Allen & Heath Telnet Control Protocol

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1. Introduction

This protocol is for use with iDR units loaded with Version 3.50 software (i.e.V3.50) and later.

Using third party Telnet client software the following functions may be controlled:

- Channel Gains
- Channel Mutes
- Routing Matrix Cross-point Gains
- Routing Matrix Cross-point Mutes
- Preset Recalls
- Group Gains

2. Control Protocol

The control protocol supports strings of the following format:

COMMAND TYPE ARGUMENT1 ARGUMENT2 ARGUMENT3

N.B the above string must be space separated with no other delimiters present.

Two Commands are supported GET and SET.

The number of arguments required to build a full control string is dependent on both the command and the type.

2.1. Get Commands

The get command is used to retrieve a current iDR setting. The table below shows the relationship between type and argument1, argument2 and argument3.

Type	Description	Argument 1	Argument 2	Argument 3
PRESET	Retrieve current preset number	-	-	-
IPGAIN	Retrieves an input gain	Input channel number	-	-
OPGAIN	Retrieves an output gain	Output channel number	-	-
XPGAIN	Retrieves a routing matrix gain	Input channel number	Output channel number	-
IPMUTE	Retrieves an input mute state	Input channel number	-	-
OPMUTE	Retrieves an output mute state	Output channel number	-	-
XPMUTE	Retrieves a routing matrix mute state	Input channel number	Output channel number	-
IPGROUPGAIN	Retrieves an input group gain	Input group number	-	-
OPGROUPGAIN	Retrieves an output group gain	Output group number	-	-
XPGROUPGAIN	Retrieves a routing matrix group gain	Routing matrix group number	-	-

2.2. Set Commands

A set command is used to modify an iDR setting. The table below shows the relationship between type and argument1, argument2 and arguemnt3.

Type	Description	Argument 1	Argument 2	Argument 3
PRESET	Sets the current Preset	Preset number	-	-
IPGAIN	Sets an input gain	Input channel number	Input gain	-
OPGAIN	Sets an output gain	Output channel number	Output gain	-
XPGAIN	Sets a routing matrix gain	Input channel number	Output channel number	Cross point gain
IPMUTE	Sets an input mute state	Input channel number	State	-
OPMUTE	Sets an output mute state	Output channel number	State	-
XPMUTE	Sets a routing matrix mute state	Input channel number	Output channel number	State
IPGROUPGAIN	Sets an input group gain	Input group number	Input group gain	-
OPGROUPGAIN	Sets an output group gain	Output group number	Output group gain	-
XPGROUPGAIN	Sets a routing matrix group gain	Routing matrix group number	Routing matrix group gain	-

2.3. Argument Ranges

The table below lists the argument ranges:

Argument	Range
Preset number	1 → 250
Input channel number	1 → 16
Output channel number	1 → 16
Input gain	-INF (Off) -59 → +5 dB
Output gain	-INF (Off) -59 → +5 dB
Group Gain	-INF(Off) -64dB → 0 dB
Cross point gain	-INF (Off) -40 → 0 dB
Input group number	1 → 8
Output group number	1 → 8
Cross point group number	1 → 16
State	On | Off

2.4. Session Details

2.4.1. Welcome and Prompt Messages

When a successful connection has been established the following welcome message will be displayed:

"Connected to iDR".

The telnet prompt is iDR type specific:

iDR 4 prompt: "iDR4>"
iDR 8 prompt: "iDR8>"

The prompt is transmitted to the client after the successful processing of each control string. In the event of an incorrectly formatted control string, or and invalid number of arguments being sent by the client an error message will be returned followed by the prompt string.

2.4.2. Passwords

When an iDR unit password has been set the client receives a password request message after the welcome message and before the prompt as follows:

"Password:"

The user only has one attempt to enter the password successfully; otherwise the connection will be dropped by the iDR.

2.4.3. Control String cases

All control strings sent from the client are not case sensitive. The only exception to this is when the user is required to provide a password.

2.4.4. Closing a Telnet session

To terminate a session the user can enter the following string:

"Bye"

On receipt of this string the iDR will drop the connection.

3. Client Configuration

Telnet clients should be configured to use TCP port 23. Each iDR can support up to 10 simultaneous telnet client connections. The client configuration should ensure a Carriage Return (CR) is transmitted after each control string; Line feeds (LF) are ignored. Two third party client configurations are detailed below.

3.1. Windows Telnet

Windows telnet should be configured as follows:

- NTLM authentication set off
- Local Echo set on
- Preferred term type set to ANSI
- CRLF set on

3.2. PuTTY

PuTTY should be configured as follows:

- Passive telnet negation mode
- Local echo auto mode
- No terminal speed string
- No environment variables
- No terminal type string

4. Utilities

4.1. Help

The user can retrieve an overview of the control string structure by entering the following:

"Help"

To receive specific command help "GET" or "SET" can be appended to the above string for more detail.

4.2. Retrieving the unit name

To retrieve the unit name after a connection has been established, the user can enter:

"GetUnitName"

The iDR responds by returning the current unit name.