

**HP 8960 Series 10 E5515A Wireless Communications Test Set
HP E1960A GSM Mobile Test Application**

HP-IB Command Syntax

<http://www.hp.com/hp8960support/>

Test Applicatin Revision A.01

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Revision C



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Hewlett-Packard Company
Learning Products Department
24001 E. Mission
Liberty Lake, WA 99019-9599
U.S.A.

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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

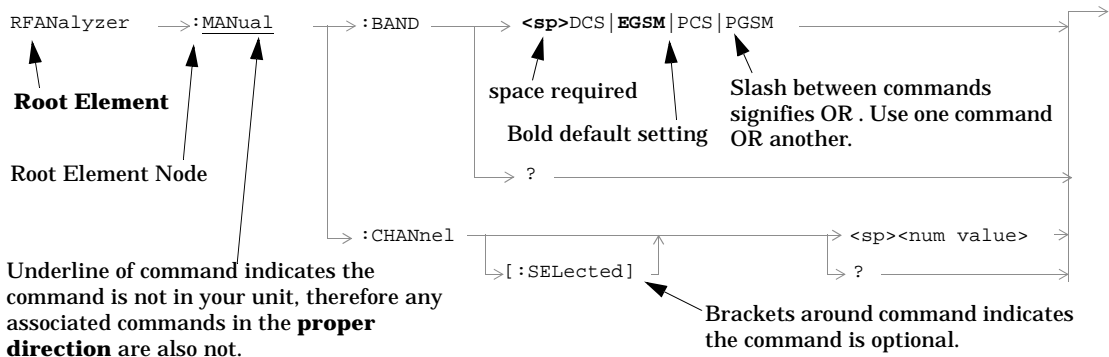
If you do not specify units-of-measure in your code the following table indicates the default units-of-measure that will be assumed.

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

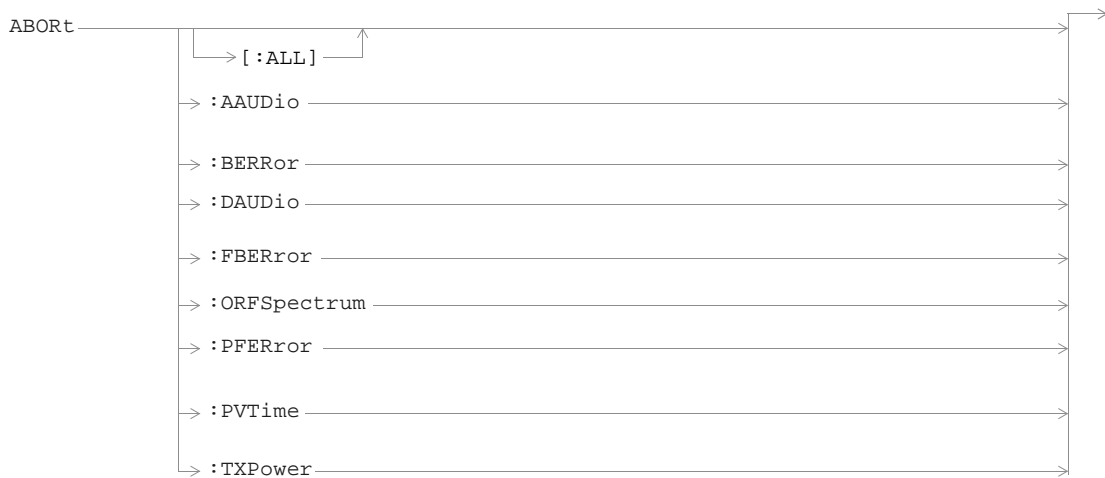
Diagram Conventions

Use the following diagram to see the conventions used in the syntax diagrams.

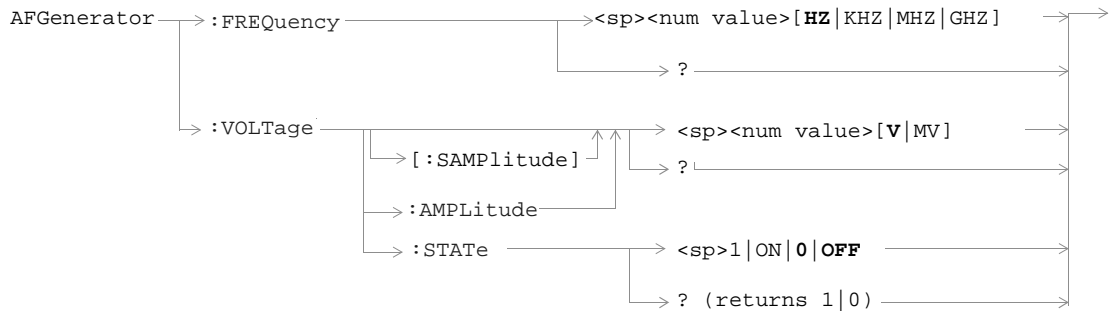
Statement elements are connected by lines. Each line can be followed in only one direction, as indicated by the arrow at the end of the line. Any combination of statement elements that can be generated by starting at the **Root Element** and following the line the **proper direction** is syntactically 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.



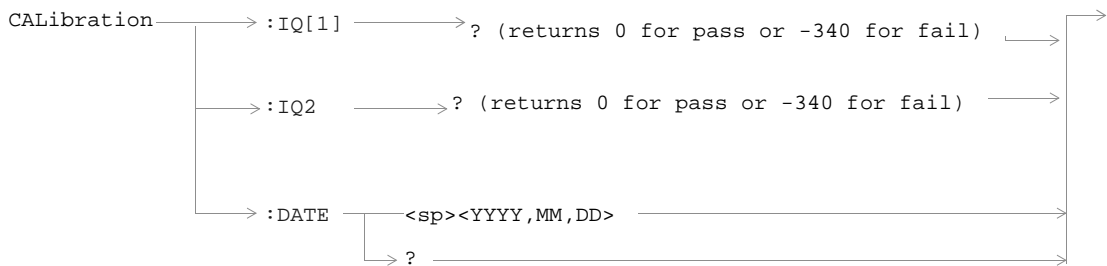
ABORt



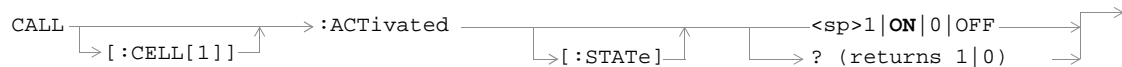
AFGenerator



CALibration

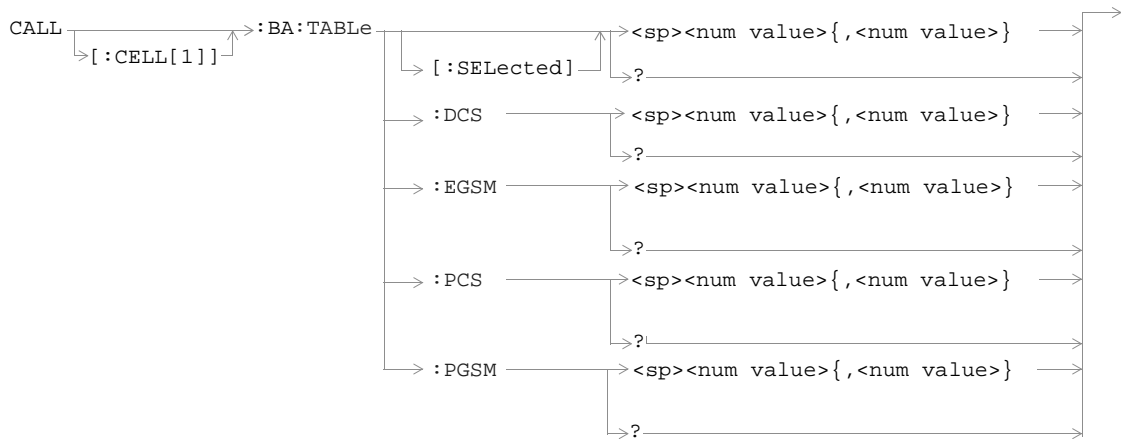


CALL:ACTivated

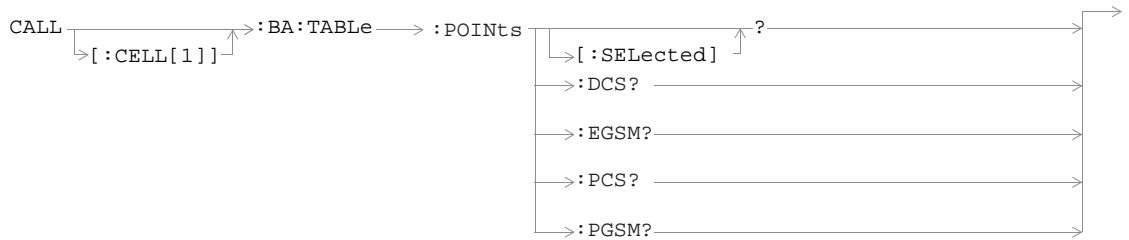


CALL:BA

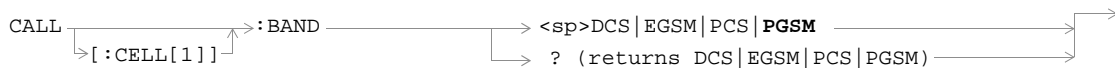
CALL[:CELL]:BA:TABLE



CALL[:CELL]:BA:TABLE:POINTs



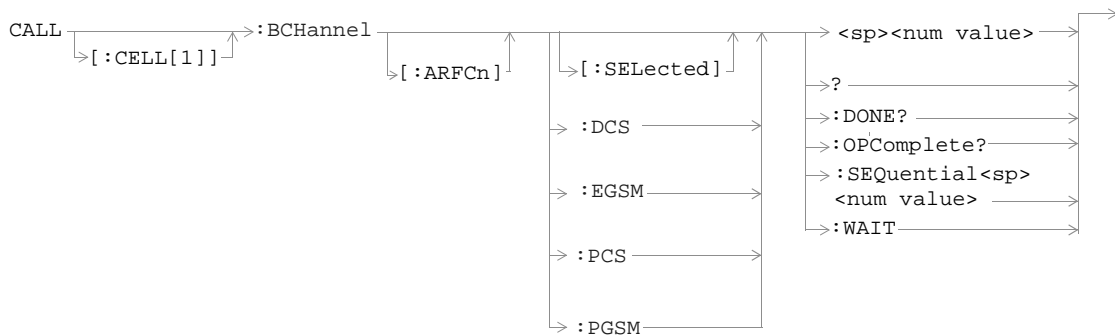
CALL:BAND



CALL:BCCode



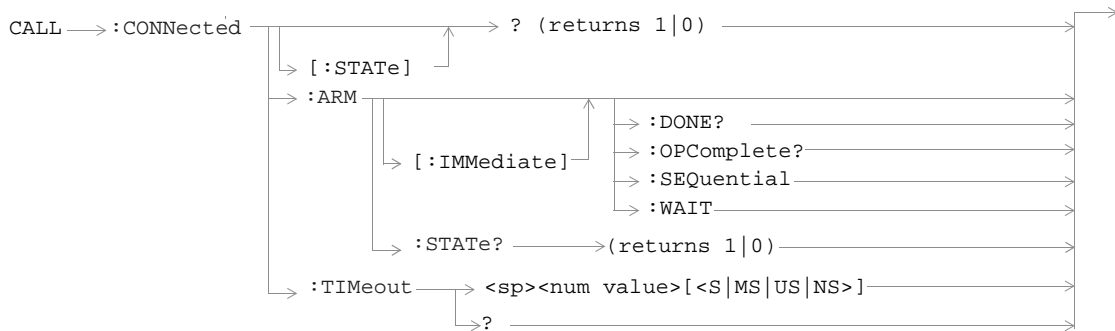
CALL:BCHannel



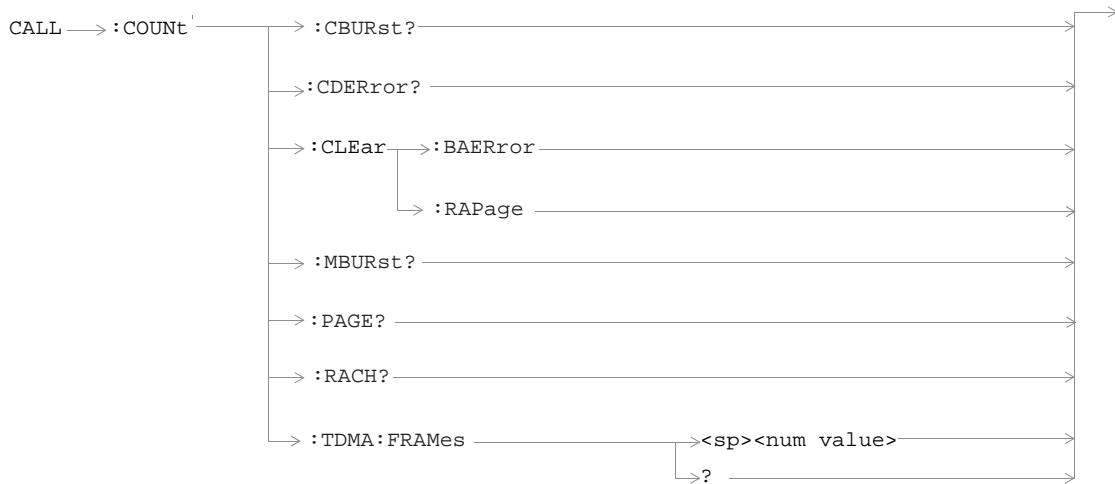
CALL:BURSt



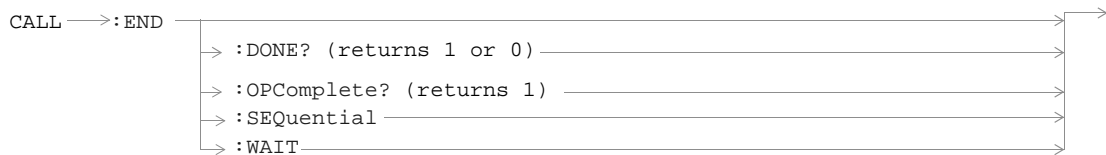
CALL:CONNECTed



CALL:COUNT



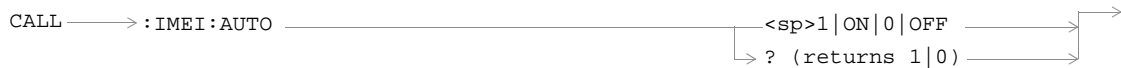
CALL:END



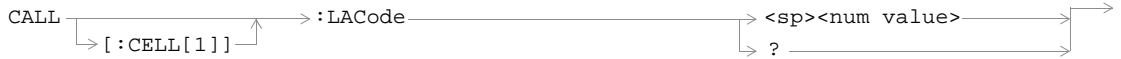
CALL:FUNction



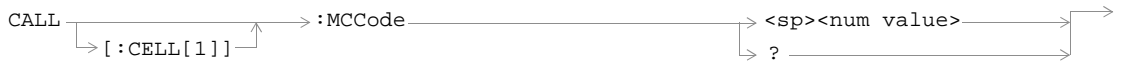
CALL:IMEI



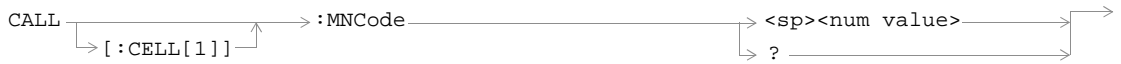
CALL:LACode



CALL:MCCode

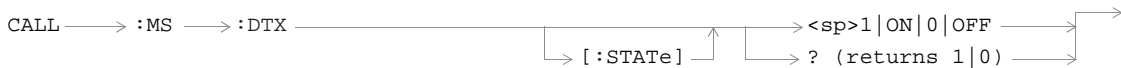


CALL:MNCode

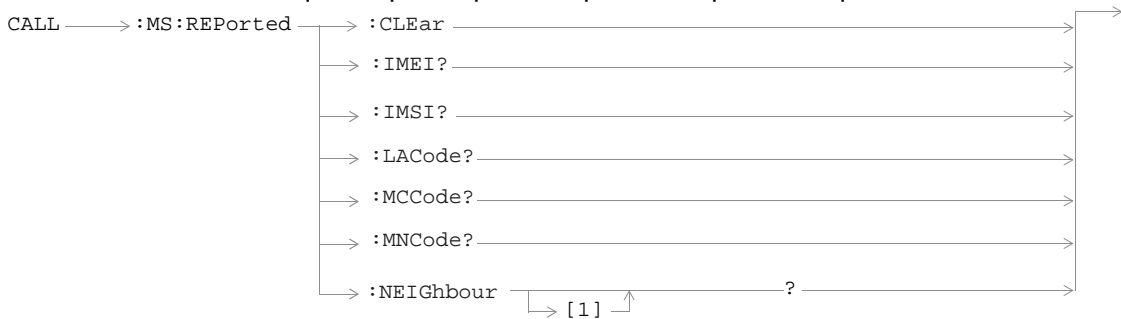


CALL:MS

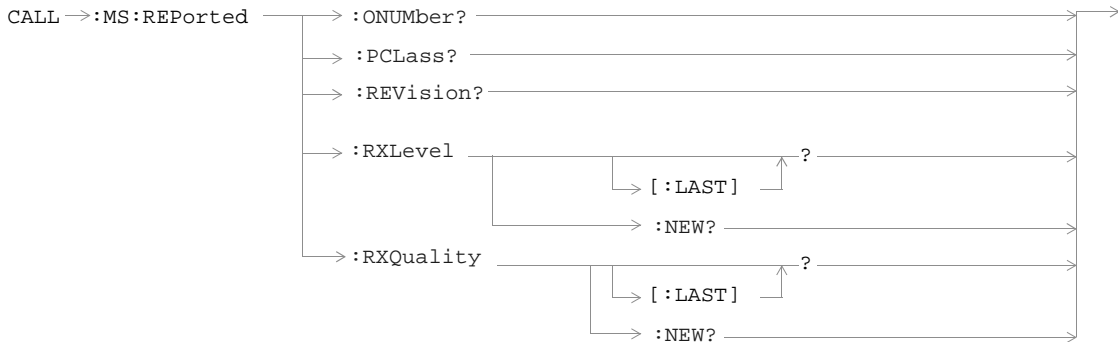
CALL:MS:DTX



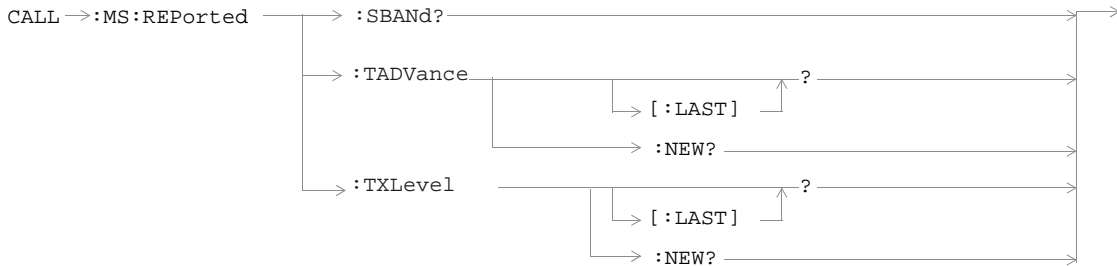
CALL:MS:REPorted<:CLEar | :IMEI? | :IMSI? | :LACode | :MCCCode? | :MNCCode? | :NEIGHbour>



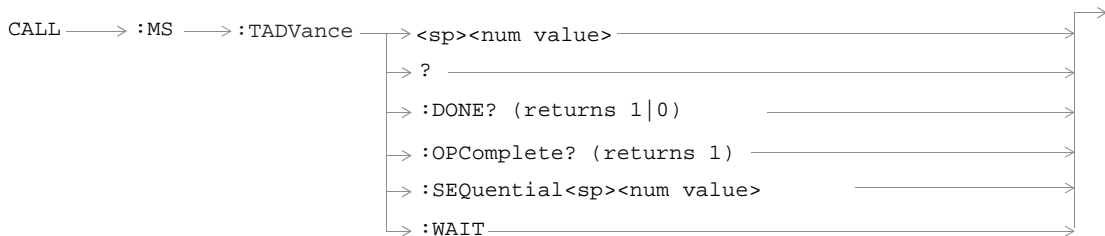
CALL:MS:REPorted<:ONUMber? | :PCLass? | :REVisiOn? | :RXLevel | :RXQuality>



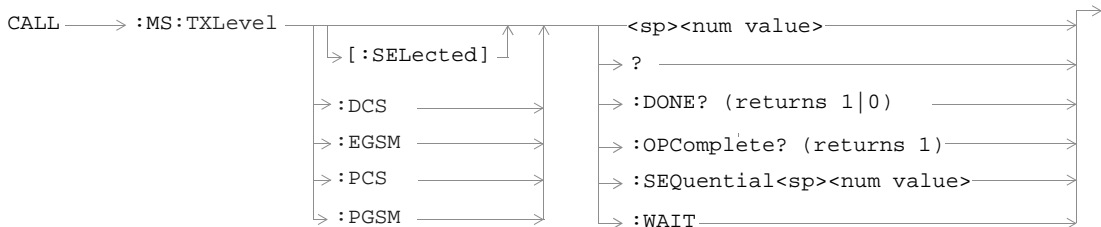
CALL:MS:REPorted<:SBANd? | :TADVance | :TXLevel>



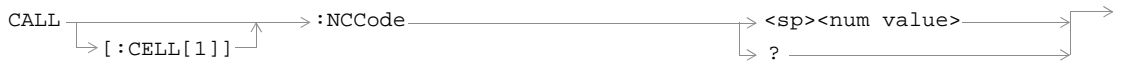
CALL:MS:TADVance



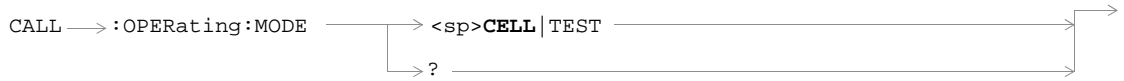
CALL:MS:TXLevel



CALL:NCCode



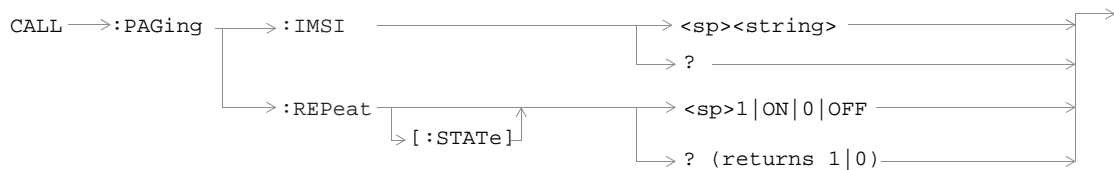
CALL:OPERating



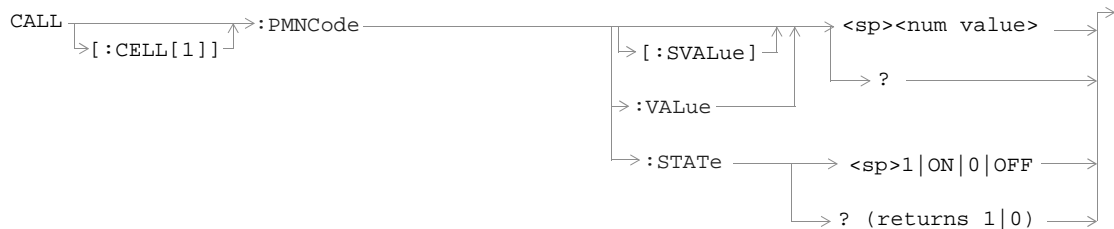
CALL:ORIGinate



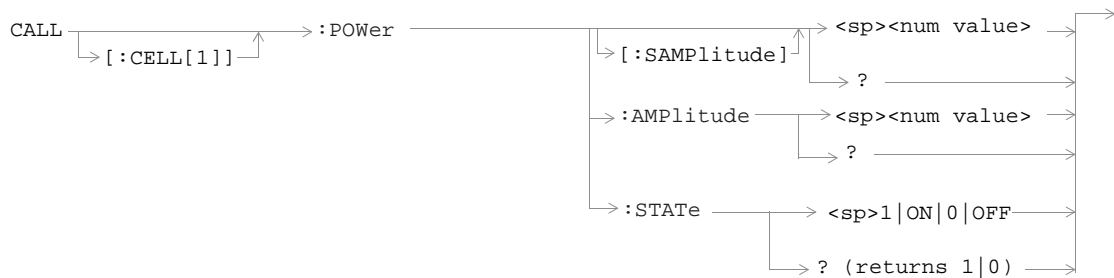
CALL:PAGing



CALL:PMNCode

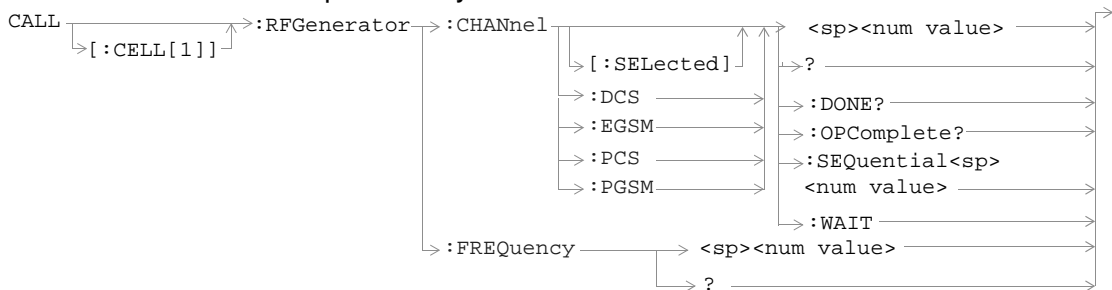


CALL:POWer

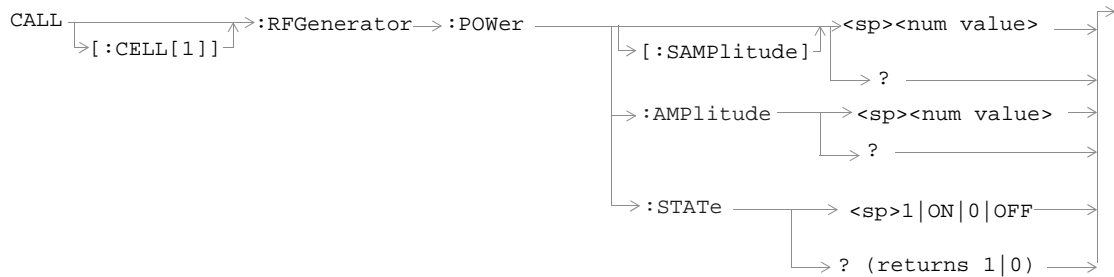


CALL:RFGenerator

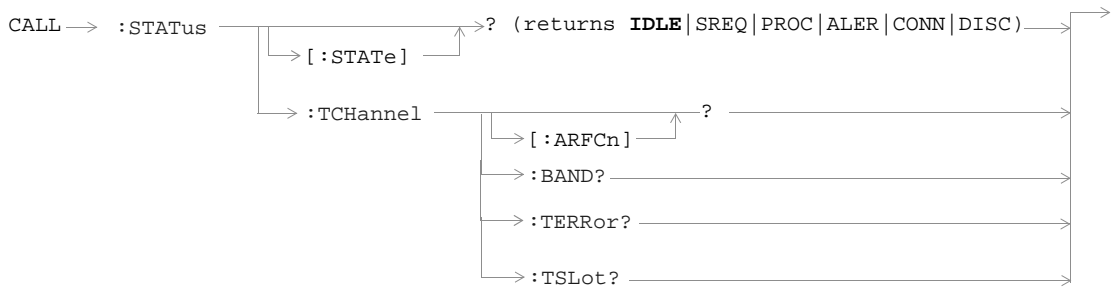
CALL:RFGenerator<:CHANnel | :FREQUency>



CALL:RFGenerator:POWer

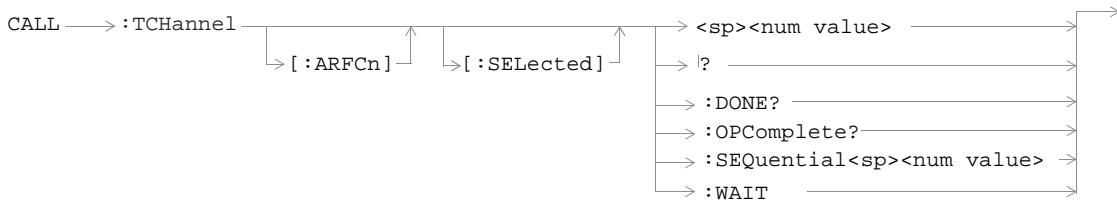


CALL:STaTus

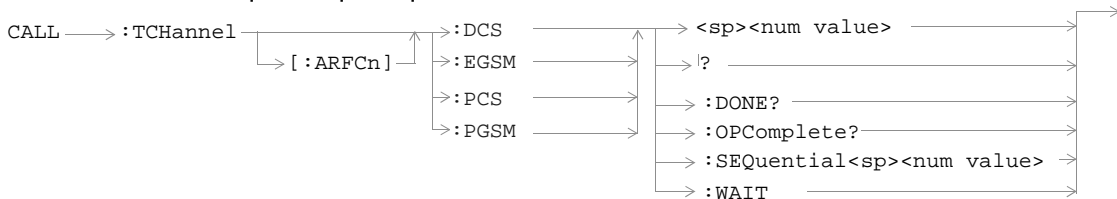


CALL:TCHannel

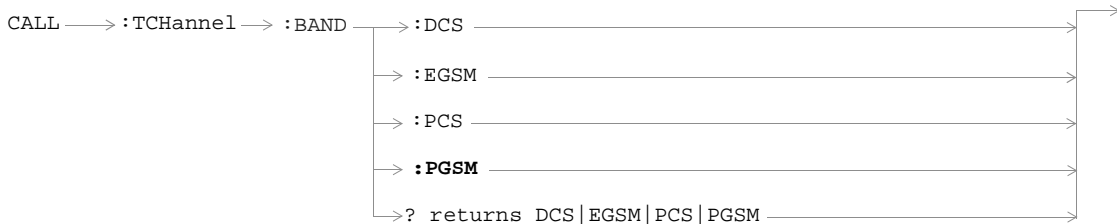
CALL:TCHannel



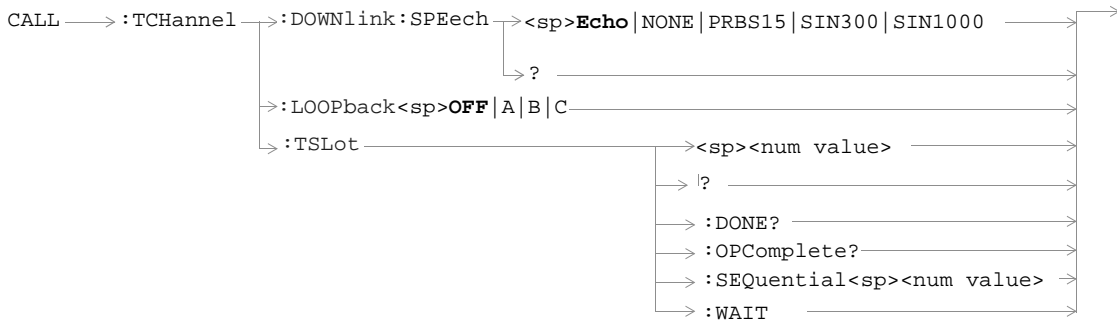
CALL:TCHannel<:DCS | :EGSM | :PCS | :PGSM>



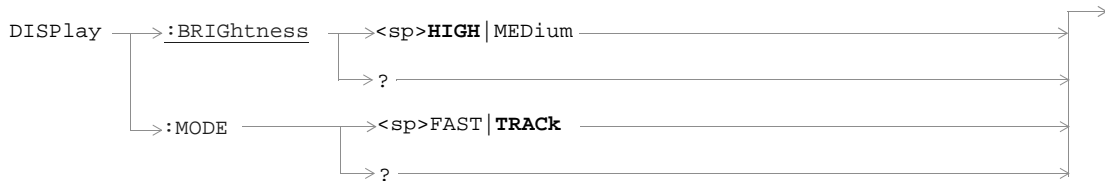
CALL:TCHannel:BAND



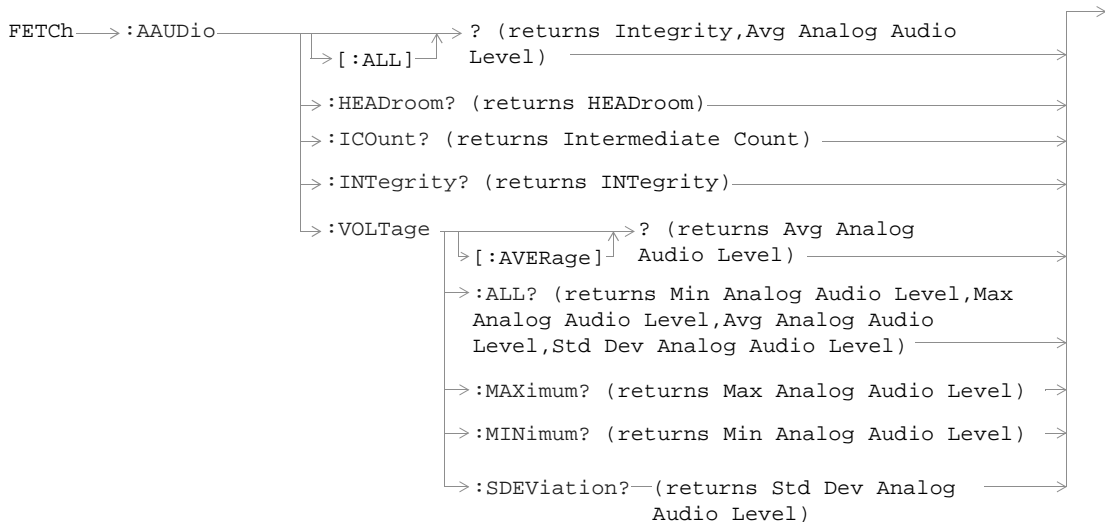
CALL:TCHannel<:DOWNlink | :LOOPback | :TSLot>



DISPlay

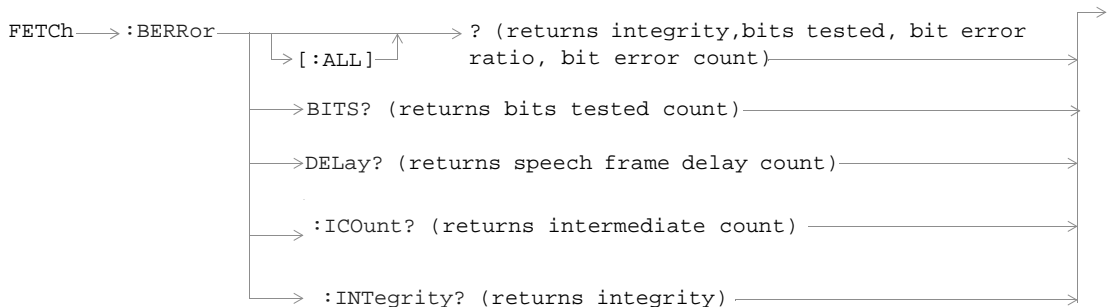


FETCh:AAudio

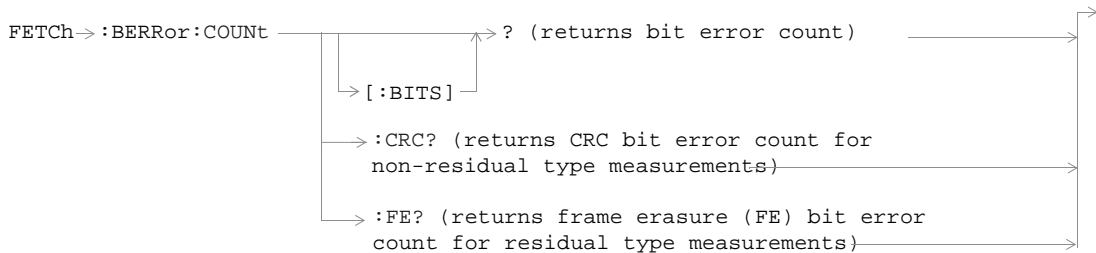


FETCh:BERRor

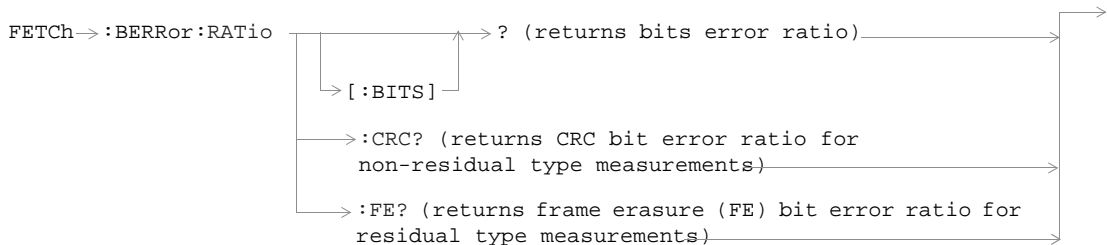
FETCh:BERRor<:BITS | :DELay | :COunt | :INTegrity>?



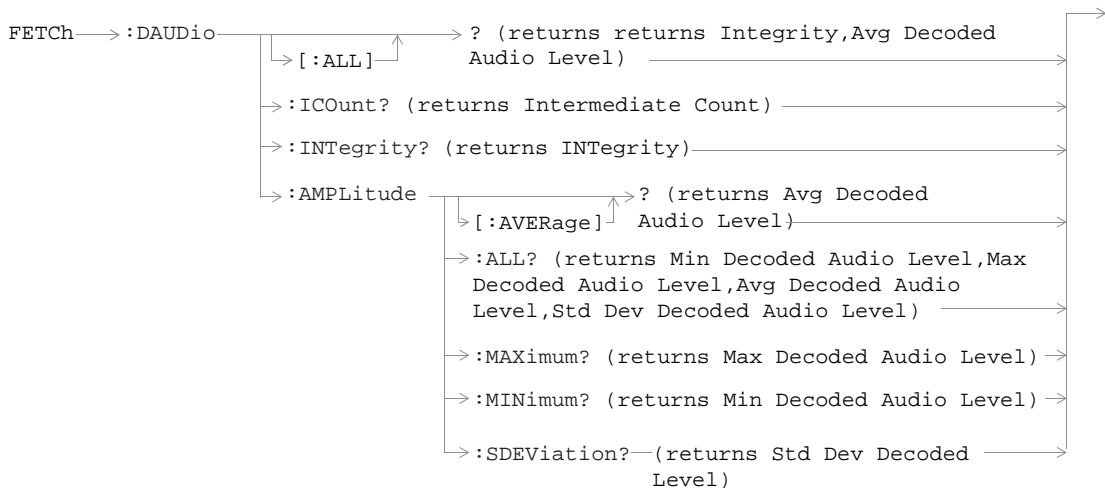
FETCh:BERRor:COUNT



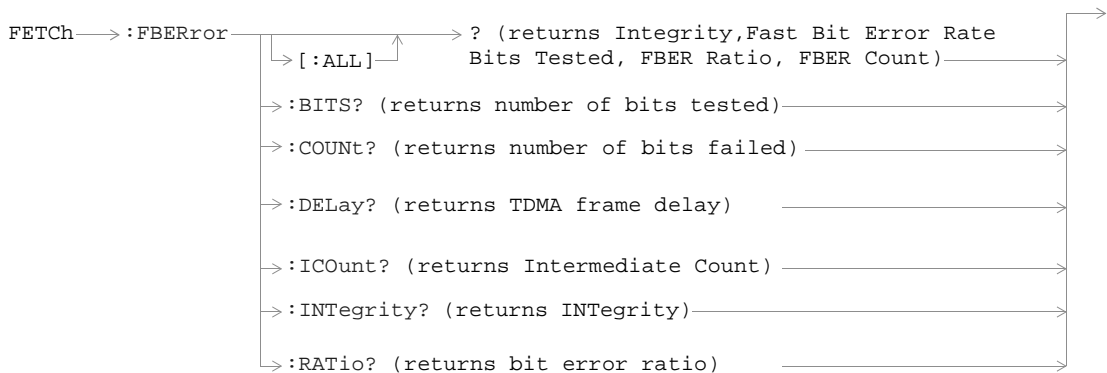
FETCH:BERRor:RATio



FETCh:DAUDIO

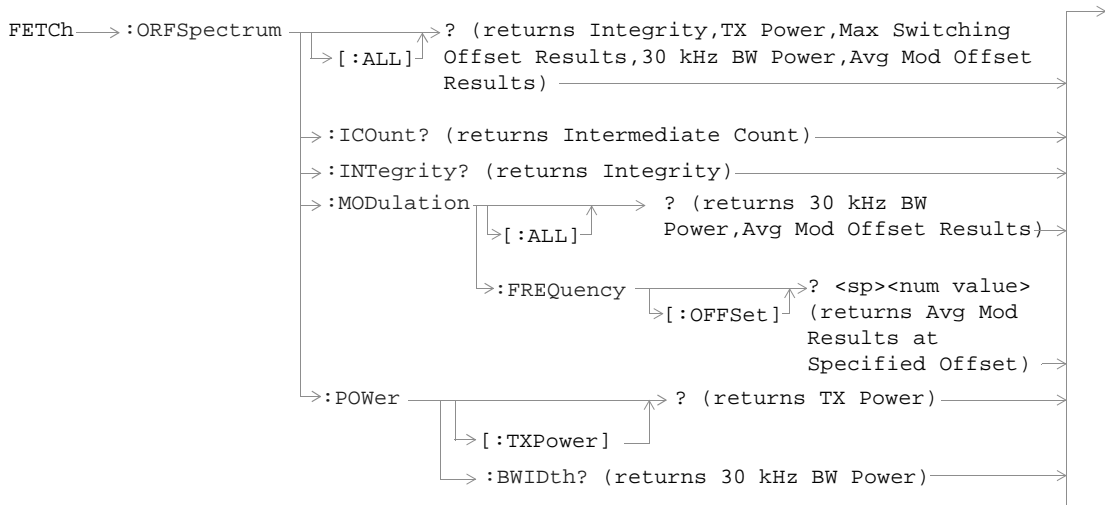


FETCh:FBERror

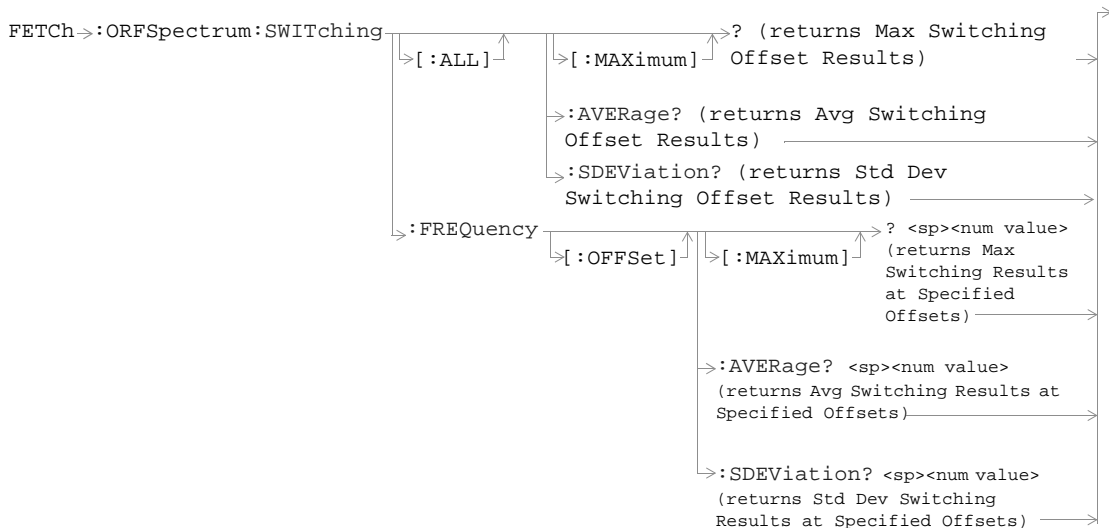


FETCh:ORFSpectrum

FETCh:ORFSpectrum<:ICount | :INTEgrity | :MODulation | :POWER>?

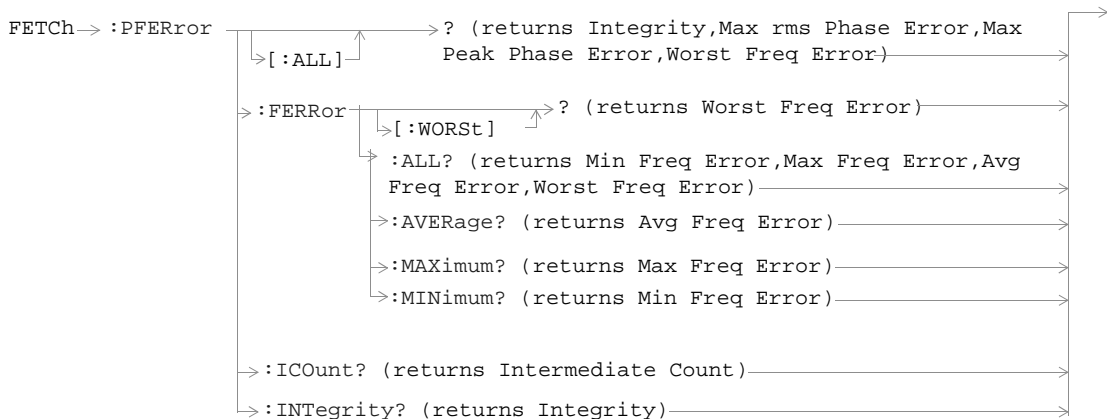


FETCH:ORFSpectrum:SWITching

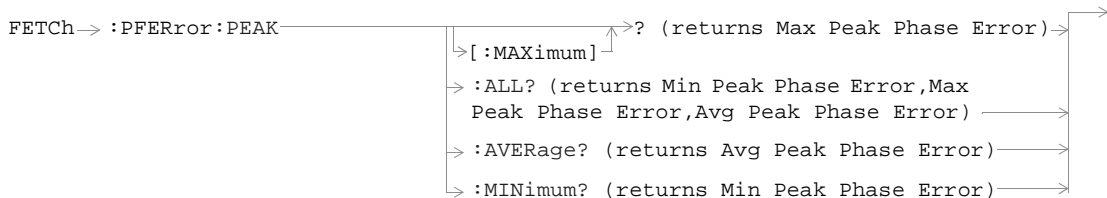


FETCh:PFERror

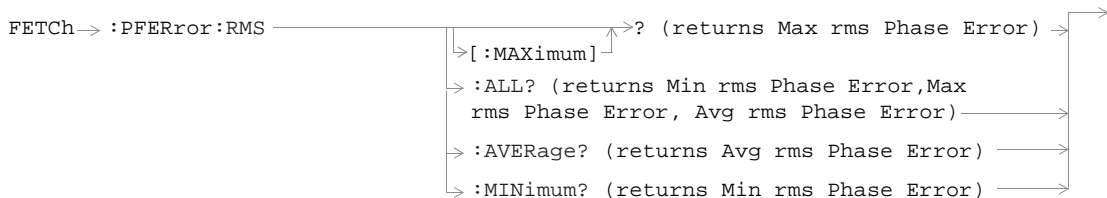
FETCh:PFERror<:FERRor | :ICount | :INTegrity>?



FETCh:PFERror:PEAK

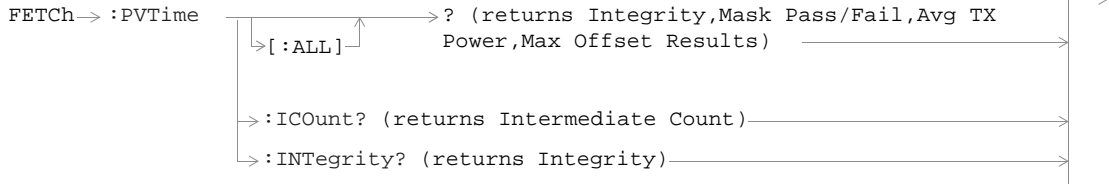


FETCh:PFERror:RMS

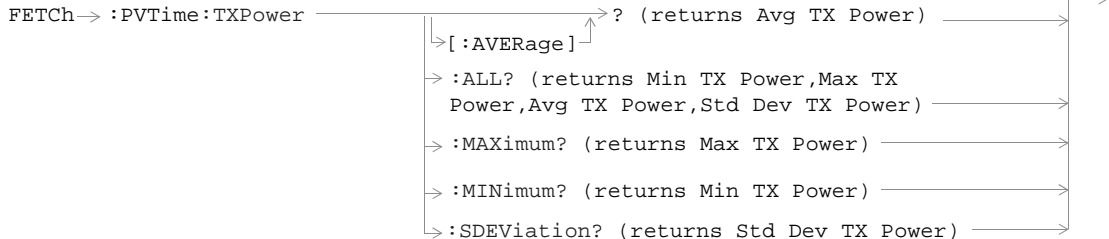


FETCh:PVTime

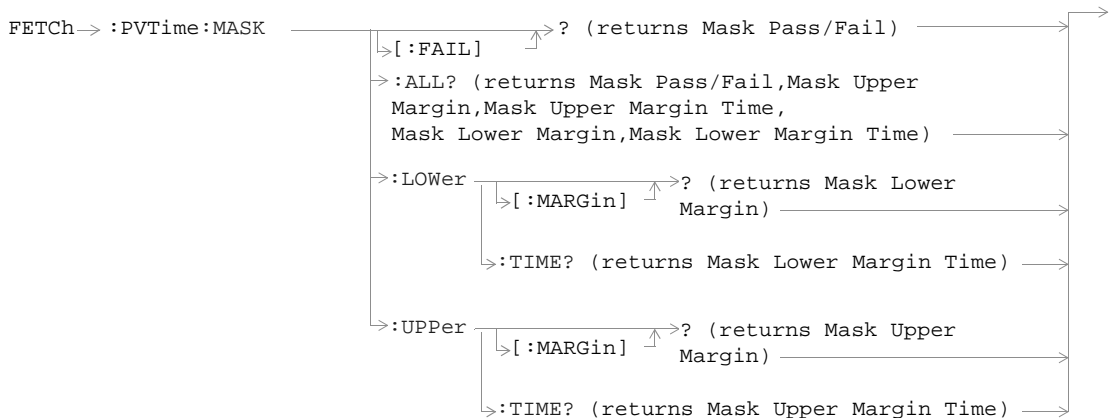
FETCh:PVTime<:ICount | :INTEgrity>?



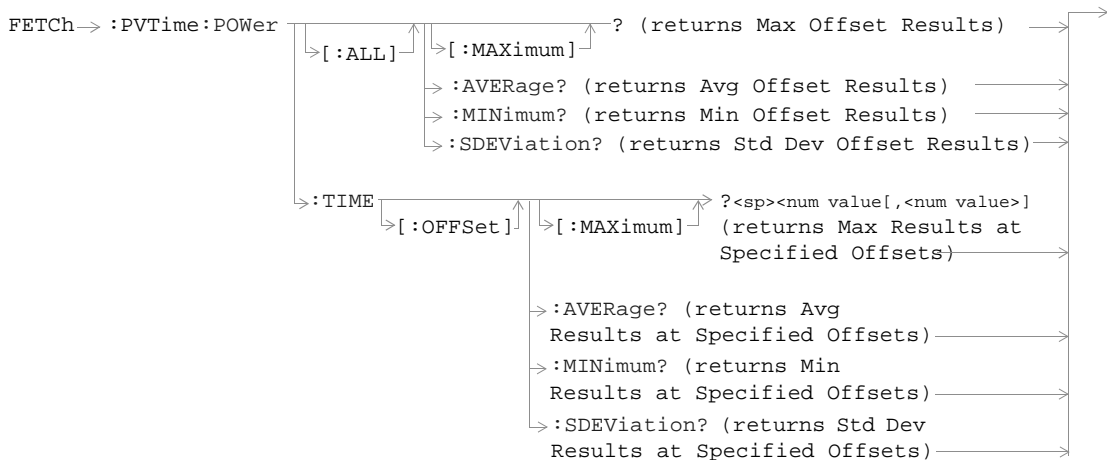
FETCh:PVTime:TXPower



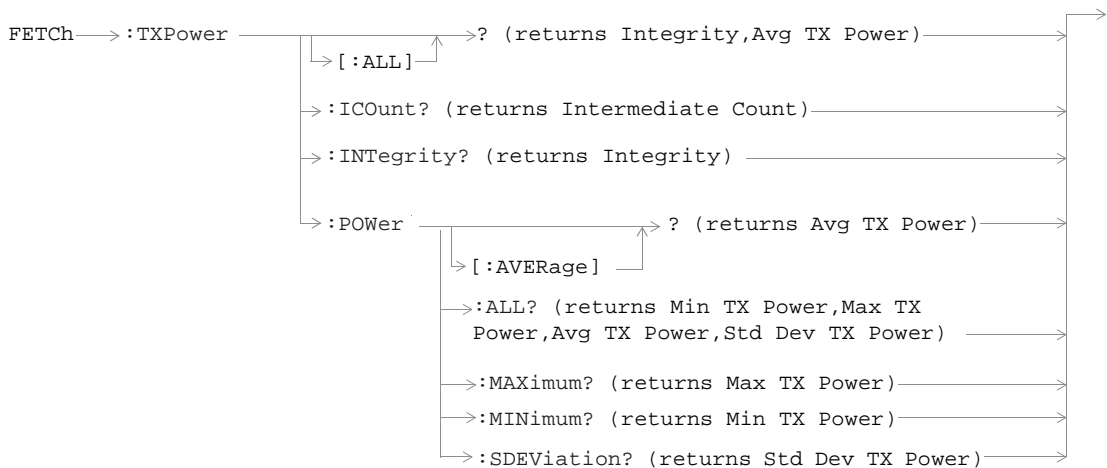
FETCh:PVTime:MASK



FETCh:PVTime:POWer

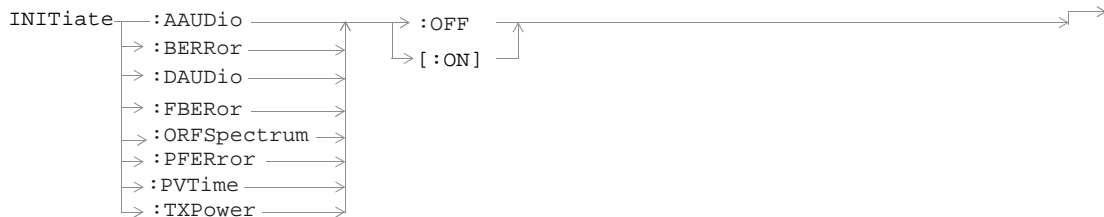


FETCh:TXPower

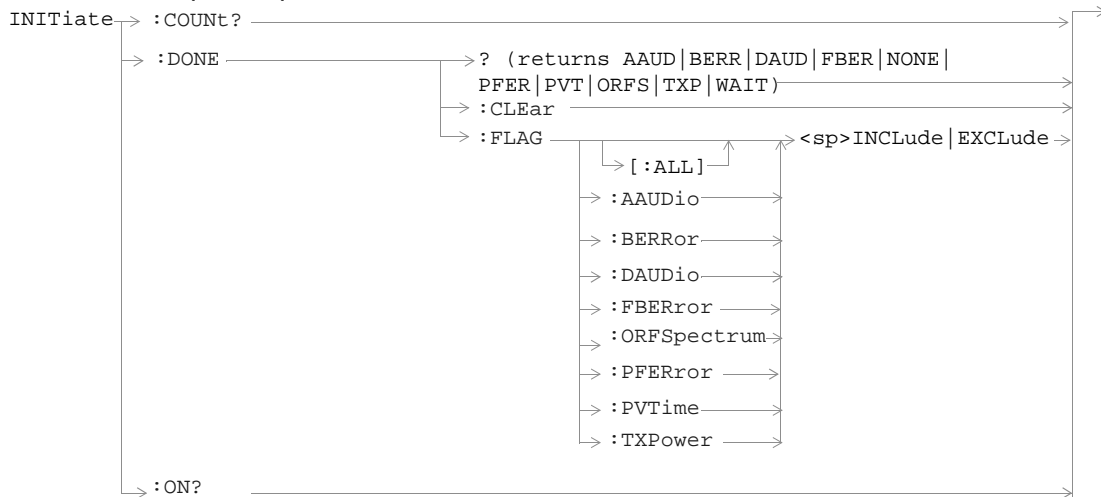


INITiate

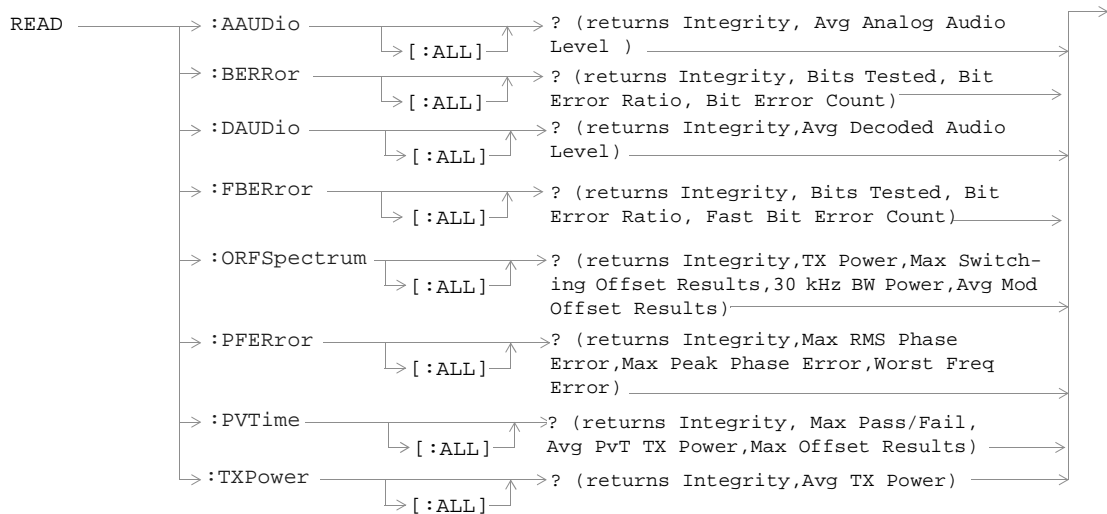
INITiate:<measurement mnemonic>



INITiate:<COUNT? | :DONE | :ON?>



READ

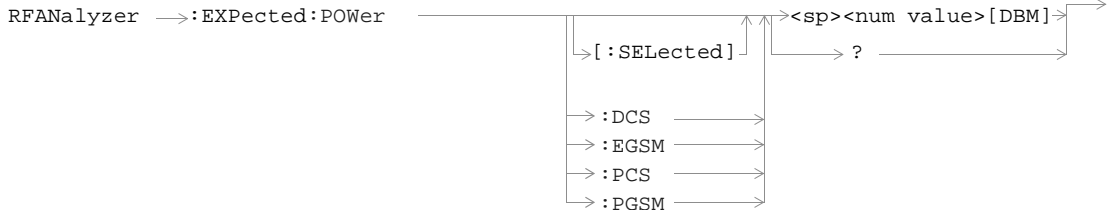


RFAnalyzer

RFAnalyzer:CONTROL

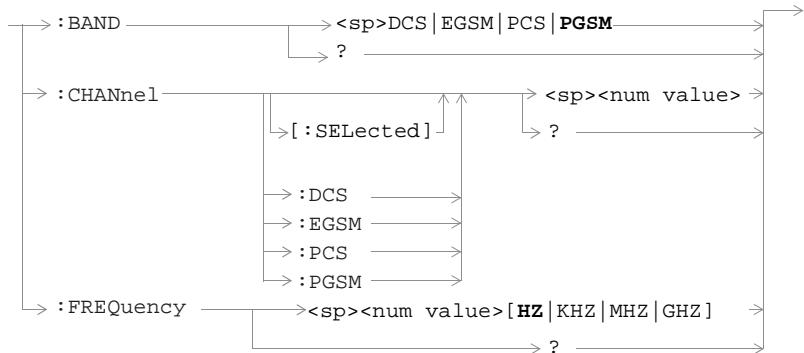


RFAnalyzer:EXPECTed



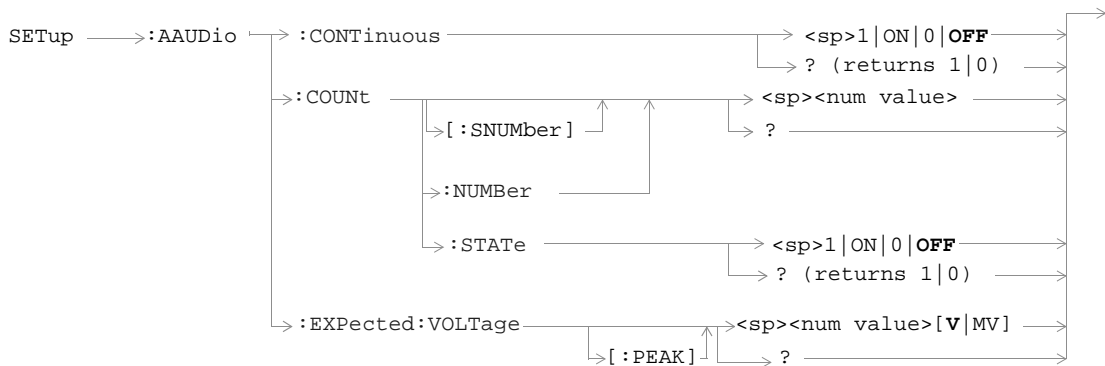
RFAnalyzer:MANual

RFAnalyzer → :MANual

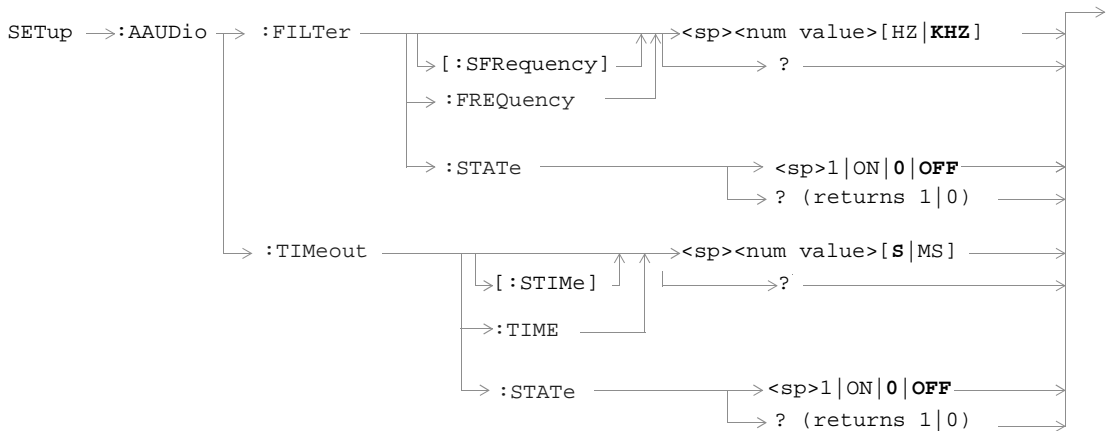


SETup:AAUDio

SETup:AAUDio<:CONTInuous | :COUNT | :EXPEcted>

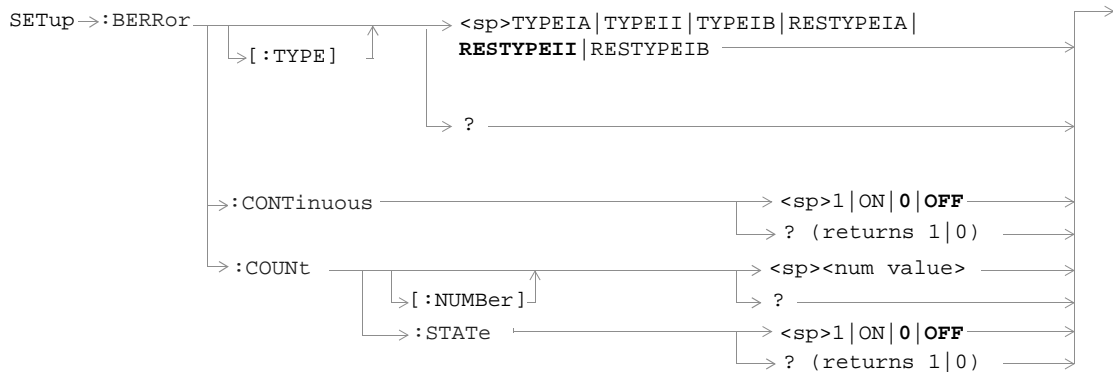


SETup:AAUDio<:FILTer | :TIMEout>

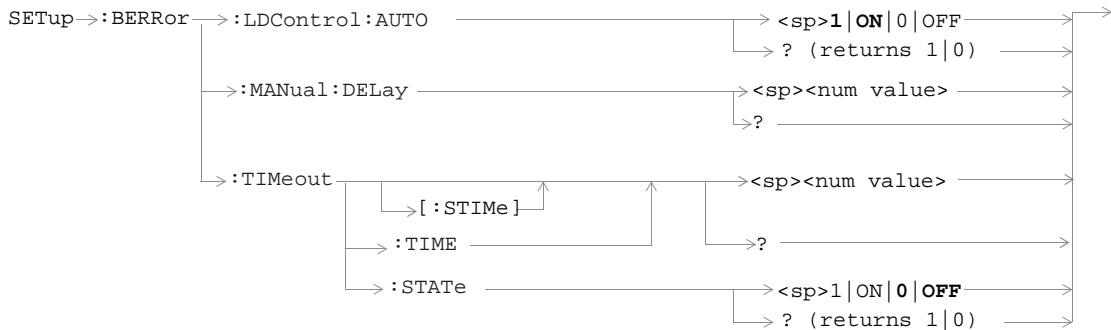


SETup:BERRor

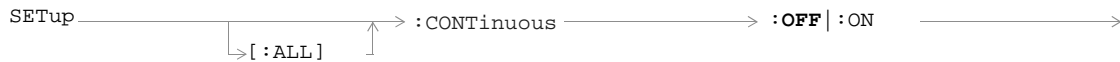
SETup:BERRor<[:TYPE] | :CONTInuous | :COUNt>



SETup:BERRor<:LDControl | :MANual | :TIMEout>

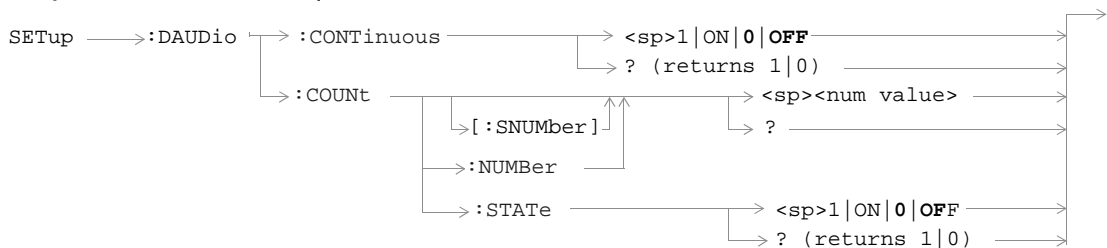


SETup:CONTInuous

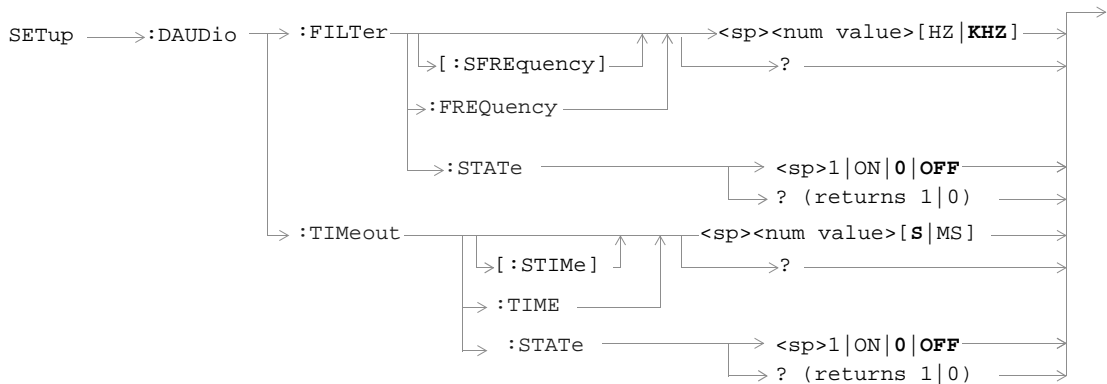


SETup:DAUDio

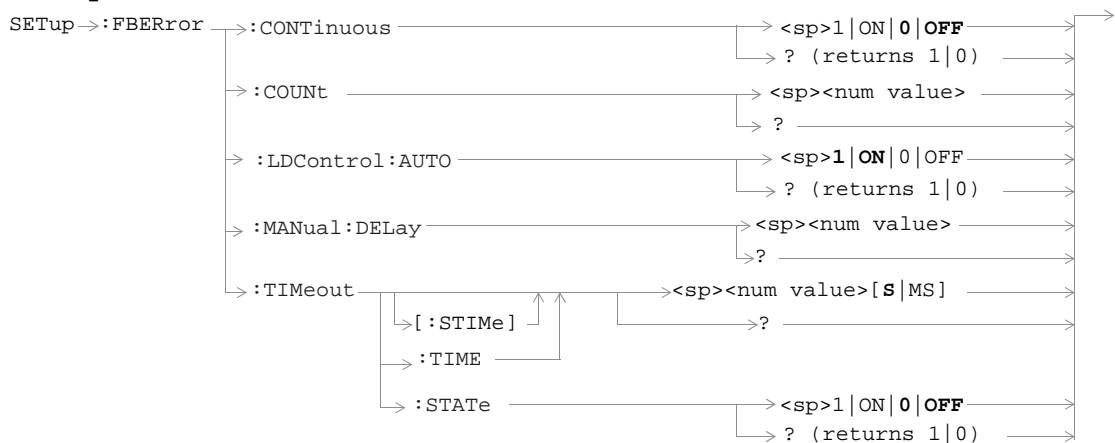
SETup:DAUDio<:CONTInuous | :COUNT>



SETup:DAUDio<:FILTer | :TIMEout>

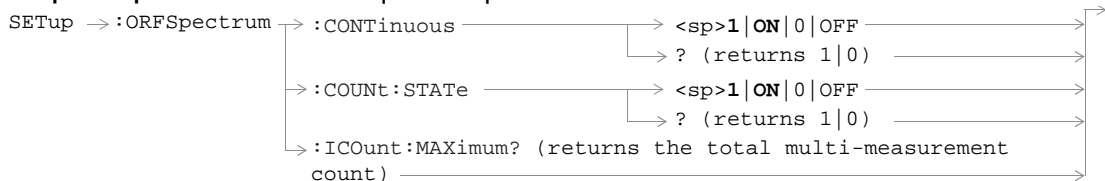


SETup:FBERror

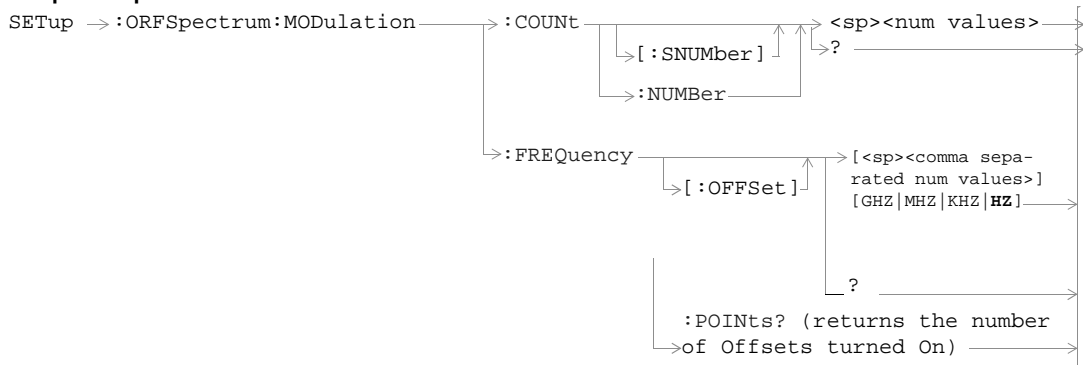


SETup:ORFSpectrum

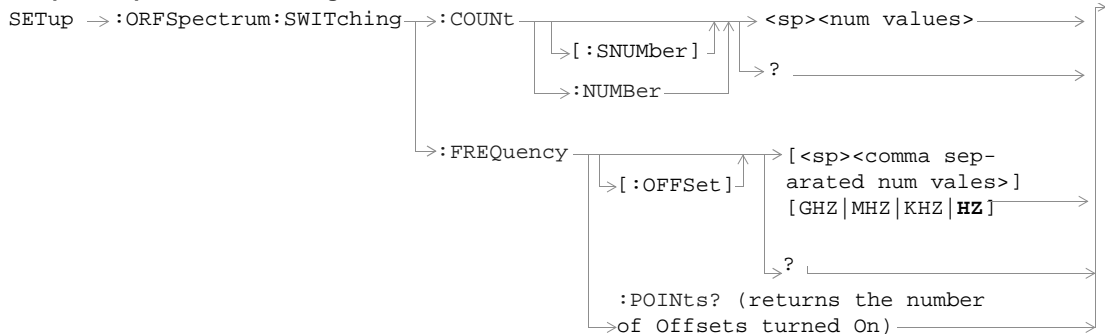
SETup:ORFSpectrum<:CONTInuous | :COUNT | :ICount>



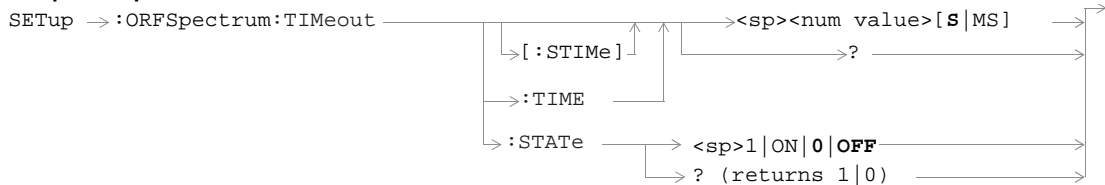
SETup:ORFSpectrum:MODulation



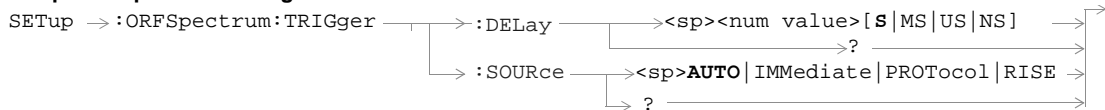
SETup:ORFSpectrum:SWITching



SETup:ORFSpectrum:TIMEout



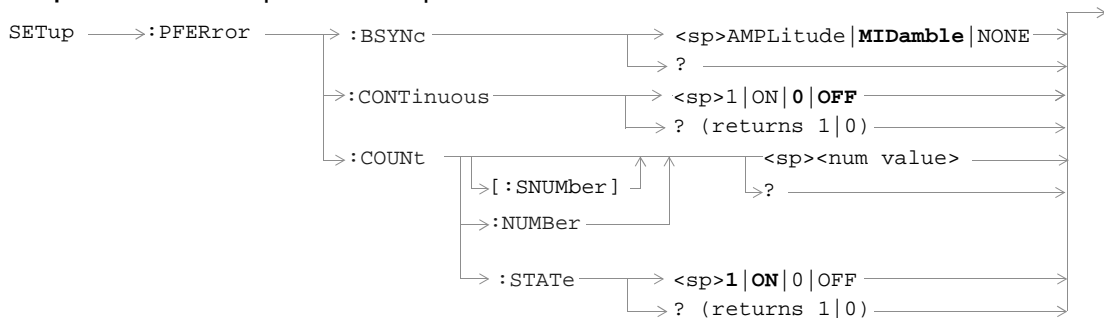
SETup:ORFSpectrum:TRIGger



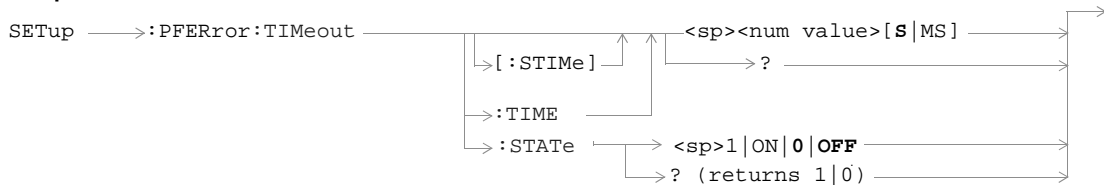
SETup:PFERror

Syntax Diagrams and Command Descriptions

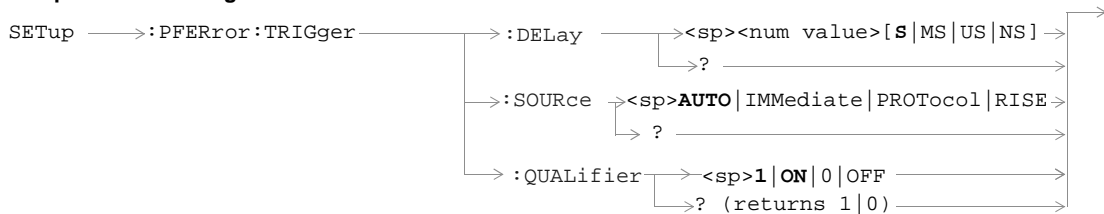
SETup:PFERror<:BSYNc | :CONTInuous | :COUNT>



SETup:PFERror:TIMEout

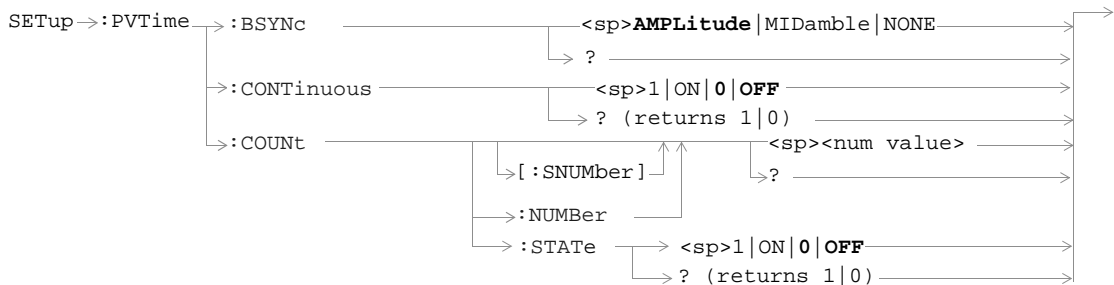


SETup:PFERror:TRIGger

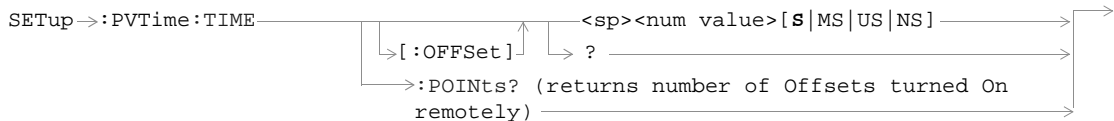


SETup:PVTime

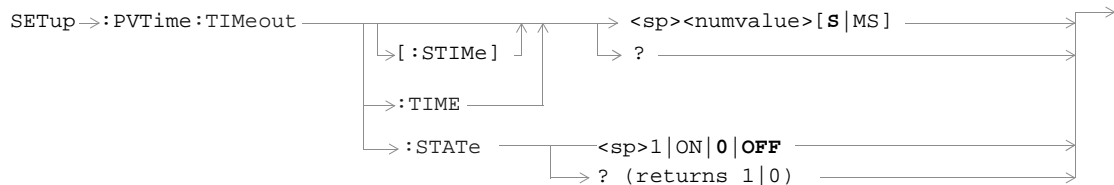
SETup:PVTime<:BSYNc | :CONTInuous | :COUNT>



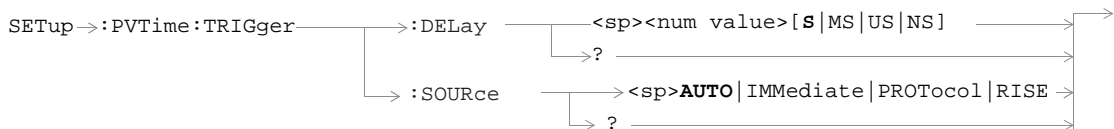
SETup:PVTime:TIME



SETup:PVTime:TIMEout

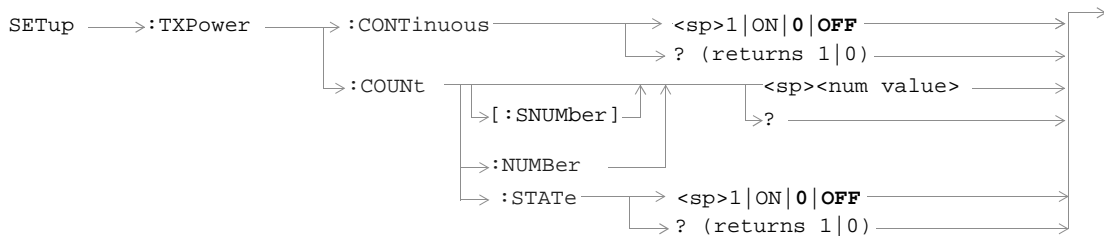


SETup:PVTime:TRIGger

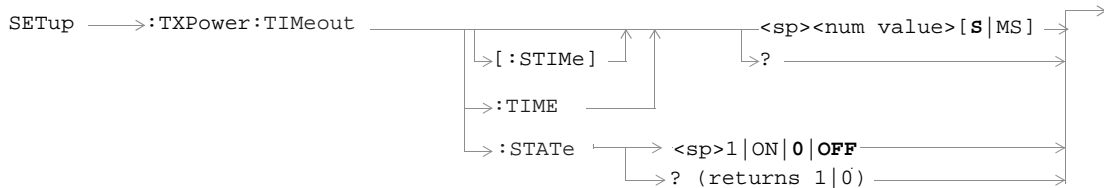


SETup:TXPower

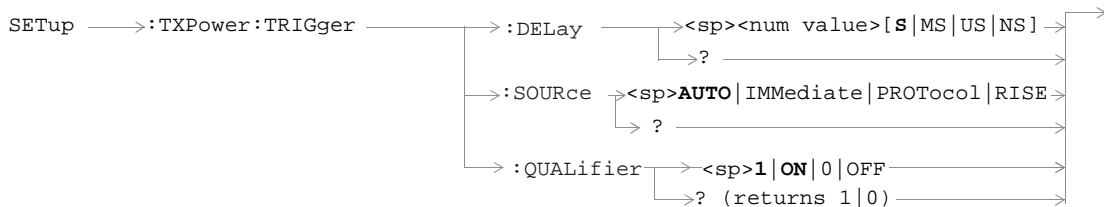
SETup:TXPower<:CONTInuous | :COUNT>



SETup:TXPower:TIMEout

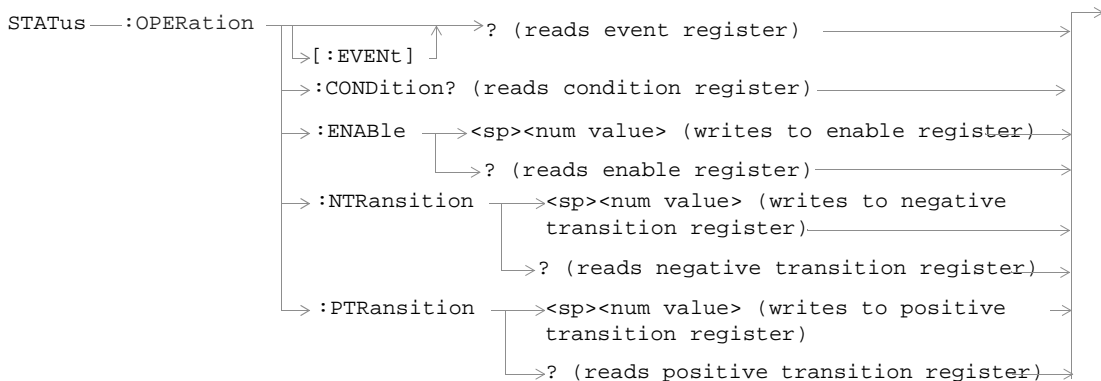


SETup:TXPower:TRIGger

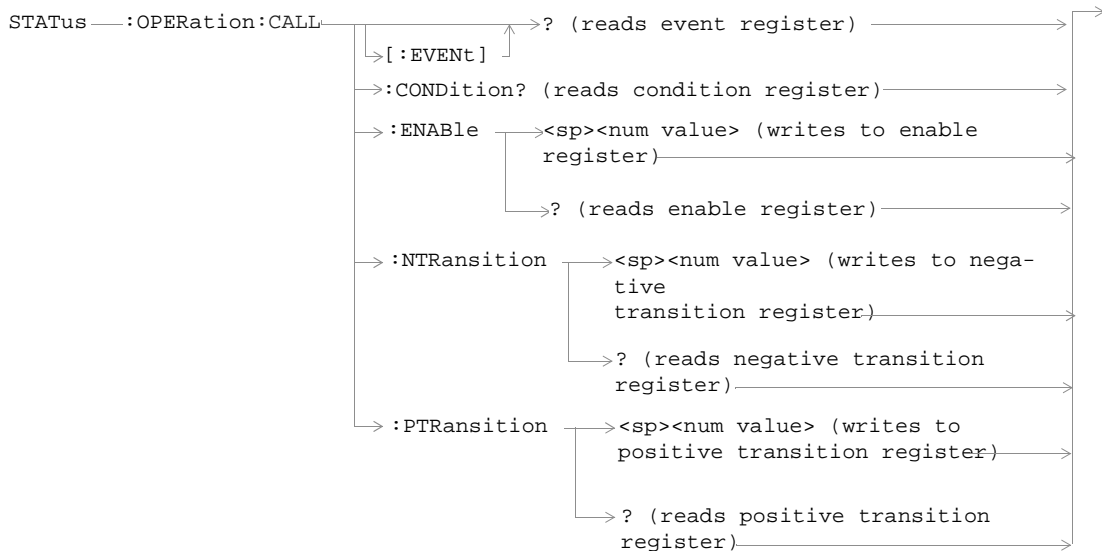


STATUS:OPERation

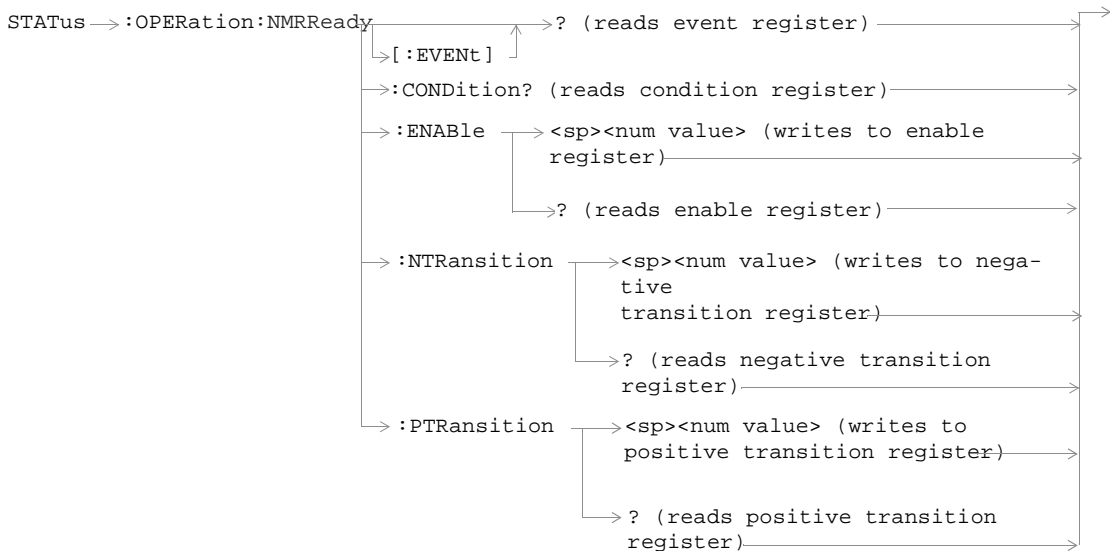
STATUS:OPERation



STATUS:OPERation:CALL



STATUS:OPERation:NMRReady

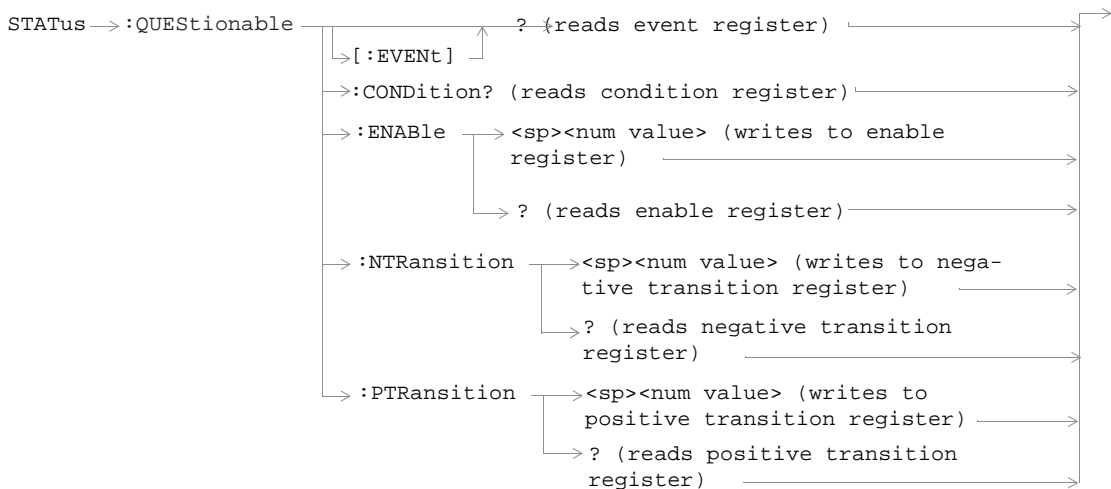


STATus:PRESet

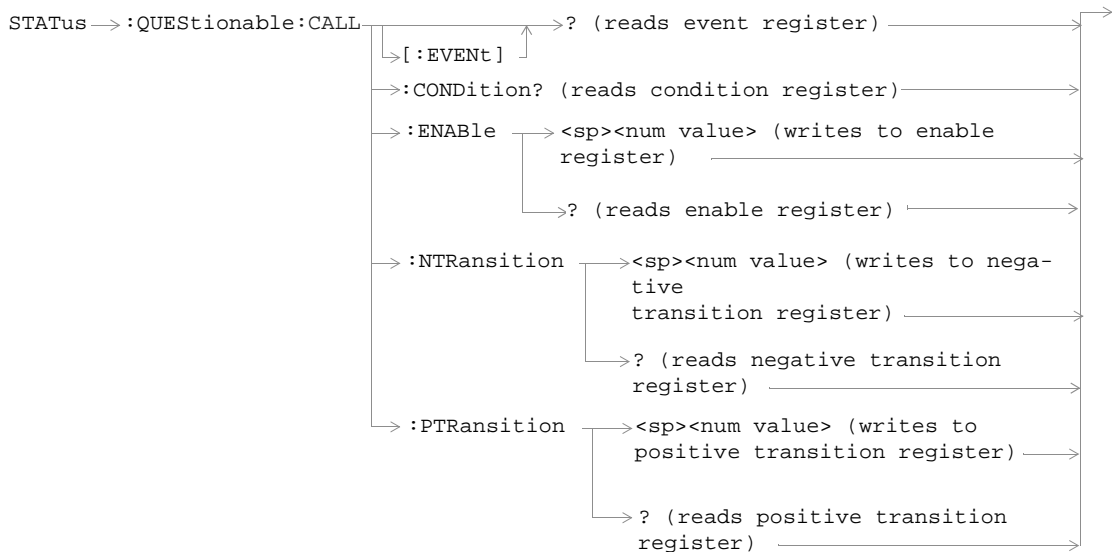
STATus → :PRESet 

STATUS:QUESTIONABLE

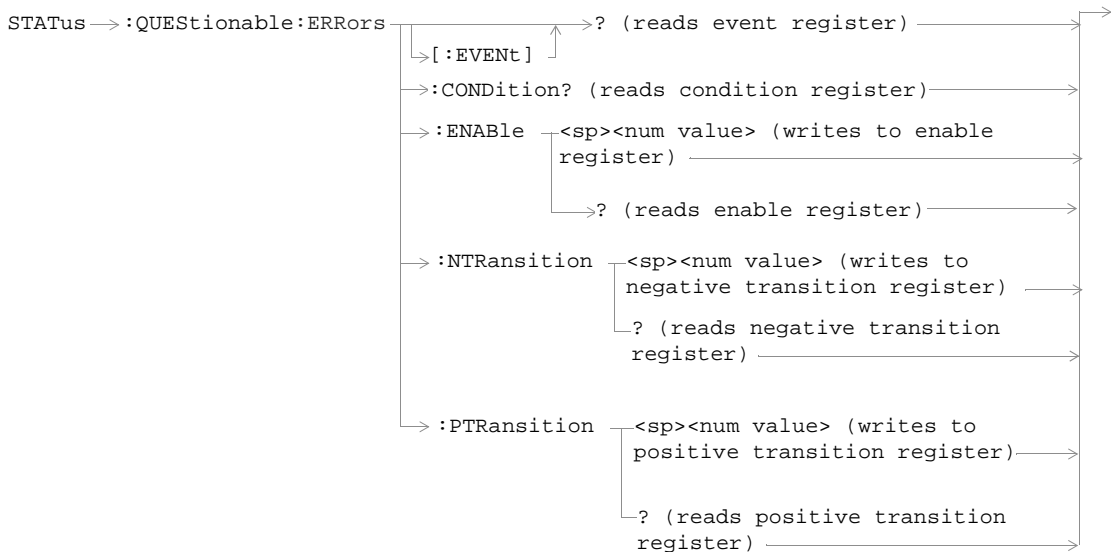
STATUS:QUESTIONABLE



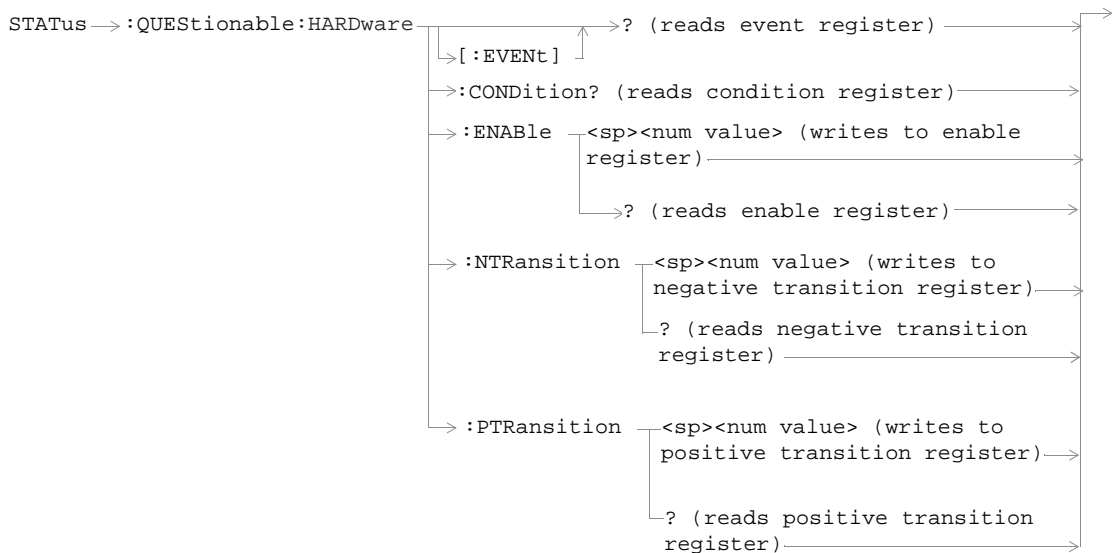
STATUS:QUESTIONABLE:CALL



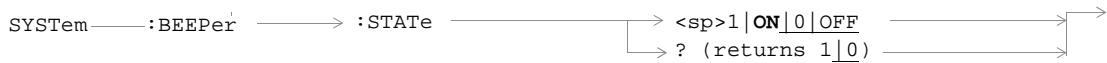
STATUS:QUESTIONABLE:ERRORS



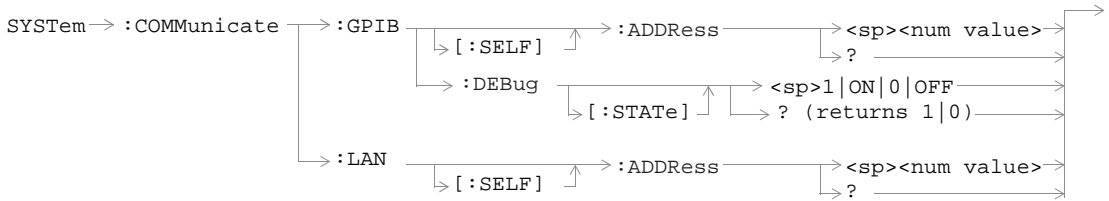
STATUS:QUESTIONABLE:HARDWARE



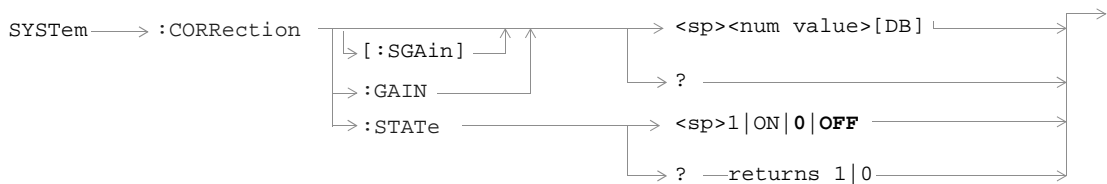
SYSTEM:BEEPer



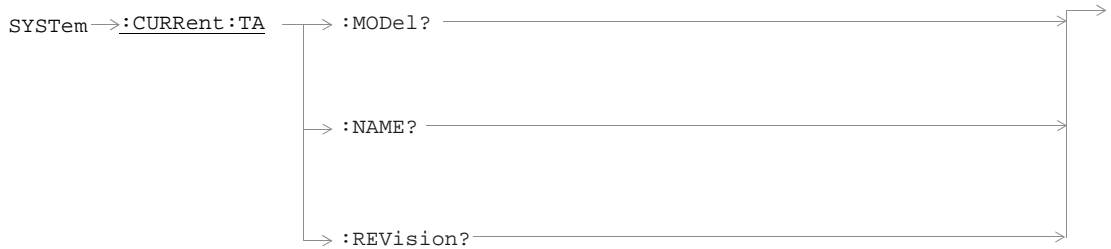
SYSTEM:COMMunicate



SYSTEM:CORRection



SYSTEM:CURRENT (future functionality)

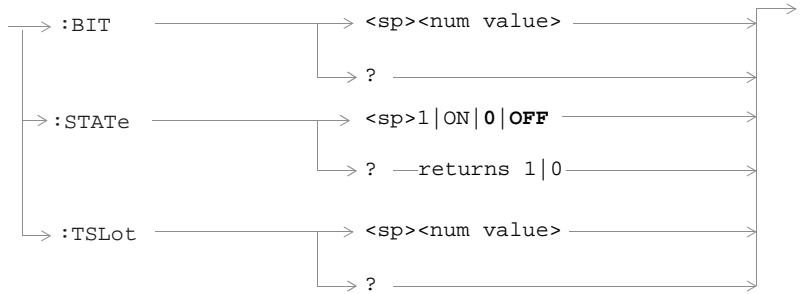


SYSTEM:ERRor

SYSTEM → :ERRor? →

SYSTEM:FTRigger

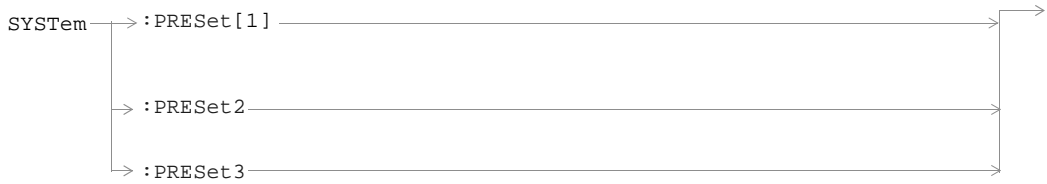
SYSTEM → :FTRigger



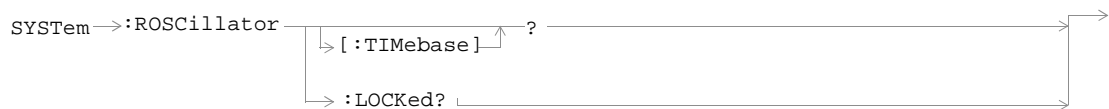
SYSTEM:MEASurement

SYSTEM → :MEASurement:RESet →

SYSTEM:PRESet



SYSTEM:ROSCillator



SYSTEM:SYNChronized



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***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. (See .)

*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 (future functionality)” on page 96.

***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.

***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. See .

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 HP-IB 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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