG  - DISP CSSFgure
Alphabetical list of fields with GPIB example

- CALL DATA - DISP CDATa
- ANLG MEAS - DISP CMEasure

Config
- TESTS - DISP TESTs
- CONFIG - DISP CONFIGure
- IO CONFIG - DISP IOCONFIGure
- PRNT CNFG - DISP PCONFIGure

Trace

GPIB Example
"DISP CONFIG;MEAS:SWEPtpower:TRACe:CLEar"

clears the measurement trace from the CDMA SWEPT POWER MEASUREMENT screen.

Traffic (Sector A Power)

GPIB Example
"DISP CGEN;CDMA:CELL:ASELECT:TRAFfic:POWer -15dB"

displays the CDMA GENERATOR CONTROL screen and sets the Traffic field (Sector A) to -15 dB.

Traffic (Sector B Power)

GPIB Example
"DISP CGEN;CDMA:CELL:BSELECT:TRAFfic:POWer -15dB"

displays the CDMA GENERATOR CONTROL screen and sets the Traffic field (Sector B) to -15 dB.

Traffic Data Mode

GPIB Example
"DISP CCNT;CDMA:CALL:TRAFfic:DATA:MODE 'SVC OPT 1'"

displays the CDMA CALL CONTROL screen and selects “Svc Opt 1” in the Traffic Data Mode field.
Alphabetical list of fields with GPIB example

Traffic Rho

GPIB Example
"DISP CTXT; CDMA:RHO:MEAS "Traffic Rho";; MEAS:CDManalyzer:RHO?"
displays the CDMA CELLULAR MOBILE TRANSMITTER TEST screen,
displays the Traffic Rho measurement field, and queries the Traffic Rho
measurement results.

Transmitting (annunciator)

GPIB Example:
"DISP CCNT; STATUS:CDMA:CONDITION?"
queries the CDMA condition register. Bit 2 will be set whenever the
Transmitting annunciator is lit.

Trig-Delay

GPIB Example
"DISP OSC; OSCilloscope:CONTrol "TRIGGER"; TRIGger:DELay 1MS"
displays the OSCILLOSCOPE screen, selects “Trigger” in the Controls
field, and enters 1.000 ms in the Trig-Delay field.

Tune Freq

GPIB Example
"CONF:RFDisplay "FREQ"; DISP TX; RFAnalyzer:FREQuency 825MHZ"
selects “Freq” in the RF Display field (CONFIGURE screen), displays the
TX TEST screen, and enters 825.000000 MHz in the Tune Freq field.

TX Power

GPIB Example
"DISP TX; MEAS:RFRequency:POWer?"
displays the TX TEST screen and queries the TX Power field measurement
results.

TX Power

GPIB Example
"DISP ACNT; MEAS:RFRequency:POWer?"
displays the CALL CONTROL screen and queries the TX Power field
measurement results.
Alphabetical list of fields with GPIB example

TX Pwr Meas

GPIB Example

"DISP TX;RFAN:PMEasurement:DEtection 'Sample'"

displays the TX TEST screen and selects “Sample” in the TX Pwr Meas field.

TX Pwr Zero

GPIB Example

"DISP TX;RFAN:PMEasurement:ZERO"

displays the TX TEST screen and selects the TX Pwr Zero field.

Type

GPIB Example

"DISP CCNT;CDMA:CALL:TRAffic:TYPe 'None'"

displays the CDMA CALL CONTROL screen and selects None in the Type field. (The Type field is displayed only when Service Option 6 or 14 is selected in the Traffic Data Mode field.)

Uniq Chall

GPIB Example

"DISP CAUT;CDMA:AUTH:UCH"

displays the CDMA AUTHENTICATION screen and executes a Unique Challenge.

Uniq Chall (annunciator)

GPIB Example

"DISP CAUT;STAT:CAUThen:CONDition ?"

displays the CDMA AUTHENTICATION screen and queries the CDMA Authentication Status register. Bit 2 is assigned to the Uniq Chall annunciator.

User Data (ASCII):

GPIB Example

"DISP CSMS;CDMA:SMS:TERM:DATA:ASC 'ABCDEFGHIJKLMNOPQRSTUVWXYZ_01234abcdefghijklmnopqrstuvwxyz#56789'"

displays the CDMA SHORT MESSAGE SERVICE screen and enters data into the User Data (ASCII) field. Data Mode must be ASCII.
Alphabetical list of fields with GPIB example

User Data (Hex):

GPIB Example

```
*DISP CMSG;CDMA:DMIS:TERM:DATA:HEX
"4142434445464748494A4B4C4D4E4F505152535455565758595A5F30313233346162636465666768696A6B6C6D6E6F707172737475767778797A233536373839"
```
displays the CDMA SHORT MESSAGE SERVICE screen and enters data into the User Data (Hex) field. Data Mode must be Hex.

VC Order

GPIB Example

```
"CALLP:AMPS:VCORD 'CHMS PL 0'
```
displays the TX TEST screen and selects the TX Pwr Zero field.

Vert/div

GPIB Example

```
"AFAN:INP 'FM Demod';
:DISP DSC;OSCilloscope:CONTrol 'MAIN';SCALe:VERTical:FM '1 KHZ'
```
selects “FM Demod” in the AF Anl In field (AF ANALYZER screen), displays the OSCILLOSCOPE screen, selects “Main” in the Controls field, and selects “1 kHz” in the Vert/div field.

Vert Offset

GPIB Example

```
"DISP DSC;OSCilloscope:CONTrol 'MAIN';SCALe:VERTical:OFFSet 1"
```
displays the OSCILLOSCOPE screen, selects “Main” in the Controls field, and enters “1.00” in the Vert Offset field.

Walsh (Sector A)

GPIB Example

```
"DISP CGEN;CDMA:CELL:ASEC:TRAF:WALS 8"
```
displays the CDMA GENERATOR CONTROL screen and enters “8” in the Walsh (Sector A) field.
Alphabetical list of fields with GPIB example

Walsh (Sector B)

GPIB Example
"DISP CGEN/CDMA:CELL:RESC:TRAF:WALS 12"
displays the CDMA GENERATOR CONTROL screen and enters “12” in the Walsh (Sector B) field.

Xmt Pace

GPIB Example
"DISP IOC;CONF:SPOR:XPACe 'NONE'"
displays the I/O CONFIGURE screen and selects “None” in the Xmt Pace field.

1 of N

GPIB Example
"DISP AUTH/CALLP:AMPS:AUTH:OON 2"
displays the AUTHENTICATION screen and enters 2 in the 1 of N field.
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