Agilent Technologies 8960 Series 10 E5515B Wireless Communications Test Set
Agilent Technologies E1960A GSM Mobile Test Application
Agilent Technologies E1964A GPRS Mobile Test Application

GPIB Command Syntax

GSM Test Application Revision A.05

GPRS Test Application Revision A.00

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

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Contents

Contents

Contents

Contents

Diagram Conventions

Description

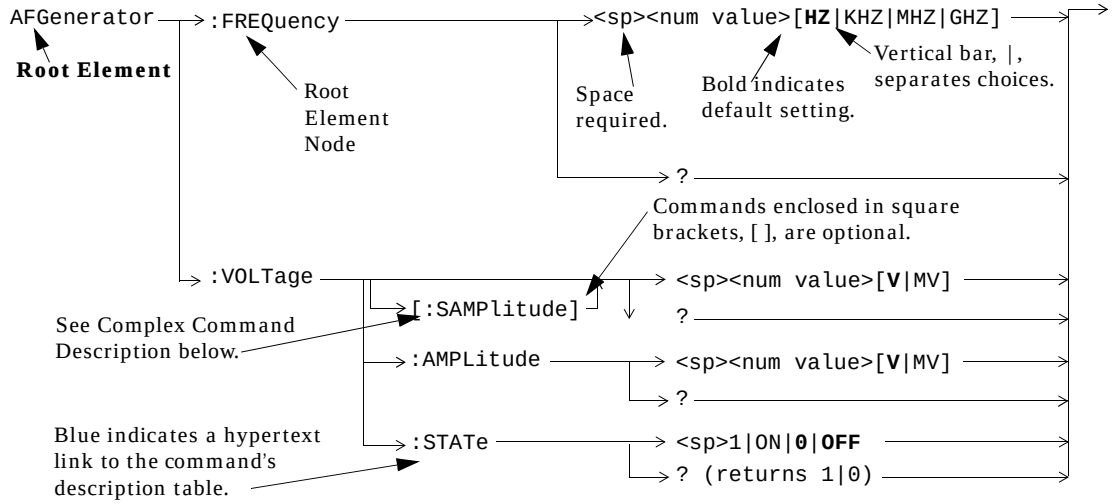


Diagram Description

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 **directionof the arrow** 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

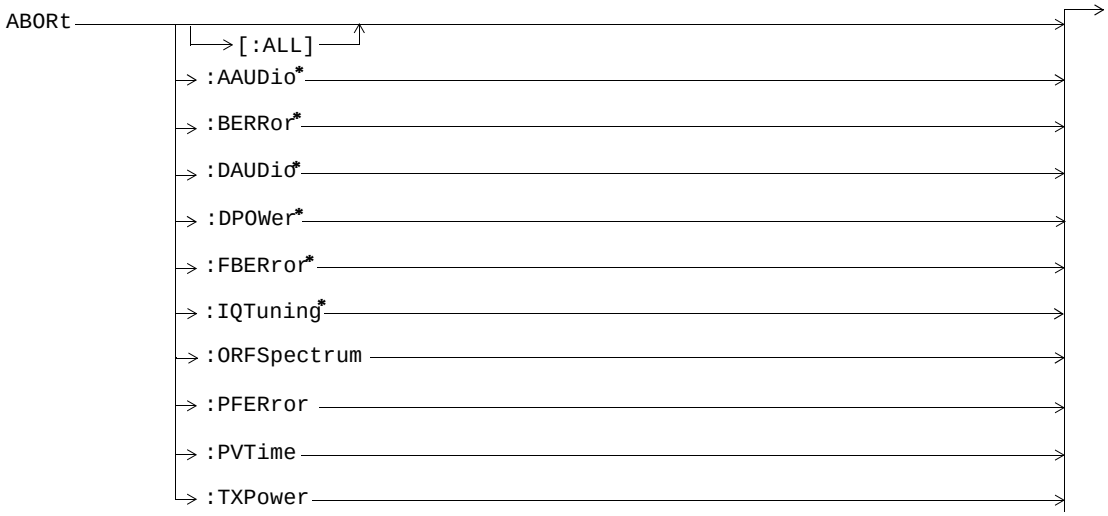
It is recommended that you set the Test Set's operating environment to debug. To set the Test Set debug mode to "ON" use the following syntax:

```
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.

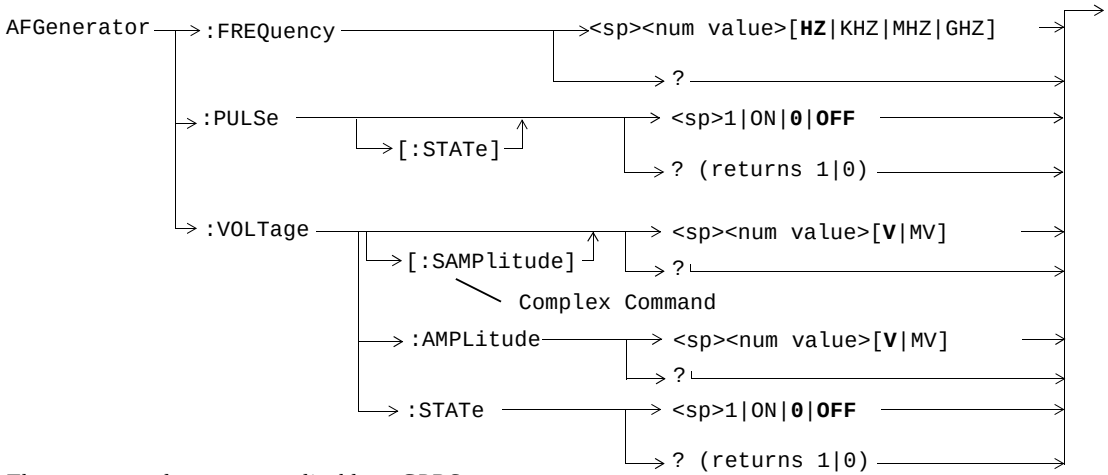
Amplitude (linear)	V
Frequency	Hz
Power (logarithmic)	dBm
Time	s

ABORt



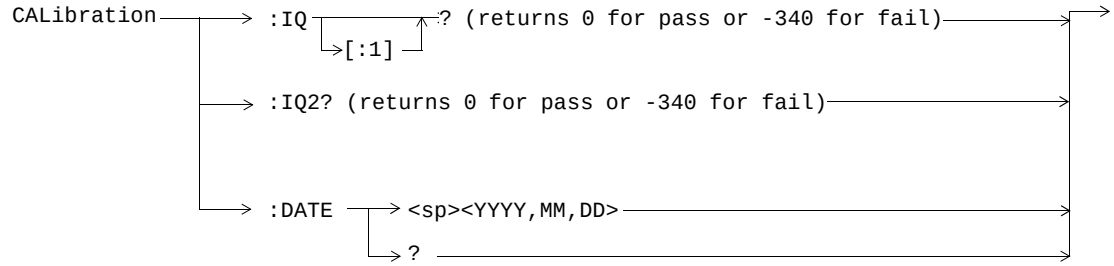
* Not applicable to GPRS.

AFGenerator

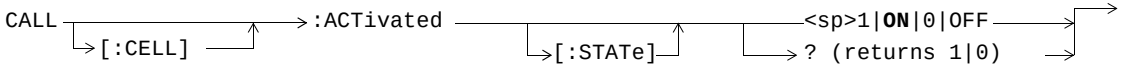


These commands are not applicable to GPRS.

CALibration

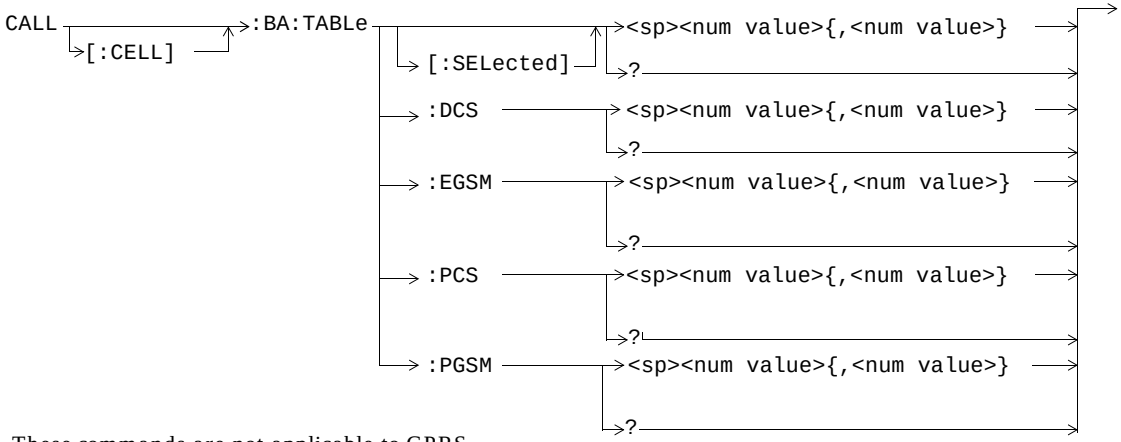


CALL:ACTivated

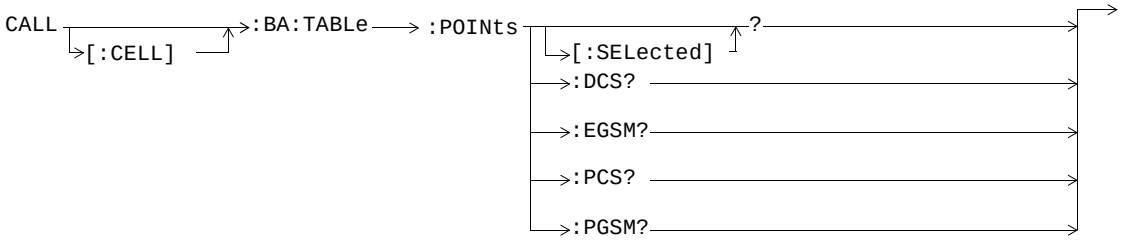


This command is not applicable to GPRS.

CALL:BA

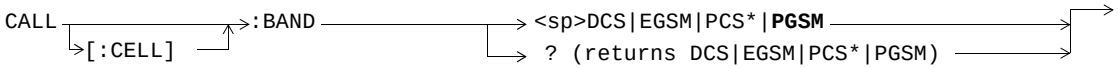


These commands are not applicable to GPRS.



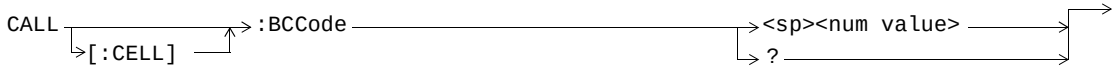
These commands are not applicable to GPRS.

CALL:BAND



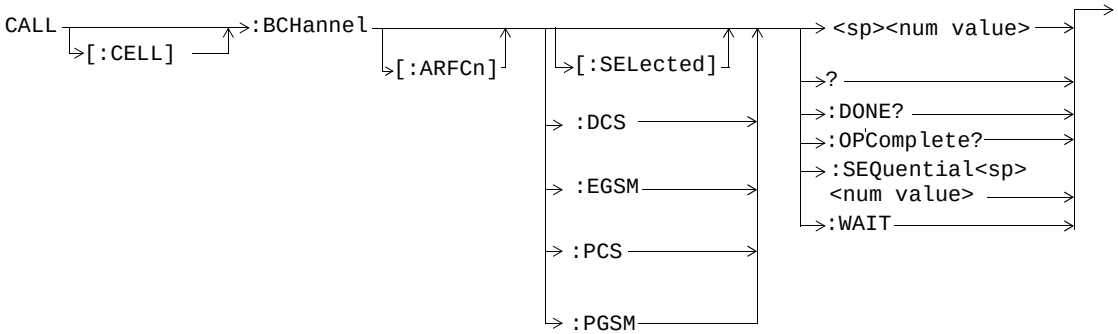
* Not applicable to GPRS

CALL:BCCode



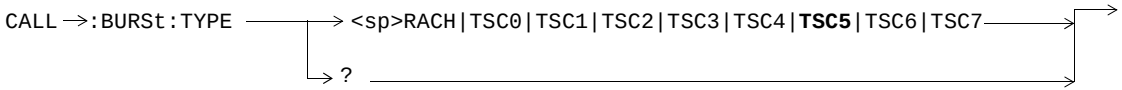
This command is not applicable to GPRS.

CALL:BCHannel



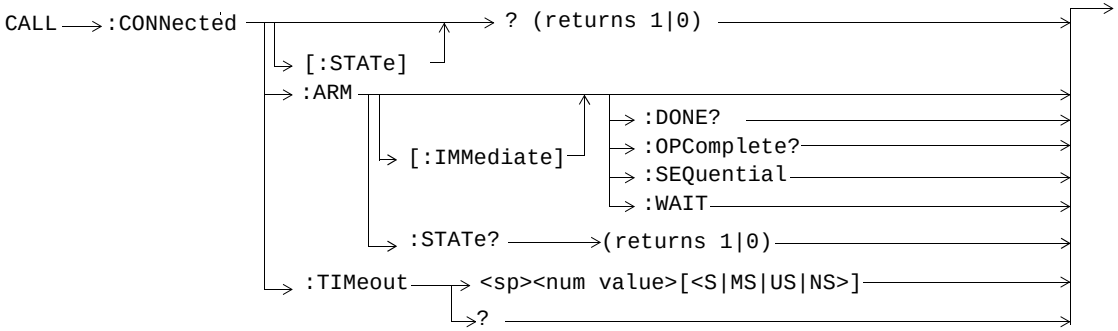
These commands are not applicable to GPRS.

CALL:BURSt



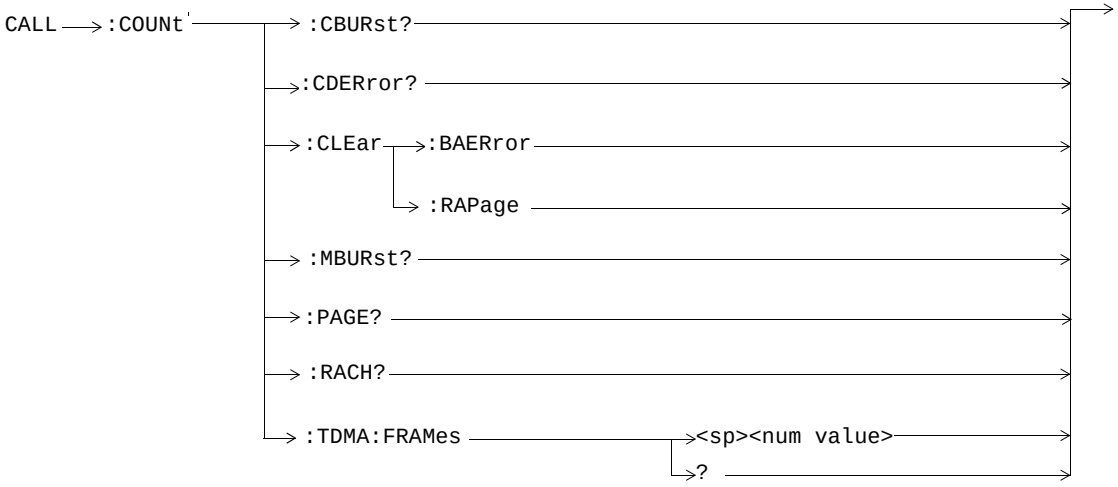
This command is not applicable to GPRS.

CALL:CONNected



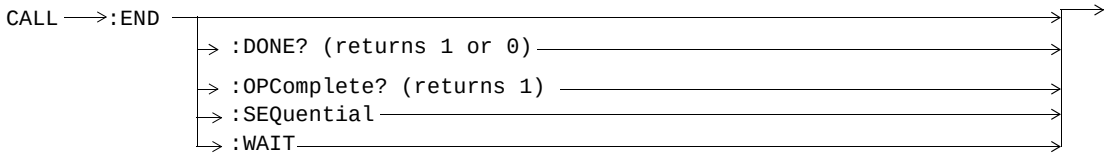
These commands are not applicable to GPRS.

CALL:COUNt



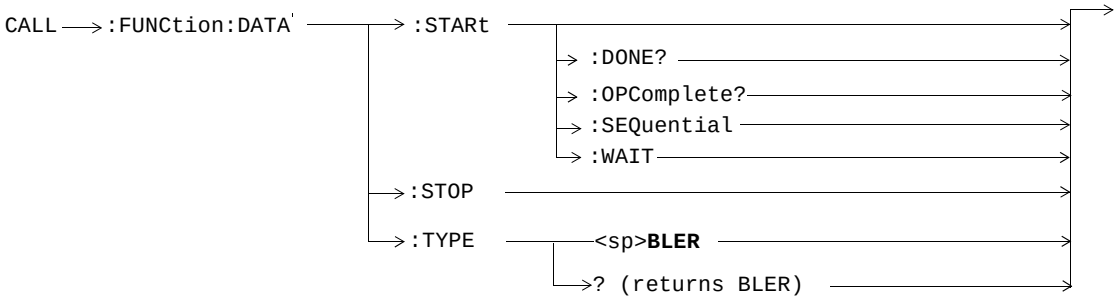
These commands are not applicable to GPRS.

CALL:END

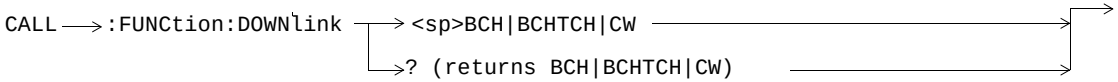


These commands are not applicable to GPRS.

CALL:FUNCtion

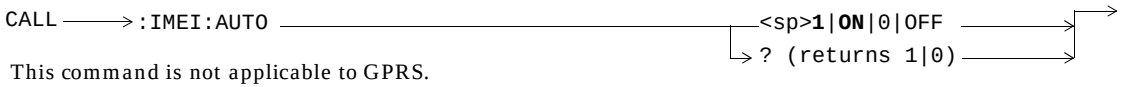


These commands are not applicable to GSM.



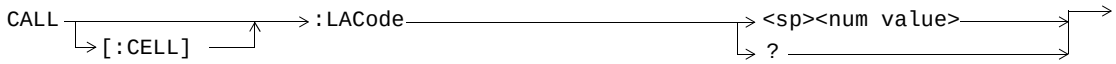
This command is not applicable to GPRS.

CALL:IMEI



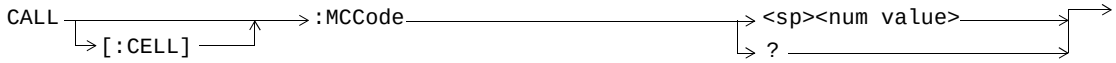
This command is not applicable to GPRS.

CALL:LACode



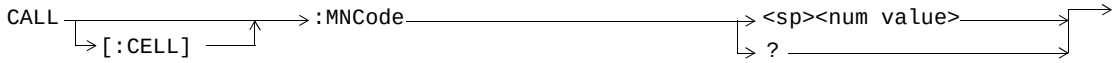
This command is not applicable to GPRS.

CALL:MCCode



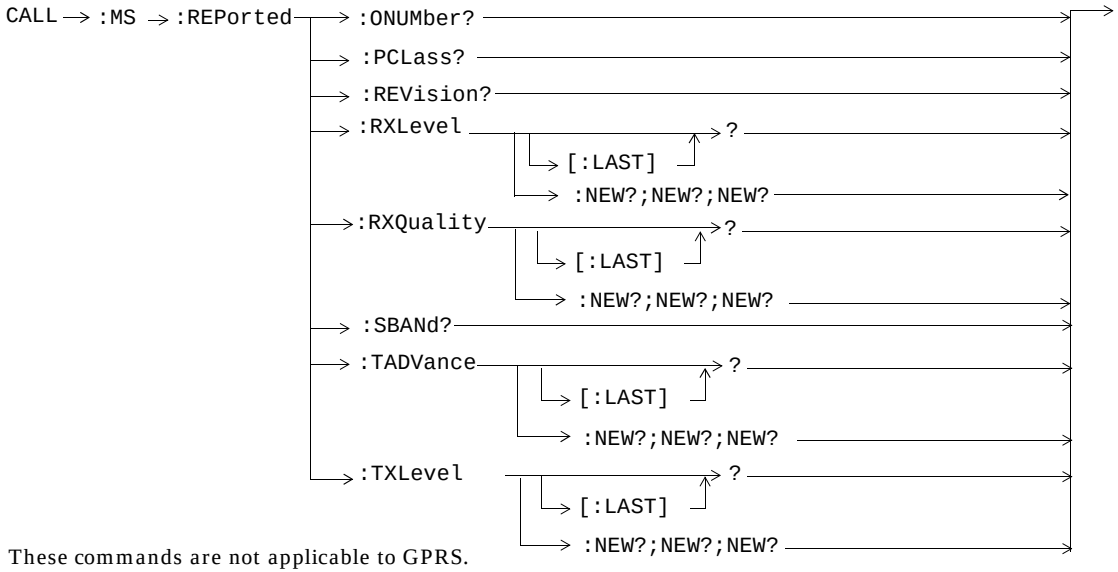
This command is not applicable to GPRS.

CALL:MNCode

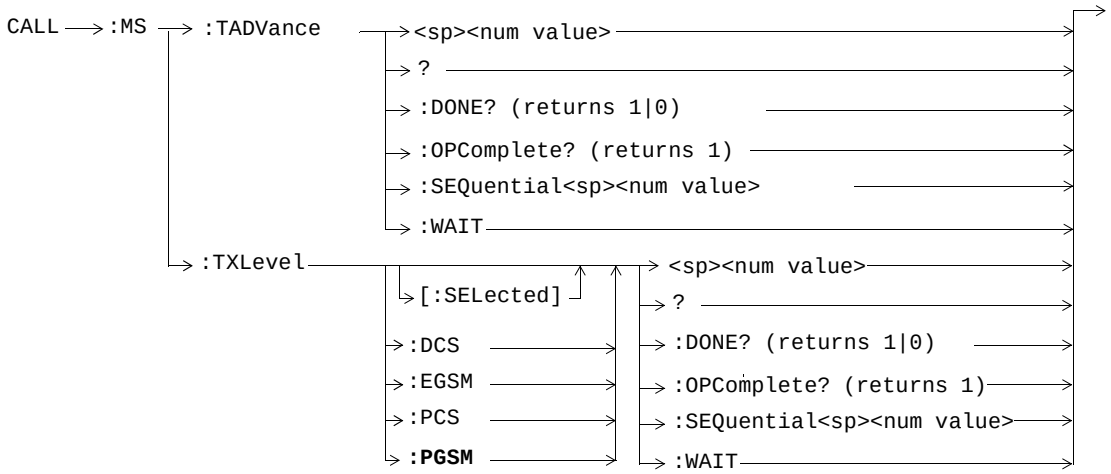


This command is not applicable to GPRS.

CALL:MS

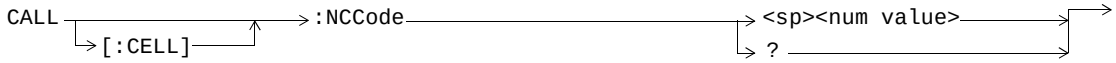


These commands are not applicable to GPRS.



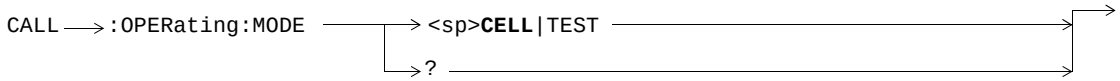
These commands are not applicable to GPRS.

CALL:NCCode



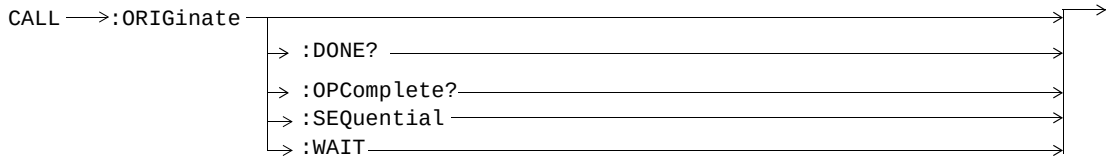
This command is not applicable to GPRS.

CALL:OPERating



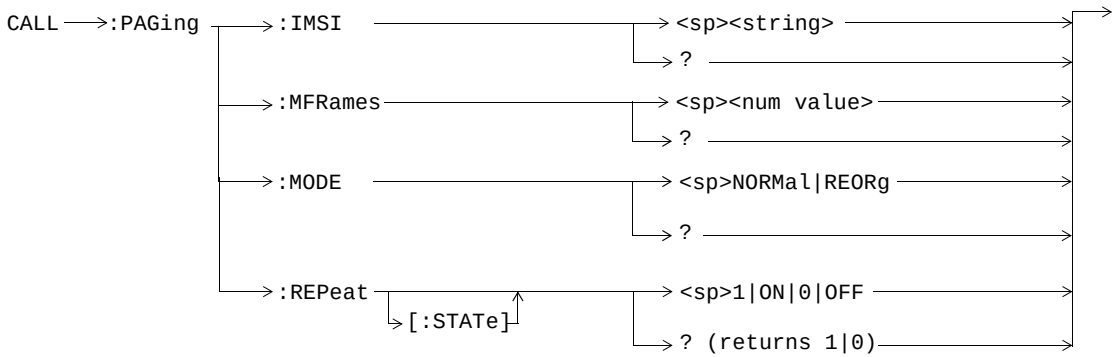
This command is not applicable to GPRS.

CALL:ORIGinate



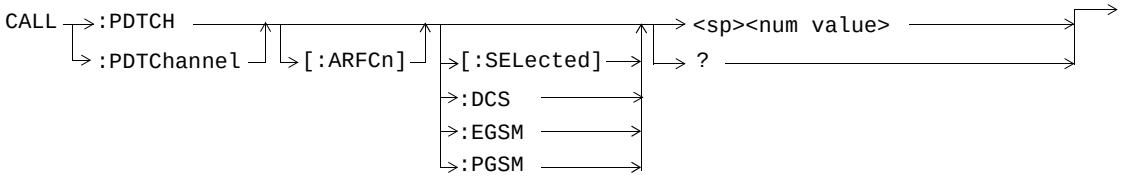
These commands are not applicable to GPRS.

CALL:PAGing

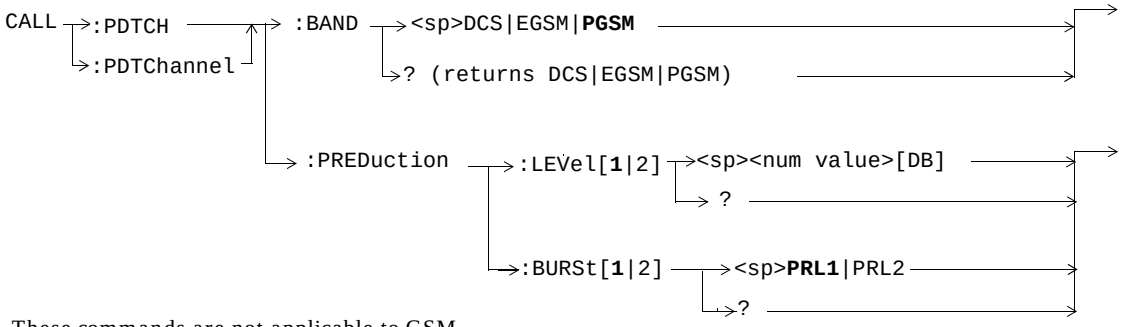


These commands are not applicable to GPRS.

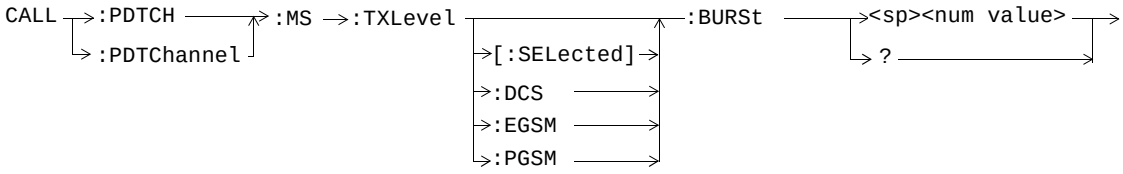
CALL:PDTCH|PDTChannel



These commands are not applicable to GSM.

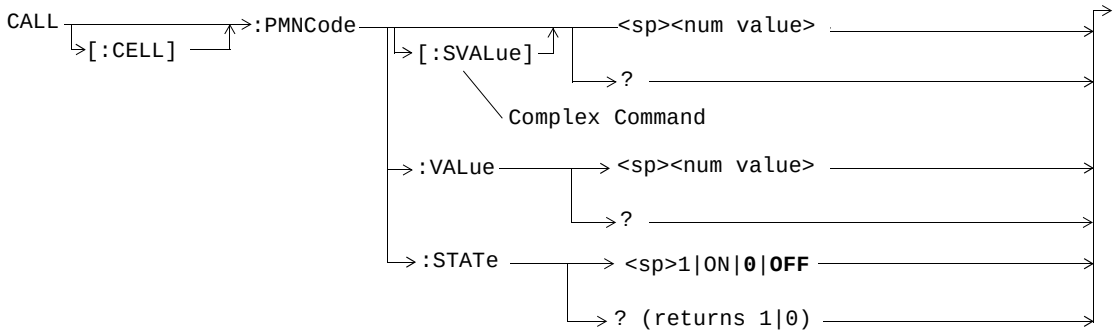


These commands are not applicable to GSM.



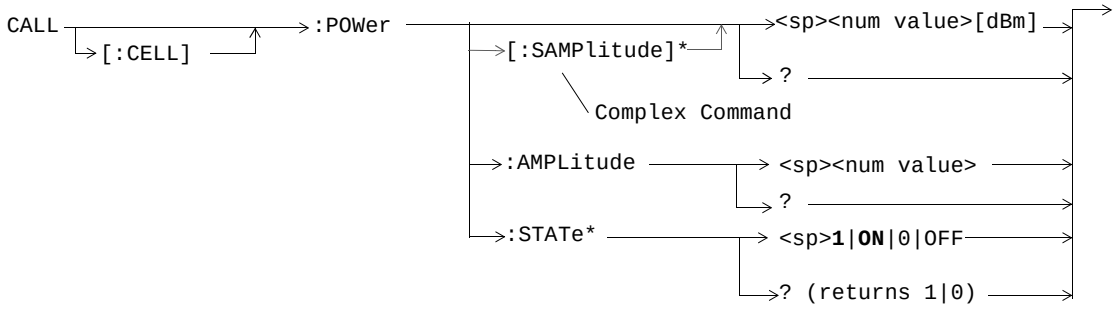
These commands are not applicable to GSM.

CALL:PMNCode



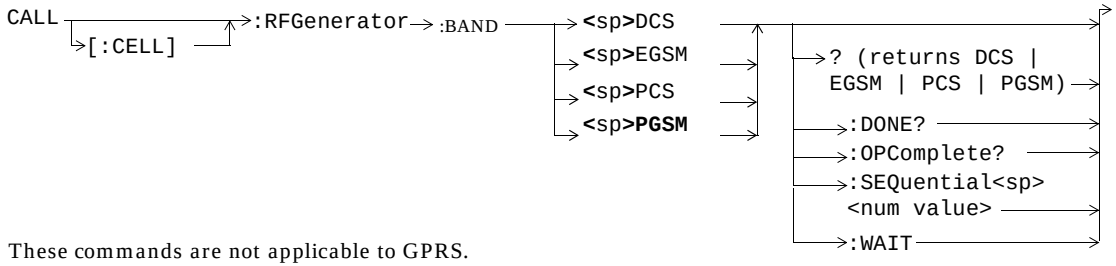
These commands are not applicable to GPRS.

CALL:POWer

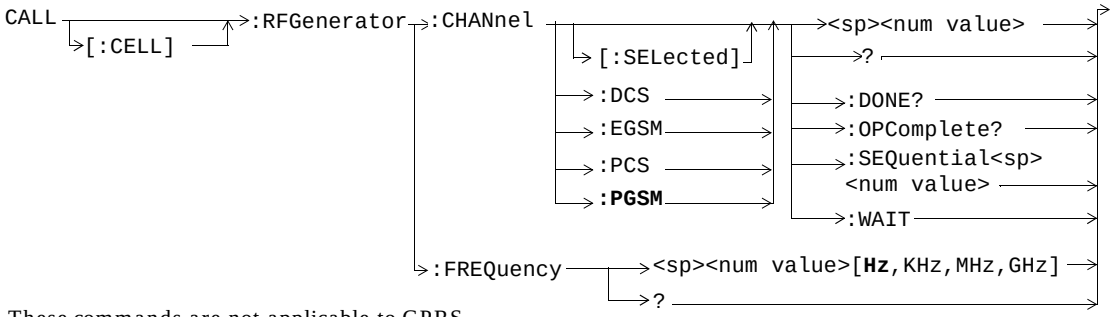


* These commands are not applicable to GPRS.

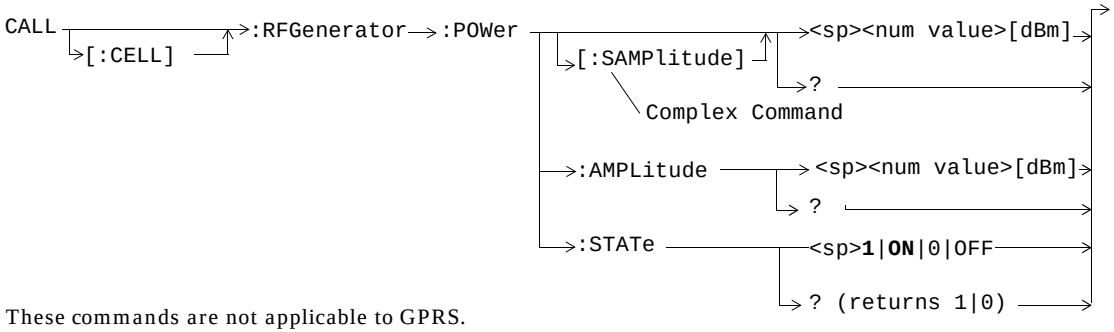
CALL:RFGenerator



These commands are not applicable to GPRS.

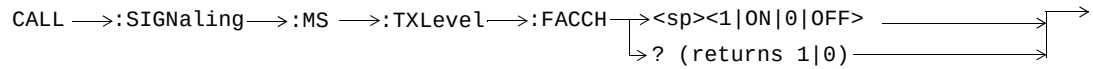


These commands are not applicable to GPRS.



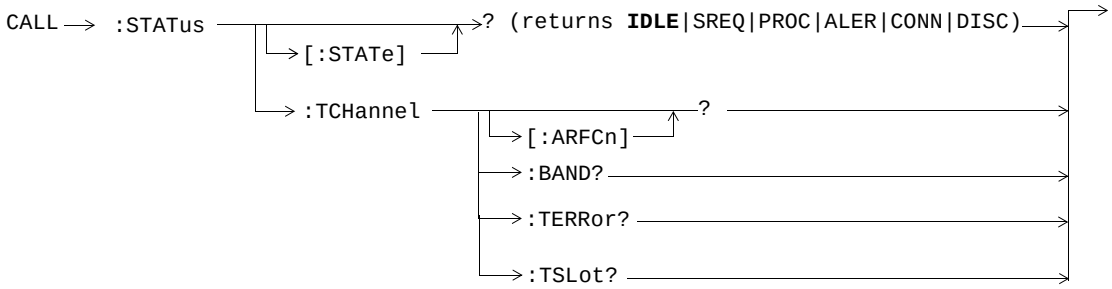
These commands are not applicable to GPRS.

CALL:SIGNaling

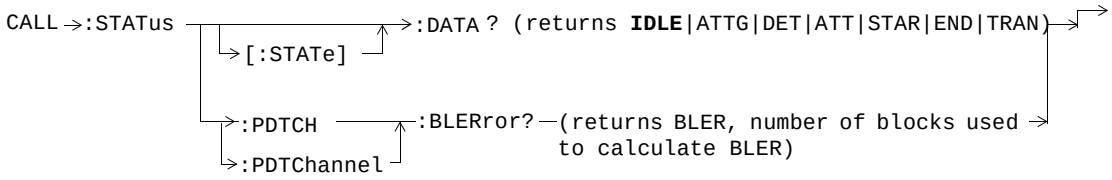


This command is not applicable to GPRS.

CALL:STATus

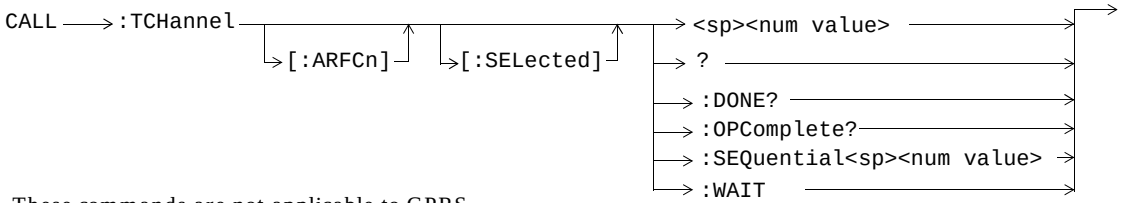


These commands are not applicable to GPRS.

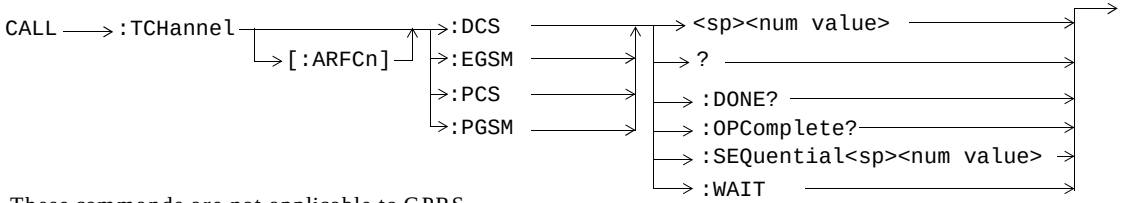


These commands are not applicable to GSM.

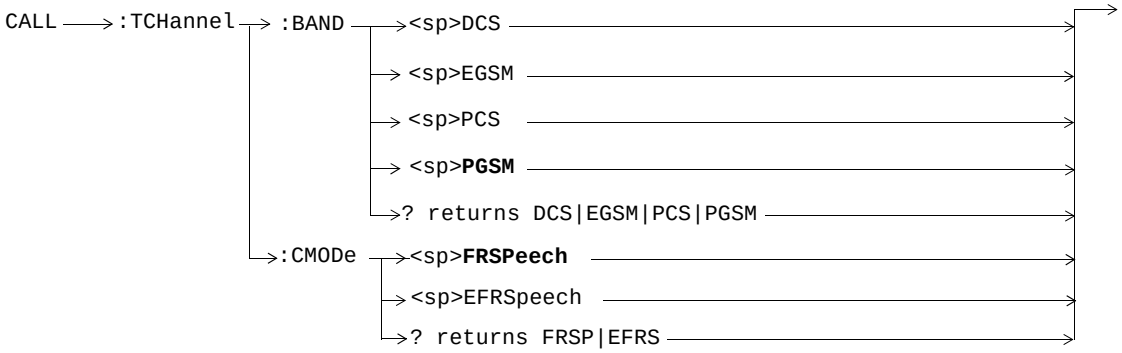
CALL:TCHannel



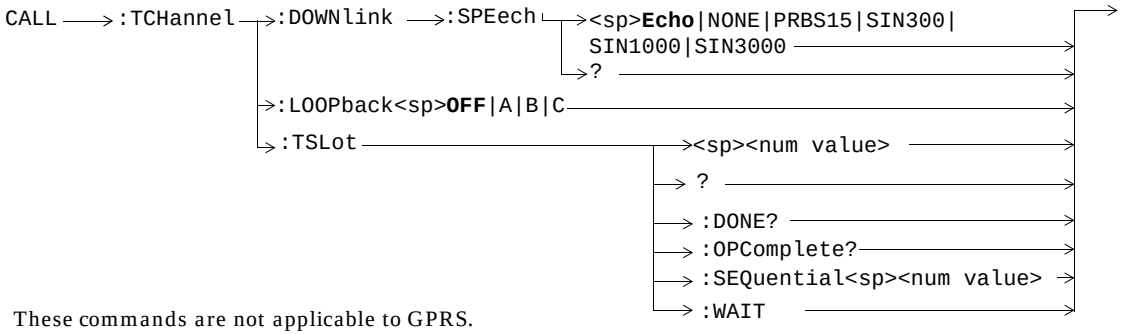
These commands are not applicable to GPRS.



These commands are not applicable to GPRS.

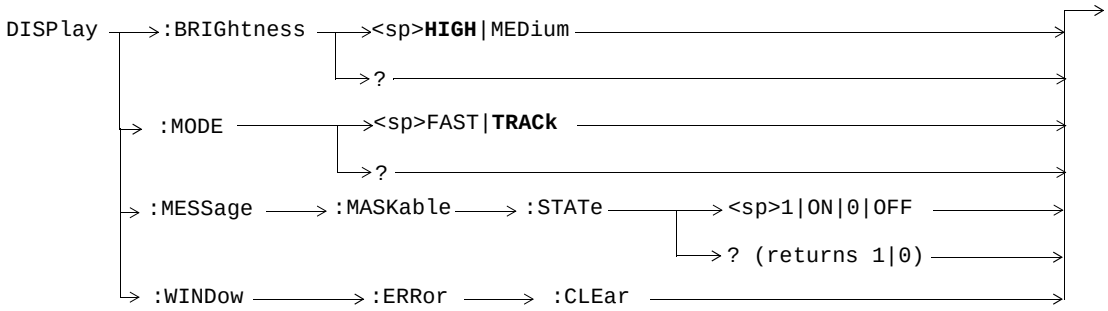


These commands are not applicable to GPRS.

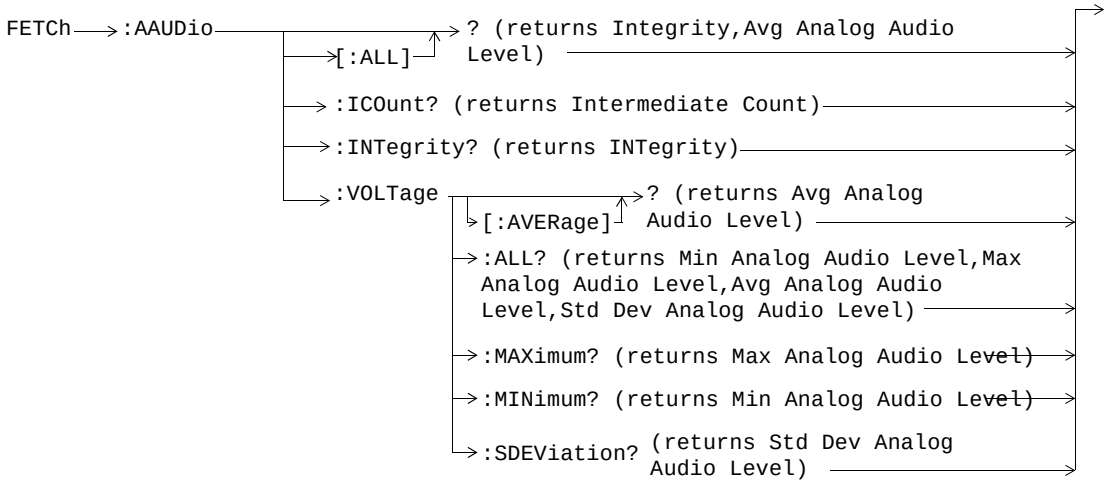


These commands are not applicable to GPRS.

DISPlay

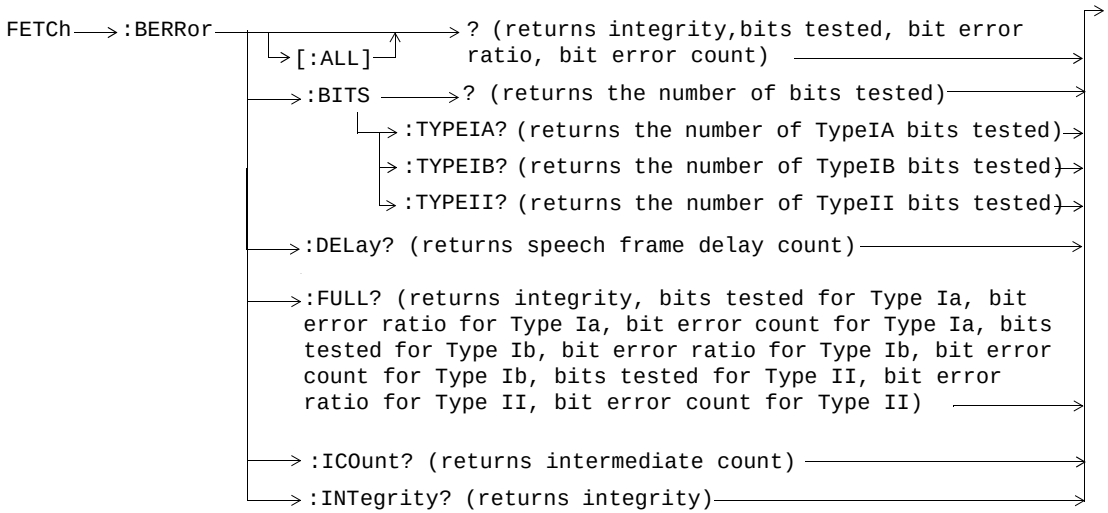

DISPlay
:BRIGhtness
<sp>HIGH|MEDium
?
:MODE
<sp>FAST|TRACk
?
:MESSage
:MASKable
:STATe
<sp>1|ON|0|OFF
? (returns 1|0)
:WINDow
:ERRor
:CLEar

FETCh:AAUDio

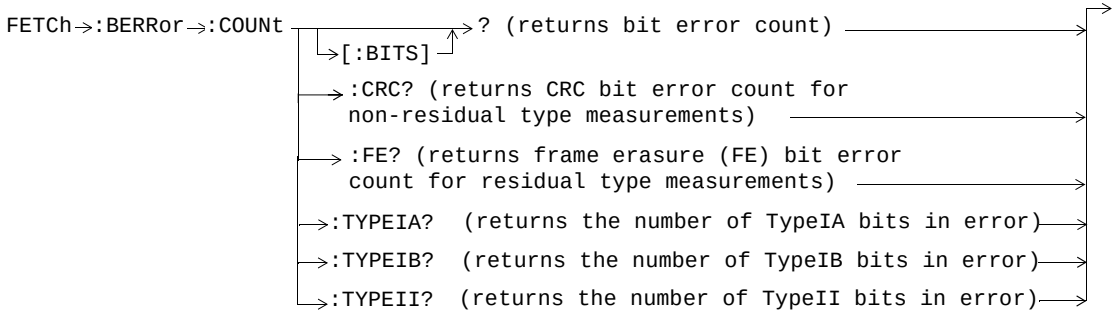


These commands are not applicable to GPRS.

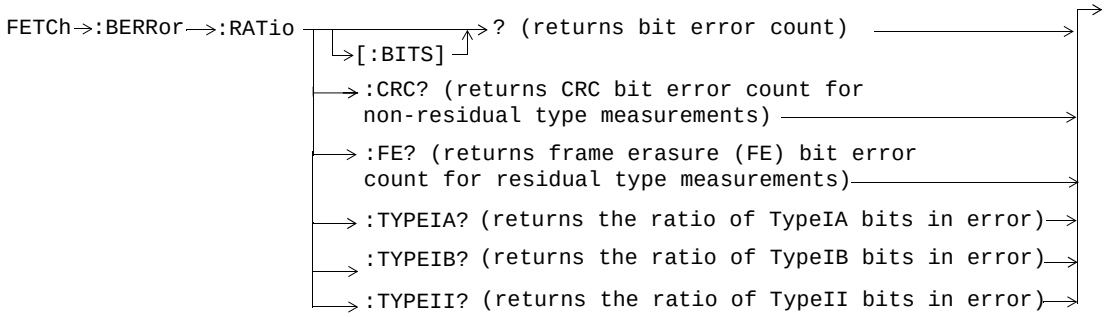
FETCh:BERRor



These commands are not applicable to GPRS.

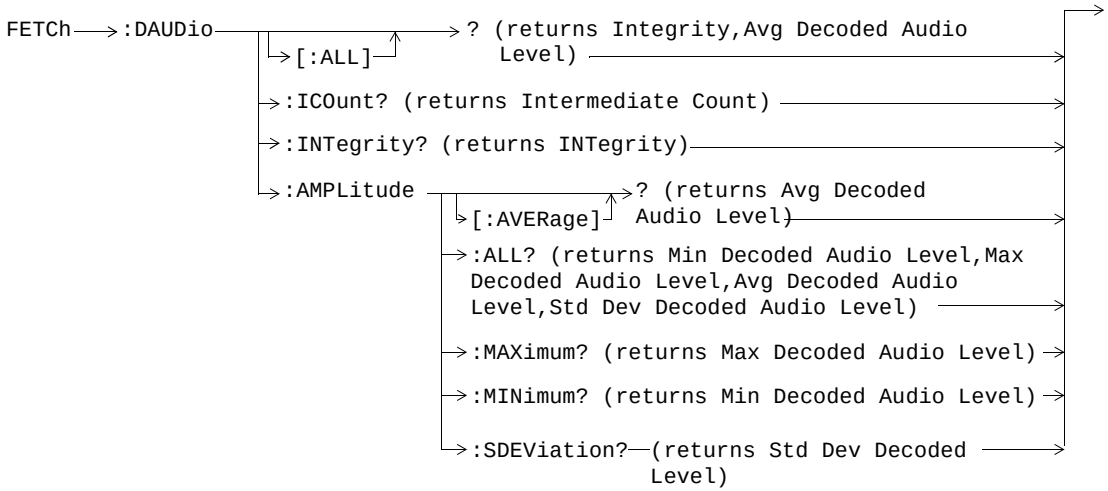


These commands are not applicable to GPRS.



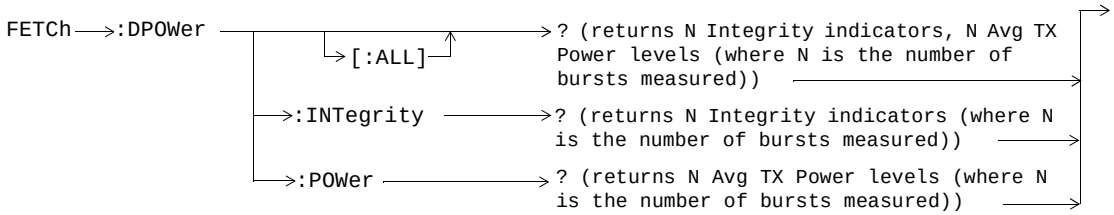
These commands are not applicable to GPRS.

FETCh:DAUDio



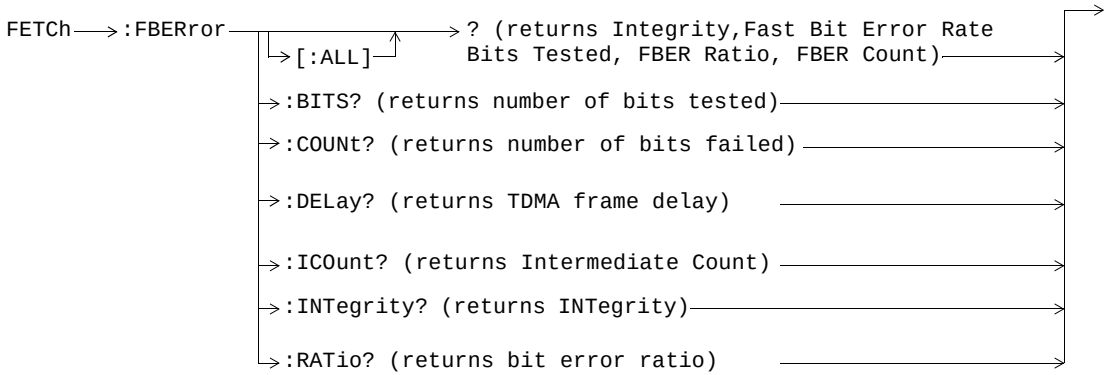
These commands are not applicable to GPRS.

FETCh:DPOWer



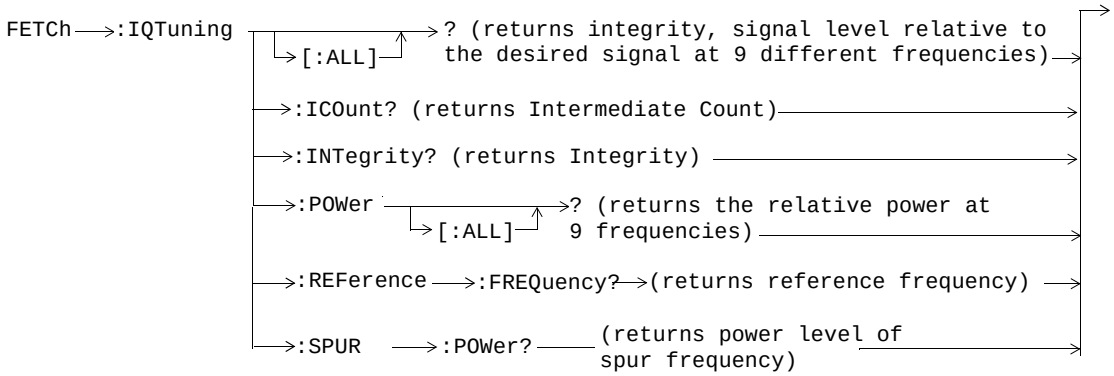
These commands are not applicable to GPRS.

FETCh:FBERror



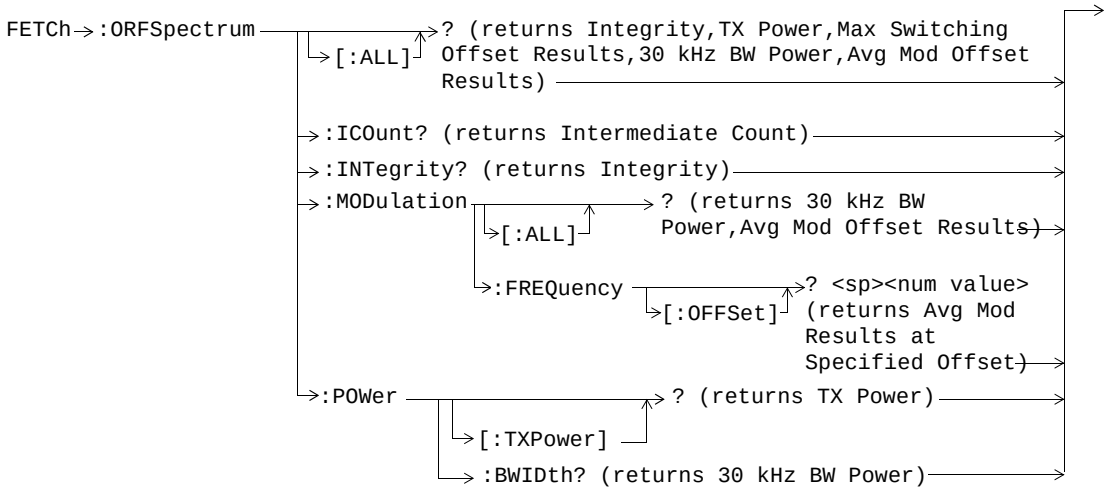
These commands are not applicable to GPRS.

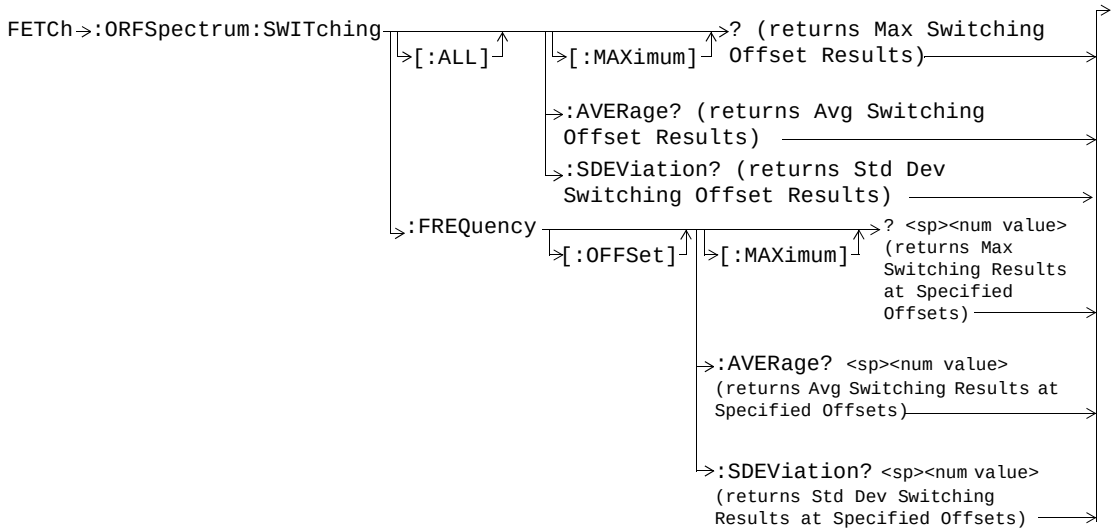
FETCh:IQTuning



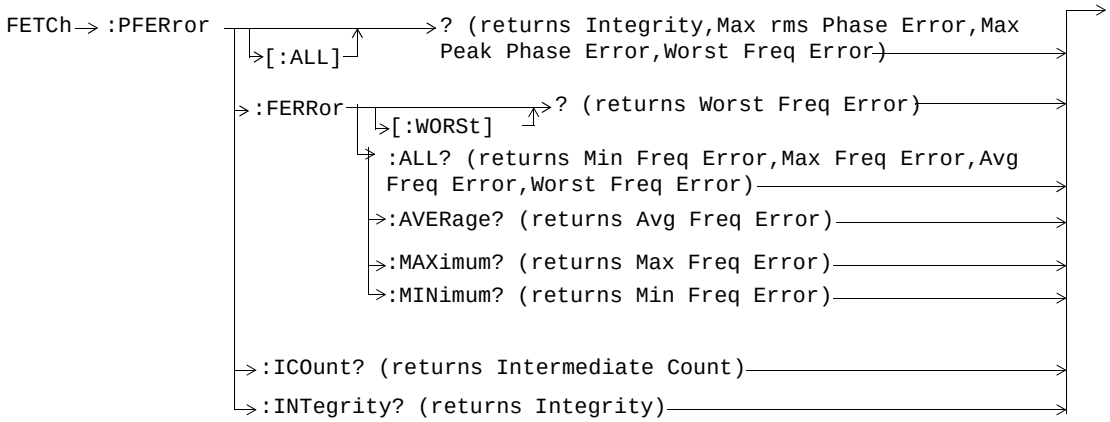
These commands are not applicable to GPRS.

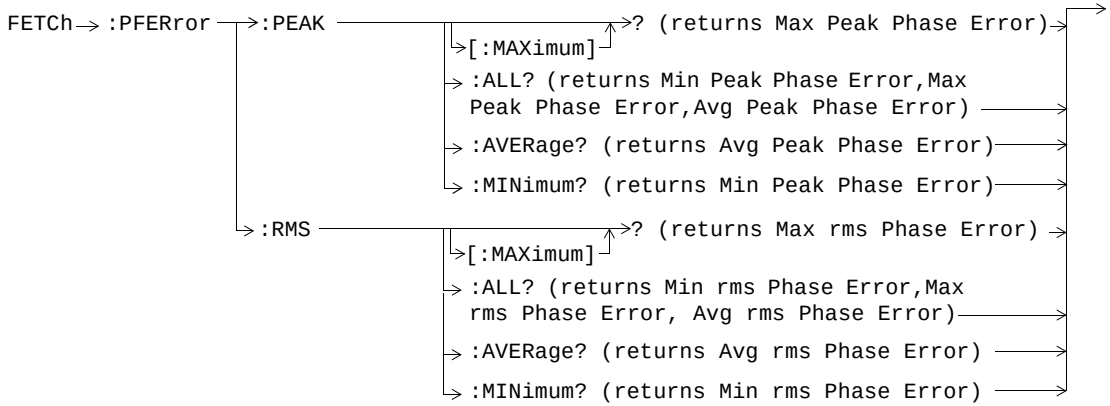
FETCh:ORFSpectrum



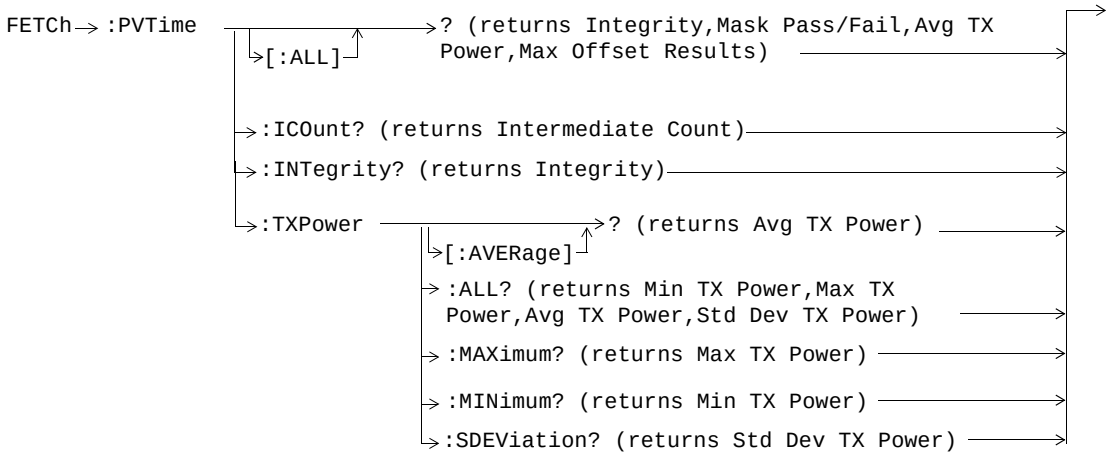

FETCh:ORFSpectrum:SWITching
[:ALL]
[:MAXimum]
? (returns Max Switching Offset Results)
:AVERage? (returns Avg Switching Offset Results)
:SDEViation? (returns Std Dev Switching Offset Results)
:FREQuency
[:OFFSet]
[:MAXimum]
? <sp><num value> (returns Max Switching Results at Specified Offsets)
:AVERage? <sp><num value> (returns Avg Switching Results at Specified Offsets)
:SDEViation? <sp><num value> (returns Std Dev Switching Results at Specified Offsets)

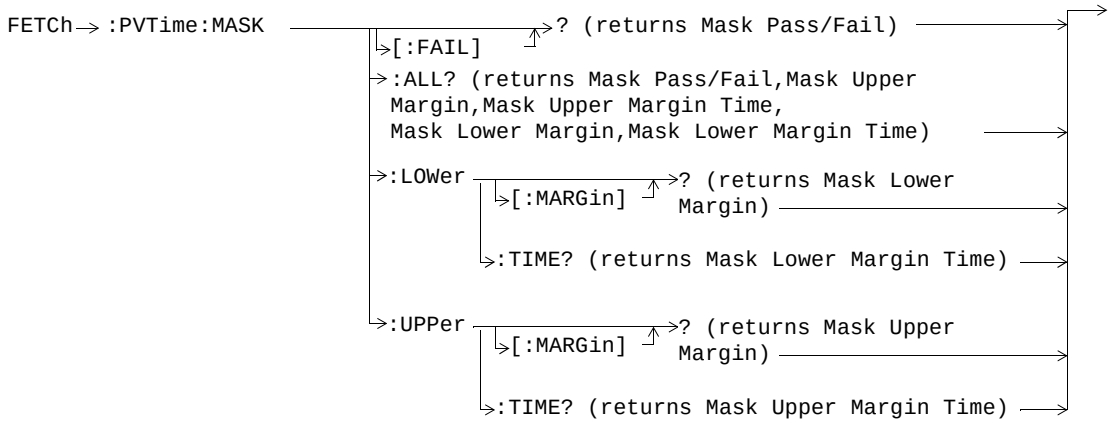
FETCh:PFERror

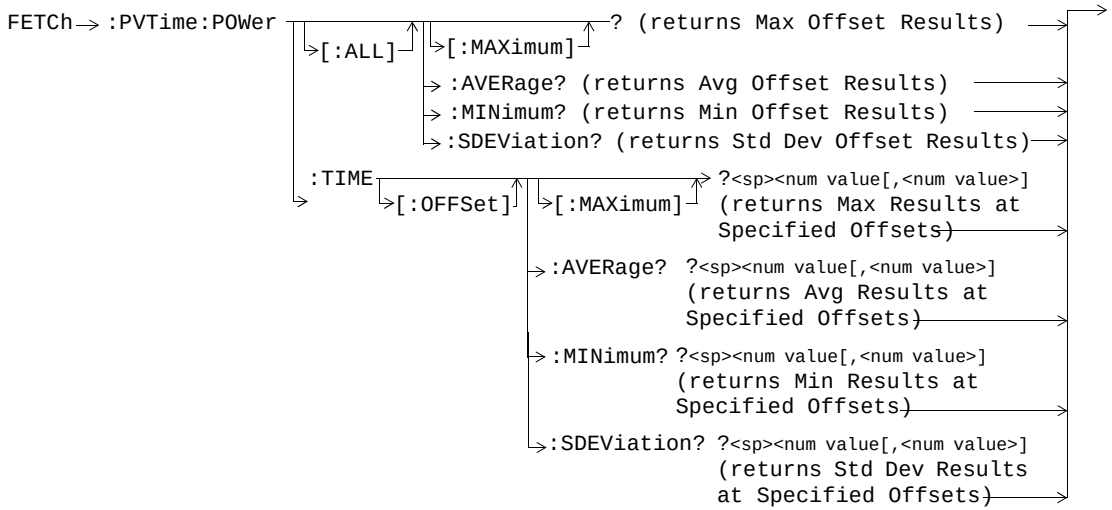



FETCh
:PFERror
:PEAK
? (returns Max Peak Phase Error)
[:MAXimum]
:ALL? (returns Min Peak Phase Error,Max Peak Phase Error,Avg Peak Phase Error)
:AVERage? (returns Avg Peak Phase Error)
:MINimum? (returns Min Peak Phase Error)
:RMS
? (returns Max rms Phase Error)
[:MAXimum]
:ALL? (returns Min rms Phase Error,Max rms Phase Error, Avg rms Phase Error)
:AVERage? (returns Avg rms Phase Error)
:MINimum? (returns Min rms Phase Error)

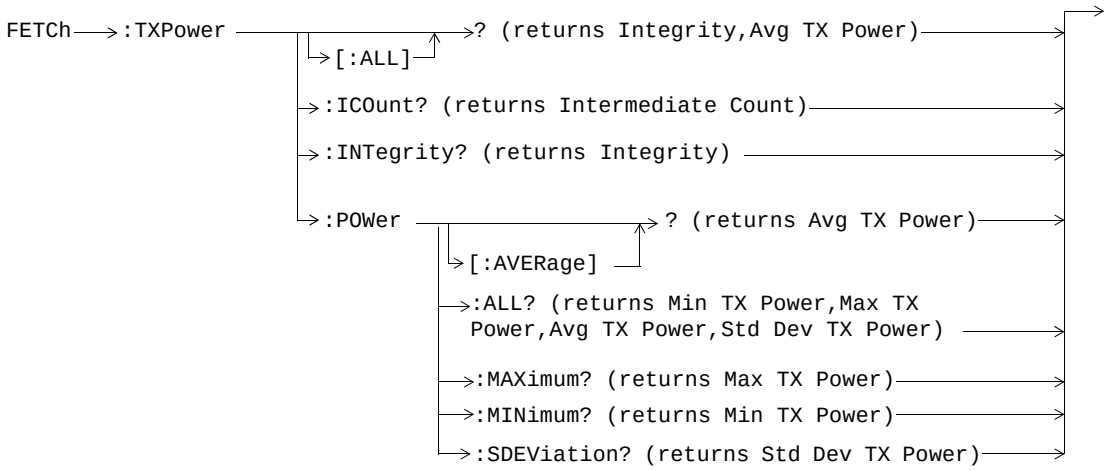
FETCh:PVTime



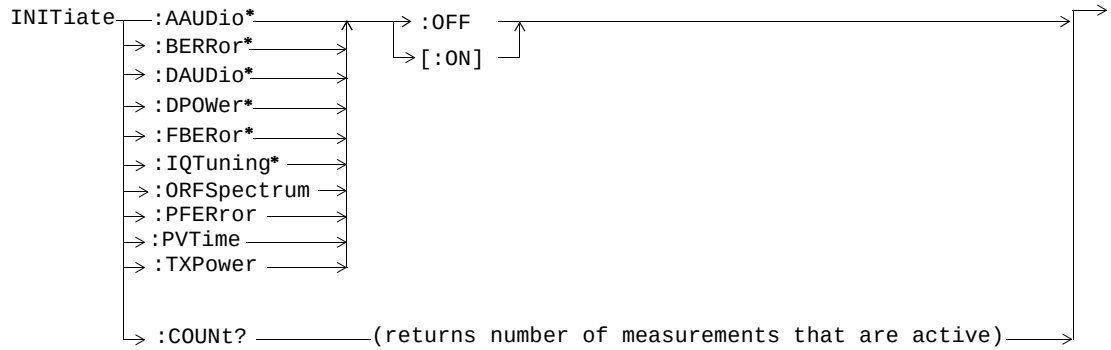

FETCh
:PVTime:MASK
? (returns Mask Pass/Fail)
[:FAIL]
:ALL? (returns Mask Pass/Fail,Mask Upper Margin,Mask Upper Margin Time, Mask Lower Margin,Mask Lower Margin Time)
:LOWer
[:MARGin]
? (returns Mask Lower Margin)
:TIME? (returns Mask Lower Margin Time)
:UPPer
[:MARGin]
? (returns Mask Upper Margin)
:TIME? (returns Mask Upper Margin Time)


FETCh
:PVTime:POWer
[:ALL]
[:MAXimum]
? (returns Max Offset Results)
:AVERage? (returns Avg Offset Results)
:MINimum? (returns Min Offset Results)
:SDEViation? (returns Std Dev Offset Results)
:TIME
[:OFFSet]
[:MAXimum]
?<sp><num value[,<num value>]
(returns Max Results at
Specified Offsets)
:AVERage?
?<sp><num value[,<num value>]
(returns Avg Results at
Specified Offsets)
:MINimum?
?<sp><num value[,<num value>]
(returns Min Results at
Specified Offsets)
:SDEViation?
?<sp><num value[,<num value>]
(returns Std Dev Results
at Specified Offsets)

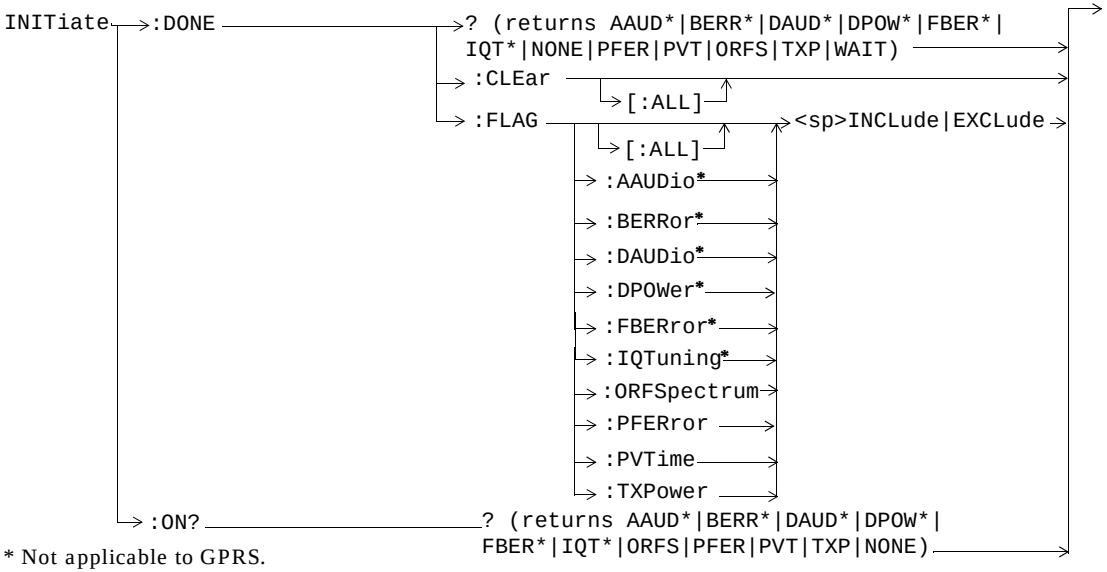
FETCh:TXPower



INITiate

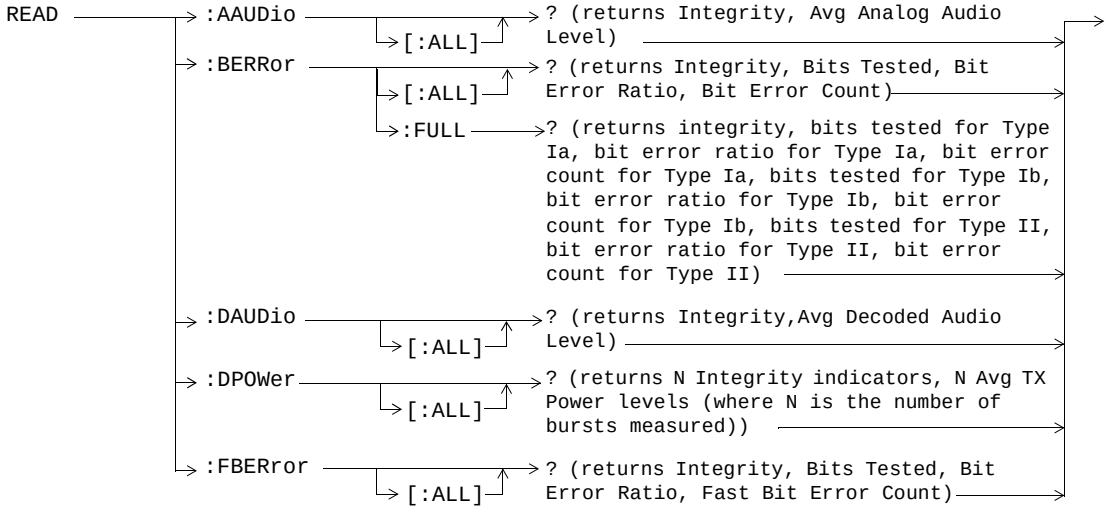


* Not applicable to GPRS.

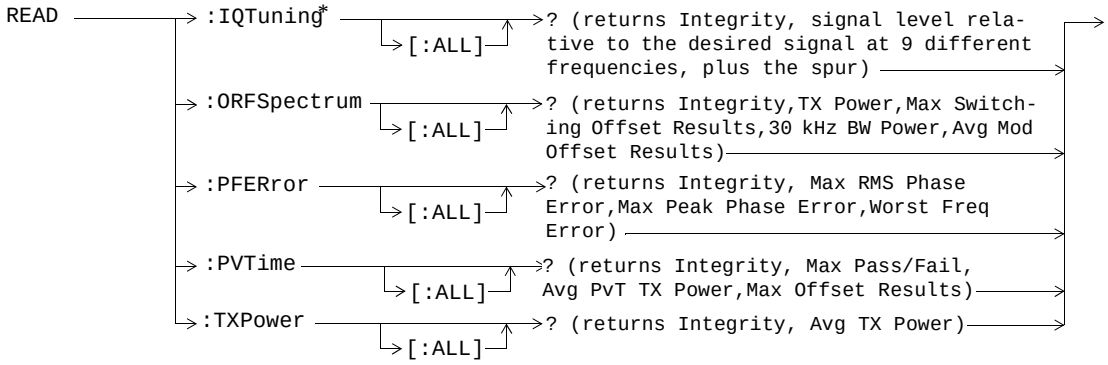


* Not applicable to GPRS.

READ

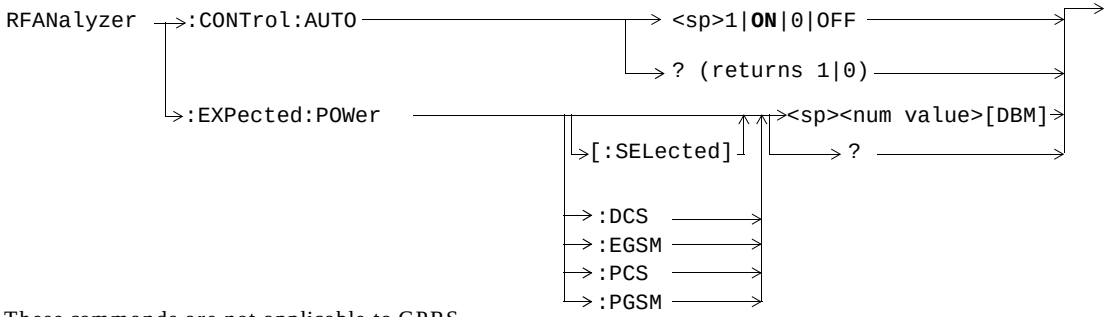


These commands are not applicable to GPRS.

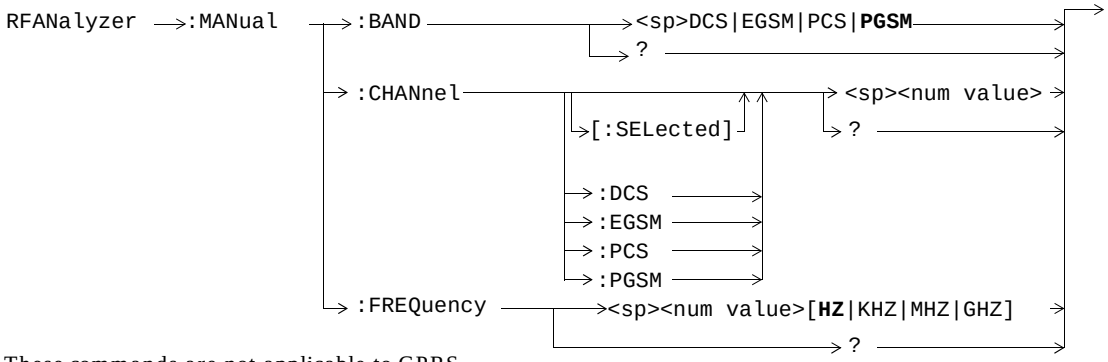


* Not applicable to GPRS.

RFANalyzer

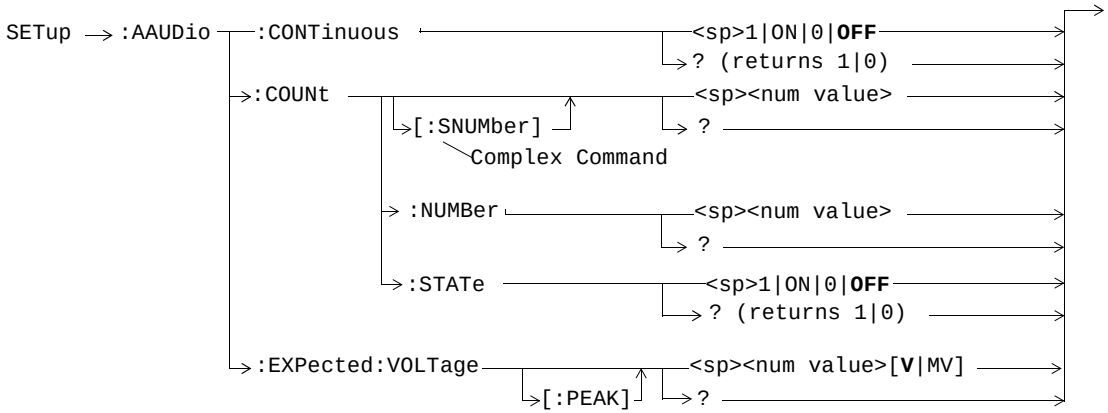


These commands are not applicable to GPRS.

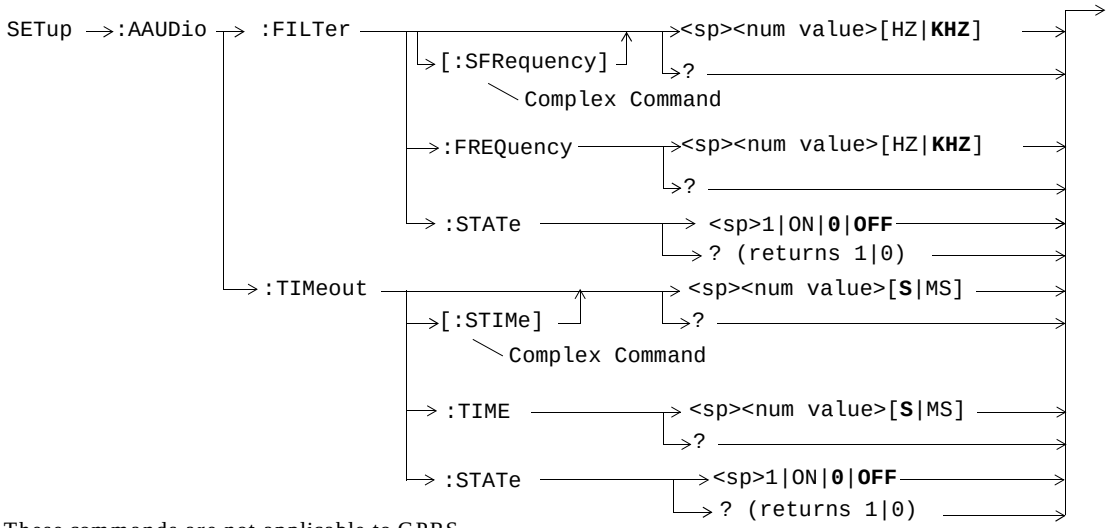


These commands are not applicable to GPRS.

SETup:AAUDio

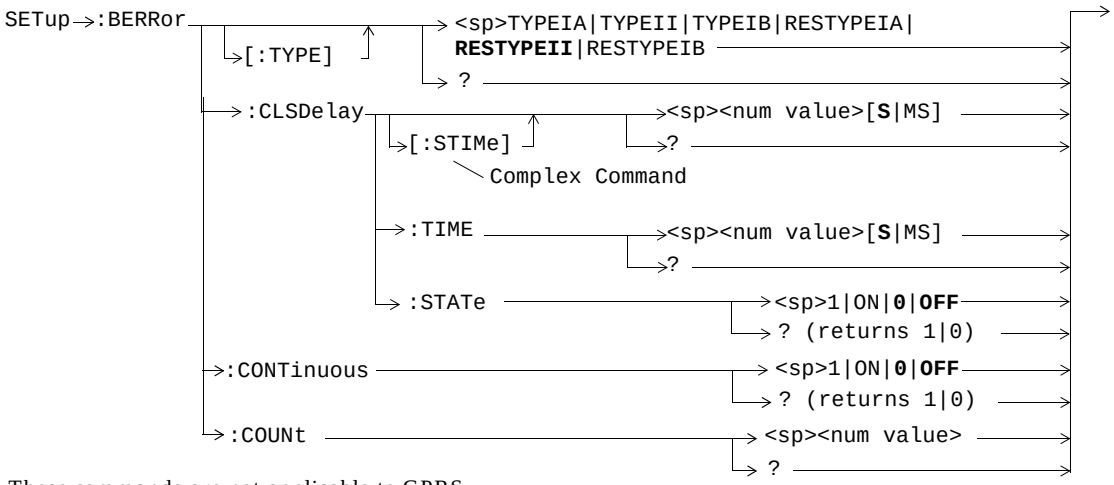


These commands are not applicable to GPRS.

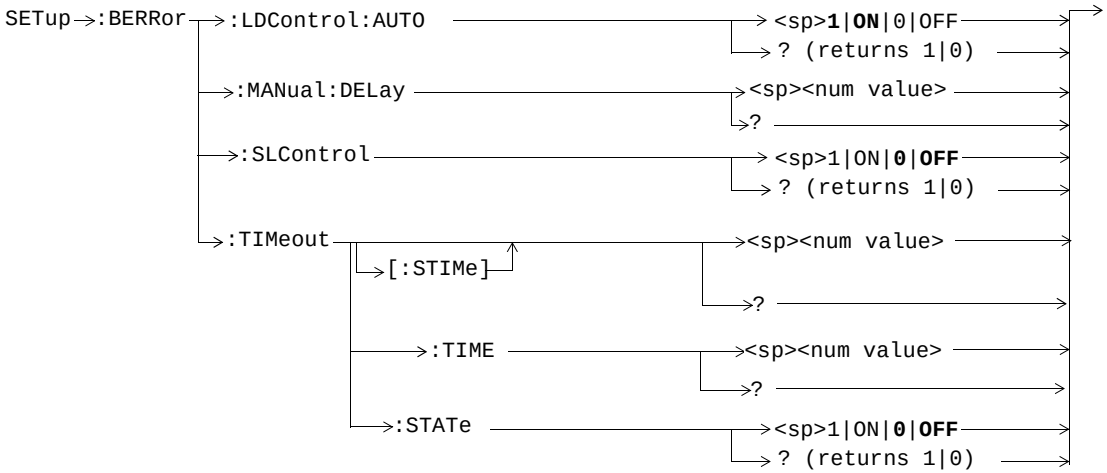


These commands are not applicable to GPRS.

SETup:BERRor

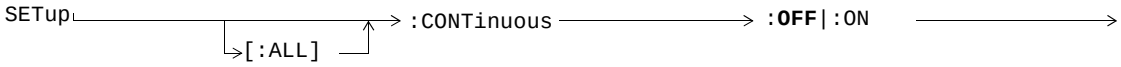


These commands are not applicable to GPRS.

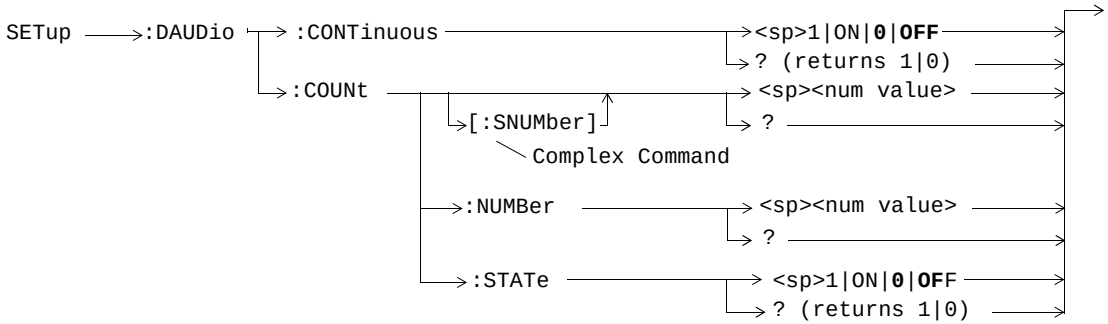


These commands are not applicable to GPRS.

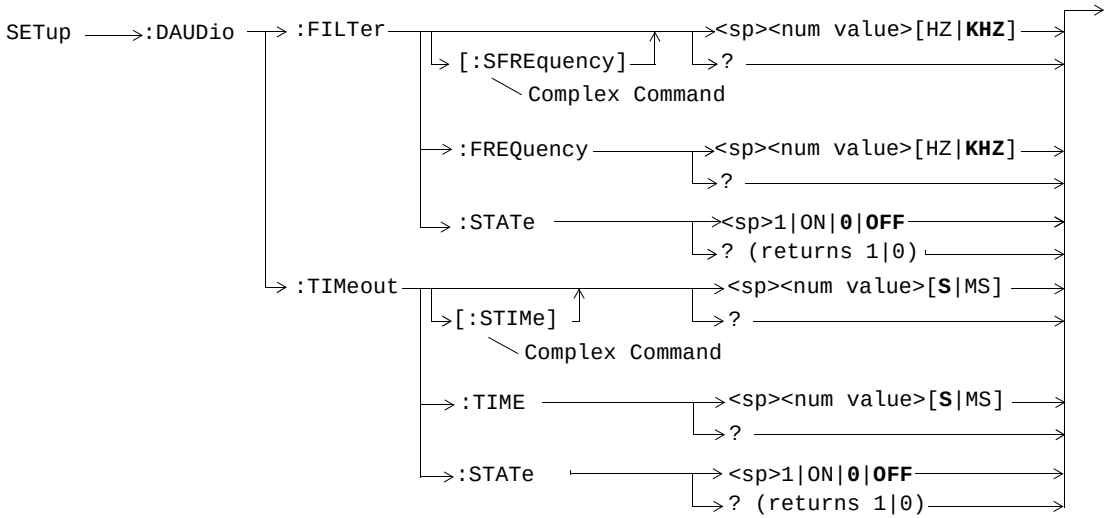
SETup:CONTinuous



SETup:DAUDio

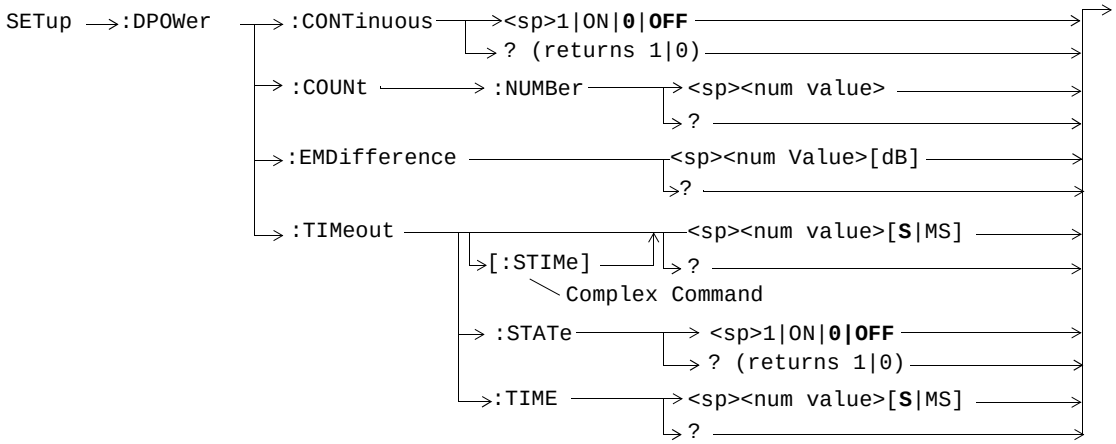


These commands are not applicable to GPRS.



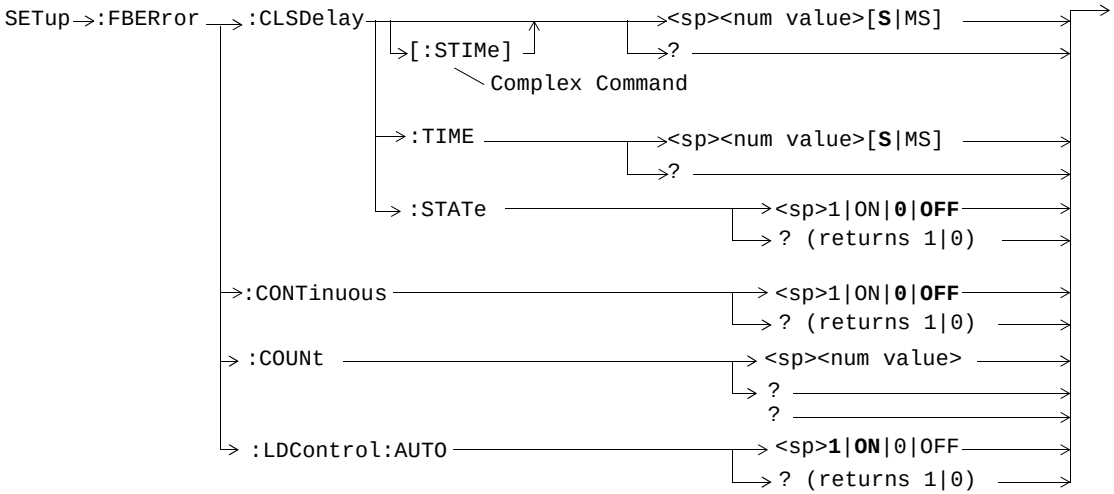
These commands are not applicable to GPRS.

SETup:DPOWer

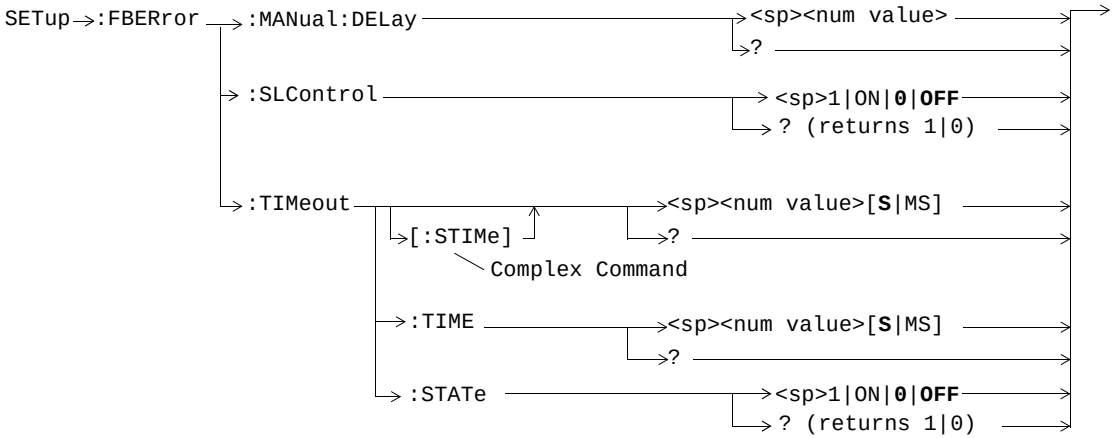


These commands are not applicable to GPRS.

SETup:FBERror

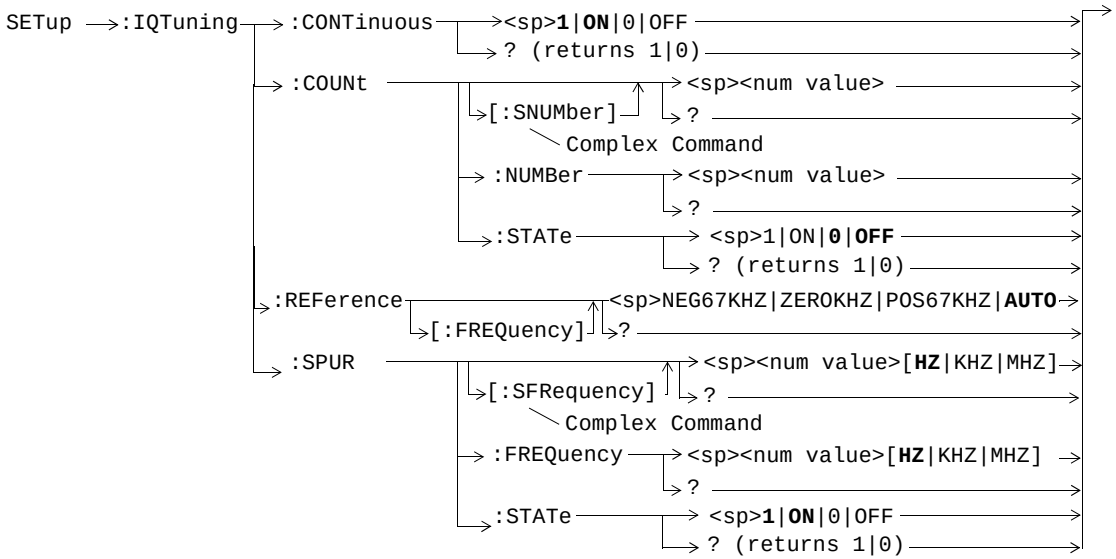


These commands are not applicable to GPRS.

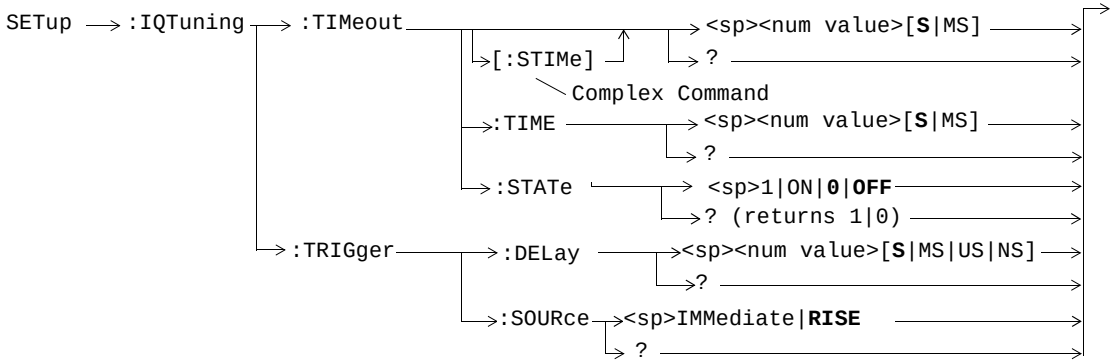


These commands are not applicable to GPRS.

SETup:IQTuning

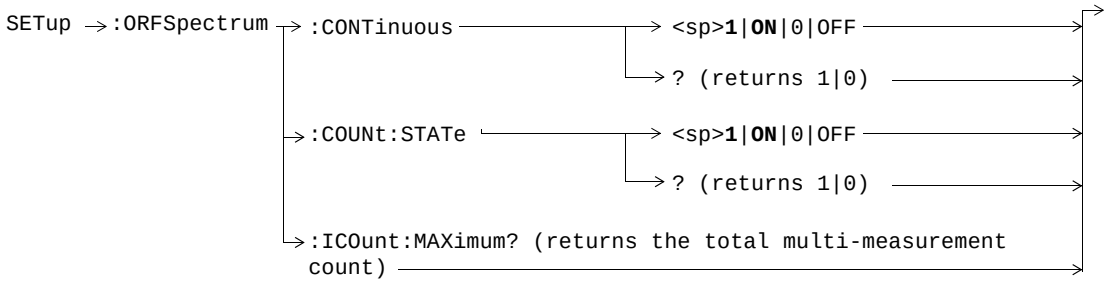


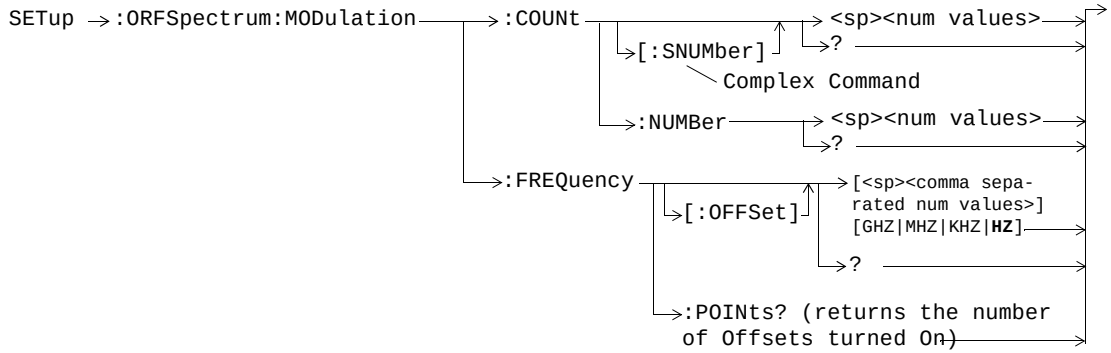
These commands are not applicable to GPRS.

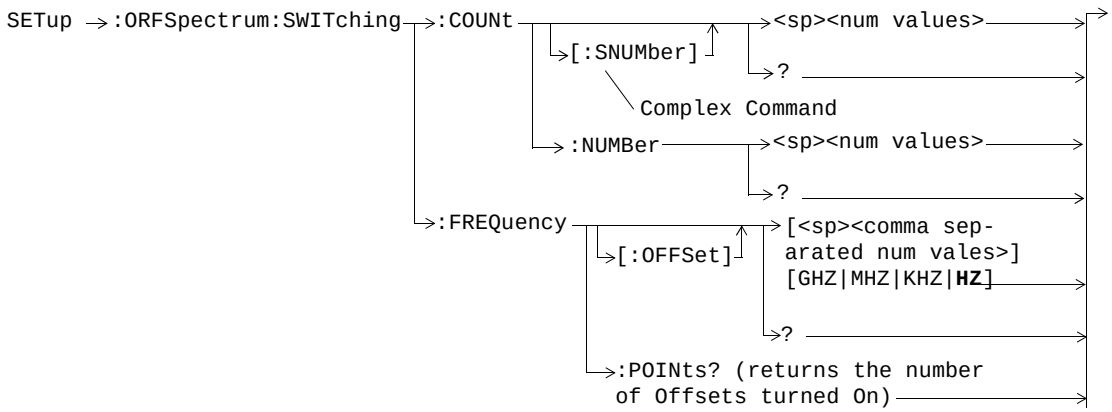


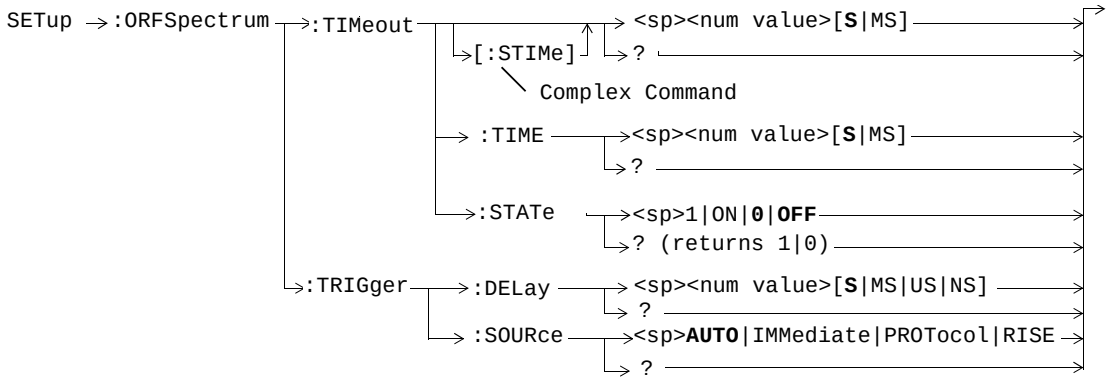
These commands are not applicable to GPRS.

SETup:ORFSpectrum

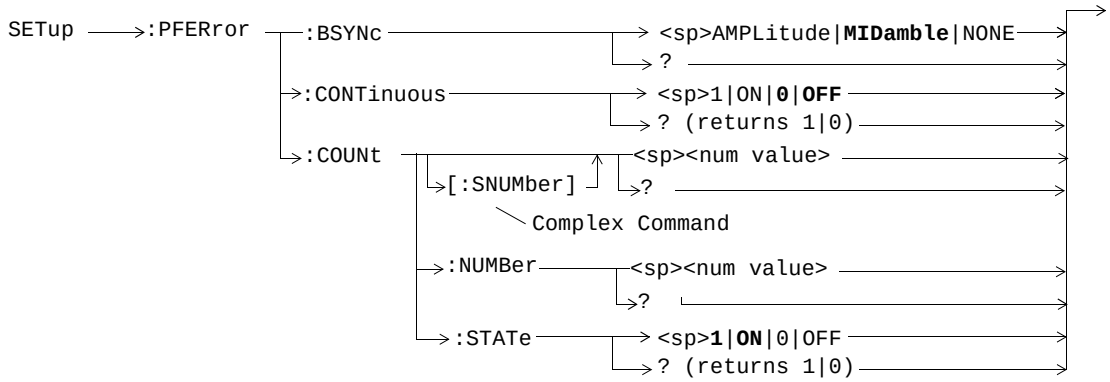


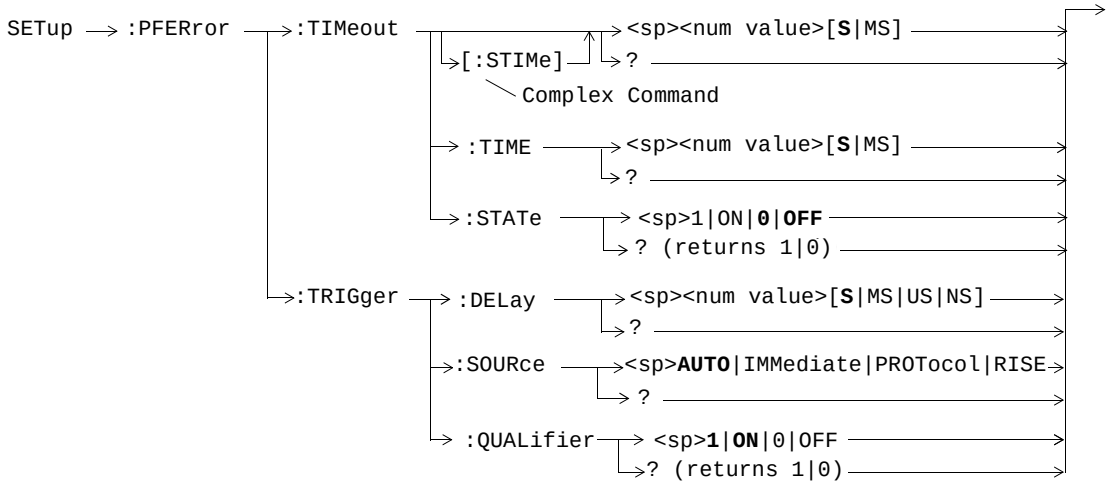

SETup
:ORFSpectrum:MODulation
:COUNt
[:SNUMber]
Complex Command
<sp><num values>
?
:NUMBer
<sp><num values>
?
:FREQuency
[:OFFSet]
[<sp><comma sepa-
rated num values>]
[GHZ|MHZ|KHZ|HZ]
?
:POINts? (returns the number
of Offsets turned On)


SETup
:ORFSpectrum:SWITching
:COUNt
[:SNUMber]
Complex Command
<sp><num values>
?
:NUMBer
<sp><num values>
?
:FREQuency
[:OFFSet]
[<sp><comma sep-
arated num vales>]
[GHZ|MHZ|KHZ|HZ]
?
:POINts? (returns the number
of Offsets turned On)

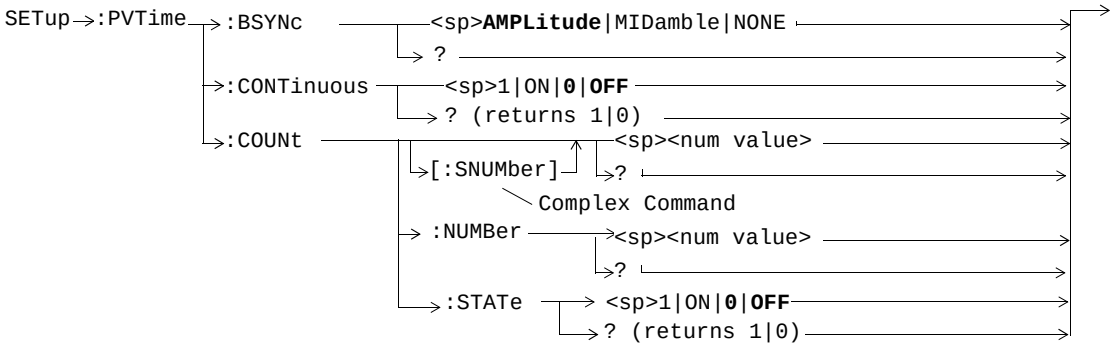

SETup
:ORFSpectrum
:TIMeout
[:STIMe]
Complex Command
<sp><num value>[S|MS]
?
:TIME
<sp><num value>[S|MS]
?
:STATe
<sp>1|ON|0|OFF
? (returns 1|0)
:TRIGger
:DELay
<sp><num value>[S|MS|US|NS]
?
:SOURce
<sp>AUTO|IMMediate|PROTocol|RISE
?

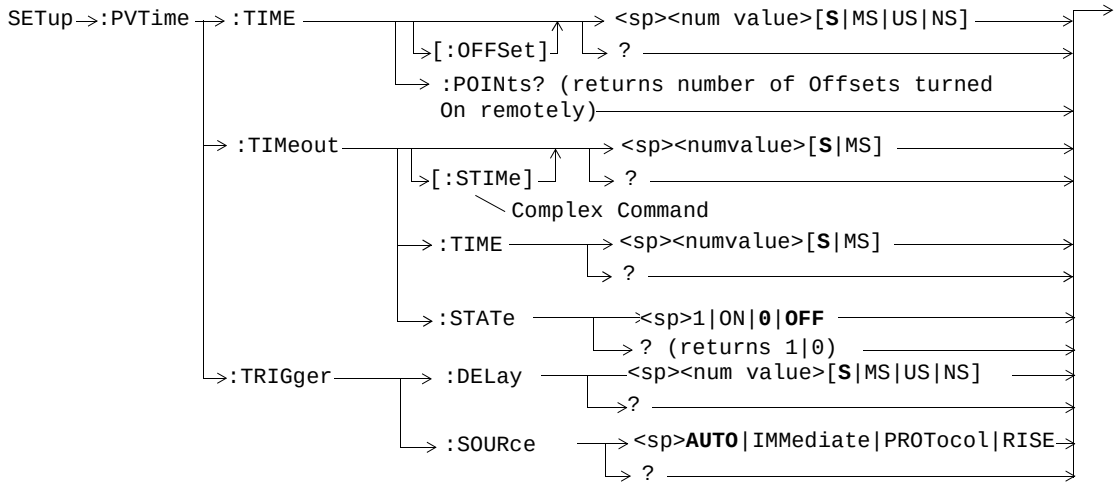
SETup:PFERror



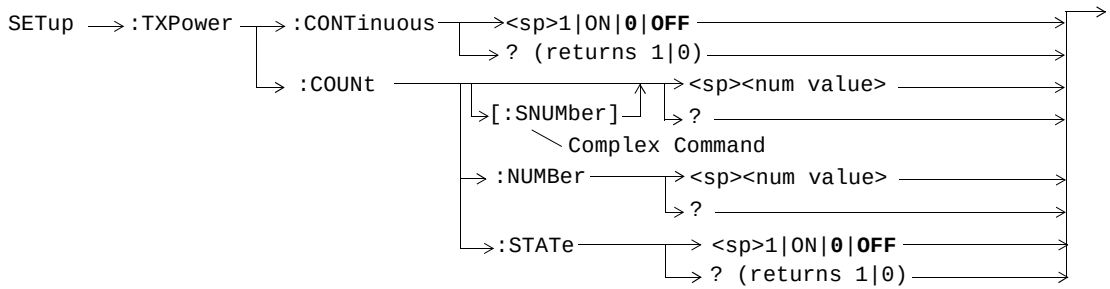

SETup
:PFERror
:TIMeout
[:STIMe]
Complex Command
<sp><num value>[S|MS]
?
:TIME
<sp><num value>[S|MS]
?
:STATe
<sp>1|ON|0|OFF
? (returns 1|0)
:TRIGger
:DELay
<sp><num value>[S|MS|US|NS]
?
:SOURce
<sp>AUTO|IMMediate|PROTocol|RISE
?
:QUALifier
<sp>1|ON|0|OFF
? (returns 1|0)

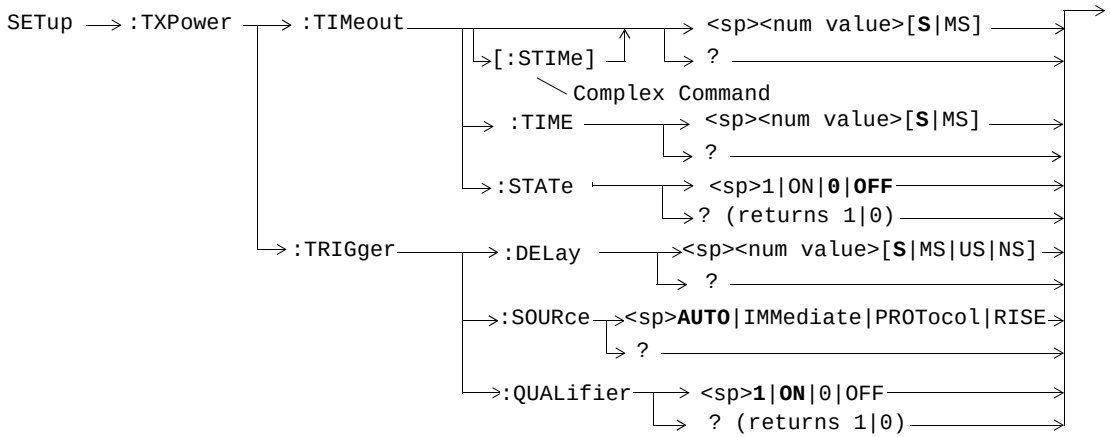
SETup:PVTime



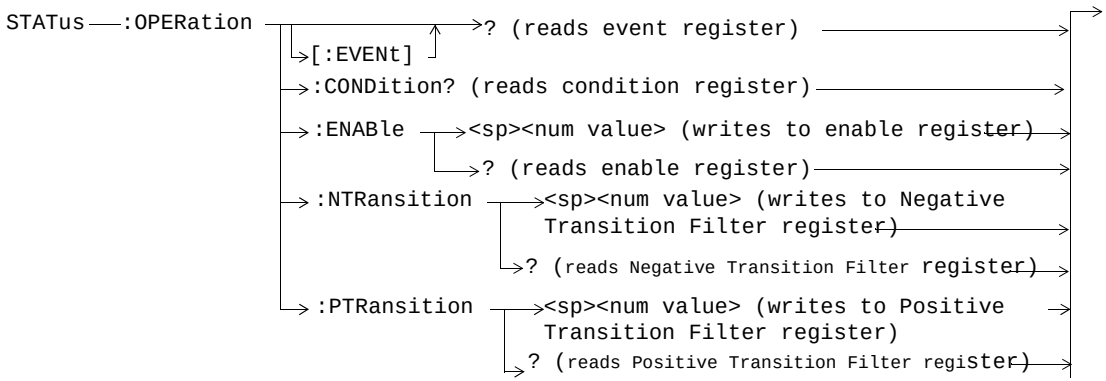

SETup
:PVTime
:TIME
[:OFFSet]
<sp><num value>[**S**|MS|US|NS]
?
:POINts? (returns number of Offsets turned On remotely)
:TIMeout
[:STIMe]
<sp><numvalue>[**S**|MS]
?
Complex Command
:TIME
<sp><numvalue>[**S**|MS]
?
:STATe
<sp>1|ON|**0**|**OFF**
? (returns 1|0)
:TRIGger
:DELay
<sp><num value>[**S**|MS|US|NS]
?
:SOURce
<sp>**AUTO**|IMMediate|PROTocol|RISE
?

SETup:TXPower

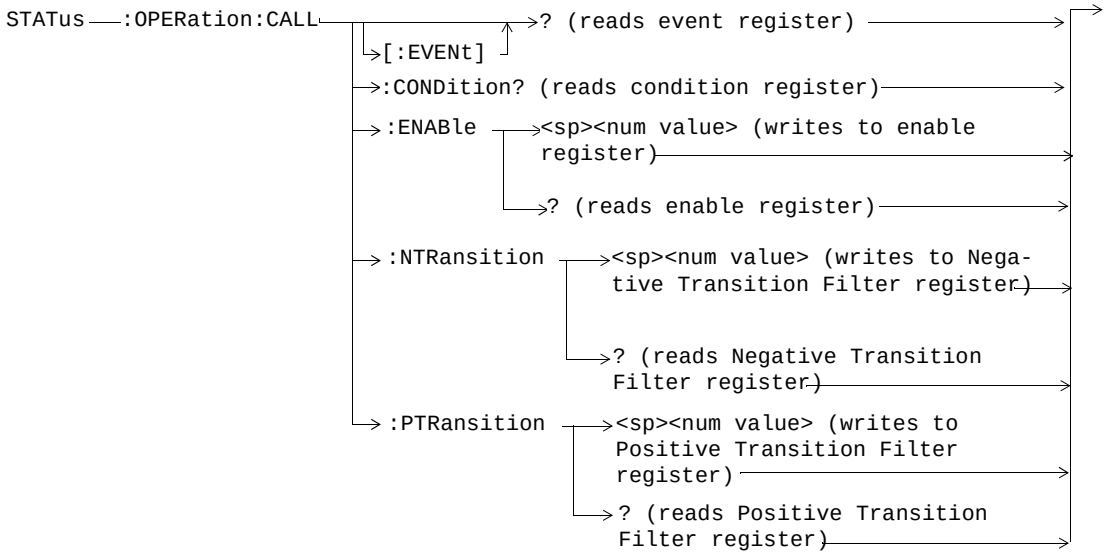



SETup
:TXPower
:TIMeout
<sp><num value>[S|MS]
[:STIMe]
?
Complex Command
:TIME
<sp><num value>[S|MS]
?
:STATe
<sp>1|ON|0|OFF
? (returns 1|0)
:TRIGger
:DELay
<sp><num value>[S|MS|US|NS]
?
:SOURce
<sp>AUTO|IMMediate|PROTocol|RISE
?
:QUALifier
<sp>1|ON|0|OFF
? (returns 1|0)

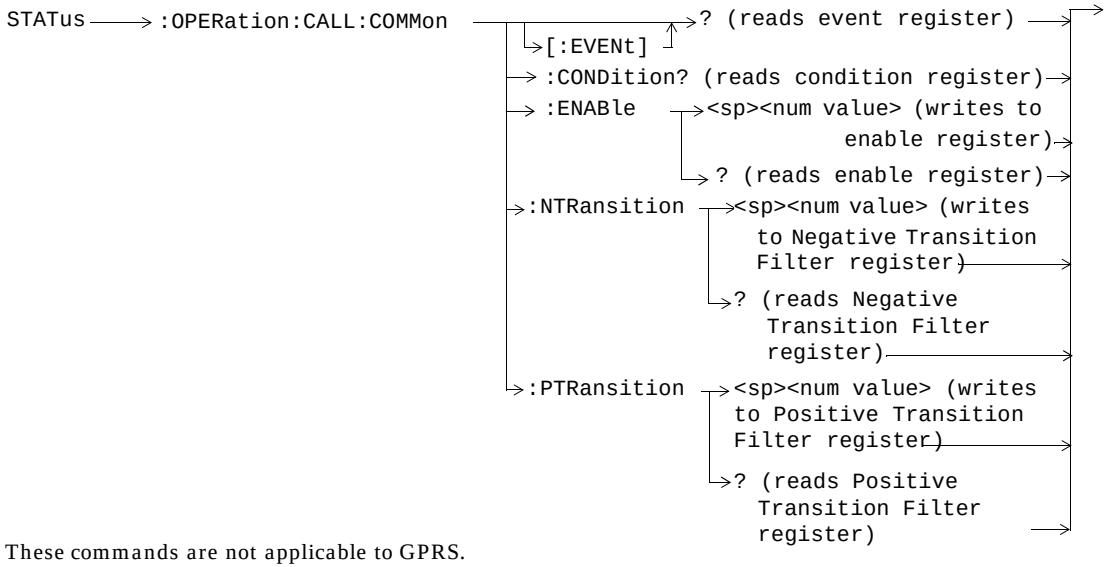
STATus:OPERation



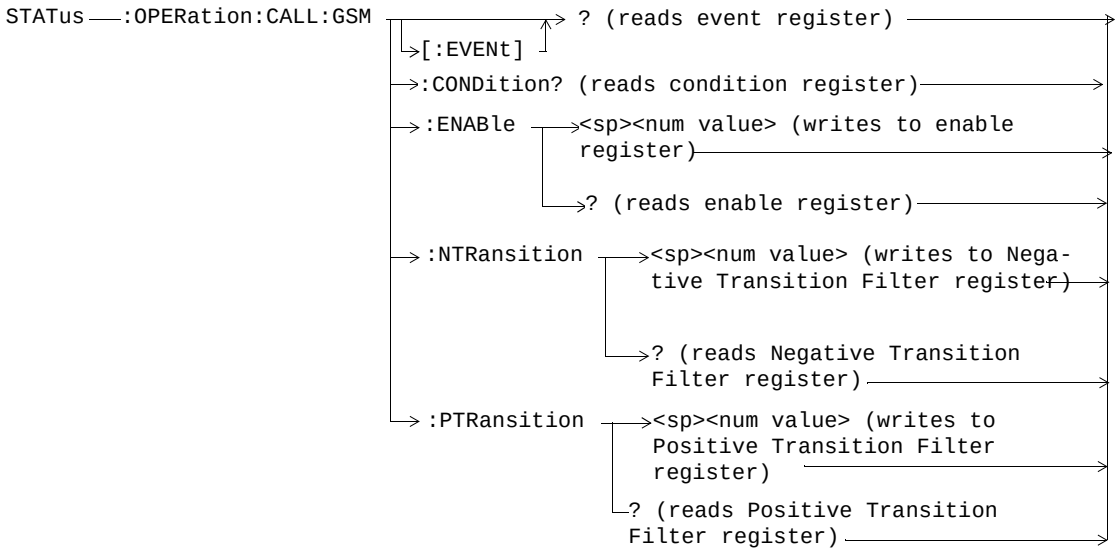
These commands are not applicable to GPRS.



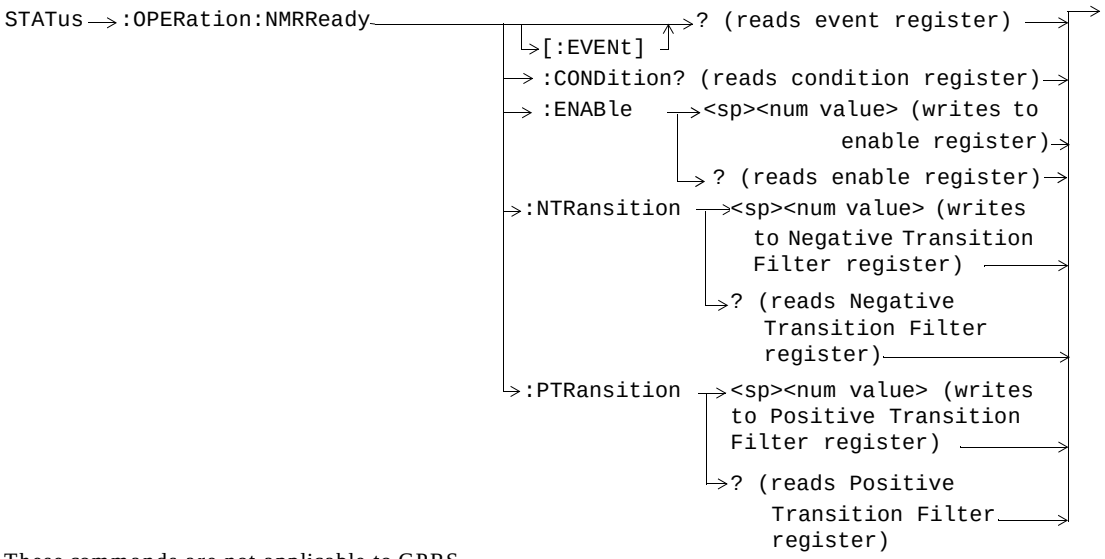
These commands are not applicable to GPRS.



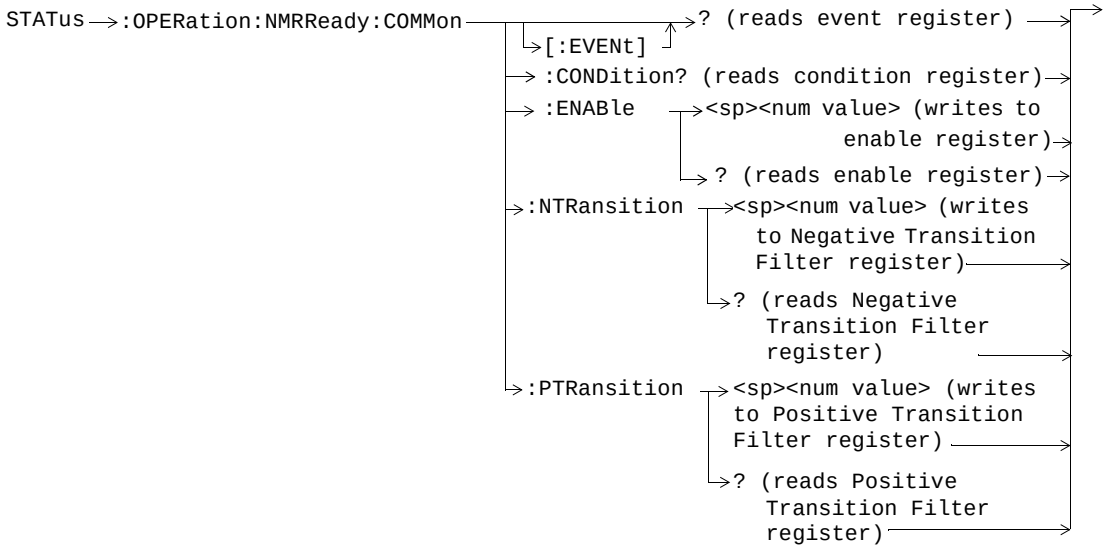
These commands are not applicable to GPRS.



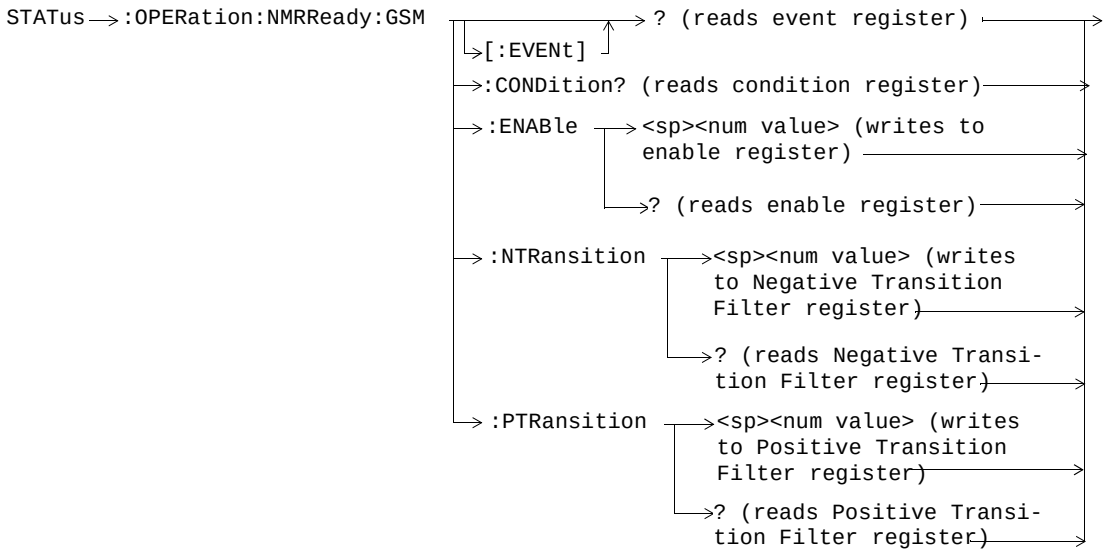
These commands are not applicable to GPRS.



These commands are not applicable to GPRS.

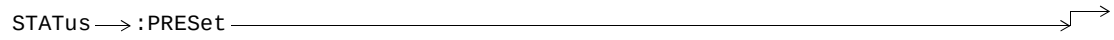


These commands are not applicable to GPRS.



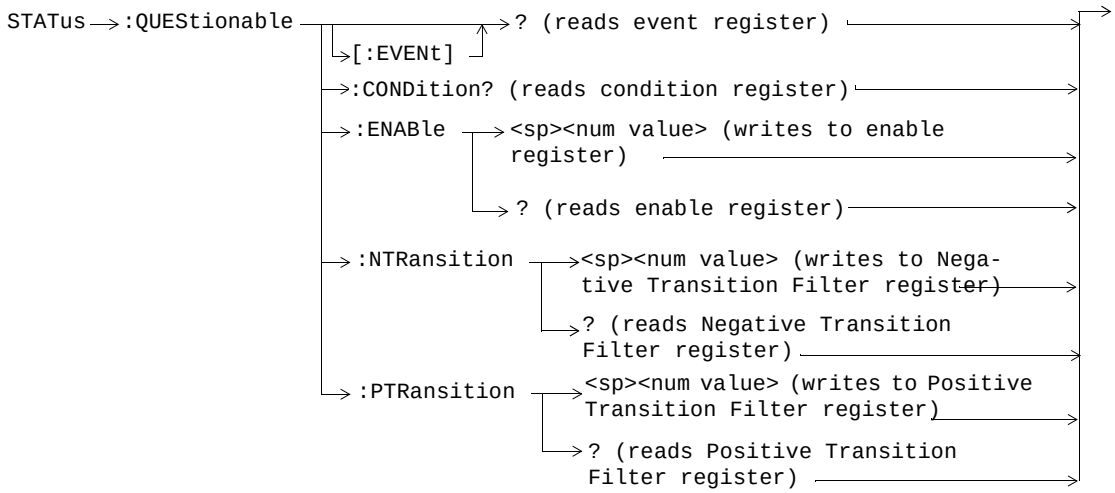
These commands are not applicable to GPRS.

STATus:PRESet

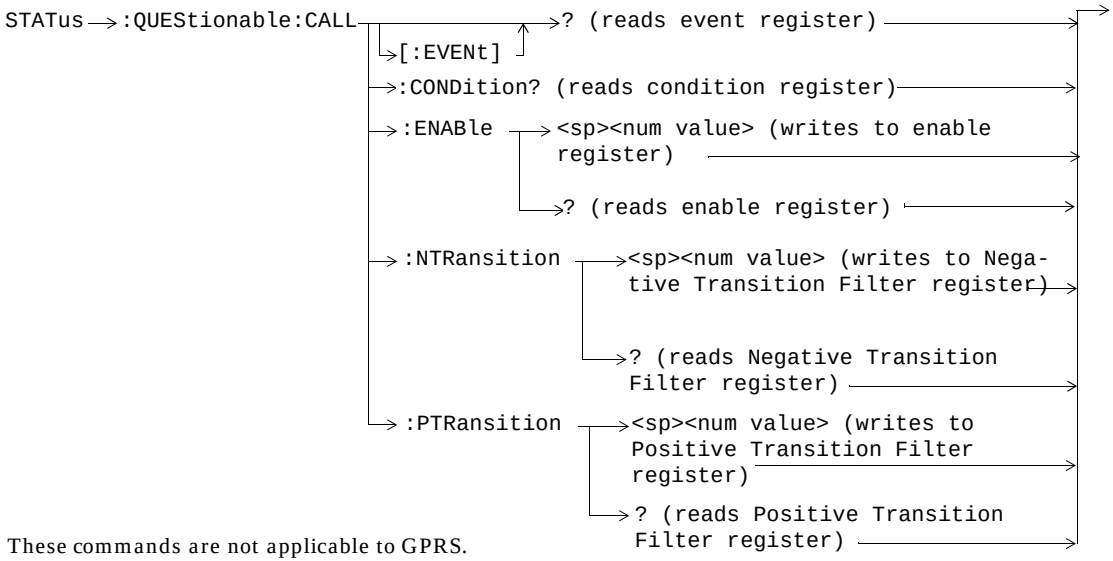


This command is not applicable to GPRS.

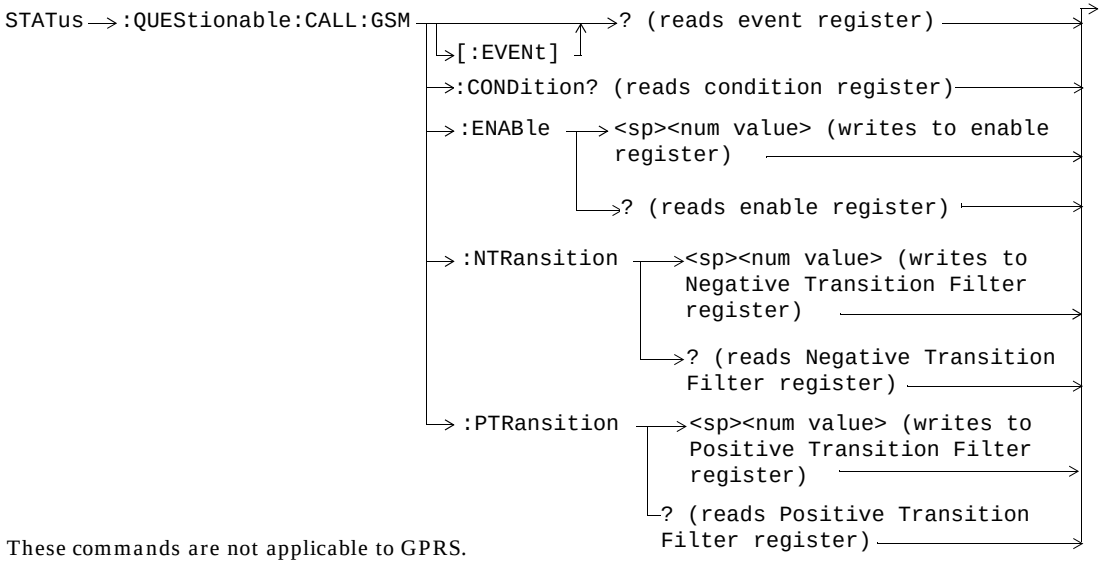
STATus:QUEStionable



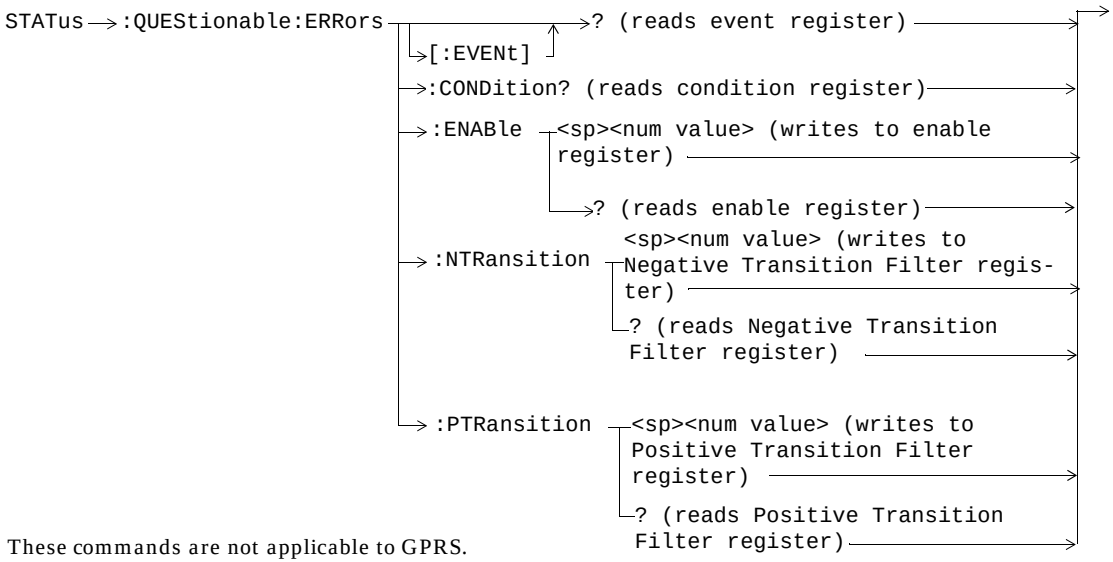
These commands are not applicable to GPRS.



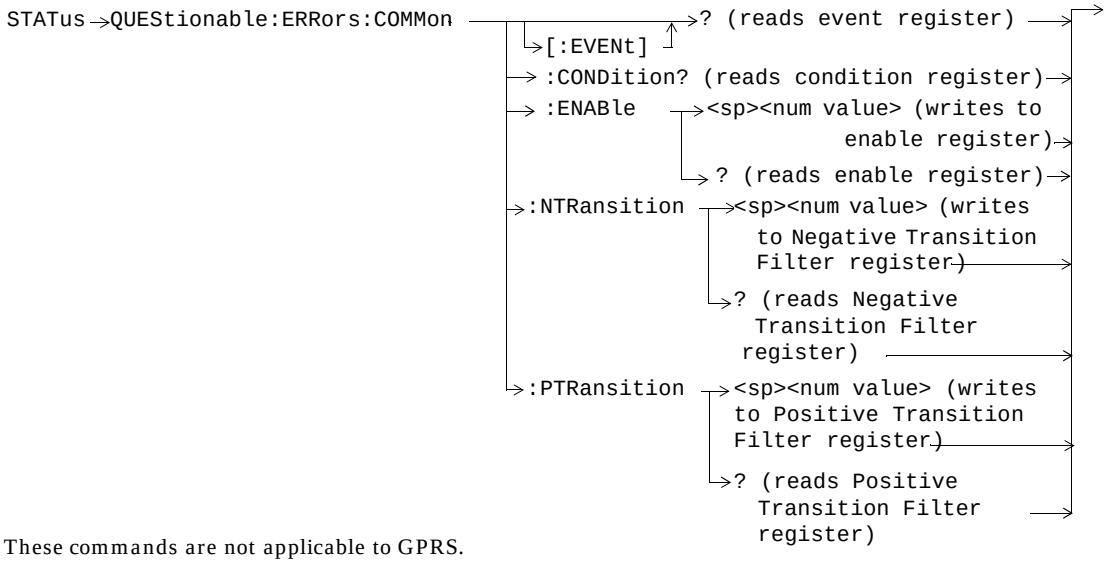
These commands are not applicable to GPRS.



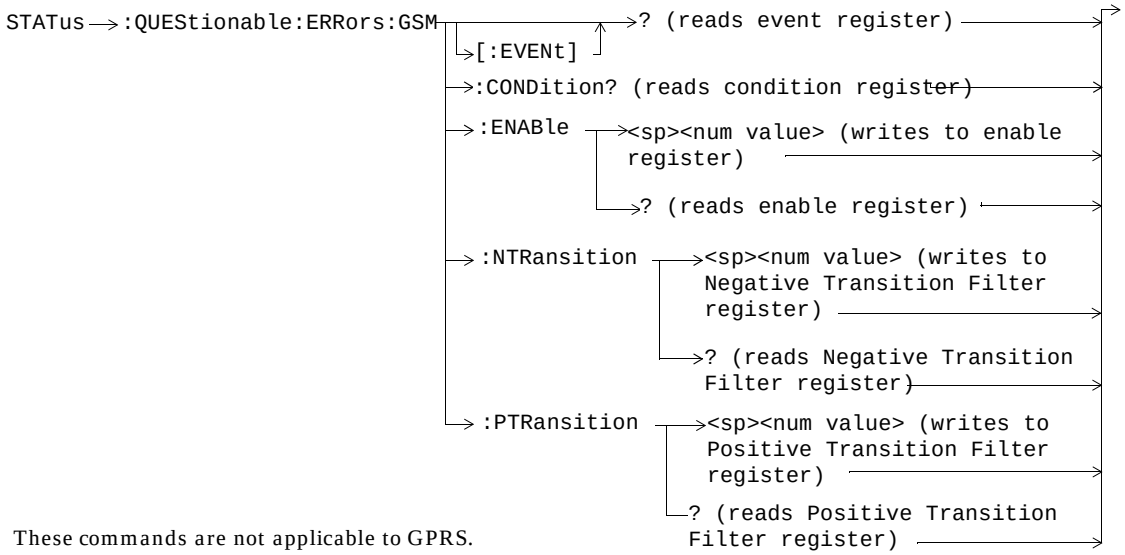
These commands are not applicable to GPRS.



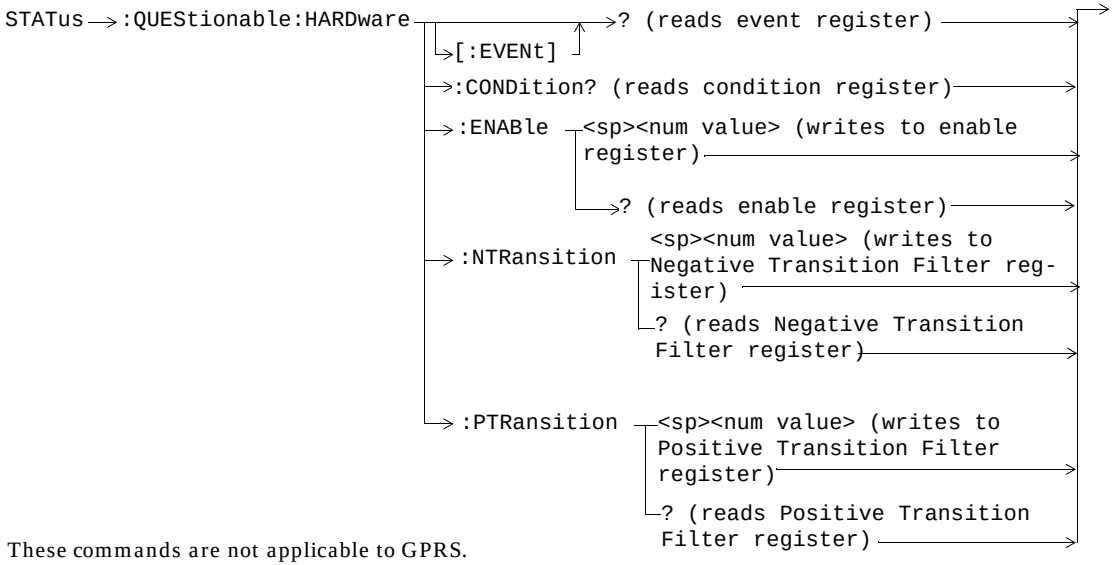
These commands are not applicable to GPRS.



These commands are not applicable to GPRS.



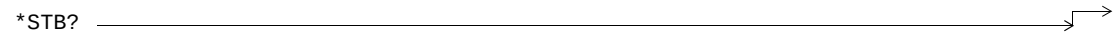
These commands are not applicable to GPRS.



These commands are not applicable to GPRS.

Status Byte Register

***STB?**



Standard Event Status Register

***ESR?**

*ESR? → Reads and clears the Std Event Status Register.

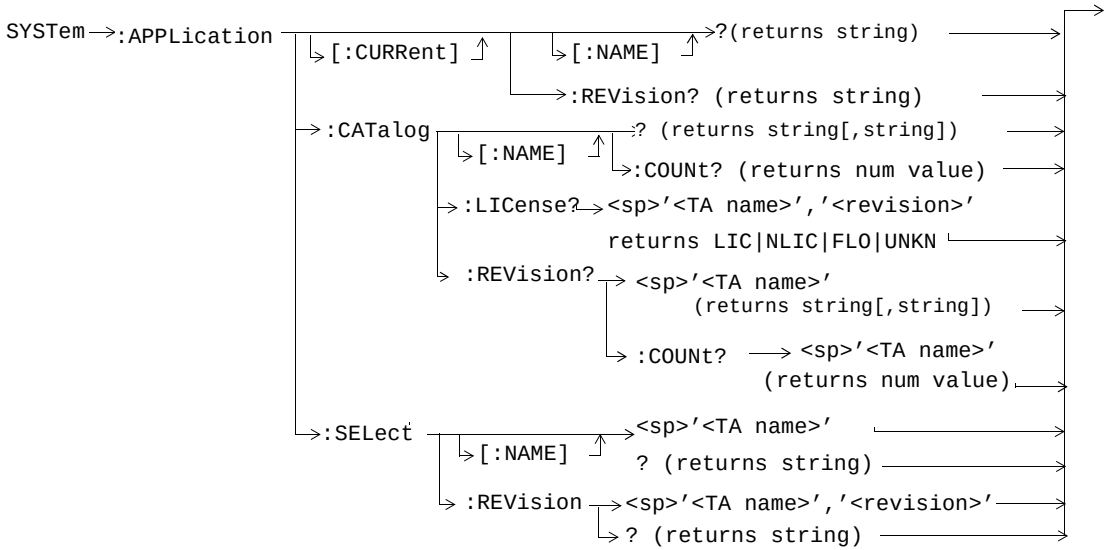
***ESE?**

*ESE? → Reads the Std Event Status Register Enable Register

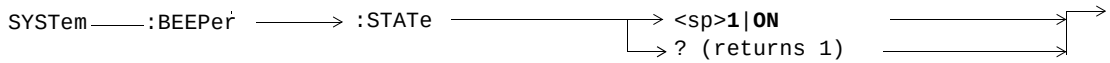
***ESE**

*ESE → Writes to the Std Event Status Register Enable Register

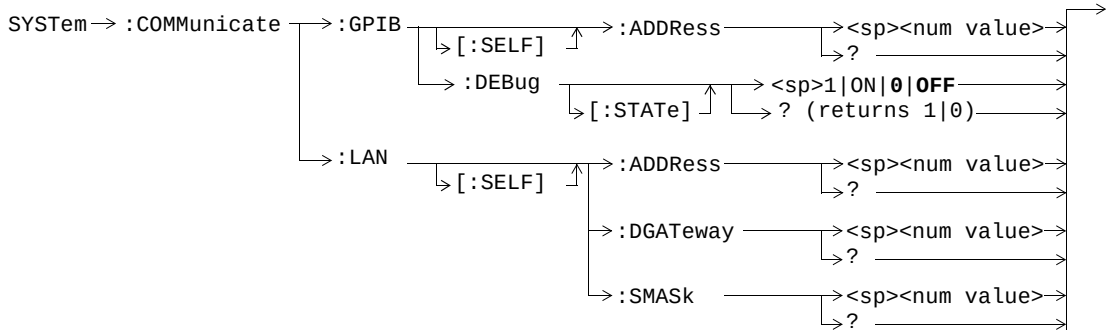
SYSTem:APPLication



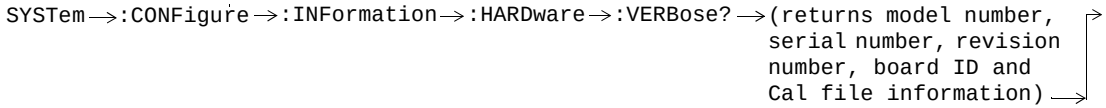
SYSTem:BEEPer



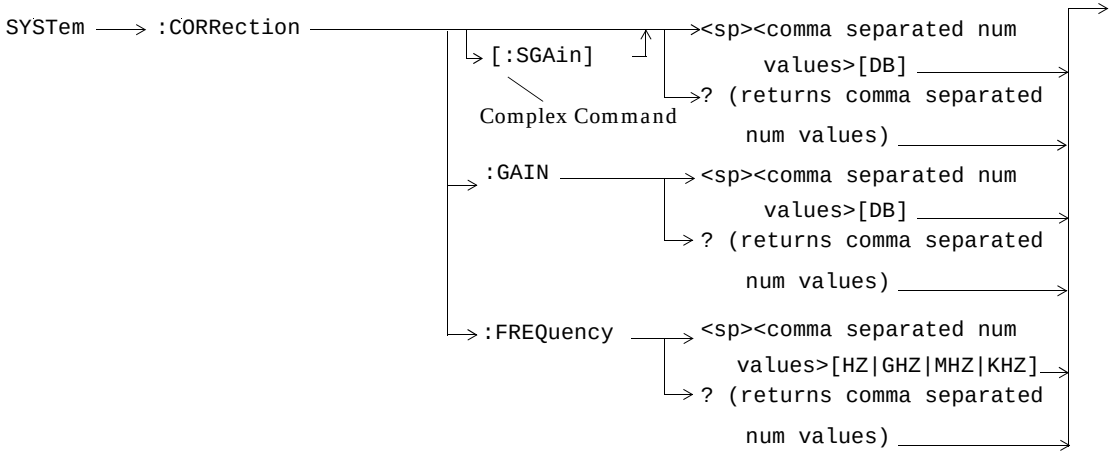
SYSTem:COMMunicate

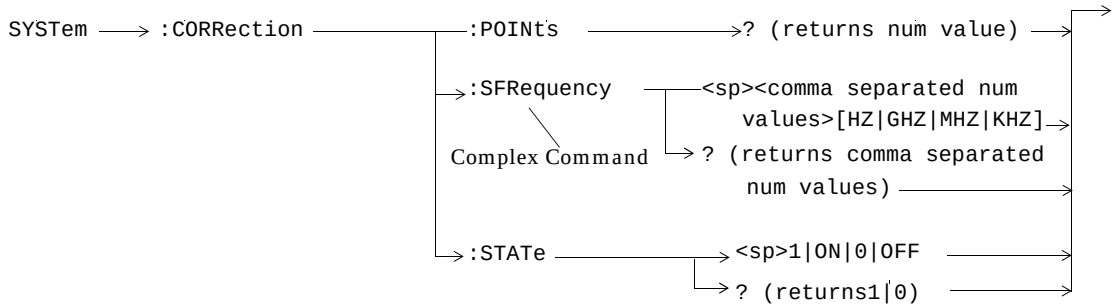


SYSTem:CONFigure

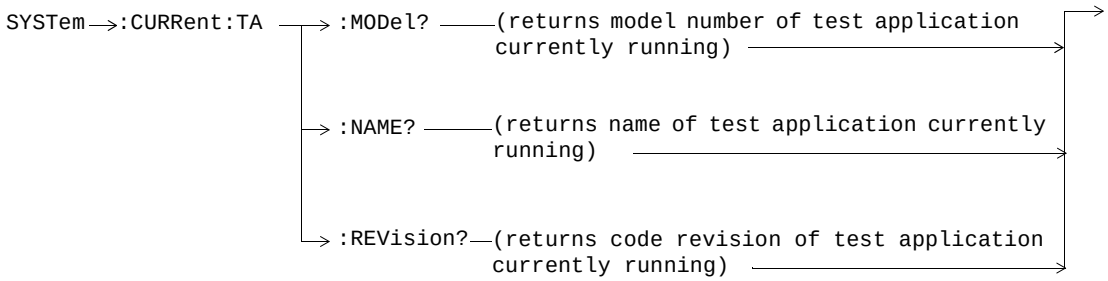


SYSTem:CORRection

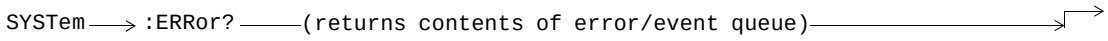



SYSTem
:CORRection
:POINts
? (returns num value)
:SFRequency
<sp><comma separated num values>[HZ|GHZ|MHZ|KHZ]
Complex Command
? (returns comma separated num values)
:STATe
<sp>1|ON|0|OFF
? (returns1|0)

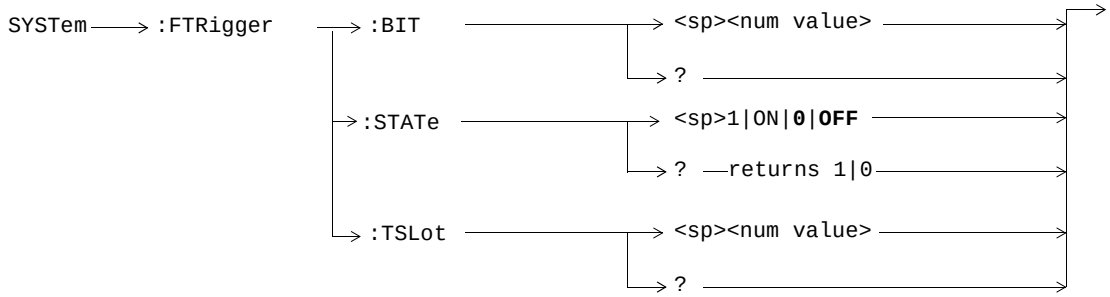
SYSTem:CURRent:TA



SYSTem:ERRor?

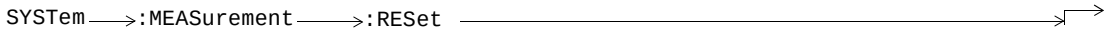


SYSTem:FTRigger



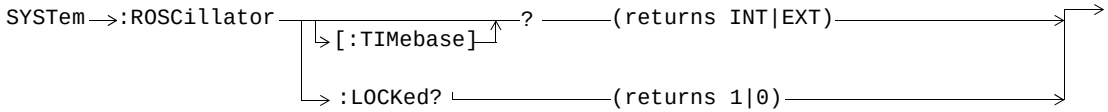
These commands are not applicable to GPRS.

SYSTem:MEASurement

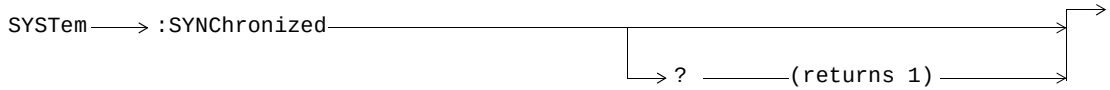


SYSTem:PRESet

SYSTem:ROSCillator



SYSTem:SYNChronized



IEEE 488.2 Common Commands

Description

***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 queryis 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.

***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 for use as an overlapped command.

***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 for use as an overlapped command.

***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 retuned with the query.

***RST**

The *RST, full preset command, is defined in “IEEE Std 488.2-1992”, 10.32. A full preset is also accomplished

using the SYStem:PRESet2 command. A full preset restores the majority of settings to their default values and sets measurement trigger arm to single.

***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 for use as an overlapped command.

Syntax Equivalents