

Reference

Tektronix

**VX4610
SDH/SONET Generator/Receiver
Command List**

070-8974-03

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Refer to the *VX4610 SDH/SONET Generator/Receiver User Manual* for the complete list of valid parameter values.

ABORt

DIAGnostic

```
:BUFFer
  :DATA?
  :INDEx <buffer number>
  :INDEx?
  :SIZE?
  :TYPE
  :TYPE?
  :CLEAR
:EXECute
:LOOP <loop control>
:LOOP?
:RESulTs?
:SElect <diagnostic group>
  ROUTINE
:SElect?
:CALibrate
:CDATe
  :CDATe?
  :CLOCK
  :CLOCK?
TRIButary
  :LOOPBack
  :LOOPBack?
```

INITiate

INPUT1

```
:TELeCom
  :ECL
    :LEVe1?
    :TYPE?
  :LEVe1 <level>
  :LEVe1?
  :OPWR?
  :PVOLTage?
  :RATE <rate>
  :RATE?
  :STATus?
  :TYPE <type>
  :TYPE?
```

INSTRument

```
:COUPling <coupling>
:COUPling?
:TRIButary
  :PORT
  :NRZ
    :INPut
      :DATA
        :POLARity
      :CLOCK
        :EDGE
    :ENAbLe
  :OUTPut
    :DATA:
      :POLARity
    :CLOCK
      :EDGE
  :ECL
    :LEVe1
    :TYPE
```

OUTPUT1

```
:TELeCom
  :ECL
    :LEVe1?
    :TYPE?
  :LEVe1 <level>
  :LEVe1?
  :RATE <rate>
  :RATE?
  :TYPE <type>
  :TYPE?
```

<pre> SENSe :DATA :TELEcom :AUTOsCan :CHANne1 <channel> :CHANne1? :MEASure :ALARm :LAIS? :LFErF? :LOFrame? :LOPointer? :LOSignal? :LPWR? :OOFrame? :PAIS? :PFERF? :ANALySiS? :AESeconds? (SONET only) :BIT? :LCV? :PCV? :SCV? :BBError? (SDH only) :LCV? :LFEBE? :PCV? :PFEBE? :SCV? :BESeconds? (SONET only) :BIT? :LCV? :PCV? :SCV? :DMINutes? (SDH only) :BIT? :EBLock? (SDH only) :LCV? :LFEBE? :PCV? :PFEBE? :SCV? :ECOUnt? :BIT? :LCV? (SONET only) :LFEBE? (SONET only) :PCV? (SONET only) :PFEBE? (SONET only) :SCV? (SONET only) </pre>	<pre> SENSe :DATA :TELEcom :MEASure :ANALySiS? :EFSeconds? :BIT? :LCV? (SONET only) :LFEBE? (SONET only) :PCV? (SONET only) :PFEBE? (SONET only) :SCV? (SONET only) :ESEconds? :BIT? :LCV? :LFEBE? :PCV? :PFEBE? :SCV? :PAESeconds? (SONET only) :BIT? :LCV? :PCV? :SCV? :PBError? (SDH only) :LCV? :LFEBE? :PCV? :PFEBE? :SCV? :PBSeconds? (SONET only) :BIT? :LCV? :PCV? :SCV? :PDMINutes? (SDH only) :BIT? :PEFSeconds? :BIT? :LCV? (SONET only) :LFEBE? (SONET only) :PCV? (SONET only) :PFEBE? (SONET only) :SCV? (SONET only) :PESeconds? :BIT? :LCV? :LFEBE? :PCV? :PFEBE? :SCV? :PSEFseconds? </pre>
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VX4610 SDH/SONET Generator/Receiver Reference

```

SENSe
:DATA
:TELEcom
:MEASure
:ANALysis?
:PSESeconds?
:BIT?
:LCV?
:LFEbE?
:PCV?
:PFEbE?
:SCV?
:PUASeconds?
:BIT?
:LCV?
:LFEbE?
:PCV?
:PFEbE?
:SEFSeconds? (SONET only)
:SESeconds?
:BIT?
:LCV?
:LFEbE?
:PCV?
:PFEbE?
:SCV?
:UASeconds?
:BIT?
:LCV?
:LFEbE?
:PCV?
:PFEbE?

```

```

SENSe
:DATA
:TELEcom
:MEASure
:BUFFer <results buffer>
:AVAIlable?
:BUFFer?
:ERRor?
:ECOUnt?
:BIT?
:LCV?
:LFEbE?
:PCV?
:PFEbE?
:SCV?
:ERATio?
:BIT?
:LCV?
:LFEbE?
:PCV?
:PFEbE?
:SCV?

```

```

SENSe
:DATA
:TELEcom
:MEASure
:ERRor?
:ESEConds?
:BIT?
:LCV?
:LFEbE?
:PCV?
:PFEbE?
:SCV?
:HISTory
:ALARm?
:BEgin <history begin>
:BEgin?
:ERRor?
:ECOUnt?
:BIT?
:LCV?
:LFEbE?
:PCV?
:PFEbE?
:SCV?
:ESEConds?
:BIT?
:LCV?
:PCV?
:SCV?
:POINter?
:PV?
:TPJ?
:SIZE <history size>
:SIZE?
:INFORmation?
:DATE?
:DESCRiption?
:FRAMing?
:INSTRument?
:LENGth?
:MAPPing?
:OPTIons?
:OWNer?
:RATE?
:RESolution?
:SOURce?
:STATus?
:STRUcture?
:TIME?
:USER?

```

```

SENSe
:DATA
:TELEcom
:MEASure
:POINter?
:ICount?
:IPSeconds?
:NDFSeconds?
:NPTR?
:PPTR?

SENSe
:DATA
:TELEcom
:MEASure
:STESTs
:DESCription <description>,<start
prompt>,<end prompt>
:DESCription?
:ENABle <stests enable>
:ENABle?
:RESUlts?
:THREshold <criteria number>,<
type>,<source>,<threshold>
:THREshold? <criteria number>

SENSe
:DATA
:TELEcom
:OVERhead
:DATA? <channel>,<byte>,<offset>
:DROp <dropped overhead>
:DROp?
:POINter?
:PAYLoad
:CUSTom
:BDATA?
:DATA? <custom row>,<custom
column>
:FRAMe <custom frame>
:FRAMe?
:MAPPing <mapping>
:MAPPing?
:PATTern <pattern>
:UBYTE <fixed pattern>
:UBYTE?
:PATTern?
:POVerhead
:DATA? <byte>
:DROp <dropped overhead>
:DROp?
:TRACe?
:SCRambling <signal scrambling>
:SCRambling?
:SOURce <source>
:SOURce?

```

```

SENSe
:DATA
:TELEcom
:STATus?
:PRESet
:STRUcture <input structure>
:STRUcture?
:TEST
:DURation
<days>,<hours>,<minutes>,<seconds>
:DURation?
:STARt
:STATus?
:STIME?
:STOP

SOURce
:CLOCK
:OFFSet
:LVALue <line clock offset>
:LVALue?
:MODE <clock offset mode>
:MODE?
:PVALue <payload clock offset>
:PVALue?
:SOURce <clock source>
:SOURce?
:STATus?

SOURce
:DATA
:TELEcom
:ALARm <alarm>
:ALARm?
:CHANnel <channel>
:CHANnel?
:ERRor
:ENABle <error rate state>
:ENABle?
:FEBEvalue <FEBE value>
:FEBEvalue?
:IMMediate
:MASK <error mask>
:MASK?
:RATE <error rate>
:RATE?
:TYPE <error type>
:TYPE?
:FAILure
:TYPE <failure>
:TYPE?
:ICHannels <inactive channel>,<pattern>
:ICHannels? <inactive channel>

```

```

SOURCE
:DATA
:TELEcom
:OVERhead
:ALLData <channel>,<offset>,<A1>,
  <A2>,<C1>,<E1>,<F1>,<D1>,<D2>,
  <D3>,<K1>,<K2>,<D4>,<D5>,<D6>,
  <D7>,<D8>,<D9>,<D10>,<D11>,<D12>,
  <S1/Z1>,<M1/Z2>,<E2>
:ALLData? <channel>,<offset>
:APS <APS value>
:APS?
:DATA <channel>,<byte>,<offset>,
  <value>
:DATA? <channel>,<byte>,<offset>
:INSert <insert>
:INSert?
:PRESet

```

```

SOURCE
:DATA
:TELEcom
:PAYLOAD
:CUStom
:BDATA <custom frame data>
:BDATA?
:DATA <custom row>,<custom
  column>,<byte value>
:DATA? <custom row>,<custom
  column>
:FRAME <custom frame>
:FRAME?
:LENGth <custom length>
:LENGth?
:PRESet <preset pattern>
  :UWORD <user pattern>
  :UWORD?
:MAPPing <mapping>
:MAPPing?
:PATTern <pattern>
  :UBYTE <fixed pattern>
  :UBYTE?
:PATTern?

```

```

SOURCE
:DATA
:TELEcom
:POINter
:ACTion
:DIRectioN <direction>
:DIRectioN?
:MODE <mode>
:MODE?
:NBURst <pointer burst number>
:NBURst?
:NDFLag <NDF state>
:NDFLag?
:RATE <rate>

```

```

SOURCE
:DATA
:TELEcom
:POINter
:RATE?
:SBITs <pointer sbits>
:SBITs?
:VALue <pointer value>
:VALue?
:SEQuence
  :ANOMaly
  :BTIME?
  :NTIME?
:CONTRol <pointer seq control>
:CONTRol?
:CPERiod <pointer seq init>
  :LENGth?
:CPERiod?
:DIRectioN <pointer seq direction>
:DIRectioN?
:IPERiod <pointer seq init>
  :LENGth?
:IPERiod?
:RATE <pointer seq rate>
:RATE?
:STATus?
:TYPE <pointer seq type>
:TYPE?

```

```

SOURCE
:DATA
:TELEcom
:POVerhead
:DATA <byte>,<value>
:DATA? <byte>
:INSert <path insert>
:INSert?
:PRESet
:TRACe <path trace>
:TRACe?
:SCRambling <output scrambling>
:SCRambling?
:SOURce <source>
:SOURce?
:STRUcture <output structure>
:STRUcture?

```

```

SYSTEM
:DATE <year>,<month>,<day>
:DATE?
:ERRor?
:HEADers <system headers>
:HEADers?
:MODE <system mode>
:MODE?
:OWNer <system owner>

```

SYSTem	:TTLTRG <trigger VXI input>
:OWNer?	:TTLTRG?
:SDEscription <description>	:STATus?
:SDEscription?	TRIGger2
:SERIal <serial number>	:SOURce <trigger source>
:SERIal?	:SOURce?
:SET?	:TTLTRG <trigger VXI input>
:TIME <hour>,<minute>,<second>	:TTLTRG?
:TIME?	
:USER <operator name>	*CLS
:USER?	*ESE <decimal value>
:VERBose <system verbose>	*ESE?
:VERBose?	*ESR?
	*IDN?
	*LRN?
	*OPC
	*OPC?
	*OPT?
	*RCL <buffer number>
	*RST
	*SAV <buffer number>
	*SRE <decimal value>
	*SRE?
	*STB?
	*TST?
	*WAI

TRIGger	
:IMMediate	
:POStion <trigger position>	
:POStion?	
:SENSe	
:FPPolarity <trigger fpanel polarity>	
:FPPolarity?	
:TPOLarity <trigger TTL polarity>	
:TPOLarity?	
:SOURce <trigger source>	
:SOURce?	
:SENSe <trigger sense>	
:SENSe?	

The following commands and queries are valid for Option 22 (DS1/DS3 Add/Drop/Test) Option 36 (2, 34, and 140 Mb/s Add/Drop/Test), and Option 58.

INPUT2

- :TELeom
- :LEVe1 <trib1 input level>
- :LEVe1?
- :STATus?
- :TERMinator <trib1 input termin>
- :TERMinator?

INPUT3

- :TELeom
- :LEVe1 <trib2 input level>
- :LEVe1?
- :RATE <trib2 input rate>
- :RATE?
- :STATus?

OUTPUT2

- :TELeom
- :CODE <trib1 output code>
- :CODE?
- :TERMinator <trib1 output termin>
- :TERMinator?

OUTPUT3

- :TELeom
- :RATE <trib2 output rate>
- :RATE?
- :CODE <linecode>
- :CODE?

SENSe

- :DATA
- :TELeom
- :MEASure
- :ALARm?
- :VTAIS?
- :VTFERF?
- :VTLOM?
- :VTLOP?

VX4610 SDH/SONET Generator/Receiver Reference

```

SENSE
:DATA
:TELEcom
:MEASure
:ANALysis?
:AESeconds? (DS1/DS3 only)
:VTBIP?
:BBError? (PDH only)
:VTBIP?
:VTFEBE?
:BESeconds? (DS1/DS3 only)
:VTBIP?
:EBLock? (PDH only)
:VTBIP?
:VTFEBE?
:ECOUnt? (DS1/DS3 only)
:VTBIP?
:VTFEBE?
:EFSeconds? (DS1/DS3 only)
:VTBIP?
:VTFEBE?
:ESEConds?
:VTBIP?
:VTFEBE?
:PAESeconds? (DS1/DS3 only)
:VTBIP?
:PBError? (PDH only)
:VTBIP?
:VTFEBE?
:PBSeconds? (DS1/DS3 only)
:VTBIP?
:PEFSeconds? (DS1/DS3 only)
:VTBIP?
:VTFEBE?
:PESeconds?
:VTBIP?
:VTFEBE?
:PSESeconds?
:VTBIP?
:VTFEBE? (PDH only)
:PUASeconds?
:VTBIP?
:VTFEBE?
:SESeconds?
:VTBIP?
:VTFEBE? (PDH only)
:UASeconds?
:VTBIP?
:VTFEBE?

```

```

SENSE
:DATA
:TELEcom
:MEASure
:ERRor?
:ECOUnt?
:VTBIP?
:VTFEBE?
:ERATio?
:VTBIP?
:VTFEBE?
:ESEConds?
:VTBIP?
:VTFEBE?
:POINter?
:VTICOUnt?
:VTIPSeconds?
:VTNDFSeconds?
:VTNPTR?
:VTPPTR?

SENSE
:DATA
:TELEcom
:MEASure
:TRIButary
:ALARm?
:AIS?
:IDLE? (DS3 only)
:LOFrame?
:LOPS?
:LOSignal?
:RAI? (PDH only)
:YELlow? (DS1/DS3 only)
:ANALysis
:G821? (PDH only)
:DMINutes?
:ECOUnt?
:EFSeconds?
:ESEConds?
:PDMinutes?
:PEFSeconds?
:PESeconds?
:PSESeconds?
:PUASeconds?
:SESeconds?
:UASeconds?

```

```

SENSe
:DATA
:TELeCom
:MEASure
:TRIButary
:ANALysis
:M2100? (PDH only)
:IN?
:EFSeconds?
:ESEConds?
:PEFSeconds?
:PESeconds?
:PSESeconds?
:PUASeconds?
:SESeconds?
:UASSeconds?
:OUT?
:EFSeconds?
:ESEConds?
:PEFSeconds?
:PESeconds?
:PSESeconds?
:PUASeconds?
:SESeconds?
:UASSeconds?
:T1M1? (DS1/DS3 only)
:BIT?
:AESeconds?
:BESeconds?
:ECOUnt?
:EFSeconds?
:ESEConds?
:PAESeconds?
:PBESeconds?
:PEFSeconds?
:PESeconds?
:PSESeconds?
:PUASeconds?
:SESeconds?
:UASSeconds?
:PATH?
:AESeconds?
:BESeconds?
:ECOUnt?
:EFSeconds?
:ESEConds?
:PAESeconds?
:PBESeconds?
:PEFSeconds?
:PESeconds?
:PSESeconds?
:PUASeconds?
:SESeconds?
:UASSeconds?

```

```

SENSe
:DATA
:TELeCom
:MEASure
:TRIButary
:ERRor?
:ECOUnt?
:BIT?
:CRC?
:FRAME?
:PARITY? (DS1/DS3 only)
:ERATio?
:BIT?
:CRC?
:FRAME?
:PARITY? (DS1/DS3 only)
:ESEConds?
:BIT?
:CRC?
:FRAME?
:PARITY? (DS1/DS3 only)

SENSe
:DATA
:TELeCom
:TRIButary
:CHANnel <trib channel>
:CHANnel?
:DROP <trib drop>
:DROP?
:FRAMing <trib framing>
:FRAMing?
:MAPPing <trib mapping>
:MAPPing?
:PATTern <trib pattern>
:UWORD <trib user pattern>
:LENGth <trib user pattern
length>
:LENGth?
:UWORD?
:PATTern?
:POINter?
:POVerhead
:DATA? <byte name>
:TRACe? (SDH/PDH only)
:STATus?

```

<hr/> <p>SOURce :DATA :TELEcom :TRIButary :ADD <trib add> :ADD? :ALARm <trib alarm> :ALARm? :BACKground :PATTern <trib background pattern> :PATTern? :CHANnel <trib channel> :CHANnel? :ERRor <trib error> :ERRor? :FAILure <trib failure> :FAILure? :FRAMing <trib framing> :FRAMing? :MAPPing <trib mapping> :MAPPing? :PATTern <trib pattern> :UWORD <trib user pattern> :LENGth <trib user pattern length> :LENGth? :UWORD? :PATTern? :POVerhead :DATA <byte name>,<value> :DATA? <byte> :TRAcE? (SDH/PDH only)</p>	<p>SOURce :DATA :TELEcom :TRIButary :POINter :DIRection <trib pointer direction> :DIRection? :MODE <trib pointer mode> :MODE? :NBURst <trib pointer burst> :NBURst? :NDFLag <trib NDF state> :NDFLag? :RATE <trib pointer rate> :RATE? :SEQuence :ANOMaly :BTIME? :NTIME? :CPErIod <pointer seq init> :LENGth? :CPErIod? :DIRection <pointer seq direction> :DIRection? :IPERiod <pointer seq init> :LENGth? :IPERiod? :RATE <pointer seq rate> :RATE? :TYPE <pointer seq type> :TYPE? :VALue <trib pointer value> :VALue?</p>
---	--

