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Introduction

This purpose of this document is to provide definition for the protocol interface used to command and interact with the R8000 Communications System Analyzer. The field description section of this document is subject to change and may vary between system versions.

2.0   Conventions

The following conventions are used herein:

Command strings are **bold** text
Response strings are *bold italicized green* text.

3.0   Requirements

The monitor and control (M&C) connection requires a cross-over Ethernet cable connected over a direct local network via TCP port **4000**. The interface is not currently available over a routed connection.

4.0   Network Security Issues

In order to enable the use of the monitor and control protocol, the R8000 must have its network settings configured. **The user should be aware that external security measures are required to protect the R8000 from unauthorized access.**

5.0   Other Warnings and Recommendations

While there are access restrictions when using this protocol to monitor and control the R8000, it is highly recommended that programmers be cautious and aware that this equipment is capable of generating and receiving high power signals through its configuration. **The protocol does not protect the user from improper physical connections or signal routing.** It is also recommended that programmers use the equipment ID command (***IDN?**) to identify the equipment being controlled upon the initiation of a connection or following local control of the equipment.

6.0   General Usage

The M&C consists of a set of proprietary commands as well as supporting the IEEE standard equipment ID query. These various commands are used to access the menus and fields that control and report R8000 operation. Commands take the form of:

CMD[Tag[=data]]

If applicable, the Tag consists of the required region, also called the owner, of the field along with a specifier. Some fields require that the region is active in order to query or control the data. The specifier identifies the specific field or code being queried or controlled. The region and specifier are joined together with a colon "**:**"; e.g. DISPLAY:Span. The data is only used with

write access controls and must be in the appropriate format per the field definition. The square brackets ([]).illustrate these options and are not part of the actual command to be sent. All commands must be terminated by a carriage-return (CR) and line-feed (LF) character.

6.1 Commands

1. **NOOP:** This command has no affect on the R8000 but provides a mechanism for a prompt query. Programmers may use this command to poll for response of code *2* (Busy) to determine if a previous new command may still be being applied; see the field description section, Typical Completion Time.

   Usage : **NOOP**

2. **GET**: This command is used to retrieve monitored information or current control settings

   Usage: **GET <Tag>**

3. **SET**: The command is used to set a control to a new value

   Usage: **SET <Tag>=<value>**

   NOTE: If a field of Data Type BOOLEAN has no List Values then value is **F** or **T**.

4. **DO**: This command is used to have the R8000 perform a function.

   Usage: **DO <Tag>**

5. **GO**: Use this command to navigate the R8000 menu tree. Some fields are only accessible if the field's required menu is active. In order to monitor or control these fields, use the **GO** command to navigate to the menu first.

   Usage: **GO <Tag>**

6. ***IDN?**: Equipment ID command. This command will return the following formatted response:

   Usage: ***IDN?**
   <Mfg Prefix> R8000 Communications System Analyzer Model:<model number>, S/N:<serial number>, System Version:<version>

7. **ERR?** and **CLEAR**: These commands are used together to manage the error notification system of the R8000. **ERR?** queries the R8000 for error information and

CLEAR is used to acknowledge error messages and popups. There are two usages based on the response to **ERR?**.

Usage : **ERR?**
Usage 1(Popup): **CLEAR <Tag>[Response]**

If a popup is active, **ERR?** will return with the popup tag, a list of valid responses, and the text message of the popup. For example:

ERR?
0:SYSTEM:6045[POP_CONTINUE,POP_CANCEL] WARNING!
Access to USB device Press Continue to save screen capture to device
Or Press Cancel to abort
CLEAR SYSTEM:6045[POP_CONTINUE]
0:

Usage 2(Messages): **CLEAR**

If no popup is active, the **ERR?** will respond with the number of active messages and a list of the message codes. For example:

ERR?
0:2[6040,7001]
CLEAR
0:
ERR?
0:0[]

8. **HELP:** Limited help information is available using this command. This command can return help for a command, a specific field, or a brief explanation of a prompt or message code.

   Usage 1(Command help): **HELP <Command>**

   Usage 2(Field help): **HELP <Tag>**

   The field help is formatted to allow users to format the response into a readable body. It contains the pipe-bar character "*/*" at each location where a carriage return/line feed (CRLF) should be placed. For example,

   HELP SYSTEM:RF

   will respond with the following string:

   0:Name:RF Zone|Tag:SYSTEM:RF|Commands:GO|Data Type:SUBMENU|Typical Completion Time:250 ms||

By replacing all pipe-bar characters with a CRLF, the result is this:

0:Name:RF Zone
Tag:SYSTEM:RF
Commands:GO
Data Type:SUBMENU
Typical Completion Time:250 ms

Usage 3(Prompt\Message code): **HELP <code>**

6.2 Responses

Each command sent to the R8000 via the M&C protocol shall return a single response. The response consists of a prompt code and colon followed by any returned data. The returned data format depends on the field's data type.

1. Prompt codes
    a. *0*: Okay – command was successful
    b. *1*: Ranged – command was accepted but the data had to be coerced into the valid data range or format.
    c. *2*: Busy – command was accepted (i.e. code would have been Okay) but previous command was not confirmed complete based on Typical Completion Time.
    d. *3*: Denied – Access to the requested field was denied. Check field Commands property.
    e. *4*: N/A – Not available at this time. Check availability requirements.
    f. *5*: Option – Option not installed. Contact Freedom Communication Technologies to purchase options.
    g. *6*: Unused.
    h. *7*: Invalid – Command not valid for field. Check field Commands property.
    i. *8*: Unknown – Tag is unknown. Check Region and Tag
    j. *9*: Format – Data is in the wrong format. For example, the field is an INTEGER type but a character string was sent. Check field data type.

7.0 Field Properties

Fields are described by their set of properties. This section describes the field properties, valid commands for them, type of data, availability conditions, typical command completion times, etc.

1. Name: This is the name of the field. It is unused in the protocol but valuable for reference as this name corresponds to the name found on soft keys for controls on the R8000. It is also may be slightly more descriptive than the tag.

2. Tag: The tag consists of two parts; the Region, or owner, categorizes the scope of the tag reference; the tag itself specifies the particular field within the region.

The format of the Tag is always Region:Tag

3. Commands: this property is a list of valid M&C commands that may be used with the field.

4. Data Type: This describes the type of data expected in the **SET** command string or the data returned from a **GET** query. All data is passed in text string format, however the string is processed by the R8000 according to the data type.
    a. Format: Some STRING and Numeric data fields have a specialized format for the data. See 10.0 Custom Formats.

    b. Char set: Some STRING data fields are restricted to the character set that can be used. For example, the DTMF Code has a defined character set:

    0,1,2,3,4,5,6,7,8,9,A,B,C,D,#,*

    c. List Values: Both LIST and BOOLEAN data type fields have aliased text strings to make the command/response more readable. These aliases correspond to the horizontal soft key position or position in the list box in the R8000 editing system.

    Some LIST and BOOLEAN data type values are dynamically available based on the condition of the system at the time of the command. These conditions are documented in brackets immediately following the list value and describe the run-time conditions necessary to set the field to the specific list value. For example, the following field description indicates availability conditions for both list values:

    Name:Select Audio Measurement
    Tag:METER:Audio Meter
    Commands:GET, SET
    Data Type:LIST
    List Values: SINAD/Ext Distortion [Test Mode<>P25 Trunk], Internal Distortion [Test Mode=Standard]
    Availability:
        Operating Mode:Monitor, Generate, Duplex
        Menu:METER:Subzone=SINAD/Distortion
    Typical Completion Time:100 ms

    The **SINAD/Ext Distortion** value is available in all test modes except P25 Trunk. The **Internal Distortion** is only available in Standard test mode.

    NOTE: Do not include the condition when setting a value; the correct command for this example is: **SET METER:Audio Meter=SINAD/Ext Distortion**

d. Range: Numeric values may have limited ranges that will be accepted. If the number has settable units (See Units), the range is always defined in the base units. If the data set into the field is outside the range, the R8000 will coerce the new value into the range at either the minimum or maximum value. The command will be accepted and return with a prompt code of *1* (Ranged)

e. Units: Some floating point values have settable units that the value can be set in. If the field has settable units, this property will list the valid entries. To set a floating point value with its units, format the data as "value units"; for example:

SET RF:Monitor Frequency=1.2 GHz
0:1.200000000 GHz

However, sending the units is not a requirement. If units are not sent, the system will apply the currently configured units to the data. For example, if the following two commands are sent, the second will be assumed to be in MHz.

SET RF:Monitor Frequency=403 MHz
0:403.000000 MHz
SET RF:Monitor Frequency=405
0:405.000000 MHz

5. Availability
Because the R8000 disables sub-systems to provide the most efficient use of processing, certain fields may not be available at all times. Fields that have availability requirements are denoted under this property.
    a. Synth Format: Field is only accessible when the specified Audio Format is selected. This availability requirement is unique to fields in the Audio Zone and used to configure specific audio formats such as PL, DPL, etc.
    b. Operating Mode: Field is only accessible when the R8000 is in the mode(s) indicated. If this property is not present, the field is available in any/all modes unless otherwise unavailable.
    c. Options: Field is only accessible when the specified option has been purchased. If this property is not present, the field is standard. Contact to purchase new options for your R8000.
    d. Menu: Field is only accessible when the R8000 menu system has the given condition active. This condition may specify a region or a region and a subzone (Region ->Subzone). Use the **GO** and **SET** commands to navigate to and/or select the appropriate region. If this property is not present, the field is available regardless of region.

6. Typical Completion Time: This property provides the typical processing time for the field in milliseconds. Most commands take very little time to complete; however some commands take more time to apply the desired condition to the system. This is particularly important when creating automated control software. The M&C is designed

for immediate command response. However if the previous command has not had time to complete, there is no guarantee that data will be ready to retrieve following a change in configuration. For example, the following commands if sent without delay would most likely result in an inaccurate Input Level reading:

SET RF:Monitor Frequency=403 MHz
0:403.000000 MHz
GET MONITOR:Input Level
2:-32.3

The prompt will be returned with code *2* (Busy) if the previous command was not given enough time to complete its transaction.

8.0   Examples

There are a few examples of how to use different types of commands with fields within the following section. These examples assume the R8000 is starting from the main zone screen and call specific commands to activate the required regions necessary to command the field. These examples are given as if executed from a terminal with a connection to the remote monitor and control interface. Expected command responses are provided for reference.

1. Tune to local radio station with the highest signal. From a terminal program execute the following commands in sequence.

    SET SYSTEM:Mode Request=Monitor
    0:Monitor
    GO SYSTEM:RF
    0:
    SET RF:Monitor Port=Antenna
    0:Antenna
    SET RF:Bandwidth=200 kHz (Wide)
    0: 200 kHz (Wide)
    GO SYSTEM:DISPLAY
    0:
    SET DISPLAY:Subzone=Spec An
    0:Spec An
    SET DISPLAY:Start Frequency=75 MHz
    0:75.000000 MHz
    SET DISPLAY:Stop Frequency=110 MHz
    0:110.000000 MHz
    DO DISPLAY:Center Peak
    0:
    SET DISPLAY:Span=158 kHz
    0:158.000 kHz

2. Generate a DTMF tone and view it on the modulation scope. From a terminal program execute the following commands in sequence.

>   **SET SYSTEM:Mode Request=Generate**
>   *0:Generate*
>   **GO SYSTEM:DISPLAY**
>   *0:*
>   **SET DISPLAY:Subzone=Mod Scope**
>   *0:Mod Scope*
>   **SET DISPLAY:FM Vertical Scale=5 kHz**
>   *0:5 kHz*
>   **GO SYSTEM:AUDIO**
>   *0:*
>   **SET AUDIO:Gen DTMF=12**
>   *0:12*
>   **SET AUDIO:DTMF Code=123ABC#**
>   *0:123ABC#--------*
>   **SET AUDIO:DTMF Mode=Continuous**
>   *0:Continuous*

9.0 Local/Remote Control

The R8000 will temporarily lock out local users when the unit is remotely controlled. When the R8000 is in lock-out, the Operating Mode indicator on the lower-left part of the screen will flash between the operating mode and "Remote". To regain local control the Esc key must be pressed from the front panel.

10.0 Custom Formats

Some fields use a custom formatting that is required for data entry. This section describes each format type.

10.1 Format symbols

$ Alphabetic characters only (A-Z)
#   Decimal digits only (0-9)
0   Hexadecimal characters only (0-9, A-F)
x   Any/all characters are valid
:   Location in string must be a colon
.   Location in string must be a period.

10.2 Format templates

0x0000 – Hexadecimal format. This field is a string containing a hexadecimal value the length of the number of digits to the right of the 0x prefix. If the data is shorter than the format, add leading zeros to ensure the appropriate value is set.

Examples:

      Format=0x0000
      Setting => 0A3F

      Format=0x00
      Setting => 3F

      Format=0x00000000
      Setting => 00000A3F

#.#### – Floating point format. This field contains a floating point number with the precision defined by the number of digits to the right of the decimal point.

Examples:

      Format=#.##
      Setting => 4.02

      Format=#.#####
      Setting => 1.10031

(POCSAGCustom) – Used for blank formatting and the POCSAG text messaging, no particular formatting required.

(56Tone) - Used specifically for the 5/6 Tone code formatting. The 5/6 tone must be formatted as #-#####c where c is either empty or 'X' indicating the 6-tone. The valid character set for the digital format (#) is [0123456789R] where the 'R' character indicates a repeat tone.
Examples:

      0-12345
      2-12R45
      0-12346X

(DTMFCode) – Used specifically for the DTMF Tone code formatting. The DTMF code field must be at exactly 16 characters long. Strings less that 16 characters will be appended with dashes "-" to extend the string to 16 characters. Strings longer than 16 characters will be truncated to 16 characters. The valid character set for DTMF code is [0123456789ABCD#*]

(GENSEQCode) - Used specifically for the General Sequence tone code, delay, and duration sequence formatting. These fields must be at exactly 20 characters long. Strings less that 20 characters will be appended with dashes "-" to extend the string to 20 characters. Strings longer than 20 characters will be truncated to 20 characters. The valid character set for the General Sequence format is [0123456789ABCDEFGHIJ]

(HH:MM) – Used for time entry where HH is 24-hour notation; MM is minutes. This field must have a colon in the 3rd character position.

(MM.DD.YYYY) – Used for date entry where MM is month, DD is day, and YYYY is year. This field must have a period in the 3rd and 6th character positions.

11.0 Field Descriptions

This section provides the specific properties for each field accessible through the R8000 Monitor and Control interface for R8000 system version 1.18.x.x.

Name:RF Zone
Tag:SYSTEM:RF
Commands:GO
Data Type:SUBMENU
Typical Completion Time:1000 ms

Name:AUDIO Zone
Tag:SYSTEM:AUDIO
Commands:GO
Data Type:SUBMENU
Typical Completion Time:1000 ms

Name:DMR
Tag:SYSTEM:DMR
Commands:GO
Data Type:SUBMENU
Availability:
        Option:R8-DMR
Typical Completion Time:2000 ms

Name:PROJECT 25
Tag:SYSTEM:P25
Commands:GO
Data Type:SUBMENU
Availability:
        Option:R8-P25
Typical Completion Time:2000 ms

Name:P25 II
Tag:SYSTEM:P25_II
Commands:GO
Data Type:SUBMENU
Availability:
        Option:R8-P25_II
Typical Completion Time:2000 ms

Name:NXDN™
Tag:SYSTEM:NXDN
Commands:GO

Data Type:SUBMENU
Availability:
      Option:R8-NXDN
Typical Completion Time:2000 ms

Name:dPMR
Tag:SYSTEM:DPMR
Commands:GO
Data Type:SUBMENU
Availability:
      Option:R8-DPMR
Typical Completion Time:2000 ms

Name:P25 TRUNK
Tag:SYSTEM:P25_TRUNK
Commands:GO
Data Type:SUBMENU
Availability:
      Option:R8-P25TRNK
Typical Completion Time:2000 ms

Name:TETRA
Tag:SYSTEM:TETRA
Commands:GO
Data Type:SUBMENU
Availability:
      Option:R8-TETRA
Typical Completion Time:2000 ms

Name:NXDN™ TRUNK
Tag:SYSTEM:NXDN_TRUNK
Commands:GO
Data Type:SUBMENU
Availability:
      Option:R8-NXDNTYPC
Typical Completion Time:2000 ms

Name:DISPLAY Zone
Tag:SYSTEM:DISPLAY
Commands:GO
Data Type:SUBMENU
Typical Completion Time:1000 ms

Name:METER Zone
Tag:SYSTEM:METER

Commands:GO
Data Type:SUBMENU
Typical Completion Time:1000 ms

Name:State
Tag:SYSTEM:State
Commands:GET
Data Type:LIST
List Values: INIT, RUN, LOAD, CALIBRATE
Typical Completion Time:0 ms

Name:Mode
Tag:SYSTEM:Mode
Commands:GET
Data Type:LIST
List Values: Monitor, Generate, Duplex, Track Gen, Cable Fault
Typical Completion Time:0 ms

Name:Mode
Tag:SYSTEM:Mode Request
Commands:GET, SET
Data Type:LIST
List Values: Monitor, Generate, Duplex
Typical Completion Time:2000 ms

Name:Squelch Position
Tag:SYSTEM:Squelch Position
Commands:GET
Data Type:FLOAT
Typical Completion Time:0 ms

Name:Squelch State
Tag:SYSTEM:Squelch State
Commands:GET
Data Type:BOOLEAN
List Values: Squelched - Low Signal, Not Squelched
Typical Completion Time:0 ms

Name:Serial Number
Tag:SYSTEM:UNITID
Commands:GET
Data Type:STRING
Typical Completion Time:0 ms

Name:

Tag:SYSTEM:BaseModel
Commands:GET
Data Type:STRING
Typical Completion Time:0 ms

Name:External Drives
Tag:SYSTEM:External Drives
Commands:GET
Data Type:LIST
List Values:
Typical Completion Time:0 ms

Name:Select Display
Tag:DISPLAY:Subzone
Commands:GET, SET
Data Type:LIST
List Values: Spec An, Mod Scope [Test Mode=Standard or Test Mode=PROJECT 25 or Test Mode=P25 II or Test Mode=P25 Trunk or Test Mode=NXDN or Test Mode=NXDN Trunk or Test Mode=DPMR], Oscilloscope [Test Mode=Standard or Test Mode=PROJECT 25 or Test Mode=P25 II or Test Mode=P25 Trunk or Test Mode=NXDN or Test Mode=NXDN Trunk or Test Mode=DPMR], Bar Graphs [Test Mode=Standard or Test Mode=PROJECT 25 or Test Mode=P25 II or Test Mode=NXDN or Test Mode=DPMR], Eye Diagram [Test Mode=PROJECT 25 or Test Mode=P25 II or Test Mode=P25 Trunk or Test Mode=NXDN or Test Mode=NXDN Trunk or Test Mode=DPMR], Power Profile [Test Mode=DMR or Test Mode=TETRA], General Sequence [METER:Decoder=General Sequence], Voice Frame Decode [Test Mode=PROJECT 25 or Test Mode=P25 II], Mod Spec / Constellation [Test Mode=TETRA], Constellation Plot [PROJECT 25&P25:Mon Mod Type=5 or P25:Mon Mod Type=WCQPSK], Distribution Plot [Test Mode=PROJECT 25 or Test Mode=P25 Trunk]
Availability:
        Operating Mode:Monitor, Generate, Duplex
Typical Completion Time:500 ms

Name:Samples
Tag:DISPLAY:Spectral Data
Commands:GET
Data Type:ARRAY
Availability:
        Operating Mode:Monitor, Duplex, Track Gen
Typical Completion Time:100 ms

Name:Samples
Tag:DISPLAY:Demodulation Data
Commands:GET
Data Type:ARRAY
Availability:

   Operating Mode:Monitor, Duplex
Typical Completion Time:100 ms

Name:Samples
Tag:DISPLAY:Modulation Data
Commands:GET
Data Type:ARRAY
Availability:
   Operating Mode:Generate, Duplex
Typical Completion Time:100 ms

Name:Samples
Tag:DISPLAY:External Data
Commands:GET
Data Type:ARRAY
Availability:
   Operating Mode:Monitor, Generate, Duplex
Typical Completion Time:100 ms

Name:Center Frequency
Tag:DISPLAY:Monitor Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
   Operating Mode:Monitor, Duplex
   Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:5000 ms

Name:Span
Tag:DISPLAY:Span
Commands:GET, SET
Data Type:FLOAT
Range: 9751 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
   Operating Mode:Monitor, Duplex
   Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:5000 ms

Name:Start Frequency
Tag:DISPLAY:Start Frequency
Commands:GET, SET
Data Type:FLOAT

Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
         Operating Mode:Monitor, Duplex
         Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:5000 ms

Name:Stop Frequency
Tag:DISPLAY:Stop Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
         Operating Mode:Monitor, Duplex
         Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:5000 ms

Name:See and Hear Active
Tag:DISPLAY:SNH Active
Commands:GET
Data Type:BOOLEAN
List Values:
Availability:
         Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:0 ms

Name:Resolution Bandwidth
Tag:DISPLAY:Resolution Bandwidth
Commands:GET
Data Type:FLOAT
Availability:
         Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:0 ms

Name:Reference Level (dBm)
Tag:DISPLAY:Reference Level
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 90
Availability:
         Operating Mode:Monitor, Duplex
         Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:100 ms

Name:Vertical Scale
Tag:DISPLAY:Vertical Scale
Commands:GET, SET
Data Type:LIST
List Values: 10 dB/div, 5 dB/div, 2 dB/div, 1 dB/div
Availability:
        Operating Mode:Monitor, Duplex
        Option:R8-ESA
        Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:100 ms

Name:Display Mode
Tag:DISPLAY:Display Mode
Commands:GET, SET
Data Type:LIST
List Values: Normal, Freeze, Max Hold, Average
Availability:
        Operating Mode:Monitor, Duplex
        Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:100 ms

Name:Trace Math
Tag:DISPLAY:Trace Math
Commands:GET, SET
Data Type:LIST
List Values: None, Spec-Ref (log),
Spec-Ref
 (lin), Spec+Ref (lin)
Availability:
        Operating Mode:Monitor, Duplex
        Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:100 ms

Name:Set Reference Trace
Tag:DISPLAY:Set Reference Trace
Commands:DO
Data Type:FUNCTION
Availability:
        Operating Mode:Monitor, Duplex
        Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:100 ms

Name:Coupling
Tag:DISPLAY:Coupling
Commands:GET, SET

Data Type:BOOLEAN
List Values: DC, AC
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:DISPLAY:Subzone=Oscilloscope
Typical Completion Time:500 ms

Name:Horizontal Scale
Tag:DISPLAY:Horizontal Scale
Commands:GET, SET
Data Type:LIST
List Values: 20 us, 50 us, 100 us, 200 us, 500 us, 1 ms, 2 ms, 5 ms, 10 ms, 20 ms, 50 ms, 100 ms, 200 ms, 500 ms, 1 s
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:DISPLAY:Subzone=Mod Scope
Typical Completion Time:100 ms

Name:Horizontal Scale
Tag:DISPLAY:Ext Horizontal Scale
Commands:GET, SET
Data Type:LIST
List Values: 20 us (Max 50 kHz In), 50 us (Max 20 kHz In), 100 us (Max 10 kHz In), 200 us (Max 5 kHz In), 500 us (Max 2 kHz In), 1 ms (Max 1 kHz In), 2 ms (Max 500 Hz In), 5 ms (Max 200 Hz In), 10 ms (Max 100 Hz In), 20 ms (Max 50 Hz In), 50 ms (Max 20 Hz In), 100 ms (Max 10 Hz In), 200 ms (Max 5 Hz In), 500 ms (Max 2 Hz In), 1 s (Max 1 Hz In)
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:DISPLAY:Subzone=Oscilloscope
Typical Completion Time:500 ms

Name:Vertical Scale
Tag:DISPLAY:AM Vertical Scale
Commands:GET, SET
Data Type:LIST
List Values: 1%, 2%, 5%, 10%, 20%, 50%
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:DISPLAY:Subzone=Mod Scope
Typical Completion Time:100 ms

Name:Vertical Scale
Tag:DISPLAY:FM Vertical Scale
Commands:GET, SET
Data Type:LIST

List Values: 100 Hz, 200 Hz, 500 Hz, 1 kHz, 2 kHz, 5 kHz, 10 kHz, 20 kHz, 50 kHz
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:DISPLAY:Subzone=Mod Scope
Typical Completion Time:100 ms

Name:Vertical Scale
Tag:DISPLAY:Ext Vertical Scale
Commands:GET, SET
Data Type:LIST
List Values: 50 mV, 100 mV, 200 mV, 500 mV, 1 V, 2 V, 5 V, 10 V, 15 V, 20 V, 25 V
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:DISPLAY:Subzone=Oscilloscope
Typical Completion Time:500 ms

Name:Find Peak
Tag:DISPLAY:Find Peak
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:100 ms

Name:Center Peak
Tag:DISPLAY:Center Peak
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DISPLAY:Subzone=Spec An
Typical Completion Time:5000 ms

Name:Trigger Mode
Tag:DISPLAY:Trigger
Commands:GET, SET
Data Type:LIST
List Values: Auto, Normal, Single
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:DISPLAY:Subzone=Mod Scope
Typical Completion Time:100 ms

Name:Trigger Level

Tag:DISPLAY:Trigger Level
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 200000
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:DISPLAY:Subzone=Mod Scope
Typical Completion Time:100 ms

Name:Trigger Level (%)
Tag:DISPLAY:AM Trigger Level
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 99
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:DISPLAY:Subzone=Mod Scope
Typical Completion Time:100 ms

Name:Trigger Edge
Tag:DISPLAY:Trigger Edge
Commands:GET, SET
Data Type:LIST
List Values: Rising, Falling, Either
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:DISPLAY:Subzone=Mod Scope
Typical Completion Time:100 ms

Name:Scope Mode
Tag:DISPLAY:Mod Scope Select
Commands:GET, SET
Data Type:BOOLEAN
List Values: Monitor, Generate
Availability:
      Operating Mode:Duplex
      Menu:DISPLAY:Subzone=Mod Scope
Typical Completion Time:100 ms

Name:Trigger Mode
Tag:DISPLAY:Ext Trigger
Commands:GET, SET
Data Type:LIST
List Values: Auto, Normal, Single, Freeze
Availability:

Operating Mode:Monitor, Generate, Duplex
Menu:DISPLAY:Subzone=Oscilloscope
Typical Completion Time:500 ms

Name:Trigger Level
Tag:DISPLAY:Ext Trigger Level
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 100
Availability:
Operating Mode:Monitor, Generate, Duplex
Menu:DISPLAY:Subzone=Oscilloscope
Typical Completion Time:500 ms

Name:Trigger Position
Tag:DISPLAY:Ext Trigger Position
Commands:GET, SET
Data Type:LIST
List Values: 10%, 50%, 90%
Availability:
Operating Mode:Monitor, Generate, Duplex
Menu:DISPLAY:Subzone=Oscilloscope
Typical Completion Time:500 ms

Name:Trigger Edge
Tag:DISPLAY:Ext Trigger Edge
Commands:GET, SET
Data Type:LIST
List Values: Rising, Falling, Either
Availability:
Operating Mode:Monitor, Generate, Duplex
Menu:DISPLAY:Subzone=Oscilloscope
Typical Completion Time:500 ms

Name:Deviation Average
Tag:DISPLAY:Deviation Average
Commands:GET, SET
Data Type:LIST
List Values: Normal, Peak Average [Test Mode=Standard], Pwr-Weight Average [Test
Mode=Standard], RMS Average [Test Mode=Standard], +/-Peak / 2 [Test Mode=Standard]
Availability:
Operating Mode:Monitor, Duplex
Menu:DISPLAY:Subzone=Bar Graphs
Typical Completion Time:100 ms

Name:Decode to Standard
Tag:DISPLAY:Standard
Commands:GET, SET
Data Type:LIST
List Values: None, CCIR1, CCIR2, PCCIR, CCITT, EEA, EIA, Euro, NATEL, MODAT, ZVEI1, ZVEI2, ZVEI3, PZVEI, DZVEI, PDZVEI
Availability:
      Menu:DISPLAY:Subzone=General Sequence
Typical Completion Time:100 ms

Name:Select View
Tag:DISPLAY:Select View
Commands:GET, SET
Data Type:LIST
List Values: Current [Test Mode=DMR], Alternate [Test Mode=DMR], Both [Test Mode=DMR], Slot 1 [Test Mode=TETRA], Frame [Test Mode=TETRA]
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DISPLAY:Subzone=Power Profile
Typical Completion Time:100 ms

Name:Vertical Maximum (dBm)
Tag:DISPLAY:PP Vertical Maximum
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 60
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DISPLAY:Subzone=Power Profile
Typical Completion Time:100 ms

Name:Vertical Scale
Tag:DISPLAY:PP Vertical Scale
Commands:GET, SET
Data Type:LIST
List Values: 10 dB/div, 5 dB/div, 2 dB/div, 1 dB/div
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DISPLAY:Subzone=Power Profile
Typical Completion Time:100 ms

Name:Power Profile before Display Mode
Tag:DISPLAY:Power Profile Data
Commands:GET
Data Type:ARRAY

Availability:
      Operating Mode:Monitor, Duplex
         Menu:DISPLAY:Subzone=Power Profile
Typical Completion Time:100 ms

Name:Display Mode
Tag:DISPLAY:PP Display Mode
Commands:GET, SET
Data Type:LIST
List Values: Normal, Freeze, Max Hold, Average
Availability:
      Operating Mode:Monitor, Duplex
         Menu:DISPLAY:Subzone=Power Profile
Typical Completion Time:100 ms

Name:Power Profile after Display Mode
Tag:DISPLAY:Power Profile
Commands:GET
Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
         Menu:DISPLAY:Subzone=Power Profile
Typical Completion Time:100 ms

Name:Update Power Profile
Tag:DISPLAY:Power Profile Request
Commands:
Data Type:BOOLEAN
List Values: F, T
Availability:
      Operating Mode:Monitor, Duplex
         Menu:DISPLAY:Subzone=Power Profile
Typical Completion Time:100 ms

Name:Percentages
Tag:DISPLAY:Distribution Data
Commands:GET
Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
Typical Completion Time:1080 ms

Name:Constellation Data
Tag:DISPLAY:Constellation Data
Commands:GET

Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
Typical Completion Time:100 ms

Name:Select Meter
Tag:METER:Subzone
Commands:GET, SET
Data Type:LIST
List Values: Power Meter [Test Mode=Standard or Test Mode=PROJECT 25 or Test Mode=P25 II or Test Mode=NXDN or Test Mode=DMR or Test Mode=DPMR], Voltmeter [Test Mode=Standard or Test Mode=PROJECT 25 or Test Mode=P25 II or Test Mode=NXDN or Test Mode=DMR or Test Mode=TETRA or Test Mode=DPMR], SINAD/Distortion [Test Mode=Standard], Decoder [Test Mode=Standard or Test Mode=PROJECT 25 or Test Mode=P25 II], Frequency Counter [Test Mode=Standard], P25 Trunking [Test Mode=P25 Trunk], Constellation [Test Mode=DMR], RF Scan [Test Mode=Standard or Test Mode=DMR], NXDN Trunking [Test Mode=NXDN Trunk]
Availability:
      Operating Mode:Monitor, Generate, Duplex
Typical Completion Time:100 ms

Name:Measured Power
Tag:METER:Measured Power
Commands:GET
Data Type:FLOAT
Availability:
      Operating Mode:Monitor, Duplex
      Menu:METER:Subzone=Power Meter
Typical Completion Time:0 ms

Name:Select Voltmeter Mode
Tag:METER:Voltmeter
Commands:GET, SET
Data Type:LIST
List Values: AC Volts [Test Mode=Standard or Test Mode=PROJECT 25 or Test Mode=P25 II or Test Mode=NXDN or Test Mode=DMR or Test Mode=TETRA or Test Mode=DPMR], DC Volts [Test Mode=Standard or Test Mode=PROJECT 25 or Test Mode=P25 II or Test Mode=NXDN or Test Mode=DMR or Test Mode=TETRA or Test Mode=DPMR]
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:METER:Subzone=Voltmeter
Typical Completion Time:100 ms

Name:AC Range
Tag:METER:AC Range

Commands:GET, SET
Data Type:LIST
List Values: Auto, 1 V, 10 V, 70 V
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:METER:Subzone=Voltmeter
Typical Completion Time:100 ms

Name:Set dBr Reference
Tag:METER:Set Reference
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:METER:Subzone=Voltmeter
Typical Completion Time:100 ms

Name:Clear dBr Reference
Tag:METER:Clear Reference
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:METER:Subzone=Voltmeter
Typical Completion Time:100 ms

Name:DC Range
Tag:METER:DC Range
Commands:GET, SET
Data Type:LIST
List Values: Auto, 1 V, 10 V, 100 V
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:METER:Subzone=Voltmeter
Typical Completion Time:100 ms

Name:AC Volts
Tag:METER:AC Volts
Commands:GET
Data Type:FLOAT
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:METER:Subzone=Voltmeter
Typical Completion Time:0 ms

Name:DC Volts
Tag:METER:DC Volts
Commands:GET
Data Type:FLOAT
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:METER:Subzone=Voltmeter
Typical Completion Time:0 ms

Name:Select Audio Measurement
Tag:METER:Audio Meter
Commands:GET, SET
Data Type:LIST
List Values: SINAD/Ext Distortion [Test Mode=Standard], Internal Distortion [Test Mode=Standard]
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:METER:Subzone=SINAD/Distortion
Typical Completion Time:100 ms

Name:SINAD
Tag:METER:SINAD
Commands:GET
Data Type:FLOAT
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:METER:Subzone=SINAD/Distortion
Typical Completion Time:0 ms

Name:External Distortion
Tag:METER:External Distortion
Commands:GET
Data Type:FLOAT
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:METER:Subzone=SINAD/Distortion
Typical Completion Time:0 ms

Name:Internal Distortion
Tag:METER:Internal Distortion
Commands:GET
Data Type:FLOAT
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:METER:Subzone=SINAD/Distortion

Typical Completion Time:0 ms

Name:Select Decoder Type
Tag:METER:Decoder
Commands:GET, SET
Data Type:LIST
List Values: PL/Period Counter [Test Mode=Standard], DPL Decode [Test Mode=Standard],
DTMF Decode [Test Mode=Standard], 2-Tone Decode [Test Mode=Standard], 5/6 Tone Decode
[Test Mode=Standard], General Sequence [Test Mode=Standard], Voice Frame Decode [Test
Mode=PROJECT 25], Voice Frame Decode [Test Mode=P25 II]
Availability:
        Operating Mode:Monitor, Generate, Duplex
        Menu:METER:Subzone=Decoder
Typical Completion Time:100 ms

Name:Reset
Tag:METER:Reset
Commands:DO
Data Type:FUNCTION
Availability:
        Operating Mode:Monitor, Generate, Duplex
        Menu:METER:Subzone=Decoder
Typical Completion Time:100 ms

Name:PL Freq
Tag:METER:PL Frequency
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
        Menu:METER:Subzone=Decoder
Typical Completion Time:0 ms

Name:PL Code
Tag:METER:PL Code
Commands:GET
Data Type:STRING
Availability:
        Operating Mode:Monitor, Duplex
        Menu:METER:Subzone=Decoder
Typical Completion Time:0 ms

Name:DPL Code
Tag:METER:DPL Code
Commands:GET

Data Type:STRING
Availability:
      Operating Mode:Monitor, Duplex
      Menu:METER:Subzone=Decoder
Typical Completion Time:0 ms

Name:DTMF Code
Tag:METER:DTMF Code
Commands:GET
Data Type:STRING
Availability:
      Operating Mode:Monitor, Duplex
      Menu:METER:Subzone=Decoder
Typical Completion Time:0 ms

Name:General Sequence Decodes
Tag:METER:GenSeqDecodes
Commands:GET
Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
      Menu:METER:Subzone=Decoder
Typical Completion Time:0 ms

Name:Decode
Tag:METER:Decode
Commands:GET, SET
Data Type:LIST
List Values: Stop, Start
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:METER:Subzone=Decoder
Typical Completion Time:500 ms

Name:Code Sequence
Tag:METER:Code Sequence
Commands:GET, SET
Data Type:STRING
Format:(GENSEQCode)
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J
Availability:
      Operating Mode:Duplex
Typical Completion Time:100 ms

Name:Decode Burst

Tag:METER:Decode Burst
Commands:DO
Data Type:FUNCTION
Availability:
  Operating Mode:Duplex
Typical Completion Time:500 ms

Name:Tone1 Freq.
Tag:METER:Tone1 Freq
Commands:GET
Data Type:FLOAT
Availability:
  Operating Mode:Monitor, Duplex
  Menu:METER:Subzone=Decoder
Typical Completion Time:0 ms

Name:Tone1 Duration
Tag:METER:Tone1 Duration
Commands:GET
Data Type:FLOAT
Availability:
  Operating Mode:Monitor, Duplex
  Menu:METER:Subzone=Decoder
Typical Completion Time:0 ms

Name:Tone2 Freq.
Tag:METER:Tone2 Freq
Commands:GET
Data Type:FLOAT
Availability:
  Operating Mode:Monitor, Duplex
  Menu:METER:Subzone=Decoder
Typical Completion Time:0 ms

Name:Tone2 Duration
Tag:METER:Tone2 Duration
Commands:GET
Data Type:FLOAT
Availability:
  Operating Mode:Monitor, Duplex
  Menu:METER:Subzone=Decoder
Typical Completion Time:0 ms

Name:5/6 Codes
Tag:METER:56_Codes

Commands:GET
Data Type:STRING
Availability:
      Operating Mode:Monitor, Duplex
      Menu:METER:Subzone=Decoder
Typical Completion Time:0 ms

Name:5/6 Freqs
Tag:METER:56_Freqs
Commands:GET
Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
      Menu:METER:Subzone=Decoder
Typical Completion Time:100 ms

Name:5/6 Durations
Tag:METER:56_Durs
Commands:GET
Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
      Menu:METER:Subzone=Decoder
Typical Completion Time:100 ms

Name:Decode to Standard
Tag:METER:Standard
Commands:GET, SET
Data Type:LIST
List Values: None, CCIR1, CCIR2, PCCIR, CCITT, EEA, EIA, Euro, NATEL, MODAT,
ZVEI1, ZVEI2, ZVEI3, PZVEI, DZVEI, PDZVEI
Availability:
      Menu:METER:Subzone=Decoder
Typical Completion Time:500 ms

Name:High Pass Filter
Tag:METER:High Pass Filter
Commands:GET, SET
Data Type:LIST
List Values: 1 Hz, 300 Hz, 3 kHz
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:METER:Subzone=Decoder
Typical Completion Time:100 ms

Name:Low Pass Filter
Tag:METER:Low Pass Filter
Commands:GET, SET
Data Type:LIST
List Values: 300 Hz, 3 kHz, 20 kHz
Availability:
　　　Operating Mode:Monitor, Generate, Duplex
　　　Menu:METER:Subzone=Decoder
Typical Completion Time:100 ms

Name:Input Decoding
Tag:METER:Input Decoding
Commands:GET, SET
Data Type:BOOLEAN
List Values: Internal, External
Availability:
　　　Menu:METER:Subzone=Decoder, Frequency Counter
Typical Completion Time:100 ms

Name:Frequency Counter
Tag:METER:Frequency Counter
Commands:GET
Data Type:FLOAT
Availability:
　　　Operating Mode:Monitor, Duplex
　　　Menu:METER:Subzone=Frequency Counter
Typical Completion Time:0 ms

Name:Resolution
Tag:METER:Resolution
Commands:GET, SET
Data Type:LIST
List Values: 0.1 Hz, 1.0 Hz, 10 Hz
Availability:
　　　Operating Mode:Monitor, Generate, Duplex
　　　Menu:METER:Subzone=Frequency Counter
Typical Completion Time:100 ms

Name:Test Status
Tag:METER:Trunk Status
Commands:GET
Data Type:STRING
Availability:
　　　Operating Mode:Monitor, Duplex
　　　Menu:METER:Subzone=P25 Trunking

Typical Completion Time:0 ms

Name:Deviations
Tag:METER:Constellation
Commands:GET
Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
      Option:R8-DMR
Typical Completion Time:100 ms

Name:Start Frequency (MHz)
Tag:METER:Start Frequency
Commands:GET, SET
Data Type:INTEGER
Range: 1 to 3000
Availability:
      Operating Mode:Monitor
      Menu:METER:Subzone=RF Scan
Typical Completion Time:5000 ms

Name:Stop Frequency (MHz)
Tag:METER:Stop Frequency
Commands:GET, SET
Data Type:INTEGER
Range: 1 to 3000
Availability:
      Operating Mode:Monitor
      Menu:METER:Subzone=RF Scan
Typical Completion Time:5000 ms

Name:Scan
Tag:METER:Run RF Scan
Commands:GET, SET
Data Type:LIST
List Values: Stop, Start
Availability:
      Operating Mode:Monitor
      Menu:METER:Subzone=RF Scan
Typical Completion Time:100 ms

Name:RF Scan State
Tag:METER:RF Scan State
Commands:GET
Data Type:LIST

List Values: Disabled, Scanning, Locked, Inactive
Availability:
      Operating Mode:Monitor
      Menu:METER:Subzone=RF Scan
Typical Completion Time:0 ms

Name:Spectrum
Tag:METER:RF Scan Data
Commands:GET
Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
      Menu:METER:Subzone=RF Scan
Typical Completion Time:0 ms

Name:Test Status
Tag:METER:NXDN Trunk Status
Commands:GET
Data Type:STRING
Availability:
      Operating Mode:Duplex
      Menu:METER:Subzone=NXDN Trunking
Typical Completion Time:0 ms

Name:Toggle with DO RF:RF Power
Tag:RF:RF Power
Commands:GET, SET
Data Type:BOOLEAN
List Values: Off, On
Availability:
      Operating Mode:Generate, Duplex
Typical Completion Time:100 ms

Name:Monitor Frequency
Tag:RF:Monitor Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
      Operating Mode:Monitor, Duplex
Typical Completion Time:5000 ms

Name:Copy Frequency to Generator
Tag:RF:Copy Mon to Gen

Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor
Typical Completion Time:5000 ms

Name:Generate Frequency
Tag:RF:Generate Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
      Operating Mode:Generate, Duplex
Typical Completion Time:5000 ms

Name:Copy Frequency to Monitor
Tag:RF:Copy Gen to Mon
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Generate
Typical Completion Time:5000 ms

Name:Modulation Type
Tag:RF:Modulation Type
Commands:GET, SET
Data Type:LIST
List Values: FM [Test Mode=Standard], AM [Test Mode=Standard], PM [Reserved], 4FSK [Test Mode=DMR or Test Mode=DPMR or Test Mode=NXDN], C4FM [Test Mode=PROJECT 25 or Test Mode=P25 Trunk], LSM [Test Mode=PROJECT 25 or Test Mode=P25 Trunk], WCQPSK [Test Mode=PROJECT 25 or Test Mode=P25 Trunk], pi/4 DQPSK [Test Mode=TETRA], HCPM [Test Mode=P25 II], HDQPSK [Test Mode=P25 II]
Availability:
      Operating Mode:Monitor, Generate, Duplex
Typical Completion Time:100 ms

Name:Output Level (dBm)
Tag:RF:Output Level
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 5
Availability:
      Operating Mode:Generate, Duplex
Typical Completion Time:500 ms

Name:Gen Port
Tag:RF:Generate Port
Commands:GET, SET
Data Type:BOOLEAN
List Values: RF In/Out, Gen Out
Availability:
        Operating Mode:Generate, Duplex
Typical Completion Time:500 ms

Name:Bandwidth
Tag:RF:Bandwidth
Commands:GET, SET
Data Type:LIST
List Values: 6.25 kHz (Narrow), 12.5 kHz (Narrow), 25 kHz (Wide), 50 kHz (Wide), 100 kHz (Wide), 200 kHz (Wide)
Availability:
        Operating Mode:Monitor, Generate, Duplex
Typical Completion Time:100 ms

Name:Attenuation
Tag:RF:Attenuation
Commands:GET, SET
Data Type:LIST
List Values: 0 dB, 2 dB, 4 dB, 6 dB, 8 dB, 10 dB, 12 dB, 14 dB, 16 dB, 18 dB, 20 dB, 22 dB, 24 dB, 26 dB, 28 dB, 30 dB, 32 dB, 34 dB, 36 dB, 38 dB, 40 dB, 42 dB, 44 dB, 46 dB, 48 dB, 50 dB, 52 dB, 54 dB, 56 dB, 58 dB, 60 dB, 62 dB
Availability:
        Operating Mode:Monitor, Duplex
Typical Completion Time:500 ms

Name:Pre-Amplifier
Tag:RF:PreAmp On
Commands:GET, SET
Data Type:BOOLEAN
List Values: Off, On
Availability:
        Operating Mode:Monitor, Duplex
Typical Completion Time:500 ms

Name:Mon Port
Tag:RF:Monitor Port
Commands:GET, SET
Data Type:BOOLEAN
List Values: RF In/Out, Antenna

Availability:
  Operating Mode:Monitor, Duplex
Typical Completion Time:500 ms

Name:Receiver Overload
Tag:RF:RX Overload
Commands:GET
Data Type:BOOLEAN
List Values: Okay, Receiver Overload - Increase Attenuation
Typical Completion Time:0 ms

Name:Mod Port Mode
Tag:AUDIO:Mod Port
Commands:GET, SET
Data Type:BOOLEAN
List Values: In, Out
Availability:
  Operating Mode:Generate, Duplex
  Menu:AUDIO
Typical Completion Time:100 ms

Name:Fixed 1kHz Level (V)
Tag:AUDIO:Fixed 1kHz
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 8
Availability:
  Operating Mode:Monitor
  Menu:AUDIO
Typical Completion Time:100 ms

Name:Fixed 1kHz Level (kHz)
Tag:AUDIO:Gen Fixed 1kHz
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 12
Availability:
  Operating Mode:Generate, Duplex
  Menu:AUDIO
Typical Completion Time:100 ms

Name:Fixed 1kHz Level (%AM)
Tag:AUDIO:Gen AM Fixed 1kHz
Commands:GET, SET
Data Type:INTEGER

Range: 0 to 99
Availability:
      Operating Mode:Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Fixed 1kHz Mode
Tag:AUDIO:Fixed 1kHz Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Synth Level (V)
Tag:AUDIO:Synth
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 8
Availability:
      Operating Mode:Monitor
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Synth Level (kHz)
Tag:AUDIO:Gen Synth
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 12
Availability:
      Operating Mode:Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Synth Level (%AM)
Tag:AUDIO:Gen AM Synth
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 99
Availability:
      Operating Mode:Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Format
Tag:AUDIO:Format
Commands:GET, SET
Data Type:LIST
List Values: PL, DPL, DPL Invert, A/B Sequence, 5/6 Tone, POCSAG, General Sequence
Availability:
        Operating Mode:Monitor, Generate, Duplex
        Menu:AUDIO
Typical Completion Time:1000 ms

Name:Synth Mode
Tag:AUDIO:Synth Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous, Burst [AUDIO:Format=A/B Sequence or AUDIO:Format=5/6 Tone or AUDIO:Format=POCSAG or AUDIO:Format=General Sequence], Disconnect Tone [AUDIO:Format=DPL or AUDIO:Format=DPL Invert]
Availability:
        Operating Mode:Monitor, Generate, Duplex
        Menu:AUDIO
Typical Completion Time:500 ms

Name:PL Code
Tag:AUDIO:PL Code
Commands:GET, SET
Data Type:LIST
List Values: XZ, WZ, XA, WA, XB, WB, YZ, YA, YB, ZZ, ZA, ZB, 1Z, 1A, 1B, 2Z, 2A, 2B, 3Z, 3A, 3B, 4Z, 4A, 4B, 5Z, 5A, 5B, 6Z, 6A, 6B, 7Z, 7A, M1, 8Z, M2, M3, M4, 9Z, M5, M6, M7
Availability:
        Synth Format:PL
        Operating Mode:Monitor, Generate, Duplex
        Menu:AUDIO
Typical Completion Time:100 ms

Name:PL Frequency (Hz)
Tag:AUDIO:PL Frequency
Commands:GET
Data Type:FLOAT
Range: 0 to 999
Availability:
        Operating Mode:Monitor, Generate, Duplex
        Menu:AUDIO
Typical Completion Time:100 ms

Name:PL Table
Tag:AUDIO:PL Table
Commands:GO
Data Type:SUBMENU
Availability:
  Synth Format:PL
  Operating Mode:Monitor, Generate, Duplex
  Menu:AUDIO
Typical Completion Time:2000 ms

Name:DPL Code
Tag:AUDIO:DPL Code
Commands:GET, SET
Data Type:LIST
List Values: 000, 001, 002, 003, 004, 005, 006, 007, 010, 011, 012, 013, 014, 015, 016, 017, 020, 021, 022, 023, 024, 025, 026, 027, 030, 031, 032, 033, 034, 035, 036, 037, 040, 041, 042, 043, 044, 045, 046, 047, 050, 051, 052, 053, 054, 055, 056, 057, 060, 061, 062, 063, 064, 065, 066, 067, 070, 071, 072, 073, 074, 075, 076, 077, 100, 101, 102, 103, 104, 105, 106, 107, 110, 111, 112, 113, 114, 115, 116, 117, 120, 121, 122, 123, 124, 125, 126, 127, 130, 131, 132, 133, 134, 135, 136, 137, 140, 141, 142, 143, 144, 145, 146, 147, 150, 151, 152, 153, 154, 155, 156, 157, 160, 161, 162, 163, 164, 165, 166, 167, 170, 171, 172, 173, 174, 175, 176, 177, 200, 201, 202, 203, 204, 205, 206, 207, 210, 211, 212, 213, 214, 215, 216, 217, 220, 221, 222, 223, 224, 225, 226, 227, 230, 231, 232, 233, 234, 235, 236, 237, 240, 241, 242, 243, 244, 245, 246, 247, 250, 251, 252, 253, 254, 255, 256, 257, 260, 261, 262, 263, 264, 265, 266, 267, 270, 271, 272, 273, 274, 275, 276, 277, 300, 301, 302, 303, 304, 305, 306, 307, 310, 311, 312, 313, 314, 315, 316, 317, 320, 321, 322, 323, 324, 325, 326, 327, 330, 331, 332, 333, 334, 335, 336, 337, 340, 341, 342, 343, 344, 345, 346, 347, 350, 351, 352, 353, 354, 355, 356, 357, 360, 361, 362, 363, 364, 365, 366, 367, 370, 371, 372, 373, 374, 375, 376, 377, 400, 401, 402, 403, 404, 405, 406, 407, 410, 411, 412, 413, 414, 415, 416, 417, 420, 421, 422, 423, 424, 425, 426, 427, 430, 431, 432, 433, 434, 435, 436, 437, 440, 441, 442, 443, 444, 445, 446, 447, 450, 451, 452, 453, 454, 455, 456, 457, 460, 461, 462, 463, 464, 465, 466, 467, 470, 471, 472, 473, 474, 475, 476, 477, 500, 501, 502, 503, 504, 505, 506, 507, 510, 511, 512, 513, 514, 515, 516, 517, 520, 521, 522, 523, 524, 525, 526, 527, 530, 531, 532, 533, 534, 535, 536, 537, 540, 541, 542, 543, 544, 545, 546, 547, 550, 551, 552, 553, 554, 555, 556, 557, 560, 561, 562, 563, 564, 565, 566, 567, 570, 571, 572, 573, 574, 575, 576, 577, 600, 601, 602, 603, 604, 605, 606, 607, 610, 611, 612, 613, 614, 615, 616, 617, 620, 621, 622, 623, 624, 625, 626, 627, 630, 631, 632, 633, 634, 635, 636, 637, 640, 641, 642, 643, 644, 645, 646, 647, 650, 651, 652, 653, 654, 655, 656, 657, 660, 661, 662, 663, 664, 665, 666, 667, 670, 671, 672, 673, 674, 675, 676, 677, 700, 701, 702, 703, 704, 705, 706, 707, 710, 711, 712, 713, 714, 715, 716, 717, 720, 721, 722, 723, 724, 725, 726, 727, 730, 731, 732, 733, 734, 735, 736, 737, 740, 741, 742, 743, 744, 745, 746, 747, 750, 751, 752, 753, 754, 755, 756, 757, 760, 761, 762, 763, 764, 765, 766, 767, 770, 771, 772, 773, 774, 775, 776, 777
Availability:
  Synth Format:DPL, DPL Invert

       Operating Mode:Monitor, Generate, Duplex
       Menu:AUDIO
Typical Completion Time:100 ms

Name:A/B Sequence
Tag:AUDIO:Sequence
Commands:GET, SET
Data Type:LIST
List Values: 1, 2, 3, 4
Availability:
       Synth Format:A/B Sequence
       Operating Mode:Monitor, Generate, Duplex
       Menu:AUDIO
Typical Completion Time:100 ms

Name:Code Sequence
Tag:AUDIO:Code Sequence
Commands:GET, SET
Data Type:STRING
Format:(GENSEQCode)
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J
Availability:
       Synth Format:General Sequence
       Operating Mode:Monitor, Generate, Duplex
       Menu:AUDIO
Typical Completion Time:100 ms

Name:A/B Sequence Table
Tag:AUDIO:SEQUENCE Table
Commands:GO
Data Type:SUBMENU
Availability:
       Synth Format:A/B Sequence
       Operating Mode:Monitor, Generate, Duplex
       Menu:AUDIO
Typical Completion Time:2000 ms

Name:General Sequence Table
Tag:AUDIO:GENSEQ Table
Commands:GO
Data Type:SUBMENU
Availability:
       Synth Format:General Sequence
       Operating Mode:Monitor, Generate, Duplex
       Menu:AUDIO

Typical Completion Time:2000 ms

Name:5/6 Tone
Tag:AUDIO:5/6 Tone
Commands:GET, SET
Data Type:STRING
Format:(56Tone)
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Availability:
        Synth Format:5/6 Tone
        Operating Mode:Monitor, Generate, Duplex
        Menu:AUDIO
Typical Completion Time:100 ms

Name:POCSAG Message
Tag:AUDIO:POCSAG Message
Commands:GET, SET
Data Type:LIST
List Values: Tone Only, NumericNum, NumericSet, AlphaNumUC, AlphaNumLC,
AlphaNumSP, NumericCust, AlphaNumCust
Availability:
        Synth Format:POCSAG
        Operating Mode:Monitor, Generate, Duplex
        Menu:AUDIO
Typical Completion Time:100 ms

Name:POCSAG Table
Tag:AUDIO:POCSAG Table
Commands:GO
Data Type:SUBMENU
Availability:
        Synth Format:POCSAG
        Operating Mode:Monitor, Generate, Duplex
        Menu:AUDIO
Typical Completion Time:2000 ms

Name:Tone A Level (V)
Tag:AUDIO:Tone A
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 8
Availability:
        Operating Mode:Monitor
        Menu:AUDIO
Typical Completion Time:100 ms

Name:Tone A Level (kHz)
Tag:AUDIO:Gen Tone A
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 12
Availability:
        Operating Mode:Generate, Duplex
        Menu:AUDIO
Typical Completion Time:100 ms

Name:Tone A Level (%AM)
Tag:AUDIO:Gen AM Tone A
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 99
Availability:
        Operating Mode:Generate, Duplex
        Menu:AUDIO
Typical Completion Time:100 ms

Name:Tone A Frequency (Hz)
Tag:AUDIO:Tone A Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 20000
Availability:
        Operating Mode:Monitor, Generate, Duplex
        Menu:AUDIO
Typical Completion Time:100 ms

Name:Tone A Mode
Tag:AUDIO:Tone A Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous, Burst
Availability:
        Operating Mode:Monitor, Generate, Duplex
        Menu:AUDIO
Typical Completion Time:100 ms

Name:Tone B Level (V)
Tag:AUDIO:Tone B
Commands:GET, SET
Data Type:FLOAT

Range: 0 to 8
Availability:
      Operating Mode:Monitor
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Tone B Level (kHz)
Tag:AUDIO:Gen Tone B
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 12
Availability:
      Operating Mode:Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Tone B Level (%AM)
Tag:AUDIO:Gen AM Tone B
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 99
Availability:
      Operating Mode:Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Tone B Frequency (Hz)
Tag:AUDIO:Tone B Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 20000
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Tone B Mode
Tag:AUDIO:Tone B Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous, Burst
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:DTMF Level (V)
Tag:AUDIO:DTMF
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 8
Availability:
      Operating Mode:Monitor
      Menu:AUDIO
Typical Completion Time:100 ms

Name:DTMF Level (kHz)
Tag:AUDIO:Gen DTMF
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 12
Availability:
      Operating Mode:Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:DTMF Level (%AM)
Tag:AUDIO:Gen AM DTMF
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 99
Availability:
      Operating Mode:Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:DTMF Mode
Tag:AUDIO:DTMF Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous, Burst
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:AUDIO
Typical Completion Time:500 ms

Name:DTMF Code
Tag:AUDIO:DTMF Code
Commands:GET, SET
Data Type:STRING

Format:(DTMFCode)
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, #, *
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:AUDIO
Typical Completion Time:100 ms

Name:DTMF Table
Tag:AUDIO:DTMF Table
Commands:GO
Data Type:SUBMENU
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:AUDIO
Typical Completion Time:2000 ms

Name:Microphone Mode
Tag:AUDIO:Microphone Mode
Commands:GET, SET
Data Type:BOOLEAN
List Values: Off, Continuous
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:AUDIO
Typical Completion Time:500 ms

Name:Microphone Level (V)
Tag:AUDIO:Microphone
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 8
Availability:
    Operating Mode:Monitor
    Menu:AUDIO
Typical Completion Time:100 ms

Name:Microphone Level (kHz)
Tag:AUDIO:Gen Microphone
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 12
Availability:
    Operating Mode:Generate, Duplex
    Menu:AUDIO
Typical Completion Time:100 ms

Name:Microphone Level (%AM)
Tag:AUDIO:Gen AM Microphone
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 99
Availability:
      Operating Mode:Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Mod In Port Level (kHz)
Tag:AUDIO:Gen Mod In Level
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 12
Availability:
      Operating Mode:Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Mod In Port Level (%AM)
Tag:AUDIO:Gen AM Mod In Level
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 99
Availability:
      Operating Mode:Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:Mod In Port Mode
Tag:AUDIO:Mod In Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous
Availability:
      Operating Mode:Generate, Duplex
      Menu:AUDIO
Typical Completion Time:100 ms

Name:High Pass Filter
Tag:AUDIO:High Pass Filter
Commands:GET, SET
Data Type:LIST

List Values: 1 Hz, 300 Hz, 3 kHz
Availability:
  Operating Mode:Monitor, Generate, Duplex
  Menu:AUDIO
Typical Completion Time:100 ms

Name:Low Pass Filter
Tag:AUDIO:Low Pass Filter
Commands:GET, SET
Data Type:LIST
List Values: 300 Hz, 3 kHz, 20 kHz
Availability:
  Operating Mode:Monitor, Generate, Duplex
  Menu:AUDIO
Typical Completion Time:100 ms

Name:Audio Sum
Tag:AUDIO:Audio Sum
Commands:GET
Data Type:FLOAT
Availability:
  Operating Mode:Monitor, Duplex
  Menu:AUDIO
Typical Completion Time:0 ms

Name:Mod Sum
Tag:AUDIO:Mod Sum
Commands:GET
Data Type:FLOAT
Availability:
  Operating Mode:Generate, Duplex
  Menu:AUDIO
Typical Completion Time:0 ms

Name:AM Mod Sum
Tag:AUDIO:AM Mod Sum
Commands:GET
Data Type:FLOAT
Availability:
  Operating Mode:Generate, Duplex
  Menu:AUDIO
Typical Completion Time:0 ms

Name:PL Code
Tag:PL:PL Code

Commands:GET, SET
Data Type:LIST
List Values: XZ, WZ, XA, WA, XB, WB, YZ, YA, YB, ZZ, ZA, ZB, 1Z, 1A, 1B, 2Z, 2A, 2B, 3Z, 3A, 3B, 4Z, 4A, 4B, 5Z, 5A, 5B, 6Z, 6A, 6B, 7Z, 7A, M1, 8Z, M2, M3, M4, 9Z, M5, M6, M7
Availability:
         Operating Mode:Monitor, Generate, Duplex
         Menu:PL
Typical Completion Time:100 ms

Name:DTMF Code
Tag:DTMF:DTMF Code
Commands:GET, SET
Data Type:STRING
Format:(DTMFCode)
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, #, *
Availability:
         Menu:DTMF
Typical Completion Time:100 ms

Name:Tone Duration (ms)
Tag:DTMF:Duration
Commands:GET, SET
Data Type:INTEGER
Range: 70 to 9999
Availability:
         Menu:DTMF
Typical Completion Time:100 ms

Name:Inter-digit Delay (ms)
Tag:DTMF:Delay
Commands:GET, SET
Data Type:INTEGER
Range: 70 to 9999
Availability:
         Menu:DTMF
Typical Completion Time:100 ms

Name:Sequence
Tag:SEQUENCE:Sequence
Commands:GET, SET
Data Type:LIST
List Values: 1, 2, 3, 4
Availability:
         Menu:SEQUENCE

Typical Completion Time:100 ms

Name:Sequence 3 Tone A Duration (sec)
Tag:SEQUENCE:S3 Tone A Duration
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 10
Availability:
        Menu:SEQUENCE
Typical Completion Time:100 ms

Name:Sequence 3 Tone A Delay (sec)
Tag:SEQUENCE:S3 Tone A Delay
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 10
Availability:
        Menu:SEQUENCE
Typical Completion Time:100 ms

Name:Sequence 3 Tone B Duration (sec)
Tag:SEQUENCE:S3 Tone B Duration
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 10
Availability:
        Menu:SEQUENCE
Typical Completion Time:100 ms

Name:Sequence 3 Tone B Delay (sec)
Tag:SEQUENCE:S3 Tone B Delay
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 10
Availability:
        Menu:SEQUENCE
Typical Completion Time:100 ms

Name:Sequence 4 Tone A Duration (sec)
Tag:SEQUENCE:S4 Tone A Duration
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 10
Availability:
        Menu:SEQUENCE

Typical Completion Time:100 ms

Name:Sequence 4 Tone A Delay (sec)
Tag:SEQUENCE:S4 Tone A Delay
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 10
Availability:
        Menu:SEQUENCE
Typical Completion Time:100 ms

Name:Sequence 4 Tone B Duration (sec)
Tag:SEQUENCE:S4 Tone B Duration
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 10
Availability:
        Menu:SEQUENCE
Typical Completion Time:100 ms

Name:Sequence 4 Tone B Delay (sec)
Tag:SEQUENCE:S4 Tone B Delay
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 10
Availability:
        Menu:SEQUENCE
Typical Completion Time:100 ms

Name:Tone A Frequency (Hz)
Tag:SEQUENCE:Tone A Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 20000
Availability:
        Menu:SEQUENCE
Typical Completion Time:100 ms

Name:Tone B Frequency (Hz)
Tag:SEQUENCE:Tone B Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 20000
Availability:
        Menu:SEQUENCE

Typical Completion Time:100 ms

Name:Code Sequence
Tag:GENSEQ:Code Sequence
Commands:GET, SET
Data Type:STRING
Format:(GENSEQCode)
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J
Availability:
　　　Menu:GENSEQ
Typical Completion Time:100 ms

Name:Select Tone Standard
Tag:GENSEQ:Standard
Commands:GET, SET
Data Type:LIST
List Values: None, CCIR1, CCIR2, PCCIR, CCITT, EEA, EIA, Euro, NATEL, MODAT, ZVEI1, ZVEI2, ZVEI3, PZVEI, DZVEI, PDZVEI
Availability:
　　　Menu:GENSEQ
Typical Completion Time:500 ms

Name:Synth Mode
Tag:GENSEQ:Synth Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous, Burst [AUDIO:Format=A/B Sequence or AUDIO:Format=5/6 Tone or AUDIO:Format=POCSAG or AUDIO:Format=General Sequence], Disconnect Tone [AUDIO:Format=DPL or AUDIO:Format=DPL Invert]
Availability:
　　　Operating Mode:Monitor, Generate, Duplex
　　　Menu:GENSEQ
Typical Completion Time:500 ms

Name:Select Symbol to Edit
Tag:GENSEQ:Select Tone
Commands:GET, SET
Data Type:LIST
List Values: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J
Availability:
　　　Menu:GENSEQ
Typical Completion Time:100 ms

Name:Tone Frequency(Hz)
Tag:GENSEQ:Edit Frequency

Commands:GET, SET
Data Type:FLOAT
Range: 0 to 20000
Availability:
        Menu:GENSEQ
Typical Completion Time:100 ms

Name:Tone Duration(sec)
Tag:GENSEQ:Edit Duration
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 0
Availability:
        Menu:GENSEQ
Typical Completion Time:100 ms

Name:Post-Tone Delay(sec)
Tag:GENSEQ:Edit Delay
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 1
Availability:
        Menu:GENSEQ
Typical Completion Time:100 ms

Name:Save Sequence Definition
Tag:GENSEQ:Save
Commands:GET, SET
Data Type:STRING
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, , ., _, (,)
Availability:
        Menu:GENSEQ
Typical Completion Time:2000 ms

Name:Load Sequence Definition
Tag:GENSEQ:Load
Commands:GET, SET
Data Type:LIST
List Values:
Availability:
        Menu:GENSEQ
Typical Completion Time:2000 ms

Name:Sync to Code Entry

Tag:GENSEQ:Sync Sequences
Commands:GET, SET
Data Type:BOOLEAN
List Values: No, Yes
Availability:
        Menu:GENSEQ
Typical Completion Time:100 ms

Name:Duration Sequence
Tag:GENSEQ:Dur Sequence
Commands:GET, SET
Data Type:STRING
Format:(GENSEQCode)
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J
Availability:
        Menu:GENSEQ
Typical Completion Time:100 ms

Name:Delay Sequence
Tag:GENSEQ:Delay Sequence
Commands:GET, SET
Data Type:STRING
Format:(GENSEQCode)
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J
Availability:
        Menu:GENSEQ
Typical Completion Time:100 ms

Name:Spectrum Analyzer
Tag:INSTRUMENTS:SPEC_AN
Commands:GO
Data Type:SUBMENU
Availability:
        Menu:INSTRUMENTS
Typical Completion Time:2000 ms

Name:Modulation Scope
Tag:INSTRUMENTS:MOD_SCOPE
Commands:GO
Data Type:SUBMENU
Availability:
        Menu:INSTRUMENTS
Typical Completion Time:2000 ms

Name:Oscilloscope

Tag:INSTRUMENTS:O_SCOPE
Commands:GO
Data Type:SUBMENU
Availability:
      Menu:INSTRUMENTS
Typical Completion Time:2000 ms

Name:Dual Display
Tag:INSTRUMENTS:DUAL_SCOPE
Commands:GO
Data Type:SUBMENU
Availability:
      Option:R8-ESA
      Menu:INSTRUMENTS
Typical Completion Time:2000 ms

Name:Tracking Generator
Tag:INSTRUMENTS:TRACK_GEN
Commands:GO
Data Type:SUBMENU
Availability:
      Option:R8-TG
      Menu:INSTRUMENTS
Typical Completion Time:5000 ms

Name:Presets
Tag:TEST:PRESETS
Commands:GO
Data Type:SUBMENU
Typical Completion Time:2000 ms

Name:Test Mode
Tag:TEST:Test Mode
Commands:GET, SET
Data Type:LIST
List Values: Standard, DMR [R8-DMR option not installed], PROJECT 25 [R8-P25 option not installed], P25 Trunk [R8-P25TRNK option not installed], NXDN [R8-NXDN option not installed], NXDN Trunk [R8-NXDNTYPC option not installed], TETRA [R8-TETRA option not installed], DPMR [R8-DPMR option not installed], P25 II [R8-P25_II option not installed]
Typical Completion Time:5000 ms

Name:AutoScript (BETA)
Tag:TEST:AUTOSCRIPT
Commands:GO
Data Type:SUBMENU

Typical Completion Time:0 ms

Name:System Settings
Tag:SETTINGS:SETUP
Commands:GO
Data Type:SUBMENU
Availability:
        Menu:SETTINGS
Typical Completion Time:2000 ms

Name:About
Tag:SETTINGS:ABOUT
Commands:GO
Data Type:SUBMENU
Availability:
        Menu:SETTINGS
Typical Completion Time:2000 ms

Name:Options
Tag:SETTINGS:OPTIONS
Commands:GO
Data Type:SUBMENU
Availability:
        Menu:SETTINGS
Typical Completion Time:2000 ms

Name:PLL Lock Status
Tag:MONITOR:PLL Status
Commands:GET
Data Type:INTEGER
Typical Completion Time:0 ms

Name:High Power Attenuator Temp
Tag:MONITOR:HP Attenuator Temp
Commands:GET
Data Type:FLOAT
Range: 0 to 100
Typical Completion Time:0 ms

Name:Receive Power Meter Temp
Tag:MONITOR:RX Power Meter Temp
Commands:GET
Data Type:FLOAT
Range: 0 to 100
Typical Completion Time:0 ms

Name:Generate Power Meter Temp
Tag:MONITOR:Gen Power Meter Temp
Commands:GET
Data Type:FLOAT
Range: 0 to 100
Typical Completion Time:0 ms

Name:Frequency Error
Tag:MONITOR:Frequency Error
Commands:GET
Data Type:FLOAT
Typical Completion Time:0 ms

Name:Input Level
Tag:MONITOR:Input Level
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
Typical Completion Time:0 ms

Name:Deviation
Tag:MONITOR:Deviation+
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
Typical Completion Time:0 ms

Name:Deviation
Tag:MONITOR:Deviation-
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
Typical Completion Time:0 ms

Name:Center Frequency
Tag:SPEC_AN:Monitor Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:

Operating Mode:Monitor, Duplex
Menu:SPEC_AN
Typical Completion Time:5000 ms

Name:Span
Tag:SPEC_AN:Span
Commands:GET, SET
Data Type:FLOAT
Range: 9751 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
Operating Mode:Monitor, Duplex
Menu:SPEC_AN
Typical Completion Time:5000 ms

Name:Start Frequency
Tag:SPEC_AN:Start Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
Operating Mode:Monitor, Duplex
Menu:SPEC_AN
Typical Completion Time:5000 ms

Name:Stop Frequency
Tag:SPEC_AN:Stop Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
Operating Mode:Monitor, Duplex
Menu:SPEC_AN
Typical Completion Time:5000 ms

Name:Resolution Bandwidth
Tag:SPEC_AN:Resolution Bandwidth
Commands:GET
Data Type:FLOAT
Availability:
Operating Mode:Monitor, Duplex
Menu:SPEC_AN
Typical Completion Time:0 ms

Name:Reference Level (dBm)
Tag:SPEC_AN:Reference Level
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 90
Availability:
        Operating Mode:Monitor, Duplex
        Menu:SPEC_AN
Typical Completion Time:100 ms

Name:Vertical Scale
Tag:SPEC_AN:Vertical Scale
Commands:GET, SET
Data Type:LIST
List Values: 10 dB/div, 5 dB/div, 2 dB/div, 1 dB/div
Availability:
        Operating Mode:Monitor, Duplex
        Menu:SPEC_AN
Typical Completion Time:100 ms

Name:Display Mode
Tag:SPEC_AN:Display Mode
Commands:GET, SET
Data Type:LIST
List Values: Normal, Freeze, Max Hold, Average
Availability:
        Operating Mode:Monitor, Duplex
        Menu:SPEC_AN
Typical Completion Time:100 ms

Name:Trace Math
Tag:SPEC_AN:Trace Math
Commands:GET, SET
Data Type:LIST
List Values: None, Spec-Ref (log),
Spec-Ref
 (lin), Spec+Ref (lin)
Availability:
        Operating Mode:Monitor, Duplex
        Menu:SPEC_AN
Typical Completion Time:100 ms

Name:Set Reference Trace
Tag:SPEC_AN:Set Reference Trace

Commands:DO
Data Type:FUNCTION
Availability:
        Operating Mode:Monitor, Duplex
        Menu:SPEC_AN
Typical Completion Time:100 ms

Name:Find Peak
Tag:SPEC_AN:Find Peak
Commands:DO
Data Type:FUNCTION
Availability:
        Operating Mode:Monitor, Duplex
        Menu:SPEC_AN
Typical Completion Time:100 ms

Name:Center Peak
Tag:SPEC_AN:Center Peak
Commands:DO
Data Type:FUNCTION
Availability:
        Operating Mode:Monitor, Duplex
        Menu:SPEC_AN
Typical Completion Time:5000 ms

Name:Select Instrument
Tag:DUAL_SCOPE:Subzone
Commands:GET, SET
Data Type:LIST
List Values: Spectrum Analyzer, Modulation Scope
Availability:
        Menu:DUAL_SCOPE
Typical Completion Time:100 ms

Name:Span
Tag:DUAL_SCOPE:Span
Commands:GET, SET
Data Type:FLOAT
Range: 9751 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
        Operating Mode:Monitor, Duplex
        Menu:DUAL_SCOPE:Subzone=Spectrum Analyzer
Typical Completion Time:5000 ms

Name:Start Frequency
Tag:DUAL_SCOPE:Start Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DUAL_SCOPE:Subzone=Spectrum Analyzer
Typical Completion Time:5000 ms

Name:Stop Frequency
Tag:DUAL_SCOPE:Stop Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DUAL_SCOPE:Subzone=Spectrum Analyzer
Typical Completion Time:5000 ms

Name:Resolution Bandwidth
Tag:DUAL_SCOPE:Resolution Bandwidth
Commands:GET
Data Type:FLOAT
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DUAL_SCOPE:Subzone=Spectrum Analyzer
Typical Completion Time:0 ms

Name:Reference Level (dBm)
Tag:DUAL_SCOPE:Reference Level
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 90
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DUAL_SCOPE:Subzone=Spectrum Analyzer
Typical Completion Time:100 ms

Name:Vertical Scale
Tag:DUAL_SCOPE:Vertical Scale
Commands:GET, SET
Data Type:LIST

List Values: 10 dB/div, 5 dB/div, 2 dB/div, 1 dB/div
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DUAL_SCOPE:Subzone=Spectrum Analyzer
Typical Completion Time:100 ms

Name:Display Mode
Tag:DUAL_SCOPE:Display Mode
Commands:GET, SET
Data Type:LIST
List Values: Normal, Freeze, Max Hold, Average
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DUAL_SCOPE:Subzone=Spectrum Analyzer
Typical Completion Time:100 ms

Name:Trace Math
Tag:DUAL_SCOPE:Trace Math
Commands:GET, SET
Data Type:LIST
List Values: None, Spec-Ref (log),
Spec-Ref
 (lin), Spec+Ref (lin)
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DUAL_SCOPE:Subzone=Spectrum Analyzer
Typical Completion Time:100 ms

Name:Set Reference Trace
Tag:DUAL_SCOPE:Set Reference Trace
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DUAL_SCOPE:Subzone=Spectrum Analyzer
Typical Completion Time:100 ms

Name:Find Peak
Tag:DUAL_SCOPE:Find Peak
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DUAL_SCOPE:Subzone=Spectrum Analyzer
Typical Completion Time:100 ms

Name:Center Peak
Tag:DUAL_SCOPE:Center Peak
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DUAL_SCOPE:Subzone=Spectrum Analyzer
Typical Completion Time:5000 ms

Name:Vertical Scale
Tag:DUAL_SCOPE:AM Vertical Scale
Commands:GET, SET
Data Type:LIST
List Values: 1%, 2%, 5%, 10%, 20%, 50%
Availability:
      Menu:DUAL_SCOPE:Subzone=Modulation Scope
Typical Completion Time:100 ms

Name:Vertical Scale
Tag:DUAL_SCOPE:FM Vertical Scale
Commands:GET, SET
Data Type:LIST
List Values: 100 Hz, 200 Hz, 500 Hz, 1 kHz, 2 kHz, 5 kHz, 10 kHz, 20 kHz, 50 kHz
Availability:
      Menu:DUAL_SCOPE:Subzone=Modulation Scope
Typical Completion Time:100 ms

Name:Horizontal Scale
Tag:DUAL_SCOPE:Horizontal Scale
Commands:GET, SET
Data Type:LIST
List Values: 20 us, 50 us, 100 us, 200 us, 500 us, 1 ms, 2 ms, 5 ms, 10 ms, 20 ms, 50 ms, 100 ms, 200 ms, 500 ms, 1 s
Availability:
      Menu:DUAL_SCOPE:Subzone=Modulation Scope
Typical Completion Time:100 ms

Name:Trigger Mode
Tag:DUAL_SCOPE:Trigger
Commands:GET, SET
Data Type:LIST
List Values: Auto, Normal, Single
Availability:
      Menu:DUAL_SCOPE:Subzone=Modulation Scope

Typical Completion Time:100 ms

Name:Trigger Level
Tag:DUAL_SCOPE:Trigger Level
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 200000
Availability:
        Menu:DUAL_SCOPE:Subzone=Modulation Scope
Typical Completion Time:100 ms

Name:Trigger Level (%)
Tag:DUAL_SCOPE:AM Trigger Level
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 99
Availability:
        Menu:DUAL_SCOPE:Subzone=Modulation Scope
Typical Completion Time:100 ms

Name:Trigger Edge
Tag:DUAL_SCOPE:Trigger Edge
Commands:GET, SET
Data Type:LIST
List Values: Rising, Falling, Either
Availability:
        Menu:DUAL_SCOPE:Subzone=Modulation Scope
Typical Completion Time:100 ms

Name:Scope Mode
Tag:DUAL_SCOPE:Mod Scope Select
Commands:GET, SET
Data Type:BOOLEAN
List Values: Monitor, Generate
Availability:
        Operating Mode:Duplex
        Menu:DUAL_SCOPE
Typical Completion Time:100 ms

Name:Center Frequency
Tag:TRACK_GEN:Generate Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz

Availability:
      Menu:TRACK_GEN
Typical Completion Time:5000 ms

Name:Span
Tag:TRACK_GEN:Span
Commands:GET, SET
Data Type:FLOAT
Range: 1 Hz to 50000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
      Menu:TRACK_GEN
Typical Completion Time:5000 ms

Name:Start Frequency
Tag:TRACK_GEN:Start Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 3000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
      Menu:TRACK_GEN
Typical Completion Time:5000 ms

Name:Stop Frequency
Tag:TRACK_GEN:Stop Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 259751 Hz to 3000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
      Menu:TRACK_GEN
Typical Completion Time:5000 ms

Name:Reference Level (dBm)
Tag:TRACK_GEN:Reference Level
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 60
Availability:
      Menu:TRACK_GEN
Typical Completion Time:100 ms

Name:Vertical Scale
Tag:TRACK_GEN:Vertical Scale

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Commands:GET, SET
Data Type:LIST
List Values: 15 dB/div, 10 dB/div, 5 dB/div, 2 dB/div, 1 dB/div
Availability:
        Option:R8-ESA
        Menu:TRACK_GEN
Typical Completion Time:100 ms

Name:# of Points
Tag:TRACK_GEN:Number of Points
Commands:GET, SET
Data Type:INTEGER
Range: 100 to 600
Availability:
        Menu:TRACK_GEN
Typical Completion Time:4000 ms

Name:RBW
Tag:TRACK_GEN:RBW
Commands:GET, SET
Data Type:LIST
List Values: Wide, [Reserved], [Reserved], [Reserved], [Reserved], [Reserved], [Reserved], Medium, Narrow
Availability:
        Menu:TRACK_GEN
Typical Completion Time:4000 ms

Name:Display Mode
Tag:TRACK_GEN:Display Mode
Commands:GET, SET
Data Type:LIST
List Values: Normal, Freeze, Max Hold, Average
Availability:
        Menu:TRACK_GEN
Typical Completion Time:100 ms

Name:Marker Mode
Tag:TRACK_GEN:SA Markers
Commands:GET, SET
Data Type:LIST
List Values: Off, Absolute, Delta
Availability:
        Menu:TRACK_GEN
Typical Completion Time:100 ms

Name:Marker Type
Tag:TRACK_GEN:Marker Type
Commands:GET, SET
Data Type:LIST
List Values: Point Cross, Vertical Bar, Horizontal Bar, Full Cross
Availability:
        Menu:TRACK_GEN
Typical Completion Time:100 ms

Name:Toggle Marker
Tag:TRACK_GEN:Toggle Marker
Commands:DO
Data Type:FUNCTION
Availability:
        Menu:TRACK_GEN
Typical Completion Time:100 ms

Name:Select Marker
Tag:TRACK_GEN:Select Marker
Commands:GET, SET
Data Type:LIST
List Values: 1, 2, 3, 4
Availability:
        Option:R8-ESA
        Menu:TRACK_GEN
Typical Completion Time:100 ms

Name:Set Marker Frequency
Tag:TRACK_GEN:Marker Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
        Menu:TRACK_GEN
Typical Completion Time:100 ms

Name:Find Peak
Tag:TRACK_GEN:Find Peak
Commands:DO
Data Type:FUNCTION
Availability:
        Menu:TRACK_GEN
Typical Completion Time:100 ms

Name:Find Valley
Tag:TRACK_GEN:Find Valley
Commands:DO
Data Type:FUNCTION
Availability:
　　　　Menu:TRACK_GEN
Typical Completion Time:100 ms

Name:Center Marker
Tag:TRACK_GEN:Center Marker
Commands:DO
Data Type:FUNCTION
Availability:
　　　　Menu:TRACK_GEN
Typical Completion Time:5000 ms

Name:Output Level (dBm)
Tag:TRACK_GEN:Output Level
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 5
Availability:
　　　　Menu:TRACK_GEN
Typical Completion Time:500 ms

Name:Attenuation
Tag:TRACK_GEN:Attenuation
Commands:GET, SET
Data Type:LIST
List Values: 0 dB, 2 dB, 4 dB, 6 dB, 8 dB, 10 dB, 12 dB, 14 dB, 16 dB, 18 dB, 20 dB, 22 dB, 24 dB, 26 dB, 28 dB, 30 dB, 32 dB, 34 dB, 36 dB, 38 dB, 40 dB, 42 dB, 44 dB, 46 dB, 48 dB, 50 dB, 52 dB, 54 dB, 56 dB, 58 dB, 60 dB, 62 dB
Availability:
　　　　Menu:TRACK_GEN
Typical Completion Time:500 ms

Name:Pre-Amplifier
Tag:TRACK_GEN:PreAmp On
Commands:GET, SET
Data Type:BOOLEAN
List Values: Off, On
Availability:
　　　　Menu:TRACK_GEN
Typical Completion Time:500 ms

Name:Gen Port
Tag:TRACK_GEN:Generate Port
Commands:GET, SET
Data Type:BOOLEAN
List Values: RF In/Out, Gen Out
Availability:
        Menu:TRACK_GEN
Typical Completion Time:500 ms

Name:Monitor Port
Tag:TRACK_GEN:Monitor Port
Commands:GET, SET
Data Type:BOOLEAN
List Values: RF In/Out, Antenna
Availability:
        Menu:TRACK_GEN
Typical Completion Time:500 ms

Name:Normalize
Tag:TRACK_GEN:Normalize
Commands:GET, SET
Data Type:BOOLEAN
List Values: Off, On
Availability:
        Menu:TRACK_GEN
Typical Completion Time:500 ms

Name:Coupling
Tag:O_SCOPE:Coupling
Commands:GET, SET
Data Type:BOOLEAN
List Values: DC, AC
Availability:
        Menu:O_SCOPE
Typical Completion Time:500 ms

Name:Horizontal Scale
Tag:O_SCOPE:Ext Horizontal Scale
Commands:GET, SET
Data Type:LIST
List Values: 20 us (Max 50 kHz In), 50 us (Max 20 kHz In), 100 us (Max 10 kHz In), 200 us (Max 5 kHz In), 500 us (Max 2 kHz In), 1 ms (Max 1 kHz In), 2 ms (Max 500 Hz In), 5 ms (Max 200 Hz In), 10 ms (Max 100 Hz In), 20 ms (Max 50 Hz In), 50 ms (Max 20 Hz In), 100 ms (Max 10 Hz In), 200 ms (Max 5 Hz In), 500 ms (Max 2 Hz In), 1 s (Max 1 Hz In)
Availability:

      Menu:O_SCOPE
Typical Completion Time:500 ms

Name:Vertical Scale
Tag:O_SCOPE:Ext Vertical Scale
Commands:GET, SET
Data Type:LIST
List Values: 50 mV, 100 mV, 200 mV, 500 mV, 1 V, 2 V, 5 V, 10 V, 15 V, 20 V, 25 V
Availability:
      Menu:O_SCOPE
Typical Completion Time:500 ms

Name:Trigger Mode
Tag:O_SCOPE:Ext Trigger
Commands:GET, SET
Data Type:LIST
List Values: Auto, Normal, Single, Freeze
Availability:
      Menu:O_SCOPE
Typical Completion Time:500 ms

Name:Trigger Level
Tag:O_SCOPE:Ext Trigger Level
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 100
Availability:
      Menu:O_SCOPE
Typical Completion Time:500 ms

Name:Trigger Position
Tag:O_SCOPE:Ext Trigger Position
Commands:GET, SET
Data Type:LIST
List Values: 10%, 50%, 90%
Availability:
      Menu:O_SCOPE
Typical Completion Time:500 ms

Name:Trigger Edge
Tag:O_SCOPE:Ext Trigger Edge
Commands:GET, SET
Data Type:LIST
List Values: Rising, Falling, Either
Availability:

      Menu:O_SCOPE
Typical Completion Time:500 ms

Name:Vertical Scale
Tag:MOD_SCOPE:AM Vertical Scale
Commands:GET, SET
Data Type:LIST
List Values: 1%, 2%, 5%, 10%, 20%, 50%
Availability:
      Menu:MOD_SCOPE
Typical Completion Time:100 ms

Name:Vertical Scale
Tag:MOD_SCOPE:FM Vertical Scale
Commands:GET, SET
Data Type:LIST
List Values: 100 Hz, 200 Hz, 500 Hz, 1 kHz, 2 kHz, 5 kHz, 10 kHz, 20 kHz, 50 kHz
Availability:
      Menu:MOD_SCOPE
Typical Completion Time:100 ms

Name:Horizontal Scale
Tag:MOD_SCOPE:Horizontal Scale
Commands:GET, SET
Data Type:LIST
List Values: 20 us, 50 us, 100 us, 200 us, 500 us, 1 ms, 2 ms, 5 ms, 10 ms, 20 ms, 50 ms, 100 ms, 200 ms, 500 ms, 1 s
Availability:
      Menu:MOD_SCOPE
Typical Completion Time:100 ms

Name:Trigger Mode
Tag:MOD_SCOPE:Trigger
Commands:GET, SET
Data Type:LIST
List Values: Auto, Normal, Single
Availability:
      Menu:MOD_SCOPE
Typical Completion Time:100 ms

Name:Trigger Level
Tag:MOD_SCOPE:Trigger Level
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 200000

Availability:
    Menu:MOD_SCOPE
Typical Completion Time:100 ms

Name:Trigger Level (%)
Tag:MOD_SCOPE:AM Trigger Level
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 99
Availability:
    Menu:MOD_SCOPE
Typical Completion Time:100 ms

Name:Trigger Edge
Tag:MOD_SCOPE:Trigger Edge
Commands:GET, SET
Data Type:LIST
List Values: Rising, Falling, Either
Availability:
    Menu:MOD_SCOPE
Typical Completion Time:100 ms

Name:Scope Mode
Tag:MOD_SCOPE:Mod Scope Select
Commands:GET, SET
Data Type:BOOLEAN
List Values: Monitor, Generate
Availability:
    Operating Mode:Duplex
    Menu:MOD_SCOPE
Typical Completion Time:100 ms

Name:System Version
Tag:ABOUT:SystemVersion
Commands:GET
Data Type:STRING
Availability:
    Menu:ABOUT
Typical Completion Time:0 ms

Name:Application Version
Tag:ABOUT:AppVersion
Commands:GET
Data Type:STRING
Availability:

   Menu:ABOUT
Typical Completion Time:0 ms

Name:R8000 Library Version
Tag:ABOUT:DllVersion
Commands:GET
Data Type:STRING
Availability:
   Menu:ABOUT
Typical Completion Time:0 ms

Name:Signal Service Provider Version
Tag:ABOUT:SSP_Version
Commands:GET
Data Type:STRING
Availability:
   Menu:ABOUT
Typical Completion Time:0 ms

Name:Audio Library Version
Tag:ABOUT:AudioVersion
Commands:GET
Data Type:STRING
Availability:
   Menu:ABOUT
Typical Completion Time:0 ms

Name:Operating System Version
Tag:ABOUT:OSVersion
Commands:GET
Data Type:STRING
Availability:
   Menu:ABOUT
Typical Completion Time:0 ms

Name:BIOS Version
Tag:ABOUT:BIOSVersion
Commands:GET
Data Type:STRING
Availability:
   Menu:ABOUT
Typical Completion Time:0 ms

Name:Main Board Revision
Tag:ABOUT:MainPCBA

Commands:GET
Data Type:STRING
Availability:
        Menu:ABOUT
Typical Completion Time:0 ms

Name:RF Board Revision
Tag:ABOUT:RfPCBA
Commands:GET
Data Type:STRING
Availability:
        Menu:ABOUT
Typical Completion Time:0 ms

Name:Control FPGA Version
Tag:ABOUT:ControlFPGA
Commands:GET
Data Type:STRING
Availability:
        Menu:ABOUT
Typical Completion Time:0 ms

Name:
Tag:ABOUT:TxFPGA
Commands:GET
Data Type:STRING
Availability:
        Menu:ABOUT
Typical Completion Time:0 ms

Name:RX FPGA Version
Tag:ABOUT:RxFPGA
Commands:GET
Data Type:STRING
Availability:
        Menu:ABOUT
Typical Completion Time:0 ms

Name:Comm FPGA Version
Tag:ABOUT:PCIeFPGA
Commands:GET
Data Type:STRING
Availability:
        Menu:ABOUT
Typical Completion Time:0 ms

Name:XTX BC Version
Tag:ABOUT:XTX_BC
Commands:GET
Data Type:STRING
Availability:
        Menu:ABOUT
Typical Completion Time:0 ms

Name:XTX Product Revision
Tag:ABOUT:XTX_Product
Commands:GET
Data Type:STRING
Availability:
        Menu:ABOUT
Typical Completion Time:0 ms

Name:XTX Serial Number
Tag:ABOUT:XTX_Serial
Commands:GET
Data Type:STRING
Availability:
        Menu:ABOUT
Typical Completion Time:0 ms

Name:Input Decoding
Tag:SETUP:Input Decoding
Commands:GET, SET
Data Type:BOOLEAN
List Values: Internal, External
Availability:
        Menu:SETUP
Typical Completion Time:100 ms

Name:Input Impedance
Tag:SETUP:Input Impedance
Commands:GET, SET
Data Type:BOOLEAN
List Values: 1 MegOhm, 600 Ohm
Availability:
        Menu:SETUP
Typical Completion Time:100 ms

Name:Reference Clock Mode
Tag:SETUP:Ref Clock Mode

Commands:GET, SET
Data Type:BOOLEAN
List Values: Output, Input
Availability:
        Menu:SETUP
Typical Completion Time:500 ms

Name:Measurement Averaging
Tag:SETUP:Msr Averaging
Commands:GET, SET
Data Type:BOOLEAN
List Values: Off, On
Availability:
        Menu:SETUP
Typical Completion Time:100 ms

Name:Averaging Samples
Tag:SETUP:Msr Avg Samples
Commands:GET, SET
Data Type:INTEGER
Range: 2 to 100
Availability:
        Menu:SETUP
Typical Completion Time:100 ms

Name:Pre-Amplifier Auto Off
Tag:SETUP:PreAmp Auto Off
Commands:GET, SET
Data Type:BOOLEAN
List Values: Disabled, Enabled
Availability:
        Menu:SETUP
Typical Completion Time:100 ms

Name:Reset to Defaults
Tag:SETUP:DefaultSetups
Commands:DO
Data Type:FUNCTION
Availability:
        Menu:SETUP
Typical Completion Time:100 ms

Name:Time
Tag:SETUP:NewTime
Commands:GET, SET

Data Type:STRING
Format:(HH:MM)
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, :
Availability:
  Menu:SETUP
Typical Completion Time:100 ms

Name:Date
Tag:SETUP:NewDate
Commands:GET, SET
Data Type:STRING
Format:(MM.DD.YYYY)
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, .
Availability:
  Menu:SETUP
Typical Completion Time:100 ms

Name:Apply Date/Time Changes
Tag:SETUP:ApplyDateTime
Commands:DO
Data Type:FUNCTION
Availability:
  Menu:SETUP
Typical Completion Time:100 ms

Name:Pre/De-emphasis
Tag:SETUP:Emphasis
Commands:GET, SET
Data Type:BOOLEAN
List Values: Off, On
Availability:
  Menu:SETUP
Typical Completion Time:100 ms

Name:Meter In Filter
Tag:SETUP:Meter In Filter
Commands:GET, SET
Data Type:LIST
List Values: None, C-Msg, CCITT, De-emphasis
Availability:
  Menu:SETUP
Typical Completion Time:100 ms

Name:Internal Audio Weighting
Tag:SETUP:Internal Audio Weight

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Commands:GET, SET
Data Type:LIST
List Values: None, C-Msg, CCITT
Availability:
     Menu:SETUP
Typical Completion Time:100 ms

Name:RF Level Offset
Tag:SETUP:RF Level Offset
Commands:GET, SET
Data Type:BOOLEAN
List Values: Off, On
Availability:
     Menu:SETUP
Typical Completion Time:100 ms

Name:RF In/Out Offset (dB)
Tag:SETUP:RF In/Out Offset
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 99
Availability:
     Menu:SETUP
Typical Completion Time:500 ms

Name:RF Gen Out Offset (dB)
Tag:SETUP:RF Gen Out Offset
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 99
Availability:
     Menu:SETUP
Typical Completion Time:500 ms

Name:Antenna Offset (dB)
Tag:SETUP:Antenna Offset
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 99
Availability:
     Menu:SETUP
Typical Completion Time:500 ms

Name:Save Configuration As
Tag:PRESETS:New

Commands:GET, SET
Data Type:STRING
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, , ., _, (,)
Availability:
     Menu:PRESETS
Typical Completion Time:2000 ms

Name:Load Factory Configuration
Tag:PRESETS:Load Defaults
Commands:DO
Data Type:FUNCTION
Availability:
     Menu:PRESETS
Typical Completion Time:10000 ms

Name:RF Level Offset
Tag:AUTOTUNE:RF Level Offset
Commands:GET, SET
Data Type:BOOLEAN
List Values: Off, On
Availability:
     Menu:AUTOTUNE
Typical Completion Time:100 ms

Name:RF In/Out Offset (dB)
Tag:AUTOTUNE:RF In/Out Offset
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 99
Availability:
     Menu:AUTOTUNE
Typical Completion Time:500 ms

Name:DMR Library Version
Tag:DMR:Version
Commands:GET
Data Type:STRING
Availability:
     Menu:DMR
Typical Completion Time:0 ms

Name:Brand
Tag:DMR:Brand
Commands:GET, SET

Data Type:LIST
List Values: MOTOTRBO™, Other
Availability:
 Menu:DMR
Typical Completion Time:100 ms

Name:Mon Sync Pattern
Tag:DMR:SYNC Pattern
Commands:GET, SET
Data Type:LIST
List Values: BS Sourced Voice, BS Sourced Data, MS Sourced Voice
Availability:
 Operating Mode:Monitor, Duplex
 Menu:DMR
Typical Completion Time:100 ms

Name:
Tag:DMR:SYNC Count
Commands:GET
Data Type:INTEGER
Availability:
 Operating Mode:Monitor, Duplex
 Menu:DMR
Typical Completion Time:0 ms

Name:
Tag:DMR:Source ID
Commands:GET
Data Type:INTEGER
Availability:
 Operating Mode:Monitor, Duplex
 Menu:DMR
Typical Completion Time:0 ms

Name:Color Code
Tag:DMR:Monitor CC
Commands:GET
Data Type:STRING
Availability:
 Operating Mode:Monitor, Duplex
 Menu:DMR
Typical Completion Time:0 ms

Name:Copy CC to Generator
Tag:DMR:Copy CC to Generator

Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DMR
Typical Completion Time:100 ms

Name:Color Code
Tag:DMR:Color Code
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 15
Availability:
      Operating Mode:Generate, Duplex
      Menu:DMR
Typical Completion Time:100 ms

Name:Burst
Tag:DMR:Burst
Commands:GET, SET
Data Type:LIST
List Values: A, B, C, D, E, F
Availability:
      Operating Mode:Monitor, Duplex
      Menu:DMR
Typical Completion Time:100 ms

Name:BER Test
Tag:DMR:BER Test
Commands:GET, SET
Data Type:LIST
List Values: Stop, Start
Availability:
      Operating Mode:Monitor
      Menu:DMR
Typical Completion Time:500 ms

Name:Modulation Mode
Tag:DMR:Gen Mod Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous
Availability:
      Operating Mode:Generate, Duplex
      Menu:DMR

Typical Completion Time:500 ms

Name:Test Pattern
Tag:DMR:Test Pattern
Commands:GET, SET
Data Type:LIST
List Values: 1031 Hz Tone, Calibration (O.153 1%), O.153, Silence, BS Idle
Availability:
        Operating Mode:Generate, Duplex
        Menu:DMR
Typical Completion Time:100 ms

Name:
Tag:DMR:Symbol Deviation
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
        Menu:DMR
Typical Completion Time:0 ms

Name:
Tag:DMR:FSK Error
Commands:GET
Data Type:FLOAT
Range: 0 to 100
Availability:
        Operating Mode:Monitor, Duplex
        Menu:DMR
Typical Completion Time:0 ms

Name:
Tag:DMR:Magnitude Error
Commands:GET
Data Type:FLOAT
Range: 0 to 100
Availability:
        Operating Mode:Monitor, Duplex
        Menu:DMR
Typical Completion Time:0 ms

Name:
Tag:DMR:BER Result
Commands:GET
Data Type:FLOAT

Range: 0 to 100
Availability:
        Operating Mode:Monitor
        Menu:DMR
Typical Completion Time:0 ms

Name:
Tag:P25:BER Result
Commands:GET
Data Type:FLOAT
Range: 0 to 100
Availability:
        Menu:P25
Typical Completion Time:0 ms

Name:
Tag:P25:Symbol Deviation
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
        Menu:P25
Typical Completion Time:0 ms

Name:
Tag:P25:Symbol Rate Error
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
        Menu:P25
Typical Completion Time:0 ms

Name:
Tag:P25:EVM
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
        Menu:P25
Typical Completion Time:0 ms

Name:
Tag:P25:Modulation Fidelity
Commands:GET

Data Type:FLOAT
Availability:
      Operating Mode:Monitor, Duplex
      Menu:P25
Typical Completion Time:0 ms

Name:Test Pattern
Tag:P25:Test Pattern
Commands:GET, SET
Data Type:LIST
List Values: 1011 Hz Tone, Calibration (Tone 5%), Standard Tx (O.153/V.52), Silence, Symbol Rate [Operating Mode=Generate], Low Deviation [Operating Mode=Generate], C4FM Mod Fidelity [Operating Mode=Generate]
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:P25
Typical Completion Time:100 ms

Name:Generate Modulation Type
Tag:P25:Modulation Type
Commands:GET, SET
Data Type:LIST
List Values: FM [Test Mode=Standard], AM [Test Mode=Standard], PM [Reserved], 4FSK [Test Mode=DMR or Test Mode=DPMR or Test Mode=NXDN], C4FM [Test Mode=PROJECT 25 or Test Mode=P25 Trunk], LSM [Test Mode=PROJECT 25 or Test Mode=P25 Trunk], WCQPSK [Test Mode=PROJECT 25 or Test Mode=P25 Trunk], pi/4 DQPSK [Test Mode=TETRA], HCPM [Test Mode=P25 II], HDQPSK [Test Mode=P25 II]
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25
Typical Completion Time:100 ms

Name:Modulation Mode
Tag:P25:Gen Mod Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous, Burst
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25
Typical Completion Time:500 ms

Name:NAC (Hex)
Tag:P25:NAC
Commands:GET, SET

Data Type:STRING
Format:0x000
Availability:
        Operating Mode:Generate, Duplex
        Menu:P25
Typical Completion Time:100 ms

Name:Monitor Modulation Type
Tag:P25:Mon Mod Type
Commands:GET, SET
Data Type:LIST
List Values: [Reserved], [Reserved], [Reserved], [Reserved], C4FM, LSM, WCQPSK, [Reserved], [Reserved], [Reserved]
Availability:
        Operating Mode:Monitor, Duplex
        Menu:P25
Typical Completion Time:100 ms

Name:Monitor NAC
Tag:P25:Monitor NAC
Commands:
Data Type:STRING
Format:0x000
Availability:
        Operating Mode:Monitor, Duplex
        Menu:P25
Typical Completion Time:100 ms

Name:Reset Symbol Rate Error
Tag:P25:Reset SRE
Commands:DO
Data Type:FUNCTION
Availability:
        Operating Mode:Monitor, Duplex
        Menu:P25
Typical Completion Time:100 ms

Name:BER Test
Tag:P25:BER Test
Commands:GET, SET
Data Type:LIST
List Values: Stop, Start
Availability:
        Operating Mode:Monitor, Duplex
        Menu:P25

Typical Completion Time:500 ms

Name:Eye Diagram Data
Tag:P25:Eye Data
Commands:GET
Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
      Menu:P25
Typical Completion Time:100 ms

Name:Version
Tag:P25:Version
Commands:GET
Data Type:STRING
Availability:
      Menu:P25
Typical Completion Time:0 ms

Name:Voice Frame Encoder
Tag:P25:P25_VFENCODE Table
Commands:GO
Data Type:SUBMENU
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25
Typical Completion Time:2000 ms

Name:Voice Frame Data
Tag:P25:Voice Frames
Commands:GET
Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
      Menu:P25
Typical Completion Time:100 ms

Name:Copy NAC to Generator
Tag:P25:Copy NAC to Generator
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor, Duplex
      Menu:P25
Typical Completion Time:100 ms

Name:NAC (Hex)
Tag:P25_VFENCODE:NAC
Commands:GET, SET
Data Type:STRING
Format:0x000
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_VFENCODE
Typical Completion Time:100 ms

Name:Key ID (Hex)
Tag:P25_VFENCODE:KID
Commands:GET, SET
Data Type:STRING
Format:0x0000
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_VFENCODE
Typical Completion Time:100 ms

Name:Algorithm ID (Hex)
Tag:P25_VFENCODE:ALGID
Commands:GET, SET
Data Type:STRING
Format:0x00
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_VFENCODE
Typical Completion Time:100 ms

Name:Status Symbols
Tag:P25_VFENCODE:SS
Commands:GET, SET
Data Type:LIST
List Values: 0 - Unknown Talkaround, 1 - Busy, 2 - Unknown In/Out, 3 - Idle
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_VFENCODE
Typical Completion Time:100 ms

Name:Low Speed Data (Hex)
Tag:P25_VFENCODE:LSD
Commands:GET, SET
Data Type:STRING

Format:0x00000000
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_VFENCODE
Typical Completion Time:100 ms

Name:Talk Group ID (Hex)
Tag:P25_VFENCODE:Group Address
Commands:GET, SET
Data Type:STRING
Format:0x0000
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_VFENCODE
Typical Completion Time:100 ms

Name:MFID (Hex)
Tag:P25_VFENCODE:MFID
Commands:GET, SET
Data Type:STRING
Format:0x00
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_VFENCODE
Typical Completion Time:100 ms

Name:Raw (Hex)
Tag:P25_VFENCODE:Raw
Commands:GET, SET
Data Type:STRING
Format:0x000000000000000000
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_VFENCODE:Subzone=Raw
Typical Completion Time:100 ms

Name:Link Control Opcode
Tag:P25_VFENCODE:Subzone
Commands:GET, SET
Data Type:LIST
List Values: Raw, 0 - LC_GRP_V_CH_USR, 3 - LC_U2U_V_CH_USR
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_VFENCODE
Typical Completion Time:100 ms

Name:SF - MFID Format
Tag:P25_VFENCODE:SF
Commands:GET, SET
Data Type:LIST
List Values: 0 - Explicit Format, 1 - Standard MFID
Availability:
 Operating Mode:Generate, Duplex
 Menu:P25_VFENCODE:Subzone=0 - LC_GRP_V_CH_USR, 3 -
LC_U2U_V_CH_USR
Typical Completion Time:100 ms

Name:Service Options (Hex)
Tag:P25_VFENCODE:Service Options
Commands:GET, SET
Data Type:STRING
Format:0x00
Availability:
 Operating Mode:Generate, Duplex
 Menu:P25_VFENCODE:Subzone=0 - LC_GRP_V_CH_USR, 3 -
LC_U2U_V_CH_USR
Typical Completion Time:100 ms

Name:S - Explicit Source ID
Tag:P25_VFENCODE:S
Commands:GET, SET
Data Type:LIST
List Values: 0 - Not Required, 1 - Required
Availability:
 Operating Mode:Generate, Duplex
 Menu:P25_VFENCODE:Subzone=0 - LC_GRP_V_CH_USR
Typical Completion Time:100 ms

Name:Target Address (Hex)
Tag:P25_VFENCODE:Target Address
Commands:GET, SET
Data Type:STRING
Format:0x000000
Availability:
 Operating Mode:Generate, Duplex
 Menu:P25_VFENCODE:Subzone=3 - LC_U2U_V_CH_USR
Typical Completion Time:100 ms

Name:Source Address (Hex)
Tag:P25_VFENCODE:Source Address

Commands:GET, SET
Data Type:STRING
Format:0x000000
Availability:
    Operating Mode:Generate, Duplex
    Menu:P25_VFENCODE:Subzone=0 - LC_GRP_V_CH_USR, 3 -
LC_U2U_V_CH_USR
Typical Completion Time:100 ms

Name:Reset to Defaults
Tag:P25_VFENCODE:Reset
Commands:DO
Data Type:FUNCTION
Availability:
    Operating Mode:Generate, Duplex
    Menu:P25_VFENCODE
Typical Completion Time:200 ms

Name:Subzone
Tag:P25_TRUNK:Subzone
Commands:GET, SET
Data Type:LIST
List Values: Alert/Dispatch, BER
Availability:
    Operating Mode:Duplex
    Menu:P25_TRUNK
Typical Completion Time:100 ms

Name:Generate Modulation Type
Tag:P25_TRUNK:Modulation Type
Commands:GET, SET
Data Type:LIST
List Values: FM [Test Mode=Standard], AM [Test Mode=Standard], PM [Reserved], 4FSK
[Test Mode=DMR or Test Mode=DPMR or Test Mode=NXDN], C4FM [Test Mode=PROJECT
25 or Test Mode=P25 Trunk], LSM [Test Mode=PROJECT 25 or Test Mode=P25 Trunk],
WCQPSK [Test Mode=PROJECT 25 or Test Mode=P25 Trunk], pi/4 DQPSK [Test
Mode=TETRA], HCPM [Test Mode=P25 II], HDQPSK [Test Mode=P25 II]
Availability:
    Operating Mode:Duplex
    Menu:P25_TRUNK
Typical Completion Time:100 ms

Name:Modulation Mode
Tag:P25_TRUNK:Gen Mod Mode
Commands:GET, SET

Data Type:LIST
List Values: Off, Continuous
Availability:
      Operating Mode:Duplex
      Menu:P25_TRUNK:Subzone=BER
Typical Completion Time:500 ms

Name:Voice Call
Tag:P25_TRUNK:Voice Call
Commands:GET, SET
Data Type:LIST
List Values: Stop, Start
Availability:
      Operating Mode:Duplex
      Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Send Call Alert
Tag:P25_TRUNK:Call Alert
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Duplex
      Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:WACN ID (Hex)
Tag:P25_TRUNK:WACN ID
Commands:GET, SET
Data Type:STRING
Format:0x00000
Availability:
      Operating Mode:Duplex
      Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:SYSTEM ID (Hex)
Tag:P25_TRUNK:SYSTEM ID
Commands:GET, SET
Data Type:STRING
Format:0x000
Availability:
      Operating Mode:Duplex
      Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:WUID (Hex)
Tag:P25_TRUNK:WUID
Commands:GET, SET
Data Type:STRING
Format:0x000000
Availability:
        Operating Mode:Duplex
        Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:RFSS ID (Hex)
Tag:P25_TRUNK:RFSS ID
Commands:GET, SET
Data Type:STRING
Format:0x00
Availability:
        Operating Mode:Duplex
        Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:WGID (Hex)
Tag:P25_TRUNK:WGID
Commands:GET, SET
Data Type:STRING
Format:0x0000
Availability:
        Operating Mode:Duplex
        Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:SITE ID (Hex)
Tag:P25_TRUNK:SITE ID
Commands:GET, SET
Data Type:STRING
Format:0x00
Availability:
        Operating Mode:Duplex
        Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Bandplan Table
Tag:P25_TRUNK:BANDPLAN Table
Commands:GO
Data Type:SUBMENU

Availability:
      Operating Mode:Duplex
      Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:2000 ms

Name:Identifier Update
Tag:P25_TRUNK:Iden Up
Commands:GET, SET
Data Type:BOOLEAN
List Values: OFF, ON
Availability:
      Operating Mode:Duplex
      Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Control Chnl TX Frequency
Tag:P25_TRUNK:CCTx
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
      Operating Mode:Duplex
      Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:CCTx Channel
Tag:P25_TRUNK:CCTx Chnl
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 4095
Availability:
      Operating Mode:Duplex
      Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Voice Chnl TX Frequency
Tag:P25_TRUNK:VCTx
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
      Operating Mode:Duplex
      Menu:P25_TRUNK:Subzone=Alert/Dispatch

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Typical Completion Time:100 ms

Name:VCTx Channel
Tag:P25_TRUNK:VCTx Chnl
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 4095
Availability:
        Operating Mode:Duplex
        Menu:P25_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Reset Symbol Rate Error
Tag:P25_TRUNK:Reset SRE
Commands:DO
Data Type:FUNCTION
Availability:
        Operating Mode:Duplex
        Menu:P25_TRUNK
Typical Completion Time:100 ms

Name:BER Test
Tag:P25_TRUNK:BER Test
Commands:GET, SET
Data Type:LIST
List Values: Stop, Start
Availability:
        Operating Mode:Duplex
        Menu:P25_TRUNK
Typical Completion Time:500 ms

Name:Test Pattern
Tag:P25_TRUNK:Test Pattern
Commands:GET, SET
Data Type:LIST
List Values: 1011 Hz Tone, Calibration (Tone 5%), Standard Tx (O.153/V.52), Silence, Symbol
Rate [Operating Mode=Generate], Low Deviation [Operating Mode=Generate], C4FM Mod
Fidelity [Operating Mode=Generate]
Availability:
        Operating Mode:Duplex
        Menu:P25_TRUNK:Subzone=BER
Typical Completion Time:100 ms

Name:Band
Tag:BANDPLAN:Band

Commands:GET, SET
Data Type:LIST
List Values: 800 MHz, 700 MHz, UHF/VHF
Availability:
     Operating Mode:Duplex
     Menu:BANDPLAN
Typical Completion Time:100 ms

Name:Set Band Plan to Defaults
Tag:BANDPLAN:Band Defaults
Commands:DO
Data Type:FUNCTION
Availability:
     Operating Mode:Duplex
     Menu:BANDPLAN
Typical Completion Time:200 ms

Name:Bandwidth
Tag:BANDPLAN:Bandwidth
Commands:GET, SET
Data Type:LIST
List Values: 6.25 kHz, 12.5 kHz
Availability:
     Operating Mode:Duplex
     Menu:BANDPLAN
Typical Completion Time:100 ms

Name:Base Frequency
Tag:BANDPLAN:Base Frequency
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
     Operating Mode:Duplex
     Menu:BANDPLAN
Typical Completion Time:100 ms

Name:Channel Spacing (kHz)
Tag:BANDPLAN:Chnl Spacing
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 512
Availability:
     Operating Mode:Duplex

       Menu:BANDPLAN
Typical Completion Time:100 ms

Name:Transmit Offset (MHz)
Tag:BANDPLAN:TX Offset
Commands:GET, SET
Data Type:FLOAT
Availability:
       Operating Mode:Duplex
       Menu:BANDPLAN
Typical Completion Time:100 ms

Name:Channel Identifier
Tag:BANDPLAN:Channel Id
Commands:GET, SET
Data Type:INTEGER
Range: 1 to 16
Availability:
       Operating Mode:Duplex
       Menu:BANDPLAN
Typical Completion Time:100 ms

Name:
Tag:NXDN:BER Result
Commands:GET
Data Type:FLOAT
Range: 0 to 100
Availability:
       Operating Mode:Monitor
       Menu:NXDN
Typical Completion Time:0 ms

Name:
Tag:NXDN:Symbol Deviation
Commands:GET
Data Type:FLOAT
Availability:
       Operating Mode:Monitor
       Menu:NXDN
Typical Completion Time:0 ms

Name:
Tag:NXDN:Modulation Fidelity
Commands:GET
Data Type:FLOAT

Availability:
  Operating Mode:Monitor
  Menu:NXDN
Typical Completion Time:0 ms

Name:Bit Rate (bps)
Tag:NXDN:Bit Rate
Commands:GET, SET
Data Type:BOOLEAN
List Values: 4800, 9600
Availability:
  Operating Mode:Monitor, Generate
  Menu:NXDN
Typical Completion Time:100 ms

Name:
Tag:NXDN:Monitor RAN
Commands:GET
Data Type:STRING
Availability:
  Menu:NXDN
Typical Completion Time:0 ms

Name:Copy RAN to Generator
Tag:NXDN:Copy RAN to Generator
Commands:DO
Data Type:FUNCTION
Availability:
  Operating Mode:Monitor
  Menu:NXDN
Typical Completion Time:100 ms

Name:RAN
Tag:NXDN:Generate RAN
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 63
Availability:
  Operating Mode:Generate
  Menu:NXDN
Typical Completion Time:100 ms

Name:Test Pattern
Tag:NXDN:Test Pattern
Commands:GET, SET

Data Type:LIST
List Values: 1031 Hz Tone [NXDN:Bit Rate=4800], 1031 Hz Tone [NXDN:Bit Rate=9600],
1011 Hz Tone [NXDN:Bit Rate=9600], Calibration (O.153 2%), 511 (O.153), 511 (O.153)
Framed [Operating Mode=Generate], Interference [Operating Mode=Generate], Max Freq
Deviation [Operating Mode=Generate], 1/3 Freq Deviation [Operating Mode=Generate]
Availability:
    Operating Mode:Monitor, Generate
    Menu:NXDN
Typical Completion Time:100 ms

Name:Modulation Mode
Tag:NXDN:Gen Mod Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous, Burst
Availability:
    Operating Mode:Generate
    Menu:NXDN
Typical Completion Time:500 ms

Name:BER Test
Tag:NXDN:BER Test
Commands:GET, SET
Data Type:LIST
List Values: Stop, Start
Availability:
    Operating Mode:Monitor
    Menu:NXDN
Typical Completion Time:500 ms

Name:Eye Diagram Data
Tag:NXDN:Eye Data
Commands:GET
Data Type:ARRAY
Availability:
    Operating Mode:Monitor
    Menu:NXDN
Typical Completion Time:100 ms

Name:Version
Tag:NXDN:Version
Commands:GET
Data Type:STRING
Availability:
    Menu:NXDN

Typical Completion Time:0 ms

Name:Modulation Mode
Tag:NXDN_TRUNK:Gen Mod Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous
Availability:
      Operating Mode:Duplex
      Menu:NXDN_TRUNK:Subzone=BER
Typical Completion Time:500 ms

Name:Voice Call
Tag:NXDN_TRUNK:Voice Call
Commands:GET, SET
Data Type:LIST
List Values: Stop, Start
Availability:
      Operating Mode:Duplex
      Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Test Pattern
Tag:NXDN_TRUNK:Test Pattern
Commands:GET, SET
Data Type:LIST
List Values: 1031 Hz Tone [NXDN_TRUNK:Bit Rate=4800], 1031 Hz Tone
[NXDN_TRUNK:Bit Rate=9600], 1011 Hz Tone [NXDN_TRUNK:Bit Rate=9600], Calibration
(O.153 2%), 511 (O.153)
Availability:
      Operating Mode:Duplex
      Menu:NXDN_TRUNK:Subzone=BER
Typical Completion Time:100 ms

Name:Subzone
Tag:NXDN_TRUNK:Subzone
Commands:GET, SET
Data Type:LIST
List Values: Alert/Dispatch, BER
Availability:
      Operating Mode:Duplex
      Menu:NXDN_TRUNK
Typical Completion Time:100 ms

Name:BER Test

Tag:NXDN_TRUNK:BER Test
Commands:GET, SET
Data Type:LIST
List Values: Stop, Start
Availability:
      Operating Mode:Duplex
      Menu:NXDN_TRUNK
Typical Completion Time:500 ms

Name:Send Status Inquiry
Tag:NXDN_TRUNK:Status Inquiry
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Duplex
      Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:CCTx Channel
Tag:NXDN_TRUNK:CCTx Chnl
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 1023
Availability:
      Operating Mode:Duplex
      Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:VCTx Channel
Tag:NXDN_TRUNK:VCTx Chnl
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 1023
Availability:
      Operating Mode:Duplex
      Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Control Chnl TX Frequency
Tag:NXDN_TRUNK:CCTx
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:

   Operating Mode:Duplex
   Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Voice Chnl TX Frequency
Tag:NXDN_TRUNK:VCTx
Commands:GET, SET
Data Type:FLOAT
Range: 250000 Hz to 1000000000 Hz
Units: Hz, kHz, MHz, GHz
Availability:
   Operating Mode:Duplex
   Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Transmit Offset (MHz)
Tag:NXDN_TRUNK:Tx Off
Commands:GET, SET
Data Type:FLOAT
Range: 0 to 100
Availability:
   Operating Mode:Duplex
   Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:System Code
Tag:NXDN_TRUNK:SYSTEM ID
Commands:GET, SET
Data Type:STRING
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Availability:
   Operating Mode:Duplex
   Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Site Code
Tag:NXDN_TRUNK:SITE ID
Commands:GET, SET
Data Type:STRING
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Availability:
   Operating Mode:Duplex
   Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Unit ID
Tag:NXDN_TRUNK:WUID
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 65535
Availability:
        Operating Mode:Duplex
        Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Group ID
Tag:NXDN_TRUNK:WGID
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 65535
Availability:
        Operating Mode:Duplex
        Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Category
Tag:NXDN_TRUNK:Category
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 2
Availability:
        Operating Mode:Duplex
        Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Bit Rate (bps)
Tag:NXDN_TRUNK:Bit Rate
Commands:GET, SET
Data Type:LIST
List Values: 4800 [NXDN_TRUNK:Vocoder=Half-rate], 9600
Availability:
        Operating Mode:Duplex
        Menu:NXDN_TRUNK:Subzone=Alert/Dispatch, BER
Typical Completion Time:100 ms

Name:Voice Playback
Tag:NXDN_TRUNK:Voice Playback
Commands:GET, SET
Data Type:BOOLEAN
List Values: OFF, ON

Availability:
      Operating Mode:Duplex
      Menu:NXDN_TRUNK:Subzone=Alert/Dispatch
Typical Completion Time:100 ms

Name:Version
Tag:TETRA:Version
Commands:GET
Data Type:STRING
Availability:
      Menu:TETRA
Typical Completion Time:0 ms

Name:Constellation Data
Tag:TETRA:Constellation Data
Commands:GET
Data Type:ARRAY
Availability:
      Menu:TETRA
Typical Completion Time:100 ms

Name:
Tag:TETRA:Modulation Spectrum
Commands:GET
Data Type:ARRAY
Availability:
      Menu:TETRA
Typical Completion Time:100 ms

Name:Reset Averaging
Tag:TETRA:Reset RX
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor
      Menu:TETRA
Typical Completion Time:100 ms

Name:Measurement Averaging
Tag:TETRA:Measurement Averaging
Commands:GET, SET
Data Type:INTEGER
Range: 1 to 250
Availability:
      Operating Mode:Monitor

Menu:TETRA
Typical Completion Time:100 ms

Name:Unwanted Power in Slot 3
Tag:TETRA:Unwanted Active
Commands:GET, SET
Data Type:BOOLEAN
List Values: No, Yes
Availability:
        Operating Mode:Monitor
        Menu:TETRA
Typical Completion Time:100 ms

Name:
Tag:TETRA:Symbol Deviation
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor
        Menu:TETRA
Typical Completion Time:0 ms

Name:
Tag:TETRA:EVM RMS
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor
        Menu:TETRA
Typical Completion Time:0 ms

Name:
Tag:TETRA:EVM Peak
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor
        Menu:TETRA
Typical Completion Time:0 ms

Name:
Tag:TETRA:Unwanted Power
Commands:GET
Data Type:FLOAT
Availability:

       Operating Mode:Monitor
       Menu:TETRA
Typical Completion Time:0 ms

Name:
Tag:TETRA:Residual Power
Commands:GET
Data Type:FLOAT
Availability:
       Operating Mode:Monitor
       Menu:TETRA
Typical Completion Time:0 ms

Name:Test Pattern
Tag:TETRA:Test Pattern
Commands:GET, SET
Data Type:LIST
List Values: 1000 Hz Tone, Silence
Availability:
       Operating Mode:Generate
       Menu:TETRA
Typical Completion Time:100 ms

Name:Modulation Mode
Tag:TETRA:Gen Mod Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous
Availability:
       Operating Mode:Generate
       Menu:TETRA
Typical Completion Time:500 ms

Name:Synth Mode
Tag:POCSAG:Synth Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous, Burst [AUDIO:Format=A/B Sequence or AUDIO:Format=5/6 Tone or AUDIO:Format=POCSAG or AUDIO:Format=General Sequence], Disconnect Tone [AUDIO:Format=DPL or AUDIO:Format=DPL Invert]
Availability:
       Operating Mode:Monitor, Generate, Duplex
       Menu:POCSAG
Typical Completion Time:500 ms

Name:Capcode
Tag:POCSAG:Capcode
Commands:GET, SET
Data Type:STRING
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:POCSAG
Typical Completion Time:100 ms

Name:Function Bits
Tag:POCSAG:Function Bits
Commands:GET, SET
Data Type:LIST
List Values: 00, 01, 10, 11
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:POCSAG
Typical Completion Time:100 ms

Name:POCSAG Message
Tag:POCSAG:POCSAG Message
Commands:GET, SET
Data Type:LIST
List Values: Tone Only, NumericNum, NumericSet, AlphaNumUC, AlphaNumLC,
AlphaNumSP, NumericCust, AlphaNumCust
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:POCSAG
Typical Completion Time:100 ms

Name:Edit Message
Tag:POCSAG:NumericCust Message
Commands:GET, SET
Data Type:STRING
Format:(POCSAGCustom)
char set:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, U, , -,], [
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:POCSAG
Typical Completion Time:100 ms

Name:Edit Message
Tag:POCSAG:AlphaNumCust Message
Commands:GET, SET

Data Type:STRING
Format:(POCSAGCustom)
char set:!, ", #, $, %, ', (,), *, +, -, ., /, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, , :, ;, <, =, >, ?, @, A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z,], \, [, ^, _, `, a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z, {,
, }, ~
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:POCSAG
Typical Completion Time:100 ms

Name:Message Length
Tag:POCSAG:Message Length
Commands:GET, SET
Data Type:INTEGER
Range: 0 to 60
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:POCSAG
Typical Completion Time:100 ms

Name:Data Rate
Tag:POCSAG:Data Rate
Commands:GET, SET
Data Type:INTEGER
Range: 400 to 4800
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:POCSAG
Typical Completion Time:100 ms

Name:Polarity
Tag:POCSAG:Polarity
Commands:GET, SET
Data Type:LIST
List Values: Normal, Inverted
Availability:
    Operating Mode:Monitor, Generate, Duplex
    Menu:POCSAG
Typical Completion Time:100 ms

Name:Error Bit
Tag:POCSAG:Error Bit
Commands:GET, SET
Data Type:INTEGER

Range: 0 to 2200
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:POCSAG
Typical Completion Time:100 ms

Name:Record Results
Tag:AUTOSCRIPT:Reporting
Commands:GET, SET
Data Type:BOOLEAN
List Values: Off, On
Availability:
      Menu:AUTOSCRIPT
Typical Completion Time:500 ms

Name:
Tag:DPMR:BER Result
Commands:GET
Data Type:FLOAT
Range: 0 to 100
Availability:
      Operating Mode:Monitor
      Menu:DPMR
Typical Completion Time:0 ms

Name:
Tag:DPMR:Symbol Deviation
Commands:GET
Data Type:FLOAT
Availability:
      Operating Mode:Monitor
      Menu:DPMR
Typical Completion Time:0 ms

Name:
Tag:DPMR:Modulation Fidelity
Commands:GET
Data Type:FLOAT
Availability:
      Operating Mode:Monitor
      Menu:DPMR
Typical Completion Time:0 ms

Name:Test Pattern
Tag:DPMR:Test Pattern

Commands:GET, SET
Data Type:LIST
List Values: Calibration (O.153 2%), 511 (O.153), Interference [Operating Mode=Generate],
Max Freq Deviation [Operating Mode=Generate], 1/3 Freq Deviation [Operating
Mode=Generate]
Availability:
        Operating Mode:Monitor, Generate
        Menu:DPMR
Typical Completion Time:100 ms

Name:Modulation Mode
Tag:DPMR:Gen Mod Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous, Burst
Availability:
        Operating Mode:Generate
        Menu:DPMR
Typical Completion Time:500 ms

Name:BER Test
Tag:DPMR:BER Test
Commands:GET, SET
Data Type:LIST
List Values: Stop, Start
Availability:
        Operating Mode:Monitor
        Menu:DPMR
Typical Completion Time:500 ms

Name:Eye Diagram Data
Tag:DPMR:Eye Data
Commands:GET
Data Type:ARRAY
Availability:
        Operating Mode:Monitor
        Menu:DPMR
Typical Completion Time:100 ms

Name:Version
Tag:DPMR:Version
Commands:GET
Data Type:STRING
Availability:
        Menu:DPMR

Typical Completion Time:0 ms

Name:
Tag:P25_II:BER Result
Commands:GET
Data Type:FLOAT
Range: 0 to 100
Availability:
        Menu:P25_II
Typical Completion Time:0 ms

Name:
Tag:P25_II:Symbol Deviation
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
        Menu:P25_II
Typical Completion Time:0 ms

Name:
Tag:P25_II:Symbol Rate Error
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
        Menu:P25_II
Typical Completion Time:0 ms

Name:
Tag:P25_II:EVM
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
        Menu:P25_II
Typical Completion Time:0 ms

Name:
Tag:P25_II:Modulation Fidelity
Commands:GET
Data Type:FLOAT
Availability:
        Operating Mode:Monitor, Duplex
        Menu:P25_II

Typical Completion Time:0 ms

Name:Test Pattern
Tag:P25_II:Test Pattern
Commands:GET, SET
Data Type:LIST
List Values: 1011 Hz Tone, Calibration (Tone 5%), Standard Tx (O.153/V.52), Silence, Symbol Rate [Operating Mode=Generate], Low Deviation [Operating Mode=Generate], C4FM Mod Fidelity [Operating Mode=Generate]
Availability:
      Operating Mode:Monitor, Generate, Duplex
      Menu:P25_II
Typical Completion Time:100 ms

Name:Generate Modulation Type
Tag:P25_II:Modulation Type
Commands:GET, SET
Data Type:LIST
List Values: FM [Test Mode=Standard], AM [Test Mode=Standard], PM [Reserved], 4FSK [Test Mode=DMR or Test Mode=DPMR or Test Mode=NXDN], C4FM [Test Mode=PROJECT 25 or Test Mode=P25 Trunk], LSM [Test Mode=PROJECT 25 or Test Mode=P25 Trunk], WCQPSK [Test Mode=PROJECT 25 or Test Mode=P25 Trunk], pi/4 DQPSK [Test Mode=TETRA], HCPM [Test Mode=P25 II], HDQPSK [Test Mode=P25 II]
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_II
Typical Completion Time:100 ms

Name:Modulation Mode
Tag:P25_II:Gen Mod Mode
Commands:GET, SET
Data Type:LIST
List Values: Off, Continuous, Burst
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_II
Typical Completion Time:500 ms

Name:NAC (Hex)
Tag:P25_II:NAC
Commands:GET, SET
Data Type:STRING
Format:0x000
Availability:
      Operating Mode:Generate, Duplex

       Menu:P25_II
Typical Completion Time:100 ms

Name:Monitor Modulation Type
Tag:P25_II:Mon Mod Type
Commands:GET, SET
Data Type:LIST
List Values: [Reserved], [Reserved], [Reserved], [Reserved], HCPM, HDQPSK, [Reserved], [Reserved], [Reserved], [Reserved]
Availability:
       Operating Mode:Monitor, Duplex
       Menu:P25_II
Typical Completion Time:100 ms

Name:Monitor NAC
Tag:P25_II:Monitor NAC
Commands:
Data Type:STRING
Format:0x000
Availability:
       Operating Mode:Monitor, Duplex
       Menu:P25_II
Typical Completion Time:100 ms

Name:Reset Symbol Rate Error
Tag:P25_II:Reset SRE
Commands:DO
Data Type:FUNCTION
Availability:
       Operating Mode:Monitor, Duplex
       Menu:P25_II
Typical Completion Time:100 ms

Name:BER Test
Tag:P25_II:BER Test
Commands:GET, SET
Data Type:LIST
List Values: Stop, Start
Availability:
       Operating Mode:Monitor, Duplex
       Menu:P25_II
Typical Completion Time:500 ms

Name:Eye Diagram Data
Tag:P25_II:Eye Data

Commands:GET
Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
      Menu:P25_II
Typical Completion Time:100 ms

Name:Version
Tag:P25_II:Version
Commands:GET
Data Type:STRING
Availability:
      Menu:P25_II
Typical Completion Time:0 ms

Name:Voice Frame Encoder
Tag:P25_II:P25_VFENCODE Table
Commands:GO
Data Type:SUBMENU
Availability:
      Operating Mode:Generate, Duplex
      Menu:P25_II
Typical Completion Time:2000 ms

Name:Voice Frame Data
Tag:P25_II:Voice Frames
Commands:GET
Data Type:ARRAY
Availability:
      Operating Mode:Monitor, Duplex
      Menu:P25_II
Typical Completion Time:100 ms

Name:Copy NAC to Generator
Tag:P25_II:Copy NAC to Generator
Commands:DO
Data Type:FUNCTION
Availability:
      Operating Mode:Monitor, Duplex
      Menu:P25_II
Typical Completion Time:100 ms

L – Transition to Freedom	C. Cox	C. Cox	4/2/15	
K – Updates for 1.18	L. Shirey	M. Mullins	1/9/15	14439
J- Updates for 1.17	L. Shirey	M. Mullins	6/5/14	14064
H- Add duplex to DMR option	L. Shirey	C. Mboula	2/26/14	13862
G – Updates for 1.15	L. Shirey	M. Mullins	7/26/13	13446
F- Updates	L. Shirey	M. Mullins	3/27/13	13248
E – Updates	K. Barnett	M. Mullins	2/6/2013	13113
D – Fields/Commands Updated	B. Tanner	M. Mullins	9/10/12	12820
C – Textual/Format Improvements	B. Tanner	D. Bulgrien	6/11/12	11555
B – Updates	D. Cunningham	M. Mullins	4/12/12	11492
A – Original Release	B. Tanner	M. Neibert	12/12/11	10822
Rev. No/change	Revised By	Approved By	Date	ECO#