HP 8711A
RF Network Analyzer

Quick Reference Card
BEGIN KEY

BEGIN A

Amplifier
Filter
Broadband Passive
Mixer

Amplifier
Transmission Reflection
Power

Filter
Transmission Reflection

Mixer
Conversion Loss Reflection

Broadband Passive
Transmission Reflection

MEAS KEYS

CHAN1 CHAN2

Detection Options
Narrowband Internal
Broadband Internal
Broadband External
Aux Input

B

Narrowband Internal
A
B
R
A/R
B/R

Broadband External
X
Y
X/Y
Y/X
YR*

Aux Input

External Detectors

To processor and display

Transmission

RF Source

RF Out

Device Under Test

AUX INPUT

Sweep Indicator
Reference Position
Absolute Scale (other choice is "relative")
Data and time

Memory Trace Indicators

Message Area

Settings changed

CHANNEL 2 Parameters

data
db

FORMAT

TRANSMISSION M M Log Mag

REFERENCE VALUE

0.00 dB
c

0.00 dB

TITLE AREA

05 May 1992
13:41:30

CRT

Sweep

Stop 1: 30,000 MHz

0.300 MHz

Abs

Graticule

BEGIN: press [BEGIN], select type of device and measurement. Autoscales and sets marker at min or max. For one channel measurements.

Detection Options: type of signal detection.

Narrowband Internal: for wide dynamic range measurements, tuned receiver, built-in.

Broadband Internal: for absolute power and frequency conversion measurements, diode detector, built-in.

Broadband External: diode detector, optional accessory.

Aux Input: voltmeter, rear panel input.
**Sweep Time AUTO man**: AUTO = fastest possible; MAN = user selected.

**Alt Sweep ON**: each channel can have different frequency span, detection mode, number of points, etc.

**Spur Avoid**: with spur avoid or dither on, do full band or user defined cal.

**Spur Avoid ON**: removes spurs from low level measurements, slows sweep.

**Dither ON**: shifts spurs, recommended for narrow frequency span measurements, no sweep speed penalty.

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**FREQ**
- Start
- Stop
- Center
- Span
- CW

**Disp Freq Resolution**
- MHz
- kHz
- Hz

**SWEEP**
- Sweep Time
- AUTO man
- Alt Sweep ON
- OFF

**POWER**
- Level
- ppm
- ON
- OFF

**SOURCE KEYS**

**CONFIGURE KEYS**

**SCALE**
- Autoscale
- Scale/DV
- Reference Level
- Reference Position

**DISPLAY**
- Split Disp
- Full
- Split

- Title and Clock
- Enter Line 1
- Enter Line 2
- Show Clock on Line 1
- Show Clock on Line 2
- Clock Off
- Title & Clock ON
- OFF

**MENU**
- Trigger
- Number of Points
- Ext Ref on OFF
- Spur Avoid

**Trigger Source**
- Continuous
- Hold
- Single
- External
- Sweep
- External Point

**Spur Avoid**
- ON
- OFF

**Char Entry**
- Select Char
- Space
- Delete Char
- Backspace
- Enter
- Clear
- Entry
- Cancel

**Add Limit**
- Add Max Line
- Add Min Line
- Add Max Point
- Add Min Point

**Delete Limit**
- Yes
- No
- Delete All Limits

**Limit Line**
- Add Limit
- Delete Limit
- Edit Limit
- Limit Line OFF
- Limit Test ON

** Normalize**
- equivalent to (Data->Mem) and (Data/Mem).

**Data->Mem**
- stores current data trace in memory.

**Limit Line**
- creates limit lines for testing. Use with (Limit Test ON) to show pass or fail.
CONFIGURE KEYS (continued)

**CAL**

- Normalize
- Transmission
- Reflection
- Cal Kit
- Detector Zero

**Marker**

- Marker Search
- More Markers
  - 1:
  - 2:
  - 3:
  - 4:
- Marker Functions
  - Delta
  - Marker
  - Target

1. **(Restore Defaults):** restores default calibration.
2. **(Full Band):** user cal of full frequency span at 801 points; can change frequency span after cal. Cal is lost if you change spur avoid settings.
3. **(User Defined):** select frequency span, number of points, spur avoid setting, then do cal. Cal is lost if you widen span, or change spur avoid settings after cal.
4. **(Detector Zero):** compensates for drift of (zeroes) internal and external broadband detectors.
5. **(Autozero):** zeroes detectors when selected and as needed.
6. **(Manual Zero):** zeroes detectors one time when selected.

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**CONFIGURE KEYS (continued)**

- **Bandwidth**: channel 1 places marker 1 at max, markers 5 and 6 at target, marker 3 at center frequency (CF).
- **Tracking ON**: updates search (for max, min, target) each sweep.

**SYSTEM KEYS**

- **Preset**: resets analyzer to predefined instrument state (full frequency range, 0 dBm output power, 201 points, averaging off, medium system bandwidth, etc.; see note (R) or Appendix A, chapter 7.) Note: power-up resets analyzer to last-used instrument state.
- **Define Save**: defines the combination of instrument state, calibration, and date to save.
- **Save ASCII**: saves trace data in ASCII format for output only.
(Select Copy Port): indicate choice of printer or plotter for hardcopy output or internal disk drive.
(SELECT): selects above choice.
(Hardcopy Address): for HP-IB devices.
(Baud Rate): for serial devices.
(Xon/Xoff): software handshake for serial devices.
(DTR/DSR): hardware handshake for serial devices.


(IBASIC): option IC2. Creates and runs programs.

(Set Clock): use with [DISPLAY] (More Display) (Title and Clock) to see on screen.

(Key Record ON): captures keystrokes to write IBASIC programs.

(HP-IB Echo ON): displays HP-IB mnemonics on screen when keys are pressed.