

**Agilent Technologies 8960 Series 10 E5515B Wireless Communications Test Set
Agilent Technologies E1960A GSM Mobile Test Application**

GPIB Command Syntax

Test Application Revision A.03

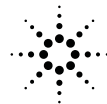
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Revision G

<http://www.agilent.com/find/8960support/>



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Diagram Conventions

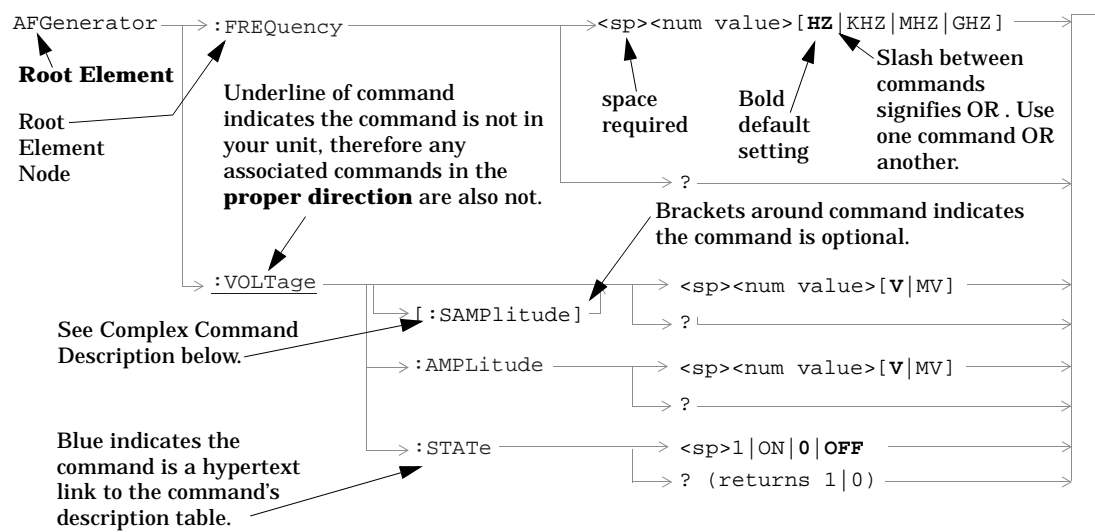


Diagram Description

Statement elements are connected by lines. Each line can be followed in only one direction, as indicated by the arrow at the end of the line. Any combination of statement elements that can be generated by starting at the **Root Element** and following the line the **proper direction** is syntactically correct. The drawings show the proper use of spaces. Where spaces are required they are indicated by <sp>, otherwise no spaces are allowed between statement elements.

Complex Command Description

A complex command sets the state of the parameter to ON, and is used to set a value for that parameter. These parameters; amplitude, frequency, gain, number, time, and value can be used as a complex command. Refer to the specific command for the parameter that applies.

Developing Code

It is recommended that you set the Test Set's operating environment to debug. To set the Test Set debug mode to "ON" use the following syntax:

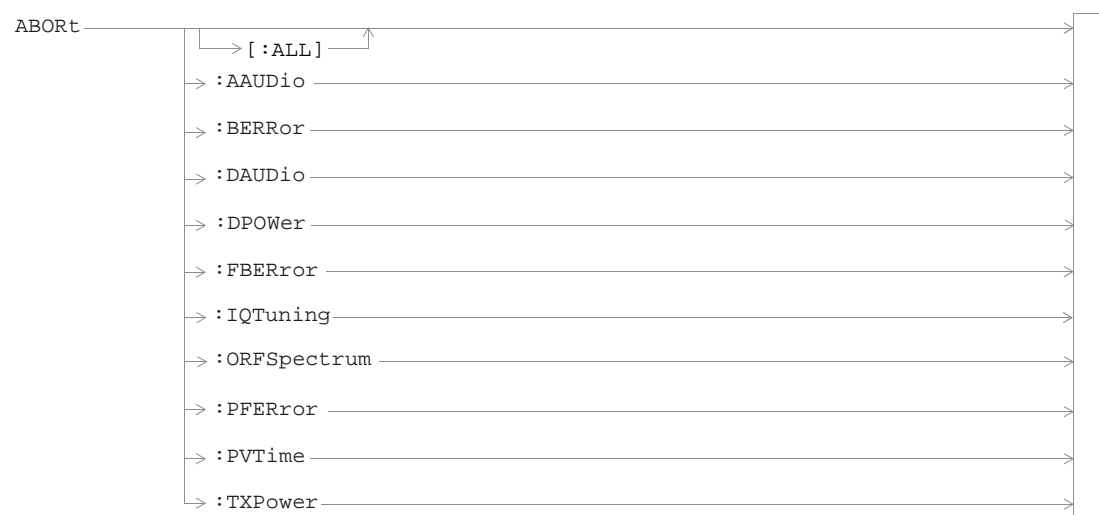
```
SYSTem:COMMunicate:GPIB:DEBug ON
```


Units-of-Measure

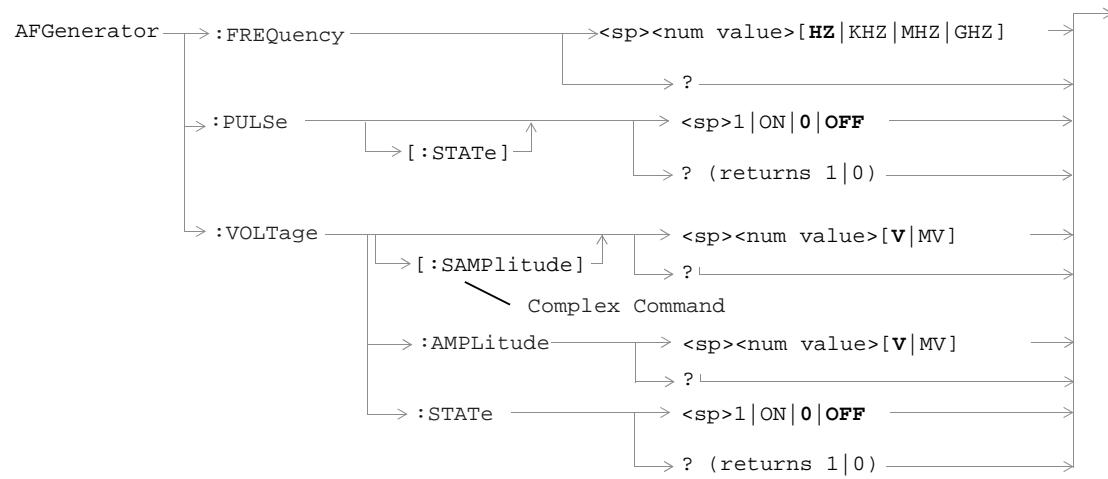
If you do not specify units-of-measure in your code the following table indicates the default units-of-measure that will be assumed.

Amplitude (linear)	V
Frequency	HZ
Power (logarithmic)	dBm
Time	S

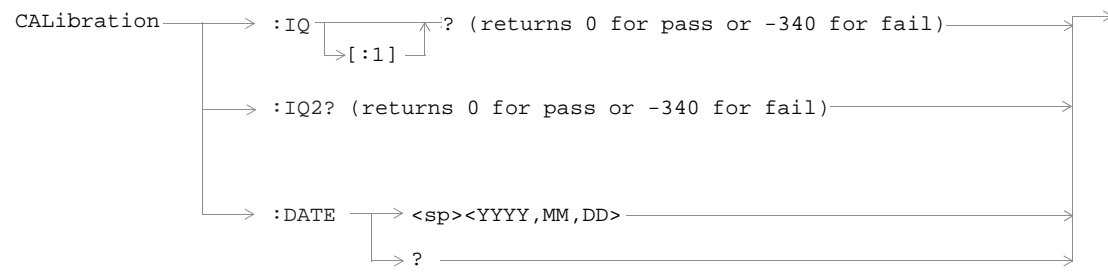
ABORT



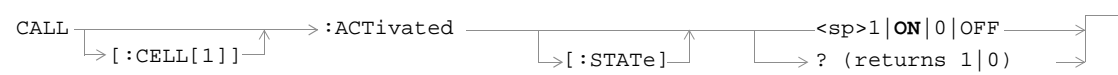
AFGenerator



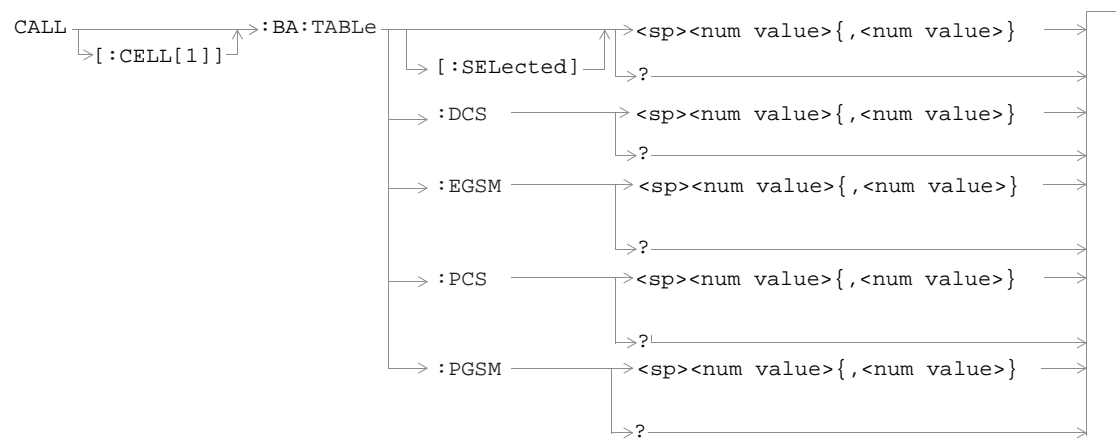
CALibration

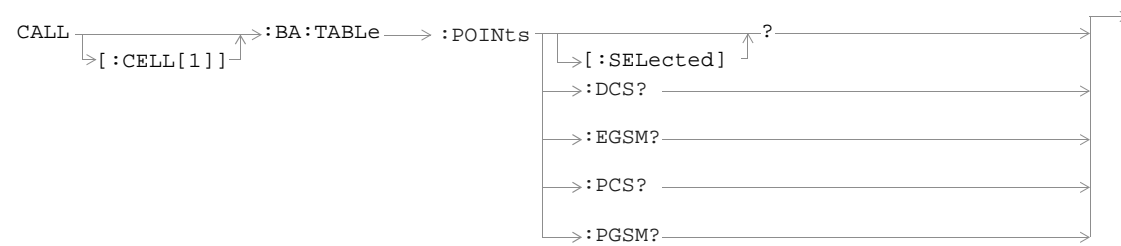


CALL:ACTivated

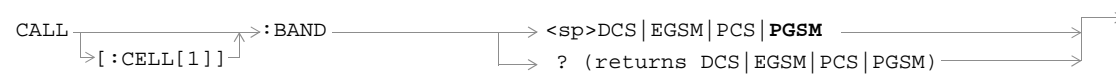


CALL:BA





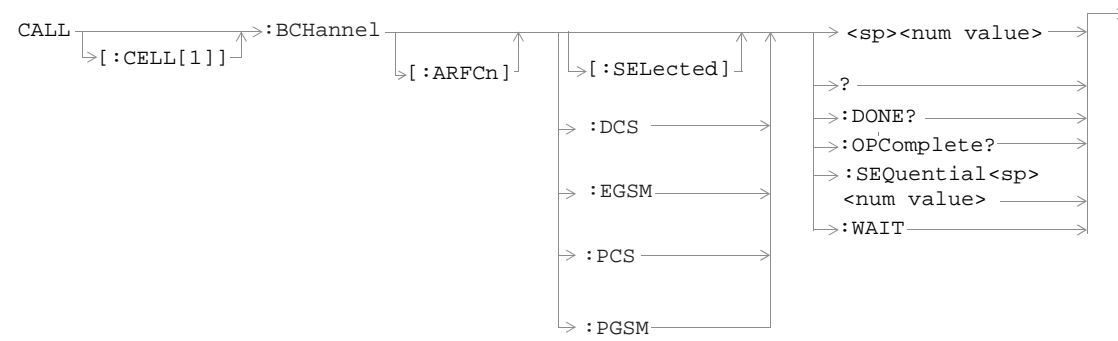
CALL:BAND



CALL:BCCode



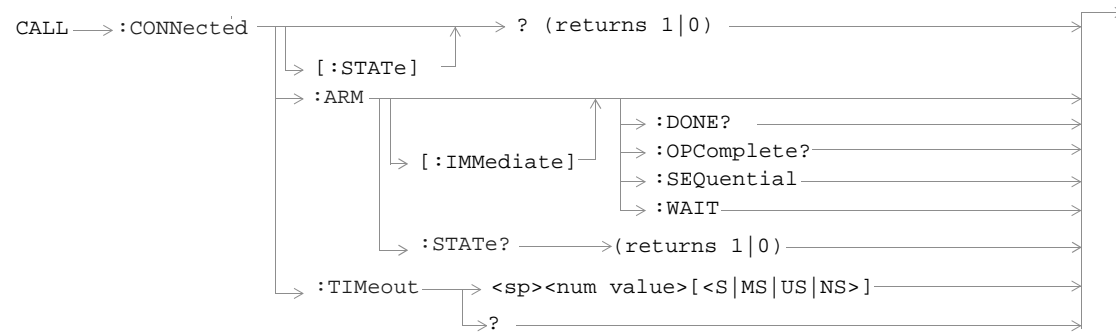
CALL:BCHannel



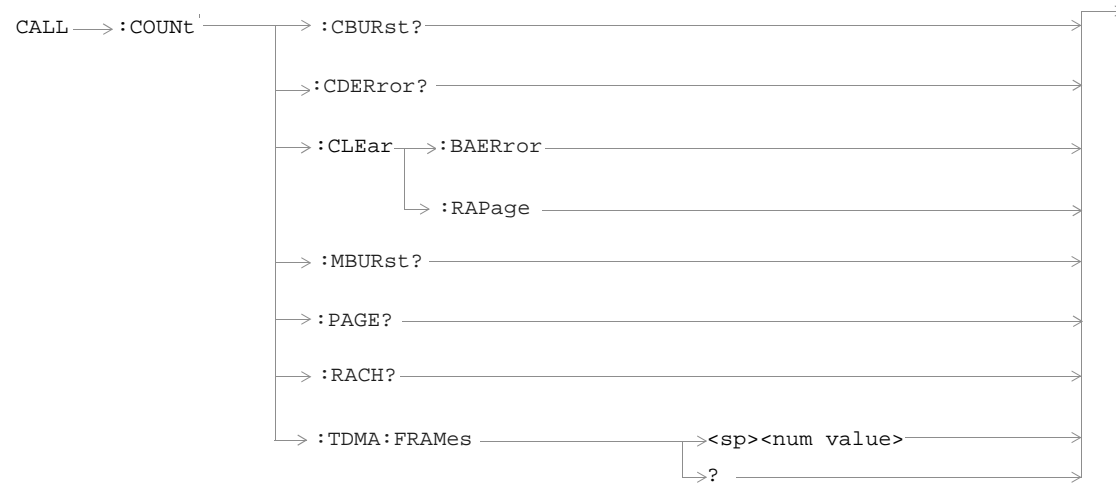
CALL:BURSt



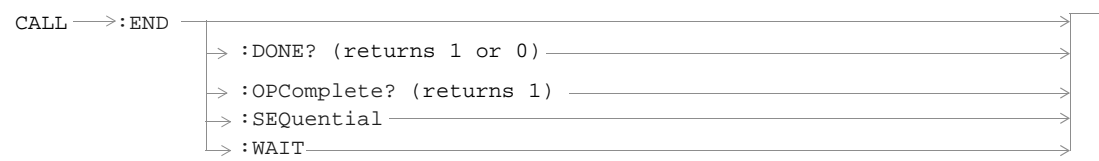
CALL:CONNEcted



CALL:COUNT



CALL:END



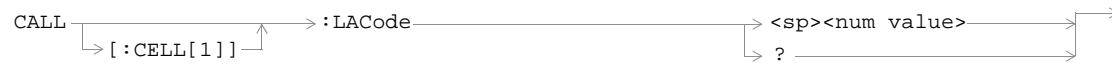
CALL:FUNCTION



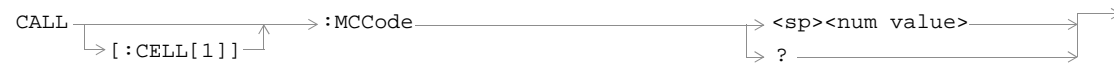
CALL:IMEI

CALL → :IMEI:AUTO →
 <sp>1|ON|0|OFF →
 ? (returns 1|0) →

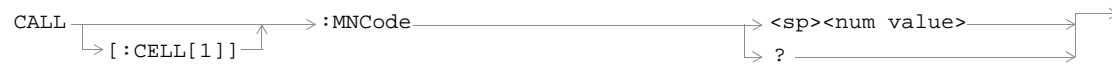
CALL:LACode



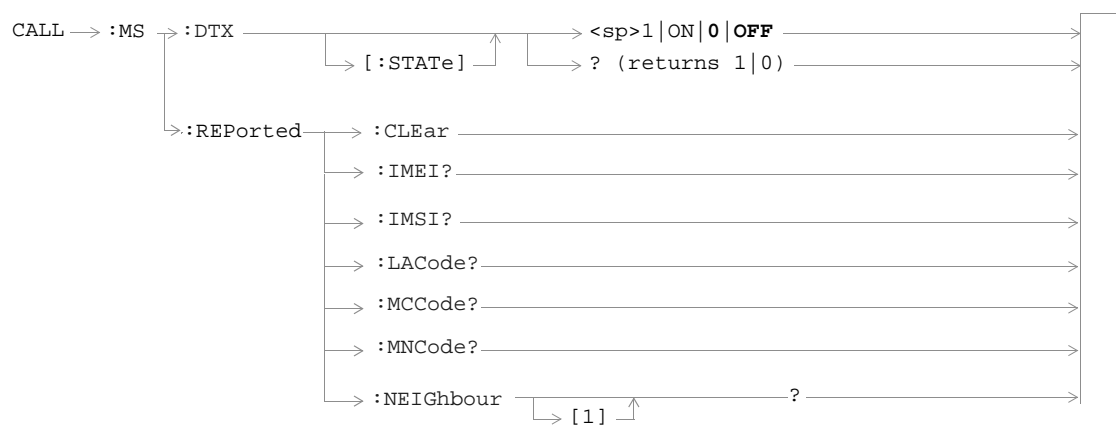
CALL:MCCode

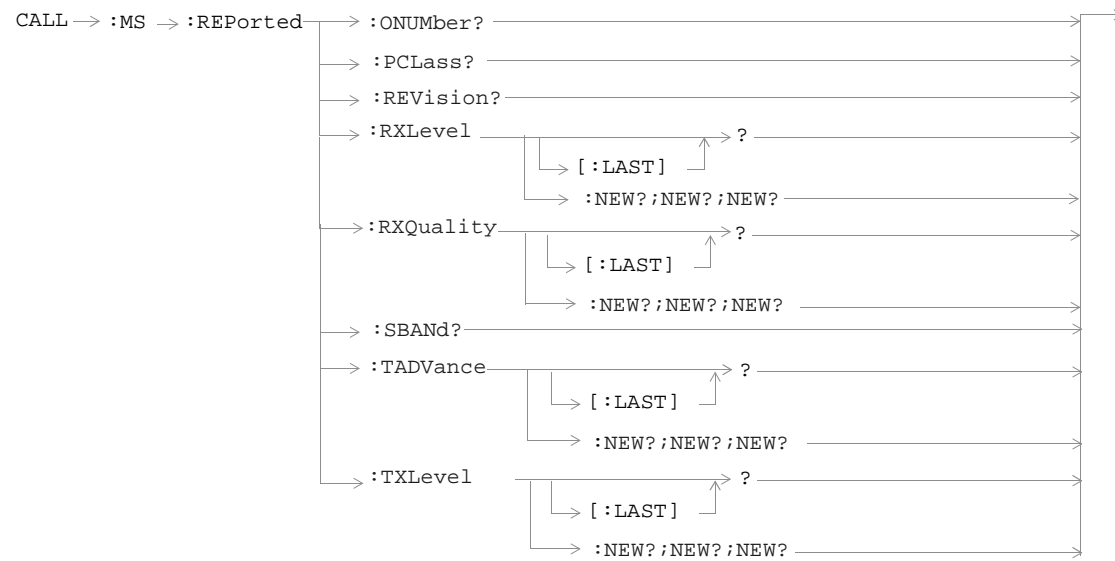


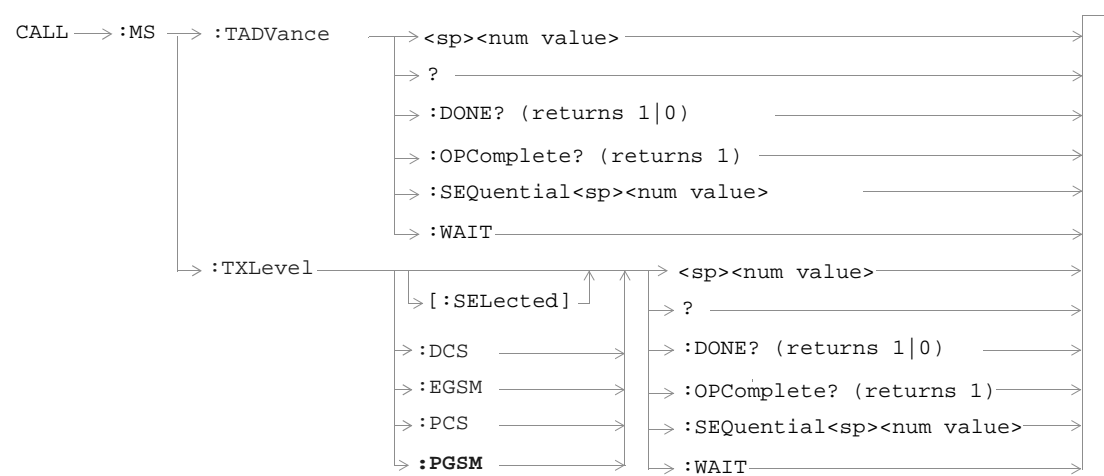
CALL:MNCCode



CALL:MS



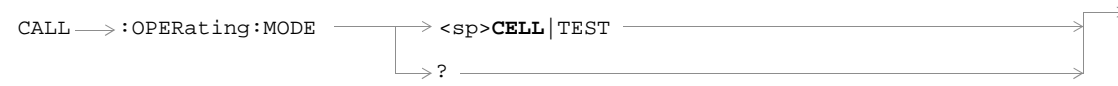




CALL:NCCode



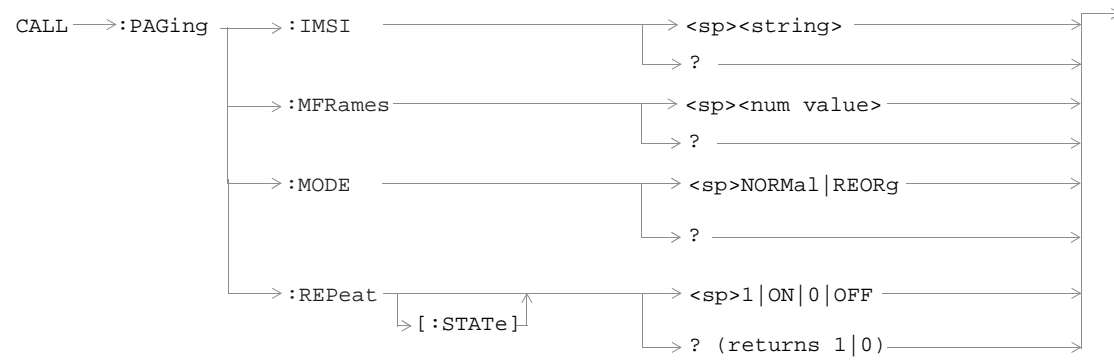
CALL:OPERating



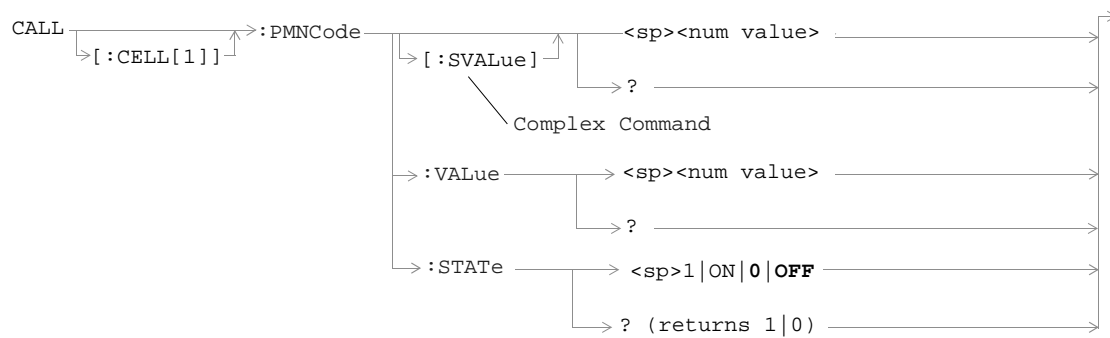
CALL:ORIGinate



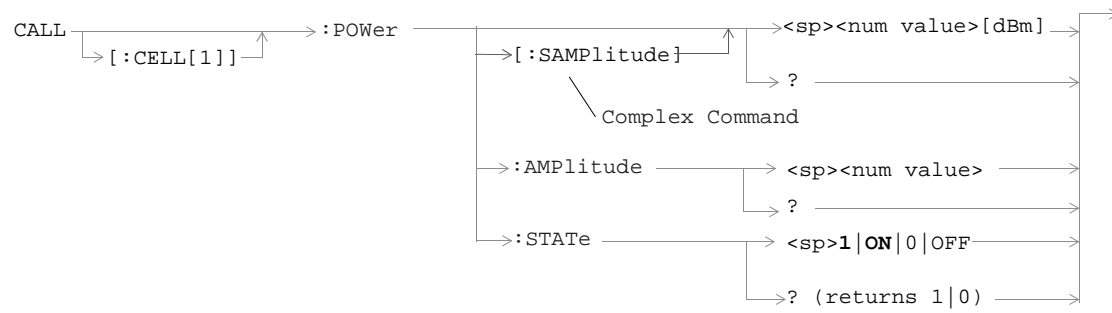
CALL:PAGing



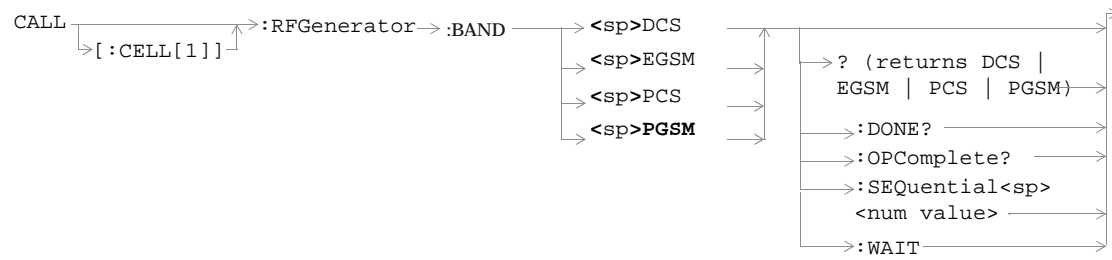
CALL:PMNCode

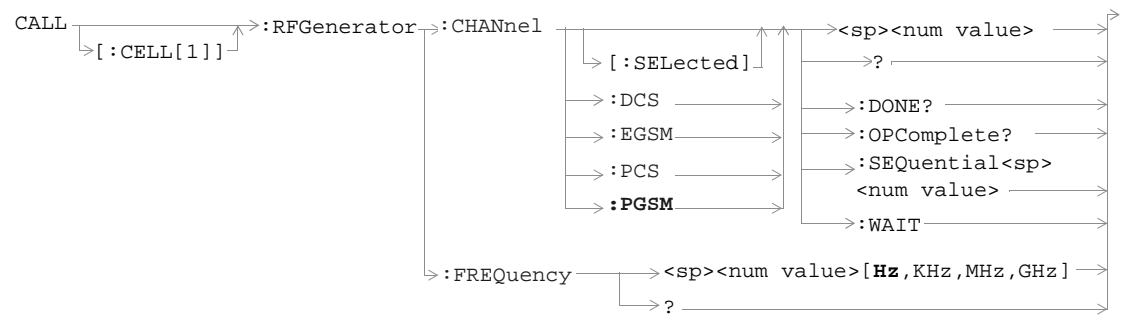


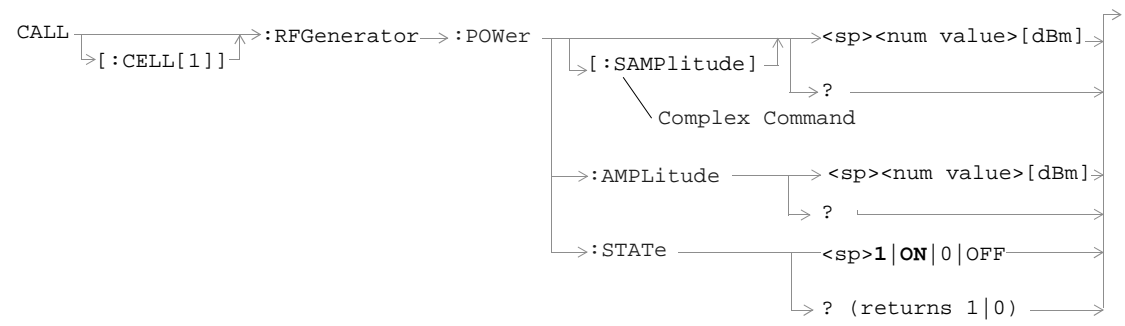
CALL:POWer



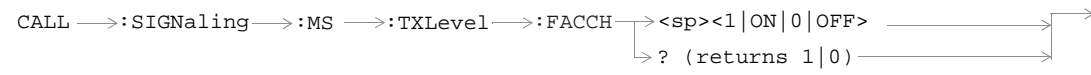
CALL:RFGenerator



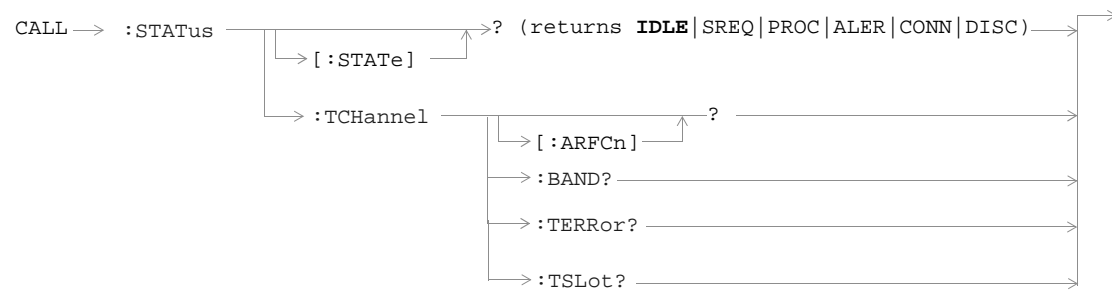




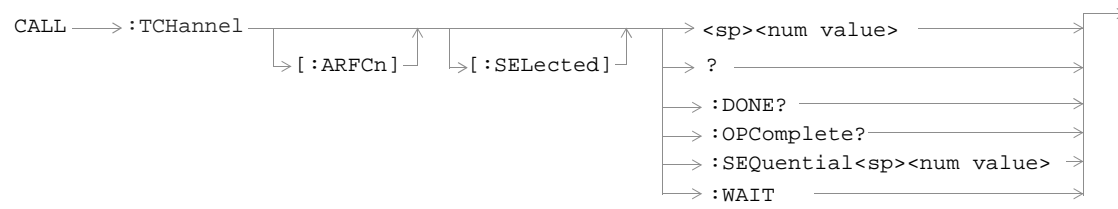
CALL:SIGNaling

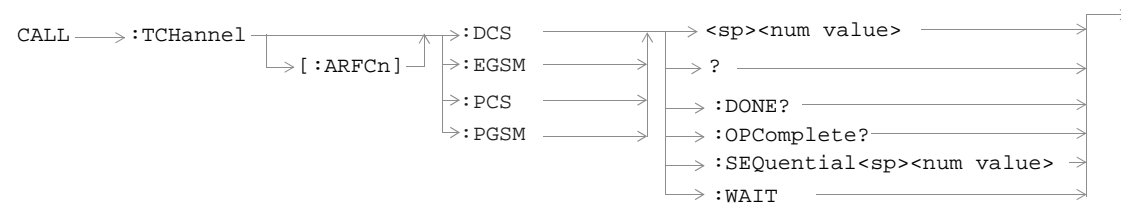


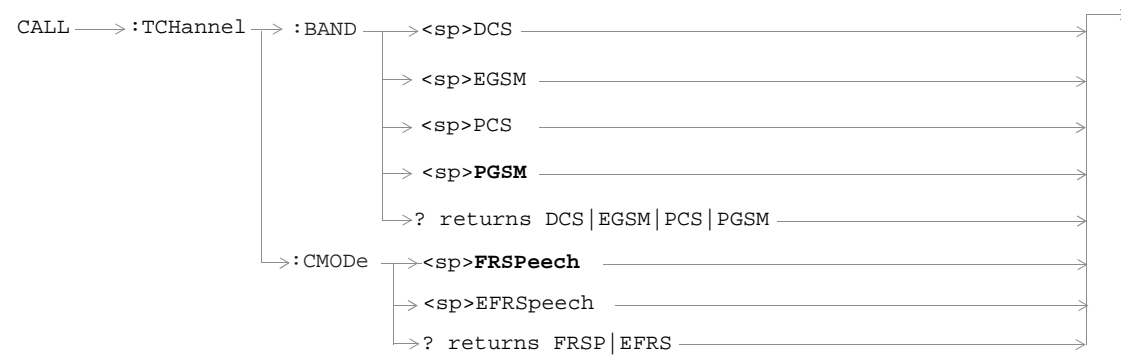
CALL:STATus

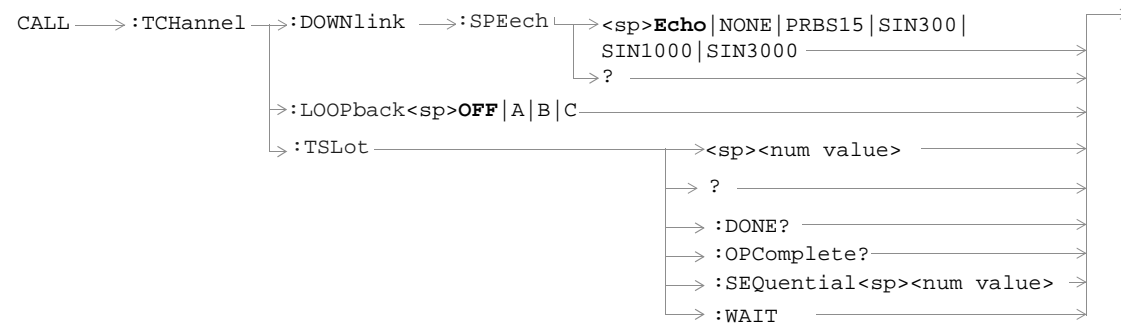


CALL:TCHannel

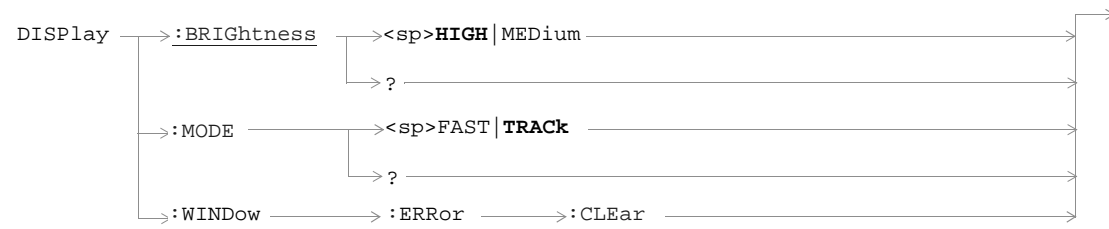




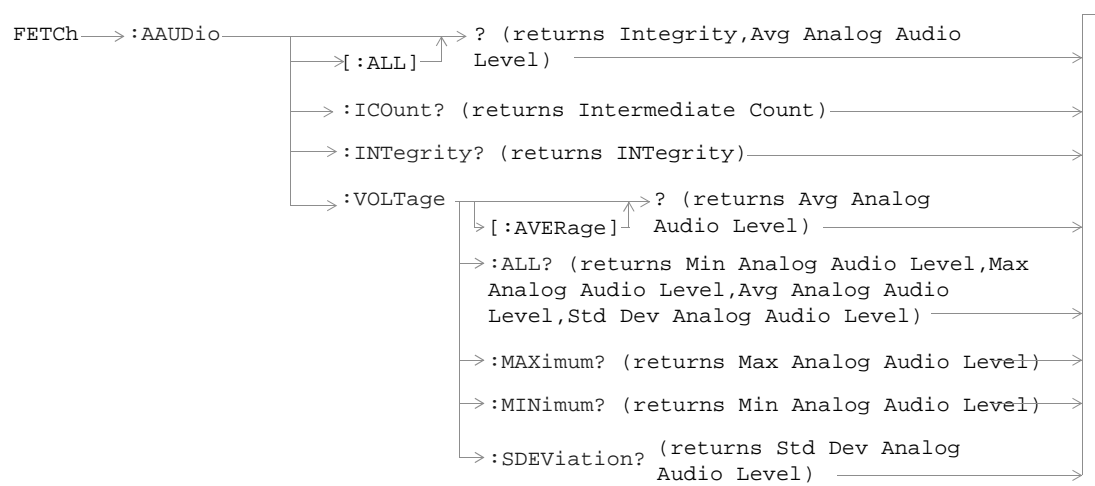




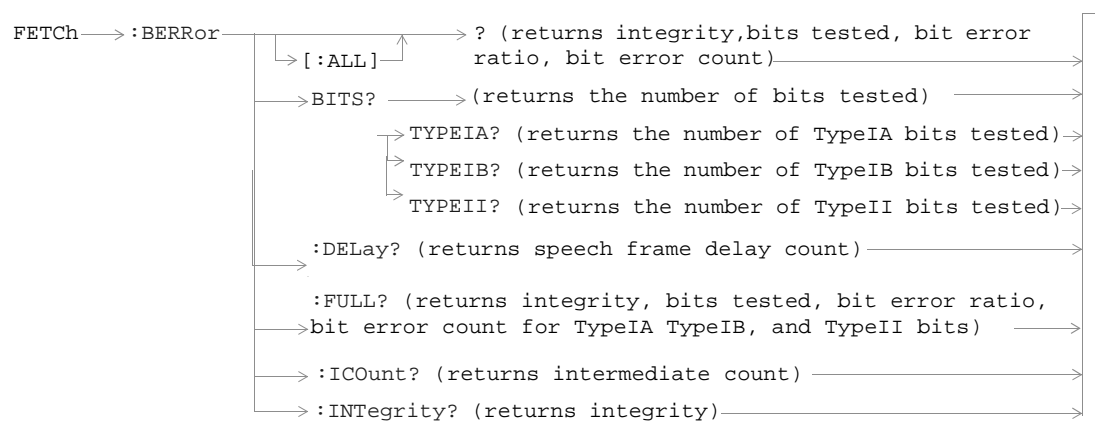
DISPlay

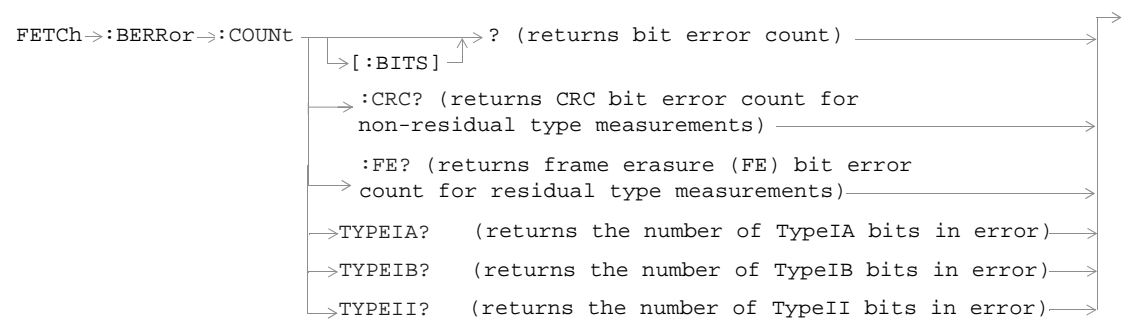


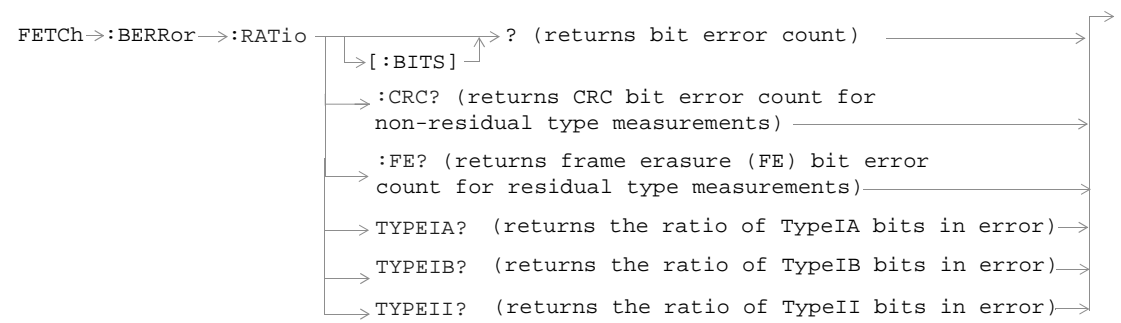
FETCh:AAudio



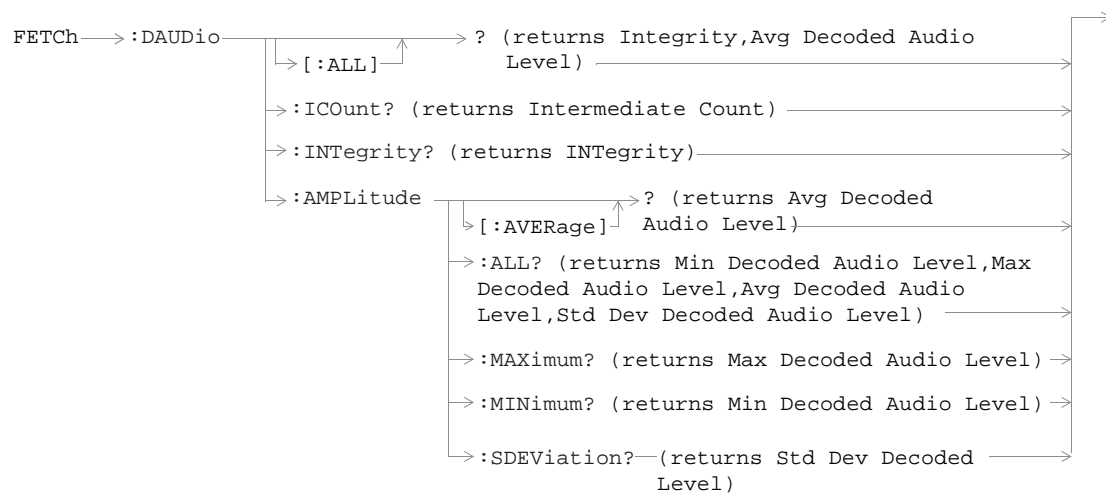
FETCH:BERRor



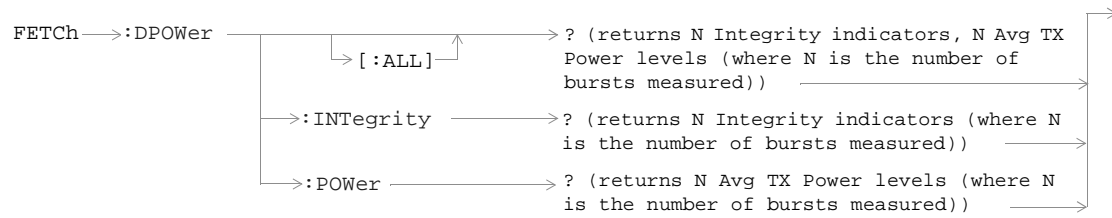




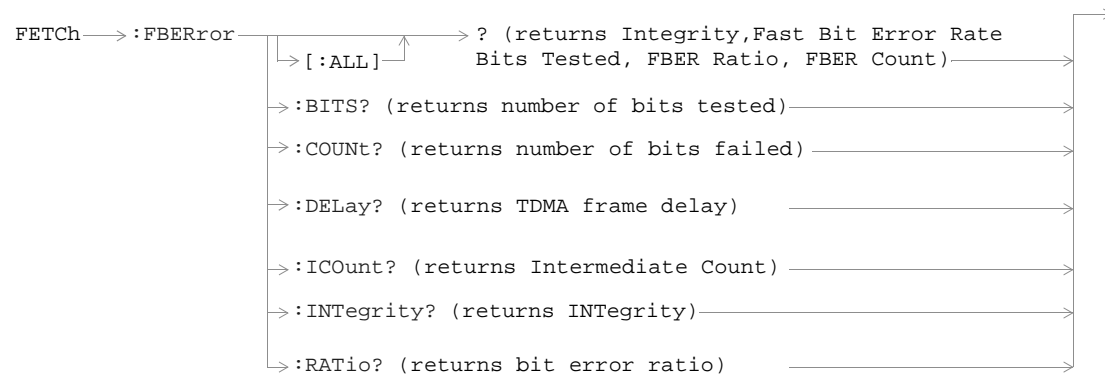
FETCh:DAUDio



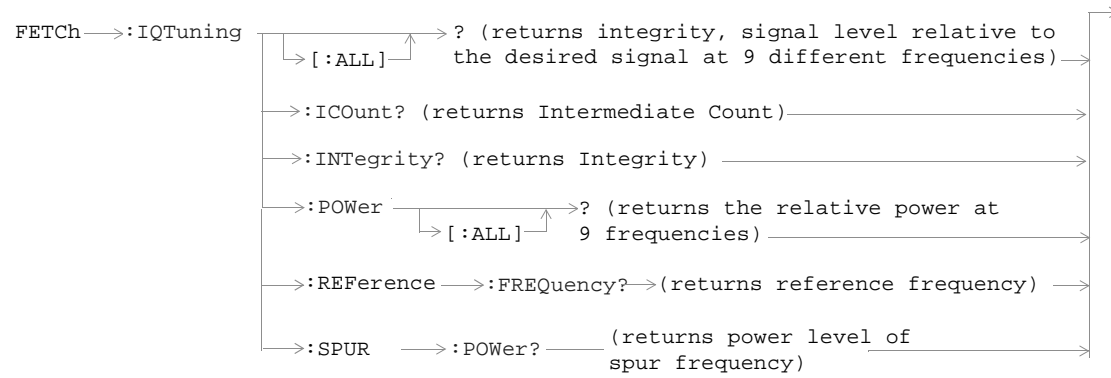
FETCH:DPOWER



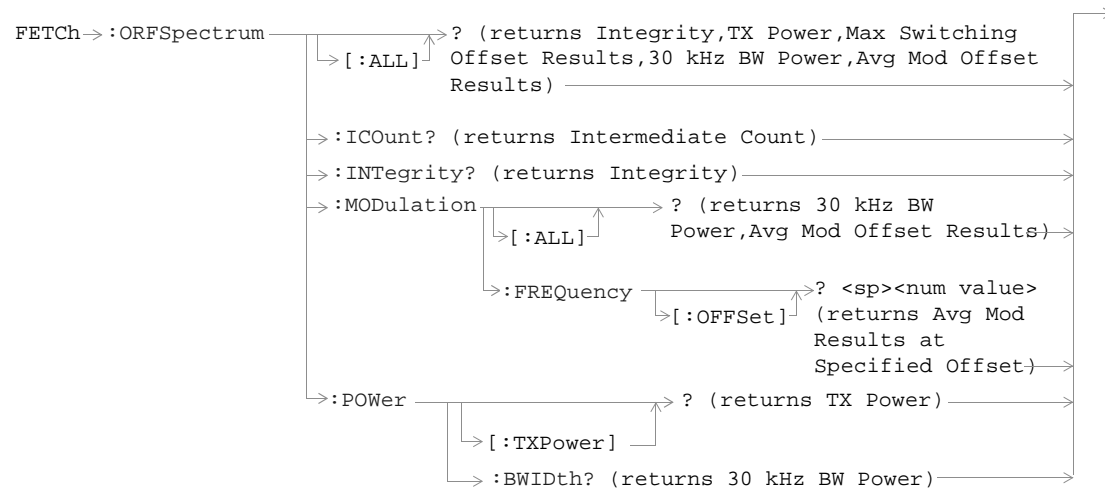
FETCH:FBERror

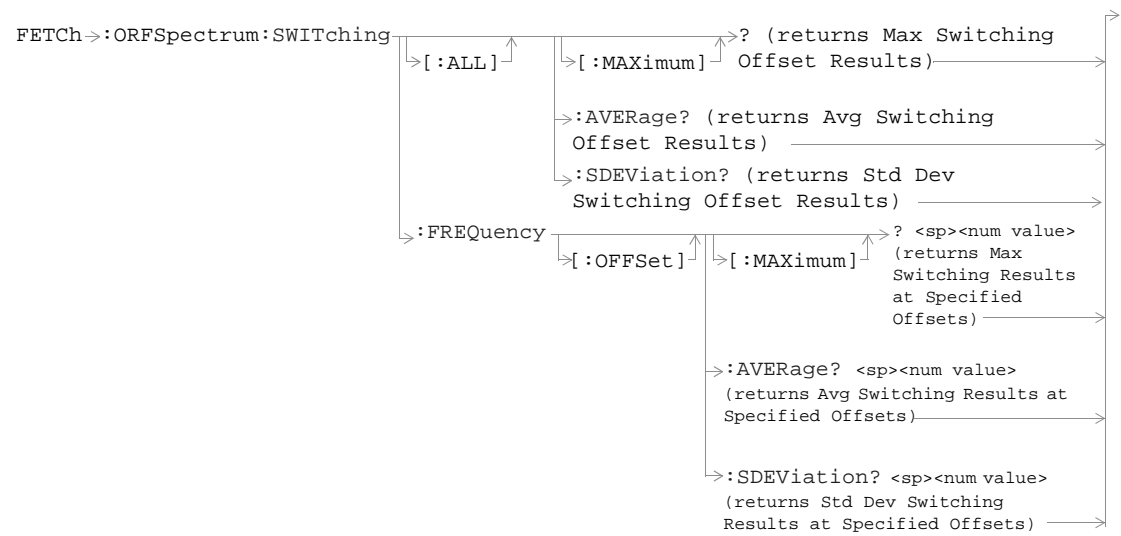


FETCH:IQTuning

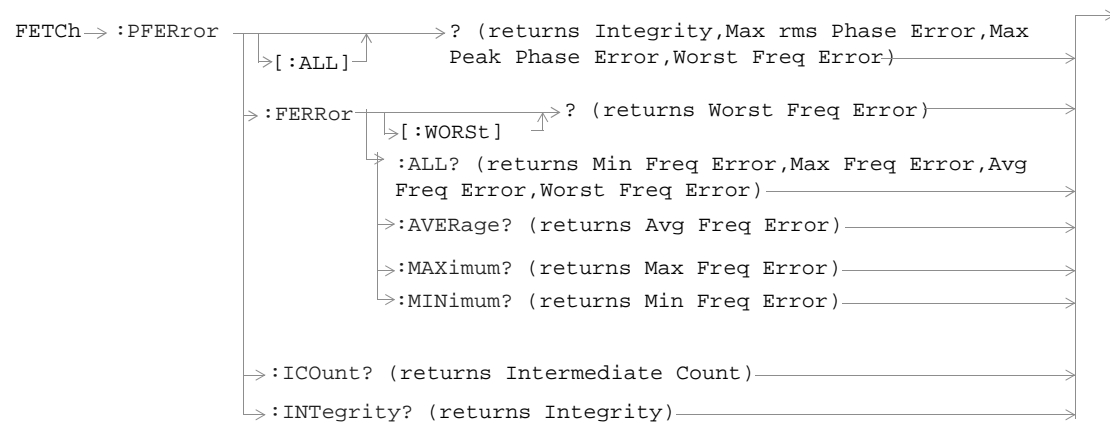


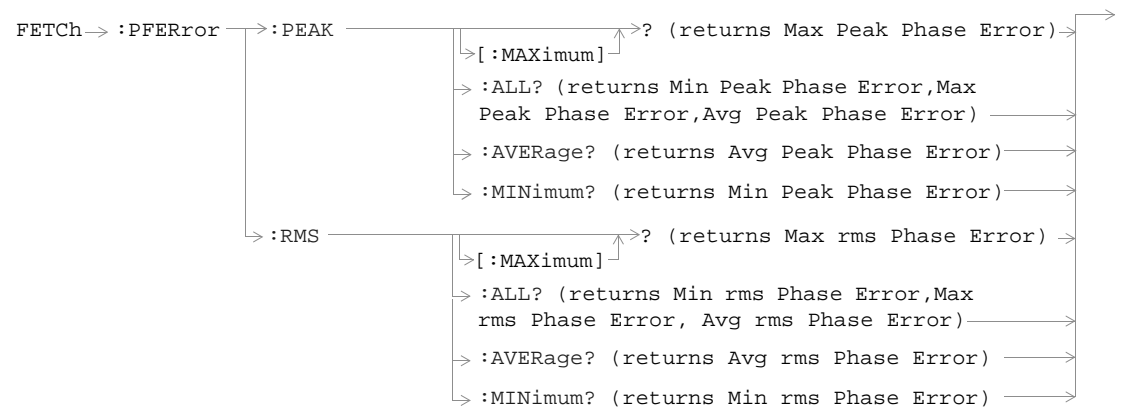
FETCH:ORFSpectrum



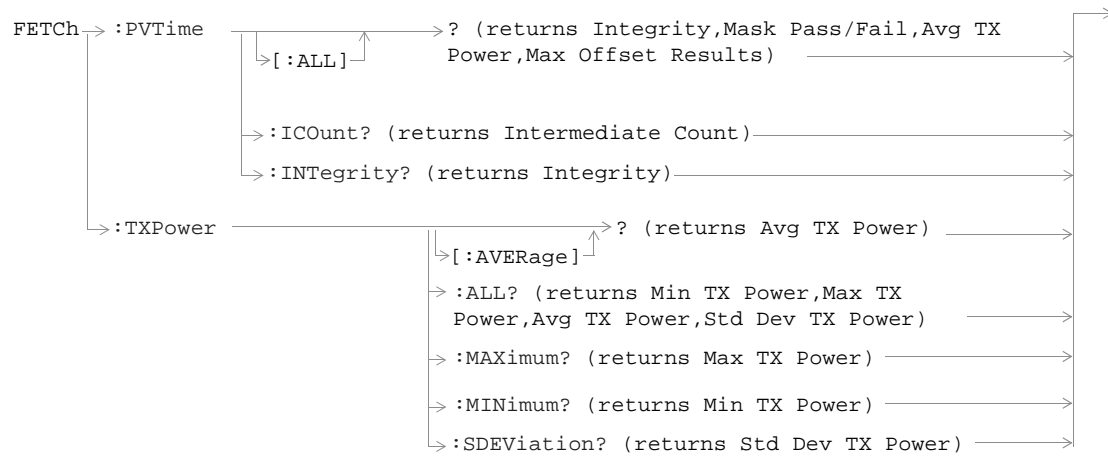


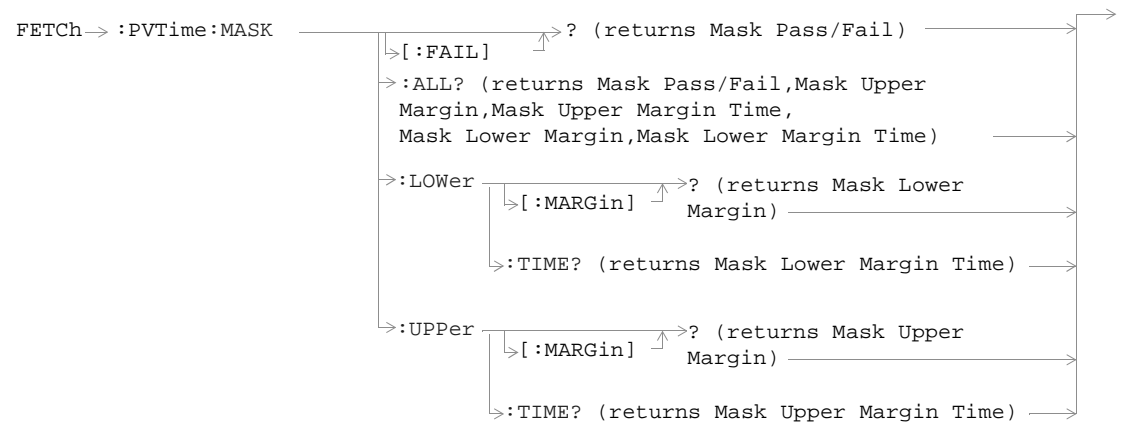
FETCH:PFERror

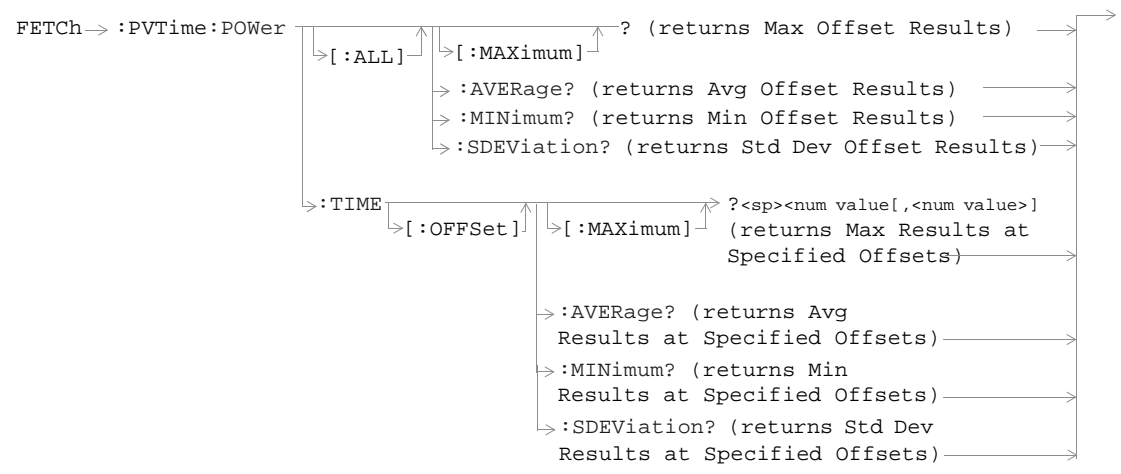




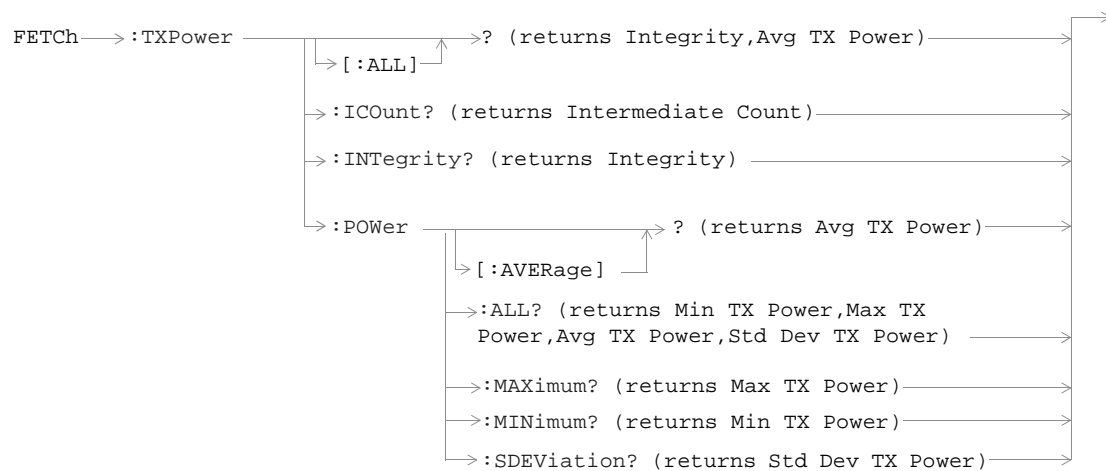
FETCh:PVTime



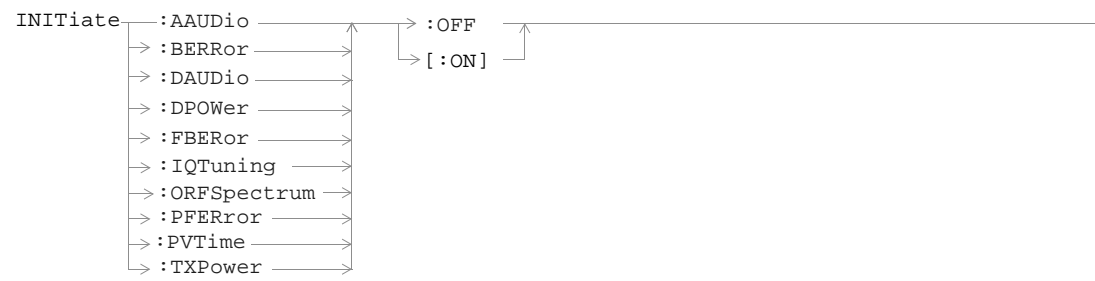


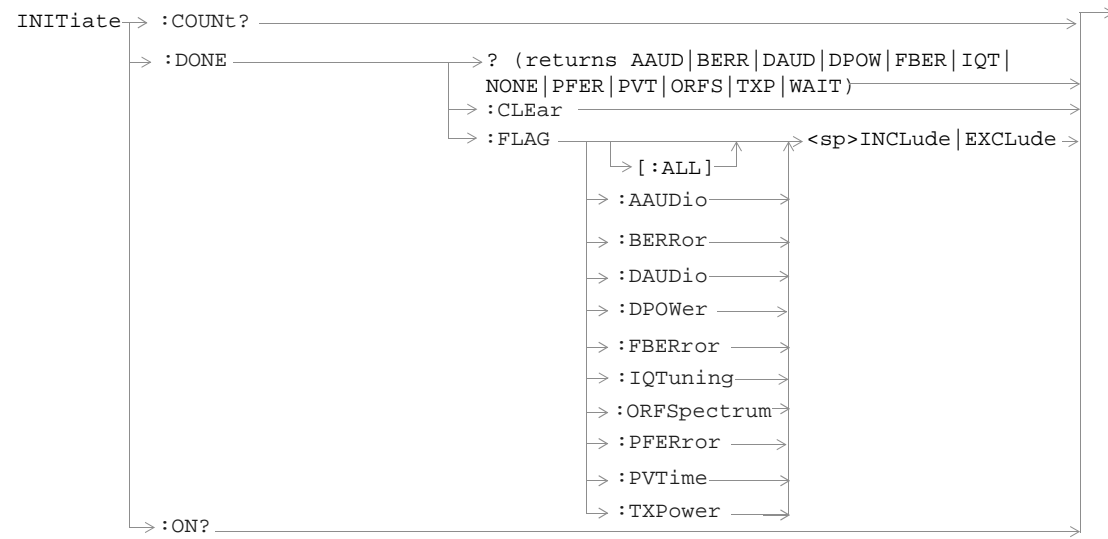


FETCH:TXPower

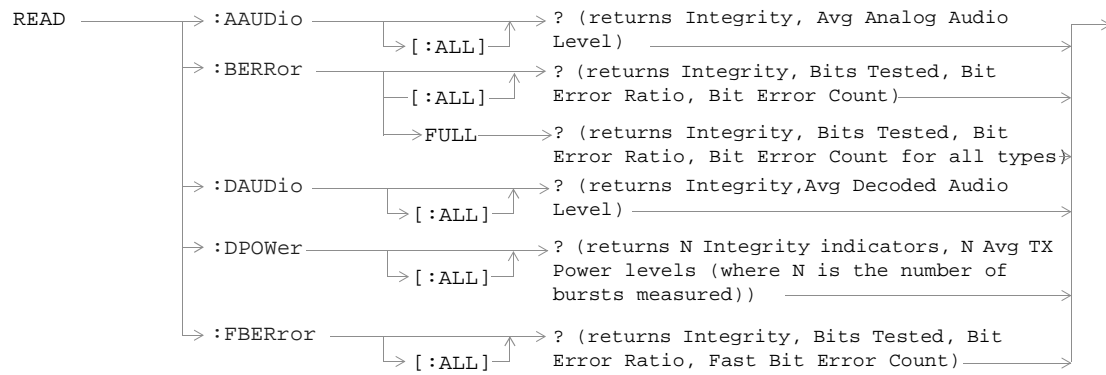


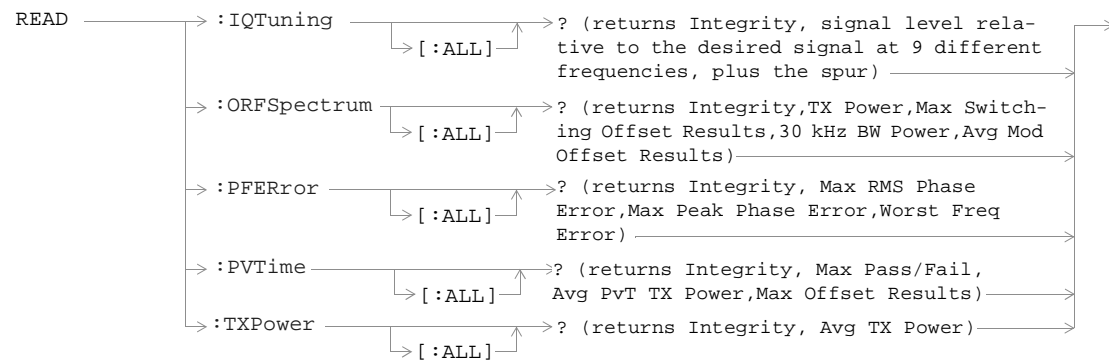
INITiate



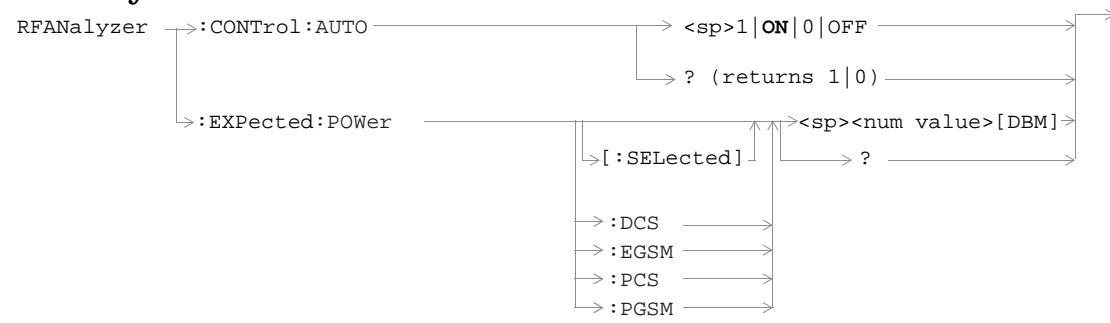


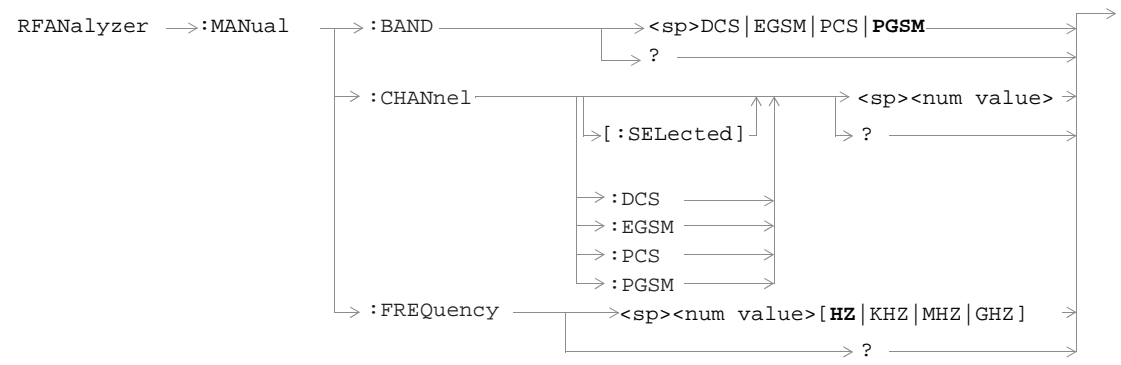
READ



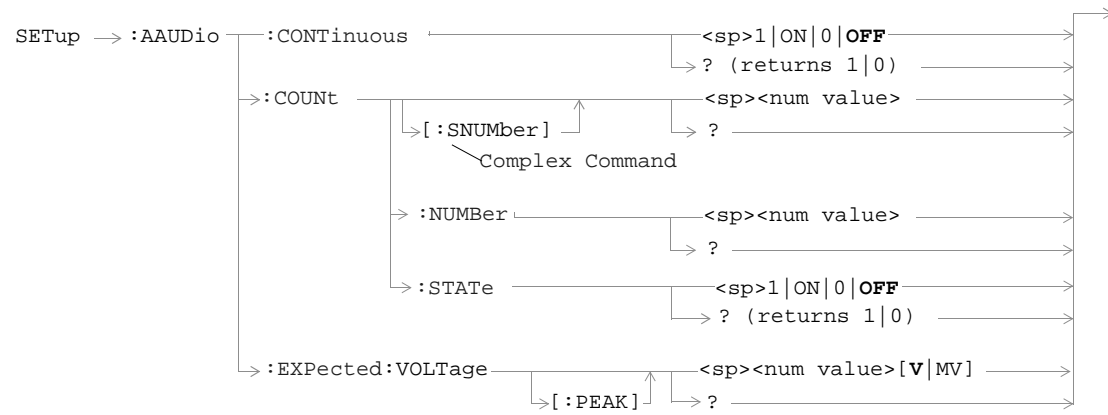


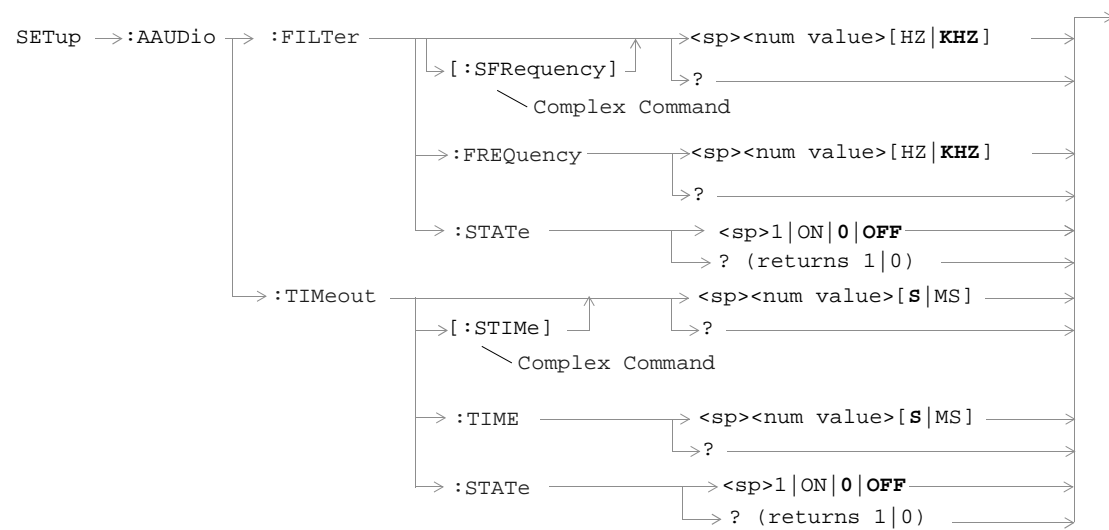
RFAnalyzer



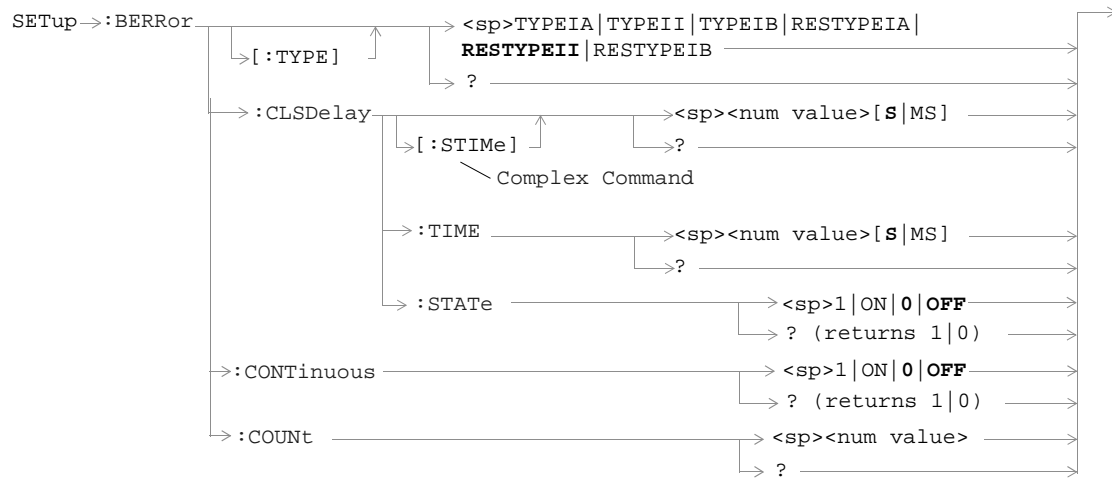


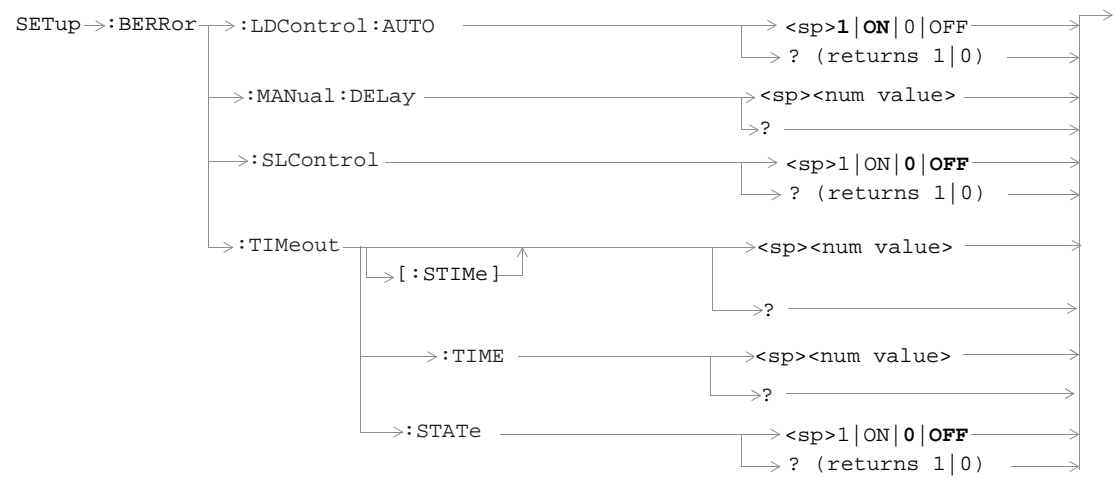
SETup:AAUDio



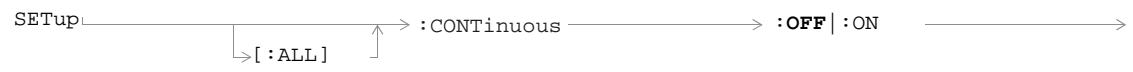


SETup:BERRor

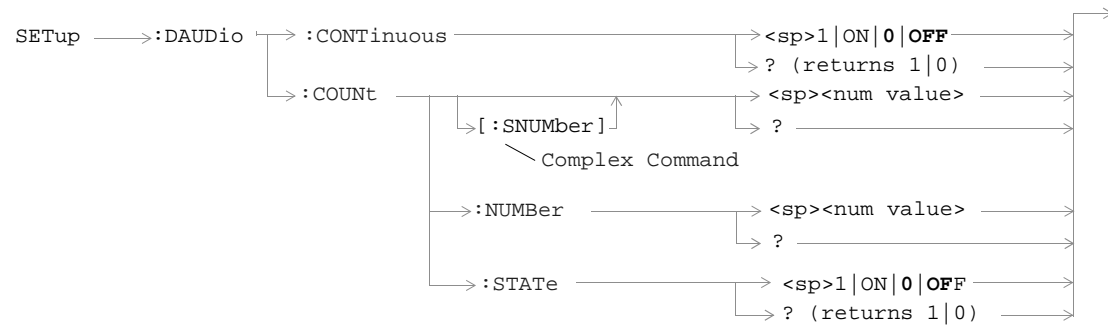


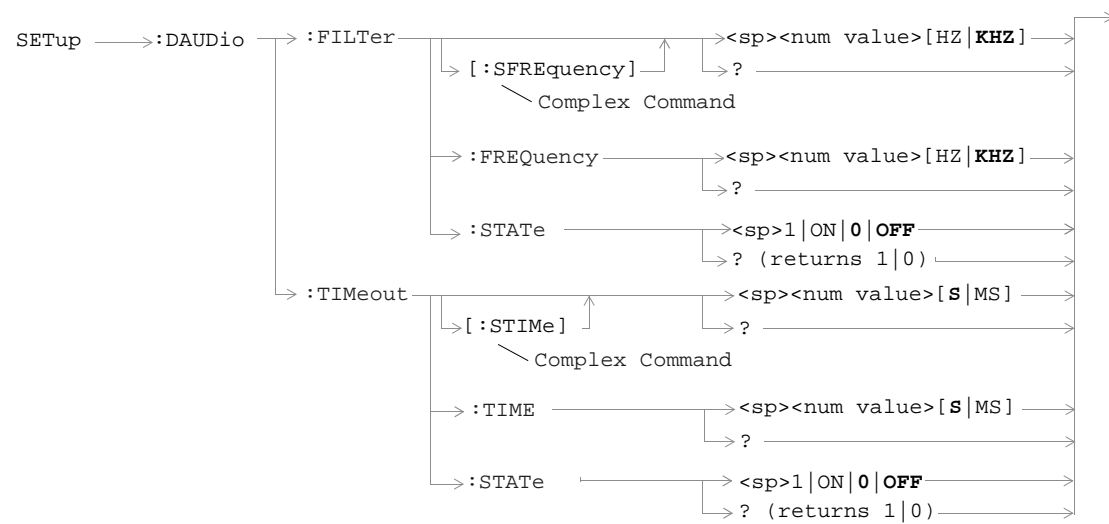


SETup:CONTInuous

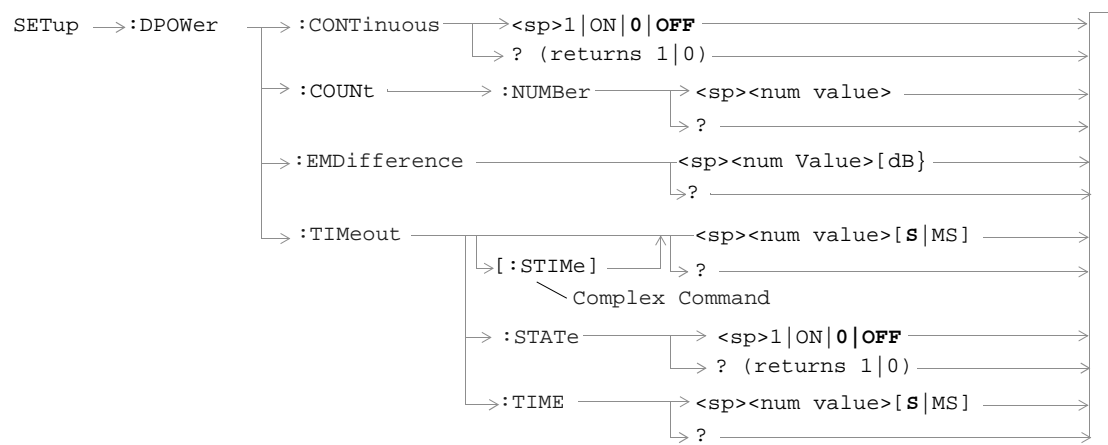


SETup:DAUDio

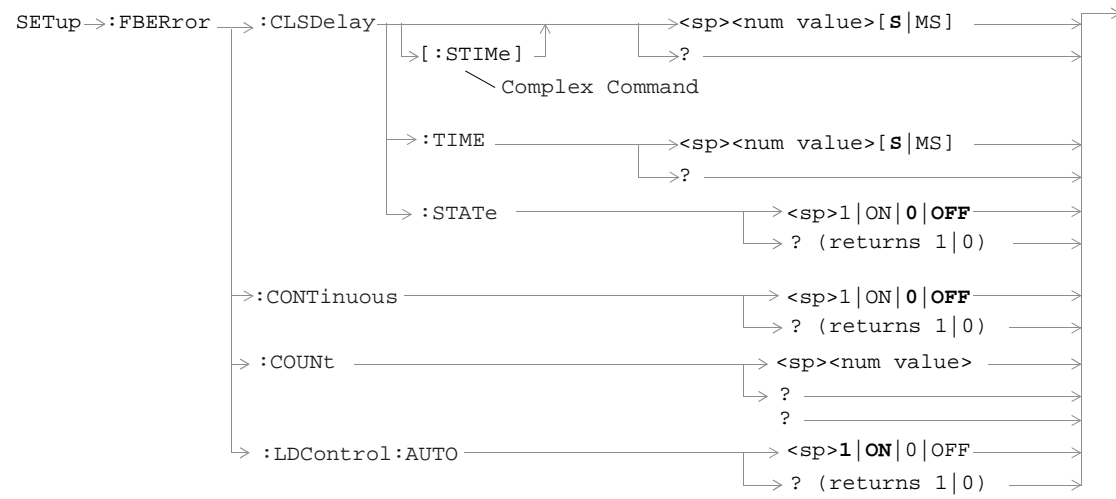


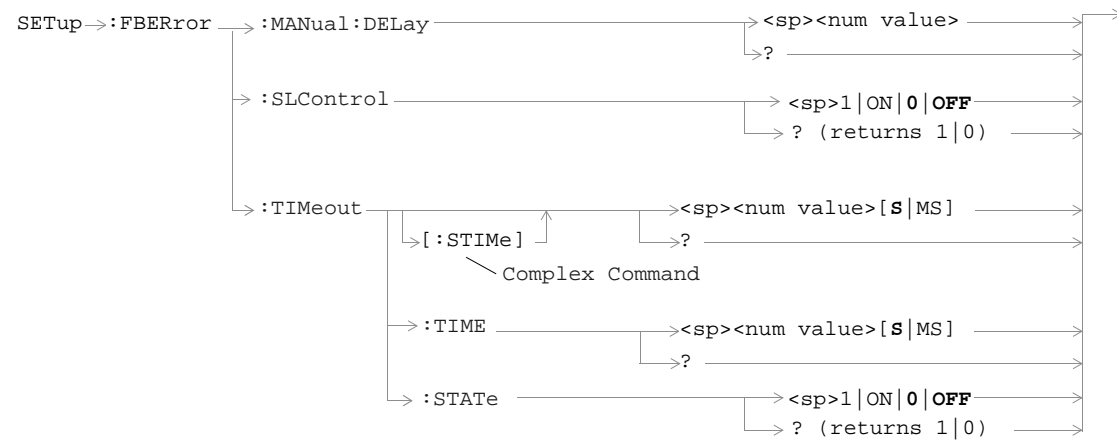


SETup:DPOWER

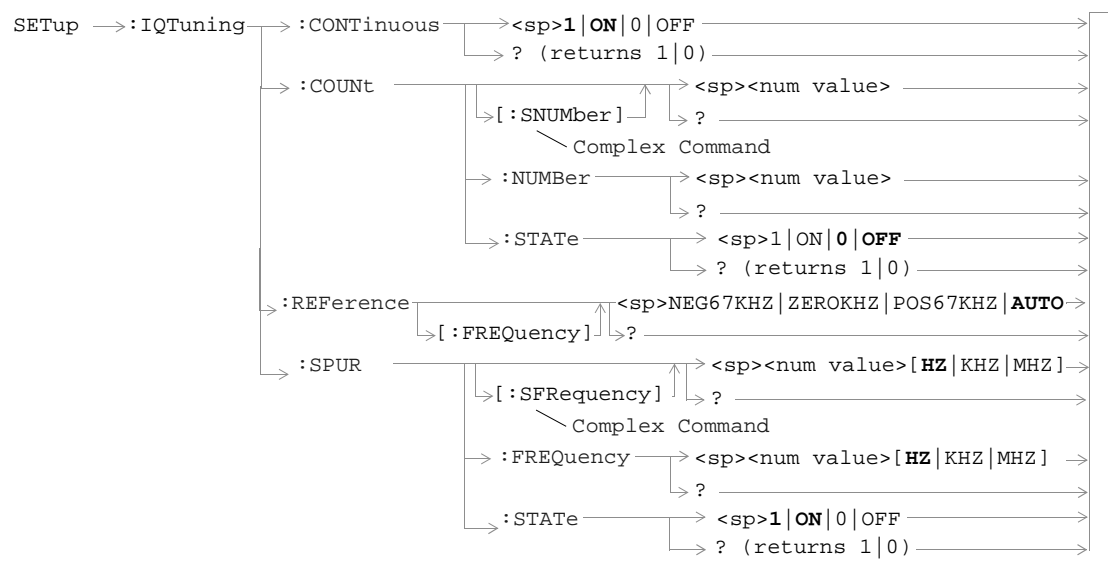


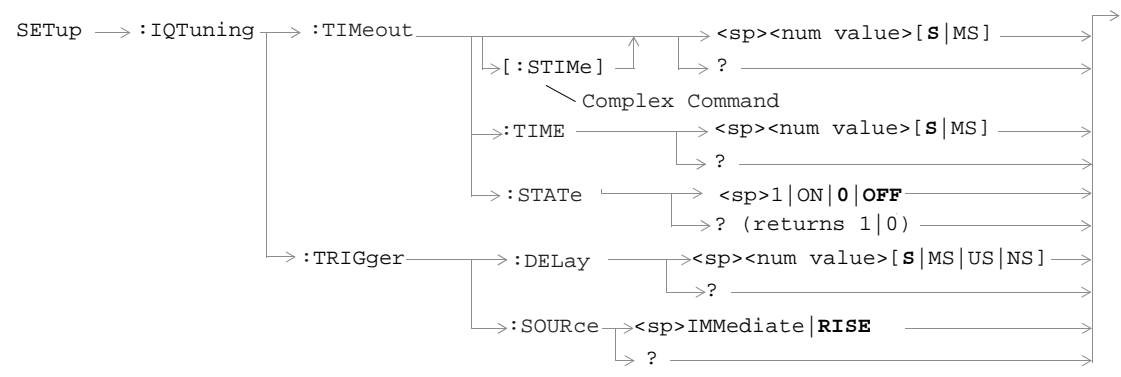
SETup:FBError



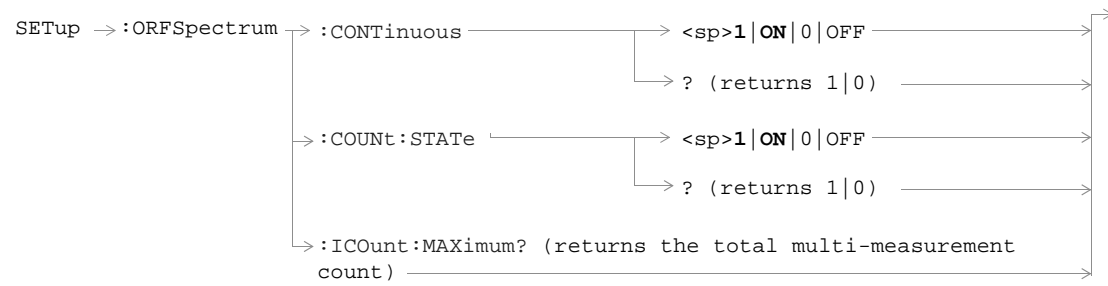


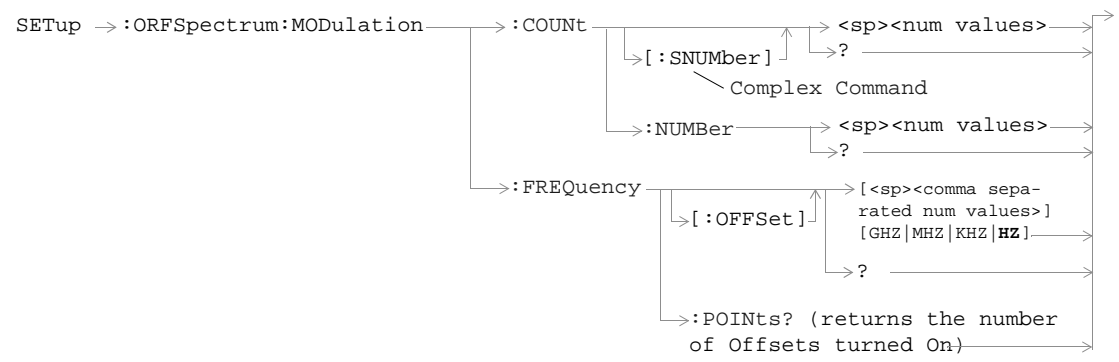
SETup:IQTuning

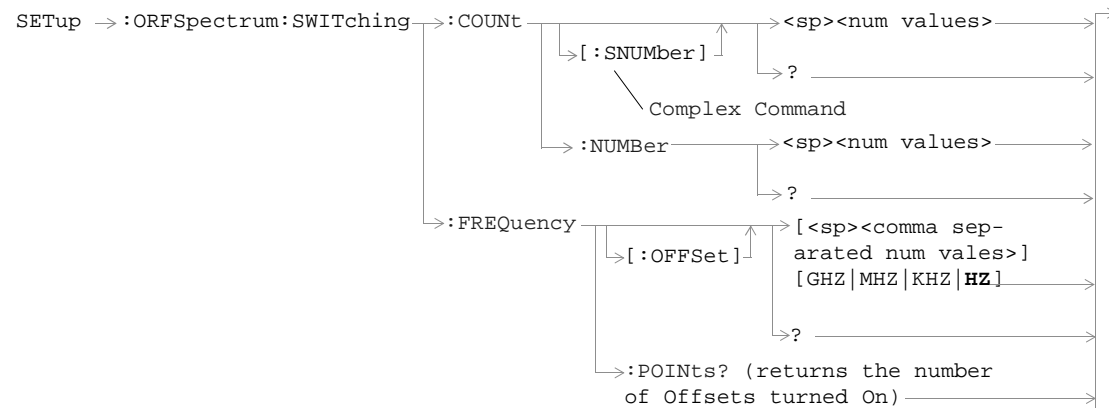


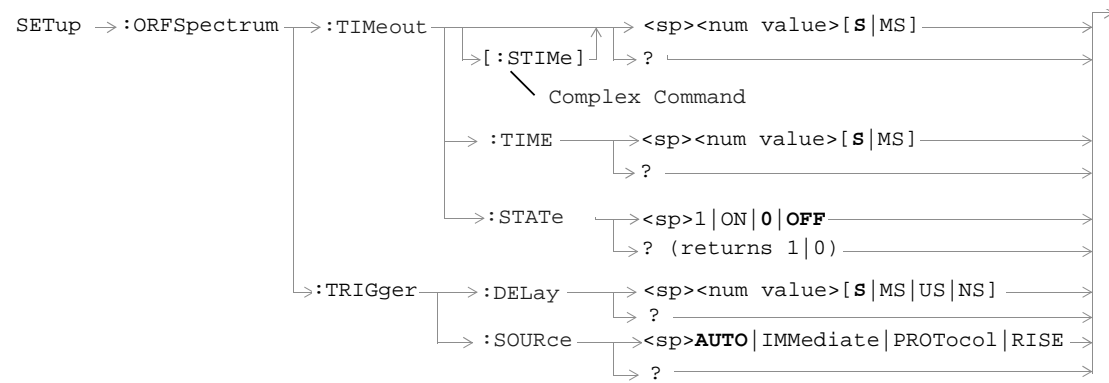


SETup:ORFSpectrum

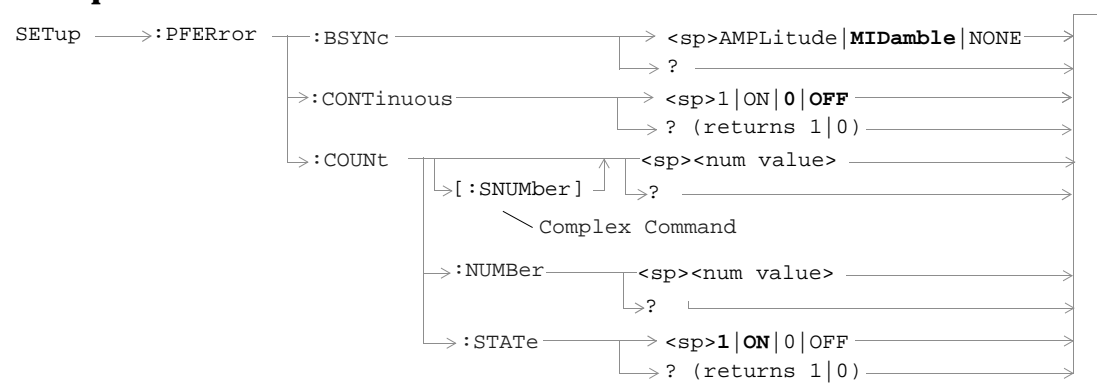


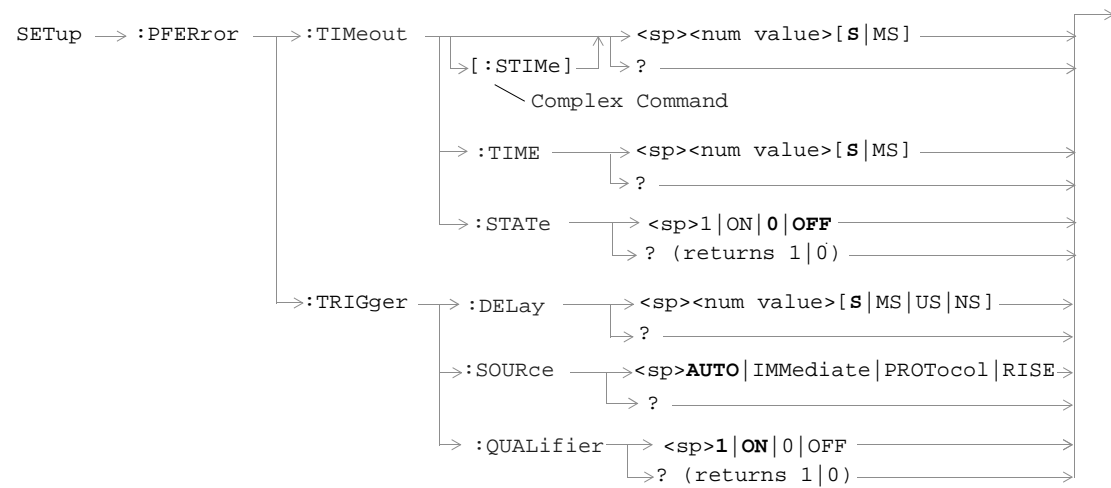




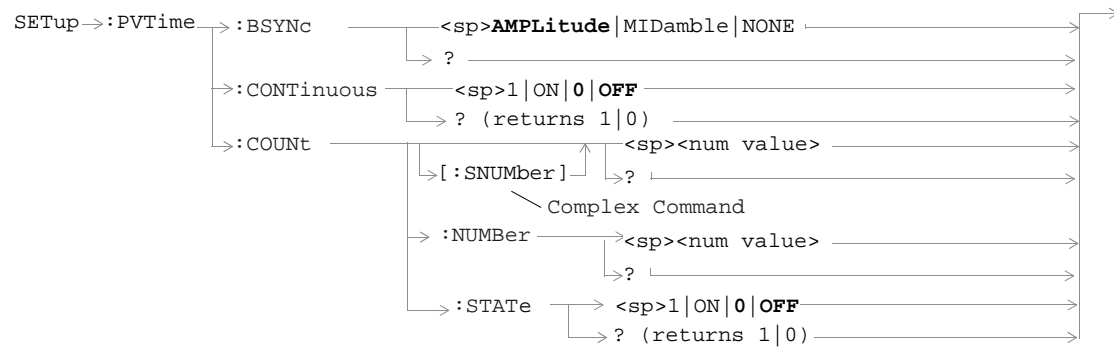


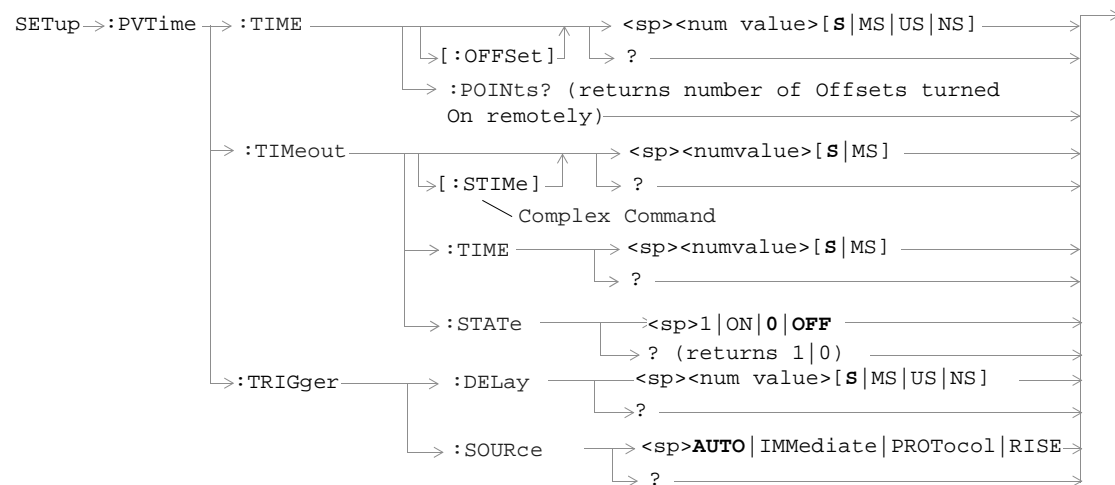
SETup:PFError



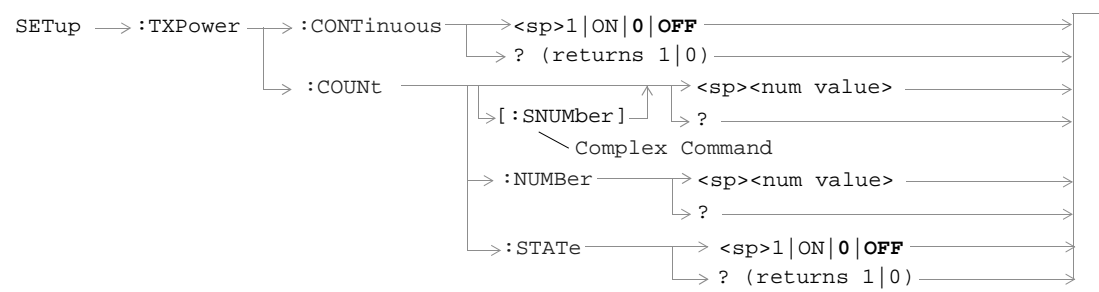


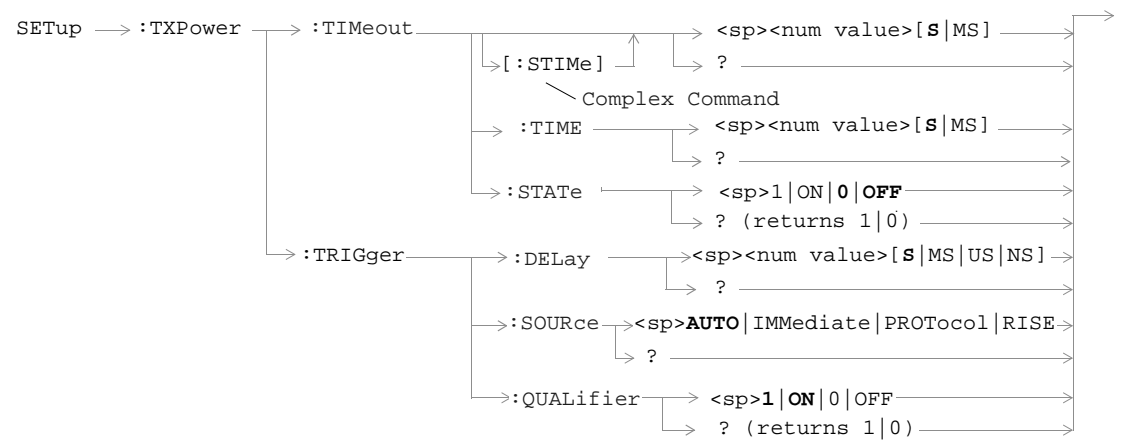
SETup:PVTime



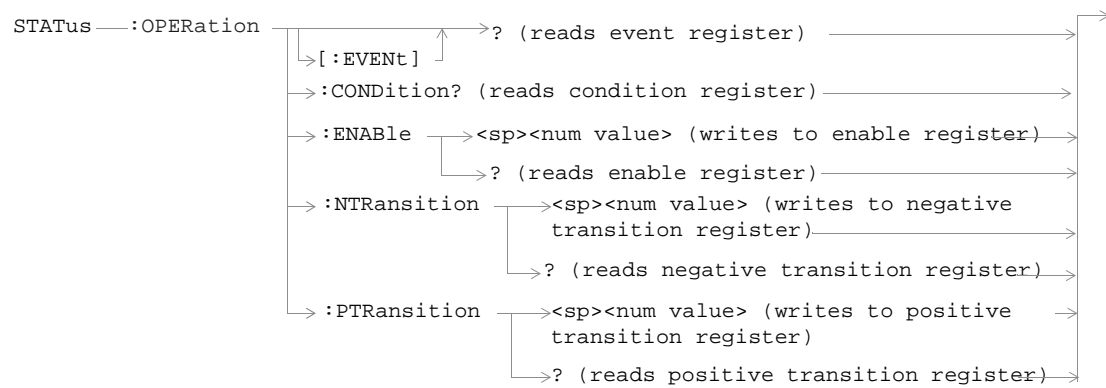


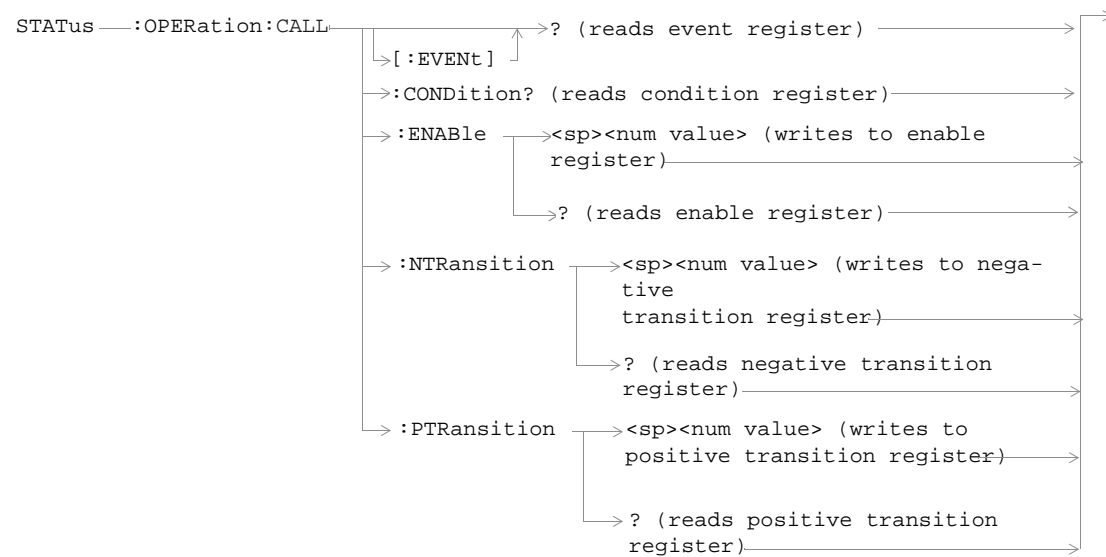
SETup:TXPower

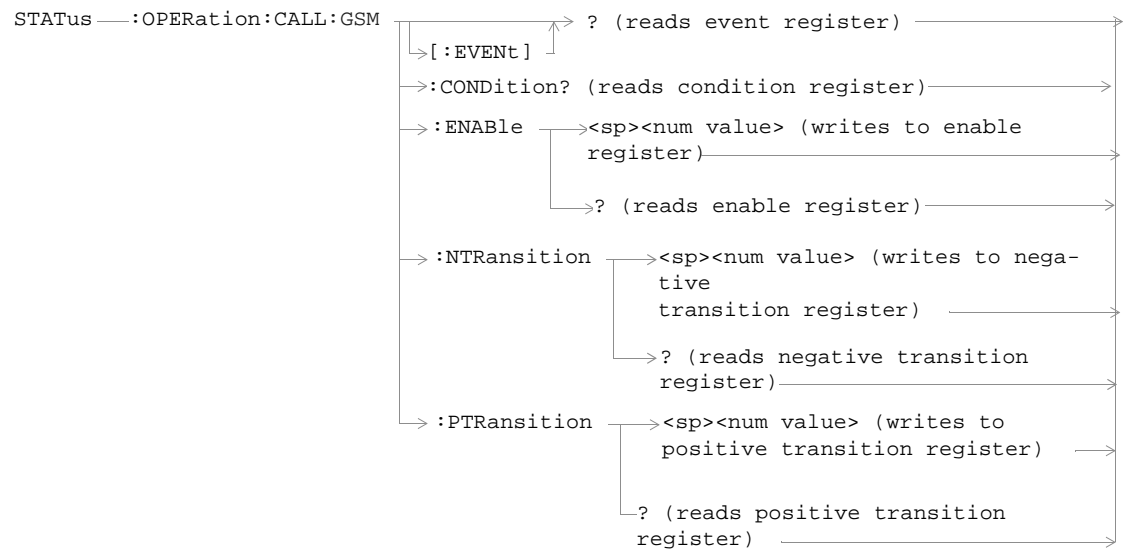


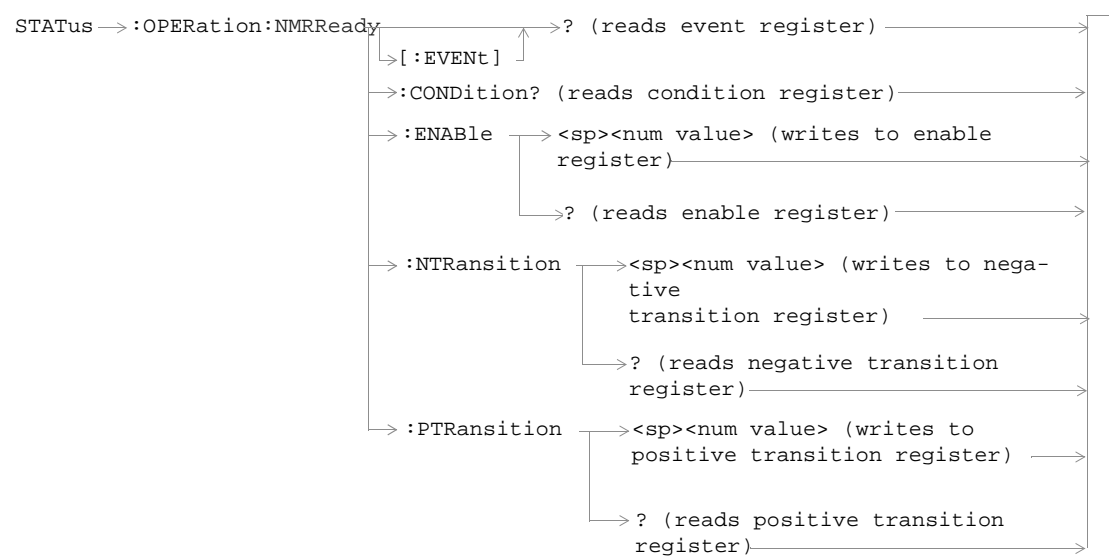


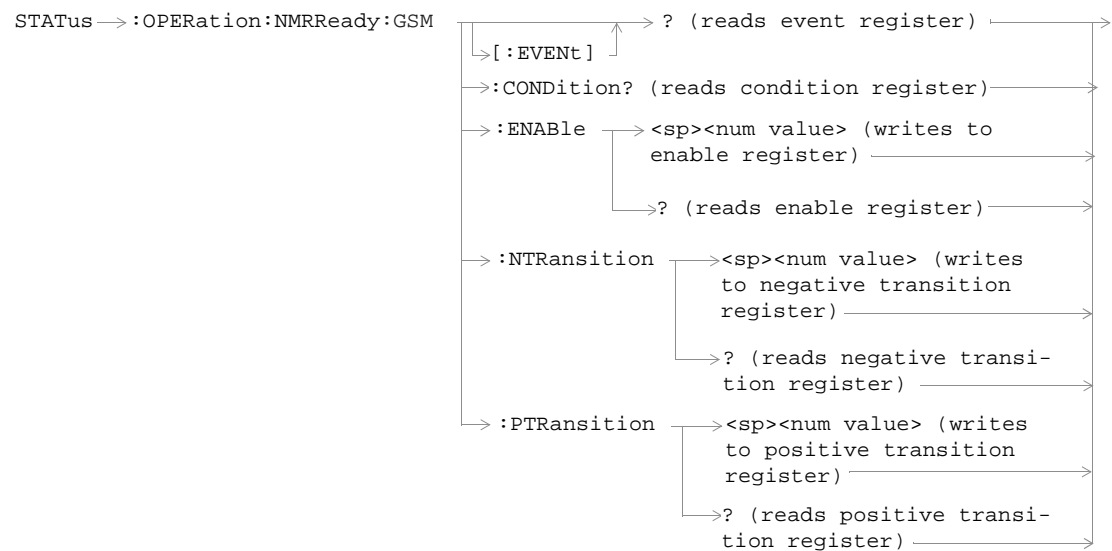
STATUS:OPERation







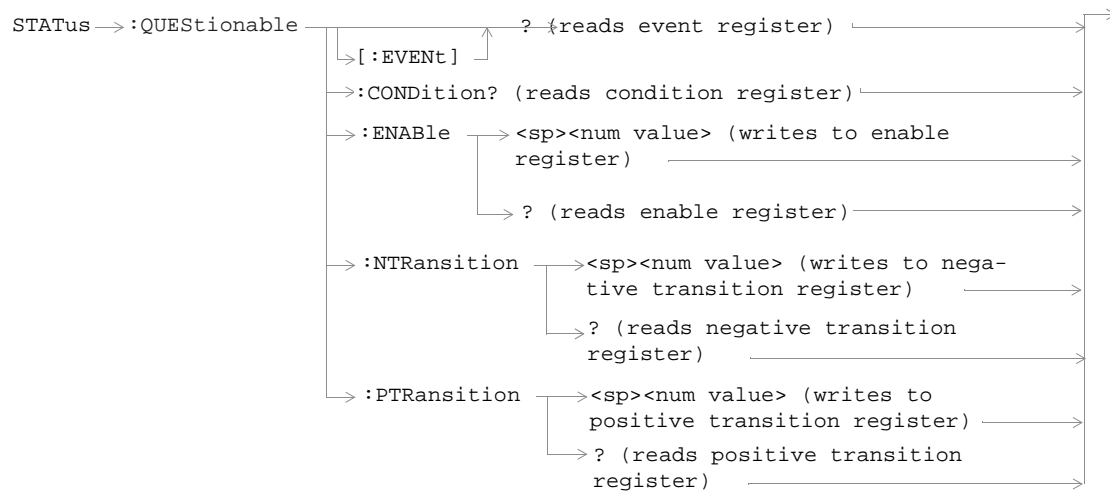


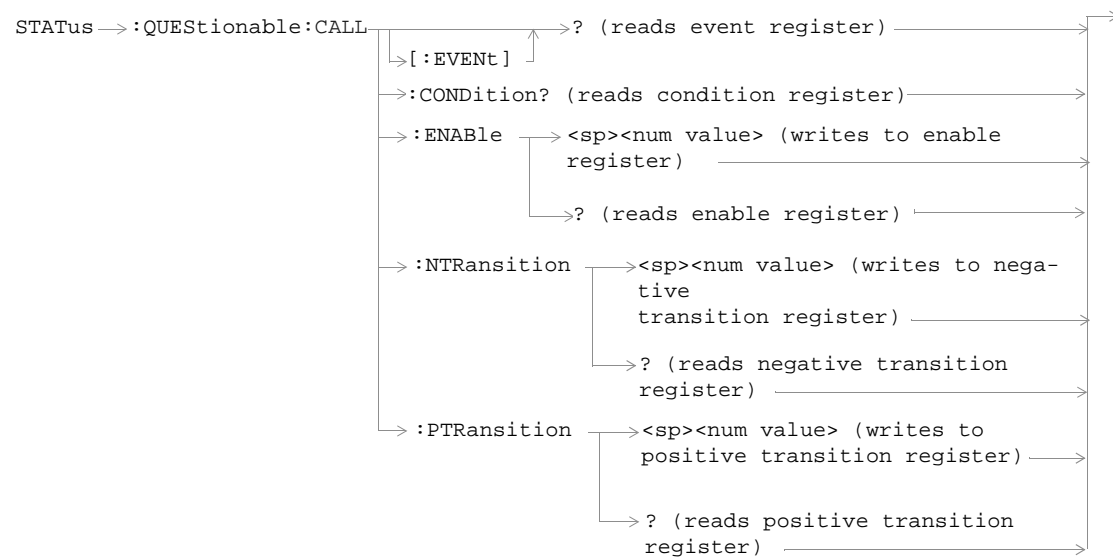


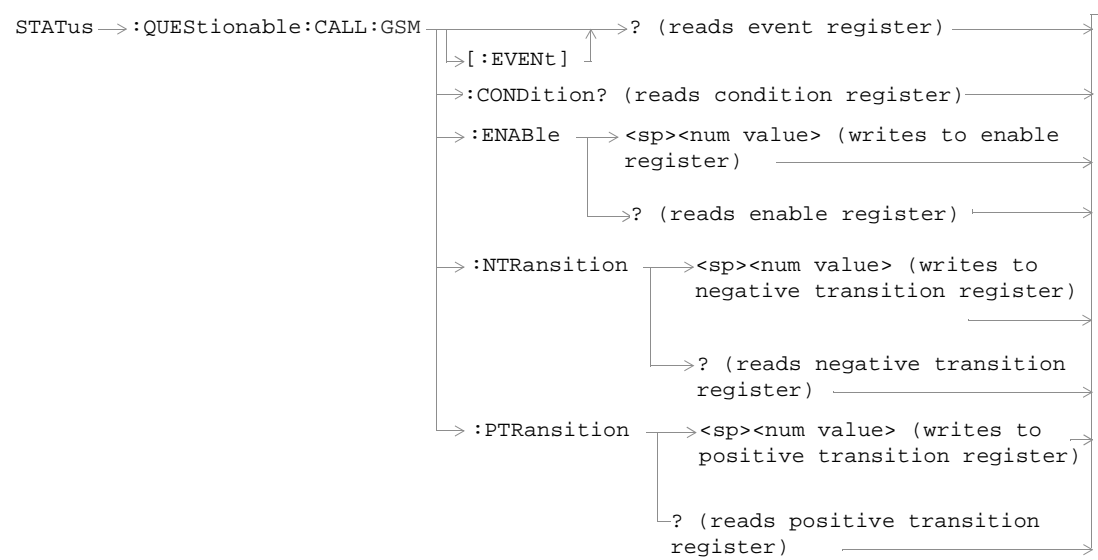
STATus:PRESet

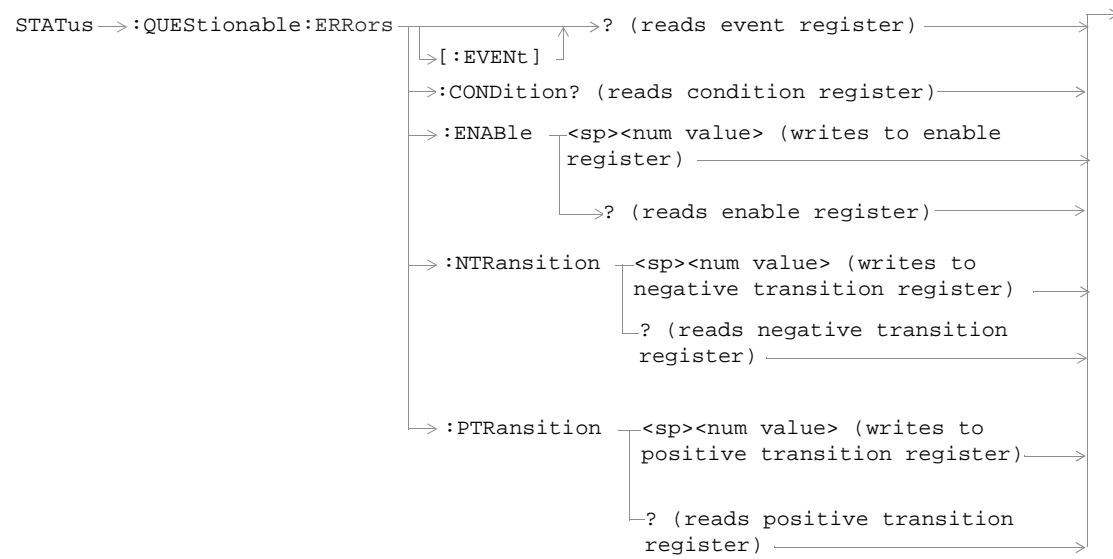
STATus → :PRESet →

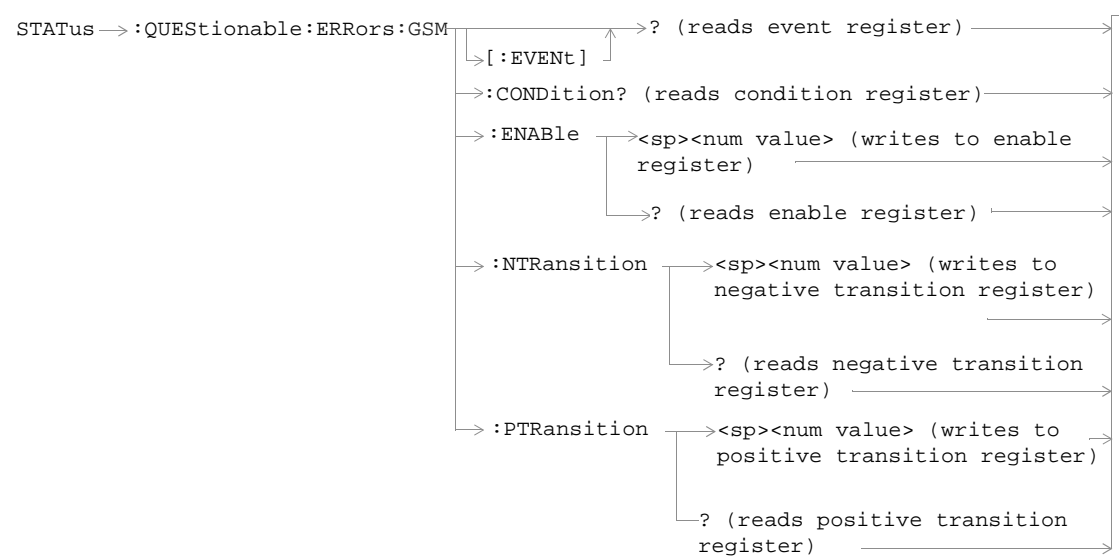
STATUS:QUESTIONable

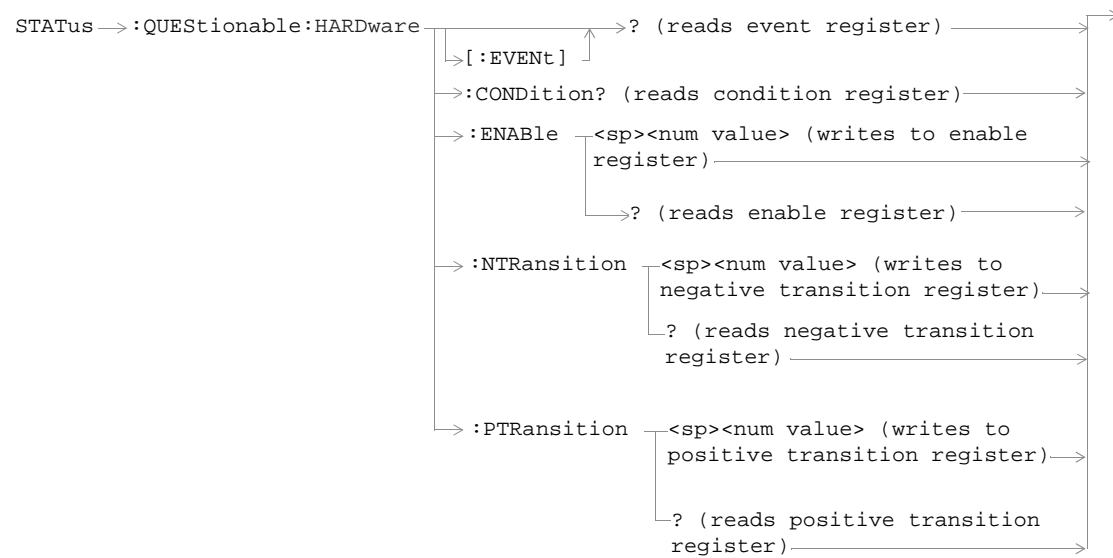













Status Byte Register

*STB?

*STB? 

Standard Event Status Register

*ESR?

*ESR? —————> Reads and clears the Std Event Status Register. ↗

*ESE?

*ESE? —————> Reads the Std Event Status Register Enable Register ↗

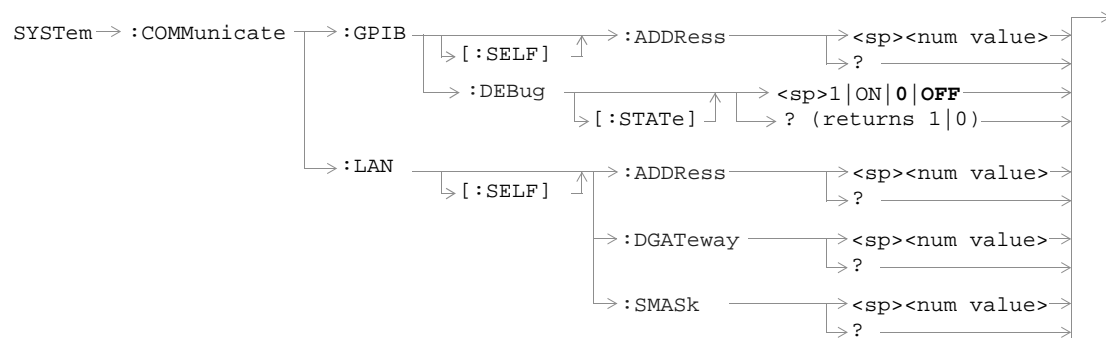
*ESE

*ESE —————> Writes to the Std Event Status Register Enable Register ↗

SYSTem:BEEPer



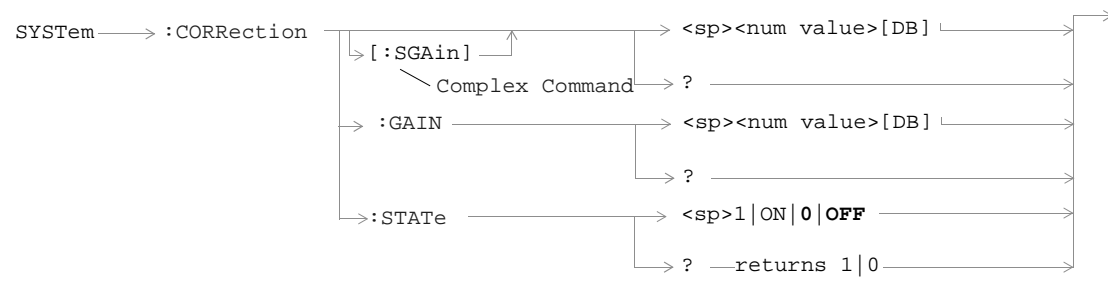
SYSTem:COMMunicate



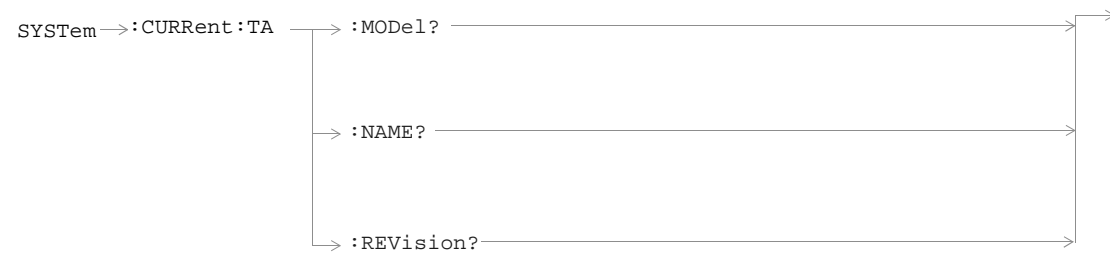
SYSTem:CONFigure:INFormation:HARDware:VERBose?

SYSTem——:CONFigure ——> :INFormation ——> :HARDware ——> :VERBose ——>

SYSTem:CORRection



SYSTEM:CURRENT:TA

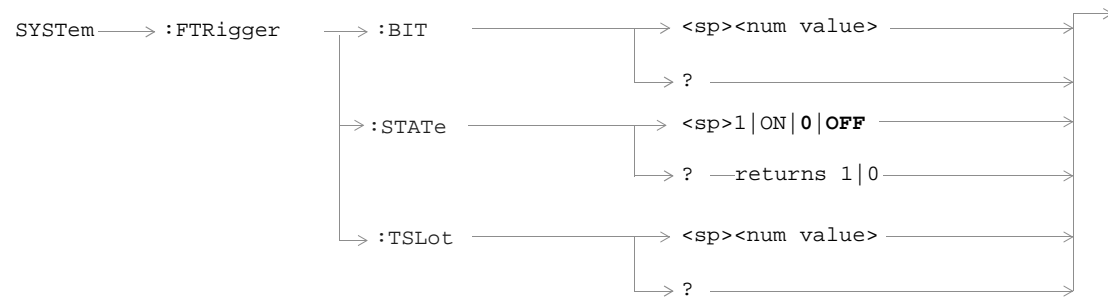


SYSTem:ERRor?

SYSTem → :ERRor? →



SYSTEM:FTRigger

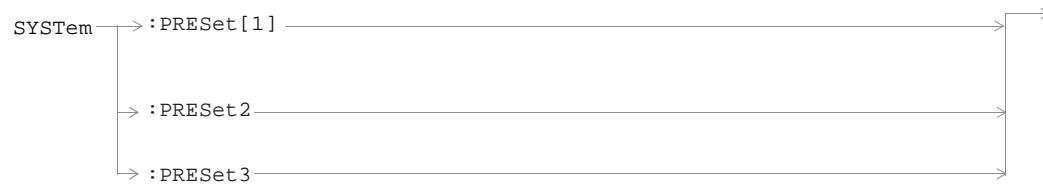


SYSTem:MEASurement

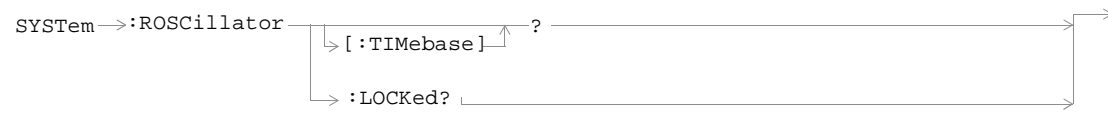
SYSTem → :MEASurement:RESet →



SYSTem:PRESet



SYSTem:ROSCillator



SYSTem:SYNChronized



IEEE 488.2 Common Commands

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"*SRE?" on page 121

"*STB?" on page 121

"*WAI" on page 121

***CLS**

The *CLS, clear status command, is defined in "IEEE Std 488.2-1992", 10.3. This command will also clear and close the error message screen on the test set's display.

***ESE**

The *ESE, standard event status enable command, is defined in "IEEE Std 488.2-1992", 10.10.

***ESE?**

The *ESE?, standard event status enable query, is defined in "IEEE Std 488.2-1992", 10.11.

***ESR?**

The *ESR?, standard event status register query, is defined in "IEEE Std 488.2-1992", 10.12.

***IDN?**

The *IDN?, identification query is defined in “IEEE Std 488.2-1992”, 10.14.*IDN? is used to retrieve information about the test set in ASCII format.

*IDN?, returns ASCII codes 32 through 126 excluding comma and semicolon in four comma separated fields. Field 1 returns the manufacturer, field 2 returns the instrument model number, field 3 returns the serial number, field 4 returns 0.

For revision information on the currently installed test application, see “SYSTem:CURRent:TA” on page 109.

***OPC**

The *OPC, operation complete command, is defined in “IEEE 488.2-1992”, 10.18. *OPC causes the test set to continuously sense the No Operation Pending flag. When the No Operation Pending flag becomes TRUE, the OPC event bit in the standard event status register (ESR) is set to indicate that the state of all pending operations is completed. The *OPC common command is not recommended.

***OPC?**

The *OPC?, operation complete query, is defined in “IEEE Std 488.2-1992”, 10.19. The *OPC? query allows synchronization between the controller and the test set using either the message available (MAV) bit in the status byte, or a read of the output OPC?. The *OPC? query does not effect the OPC event bit in the Standard Event Status Register (ESR). The *OPC? common command is not recommended, see or the recommended overlapped commands.

***OPT?**

The *OPT?, option identification query, is defined in “IEEE Std 488.2-1992”, 10.20. Each option will have a unique name, that name will be returned with the query.

***RST**

The *RST command is defined in “IEEE Std 488.2-1992”, 10.32. The *RST command is a full preset, which restores a majority of settings to their default values.

Affects of Sending the *RST Command

- All pending operations are aborted.
- Measurement triggering is set to single.
- Any previously received operation complete command (*OPC) is cleared.
- Any previously received operation complete query (*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, operation, calibration, and questionable data/signal.
- All positive transition filter registers are unaffected: communicate, hardware #1, hardware #2, operation, 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.

***SRE**

The *SRE, service request enable command, is defined in “IEEE Std 488.2-1992”, 10.34. The parameter range for this command is 0 through 255.

***SRE?**

The *SRE?, service request enable query, is defined in “IEEE Std 488.2-1992”, 10.35. Values returned by this query range from 0 through 255.

***STB?**

The *STB?, read status byte query, is defined in “IEEE Std 488.2-1992”, 10.36. Values returned by this query range from 0 through 255.

***WAI**

The *WAI, wait-to-continue command, is defined in “IEEE Std 488.2-1992”, 10.39. The *WAI command prevents the test set from executing any further commands or queries until all pending operation flags are false. The *WAI common command is not recommended.

Syntax Equivalents

To find a syntax equivalent for a field on the Test Set's display.

1. Find the field name on the Test Set's display.

2. Look up the name in the alphabetical listing.

3. Turn to the page indicated.

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