



**DIGITAL RADIO
TEST SYSTEM
8800/8800s**

RCI Manual



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OPERATION MANUAL

DIGITAL RADIO TEST SYSTEM

8800 / 8800S

PUBLISHED BY
VIAVI

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Electromagnetic Compatibility:

For continued EMC compliance, all external cables must be shielded and three meters or less in length.

Nomenclature Statement:

In this manual, 8800 / 8800S, Test Set or Unit refers to the 8800 / 8800S Digital Radio Test System.

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SAFETY FIRST: TO ALL OPERATIONS PERSONNEL

REFER ALL SERVICING OF UNIT TO QUALIFIED TECHNICAL PERSONNEL. THIS UNIT CONTAINS NO OPERATOR SERVICEABLE PARTS.

WARNING: USING THIS EQUIPMENT IN A MANNER NOT SPECIFIED BY THE ACCOMPANYING DOCUMENTATION MAY IMPAIR THE SAFETY PROTECTION PROVIDED BY THE EQUIPMENT.

CASE, COVER OR PANEL REMOVAL

Opening the Case Assembly exposes the operator to electrical hazards that can result in electrical shock or equipment damage. Do not operate this Test Set with the Case Assembly open.

SAFETY IDENTIFICATION IN TECHNICAL MANUAL

This manual uses the following terms to draw attention to possible safety hazards that may exist when operating or servicing this equipment.

CAUTION: THIS TERM IDENTIFIES CONDITIONS OR ACTIVITIES THAT, IF IGNORED, CAN RESULT IN EQUIPMENT OR PROPERTY DAMAGE (E.G., FIRE).

WARNING: THIS TERM IDENTIFIES CONDITIONS OR ACTIVITIES THAT, IF IGNORED, CAN RESULT IN PERSONAL INJURY OR DEATH.

SAFETY SYMBOLS IN MANUALS AND ON UNITS



CAUTION: Refer to accompanying documents. (This symbol refers to specific CAUTIONS represented on the unit and clarified in the text.)



AC OR DC TERMINAL: Terminal that may supply or be supplied with AC or DC voltage.



DC TERMINAL: Terminal that may supply or be supplied with DC voltage.



AC TERMINAL: Terminal that may supply or be supplied with AC or alternating voltage.



HOT SURFACE: This surface may be hot to the touch.

EQUIPMENT GROUNDING PRECAUTION

Improper grounding of equipment can result in electrical shock.

USE OF PROBES

Check the specifications for the maximum voltage, current and power ratings of any connector on the Test Set before connecting it with a probe from a terminal device. Be sure the terminal device performs within these specifications before using it for measurement, to prevent electrical shock or damage to the equipment.

POWER CORDS

Power cords must not be frayed, broken nor expose bare wiring when operating this equipment.

USE RECOMMENDED FUSES ONLY

Use only fuses specifically recommended for the equipment at the specified current and voltage ratings.

INTENDED USE

The 8800 / 8800S is intended for indoor use only and should not be subjected to conditions which cause water or other liquids to collect on the Touch Screen Display.

INTERNAL BATTERY

This unit contains a Lithium Ion Battery, serviceable only by a qualified technician.

CAUTION: SIGNAL GENERATORS CAN BE A SOURCE OF ELECTROMAGNETIC INTERFERENCE (EMI) TO COMMUNICATION RECEIVERS. SOME TRANSMITTED SIGNALS CAN CAUSE DISRUPTION AND INTERFERENCE TO COMMUNICATION SERVICES OUT TO A DISTANCE OF SEVERAL MILES. USERS OF THIS EQUIPMENT SHOULD SCRUTINIZE ANY OPERATION THAT RESULTS IN RADIATION OF A SIGNAL (DIRECTLY OR INDIRECTLY) AND SHOULD TAKE NECESSARY PRECAUTIONS TO AVOID POTENTIAL COMMUNICATION INTERFERENCE PROBLEMS.

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PREFACE

SCOPE

This Manual contains Instructions for operating the 8800 / 8800S through a remote interface. It is strongly recommended that the programmer be thoroughly familiar with the operational functions of the Unit and this manual before attempting to remotely configure the 8800 / 8800S.

ORGANIZATION

The Manual is composed of the following Chapters:

CHAPTER 1 - REMOTE OPERATION CONFIGURATION

Describes how to configure the 8800 / 8800S for remote operation.

CHAPTER 2 - REMOTE OPERATION COMMANDS

Identifies and explains the Remote Operation commands.

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CHAPTER 1 - REMOTE OPERATION CONFIGURATION

1-1. GENERAL

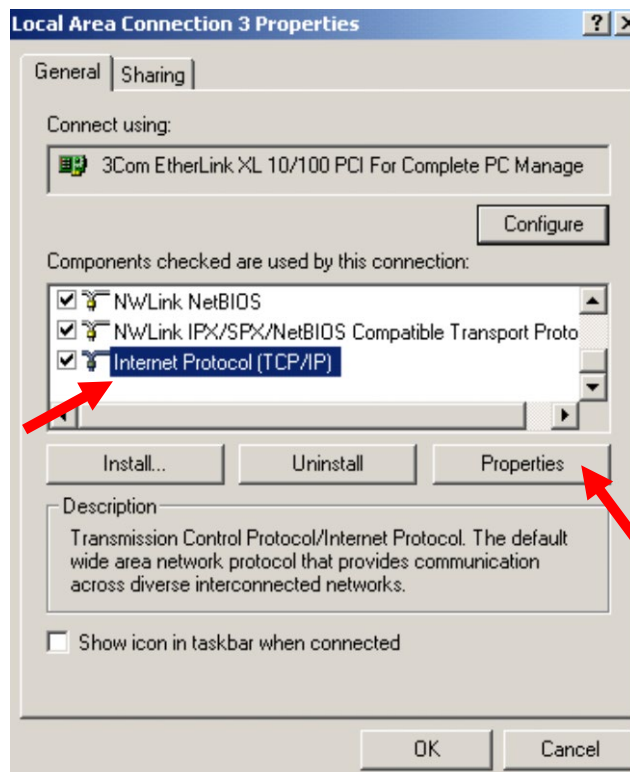
The 8800 / 8800S can be controlled through a serial interface.

1-2. REMOTE OPERATION CONFIGURATION

The 8800 / 8800S can be configured for remote operation using an Ethernet connection.

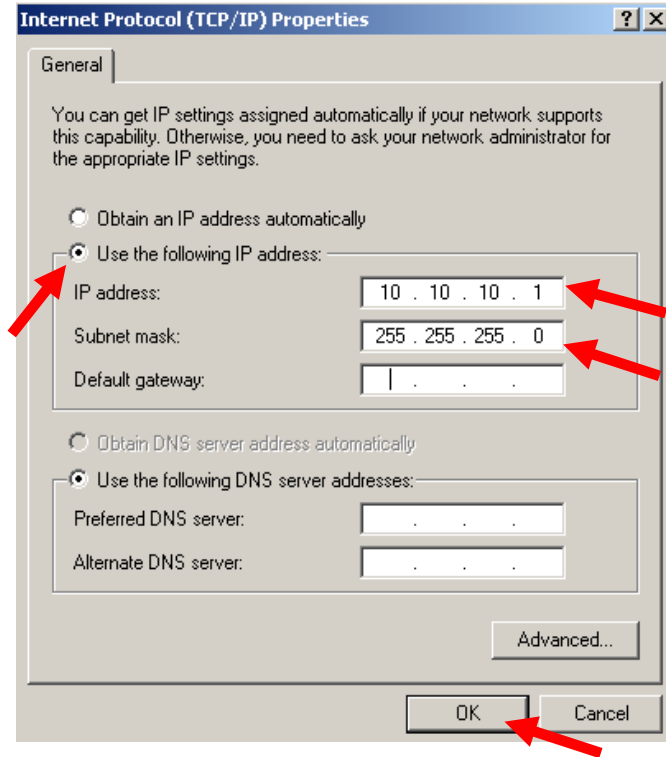
This is an example configuration for a static address on the PC utilizing an Ethernet Crossover Cable.

1. On the PC, select the Internet Protocol (TCP/IP). Select 'Properties.'

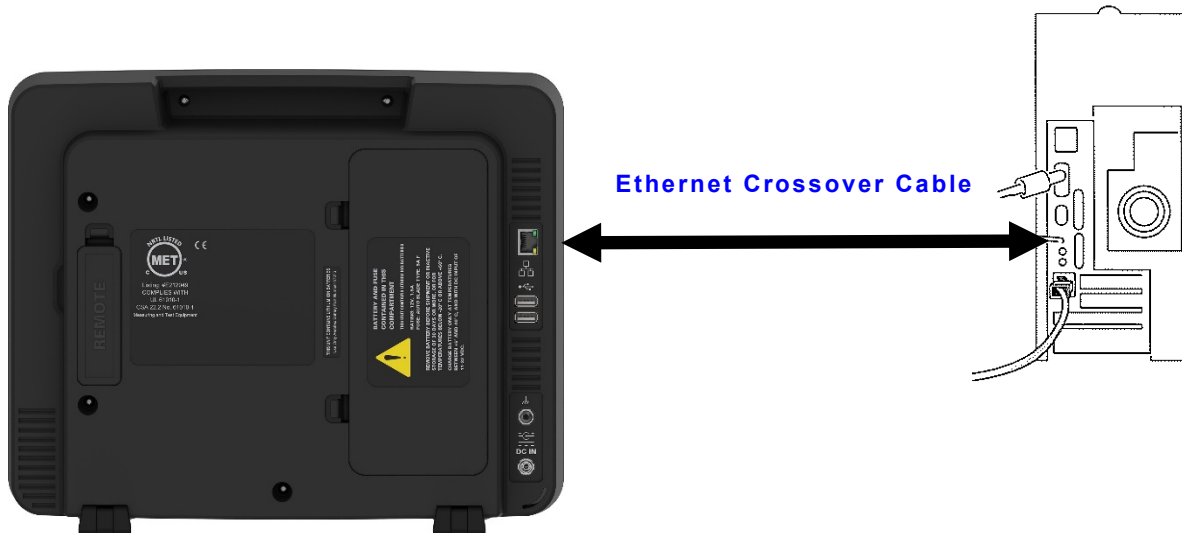


1-2. REMOTE OPERATION CONFIGURATION (cont)

2. Select 'Use the following IP address' and set the IP Address to " 10 10 10 1 " and the Subnet Mask to " 255 255 255 0." Select "OK."

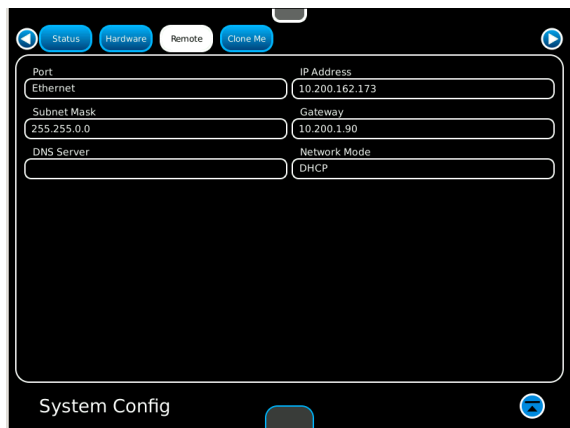
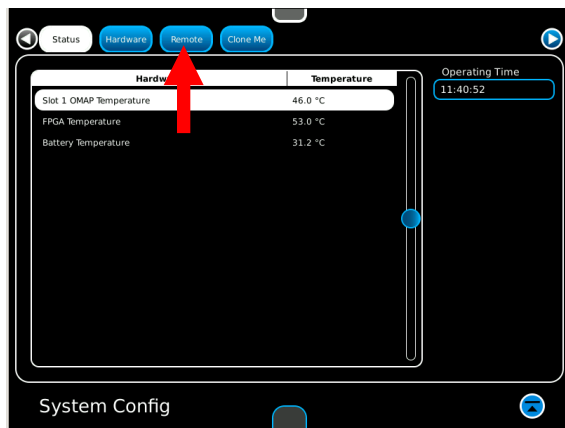
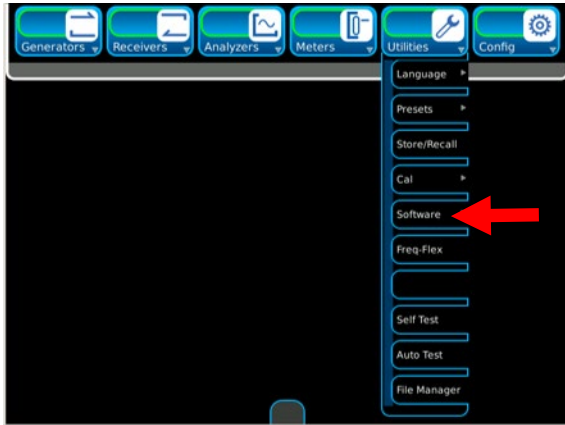


3. Connect Ethernet Crossover Cable to the 8800 / 8800S ETHERNET Connector and the Ethernet Connector on the PC.



1-2. REMOTE OPERATION CONFIGURATION (cont)

4. Select the Utilities Function Tab to display the Utilities Dropdown selections. Select the “Software” icon to display the Software extended icons. Select the “System” icon to display the System Tile Window. Select the Remote icon.



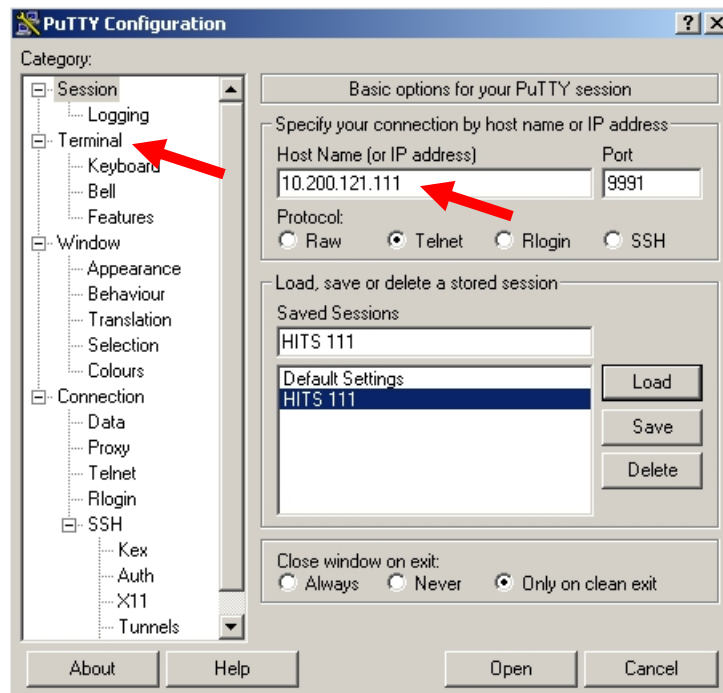
5. Select the following field settings:

Port	Ethernet
IP Address	10.10.10.193
Subnet Mask	255.255.0.0
Network Mode	Static IP

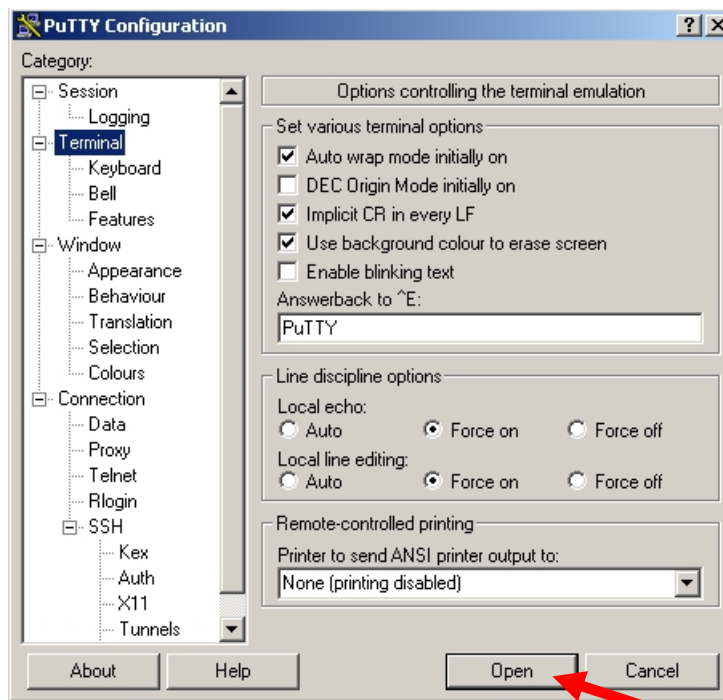
6. Open the ‘Command Shell’ on the PC and ping the IP address of the PC (10 10 10 1) to test the connection. Ping the IP address of the 8800 / 8800S (10 10 10 193) to test the connection.

1-2. REMOTE OPERATION CONFIGURATION (cont)

7. Open remote program (PuTTY) and set the IP Address to “ 10 10 10 193 ” Select ‘Terminal.’

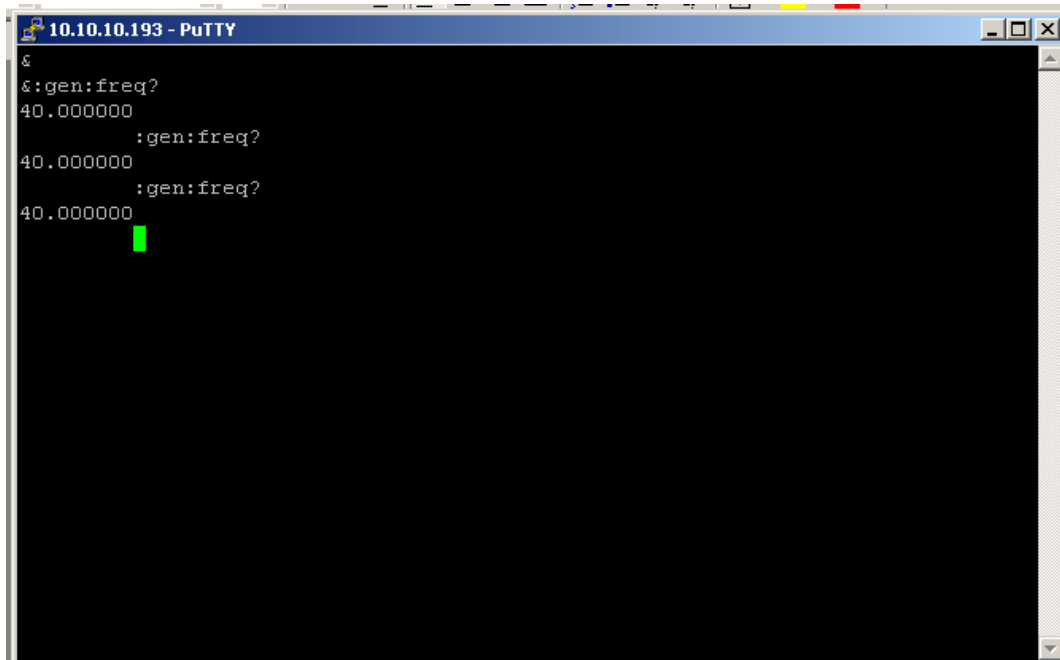


8. Set the fields as shown and select “Open.”



1-2. REMOTE OPERATION CONFIGURATION (cont)

9. The Remote Window is displayed on the PC. Remote commands can now be issued to the 8800 / 8800S.



```
10.10.10.193 - PuTTY
&
&:gen:freq?
40.000000
      :gen:freq?
40.000000
      :gen:freq?
40.000000
      █
```

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CHAPTER 2 - REMOTE OPERATION COMMANDS

2-1. GENERAL

All commands and data are printable ASCII characters.

Commands can be entered in lowercase, uppercase or a combination of uppercase and lowercase letters.

All commands must be terminated in some manner. The commands that are written to the 8800 / 8800S must be terminated with a Carriage Return/Line Feed and EOI asserted on the last byte.

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2-2. REMOTE OPERATION COMMANDS

AF Counter

:agc:alarm:high:limit <Arg0>
:agc:alarm:high:limit?

This command sets/returns the Alarm high limit value.

Numeric/Return: Arg0
 15.0 to 20000.0

:agc:alarm:high:state <Arg0>
:agc:alarm:high:state?

This command sets/returns the Alarm high limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:agc:alarm:low:limit <Arg0>
:agc:alarm:low:limit?

This command sets/returns the Alarm low limit value.

Numeric/Return: Arg0
 15.0 to 20000.0

:agc:alarm:low:state <Arg0>
:agc:alarm:low:state?

This command sets/returns the Alarm low limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:agc:average <Arg0>
:agc:average?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 1 to 99

:agc:filter <Arg0>
:agc:filter?

This command sets/returns the input filter type.

Numeric/Return: Arg0
 0 None
 1 300 Hz LPF
 2 3 kHz LPF
 3 5 kHz LPF
 4 15 kHz LPF
 5 CMESS BPF
 6 CCITT BPF
 7 300 Hz HPF
 8 300 to 3000 Hz BPF
 9 300 to 5000 Hz BPF
 10 300 to 20000 Hz BPF

2-2. REMOTE OPERATION COMMANDS (cont)

AF Counter (cont)

:agc:range?

This command returns the AF Counter range information.

Numeric/Return:	0	Auto
	1	OFF
	2	ON

:agc:range:auto

This command sets the AF Counter autorange state to Auto.

:agc:range>manual

This command sets the AF Counter autorange state to Manual.

:agc:range:state?

This command returns the AF Counter autorange state.

Numeric/Return:	0	Auto
	1	Manual
	2	Manual - Waiting Update

:agc:reading:avg?

This command returns the AF Counter reading averaged value.

Numeric/Return: 0.0 to 20000.0 Hz

:agc:reading:cal?

This command sets/returns the AF Counter reading with no statistics.

Numeric/Return: 0.0 to 20000.0 Hz

:agc:reading:clear

This command clears the AF Counter reading.

:agc:reading:max?

This command returns the AF Counter reading maximum value.

Numeric/Return: 0.0 to 20000.0 Hz

:agc:reading:min?

This command returns the AF Counter reading minimum value.

Numeric/Return: 0.0 to 20000.0 Hz

:agc:resolution <Arg0>

This command sets the resolution for the reading.

Numeric/Return:	<u>Arg0</u>	
	1	1 Hz
	2	0.1 Hz

2-2. REMOTE OPERATION COMMANDS (cont)

AF Counter (cont)

:agc:source <Arg0>
:agc:source?

This command sets/returns the signal source to count.

Numeric/Return: Arg0

0	EXT_AUD_IN_2_AFCOUNTER
1	DEMOD_2_AFCOUNTER
2	MODULATION_2_AFCOUNTER
3	FGEN_2_AFCOUNTER

:agc:state <Arg0>
:agc:state?

This command sets/returns the AF Counter state.

Numeric/Return: Arg0

0	OFF
1	ON

2-2. REMOTE OPERATION COMMANDS (cont)

AGC

:agc:mode <Arg0>
:agc:mode?

This command sets/returns the AGC Mode.

Numeric/Return: Arg0
 0 Manual
 1 Auto

:agc:rfamp_mode <Arg0>
:agc:rfamp_mode?

This command sets/returns the Receiver input preamp state.

Numeric/Return: Arg0
 0 Auto
 1 OFF
 2 ON

:agc:state <Arg0>
:agc:state?

This command sets/returns the Receiver AGC state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:agc:tos <Arg0>
:agc:tos?

This command sets/returns the Top of Scale adjustment for Manual AGC Mode.

Numeric/Return: Arg0
 -90.0 to 10.0 dBm

2-2. REMOTE OPERATION COMMANDS (cont)

Audio Level Meter

:alm:alarm:high:limit <Arg0>
:alm:alarm:high:limit?

This command sets/returns the Alarm high limit value.

Numeric/Return: Arg0
 0.0 to 50.0

:alm:alarm:high:state <Arg0>
:alm:alarm:high:state?

This command sets/returns the Alarm high limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:alm:alarm:low:limit <Arg0>
:alm:alarm:low:limit?

This command sets/returns the Alarm low limit value.

Numeric/Return: Arg0
 0.0 to 50.0

:alm:alarm:low:state <Arg0>
:alm:alarm:low:state?

This command sets/returns the Alarm low limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:alm:average <Arg0>
:alm:average?

This command sets/returns the average size.

Numeric/Return: Arg0
 1 to 99

:alm:coupling <Arg0>
:alm:coupling?

This command sets/returns the signal coupling.

Numeric/Return: Arg0
 0 AC
 1 DC
 2 GND

2-2. REMOTE OPERATION COMMANDS (cont)

Audio Level Meter (cont)

:alm:detector <Arg0>
:alm:detector?

This command sets/returns the detector type.

Numeric/Return:	<u>Arg0</u>	
	0	RMS
	1	PEAK PLUS
	2	PEAK MINUS
	3	PK2PK

:alm:dvm:overload?

This command returns the overload status of DVM Connector.

Numeric/Return:	0	No Overload
	1	Overload

:alm:range:dbuv:auto

This command sets the Audio Level autorange state to Auto.

:alm:range:dbuv>manual

This command sets the Audio Level autorange state to Manual.

:alm:range:dbuv:range?

This command returns the Audio Level range information.

:alm:range:dbuv:state?

This command returns the Audio Level autorange state.

Numeric/Return:	0	Auto
	1	Manual
	2	Manual - Waiting Update

:alm:range:dbm:auto

This command sets the Audio Level autorange state to Auto.

:alm:range:dbm>manual

This command sets the Audio Level autorange state to Manual.

:alm:range:dbm:range?

This command returns the Audio Level range information.

:alm:range:dbm:state?

This command returns the Audio Level autorange state.

Numeric/Return:	0	Auto
	1	Manual
	2	Manual - Waiting Update

:alm:range:mv:auto

This command sets the Audio Level autorange state to Auto.

:alm:range:mv>manual

This command sets the Audio Level autorange state to Manual.

2-2. REMOTE OPERATION COMMANDS (cont)

Audio Level Meter (cont)

:alm:range:mv:range?

This command returns the Audio Level range information.

:alm:range:mv:state?

This command returns the Audio Level autorange state.

Numeric/Return:	0	Auto
	1	Manual
	2	Manual - Waiting Update

:alm:range:volt:auto

This command sets the Audio Level autorange state to Auto.

:alm:range:volt>manual

This command sets the Audio Level autorange state to Manual.

:alm:range:volt:range?

This command returns the Audio Level range information.

:alm:range:volt:state?

This command returns the Audio Level autorange state.

Numeric/Return:	0	Auto
	1	Manual
	2	Manual - Waiting Update

:alm:range:watts:auto

This command sets the Audio Level autorange state to Auto.

:alm:range:watts>manual

This command sets the Audio Level autorange state to Manual.

:alm:range:watts:range?

This command returns the Audio Level range information.

:alm:range:watts:state?

This command returns the Audio Level autorange state.

Numeric/Return:	0	Auto
	1	Manual
	2	Manual - Waiting Update

:alm:reading:avg?

This command returns the Audio Level Meter reading with averaged value.

Numeric/Return: 0.0 to 50.0

:alm:reading:clear

This command clears the meter readings.

:alm:reading:max?

This command returns the Audio Level Meter reading maximum value.

Numeric/Return: 0.0 to 50.0

2-2. REMOTE OPERATION COMMANDS (cont)

Audio Level Meter (cont)

:alm:reading:min?

This command returns the Audio Level Meter reading minimum value

Numeric/Return: 0.0 to 50.0

:alm:reading:val?

This command returns the Audio Level Meter average value.

Numeric/Return: 0.0 to 50.0

:alm:scale <Arg0>

:alm:scale?

This command sets/returns the hardware input scaling for the DVM connector.

Numeric/Return: Arg0

0	2 V max
1	40 V max

:alm:setrelative

This command sets the Audio Level Relative value and changes units to dBr.

:alm:source <Arg0>

:alm:source?

This command sets/returns the input signal selection.

Numeric/Return: Arg0

0	AUD IN
1	DVM

:alm:state <Arg0>

:alm:state?

This command sets/returns the Audio Level Meter state.

Numeric/Return: Arg0

0	Disable
1	Enable

:alm:units <Arg0>

:alm:units?

This command sets/returns the current units setting.

Numeric/Return: Arg0

0	V
1	mV
2	dB μ V
3	dBm
4	W
5	dBr

:alm:zero

:alm:zero?

This command activates/returns the DC offset compensation for the DVM input.

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK

:c4fsk:rx:average:ber <Arg0> <Arg1>
:c4fsk:rx:average:ber?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 0 P25
 1 DMR
 2 dPMR
 3 ARIBT98
 4 NXDN

 Arg1
 1 to 99

:c4fsk:rx:average:carrierfeed <Arg0>
:c4fsk:rx:average:carrierFeed?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 1 to 99

:c4fsk:rx:average:carrierfeed:clear <Arg0>

This command clears the current Freq Error Minimum, Maximum and Average.

:c4fsk:rx:average:carrierfeed:val?

This command returns the current value.

Numeric/Return: 0 Average
 1 Maximum
 2 Mimimum

:c4fsk:rx:average:dev <Arg0> <Arg1>
:c4fsk:rx:average:dev?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 0 P25
 1 DMR
 2 dPMR
 3 ARIBT98
 4 NXDN

 Arg1
 1 to 99

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:rx:average:freq <Arg0> <Arg1>
:c4fsk:rx:average:freq?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

Arg1
 1 to 99

:c4fsk:rx:average:freq2 <Arg0> <Arg1>
:c4fsk:rx:average:freq2?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

Arg1
 1 to 99

:c4fsk:rx:average:freq_err <Arg0> <Arg1>
:c4fsk:rx:average:freq_err?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

Arg1
 1 to 99

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:rx:average:mod_fid <Arg0> <Arg1>
:c4fsk:rx:average:mod_fid?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

Arg1
 1 to 99

:c4fsk:rx:average:pwr <Arg0> <Arg1>
:c4fsk:rx:average:pwr?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

Arg1
 1 to 99

:c4fsk:rx:average:time <Arg0> <Arg1>
:c4fsk:rx:average:time?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

Arg1
 1 to 99

:c4fsk:rx:ber:clear <Arg0>

This command clears the current BER minimum, maximum and average settings.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:rx:berstate <Arg0>

This command sets the ber state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:c4fsk:rx:ber:val?

This command returns the current value.

Numeric/Return: 0 P25
 1 DMR
 2 dPMR
 3 ARIBT98
 4 NXDN

 0 Average
 1 Maximum
 2 Minimum

:c4fsk:rx:chan_id?

This command returns the channel ID (DMR Option).

:c4fsk:rx:config

Configures digital receive. (Must be run after setting P25 State to 1 before taking readings.)

:c4fsk:rx:color_code?

This command returns the color code (DMR Option).

:c4fsk:rx:debug:setburstrate

Sends audio route to console.

:c4fsk:rx:debug:skip

This command sets the frequency.

:c4fsk:rx:debug:skipevm

This command sets the frequency.

:c4fsk:rx:dev:clear <Arg0>

This command clears the current Deviation minimum, maximum and average settings.

Numeric/Return: Arg0
 0 P25
 1 DMR
 2 dPMR
 3 ARIBT98
 4 NXDN

:c4fsk:rx:dev:dmr:val?

This command returns the current value.

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:rx:dev:val?

This command returns the current value.

Numeric/Return:	0	P25
	1	DMR
	2	dPMR
	3	ARIBT98
	4	NXDN
	0	Average
	1	Maximum
	2	Minimum

:c4fsk:rx:dev2:clear <Arg0>

This command clears the current Deviation 2 minimum, maximum and average settings.

Numeric/Return:	<u>Arg0</u>	
	0	P25
	1	DMR
	2	dPMR
	3	ARIBT98
	4	NXDN

:c4fsk:rx:dev2:val?

This command returns the current value.

Numeric/Return:	0	P25
	1	DMR
	2	dPMR
	3	ARIBT98
	4	NXDN
	0	Average
	1	Maximum
	2	Minimum

:c4fsk:rx:dpmr:callid?

This command returns the caller ID.

Numeric/Return:	<u>Arg0</u>
	0x0 to 0xFFFFFFFF

:c4fsk:rx:dpmr:channelcode?

This command returns the channel code.

Numeric/Return:	0 to 63
-----------------	---------

:c4fsk:rx:dpmr:commsformat?

This command returns the communication code.

Numeric/Return:	0 to 3
-----------------	--------

:c4fsk:rx:dpmr:emergencypriority?

This command returns the emergency priority.

Numeric/Return:	0	OFF
	1	ON

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:rx:dpmr:unitid?

This command returns the caller ID.

Numeric/Return: 0x0 to 0xFFFFFFFF

:c4fsk:rx:dump_rec_packets <Arg0> <Arg1>

Dump recorded packets.

Numeric/Return: Arg0

0	Number Packet
1	All

Arg1

0	First Packet
---	--------------

:c4fsk:rx:freq:clear <Arg0>

This command clears the current Frequency minimum, maximum and average settings.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

:c4fsk:rx:freq:val?

This command returns the current value.

Numeric/Return:

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

0	Average
1	Maximum
2	Minimum

:c4fsk:rx:freq2:clear <Arg0>

This command clears the current Frequency 2 minimum, maximum and average settings.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:rx:freq2:val?

This command returns the current value.

Numeric/Return:	0	P25
	1	DMR
	2	dPMR
	3	ARIBT98
	4	NXDN
	0	Average
	1	Maximum
	2	Minimum

:c4fsk:rx:freq_err:clear <Arg0>

This command clears the current Frequency Error minimum, maximum and average settings.

Numeric/Return:	<u>Arg0</u>	
	0	P25
	1	DMR
	2	dPMR
	3	ARIBT98
	4	NXDN

:c4fsk:rx:freq_err:val?

This command returns the current value.

Numeric/Return:	0	P25
	1	DMR
	2	dPMR
	3	ARIBT98
	4	NXDN
	0	Average
	1	Maximum
	2	Minimum

:c4fsk:rx:magerr?

This command returns the Magnitude Error value (DMR Option).

Numeric/Return:	0	Average
	1	Maximum
	2	Minimum

:c4fsk:rx:magerr:clear

This command clears the current Magnitude Error minimum, maximum and average settings. (DMR Option).

:c4fsk:rx:mod_fid:clear <Arg0>

This command clears the current Mod Fidelity minimum, maximum and average settings.

Numeric/Return:	<u>Arg0</u>	
	0	P25
	1	DMR
	2	dPMR
	3	ARIBT98
	4	NXDN

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:rx:mod_fid:val?

This command returns the current value.

Numeric/Return:	0	P25
	1	DMR
	2	dPMR
	3	ARIBT98
	4	NXDN
	0	Average
	1	Maximum
	2	Minimum

:c4fsk:rx:nac:val?

This command returns the current value of Network Access Code.

:c4fsk:rx:nxdn:calltype?

This command returns the Call Type (NXDN Option).

Numeric/Return:	0	Group Call
	1	Individual Call

:c4fsk:rx:nxdn:cipher?

This command returns the NXDN Cipher Type (NXDN Option).

Numeric/Return:	0	None
	1	Scrambled
	2	DES
	3	AES

:c4fsk:rx:nxdn:duplex?

This command returns the NXDN Duplex (NXDN Option).

Numeric/Return:	0	Half
	1	Full

:c4fsk:rx:nxdn:emergency?

This command returns the NXDN Emergency (NXDN Option).

Numeric/Return:	0	OFF
	1	ON

:c4fsk:rx:nxdn:groupdestid?

This command returns the NXDN Group/Destination ID (NXDN Option).

Numeric/Return:	0	65535
-----------------	---	-------

:c4fsk:rx:nxdn:keyid?

This command returns the NXDN Key ID (NXDN Option).

Numeric/Return:	0	to 63
-----------------	---	-------

:c4fsk:rx:nxdn:priority?

This command returns the NXDN Priority (NXDN Option).

Numeric/Return:	0	OFF
	1	ON

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:rx:nxdnrate <Arg0>
:c4fsk:rx:nxdnrate?

This command sets/returns the rate data is transmitted (NXDN Option).

Numeric/Return: Arg0
 0 4600
 1 9600

:c4fsk:rx:nxdn:sourceid?

This command returns the NXDN Source ID (NXDN Option).

Numeric/Return: 0 65535

:c4fsk:rx:p25:algorithmid?

This command returns the P25 Algorithm ID (P25 Option).

Numeric/Return: 0 to 255

:c4fsk:rx:p25:destid?

This command returns the P25 Destination ID (P25 Option).

Numeric/Return: 0 to 65535

:c4fsk:rx:p25:emergency?

This command returns the P25 Emergency (P25 Option).

Numeric/Return: 0 OFF
 1 ON

:c4fsk:rx:p25:keyid?

This command returns the P25 Key ID (P25 Option).

Numeric/Return: 0 to 65535

:c4fsk:rx:p25:linkcontrol?

This command returns the P25 Link Control (P25 Option).

Numeric/Return: 0 Group Call
 1 Individual Call

:c4fsk:rx:p25:mfid?

This command returns the P25 Manufacturer ID (P25 Option).

Numeric/Return: 0 to 255

:c4fsk:rx:p25:serviceoptions?

This command returns the P25 Service Options (P25 Option).

Numeric/Return: 0 to 255

:c4fsk:rx:p25:sourceid?

This command returns the P25 Source ID (P25 Option).

Numeric/Return: 0 to 65535

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:rx:p25:tgid?

This command returns the P25 Talk Group ID (P25 Option).

Numeric/Return: 0 to 65535

:c4fsk:rx:pattern <Arg0> <Arg1>

:c4fsk:rx:pattern?

This command sets/returns the decode pattern.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

Arg1

0	1011 (P25)
1	CaI (P25)
2	0.153 (P25)

0	0.153 (DPMR)
---	--------------

0	1031 (ARIBT98)
1	CaI (ARIBT98)
2	PN9 (ARIBT98)
3	PN15 (ARIBT98)

0	1031 (DMR / NXDN)
1	CaI (DMR / NXDN)
2	0.153 (DMR / NXDN)

:c4fsk:rx:play_capable?

This command returns the given protocol supports playback.

:c4fsk:rx:ptcrate <Arg0>

:c4fsk:rx:ptcrate?

This command sets/returns the rate.

Numeric/Return: Arg0

0	8000
1	16000

:c4fsk:rx:pwr:clear <Arg0>

This command clears the current Power minimum, maximum and average settings.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:rx:pwr:val? <Arg0>,<Arg1>

This command returns the current value.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

Arg1

0	Average
1	Maximum
2	Minimum

:c4fsk:rx:pwr2:clear <Arg0>

This command clears the current Power minimum, maximum and average settings.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

:c4fsk:rx:pwr2:val? <Arg0>,<Arg1>

This command returns the current value.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

Arg1

0	Average
1	Maximum
2	Minimum

:c4fsk:rx:ran?

This command returns the radio access number (NXDN Option).

:c4fsk:rx:record_capable?

This command returns the given protocol supports record.

:c4fsk:rx:record_threshold <Arg0> <Arg1>

:c4fsk:rx:record_threshold?

This command sets/returns the minimum signal power threshold for record.

Numeric/Return: Arg0
 Protocol

Arg1
 Power threshold in dBm

REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:rx:recplay_reset

Resets to idle.

:c4fsk:rx:recplay_status?

This command returns the record/play status.

:c4fsk:rx:reset_acq <Arg0>

This command resets the variables.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

:c4fsk:rx:reset_comp

This command debugs the sections of code.

:c4fsk:rx:reset_fifo

This command resets the variables.

:c4fsk:rx:setagc

This command debugs the sections of code.

:c4fsk:rx:setpwrthresh

This command debugs the sections of code.

:c4fsk:rx:start_playback

This command starts the playback.

:c4fsk:rx:stop_playback

This command stops the playback.

:c4fsk:rx:start_record <Arg0>

This command starts the record.

Numeric/Return: Arg0
 Number of seconds

:c4fsk:rx:stop_record

This command stops the record.

:c4fsk:rx:state <Arg0> <Arg1>

:c4fsk:rx:state?

This command sets/returns the digital receive state.

Numeric/Return: 0 P25
 1 DMR
 2 dPMR
 3 ARIBT98
 4 NXDN

0	OFF
1	ON

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:symclkerr?

This command returns the symbol clock error.

:c4fsk:symclkerr_units <Arg0>

:c4fsk:symclkerr_units?

This command sets/returns the digital receive state.

Numeric/Return: Arg0
 0 PPM
 1 Hz

:c4fsk:rx:time:clear <Arg0>

This command clears the current Time minimum, maximum and average settings.

Numeric/Return: Arg0
 0 P25
 1 DMR
 2 dPMR
 3 ARIBT98
 4 NXDN

:c4fsk:rx:time:val?

This command returns the current value.

Numeric/Return: 0 P25
 1 DMR
 2 dPMR
 3 ARIBT98
 4 NXDN

 0 Average
 1 Maximum
 2 Minimum

:c4fsk:rx:unitid?

This command returns the unit ID (DMR Option).

:c4fsk:rx:valid?

This command returns the decode validity (LMR Option).

Numeric/Return: 0 Invalid
 1 Valid

:c4fsk:tx:chanid <Arg0>

This command sets the channel ID (DMR Option).

Numeric/Return: Arg0
 00000000 to 16777215

:c4fsk:tx:colorcode <Arg0>

This command sets the color code (DMR Option).

Numeric/Return: Arg0
 0 to 15

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:tx:dpmr:callid <Arg0>
:c4fsk:tx:dpmr:callid?

This command sets/returns the caller ID.

Numeric/Return: Arg0
 7 digit string with 0 to 0 or *

:c4fsk:tx:dpmr:channelcode <Arg0>
:c4fsk:tx:dpmr:channelcode?

This command sets/returns the channel code.

Numeric/Return: Arg0
 0 to 63

:c4fsk:tx:dpmr:commsformat <Arg0>
:c4fsk:tx:dpmr:commsformat?

This command sets/returns the communication format.

Numeric/Return: Arg0
 0 to 3

:c4fsk:tx:dpmr:emergencypriority <Arg0>
:c4fsk:tx:dpmr:emergencypriority?

This command sets/returns the emergency priority.

Numeric/Return: Arg0
 0 OFF
 1 ON

:c4fsk:tx:dpmr:unitid <Arg0>
:c4fsk:tx:dpmr:unitid?

This command sets/returns the unit ID.

Numeric/Return: Arg0
 7 digit string with 0 to 0 or *

:c4fsk:tx:err <Arg0> <Arg1>

This command sets the number of false errors on transmitted signal.

Numeric/Return: Arg0
 0 P25
 1 DMR
 2 dPMR
 3 ARIBT98
 4 NXDN

 Arg1
 0 to 20

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:tx:iffreq <Arg0> <Arg1>
:c4fsk:tx:iffreq?

This command sets/returns the frequency state.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

Arg1

0	OFF
1	ON

:c4fsk:tx:iflevel <Arg0> <Arg1>
:c4fsk:tx:iflevel?

This command sets/returns the level state.

Numeric/Return: Arg0

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN

Arg1

0	OFF
1	ON

:c4fsk:tx:nac <Arg0>

This command sets the digital receive Network Access Code (P25 Option only).

Numeric/Return: Arg0
 000 to FFF

:c4fsk:tx:nxdn:emergency <Arg0>
:c4fsk:tx:nxdn:emergency?

This command sets/returns the emergency (NXDN Option).

Numeric/Return: Arg0

0	OFF
1	ON

:c4fsk:tx:nxdn:priority <Arg0>
:c4fsk:tx:nxdn:priority?

This command sets/returns the priority (NXDN Option).

Numeric/Return: Arg0

0	OFF
1	ON

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:tx:nxdnran <Arg0>
:c4fsk:tx:nxdnran?

This command sets/returns the Radio Access Number (NXDN Option).

Numeric/Return: Arg0
 0 to 63

:c4fsk:tx:nxdnrate <Arg0>
:c4fsk:tx:nxdnrate?

This command sets/returns the rate data is transmitted (NXDN Option).

Numeric/Return: Arg0
 0 4800
 1 9600

:c4fsk:tx:nxdn:tgid <Arg0>
:c4fsk:tx:nxdn:tgid?

This command sets/returns the Talk Group ID (NXDN Option).

Numeric/Return: Arg0
 0 to 65535

:c4fsk:tx:nxdn:unitid <Arg0>
:c4fsk:tx:nxdn:unitid?

This command sets/returns the Unit ID (NXDN Option).

Numeric/Return: Arg0
 0 to 65535

:c4fsk:tx:p25:emergency <Arg0>
:c4fsk:tx:p25:emergency?

This command sets/returns the emergency (P25 Option).

Numeric/Return: Arg0
 0 OFF
 1 ON

:c4fsk:tx:p25:priority <Arg0>
:c4fsk:tx:p25:priority?

This command sets/returns the priority (P25 Option).

Numeric/Return: Arg0
 0 OFF
 1 ON

:c4fsk:tx:p25:tgid <Arg0>
:c4fsk:tx:p25:tgid?

This command sets/returns the Talk Group ID (P25 Option).

Numeric/Return: Arg0
 0 to 65535

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:tx:p25:unitid <Arg0>
:c4fsk:tx:p25:unitid?

This command sets/returns the Unit ID (P25 Option).

Numeric/Return: Arg0
 0 to 65535

:c4fsk:tx:option?

This command returns the digital transmit option enable status.

Numeric/Return: 0 P25
 1 DMR
 2 dPMR
 3 ARIBT98
 4 NXDN

 0 Disabled
 1 Enabled

:c4fsk:tx:pattern <Arg0> <Arg1>
:c4fsk:tx:pattern?

This command sets/returns the digital transmit decode pattern.

Numeric/Return: Arg0
 0 P25
 1 DMR
 2 dPMR
 3 ARIBT98
 4 NXDN

 Arg1
 0 1011 (P25)
 1 CaI (P25)
 2 0.153 (P25)

 0 0.153 (DPMR)

 0 1031 (ARIBT98)
 1 CaI (ARIBT98)
 2 PN9 (ARIBT98)
 3 PN15 (ARIBT98)

 0 1031 (NXDN)
 1 CaI (NXDN)
 2 0.153 (NXDN)

 0 1031 (DMR)
 1 CaI (DMR)
 2 0.153 (DMR)
 3 BR (DMR)

2-2. REMOTE OPERATION COMMANDS (cont)

C4FSK (cont)

:c4fsk:tx:ptcrate <Arg0>
:c4fsk:tx:ptcrate?

This command sets/returns the PTC rate.

Numeric/Return: Arg0
 0 4800
 1 9600

:c4fsk:tx:state
:c4fsk:tx:state?

This command sets/returns the digital transmit state.

Numeric/Return: Arg0
 0 P25
 1 DMR
 2 dPMR
 3 ARIBT98
 4 NXDN

Arg1

0 ON
1 OFF

:c4fsk:tx:unitid <Arg0>

This command sets the Unit ID (DMR Option).

Numeric/Return: Arg0
 0 to 15

2-2. REMOTE OPERATION COMMANDS (cont)

Calibration

:calibration:continue <Arg0>

This command continues the individual Calibration.

Numeric/Return: Arg0
 0 GEN
 1 REC
 2 Audio In

:calibration:save <Arg0>

This command saves the individual Calibration.

Numeric/Return: Arg0
 0 GEN
 1 REC
 2 Audio In

:calibration:start <Arg0>

This command starts the individual Calibration.

Numeric/Return: Arg0
 0 GEN
 1 REC
 2 Audio In

:calibration:state?

This command returns the individual Calibration state.

Numeric/Return: 0 GEN
 1 REC
 2 Audio In

 0 Not Running
 1 Running
 2 Waiting for Continue

:calibration:stop <Arg0>

This command stops the individual Calibration.

Numeric/Return: Arg0
 0 GEN
 1 REC
 2 Audio In

2-2. REMOTE OPERATION COMMANDS (cont)

DCS

:dcs:decode:getcode?

This command returns the DCS Decode number code.

Numeric/Return:	0	023	29	023	57	464
	1	025	30	025	58	465
	2	026	31	026	59	466
	3	031	32	031	60	503
	4	032	33	032	61	506
	5	043	34	043	62	516
	6	047	35	047	63	532
	7	051	36	051	64	546
	8	054	37	054	65	565
	9	065	38	065	66	606
	10	071	39	071	67	612
	11	072	40	306	68	624
	12	073	41	311	69	627
	13	074	42	315	70	631
	14	114	43	331	71	632
	15	115	44	343	72	654
	16	116	45	346	73	662
	17	125	46	351	74	664
	18	131	47	364	75	703
	19	132	48	365	76	712
	20	134	49	371	77	723
	21	143	50	411	78	731
	22	152	51	412	79	732
	23	155	52	413	80	734
	24	156	53	423	81	743
	25	162	54	431	82	754
	26	165	55	432	83	OFF
	27	172	56	445	84	N/S
	28	174				

:dcs:decode:invert <Arg0>

This command sets the DCS Decode Inverted state.

Numeric/Return:	<u>Arg0</u>
	0 Non-Inverted
	1 Inverted

:dcs:state <Arg0>

:dcs:state?

This command sets/returns the DCS Decode state.

Numeric/Return:	<u>Arg0</u>
	0 OFF
	1 ON

2-2. REMOTE OPERATION COMMANDS (cont)

Demod

:demod:afbw <Arg0>
:demod:afbw?

This command sets/returns the Demod AF bandwidth setting.

Numeric/Return: Arg0

0	None
1	LOWPASS_300Hz
2	LOWPASS_3kHz
3	LOWPASS_5kHz
4	LOWPASS_15kHz
5	BANDPASS_CMESS
6	BANDPASS_CCITT
7	HIGHPASS_300Hz
8	BANDPASS_300_3000Hz
9	BANDPASS_300_5000Hz
10	BANDPASS_300_20000Hz
26	HIGHPASS_20Hz
27	BANDPASS_20_3000Hz
28	BANDPASS_20_5000Hz
29	BANDPASS_20_15000Hz

:demod:dcpwr <Arg0>
:demod:dcpwr?

This command sets/returns the DC Power state to the ADC.

Numeric/Return: Arg0

0	OFF
1	ON

:demod:state <Arg0>
:demod:state?

This command sets/returns the Analog Demod state.

Numeric/Return: Arg0

0	OFF
1	ON

2-2. REMOTE OPERATION COMMANDS (cont)

Demod (cont)

:demod:type <Arg0>
:demod:type?

This command sets/returns the Demod Modulation setting.

Numeric/Return: Arg0

0	FM_DEMOD_DEV_5
1	FM_DEMOD_DEV_6P25
2	FM_DEMOD_DEV_8P33
3	FM_DEMOD_DEV_10
4	FM_DEMOD_DEV_12P5
5	FM_DEMOD_DEV_25
6	FM_DEMOD_DEV_30
7	FM_DEMOD_DEV_100
8	FM_DEMOD_DEV_300
9	AM_DEMOD_DEV_5
10	AM_DEMOD_DEV_6P25
11	AM_DEMOD_DEV_8P33
12	AM_DEMOD_DEV_10
13	AM_DEMOD_DEV_12P5
14	AM_DEMOD_DEV_25
15	AM_DEMOD_DEV_30
25	SIGSTR_DEMOD_DEV_30K
26	SIGSTR_DEMOD_DEV_300K
27	SIGSTR_DEMOD_DEV_3M
28	SIGSTR_DEMOD_DEV_5M

2-2. REMOTE OPERATION COMMANDS (cont)

Deviation Meter / Modulation Meter

:devmod:alarm:high:limit <Arg0>
:devmod:alarm:high:limit?

This command sets/returns the Alarm high limit value.

Numeric/Return: Arg0
 -100.0% to 100% (AM)
 -100.0 to 100.0 kHz (FM)

:devmod:alarm:high:state
:devmod:alarm:high:state?

This command sets/returns the Alarm high limit state.

:devmod:alarm:low:limit <Arg0>
:devmod:alarm:low:limit?

This command sets/returns the Alarm low limit value.

Numeric/Return: Arg0
 -100.0% to 100% (AM)
 -100.0 to 100.0 kHz (FM)

:devmod:alarm:low:state
:devmod:alarm:low:state?

This command sets/returns the Alarm low limit state.

:devmod:average <Arg0>
:devmod:average?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 1 to 99

:devmod:range:am:auto

This command sets the Modulation Meter autorange state to Auto.

:devmod:range:am>manual

This command sets the Modulation Meter autorange state to Manual.

:devmod:range:am:range?

This command returns the Modulation Meter range information.

:devmod:range:am:state?

This command returns the Modulation Meter autorange state.

Numeric/Return: 0 Auto
 1 Manual
 2 Manual - Waiting Update

:devmod:range:fm:auto

This command sets the Modulation Meter autorange state to Auto.

:devmod:range:fm>manual

This command sets the Modulation Meter autorange state to Manual.

2-2. REMOTE OPERATION COMMANDS (cont)

Deviation Meter / Modulation Meter (cont)

:devmod:range:fm:range?

This command returns the Modulation Meter range information.

:devmod:dbr <Arg0>

:devmod:dbr?

This command sets/returns the dbr readings state.

Numeric/Return: Arg0
 0 dbr OFF
 1 dbr ON

:devmod:dbr:relative

This command sets the dbr relative value to the current reading.

:devmod:range:fm:state?

This command returns the Modulation Meter autorange state.

Numeric/Return: 0 Auto
 1 Manual
 2 Manual - Waiting Update

:devmod:reading:avg?

This command returns the Modulation Meter reading new average Peak2Peak value.

Numeric/Return: 0.0% to 100% (AM)
 0.0 to 100.0 kHz (FM)

:devmod:reading:clear

This command clears the Meter reading.

:devmod:reading:max?

This command returns the Modulation Meter reading maximum value.

Numeric/Return: 0.0% to 100% (AM)
 0.0 to 100.0 kHz (FM)

:devmod:reading:min?

This command returns the Modulation Meter reading minimum value

Numeric/Return: 0.0% to 100% (AM)
 0.0 to 100.0 kHz (FM)

:devmod:reading:peak2peak?

This command returns the Modulation Meter reading Peak2Peak value.

Numeric/Return: 0.0% to 100% (AM)
 0.0 to 100.0 kHz (FM)

:devmod:reading:pk_state

Enables/disables reading Peak Hold function.

2-2. REMOTE OPERATION COMMANDS (cont)

Deviation Meter / Modulation Meter (cont)

:devmod:reading:type <Arg0>

:devmod:reading:type?

This command sets/returns the readings sent to CF Meter.

Numeric/Return: Arg0

0	PEAK_READING_PLUS
1	PEAK_READING_MINUS
2	PK_PK_READING

:devmod:reading:val?

This command returns the Modulation Meter reading current average Peak2Peak value.

Numeric/Return: 0.0% to 100% (AM)
 0.0 to 100.0 kHz (FM)

:devmod:type <Arg0>

:devmod:type?

This command sets/returns the Meter Type.

Numeric/Return: Arg0

0	AM
1	FM

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only)

:digital:rx:average:ber <Arg0> <Arg1>
:digital:rx:average:ber?

This command sets/returns the number of BER readings to average.

Numeric/Return: Arg0
 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK
 11 TETRA BS

 Arg1
 1 to 99

:digital:rx:average:carrierfeed <Arg0> <Arg1>
:digital:rx:average:carrierfeed?

This command sets/returns the number of Carrier Feed readings to average.

Numeric/Return: Arg0
 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK
 11 TETRA BS

 Arg1
 1 to 99

:digital:rx:color_code?

Returns the current decoded color code.

:digital:rx:average:dev <Arg0> <Arg1>
:digital:rx:average:dev?

This command sets/returns the number of Deviation readings to average.

Numeric/Return: Arg0
 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK

 Arg1
 1 to 99

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:rx:average:evm <Arg0> <Arg1>
:digital:rx:average:evm?

This command sets/returns the number of averages for EVM.

Numeric/Return: Arg0
 11 - TETRA BS

 Arg1
 1 to 99

:digital:rx:average:freq <Arg0> <Arg1>
:digital:rx:average:freq?

This command sets/returns the number of Frequency readings to average.

Numeric/Return: Arg0
 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK

 Arg1
 1 to 99

:digital:rx:average:freq_err <Arg0> <Arg1>
:digital:rx:average:freq_err?

This command sets/returns the number of Frequency Error readings to average.

Numeric/Return: Arg0
 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK
 11 TETRA BS

 Arg1
 1 to 99

:digital:rx:average:mod_fid <Arg0> <Arg1>
:digital:rx:average:mod_fid?

This command sets/returns the number of Mod Fidelity readings to average.

Numeric/Return: Arg0
 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK
 11 TETRA BS

 Arg1
 1 to 99

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:rx:average:pwr <Arg0> <Arg1>
:digital:rx:average:pwr?

This command sets/returns the number of Power readings to average.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK
11	TETRA BS

Arg1

 1 to 99

:digital:rx:average:time <Arg0> <Arg1>
:digital:rx:average:time?

This command sets/returns the number of Time readings to average.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK

Arg1

 1 to 99

:digital:rx:ber:clear <Arg0>

This command clears the current BER Minimum, Maximum and Average.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK
11	TETRA BS

:digital:rx:ber:val?

This command returns the current BER value.

Numeric/Return: 0 P25-C4FM

7	FM30K
8	P25-HCPM
9	P25-HDQPSK
11	TETRA BS

 0 Average

1	Maximum
2	Minimum

 Value

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:rx:berstate <Arg0>

This command sets the BER state and returns the Random Access Number (PTC only).

Numeric/Return: Arg0
 0 Absolute
 1 Relative

 RAN

:digital:rx:carrierfeed:clear <Arg0>

This command clears the current Carrier Feed Minimum, Maximum and Average.

Numeric/Return: Arg0
 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK
 11 TETRA BS

:digital:rx:carrierfeed:val?

This command returns the current Carrier Feed value.

Numeric/Return: 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK
 11 TETRA BS

 0 Average
 1 Maximum
 2 Minimum

 Value

:digital:rx:color_code?

This command returns the current decoded color code.

:digital:rx:config <Arg0>

This command configures the digital. This command must be run before taking readings when the :digital:rx:state is set to 1.

Numeric/Return: Arg0
 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK
 11 TETRA BS

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:rx:countryCode?

This command returns current decoded country code.

Returns: MCC

:digital:rx:dev:clear <Arg0>

This command clears the current Deviation Minimum, Maximum and Average.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK

:digital:rx:dev:val?

This command returns the current Deviation value.

Numeric/Return: 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK

0	Average
1	Maximum
2	Minimum

Value

:digital:rx:evm:clear <Arg0>

This command clears the current EVM minimum, maximum, and average.

Numeric: Arg0

 11 - TETRA BS

:digital:rx:evm:val? <Arg0> <Arg1>

This command returns the current EVM value.

Numeric/Return: Arg0

 11 - TETRA BS

Arg1

 0 - Average
 1 - Maximum
 2 - Minimum

:digital:rx:fmfreqerrunit <Arg0>

:digital:rx:fmfreqerrunit?

This command sets/returns the FM Frequency Error Rate units.

Numeric/Return: Arg0

0	Hz
1	PPM

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:rx:fmfreqerrtype <Arg0>
:digital:rx:fmfreqerrtype?

This command sets/returns the FM Frequency Error Rate type.

Numeric/Return: Arg0
 0 Absolute
 1 Relative

:digital:rx:freq:clear <Arg0>

This command clears the current Frequency Minimum, Maximum and Average.

Numeric/Return: Arg0
 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK

:digital:rx:freq:val?

This command returns the current Frequency value.

Numeric/Return: 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK

 0 Average
 1 Maximum
 2 Minimum

 Value

:digital:rx:freq_err:clear <Arg0>

This command clears the current Frequency Error Minimum, Maximum and Average.

Numeric/Return: Arg0
 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK
 11 TETRA BS

:digital:rx:freq_err:val?

This command returns the current Frequency Error value.

Numeric/Return: 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK
 11 TETRA BS

 0 Average
 1 Maximum
 2 Minimum

 Value

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:rx:mod_fid:clear <Arg0>

This command clears the current Mod Fidelity Minimum, Maximum and Average.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK
11	TETRA BS

:digital:rx:mod_fid:val?

This command returns the current Mod Fidelity value.

Numeric/Return: 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK
 11 TETRA BS

 0 Average
 1 Maximum
 2 Minimum

 Value

:digital:rx:nac:val?

This command returns the current NAC value.

Numeric/Return: 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK

 Value

:digital:rx:networkCode?

This command returns current decoded network code.

Returns: MNC

:digital:rx:pattern <Arg0> <Arg1>

:digital:rx:pattern?

This command sets/returns the decode pattern.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK
11	TETRA BS

Arg1

0	1011
1	CaI
2	0.153

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:rx:pwr:clear <Arg0>

This command clears the current Power Minimum, Maximum and Average.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK
11	TETRA BS

:digital:rx:pwr:val?

This command returns the current Power value.

Numeric/Return: 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK
 11 TETRA BS

 0 Average
 1 Maximum
 2 Minimum

 Value

:digital:rx:reset_acq <Arg0>

This command resets the variables.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK
11	TETRA BS

:digital:rx:setagc <Arg0>

This command sets the AGC state.

Numeric/Return: Arg0

0	OFF
1	ON

:digital:rx:setagcmode <Arg0>

This command sets the AGC mode.

Numeric/Return: Arg0

0	Manual
1	Auto

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:rx:state <Arg0> <Arg1>
:digital:rx:state?

This command sets/returns the digital state.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK
11	TETRA BS

Arg1

0	OFF
1	ON

:digital:rx:tetraT1:mode <Arg0>

:digital:rx:tetraT1:mode?

Sets Tetra operation mode.

Numeric/Return: Arg0

0	TETRAT1_BS
1	TETRAT1_MS
2	TETRAT1_DM

:digital:rx:time:clear <Arg0>

This command clears the current Time Minimum, Maximum and Average.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK

:digital:rx:time:val?

This command returns the current Time value.

Numeric/Return: 0 P25-C4FM
 7 FM30K
 8 P25-HCPM
 9 P25-HDQPSK

 0 Average
 1 Maximum
 2 Minimum

 Value

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:rx:valid?

This command returns the decode validity.

Numeric/Return: 0 Invalid
 1 Valid

:digital:symclkerr?

This command returns the Symbol Clock Error.

:digital:symclkerr_units <Arg0>

:digital:symclkerr_units?

This command sets/returns the Symbol Clock Error units.

Numeric/Return: Arg0
 0 PPM
 1 Hz

:digital:tx:hcpm:chan <Arg0>

This command sets the channel.

Numeric/Return: Arg0
 0 Free Run
 1 Sync Mode

:digital:tx:hcpm:mode <Arg0>

This command sets the mode.

Numeric/Return: Arg0
 0 Free Run
 1 Sync Mode

:digital:tx:iffreq <Arg0>

This command sets the IF frequency

Numeric: Arg0
 8 to 12

:digital:tx:iflevel <Arg0>

:digital:tx:iflevel?

This command sets/returns the IF level.

Numeric/Return: Arg0
 -50.0 to 0.0

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:tx:nac <Arg0> <Arg1>

This command sets the NAC.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK

Arg1

 0x000 to 0xFF

:digital:tx:option?

This command returns the option enable status.

Numeric/Return: 0 P25-C4FM

7	FM30K
8	P25-HCPM
9	P25-HDQPSK
11	TETRA BS

 0 Disabled

1	Enabled
---	---------

:digital:tx:state <Arg0> <Arg1>

:digital:tx:state?

This command sets/returns the state.

Numeric/Return: Arg0

0	P25-C4FM
7	FM30K
8	P25-HCPM
9	P25-HDQPSK
11	TETRA BS

Arg1

0	OFF
1	ON

:digital:tx:tetraT1:BCCIdentity <Arg0>

:digital:tx:tetraT1:BCCIdentity?

Sets BCC identity value.

Numeric/Return: Arg0

 0 to 63

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:tx:tetraT1:MCCIdentity <Arg0>
:digital:tx:tetraT1:MCCIdentity?

This command sets MCC identity value.

Numeric/Return: Arg0
 0 to 999

:digital:tx:tetraT1:MNCIdentity <Arg0>
:digital:tx:tetraT1:MNCIdentity?

This command sets MNC identity values.

Numeric/Return: Arg0
 0 to 16383

:digital:tx:tetraT1:mode <Arg0>
:digital:tx:tetraT1:mode?

This command sets operation mode.

Numeric/Return: Arg0
 0 BS
 1 MS
 2 DM

:digital:tx:tetraT1:paramsMode <Arg0>
:digital:tx:tetraT1:paramsMode?

This command sets parameter mode.

Numeric/Return: Arg0
 0 auto
 1 manual

:digital:tx:tetraT1:syncAutoOffset <Arg0>
:digital:tx:tetraT1:syncAutoOffset?

This command syncs auto offset.

Numeric/Return: Arg0
 float 0 to 9999.99 symbols

:digital:tx:tetraT1:syncMode <Arg0>
:digital:tx:tetraT1:syncMode?

This command sets sync mode.

Numeric/Return: Arg0
 0 free run
 1 sync from RX
 2 external sync mode

2-2. REMOTE OPERATION COMMANDS (cont)

Digital (P25 Phase 2 only) (cont)

:digital:tx:tetraT1:syncPulseEdge <Arg0>
:digital:tx:tetraT1:syncPulseEdge?

This command syncs pulse edge.

Numeric/Return: Arg0
 0 falling
 1 rising

:digital:tx:tetraT1:syncPulseOffset <Arg0>
:digital:tx:tetraT1:syncPulseOffset?

This command syncs pulse offset.

Numeric/Return: Arg0
 float 0 to 1020.000 ms

2-2. REMOTE OPERATION COMMANDS (cont)

Distortion Meter

:distortion:demod:alarm:high:limit <Arg0>
:distortion:demod:alarm:high:limit?

This command sets/returns the Alarm high limit value.

Numeric/Return: Arg0
 0.0% to 100%

:distortion:demod:alarm:high:state
:distortion:demod:alarm:high:state?

This command sets/returns the Alarm high limit state.

:distortion:demod:alarm:low:limit <Arg0>
:distortion:demod:alarm:low:limit?

This command sets/returns the Alarm low limit value.

Numeric/Return: Arg0
 0.0% to 100%

:distortion:demod:alarm:low:state
:distortion:demod:alarm:low:state?

This command sets/returns the Alarm low limit state.

:distortion:demod:average <Arg0>
:distortion:demod:average?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 1 to 99

:distortion:demod:reading:avg?

This command returns the Distortion Meter reading with averaged value.

Numeric/Return: 0.0% to 100%

:distortion:demod:reading:clear

Clear Distortion Meter reading.

:distortion:demod:reading:max?

This command returns the Distortion Meter reading maximum value.

Numeric/Return: 0.0% to 100%

:distortion:demod:reading:min?

This command returns the Distortion Meter reading minimum value.

Numeric/Return: 0.0% to 100%

:distortion:demod:reading:val?

This command returns the Distortion Meter average value.

Numeric/Return: 0.0% to 100%

2-2. REMOTE OPERATION COMMANDS (cont)

Distortion Meter (cont)

:distortion:demod:state
:distortion:demod:state?

This command activates/returns the Distortion Meter on demod input state.

:distortion:ext_aud_in:alarm:high:limit <Arg0>
:distortion:ext_aud_in:alarm:high:limit?

This command sets/returns the Alarm high limit value.

Numeric/Return: Arg0
 0.0% to 100%

:distortion:ext_aud_in:alarm:high:state
:distortion:ext_aud_in:alarm:high:state?

This command sets/returns the Alarm high limit state.

:distortion:ext_aud_in:alarm:low:limit <Arg0>
:distortion:ext_aud_in:alarm:low:limit?

This command sets/returns the Alarm low limit value.

Numeric/Return: Arg0
 0.0% to 100%

:distortion:ext_aud_in:alarm:low:state
:distortion:ext_aud_in:alarm:low:state?

This command sets/returns the Alarm low limit state.

:distortion:ext_aud_in:average <Arg0>
:distortion:ext_aud_in:average?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 1 to 99

:distortion:ext_aud_in:filter <Arg0>
:distortion:ext_aud_in:filter?

This command sets/returns the audio filter status.

Numeric/Return: Arg0
 0 No Filter
 1 15 kHz LP
 2 300 Hz to 3 kHz BP

:distortion:ext_aud_in:reading:avg?

This command returns the Distortion Meter reading with averaged value.

Numeric/Return: 0.0% to 100%

:distortion:ext_aud_in:reading:clear

This command clear the Distortion Meter reading.

2-2. REMOTE OPERATION COMMANDS (cont)

Distortion Meter (cont)

:distortion:ext_aud_in:reading:max?

This command returns the Distortion Meter reading maximum value.

Numeric/Return: 0.0% to 100%

:distortion:ext_aud_in:reading:min?

This command returns the Distortion Meter reading minimum value.

Numeric/Return: 0.0% to 100%

:distortion:ext_aud_in:reading:val?

This command returns the Distortion Meter average value.

Numeric/Return: 0.0% to 100%

:distortion:ext_aud_in:state **:distortion:ext_aud_in:state?**

This command activates/returns the Distortion Meter on ext audio input state.

:distortion:notch <Arg0> **:distortion:notch?**

This command sets/returns the notch frequency.

Numeric/Return: Arg0
1000 to 5000 Hz

:distortion:range?

This command returns the Distortion Meter range information.

:distortion:range:auto

This command sets the Distortion Meter autorange state to Auto.

:distortion:range>manual

This command sets the Distortion Meter autorange state to Manual.

:distortion:range:state?

This command returns the Distortion Meter autorange state.

Numeric/Return: 0 Auto
1 Manual
2 Manual - Waiting Update

2-2. REMOTE OPERATION COMMANDS (cont)

DMM

:dmm:enable <Arg0>

This command enables/disables the DMM.

Numeric/Return: Arg0
 0 OFF
 1 ON

:dmm:lower:limit:state <Arg0>
:dmm:lower:limit:state?

This command sets/returns the upper limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:dmm:lower:limit:value <Arg0>
:dmm:lower:limit:value?

This command sets/returns the upper limit value.

Numeric/Return: Arg0
 -2000 to 2000

:dmm:meter:amps:ac:aver <Arg0>
:dmm:meter:amps:ac:aver?

This command sets/returns the averaging.

Numeric/Return: Arg0
 1 to 100

:dmm:meter:amps:ac:enab:peak <Arg0>
:dmm:meter:amps:ac:enab:peak?

This command sets/returns the peak hold.

Numeric/Return: Arg0
 0 OFF
 1 ON

:dmm:meter:amps:ac:stat?

This command returns the reading.

Numeric/Return: -2000 to 2000

:dmm:meter:amps:ac:tos <Arg0>
:dmm:meter:amps:ac:tos?

This command sets/returns the scale.

Numeric/Return: Arg0
 0 to 6

2-2. REMOTE OPERATION COMMANDS (cont)

DMM (cont)

:dmm:meter:amps:dc:enab:peak <Arg0>
:dmm:meter:amps:dc:enab:peak?

This command sets/returns the peak hold.

Numeric/Return: Arg0
 0 OFF
 1 ON

:dmm:meter:amps:dc:aver <Arg0>
:dmm:meter:amps:dc:aver?

This command sets/returns the averaging.

Numeric/Return: Arg0
 1 to 100

:dmm:meter:amps:dc:stat?

This command returns the reading.

Numeric/Return: -2000 to 2000

:dmm:meter:amps:dc:tos <Arg0> <Arg0>
:dmm:meter:amps:dc:tos?

This command sets/returns the scale.

Numeric/Return: Arg0
 0 to 6

:dmm:meter:clear:peak

This command clear the peak hold.

:dmm:meter:ohms:aver <Arg0>
:dmm:meter:ohms:aver?

This command sets/returns the averaging.

Numeric/Return: Arg0
 1 to 100

:dmm:meter:ohms:enab:peak <Arg0>
:dmm:meter:ohms:enab:peak?

This command sets/returns the peak hold.

Numeric/Return: Arg0
 0 OFF
 1 ON

:dmm:meter:ohms:stat?

This command returns the reading.

Numeric/Return: -2000 to 2000

2-2. REMOTE OPERATION COMMANDS (cont)

DMM (cont)

:dmm:meter:ohms:tos <Arg0>
:dmm:meter:ohms:tos?

This command sets/returns the scale.

Numeric/Return: Arg0
 0 to 6

:dmm:meter:peak?

This command returns the peak reading.

Numeric/Return: 0 to 20000000

:dmm:meter:type <Arg0>
:dmm:meter:type?

This command sets/returns the measurement type.

Numeric/Return: Arg0
 0 ACV
 1 CV
 2 DCA
 3 ACA
 4 OHMS

:dmm:meter:volts:ac:aver <Arg0>
:dmm:meter:volts:ac:aver?

This command sets/returns the averaging.

Numeric/Return: Arg0
 1 to 100

:dmm:meter:volts:ac:enab:peak <Arg0>
:dmm:meter:volts:ac:enab:peak?

This command sets/returns the peak hold.

Numeric/Return: Arg0
 0 OFF
 1 ON

:dmm:meter:volts:ac:stat?

This command returns the reading.

Numeric/Return: -2000 to 2000

:dmm:meter:volts:ac:tos <Arg0>
:dmm:meter:volts:ac:tos?

This command sets/returns the scale.

Numeric/Return: Arg0
 0 to 5

2-2. REMOTE OPERATION COMMANDS (cont)

DMM (cont)

:dmm:meter:volts:dc:aver <Arg0>
:dmm:meter:volts:dc:aver?

This command sets/returns the averaging.

Numeric/Return: Arg0
 1 to 100

:dmm:meter:volts:dc:enab:peak <Arg0>
:dmm:meter:volts:dc:enab:peak?

This command sets/returns the peak hold.

Numeric/Return: Arg0
 0 OFF
 1 ON

:dmm:meter:volts:dc:stat?

This command returns the reading.

Numeric/Return: -2000 to 2000

:dmm:meter:volts:dc:tos <Arg0>
:dmm:meter:volts:dc:tos?

This command sets/returns the scale.

Numeric/Return: Arg0
 0 to 5

:dmm:shunt:msg:state <Arg0>

This command sets the 20 A Range display dialog state.

Numeric/Return: Arg0
 0 HIDE
 1 SHOW

:dmm:upper:limit:state <Arg0>
:dmm:upper:limit:state?

This command sets/returns the upper limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:dmm:upper:limit:value <Arg0>
:dmm:upper:limit:value?

This command sets/returns the upper limit value.

Numeric/Return: Arg0
 -2000 to 2000

2-2. REMOTE OPERATION COMMANDS (cont)

External Audio Input

:extaudin:filter <Arg0>
:extaudin:filter?

This command sets/returns the external Audio Input filter.

Numeric/Return: Arg0

0	NONE
1	LOWPASS_300HZ
2	LOWPASS_3kHz
3	LOWPASS_5kHz
4	LOWPASS_15kHz
5	BANDPASS_CMESS
6	BANDPASS_CCITT
7	HIGHPASS_300HZ
8	BANDPASS_300_3000HZ
9	BANDPASS_300_5000HZ
10	BANDPASS_300_20000HZ
26	HIGHPASS_20HZ
27	BANDPASS_20_3000HZ
28	BANDPASS_20_5000HZ
29	BANDPASS_20_15000HZ

:extaudin:gain <Arg0>

This command sets the external Audio Input gain.

Numeric/Return: Arg0
 0.0001 to 1.0

:extaudin:load <Arg0>

This command sets the output scaling.

Numeric/Return: Arg0

0	Open
1	150 Ω
2	600 Ω
3	1 k Ω
4	Divide-by-10

:extaudin:mute

This command mutes the Audio Input.

:extaudin:state <Arg0>
:extaudin:state?

This command sets/returns the external Audio Input state.

Numeric/Return: Arg0

0	OFF
1	ON

2-2. REMOTE OPERATION COMMANDS (cont)

External Audio Output

:extaudout:source <Arg0>
:extaudout:source?

This command sets/returns the external Audio Output source.

Numeric/Return: Arg0

0	EXT_AUD_IN_2_EXT_AUD_OUT
1	DEMOD_2_EXT_AUD_OUT
2	MODULATION_2_EXT_AUD_OUT
3	FGEN_2_EXT_AUD_OUT

:extaudout:state <Arg0>
:extaudout:state?

This command sets/returns the external Audio Output state.

Numeric/Return: Arg0

0	OFF
1	ON

2-2. REMOTE OPERATION COMMANDS (cont)

External RF Power

:extrfpwr:CCDF:limit <Arg0>
:extrfpwr:CCDF:limit?

This command sets/returns the CCDF limit.

Numeric/Return: Arg0
 0 to 400 (W)

:extrfpwr:dutycycle:avg <Arg0>
:extrfpwr:dutycycle:avg?

This command sets/returns the number of averages for duty cycle.

Numeric/Return: Arg0
 1 to 99

:extrfpwr:dutycycle:lower:limit:state
:extrfpwr:dutycycle:lower:limit:state?

This command sets/returns the duty cycle lower limit state.

:extrfpwr:dutycycle:lower:limit:value <Arg0>
:extrfpwr:dutycycle:lower:limit:value?

This command sets/returns the duty cycle lower limit value.

Numeric/Return: Arg0
 0 to 100

:extrfpwr:dutycycle:reading:val?

This command returns the duty cycle reading.

:extrfpwr:dutycycle:upper:limit:state
:extrfpwr:dutycycle:upper:limit:state?

This command sets/returns the duty cycle upper limit state.

:extrfpwr:dutycycle:upper:limit:value <Arg0>
:extrfpwr:dutycycle:upper:limit:value?

This command sets/returns the duty cycle upper limit value.

Numeric/Return: Arg0
 0 to 100

:extrfpwr:filter <Arg0>
:extrfpwr:filter?

This command sets/returns the video filter.

Numeric/Return: Arg0
 0 4500
 1 400000

2-2. REMOTE OPERATION COMMANDS (cont)

External RF Power (cont)

:extrfpwr:freqresp:100 <Arg0>
:extrfpwr:freqresp:100?

This command sets/returns the 100 MHz frequency response value.

Numeric/Return: Arg0
 44.7 to 45.3 dBm

:extrfpwr:freqresp:300 <Arg0>
:extrfpwr:freqresp:300?

This command sets/returns the 300 MHz frequency response value.

Numeric/Return: Arg0
 44.7 to 45.3 dBm

:extrfpwr:freqresp:500 <Arg0>
:extrfpwr:freqresp:500?

This command sets/returns the 500 MHz frequency response value.

Numeric/Return: Arg0
 44.7 to 45.3 dBm

:extrfpwr:freqresp:700 <Arg0>
:extrfpwr:freqresp:700?

This command sets/returns the 700 MHz frequency response value.

Numeric/Return: Arg0
 44.7 to 45.3 dBm

:extrfpwr:freqresp:900 <Arg0>
:extrfpwr:freqresp:900?

This command sets/returns the 900 MHz frequency response value.

Numeric/Return: Arg0
 44.7 to 45.3 dBm

:extrfpwr:freqresp:cal:save

This command saves the calibration values.

:extrfpwr:freqresp:cal:start

This command starts the calibration.

:extrfpwr:fwd:avg <Arg0>
:extrfpwr:fwd:avg?

This command sets/returns the number of averages for forward power.

Numeric/Return: Arg0
 1 to 99

2-2. REMOTE OPERATION COMMANDS (cont)

External RF Power (cont)

:extrfpwr:fwd:avg:dutycycle <Arg0>
:extrfpwr:fwd:avg:dutycycle?

This command sets/returns the length of duty cycle for forward power averages.

Numeric/Return: Arg0
 1 to 99

:extrfpwr:fwd:lower:limit:state
:extrfpwr:fwd:lower:limit:state?

This command sets/returns the forward lower limit state.

:extrfpwr:fwd:lower:limit:value <Arg0>
:extrfpwr:fwd:lower:limit:value?

This command sets/returns the forward lower limit value.

Numeric/Return: Arg0
 0 to 400

:extrfpwr:fwd:reading:val?

This command returns the forward power reading.

:extrfpwr:fwd:units <Arg0>
:extrfpwr:fwd:units?

This command sets/returns the forward power units.

Numeric/Return: Arg0
 6 dBm
 7 uW
 8 mW
 9 W

:extrfpwr:fwd:upper:limit:state
:extrfpwr:fwd:upper:limit:state?

This command sets/returns the forward upper limit state.

:extrfpwr:fwd:upper:limit:value <Arg0>
:extrfpwr:fwd:upper:limit:value?

This command sets/returns the forward upper limit value.

Numeric/Return: Arg0
 0 to 400

:extrfpwr:match:avg <Arg0>
:extrfpwr:match:avg?

This command sets/returns the number of averages for match.

Numeric/Return: Arg0
 1 to 99

2-2. REMOTE OPERATION COMMANDS (cont)

External RF Power (cont)

:extrfpwr:match:lower:limit:state
:extrfpwr:match:lower:limit:state?

This command sets/returns the match lower limit state.

:extrfpwr:match:lower:limit:value <Arg0>
:extrfpwr:match:lower:limit:value?

This command sets/returns the match lower limit value.

Numeric/Return: Arg0
 0 to 100

:extrfpwr:match:reading:val?

This command returns the match reading.

:extrfpwr:match:units <Arg0>
:extrfpwr:match:units?

This command sets/returns the match units.

Numeric/Return: Arg0
 2 RHO
 3 VSWR
 5 RTL

:extrfpwr:match:upper:limit:state
:extrfpwr:match:upper:limit:state?

This command sets/returns the match upper limit state.

:extrfpwr:match:upper:limit:value <Arg0>
:extrfpwr:match:upper:limit:value?

This command sets/returns the match upper limit value.

Numeric/Return: Arg0
 0 to 100

:extrfpwr:meas:type <Arg0>
:extrfpwr:meas:type?

This command sets/returns the measurement type.

Numeric/Return: Arg0
 0 avg
 1 peak
 2 burst
 3 crest
 4 ccdf

:extrfpwr:offset <Arg0>
:extrfpwr:offset?

This command sets/returns the offset in dB.

Numeric/Return: Arg0
 0 to 100 (dB)

2-2. REMOTE OPERATION COMMANDS (cont)

External RF Power (cont)

:extrfpwr:refl:avg <Arg0>
:extrfpwr:refl:avg?

This command sets/returns the number of averages for reflected power.

Numeric/Return: Arg0
 1 to 99

:extrfpwr:refl:lower:limit:state
:extrfpwr:refl:lower:limit:state?

This command sets/returns the reflected lower limit state.

:extrfpwr:refl:lower:limit:value <Arg0>
:extrfpwr:refl:lower:limit:value?

This command sets/returns the reflected lower limit value.

Numeric/Return: Arg0
 0 to 400

:extrfpwr:refl:reading:val?

This command returns the reflected power reading.

:extrfpwr:refl:units
:extrfpwr:refl:units? <Arg0>

This command sets/returns the reflected power units.

Numeric/Return: Arg0
 6 dBm
 7 uW
 8 mW
 9 W

:extrfpwr:refl:upper:limit:state <Arg0>
:extrfpwr:refl:upper:limit:state?

This command sets/returns the reflected upper limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:extrfpwr:refl:upper:limit:value <Arg0>
:extrfpwr:refl:upper:limit:value?

This command sets/returns the reflected upper limit value.

Numeric/Return: Arg0
 0 to 400

2-2. REMOTE OPERATION COMMANDS (cont)

External RF Power (cont)

:extrfpwr:state <Arg0>

This command sets the meter state.

Numeric/Return: Arg0

0	OFF
1	ON

:extrfpwr:zero

This command zeros the power sensor.

2-2. REMOTE OPERATION COMMANDS (cont)

Frequency Find

:freqfind:peak?

This command returns the next tune frequency.

:freqfind:start <Arg0>

:freqfind:start?

This command sets/returns the tune start frequency.

Numeric/Return: Arg0

2 to 1000 MHz

:freqfind:stop <Arg0>

:freqfind:stop?

This command sets/returns the tune stop frequency.

Numeric/Return: Arg0

2 to 1000 MHz

:freqfind:threshold <Arg0>

:freqfind:threshold?

This command sets/returns the tune threshold.

Numeric/Return: Arg0

-110.0 to 40.0 dBm

:freqfind:boundary <Arg0>

:freqfind:boundary?

This command sets/returns the channel bandwidth step for frequency search.

Numeric/Return: Arg0

0.001 to 5.000 MHz

2-2. REMOTE OPERATION COMMANDS (cont)

Frequency List

:freqlist:index <Arg0>
:freqlist:index?

This command sets/returns the frequency list index.

Numeric/Return: Arg0
 1 to 30

:freqlist:indexname <Arg0>
:freqlist:indexname?

This command sets/returns the frequency list index name.

Numeric/Return: Arg0
 Frequency List Index Name

:freqlist:list <Arg0>
:freqlist:list?

This command sets/returns the frequency list.

Numeric/Return: Arg0
 List File Name (without extension)

2-2. REMOTE OPERATION COMMANDS (cont)

Function Generator

:fgen:enable <Arg0>
:fgen:enable?

This command sets/returns the Function Generator state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:fgen:freq <Arg0> <Arg1>

This command sets the individual Function Generator frequency.

Numeric/Return: Arg0
 1 Fgen1
 2 Fgen2

 Arg1
 0 to 24000 Hz

:fgen:level <Arg0> <Arg1>
:fgen:enable?

This command sets/returns the individual Function Generator output.

Numeric/Return: Arg0
 1 Fgen1
 2 Fgen2

 Arg1
 0 to 1.7 Vrms

:fgen:load <Arg0>

This command sets the output scaling.

Numeric/Return: Arg0
 0 600 Ω
 1 150 Ω
 2 Open Circuit

:fgen:state <Arg0>
:fgen:state?

This command sets/returns the individual Function Generator state.

Numeric/Return: Arg0
 1 Fgen1
 2 Fgen2

 Arg1
 0 OFF
 1 ON

2-2. REMOTE OPERATION COMMANDS (cont)

Normalize

:normalize:pre:state

This command activates the pre-normalize state.

:normalize:pre:status?

This command returns the pre-normalize status.

Numeric/Return:	0	Stopped
	1	Running

:normalize:recall

This command Issues a command to the database to recall TABLE_CURRENT_NORMALIZE.

:normalize:run:state

This command activates the normalize state.

:normalize:run:status?

This command returns the normalize status.

Numeric/Return:	0	Stopped
	1	Running

2-2. REMOTE OPERATION COMMANDS (cont)

Options

:options:flash?

This command returns the unique ID number.

:options:isactive?

This command returns the status of installed Options.

Numeric/Return:	35000001	Spectrum Analyzer
	35000010	Oscilloscope
	35000060	Scripting
	35000070	Tracking Generator
	35000100	P25
	35000200	DMR
	35000300	dPMR
	35000400	NXDN
	35000500	ARIBT98
	0	Not Installed
	1	Installed

:options:man?

This command returns the manufacturer's name.

:options:model?

This command returns the model number.

:options:serial?

This command returns the 10 Digit serial number.

2-2. REMOTE OPERATION COMMANDS (cont)

Oscilloscope

:scope:coupling <Arg0>
:scope:coupling?

This command sets/returns the Oscilloscope input coupling.

Numeric/Return: Arg0
 0 AC
 1 DC
 2 GND

:scope:dvm:divby20 <Arg0>
:scope:dvm:divby20?

This command sets/returns the input scaling for DVM Connector.

Numeric/Return: Arg0
 0 2 V max
 1 40 V max

:scope:dvm:overload?

This command returns the DVM overload status.

Numeric/Return: 0 No Overload
 1 Overload

:scope:offset:vertical <Arg0>
:scope:offset:vertical?

This command sets/returns the Oscilloscope input vertical offset.

Numeric/Return: Arg0
 -100.0 to 100.0

:scope:horizontal:scale <Arg0>
:scope:horizontal:scale?

This command sets/returns the Oscilloscope input horizontal scale.

Numeric/Return: Arg0
 0 20 μ s/Div
 1 50 μ s/Div
 2 0.1 ms/Div
 3 0.2 ms/Div
 4 0.5 ms/Div
 5 1 ms/Div
 6 2 ms/Div
 7 4 ms/Div
 8 6 ms/Div
 9 10 ms/Div
 10 20 ms/Div
 11 50 ms/Div
 12 0.1 sec/Div

2-2. REMOTE OPERATION COMMANDS (cont)

Oscilloscope (cont)

:scope:scale:vertical <Arg0>
:scope:scale:vertical?

This command sets/returns the Oscilloscope input vertical scale.

Numeric/Return: Arg0

0	10 mV/Div (DVM / AUDIO IN) 0.1 kHz/Div (DEMOD FM) 5%/Div (DEMOD AM)
1	20 mV/Div (DVM / AUDIO IN) 0.2 kHz/Div (DEMOD FM) 10%/Div (DEMOD AM)
2	50 mV/Div (DVM / AUDIO IN) 0.5 kHz/Div (DEMOD FM) 20%/Div (DEMOD AM)
3	0.1 V/Div (DVM / AUDIO IN) 1 kHz/Div (DEMOD FM) 50%/Div (DEMOD AM)
4	0.2 V/Div (DVM / AUDIO IN) 2 kHz/Div (DEMOD FM)
5	0.5 V/Div (DVM / AUDIO IN) 5 kHz/Div (DEMOD FM)
6	1 V/Div (DVM / AUDIO IN) 10 kHz/Div (DEMOD FM)
7	2 V/Div (DVM / AUDIO IN) 20 kHz/Div (DEMOD FM)
8	5 V/Div (DVM / AUDIO IN) 50 kHz/Div (DEMOD FM)
9	10 V/Div (DVM / AUDIO IN)

:scope:source <Arg0>
:scope:source?

This command sets/returns the Oscilloscope input source.

Numeric/Return: Arg0

0	DVM
1	DEMOD
2	AUD IN

:scope:state <Arg0>
:scope:state?

This command sets/returns the Oscilloscope input state.

Numeric/Return: Arg0

0	Disable
1	Enable

:scope:trace:length?

This command returns the maximum Oscilloscope trace elements.

:scope:trace:val?

This command returns the Oscilloscope trace value.

2-2. REMOTE OPERATION COMMANDS (cont)

Oscilloscope (cont)

:scope:trigger:edge <Arg0>
:scope:trigger:edge?

This command sets/returns the Oscilloscope input trigger edge.

Numeric/Return: Arg0
 0 FALL
 1 RISE

:scope:trigger:level
:scope:trigger:level?

This command sets/returns the Oscilloscope input trigger level.

:scope:trigger:mode <Arg0>
:scope:trigger:mode?

This command sets/returns the Oscilloscope input trigger mode.

Numeric/Return: Arg0
 0 Normal
 1 Auto

:scope:trigger:type <Arg0> <Arg1> <Arg2>
:scope:trigger:type?

This command sets/returns the Oscilloscope input trigger.

Numeric/Return: Arg0
 0 Normal
 1 Auto

 Arg1
 0 Fall
 1 Rise

 Arg2
 Level

2-2. REMOTE OPERATION COMMANDS (cont)

Receiver

:rec:atten?

This command returns the Receiver attenuator setting.

Numeric/Return: 0, 10, 20 or 30 dB

:rec:dcpwr <Arg0>

This command sets the Receiver DC Power state.

Numeric/Return: Arg0
0 OFF
1 ON

:rec:extpad <Arg0>

:rec:extpad?

This command sets/returns the compensation of Receiver TOS for the external pad.

Numeric/Return: Arg0
-50.0 to 50.0 dB

:rec:freq <Arg0>

:rec:freq?

This command sets/returns the Receiver frequency.

Numeric/Return: Arg0
2.000000 to 1000.000000 MHz

:rec:port <Arg0>

:rec:port?

This command sets/returns the Receiver Input Connector.

Numeric/Return: Arg0
0 T/R
1 ANT

:rec:port:protection <Arg0>

This command resets the ANT Connector protection circuit.

Numeric/Return: Arg0
0 OFF
1 Reset
2 ON

2-2. REMOTE OPERATION COMMANDS (cont)

RF Error Meter

:rferr:alarm:high:limit <Arg0>
:rferr:alarm:high:limit?

This command sets/returns the Alarm high limit value.

Numeric/Return: Arg0
 -200.0 to 200.0 kHz

:rferr:alarm:high:state <Arg0>
:rferr:alarm:high:state?

This command sets/returns the Alarm high limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:rferr:alarm:low:limit <Arg0>
:rferr:alarm:low:limit?

This command sets/returns the Alarm low limit value.

Numeric/Return: Arg0
 -200.0 to 200.0 kHz

:rferr:alarm:low:state <Arg0>
:rferr:alarm:low:state?

This command sets/returns the Alarm low limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:rferr:average <Arg0>
:rferr:average?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 1 to 99

:rferr:interval <Arg0>
:rferr:interval?

This command sets/returns the RF Counter update interval.

Numeric/Return: Arg0
 0.0 to 53.0 sec

:rferr:range?

This command returns the RF Error Meter range information.

:rferr:range:auto

This command sets the RF Error Meter autorange state to Auto.

:rferr:range>manual

This command sets the RF Error Meter autorange state to Manual.

2-2. REMOTE OPERATION COMMANDS (cont)

RF Error Meter (cont)

:rferr:range:state?

This command returns the RF Error Meter autorange state.

Numeric/Return: 0 Auto
 1 Manual
 2 Manual - Waiting Update

:rferr:reading:avg?

This command returns the RF Error Counter reading averaged value.

Numeric/Return: -500.0 to 500.0 kHz

:rferr:reading:clear

This command clears the RF Error Counter reading.

:rferr:reading:max <Arg0>

:rferr:reading:max?

This command sets/returns the RF Error Counter reading maximum value.

Numeric/Return: Arg0
 -500.0 to 500.0 kHz

:rferr:reading:min <Arg0>

:rferr:reading:min?

This command sets/returns the RF Error Counter reading minimum value.

Numeric/Return: Arg0
 -500.0 to 500.0 kHz

:rferr:reading:val <Arg0>

:rferr:reading:val?

This command sets/returns the RF Error Counter reading with no statistics.

Numeric/Return: Arg0
 -500.0 to 500.0 kHz

:rferr:relative <Arg0>

:rferr:relative?

This command sets/returns the RF Error status to absolute or relative counting using the Receiver RF.

Numeric/Return: Arg0
 0 Absolute
 1 Relative

:rferr:state <Arg0>

:rferr:state?

This command sets/returns the RF Error Counter state.

Numeric/Return: Arg0
 0 OFF
 1 ON

2-2. REMOTE OPERATION COMMANDS (cont)

RF Generator

:gen:ant:protection?

This command returns the ANT Connector protection state.

Numeric/Return: 0 OFF
 1 ON (Overload)

:gen:ant:protection:reset

This command resets the ANT Connector protection state.

:gen:atten?

This command returns the RF Generator attenuator setting.

Numeric/Return: 0 to 63 dB

:gen:dcpwr <Arg0>

This command sets the RF Generator DC Power state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:gen:extpad <Arg0>

:gen:extpad?

This command sets/returns the compensation of RF Generator output level for external pad.

Numeric/Return: Arg0
 -50.0 to 50.0 dB

:gen:freq <Arg0>

:gen:freq?

This command sets/returns the RF Generator frequency.

Numeric/Return: Arg0
 2.000000 to 1000.000000 MHz

:gen:holdatten:dBm?

This command returns the Attenuator Hold level in dBm.

:gen:holdatten:state <Arg0>

:gen:holdatten:state?

This command sets/returns the Attenuator Hold state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:gen:holdatten:uv?

This command returns the Attenuator Hold level in μ V.

2-2. REMOTE OPERATION COMMANDS (cont)

RF Generator (cont)

:gen:lvl:dbm <Arg0>
:gen:lvl:dbm?

This command sets/returns the RF Generator level in dBm on selected output connector.

Numeric/Return: Arg0
 SWR -65 to -5 dBm
 T/R -120 to -50 dBm
 ANT -90 to -30 dBm

:gen:lvl:dbuv <Arg0>
:gen:lvl:dbuv?

This command sets/returns the RF Generator level in dB μ V on selected output connector.

Numeric/Return: Arg0
 SWR 41 to 102 dB μ V
 T/R -18.7 to 57 dB μ V
 ANT 17 to 77 dB μ V

:gen:lvl:unit <Arg0>

This command sets the RF Generator level units to μ V or dBm.

Numeric/Return: Arg0
 0 dBm
 1 μ V

:gen:lvl:uv <Arg0>
:gen:lvl:uv?

This command sets/returns the RF Generator level to μ V on selected output connector.

Numeric/Return: Arg0
 SWR 125.74 to 125743.34 μ V
 T/R 0.22361 to 707.11 μ V
 ANT 7.071 to 7071.07 μ V

:gen:port <Arg0>
:gen:port?

This command sets/returns the RF Generator Output Connector.

Numeric/Return: Arg0
 0 T/R
 1 ANT
 2 SWR

:gen:port:protection <Arg0>

This command resets the SWR Connector protection circuit.

Numeric/Return: Arg0
 0 OFF
 1 RESET
 2 ON

2-2. REMOTE OPERATION COMMANDS (cont)

RF Generator (cont)

:gen:swr:protection?

This command returns the SWR Connector protection state.

Numeric/Return:	0	OFF
	1	ON (Overload)

:gen:swr:protection:reset

This command resets the SWR Connector protection state.

:gen:tr:protection?

This command returns the T/R Connector protection state.

Numeric/Return:	0	OFF
	1	ON (Overload)

:gen:tr:protection:reset

This command resets the T/R Connector protection state.

2-2. REMOTE OPERATION COMMANDS (cont)

RF Power Meter

:rfpow:alarm:high:limit <Arg0>
:rfpow:alarm:high:limit?

This command sets/returns the Alarm high limit value.

Numeric/Return: Arg0
 0.0 to 43.0 dBm
 0.0 to 100.0 W

:rfpow:alarm:high:state
:rfpow:alarm:high:state?

This command sets/returns the Alarm high limit state.

:rfpow:alarm:low:limit <Arg0>
:rfpow:alarm:low:limit?

This command sets/returns the Alarm low limit value.

Numeric/Return: Arg0
 0.0 to 43.0 dBm
 0.0 to 100.0 W

:rfpow:alarm:low:state
:rfpow:alarm:low:state?

This command sets/returns the Alarm low limit state.

:rfpow:average <Arg0>
:rfpow:average?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 1 to 99

:rfpow:cal:freq:resp?

This command returns the frequency in MHz at supplied index.

:rfpow:cal:lin:high:calpt

This command takes the current high power reading and supplied cal value at the supplied index.

:rfpow:cal:lin:high:dac?

This command returns the DAC value at supplied index.

:rfpow:cal:lin:high:pow?

This command returns the dBm value at supplied index.

:rfpow:cal:lin:high:size

This command clears the previous high range cal curve and resizes as required.

:rfpow:cal:lin:high:size?

This command returns the high power cal curve size.

:rfpow:cal:lin:low:calpt

This command takes the current low power reading and supplied cal value at the supplied index.

2-2. REMOTE OPERATION COMMANDS (cont)

RF Power Meter (cont)

:rfpow:cal:lin:low:dac?

This command returns the dac value at supplied index.

:rfpow:cal:lin:low:pow?

This command returns the dBm value at supplied index.

:rfpow:cal:lin:low:size

This command clears the previous low range cal curve and resizes as required.

:rfpow:cal:lin:low:size?

This command returns the low power cal curve size.

:rfpow:cal:recalc

This command recalculates the Calibration.

:rfpow:cal:recall

This command recalls the Calibration Data.

:rfpow:cal:resp:calpt

This command takes the correction frequency and index to fill the cal table.

:rfpow:cal:resp:calpt?

This command returns the cal factor value at supplied index.

:rfpow:cal:resp:size

This command clears the previous response cal curve and resizes as required.

:rfpow:cal:resp:size?

This command returns the response cal curve size.

:rfpow:cal:save

This command saves the Calibration Data.

:rfpow:cal:state <Arg0>

:rfpow:cal:state?

This command sets/returns the Calibration State.

Numeric/Return: Arg0

0	Normal PT Operation
1	Range Cal
2	Response Cal

:rfpow:extatten <Arg0>

:rfpow:extatten?

This command sets/returns the compensation factor for external attenuation.

Numeric/Return: Arg0

-50.0 to +50.0 dB

2-2. REMOTE OPERATION COMMANDS (cont)

RF Power Meter (cont)

:rfpow:range <Arg0>

This command sets the reading range operation.

Numeric/Return: Arg0
 0 Low Range
 1 High Range
 2 Auto Range

:rfpow:range:dbm:range?

This command returns the RF Power Meter range information.

:rfpow:range:dbm:auto

This command sets the RF Power Meter autorange state to Auto.

:rfpow:range:dbm>manual

This command sets the RF Power Meter autorange state to Manual.

:rfpow:range:dbm:state?

This command returns the RF Power Meter autorange state.

Numeric/Return: 0 Auto
 1 Manual
 2 Manual - Waiting Update

:rfpow:range:watt:range?

This command returns the RF Power Meter range information.

:rfpow:range:watt:auto

This command sets the RF Power Meter autorange state to Auto.

:rfpow:range:watt>manual

This command sets the RF Power Meter autorange state to Manual.

:rfpow:range:watt:state?

This command returns the RF Power Meter autorange state.

Numeric/Return: 0 Auto
 1 Manual
 2 Manual - Waiting Update

:rfpow:reading:avg?

This command returns the RF Power Meter average reading.

:rfpow:reading:clear

This command clears the current minimum, maximum and average settings.

:rfpow:reading:dbm:avg?

This command returns the RF Power Meter average reading.

Numeric/Return: 1.0 to 43.0 dBm

2-2. REMOTE OPERATION COMMANDS (cont)

RF Power Meter (cont)

:rfpow:reading:dbm:max?

This command returns the RF Power Meter reading maximum value.

Numeric/Return: 1.0 to 43.0 dBm

:rfpow:reading:dbm:min?

This command returns the RF Power Meter reading minimum value.

Numeric/Return: 1.0 to 43.0 dBm

:rfpow:reading:dbm:val?

This command returns the RF Power Meter average reading.

Numeric/Return: 1.0 to 43.0 dBm

:rfpow:reading:max?

This command returns the RF Power Meter reading maximum value.

Numeric/Return: 1.0 to 43.0 dBm

:rfpow:reading:min?

This command returns the RF Power Meter reading minimum value.

Numeric/Return: 1.0 to 43.0 dBm

:rfpow:reading:val?

This command returns the RF Power Meter average reading.

Numeric/Return: 1.0 to 43.0 dBm

:rfpow:reading:watt:avg?

This command returns the RF Power Meter average reading.

Numeric/Return: 0.00125 to 100 W

:rfpow:reading:watt:max?

This command returns the RF Power Meter reading maximum value.

Numeric/Return: 0.00125 to 100 W

:rfpow:reading:watt:min?

This command returns the RF Power Meter reading minimum value.

Numeric/Return: 0.00125 to 100 W

:rfpow:reading:watt:val?

This command returns the RF Power Meter average reading.

Numeric/Return: 0.00125 to 100 W

:rfpow:state

:rfpow:state?

This command enables/returns the RF Power Meter operation state.

2-2. REMOTE OPERATION COMMANDS (cont)

RF Power Meter (cont)

:rfpow:units <Arg0>

This command sets the units for reading.

Numeric/Return: Arg0
 0 dBm
 1 Watts

:rfpow:zero

This command starts the zero operation required before measurements.

2-2. REMOTE OPERATION COMMANDS (cont)

RNS Meter

:extrnsrfpwr:burst:period <Arg0>
:extrnsrfpwr:burst:period?

This command sets/returns the burst period for burst user.

Numeric/Return: Arg0
 Burst Period in sec (burst width to 1 sec)

:extrnsrfpwr:burst:width <Arg0>
:extrnsrfpwr:burst:width?

This command sets/returns the burst width for burst user type.

Numeric/Return: Arg0
 Burst Width in seconds (1e-9 sec to period)

:extrnsrfpwr:CCDF:limit <Arg0>
:extrnsrfpwr:CCDF:limit?

This command sets/returns the CCDF limit.

Numeric/Return: Arg0
 0 to 400 W

:extrnsrfpwr:filter <Arg0>
:extrnsrfpwr:filter?

This command sets/returns the filter.

Numeric/Return: Arg0
 0 4500
 1 400000

:extrnsrfpwr:fwd:avg <Arg0>
:extrnsrfpwr:fwd:avg?

This command sets/returns the forward average.

Numeric/Return: Arg0
 1 to 99

:extrnsrfpwr:fwd:units <Arg0>
:extrnsrfpwr:fwd:units?

This command sets/returns the forward units.

Numeric/Return: Arg0
 6 dBm
 7 μW
 8 mW
 9 W

2-2. REMOTE OPERATION COMMANDS (cont)

RNS Meter (cont)

:extrnsrfpwr:fwd:lower:limit:state <Arg0>
:extrnsrfpwr:fwd:lower:limit:state?

This command sets/returns the forward lower limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:extrnsrfpwr:fwd:lower:limit:value <Arg0>
:extrnsrfpwr:fwd:lower:limit:value?

This command sets/returns the forward lower limit value.

Numeric/Return: Arg0
 0 to 400

:extrnsrfpwr:fwd:reading:val?

This command returns the forward reading.

Numeric/Return: 0 to 400

:extrnsrfpwr:fwd:upper:limit:state <Arg0>
:extrnsrfpwr:fwd:upper:limit:state?

This command sets/returns the forward upper limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:extrnsrfpwr:fwd:upper:limit:value <Arg0>
:extrnsrfpwr:fwd:upper:limit:value?

This command sets/returns the forward upper limit value.

Numeric/Return: Arg0
 0 to 400

:extrnsrfpwr:fwdabs <Arg0>
:extrnsrfpwr:fwdabs?

This command sets/returns the forward measurement.

Numeric/Return: Arg0
 0 Forward
 1 Absorbed

2-2. REMOTE OPERATION COMMANDS (cont)

RNS Meter (cont)

:extrnsrfpwr:meas:type <Arg0>
:extrnsrfpwr:meas:type?

This command sets/returns the measurement type.

Numeric/Return: Arg0

0	Average
1	Peak
2	Burst
3	Crest
4	CCDF

:extrnsrfpwr:offset <Arg0>
:extrnsrfpwr:offset?

This command sets/returns the offset.

Numeric/Return: Arg0

0 to 100 dB

:extrnsrfpwr:port <Arg0>
:extrnsrfpwr:port?

This command sets/returns the port.

Numeric/Return: Arg0

0	Source
1	Load

:extrnsrfpwr:refl:avg <Arg0>
:extrnsrfpwr:refl:avg?

This command sets/returns the reflected average.

Numeric/Return: Arg0

1 to 99

:extrnsrfpwr:refl:units <Arg0>
:extrnsrfpwr:refl:units?

This command sets/returns the reflected units.

Numeric/Return: Arg0

6	dBm
7	μ W
8	mW
9	W

:extrnsrfpwr:refl:lower:limit:state <Arg0>
:extrnsrfpwr:refl:lower:limit:state?

This command sets/returns the reflected lower limit state.

Numeric/Return: Arg0

0	OFF
1	ON

2-2. REMOTE OPERATION COMMANDS (cont)

RNS Meter (cont)

:extrnsrfpwr:refl:lower:limit:value <Arg0>
:extrnsrfpwr:refl:lower:limit:value?

This command sets/returns the reflected lower limit value.

Numeric/Return: Arg0
 0 to 400

:extrnsrfpwr:refl:reading:val? <Arg0>

This command returns the reflected reading.

Numeric/Return: 0 to 400

:extrnsrfpwr:refl:upper:limit:state <Arg0>
:extrnsrfpwr:refl:upper:limit:state?

This command sets/returns the reflected upper limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:extrnsrfpwr:refl:upper:limit:value <Arg0>
:extrnsrfpwr:refl:upper:limit:value?

This command sets/returns the reflected upper limit value.

Numeric/Return: Arg0
 0 to 400

:extrnsrfpwr:relstate <Arg0>
:extrnsrfpwr:relstate?

This command sets/returns the relative state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:extrnsrfpwr:relunits <Arg0>
:extrnsrfpwr:relunits?

This command sets/returns the relative units.

Numeric/Return: Arg0
 0 %
 1 dB

:extrnsrfpwr:state <Arg0>

This command sets the meter state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:extrnsrfpwr:zero

This command starts the zero operation.

2-2. REMOTE OPERATION COMMANDS (cont)

RSSI Meter

:rssi:alarm:high:limit <Arg0>
:rssi:alarm:high:limit?

This command sets/returns the Alarm high limit value.

Numeric/Return: Arg0
 0 to 20 W

:rssi:alarm:high:state
:rssi:alarm:high:state?

This command sets/returns the Alarm high limit state.

:rssi:alarm:low:limit <Arg0>
:rssi:alarm:low:limit?

This command sets/returns the Alarm low limit value.

Numeric/Return: Arg0
 0 to 20 W

:rssi:alarm:low:state
:rssi:alarm:low:state?

This command sets/returns the Alarm low limit state.

:rssi:average <Arg0>
:rssi:average?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 1 to 99

:rssi:range:dbm:auto

This command sets the Audio Level autorange state to Auto.

:rssi:range:dbm>manual

This command sets the Audio Level autorange state to Manual.

:rssi:range:dbm:range?

This command returns the Audio Level range information.

:rssi:range:dbm:state?

This command returns the Audio Level autorange state.

Numeric/Return: 0 Auto
 1 Manual
 2 Manual - Waiting Update

:rssi:range:watts:auto

This command sets the Audio Level autorange state to Auto.

:rssi:range:watts>manual

This command sets the Audio Level autorange state to Manual.

:rssi:range:watts:range?

This command returns the Audio Level range information.

2-2. REMOTE OPERATION COMMANDS (cont)

RSSI Meter (cont)

:rssi:range:watts:state?

This command returns the Audio Level autorange state.

Numeric/Return: 0 Auto
 1 Manual
 2 Manual - Waiting Update

:rssi:reading:avg?

This command returns the RSSI reading averaged value.

Numeric/Return: -110 to 53 dBm

:rssi:reading:dbm:avg?

This command returns the RSSI reading averaged value.

:rssi:reading:dbm:max?

This command returns the RSSI reading maximum value.

:rssi:reading:dbm:min?

This command returns the RSSI reading minimum value.

:rssi:reading:dbm:val?

This command returns the RSSI reading with no statistics.

:rssi:reading:clear

This command clears the RSSI reading.

:rssi:reading:max?

This command returns the RSSI reading maximum value.

Numeric/Return: -110 to 53 dBm

:rssi:reading:min?

This command returns the RSSI reading minimum value.

Numeric/Return: -110 to 53 dBm

:rssi:reading:units <Arg0>

This command sets the displayed units.

Numeric/Return: Arg0
 0 dBm
 1 Watts
 2 μWatts

:rssi:reading:val?

This command returns the RSSI reading with no statistics.

Numeric/Return: -110 to 53 dBm

:rssi:reading:watt:avg?

This command returns the RSSI reading averaged value.

Numeric/Return: 0 to 100 W

2-2. REMOTE OPERATION COMMANDS (cont)

RSSI Meter (cont)

:rssi:reading:watt:max?

This command returns the RSSI reading maximum value.

Numeric/Return: 0 to 100 W

:rssi:reading:watt:min?

This command returns the RSSI reading minimum value.

Numeric/Return: 0 to 100 W

:rssi:reading:watt:val?

This command returns the RSSI reading with no statistics.

Numeric/Return: 0 to 100 W

:rssi:state

:rssi:state?

This command activates/returns the RSSI Meter state.

2-2. REMOTE OPERATION COMMANDS (cont)

Screens

:screen:af_counter_meter

This command selects the AF Counter Meter Screen.

:screen:analyzer

This command selects the Analyzer Screen.

:screen:annunciator

This command selects the Annunciator Screen.

:screen:audio

This command selects the Audio Function Generator Test Screen.

:screen:audio_level_meter

This command selects the Audio Level Meter Screen.

:screen:date_time_config

This command selects the Date/Time Screen.

:screen:diagnostic_tests

This command selects the Diagnostic Screen.

:screen:distortion_meter

This command selects the Distortion Meter Screen.

:screen:duplex_test

This command selects the Duplex Test Screen.

:screen:hwconfig

This command selects the HW Config Screen.

:screen:options

This command selects the Options Screen.

:screen:receiver_test

This command selects the Receiver Test Screen.

:screen:remote_config

This command selects the Remote Screen.

:screen:scope

This command selects the Oscilloscope Screen.

:screen:self_test

This command selects the Self Test Screen.

:screen:sinad_meter

This command selects the Sinad Meter Screen.

:screen:swr_test

This command selects the ANT-Cable Test Screen.

2-2. REMOTE OPERATION COMMANDS (cont)

Screens (cont)

:screen:trackgen

This command selects the Tracking Generator Screen.

:screen:transmitter_test

This command selects the Transmitter Test Screen.

:screen:unitcopy

This command selects the Unit Copy Screen.

:screen:usbmanager

This command selects the USB Manager Screen.

:screen:version

This command selects the Version Screen.

2-2. REMOTE OPERATION COMMANDS (cont)

Scripting

:scripting:checkkey?

This command returns the Key Code or -1 if no key is pressed.

:scripting:dialog:close

This command closes an open Dialog Box.

:scripting:dialog:create

This command creates a Dialog Box.

:scripting:event:enable <Arg0> <Arg1>

This command sets the event for the Soft Key to a Lua Command.

Numeric/Return: Arg0
 1 to 5
 Lua Command
 Arg1
 1 to 5
 Lua Command

:scripting:event:idle

This command waits for a Key Event.

:scripting:event:idle:dcib

This command waits for a Key Event without closing the Dialog Box.

:scripting:exit

This command signals the end of a running script.

:scripting:getkey?

This command returns the Key Code

:scripting:rs232:close

This command closes the RS-232 connection.

:scripting:rs232:open

This command opens the RS-232 connection.

:scripting:rs232:pacewrite <Arg0> <Arg1>

This command writes to the RS-232 Connector, pausing between each character.

Numeric/Return: Arg0
 <string>
 Arg1
 Time

2-2. REMOTE OPERATION COMMANDS (cont)

Scripting (cont)

:scripting:rs232:config <Arg0> <Arg1> <Arg2> <Arg3> <Arg4> <Arg5> <Arg6> <Arg7>

This command configures the RS-232 Connector.

Numeric/Return: Arg0 (Baud Rate)

1200
2400
4800
9600
19200
38400
57600
115200
230400

Arg1 (Byte Size)

5
6
7
8

Arg2 (Parity)

0 (no parity),
1 (even parity),
2 (odd parity),
3 (space parity)

Arg3 (Stop Bits)

1
2

Arg4 (Flow)

0 (Off),
1 (On)

Arg5 (Crtsets))

0 (flow off),
1 (flow on)

Arg6 (Timeout)

Integer

Arg7 (Term)

Terminating character in hex format

2-2. REMOTE OPERATION COMMANDS (cont)

Scripting (cont)

:scripting:rs232:read

This command reads in from RS-232 until the term character is reached or timeout occurs.

:scripting:rs232:readsize

This command reads the Number of Characters in the RS-232 Buffer.

:scripting:rs232:stringwrite <Arg0>

This command writes a string to the RS-232 Connector.

Numeric/Return: Arg0
 <string>

:scripting:rs232:wait <Arg0> <Arg1> <Arg2>

This command waits until the given string is read.

Numeric/Return: Arg0
 <string>
 Arg1
 <timeout>
 Arg2
 <log enable>

:scripting:rs232:write <Arg0>

This command writes a string of hex values delimited by commas to the RS-232 Connector.

Numeric/Return: Arg0
 <string>

:scripting:screen:print <Arg0> <Arg1> <Arg2>

This command prints the given string to the given x,y coordinates on the Dialog Box.

Numeric/Return: Arg0
 X Coordinate
 Arg1
 Y Coordinate
 Arg2
 "String"

:scripting:screen:print:invert

This command prints the given string to the given x,y coordinates on the Dialog Box with Inverted Colors.

2-2. REMOTE OPERATION COMMANDS (cont)

Scripting (cont)

:scripting:screen:rectangle <Arg0> <Arg1> <Arg2> <Arg3> <Arg4>

This command prints a Rectangle to the Scripting Dialog.

Numeric/Return: Arg0>
 X1 Coordinate
 Arg1
 Y1 Coordinate
 Arg2
 X2 Coordinate
 Arg3
 Y2 Coordinate
 Arg4
 0 Black
 1 White

:scripting:sleep

This command sets the Sleep time in ms. For time >1 minute, the Sleep time is truncated to 1 minute.

:scripting:softkey:clear

This command clears all the Soft Key Labels.

:scripting:softkey:label <Arg0> <Arg1>

This command sets the Soft Key Label.

Numeric/Return: Arg0
 1 to 5
 Arg1
 Label Name

2-2. REMOTE OPERATION COMMANDS (cont)

Setup

:setup:configuration <Arg0>
:setup:configuration?

This command sets/returns the configuration.

Numeric/Return: Arg0
 0 LMR
 1 PTC
 2 P25 Phase 2

:setup:date:cal:new <Arg0> <Arg1> <Arg2>

This command writes the next Calibration Date into RTC.

Numeric/Return: Arg0
 Day
 Arg1
 Month
 Arg2
 Year

:setup:date:cal_due?

This command returns the next Calibration Date.

:setup:date:current?

This command returns the current date.

:setup:ftp:filepath
:setup:ftp:filepath?

This command sets/returns the path to files on FTP server.

:setup:ppcram:free?

This command returns the PowerPC free RAM value.

:setup:ppcram:total?

This command returns the PowerPC total RAM value.

:setup:ppcflash:free?

This command returns the PowerPC free Flash value.

:setup:ppcflash:total?

This command returns the PowerPC total Flash value.

:setup:ptt:35xx

This command sets the PTT ON/OFF.

:setup:ptt:hw?

This command returns the PTT hardware.

Numeric/Return: 0 Viavi Mic
 1 H-250 Mic
 2 Headset Mic
 3 Viavi Breakout Box

2-2. REMOTE OPERATION COMMANDS (cont)

Setup (cont)

:setup:rem:in14?

This command returns the Remote input on Pin 14.

:setup:rem:in28?

This command returns the Remote input on Pin 28.

:setup:rem:in40?

This command returns the Remote input on Pin 40.

:setup:rem:inall

This command returns the Remote input on all 4 input pins.

:setup:rem:out15

This command sets the Remote output on Pin 15.

:setup:rem:out29

This command sets the Remote output on Pin 29.

:setup:rem:out30

This command sets the Remote output on Pin 30.

:setup:rem:out41

This command sets the Remote output on Pin 41.

:setup:temp:battery?

This command returns the battery temperature in degrees.

:setup:temp:internal?

This command returns the FPGA temperature in degrees.

:setup:temp:remote?

This command returns the I²C temperature in degrees.

:setup:time:active?

This command returns the total time unit has been powered on.

:setup:time:current?

This command returns the Time.

:setup:version:cpld:rf?

This command returns the CPLD RF version number.

:setup:version:fpga?

This command returns the FPGA version number.

:setup:version:powerpc?

This command returns the PPC Application Code version number.

:setup:version:rf_hdw?

This command returns the RF hardware version number (FPGA).

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling

:signaling:dcs:disable

This command disables the DCS Encode (immediate stop).

:signaling:dcs:getcode?

This command returns the DCS Encode Code.

:signaling:dcs:getpolarity?

This command returns the DCS Encode Polarity.

:signaling:dcs:setcode <Arg0>

This command sets the DCS Encode Code (i.e., Enter 19 for DCS Code 023).

Numeric/Return: Arg0
 (DCS Code in Decimal)

:signaling:dcs:setpolarity <Arg0>

This command sets the DCS Encode Polarity.

Numeric/Return: Arg0
 0 Non-Inverted
 1 Inverted

:signaling:dcs:start

This command starts the DCS Encode.

:signaling:dcs:state <Arg0>

:signaling:dcs:state?

This command sets/returns the DCS Encode State.

Numeric/Return: Arg0
 0 OFF
 1 ON

:signaling:dcs:turnoff

This command disables the DCS Encode (200 ms delay).

:signaling:dtmf:decode:idle <Arg0>

:signaling:dtmf:decode:idle?

This command sets/returns the DTMF Decode Idle.

Numeric/Return: Arg0
 0.0 to 100.0 sec

:signaling:dtmf:decode:lastmessage?

This command returns the last complete DTMF message decoded.

:signaling:dtmf:decode:message?

This command returns the current DTMF Message being decoded.

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling (cont)

:signaling:dtmf:decode:state <Arg0>
:signaling:dtmf:decode:state?

This command sets/returns the DTMF Decode State.

Numeric/Return: Arg0
 0 OFF
 1 ON

:signaling:dtmf:encode:idle <Arg0>
:signaling:dtmf:encode:idle?

This command sets/returns the DTMF Encode Idle.

Numeric/Return: Arg0
 0.0 to 100.0 sec

:signaling:dtmf:encode:mark <Arg0>
:signaling:dtmf:encode:mark?

This command sets/returns the DTMF Encode Mark.

Numeric/Return: Arg0
 0 to 1000 ms

:signaling:dtmf:encode:message <Arg0>
:signaling:dtmf:encode:message?

This command sets/returns the DTMF Encode Message.

Numeric/Return: Arg0
 Up to 20 valid DTMF Tones

:signaling:dtmf:encode:oneshot

This command transmits DTMF Encode Message Only Once. (Valid only when DTMF Encode Space is set to OFF.)

:signaling:dtmf:encode:space <Arg0>
:signaling:dtmf:encode:space?

This command sets/returns the DTMF Encode Space.

Numeric/Return: Arg0
 0 to 1000 ms

:signaling:dtmf:encode:state <Arg0>
:signaling:dtmf:encode:state?

This command sets/returns the DTMF Encode State.

Numeric/Return: Arg0
 0 OFF
 1 ON

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling (cont)

:signaling:toneremote:decode:idle <Arg0>

:signaling:toneremote:decode:idle?

This command sets/returns the tone remote idle time in seconds.

Numeric return: Arg0
 0.0 to 100.0

:signaling:toneremote:decode:lastmessage?

This command returns the last decoded tone remote message.

:signaling:toneremote:decode:message?

This command returns the currently decoded tone remote message as ASCII string data.

:signaling:toneremote:decode:state <Arg0>

:signaling:toneremote:decode:state?

This command sets/returns the tone remote decode state.

Numeric return: Arg0
 0 Off
 1 On

:signaling:toneremote:encode:af:dblevel <Arg0> <Arg1>

:signaling:toneremote:encode:af:dblevel?

This command sets/returns the Tone Remote Encode AF dB Level.

Numeric/Return: Arg0
 Tone 1, 2 or 3
 Arg1
 -20 to 20 dB

:signaling:toneremote:encode:af:dur <Arg0> <Arg1>

:signaling:toneremote:encode:af:dur?

This command sets/returns the Tone Remote Encode AF Duration.

Numeric/Return: Arg0
 Tone 1, 2 or 3
 Arg1
 20 to 500 ms

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling (cont)

:signaling:toneremote:encode:af:freq <Arg0> <Arg1>
:signaling:toneremote:encode:af:freq?

This command sets/returns the Tone Remote Encode AF Frequency.

Numeric/Return: Arg0
 Tone 1, 2 or 3

 Arg1
 0 to 20 kHz

:signaling:toneremote:encode:aflevel <Arg0>
:signaling:toneremote:encode:aflevel?

This command sets/returns the Tone Remote Encode AF Level.

Numeric/Return: Arg0
 0 to 1.57 Vrms

:signaling:toneremote:encode:amlevel <Arg0>
:signaling:toneremote:encode:amlevel?

This command sets/returns the Tone Remote Encode AM Level.

Numeric/Return: Arg0
 0% to 100%

:signaling:toneremote:encode:fmlevel <Arg0>
:signaling:toneremote:encode:fmlevel?

This command sets/returns the Tone Remote Encode FM Level.

Numeric/Return: Arg0
 0 to 100 kHz

:signaling:toneremote:encode:mod:dblevel <Arg0> <Arg1>
:signaling:toneremote:encode:mod:dblevel?

This command sets/returns the Tone Remote Encode Mod dB Level.

Numeric/Return: Arg0
 Tone 1, 2 or 3

 Arg1
 -20 to 20 dB

:signaling:toneremote:encode:mod:dur <Arg0> <Arg1>
:signaling:toneremote:encode:mod:dur?

This command sets/returns the Tone Remote Encode Mod Duration.

Numeric/Return: Arg0
 Tone 1, 2 or 3

 Arg1
 20 to 500 ms

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling (cont)

:signaling:toneremote:encode:mod:freq <Arg0> <Arg1>
:signaling:toneremote:encode:mod:freq?

This command sets/returns the Tone Remote Encode Mod Frequency.

Numeric/Return: Arg0
 Tone 1, 2 or 3
 Arg1
 0 to 20 kHz

:signaling:toneremote:encode:run <Arg0>

This command starts the Tone Remote Encode.

Numeric/Return: Arg0
 0 FGEN
 1 MOD

:signaling:toneremote:encode:state?

This command returns the Tone Remote Encode state (if Tone Remote is running).

Numeric/Return: 0 OFF
 1 ON

:signaling:tonesequential:encode:af:code <Arg0>
:signaling:tonesequential:encode:af:code?

This command sets/returns the Tone Sequential Encode AF Code.

Numeric/Return: Arg0
 Code

:signaling:tonesequential:encode:af:freqshift <Arg0>
:signaling:tonesequential:encode:af:freqshift?

This command sets/returns the Tone Sequential Encode AF Frequency Shift.

Numeric/Return: Arg0
 -100% to 100%

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling (cont)

:signaling:tonesequential:encode:af:protocol <Arg0>
:signaling:tonesequential:encode:mod:af:protocol?

This command sets/returns the Tone Sequential Encode AF Protocol.

Numeric/Return: Arg0

0	ZVEI1
1	ZVEI2
2	ZVEI3
3	PZVEI
4	DZVEI
5	PDZVEI
6	CCIR1
7	CCIR2
8	PCCIR
9	EEA
10	EUROSIG
11	NATEL
12	EIA
13	MODAT
14	USER1
15	USER2

:signaling:tonesequential:encode:af:user:dur <Arg0> <Arg1> <Arg2>
:signaling:tonesequential:encode:af:user:dur?

This command sets/returns the Tone Sequential Encode AF User Duration.

Numeric/Return: Arg0
 User 1 or 2

Arg1
 Tone 0 to 15

Arg2
 0 to 1000 ms

:signaling:tonesequential:encode:af:user:freq <Arg0> <Arg1>
:signaling:tonesequential:encode:af:user:freq?

This command sets/returns the Tone Sequential Encode AF User Frequency.

Numeric/Return: Arg0
 User 1 or 2

Arg1
 Tone 0 to 15

Arg2
 0 to 20 kHz

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling (cont)

:signaling:tonesequential:encode:af:user:pause <Arg0> <Arg1>
:signaling:tonesequential:encode:af:user:pause?

This command sets/returns the Tone Sequential Encode AF User Pause.

Numeric/Return: Arg0
 User 1 or 2
 Arg1
 Tone 0 to 15
 Arg2
 0 to 1000 ms

:signaling:tonesequential:encode:aflevel <Arg0>
:signaling:tonesequential:encode:aflevel?

This command sets/returns the Tone Sequential Encode AF Level.

Numeric/Return: Arg0
 0 to 1.57 Vrms

:signaling:tonesequential:encode:amlevel <Arg0>
:signaling:tonesequential:encode:amlevel?

This command sets/returns the Tone Sequential Encode AM Level.

Numeric/Return: Arg0
 0% to 100%

:signaling:tonesequential:encode:fmlevel <Arg0>
:signaling:tonesequential:encode:fmlevel?

This command sets/returns the Tone Sequential Encode AM Level.

Numeric/Return: Arg0
 0 to 100 kHz

:signaling:tonesequential:encode:mod:code <Arg0>
:signaling:tonesequential:encode:mod:code?

This command sets/returns the Tone Sequential Encode Mod Code.

Numeric/Return: Arg0
 Code

:signaling:tonesequential:encode:mod:freqshift <Arg0>
:signaling:tonesequential:encode:mod:freqshift?

This command sets/returns the Tone Sequential Encode Mod Frequency Shift.

Numeric/Return: Arg0
 -100% to 100%

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling (cont)

:signaling:tonesequential:encode:mod:protocol <Arg0>
:signaling:tonesequential:encode:mod:protocol?

This command sets/returns the Tone Sequential Encode Mod Protocol.

Numeric/Return: Arg0

0	ZVEI1
1	ZVEI2
2	ZVEI3
3	PZVEI
4	DZVEI
5	PDZVEI
6	CCIR1
7	CCIR2
8	PCCIR
9	EEA
10	EUROSIG
11	NATEL
12	EIA
13	MODAT
14	USER1
15	USER2

:signaling:tonesequential:encode:mod:user:dur <Arg0> <Arg1>
:signaling:tonesequential:encode:mod:user:dur?

This command sets/returns the Tone Sequential Encode Mod User Duration.

Numeric/Return: Arg0
 User 1 or 2

Arg1
 Tone 0 to 15

Arg2
 0 to 1000 ms

:signaling:tonesequential:encode:mod:user:freq <Arg0> <Arg1>
:signaling:tonesequential:encode:mod:user:freq?

This command sets/returns the Tone Sequential Encode Mod User Frequency.

Numeric/Return: Arg0
 User 1 or 2

Arg1
 Tone 0 to 15

Arg2
 0 to 20 kHz

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling (cont)

:signaling:tonesequential:encode:mod:user:pause <Arg0> <Arg1>
:signaling:tonesequential:encode:mod:user:pause?

This command sets/returns the Tone Sequential Encode Mod User Pause.

Numeric/Return: Arg0
 User 1 or 2
 Arg1
 Tone 0 to 15
 Arg2
 0 to 1000 ms

:signaling:tonesequential:encode:run <Arg0>

This command sets the Tone Sequential Encode.

Numeric/Return: Arg0
 0 Fgen
 1 Mod

:signaling:tonesequential:decode:idle <Arg0>

:signaling:tonesequential:decode:idle?

This command sets/returns the tone sequential idle time in seconds.

Numeric return: Arg0
 0.0 to 100.0

:signaling:tonesequential:decode:lastmessage?

This command returns the last decoded tone sequential message.

:signaling:tonesequential:decode:message?

This command returns the currently decoded tone sequential message as ASCII string data.

:signaling:tonesequential:decode:state

:signaling:tonesequential:decode:state?

This command sets/returns the tone sequential decode state.

Numeric return: Arg0
 0 Off
 1 On

:signaling:tonesequential:encode:state?

This command returns the Tone Sequential Encode State if running.

Numeric/Return: 0 OFF
 1 ON

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling (cont)

:signaling:twotoneseq:encode:af:adur <Arg0>
:signaling:twotoneseq:encode:af:adur?

This command sets/returns the 2 Tone Sequence Encode AF A Duration.

Numeric/Return: Arg0
 20 to 5000 ms

:signaling:twotoneseq:encode:af:afreq
:signaling:twotoneseq:encode:af:afreq?

This command sets/returns the 2 Tone Sequence Encode AF A Frequency.

Numeric/Return: Arg0
 0 to 20 kHz

:signaling:twotoneseq:decode:idle
:signaling:twotoneseq:decode:idle?

This command sets/returns the two tone sequential idle time in seconds.

Numeric return: Arg0
 0.0 to 100.0

:signaling:twotoneseq:decode:lastmessage?

This command returns the last decoded two tone sequential message.

:signaling:twotoneseq:decode:message?

This command returns the currently decoded two tone sequential message as ASCII string data.

:signaling:twotoneseq:decode:idle
:signaling:twotoneseq:decode:idle?

This command sets/returns the two tone sequential idle time in seconds.

Numeric return: Arg0
 0.0 to 100.0

:signaling:twotoneseq:decode:lastmessage?

This command returns the last decoded two tone sequential message.

:signaling:twotoneseq:decode:message?

This command returns the currently decoded two tone sequential message as ASCII string data.

:signaling:twotoneseq:decode:state
:signaling:twotoneseq:decode:state?

This command sets/returns the two tone sequential decode state.

Numeric return: Arg0
 0 Off
 1 On

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling (cont)

:signaling:twotoneseq:encode:af:bdur <Arg0>
:signaling:twotoneseq:encode:af:bdur?

This command sets/returns the 2 Tone Sequence Encode AF B Duration.

Numeric/Return: Arg0
 20 to 5000 ms

:signaling:twotoneseq:encode:af:bfreq <Arg0>
:signaling:twotoneseq:encode:af:bfreq?

This command sets/returns the 2 Tone Sequence Encode AF B Frequency.

Numeric/Return: Arg0
 0 to 20 kHz

:signaling:twotoneseq:encode:af:space <Arg0>
:signaling:twotoneseq:encode:af:space?

This command sets/returns the 2 Tone Sequence Encode AF Space.

Numeric/Return: Arg0
 0 to 5000 ms

:signaling:twotoneseq:encode:aflevel <Arg0>
:signaling:twotoneseq:encode:aflevel?

This command sets/returns the 2 Tone Sequence Encode AF Level.

Numeric/Return: Arg0
 0 to 1.57 Vrms

:signaling:twotoneseq:encode:amlevel <Arg0>
:signaling:twotoneseq:encode:amlevel?

This command sets/returns the 2 Tone Sequence Encode AM Level.

Numeric/Return: Arg0
 0% to 100%

:signaling:twotoneseq:encode:fmlevel <Arg0>
:signaling:twotoneseq:encode:fmlevel?

This command sets/returns the 2 Tone Sequence Encode FM Level.

Numeric/Return: Arg0
 0 to 100 kHz

:signaling:twotoneseq:encode:mod:adur <Arg0>
:signaling:twotoneseq:encode:mod:adur?

This command sets/returns the 2 Tone Sequence Encode Mod A Duration.

Numeric/Return: Arg0
 20 to 5000 ms

2-2. REMOTE OPERATION COMMANDS (cont)

Signaling (cont)

:signaling:twotoneseq:encode:mod:afreq <Arg0>
:signaling:twotoneseq:encode:mod:afreq?

This command sets/returns the 2 Tone Sequence Encode Mod A Frequency.

Numeric/Return: Arg0
 0 to 20 kHz

:signaling:twotoneseq:encode:mod:bdur <Arg0>
:signaling:twotoneseq:encode:mod:bdur?

This command sets/returns the 2 Tone Sequence Encode Mod B Duration.

Numeric/Return: Arg0
 20 to 5000 ms

:signaling:twotoneseq:encode:mod:bfreq <Arg0>
:signaling:twotoneseq:encode:mod:bfreq?

This command sets/returns the 2 Tone Sequence Encode Mod B Frequency.

Numeric/Return: Arg0
 0 to 20 kHz

:signaling:twotoneseq:encode:mod:space <Arg0>
:signaling:twotoneseq:encode:mod:space?

This command sets/returns the 2 Tone Sequence Encode Mod Space.

Numeric/Return: Arg0
 0 to 5000 ms

:signaling:twotoneseq:encode:run <Arg0>

This command starts the 2 Tone Sequence Encode.

Numeric/Return: Arg0
 0 FGEN
 1 MOD

:signaling:twotoneseq:encode:state?

This command returns the Two Tone Sequence Encode state (if Two Tone Sequence is running).

Numeric/Return: 0 OFF
 1 ON

2-2. REMOTE OPERATION COMMANDS (cont)

Sinad Meter

:sinad:demod:alarm:high:limit <Arg0>
:sinad:demod:alarm:high:limit?

This command sets/returns the Alarm high limit value.

Numeric/Return: Arg0
 0.0 to 60.0 dB

:sinad:demod:alarm:high:state
:sinad:demod:alarm:high:state?

This command sets/returns the Alarm high limit state.

:sinad:demod:alarm:low:limit <Arg0>
:sinad:demod:alarm:low:limit?

This command sets/returns the Alarm low limit value.

Numeric/Return: Arg0
 0.0 to 60.0 dB

:sinad:demod:alarm:low:state
:sinad:demod:alarm:low:state?

This command sets/returns the Alarm low limit state.

:sinad:demod:average <Arg0>
:sinad:demod:average?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 1 to 99

:sinad:demod:reading:avg?

This command returns the Sinad Meter reading with averaged value.

Numeric/Return: 0.0 to 60.0 dB

:sinad:demod:reading:clear

This command clears the Sinad Meter reading.

:sinad:demod:reading:max?

This command returns the Sinad Meter reading maximum value.

Numeric/Return: 0.0 to 60.0 dB

:sinad:demod:reading:min?

This command returns the Sinad Meter reading minimum value.

Numeric/Return: 0.0 to 60.0 dB

:sinad:demod:reading:val?

This command returns the Sinad Meter average value.

Numeric/Return: 0.0 to 60.0 dB

2-2. REMOTE OPERATION COMMANDS (cont)

Sinad Meter (cont)

:sinad:demod:state
:sinad:demod:state?

This command activates/returns the Sinad Meter on demod input state.

:sinad:ext_aud_in:alarm:high:limit <Arg0>
:sinad:ext_aud_in:alarm:high:limit?

This command sets/returns the Alarm high limit value.

Numeric/Return: Arg0
 0.0 to 60.0 dB

:sinad:ext_aud_in:alarm:high:state
:sinad:ext_aud_in:alarm:high:state?

This command sets/returns the Alarm high limit state.

:sinad:ext_aud_in:alarm:low:limit <Arg0>
:sinad:ext_aud_in:alarm:low:limit?

This command sets/returns the Alarm low limit value.

Numeric/Return: Arg0
 0.0 to 60.0 dB

:sinad:ext_aud_in:alarm:low:state
:sinad:ext_aud_in:alarm:low:state?

This command sets/returns the Alarm low limit state.

:sinad:ext_aud_in:average <Arg0>
:sinad:ext_aud_in:average?

This command sets/returns the number of readings to average.

Numeric/Return: Arg0
 1 to 99

:sinad:ext_aud_in:filter <Arg0>
:sinad:ext_aud_in:filter?

This command sets/returns the audio filter status.

Numeric/Return: Arg0
 0 No Filter
 1 15 kHz LP
 2 300 Hz to 3 kHz BP

:sinad:ext_aud_in:reading:avg?

This command returns the Sinad Meter reading with averaged value.

Numeric/Return: 0.0 to 60.0 dB

:sinad:ext_aud_in:reading:clear

This command clears the Sinad Meter reading.

2-2. REMOTE OPERATION COMMANDS (cont)

Sinad Meter (cont)

:sinad:ext_aud_in:reading:max?

This command returns the Sinad Meter reading maximum value.

Numeric/Return: 0.0 to 60.0 dB

:sinad:ext_aud_in:reading:min?

This command returns the Sinad Meter reading minimum value.

Numeric/Return: 0.0 to 60.0 dB

:sinad:ext_aud_in:reading:val?

This command returns the Sinad Meter average value.

Numeric/Return: 0.0 to 60.0 dB

:sinad:ext_aud_in:state

:sinad:ext_aud_in:state?

This command activates/returns the Sinad Meter on ext audio input state.

:sinad:range?

This command returns the Sinad Meter range information.

:sinad:range:auto

This command sets the Sinad Meter autorange state to Auto.

:sinad:range>manual

This command sets the Sinad Meter autorange state to Manual.

:sinad:range:state?

This command returns the Sinad Meter autorange state.

Numeric/Return: 0 Auto
1 Manual
2 Manual - Waiting Update

2-2. REMOTE OPERATION COMMANDS (cont)

SNR Meter

:snr:enable <Arg0>
:snr:enable?

This command sets/returns the forward measurement.

Numeric/Return: Arg0
 0 OFF
 1 ON

:snr:lower:limit:state <Arg0>
:snr:lower:limit:state?

This command sets/returns the lower limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:snr:lower:limit:value <Arg0>
:snr:lower:limit:value?

This command sets/returns the forward lower limit value.

Numeric/Return: Arg0
 -100 to 100

:snr:meter:aver <Arg0>
:snr:meter:aver?

This command sets/returns the averaging.

Numeric/Return: Arg0
 1 to 100

:snr:meter:range <Arg0>
:snr:meter:range?

This command sets/returns the scale.

Numeric/Return: Arg0
 0 to 7 dB

:snr:meter:stat?

This command returns the measurement.

Numeric/Return: 0 to 100 dB

:snr:meter:type <Arg0>
:snr:meter:type?

This command sets/returns the measurement type.

Numeric/Return: Arg0
 0 Audio SNR
 1 Demod SNR

2-2. REMOTE OPERATION COMMANDS (cont)

SNR Meter (cont)

:snr:upper:limit:state <Arg0>
:snr:upper:limit:state?

This command sets/returns the forward upper limit state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:snr:upper:limit:value <Arg0>
:snr:upper:limit:value?

This command sets/returns the forward upper limit value.

Numeric/Return: Arg0
 -100 to 100

2-2. REMOTE OPERATION COMMANDS (cont)

Speaker

:speaker:internal:state <Arg0>
:speaker:internal:state?

This command sets/returns the internal speaker output state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:speaker:level:squelch:level <Arg0>
:speaker:level:squelch:level?

This command sets/returns the speaker level squelch level.

Numeric/Return: Arg0
 -150 to 50

:speaker:source <Arg0>
:speaker:source?

This command sets/returns the speaker input signal source.

Numeric/Return: Arg0
 0 EXT_AUD_IN_2_SPEAKER
 1 DEMOD_2_SPEAKER
 2 MODULATION_2_SPEAKER
 3 FGEN_2_SPEAKER

:speaker:state <Arg0>
:speaker:state?

This command sets/returns the speaker output state.

Numeric/Return: Arg0
 1 ON
 2 OFF

:speaker:volume <Arg0>
:speaker:volume?

This command sets/returns the speaker volume.

Numeric/Return: Arg0
 0 to 100

2-2. REMOTE OPERATION COMMANDS (cont)

Spectrum Analyzer

:analyzer:avg <Arg0>
:analyzer:avg?

This command sets/returns the Spectrum Analyzer average.

Numeric/Return: Arg0
 1 to 99

:analyzer:current:avg?

This command returns the number of traces for current Spectrum Analyzer trace reading.

Numeric/Return: 0 to 99

:analyzer:freq <Arg0>
:analyzer:freq?

This command sets/returns the Spectrum Analyzer center frequency.

Numeric/Return: Arg0
 2 to 1000 MHz

:analyzer:marker:freq <Arg0>
:analyzer:marker:freq?

This command sets/returns the Spectrum Analyzer marker center frequency.

Numeric/Return: Arg0
 2 to 1000 MHz

:analyzer:obw:bw?

This command returns the Spectrum Analyzer obw bandwidth frequency.

:analyzer:obw:mode <Arg0>
:analyzer:obw:mode?

This command sets/returns the Spectrum Analyzer obw mode.

Numeric/Return: Arg0
 0 Live
 1 Peak Hold
 2 Hold

:analyzer:obw:percent <Arg0>
:analyzer:obw:percent?

This command sets/returns the Spectrum Analyzer obw percentile.

Numeric/Return: Arg0
 0 to 100 MHz

:analyzer:obw:power <Arg0>

This command returns the Spectrum Analyzer obw power.

2-2. REMOTE OPERATION COMMANDS (cont)

Spectrum Analyzer (cont)

:analyzer:obw:state <Arg0>
:analyzer:obw:state?

This command activates/returns the Spectrum Analyzer obw processing state.

Numeric/Return: Arg0
 0 OFF
 1 ON

:analyzer:psd <Arg0>
:analyzer:psd?

This command sets/returns the Spectrum Analyzer power spectral density.

Numeric/Return: Arg0
 0 Spectrum
 1 Power Spectral Density

:analyzer:peakhold <Arg0>
:analyzer:peakhold?

This command activates/returns the Spectrum Analyzer peak hold status.

Numeric/Return: Arg0
 0 OFF
 1 ON

:analyzer:pwrbandspan <Arg0>
:analyzer:pwrbandspan?

This command sets/returns the Spectrum Analyzer power bandwidth span.

Numeric/Return: Arg0
 1000 Hz
 2000 Hz
 5000 Hz
 10000 Hz
 20000 Hz
 50000 Hz
 100000 Hz
 200000 Hz
 500000 Hz
 1000000 Hz
 2000000 Hz
 5000000 Hz

:analyzer:reading:bwpower?

This command returns the Spectrum Analyzer bandwidth power.

:analyzer:reading:rbwe?

This command returns the Spectrum Analyzer resolution bandwidth equivalent.

2-2. REMOTE OPERATION COMMANDS (cont)

Spectrum Analyzer (cont)

:analyzer:sleep <Arg0>
:analyzer:sleep?

This command sets/returns the Spectrum Analyzer sleep time.

Numeric/Return: Arg0
 10000 to 500000 μ s

:analyzer:span <Arg0>
:analyzer:span?

This command sets/returns the Spectrum Analyzer span.

Numeric/Return: Arg0
 10000 Hz
 20000 Hz
 50000 Hz
 100000 Hz
 200000 Hz
 500000 Hz
 1000000 Hz
 2000000 Hz
 5000000 Hz

:analyzer:state
:analyzer:state?

This command activates/returns the Spectrum Analyzer signal processing state.

:analyzer:trace:amplitude?

This command returns the Spectrum Analyzer trace amplitude.

:analyzer:trace:frequency?

This command returns the Spectrum Analyzer trace frequency.

:analyzer:trace:length <Arg0>
:analyzer:trace:length?

This command sets/returns the Spectrum Analyzer graph width.

Numeric/Return: Arg0
 0 768
 1 256
 2 180
 3 128
 4 90

:analyzer:trace:points?

This command returns the Spectrum Analyzer graph points.

2-2. REMOTE OPERATION COMMANDS (cont)

Spectrum Analyzer (cont)

**:analyzer>window <Arg0>
:analyzer>window?**

This command sets/returns the Spectrum Analyzer window size.

Numeric/Return: Arg0
 0 HANNING
 1 FLATTOP
 2 RECTANGULAR
 3 BLACKMAN

2-2. REMOTE OPERATION COMMANDS (cont)

Tracking Generator

:trackgen:freq <Arg0>
:trackgen:freq?

This command sets/returns the Tracking Generator frequency.

Numeric/Return: Arg0
 2 to 1000 MHz

:trackgen:peakhold
:trackgen:peakhold?

This command sets/returns the Peak Hold status.

:trackgen:reset:peak

This command resets the Peak Hold data.

:trackgen:scale <Arg0>
:trackgen:scale?

This command sets/returns the Tracking Generator scale.

Numeric/Return: Arg0
 0 2 dB/Div
 1 5 dB/Div
 2 10 dB/Div
 3 15 dB/Div
 4 20 dB/Div

:trackgen:setref

This command sets the Tracking Generator reference.

:trackgen:setreflvl <Arg0>
:trackgen:setreflvl?

This command sets/returns the Tracking Generator reference level.

Numeric/Return: Arg0
 -70 dBm
 -60 dBm
 -50 dBm
 -40 dBm
 -30 dBm
 -20 dBm
 -10 dBm
 +0 dBm
 +10 dBm

:trackgen:start <Arg0>
:trackgen:start?

This command sets/returns the Tracking Generator start frequency.

Numeric/Return: Arg0
 2 to 1000 MHz

2-2. REMOTE OPERATION COMMANDS (cont)

Tracking Generator (cont)

:trackgen:state
:trackgen:state?

This command activates/returns the Tracking Generator signal processing state.

:trackgen:stop <Arg0>
:trackgen:stop?

This command sets/returns the Tracking Generator stop frequency.

Numeric/Return: Arg0
 2 to 1000 MHz

:trackgen:trace?

This command returns the trace data.

Numeric/Return: 0 Live Trace
 1 Ref Trace
 2 Diff Trace
 3 Peakhold Trace

:trackgen:type <Arg0>
:trackgen:type?

This command sets/returns the Tracking Generator type.

Numeric/Return: Arg0
 0 Live
 1 Diff

:trackgen:user:span <Arg0>
:trackgen:user:span?

This command sets/returns the Tracking Generator User span.

Numeric/Return: Arg0
 0.01 to 998.0

:trackgen:dtf:trace?

This command returns the DTF trace data.

2-2. REMOTE OPERATION COMMANDS (cont)

Upconverter

:upconverter:carrier_state <Arg0>
:upconverter:carrier_state?

This command sets/returns the Carrier State. Acts as a PTT. Needs to be ON for normal Generator operation.

Numeric/Return: Arg0
 0 OFF
 1 ON

:upconverter:dcs:am <Arg0>

This command sets the Modulator DCS AM level.

Numeric/Return: Arg0
 0% to 100%

:upconverter:dcs:fm <Arg0>

This command sets the Modulator DCS FM level.

Numeric/Return: Arg0
 0.0 to 100.0 kHz

:upconverter:dcs:state <Arg0>

This command sets the Modulator DCS Signaling State.

:upconverter:dtmf:am:high <Arg0>

This command sets the Modulator DTMF AM high level.

Numeric/Return: Arg0
 0% to 100%

:upconverter:dtmf:am:low <Arg0>

This command sets the Modulator DTMF AM low level.

Numeric/Return: Arg0
 0% to 100%

:upconverter:dtmf:fm:high <Arg0>

This command sets the Modulator DTMF FM high level.

Numeric/Return: Arg0
 0.0 to 100.0 kHz

:upconverter:dtmf:fm:low <Arg0>

This command sets the Modulator DTMF FM low level.

Numeric/Return: Arg0
 0.0 to 100.0 kHz

2-2. REMOTE OPERATION COMMANDS (cont)

Upconverter (cont)

:upconverter:ext_aud_in:gain <Arg0>

This command sets the Modulator External Audio Input Raw Scaling.

Numeric/Return: Arg0
 0.0 to 1.0

:upconverter:ext_aud_in:state

This command sets the Modulator External Audio Input State.

:upconverter:fgen1:am <Arg0>

This command sets the Modulator fgen #1 AM level.

Numeric/Return: Arg0
 0% to 100%

:upconverter:fgen1:fm <Arg0>

This command sets the Modulator fgen #1 FM level.

Numeric/Return: Arg0
 0.0 to 100.0 kHz

:upconverter:fgen1:freq <Arg0>

This command sets the Modulator fgen #1 frequency.

Numeric/Return: Arg0
 0 to 24000 Hz

:upconverter:fgen1:gain <Arg0>

This command sets the Modulator fgen #1 Raw Scaling.

Numeric/Return: Arg0
 0.0 to 1.0

:upconverter:fgen1:state

This command sets the Modulator fgen #1 state.

:upconverter:fgen2:am <Arg0>

This command sets the Modulator fgen #2 AM level.

Numeric/Return: Arg0
 0% to 100%

:upconverter:fgen2:fm <Arg0>

This command sets the Modulator fgen #2 FM level.

Numeric/Return: Arg0
 0.0 to 100.0 kHz

2-2. REMOTE OPERATION COMMANDS (cont)

Upconverter (cont)

:upconverter:fgen2:freq <Arg0>

This command sets the Modulator fgen #2 frequency.

Numeric/Return: Arg0
 0 to 20000 Hz

:upconverter:fgen2:gain <Arg0>

This command sets the Modulator fgen #2 Raw Scaling.

Numeric/Return: Arg0
 0.0 to 1.0

:upconverter:fgen2:state

This command sets the Modulator fgen #2 state.

:upconverter:mic:am <Arg0>

This command sets the Modulator Microphone AM level.

Numeric/Return: Arg0
 0% to 100%

:upconverter:mic:fm <Arg0>

This command sets the Modulator Microphone FM level.

Numeric/Return: Arg0
 0.0 to 100.0 kHz

:upconverter:mic:gain <Arg0>

This command sets the Modulator Microphone Gain.

Numeric/Return: Arg0
 0.0 to 1.0

:upconverter:mic:select?

This command returns the Microphone connected.

:upconverter:mic:state

This command sets the Modulator Microphone State.

2-2. REMOTE OPERATION COMMANDS (cont)

Upconverter (cont)

:upconverter:mod:group <Arg0> <Arg1>
:upconverter:mod:group?

This command sets/returns the Modulation Group and Type.

Numeric/Return: Arg0

0	Analog
1	Digital
2	DTMF
3	DCS
4	Two-Tone Sequence
5	Tone Removed
6	Tone Sequential

Arg1

(Digital Mod Group)

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN
5	PTC

(Other Mod Groups)

0	None
1	FM
2	AM

:upconverter:mod_inhibit
:upconverter:mod_inhibit?

This command disables/returns the modulation inhibit state for one-time calibrations.

:upconverter:mod:type?

This command returns the Modulation Type.

Numeric/Return: (Digital Mod Group)

0	P25
1	DMR
2	dPMR
3	ARIBT98
4	NXDN
5	PTC

(Other Mod Groups)

0	None
1	FM
2	AM

:upconverter:route:enable

This command sets the Modulator ON/OFF.

2-2. REMOTE OPERATION COMMANDS (cont)

Upconverter (cont)

:upconverter:sde:am <Arg0>

This command sets the SDE AM level.

Numeric/Return: Arg0
 0% to 100%

:upconverter:sde:fm <Arg0>

This command sets the SDE FM level.

Numeric/Return: Arg0
 0.0 to 100.0 kHz

:upconverter:sde:gain <Arg0>

This command sets the SDE Gain ffff Scaling.

Numeric/Return: Arg0
 0.0 to 1.0

:upconverter:sde:state

This command sets the SDE State.

:upconverter:type <Arg0>

:upconverter:type?

This command sets/returns the Modulator type.

Numeric/Return: Arg0
 0 AM
 1 FM
 2 None
 3 P25
 4 SDE-AM
 5 SDE-FM
 6 Invalid

2-2. REMOTE OPERATION COMMANDS (cont)

VSWR Meter

:vswr:cable:len

This command estimates the cable length to measure.

:vswr:cablelength2span?

This command returns the Cable Length to Span.

:vswr:cable:loss

This command sets the cable attenuation per 100 feet.

:vswr:cable:velocity <Arg0>

This command sets the cable velocity factor.

Numeric/Return: Arg0
 [0.0, 1.0]

:vswr:cal:save

This command saves the Calibration data.

:vswr:cal:recall

This command recalls the Calibration data.

:vswr:dump:capture

This command captures the VSWR phase and magnitude.

:vswr:dump:full:freq?

This command returns the full span frequencies.

:vswr:dump:full:mag?

This command returns the full span magnitude.

:vswr:dump:full:phase?

This command returns the full span phase.

:vswr:dump:user:freq?

This command returns the user span frequencies.

:vswr:dump:user:mag?

This command returns the user span magnitude.

:vswr:dump:user:phase?

This command returns the user span phase.

:vswr:freq

:vswr:freq?

This command sets/returns the center frequency.

:vswr:marker:delta <Arg0>

This command sets the Delta Marker.

Numeric/Return: Arg0
 1 to 3

2-2. REMOTE OPERATION COMMANDS (cont)

VSWR Meter (cont)

:vswr:marker:delta:x?

This command returns the marker delta number at x axis.

Numeric/Return: 1 to 3

:vswr:marker:delta:y?

This command returns the marker delta number at y axis.

Numeric/Return: 1 to 3

:vswr:marker:enable <Arg0> <Arg1>

This command enables the Marker.

Numeric/Return: Arg0
1 to 3
Arg1
0 OFF
1 ON

:vswr:marker:left <Arg0>

This command moves the marker to the left.

Numeric/Return: Arg0
1 to 3

:vswr:marker:lmin <Arg0>

This command moves the marker to the next left min.

Numeric/Return: Arg0
1 to 3

:vswr:marker:lpk <Arg0>

This command moves the marker to the next left peak.

Numeric/Return: Arg0
1 to 3

:vswr:marker:max <Arg0>

This command moves the marker to maximum.

Numeric/Return: Arg0
1 to 3

:vswr:marker:min <Arg0>

This command moves the marker to minimum.

Numeric/Return: Arg0
1 to 3

:vswr:marker:pos

This command sets the horizontal position of current Marker.

2-2. REMOTE OPERATION COMMANDS (cont)

VSWR Meter (cont)

:vswr:marker:right <Arg0>

This command moves the marker to the right.

Numeric/Return: Arg0
 1 to 3

:vswr:marker:rpk <Arg0>

This command moves the marker to the next right peak.

Numeric/Return: Arg0
 1 to 3

:vswr:marker:rmin <Arg0>

This command moves the marker to the next right min.

Numeric/Return: Arg0
 1 to 3

:vswr:marker:x? <Arg0>

This command returns the marker number at x axis.

Numeric/Return: Arg0
 1 to 3

:vswr:marker:y? <Arg0>

This command returns the marker number at y axis.

Numeric/Return: Arg0
 1 to 3

:vswr:meas:type <Arg0>

:vswr:meas:type?

This command sets/returns the type of measurement.

Numeric/Return: Arg0
 0 SWR
 1 DTF
 2 RL
 3 LOSS
 4 Raw
 5 Calibration

:vswr:postprocess <Arg0>

This command sets the Post Process state.

Numeric/Return: Arg0
 0 INVALID_CIRCUIT
 1 OPEN_CIRCUIT
 2 SHORT_CIRCUIT
 3 FIFTY_OHM_CIRCUIT
 4 LOAD_CIRCUIT

2-2. REMOTE OPERATION COMMANDS (cont)

VSWR Meter (cont)

:vswr:runmode <Arg0>

This command sets the Run mode.

Numeric/Return: Arg0

0	RESULT_INVALID
1	REQUEST_RUNNING
2	RUNNING
3	STOPPED
4	REQUEST_STOP

:vswr:scale <Arg0> <Arg1>

This command sets the scale for vertical.

Numeric/Return: Arg0

1	Top
---	-----

Arg1

2	Bottom
---	--------

:vswr:span

:vswr:span?

This command sets/returns the span.

:vswr:span2cablelength?

This command returns the Calculated Span to Cable Length.

:vswr:start

:vswr:start?

This command sets/returns the start frequency.

:vswr:startswEEP

This command starts the sweep.

:vswr:state <Arg0>

:vswr:state?

This command sets/returns the VSWR state.

Numeric/Return: Arg0

0	RESULT_INVALID
1	REQUEST_RUNNING
2	RUNNING
3	STOPPED
4	REQUEST_STOP

:vswr:stop

:vswr:stop?

This command sets/returns the stop frequency.

:vswr:stopswEEP

This command stops the sweep.

2-2. REMOTE OPERATION COMMANDS (cont)

VSWR Meter (cont)

:vswr:trace:count?

This command returns the trace count of each trace completed then counts increments.

Numeric/Return: 0 to 4294967295

:vswr:trace:dtf?

This command returns the DTF trace values by index. (See :vswr:size? command.)

Numeric/Return: 0 to trace size minus one
-50 to 0 dB

:vswr:trace:loss?

This command returns the LOSS trace values by index. (See :vswr:size? command.)

Numeric/Return: 0 to trace size minus one
-5 to 0 dB

:vswr:trace:rtn_loss?

This command returns the Return Loss trace values by index. (See :vswr:size? command.)

Numeric/Return: 0 to trace size minus one
-5 to 0 dB

:vswr:trace:size?

This command returns the SWR trace length.

Numeric/Return: 2 to 512

:vswr:trace:vswr?

This command returns the SWR trace values by index. (See :vswr:size? command.)

Numeric/Return: 0 to trace size minus one
SWR: 1 to 6

:vswr:trace:vswr_dump?

This command returns the VSWR trace values.



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