AT-HDR-CAT-2

AT-HDR-CAT-4

AT-HDR-CAT-4ED

AT-HDR-CAT-8

HDR HDBT Distribution Amps

API Command Reference

October 2026



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Version Information

This document lists the commands for controlling the AT-HDR-CAT-2, AT-HDR-CAT-4, AT-HDR-CAT-4ED, AT-HDR-CAT-8 over RS-232 and Telnet. Its version history follows the original command reference.

Version	Date	Notes
1	Dec 2022	Initial release
HR 1.0	October 2026	Converted to the Hall Research document format. No command changes.

Sales & Customer Support

Item	Details
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Website	https://www.hallresearch.com
Product Page (AT-HDR-CAT-2)	https://www.hallresearch.com/product/AT-HDR-CAT-2
Product Page (AT-HDR-CAT-4)	https://www.hallresearch.com/product/AT-HDR-CAT-4
Product Page (AT-HDR-CAT-4ED)	https://www.hallresearch.com/product/AT-HDR-CAT-4ED
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Introduction

General

This document provides an alphabetical list of the commands available for the AT-HDR-CAT-2, AT-HDR-CAT-4, AT-HDR-CAT-4ED, and AT-HDR-CAT-8 (AT-HDR-CAT-XX in the command descriptions). Commands are case-sensitive. If a command fails or is entered incorrectly, the feedback is “Command FAILED”. Commands can be sent using RS-232 or Telnet. Allow a 500 millisecond delay between commands sent to the unit. The default Telnet port is 23.

IMPORTANT: Each command is terminated with a carriage return (0x0d), and the feedback is terminated with a carriage return and line feed (0x0a).

Command Quick Reference

Select a command name to go to its full description.

Command	Description
BCPW	Sets the function of the POWER button on the front panel
Blink	Enables or disables blinking of the POWER LED indicator on the front panel
Broadcast	Enables or disables broadcast mode
CSpara	Sets the baud rate, data bits, parity bit, and stop bits for the serial port
EDIDCopy	Copies the downstream EDID to the HDMI IN port
EDIDMSet	Assigns an EDID to the HDMI IN port
EDIDSW	Sets the EDID mode
HDCPSet	Set the HDCP reporting mode of the HDMI input port
help	Displays the list of available commands
InputStatus	Event-driven API command
IPCFG	Displays the current network settings for the unit
IPDHCP	Enables or disables DHCP mode on the unit
IPLogin	Enables or disables the use of login credentials when starting a Telnet session on the unit
IPPort	Sets the Telnet listening port for the unit
IPQuit	Closes the current Telnet session
IPStatic	Sets the static IP address, subnet mask, and gateway (router) address of the unit
IPTimeout	Specifies the time interval of inactivity before the Telnet session is automatically closed
Lock	Locks all the buttons on the front panel
LockEdid	Locks the EDID button on the front panel
LRAUD	Enables / disables the L/R audio output
Mreset	Resets the unit to factory-default settings
OutputStatus	Event-driven API command
PWOFF	Executing this command will power-off the AT-HDR-CAT-XX
PWON	Executing this command will power-on the AT-HDR-CAT-XX
PWSTA	Displays the current power state of the AT-HDR-CAT-XX
RHostName	Displays the hostname of the unit
SHostName	Sets the hostname of the unit

Command	Description
System	Displays the status of the unit
TrigCEC	Sends the specified command to the display using CEC
Type	Displays the model information of the unit
Unlock	Unlocks the buttons on the front panel
Version	Displays the current firmware version of the unit
VOUT	Increases / decreases the audio output volume

Commands

BCPW

Sets the function of the POWER button on the front panel. Refer to the table below for a description of each argument. Use the sta argument to display the current setting.

Syntax

```
BCPW X
```

Parameter	Description	Range
X	Mode	local, cec, both, sta

Example

```
BCPW local
```

Feedback

```
BCPW local
```

Mode	Description
local	Pressing the POWER button will toggle the AT-HDR-CAT-XX between standby mode and normal operating mode.
cec	When a sink device (display) is connected to the AT-HDR-CAT-XX, pressing the POWER button will toggle the power state of the display using the CEC protocol. The power state of the AT-HDR-CAT-XX is unaffected. Power-on and power-off commands are sent over both the HDBaseT OUT and HDMI OUT ports.
both	Pressing the POWER button will toggle the power state of both the AT-HDR-CAT-XX and any sink devices that are connected to the AT-HDR-CAT-XX, using the CEC protocol. Power-on and power-off commands are sent over both the HDBaseT OUT and HDMI OUT ports.

Blink

Enables or disables blinking of the POWER LED indicator on the front panel. When set to on, the POWER LED indicator button will flash, alternating between blue and red, and can be used to physically identify the unit on a network. The POWER LED indicator will flash until the Blink off command is executed. on = enables blinking; off = disables blinking. Use the sta argument to display the current setting. The default setting is off.

Syntax

```
Blink X
```

Parameter	Description	Range
X	Value	on, off, sta

Example

```
Blink on
```

Feedback

```
Blink on
```

Broadcast

Enables or disables broadcast mode. By default, broadcast mode is set to ON. When set to ON, any system changes will be broadcast to the web GUI will also be affected on the control system (if connected), via TCP/IP. To separate control between the web GUI and Telnet, set this feature to OFF. Command queries such as #IPCFG and #Type will only return information to the requester. Use the sta argument to display the current setting.

Syntax

```
Broadcast X
```

Parameter	Description	Range
X	Value	on, off, sta

Example

```
Broadcast on
```

Feedback

```
Broadcast on
```

CSpara

Sets the baud rate, data bits, parity bit, and stop bits for the serial port. Use the sta argument to display the current serial port settings. Each argument must be separated by a comma; no spaces are permitted. Brackets must be used when executing this command.

Syntax

```
CSpara[W,X,Y,Z]
```

Parameter	Description	Range
W	Baud rate	2400, 4800, 9600, 19200, 38400, 57600, 115200
X	Data bits	7, 8
Y	Parity bit	None, Odd, Even
Z	Stop bits	1, 2

Example

```
CSpara[115200,8,0,1]
CSpara[sta]
```

Feedback

```
CSpara[115200,8,0,1]
CSpara [115200,8,0,1]
```

EDIDCopy

Copies the downstream EDID to the HDMI IN port. If no sink device is connected to the HDMI OUT port, then “Output 1 was no connected” will be returned.

Syntax

```
EDIDCopy
```

This command does not require any parameters.

Example

```
EDIDCopy
```

Feedback

```
EDIDCopy
```

EDIDMSet

Assigns an EDID to the HDMI IN port. A brief description of each preprogrammed EDID is listed in the table below. To display the EDID assigned to an input, use the sta argument.

Syntax

```
EDIDMSetX
```

Parameter	Description	Range
X	EDID preset	0 ... 16, sta

Example

```
EDIDMSet2
```

Feedback

```
EDIDMSet2
```

EDID	
STD	ATL 1280x800 RGB 2CH
ATL 1080P 2CH	ATL 1366x768 RGB 2CH
ATL 1080P Multi CH	ATL 1080P DVI
ATL 1080P DD	ATL 1280x800 RGB DVI
ATL 1080P 3D 2CH	ATL 3840x2160@30 2CH
ATL 1080P 3D Multi CH	ATL 3840x2160@30 Multi CH
ATL 1080P 3D DD	ATL 3840x2160@60 2CH
ATL 720P 2CH	ATL 3840x2160@60 Multi CH
ATL 720P DD	

EDIDSW

Sets the EDID mode. int = internal EDID (use the EDIDMSet command to select the EDID), learn = fetches the downstream EDID and copies it to the HDMI IN port. Use the sta argument to display the current setting.

Syntax

```
EDIDSWX
```

Parameter	Description	Range
X	Mode	int, learn, sta

Example

```
EDIDSWint
```

Feedback

```
EDIDSWint
```

HDCPSet

Set the HDCP reporting mode of the HDMI input port. Some computers will send HDCP content if an HDCP-compliant display is detected. Setting this value to off, will force the computer to ignore detection of HDCP-compliant displays. Disabling this feature will not decrypt HDCP content. on = enables HDCP detection; off = disables HDCP detection; sta = displays the current setting. No space should exist between the first argument and the command.

Syntax

```
HDCPSet X
```

Parameter	Description	Range
X	Reporting status	on, off, sta

Example

```
HDCPSet off
```

Feedback

```
HDCPSet off
```

help

Displays the list of available commands. To obtain help on a specific command, enter the help command followed by the name of the command.

Syntax

```
help X
```

Parameter	Description	Range
X	Command name (optional)	Command

Example

```
help
```

Feedback

```
Command List
------------------------
BCPW
Blink
Broadcast
...
...
```

InputStatus

Event-driven API command. Feedback indicates if a source device is present, based on both the HDMI 5V and TMDS lines. If a source is detected on the input, then a 1 will be returned. Inputs with no source connected will return a 0.

Syntax

```
InputStatus X
```

Parameter	Description	Range
X	Returned result (input)	0 ... 1

Example

```
InputStatus
```

NOTE: If a PC is connected to the HDMI input, the control system (RS-232 or Telnet) receives InputStatus 1. Disconnecting the PC returns InputStatus 0. To poll the status, send InputStatus.

Feedback

```
InputStatus 1
```

IPCFG

Displays the current network settings for the unit.

Syntax

```
IPCFG
```

This command does not require any parameters.

Example

```
IPCFG
```

Feedback

```
IP Addr: 10.20.20.36
Netmask: 255.255.255.0
Gateway: 10.20.20.1
Telnet Port: 23
Http Port: 80
```

IPDHCP

Enables or disables DHCP mode on the unit. on = enables DHCP mode; off = disables DHCP mode; sta = displays the current setting. If this feature is disabled, then a static IP address must be specified for the unit. Refer to the IPStatic command for more information.

Syntax

```
IPDHCP X
```

Parameter	Description	Range
X	Value	on, off, sta

Example

```
IPDHCP on
```

Feedback

```
IPDHCP on
```

IPLogin

Enables or disables the use of login credentials when starting a Telnet session on the unit. If this feature is set to on, then the unit will prompt for both the username and password. Use the same credentials as the web GUI. on = login credentials required; off = no login required. Use the sta argument to display the current setting.

Syntax

```
IPLogin X
```

Parameter	Description	Range
X	Value	on, off, sta

Example

```
IPLogin off
```

Feedback

```
IPLogin off
```

IPPort

Sets the Telnet listening port for the unit. Use the sta argument to display the current setting.

Syntax

```
IPPort X
```

Parameter	Description	Range
X	Port	0 ... 65535, sta

Example

```
IPPort 23
```

Feedback

```
IPPort 23
```

IPQuit

Closes the current Telnet session.

Syntax

```
IPQuit
```

This command does not require any parameters.

Example

```
IPQuit
```

Feedback

```
Connection lost...
```

IPStatic

Sets the static IP address, subnet mask, and gateway (router) address of the unit. Before using this command, DHCP must be disabled on the unit. Refer to the IPDHCP command for more information. Each argument must be entered in dot-decimal notation and separated by a space. The default static IP address is 192.168.1.254.

Syntax

```
IPStatic X Y Z
```

Parameter	Description	Range
X	IP address	0 ... 255 (per octet)
Y	Subnet mask	0 ... 255 (per octet)
Z	Gateway (router)	0 ... 255 (per octet)

Example

```
IPStatic 192.168.1.112 255.255.255.0 192.168.1.1
```

Feedback

```
IPStatic 192.168.1.112 255.255.255.0 192.168.1.1
```

IPTimeout

Specifies the time interval of inactivity before the Telnet session is automatically closed.

Syntax

```
IPTimeout X
```

Parameter	Description	Range
X	Interval (in seconds)	1 ... 60000

Example

```
IPTimeout 300
```

Feedback

```
IPTimeout 300
```

Lock

Locks all the buttons on the front panel. This feature is useful when the unit is installed in a rack environment or other remote location, to prevent unauthorized tampering or accidental pressing of the front-panel buttons. Also refer to the Unlock command.

Syntax

```
Lock
```

This command does not require any parameters.

Example

```
Lock
```

Feedback

```
Lock
```

LockEdid

Locks the EDID button on the front panel. This prevents accidental pressing of the EDID button, which might erase the EDID stored by the AT-HDR-CAT-XX. Use the Unlock command to unlock the EDID button.

Syntax

```
LockEdid
```

This command does not require any parameters.

Example

```
LockEdid
```

Feedback

```
LockEdid
```

LRAUD

Enables / disables the L/R audio output. on = enables L/R audio out, off = disables L/R audio out, sta = displays the current setting.

Syntax

```
LRAUD X
```

Parameter	Description	Range
X	Value	on, off, sta

Example

```
LRAUD off
```

Feedback

```
LRAUD off
```

Mreset

Resets the unit to factory-default settings.

Syntax

```
Mreset
```

This command does not require any parameters.

Example

```
Mreset
```

Feedback

```
Mreset
```

OutputStatus

Event-driven API command. Feedback indicates if a sink device is present, based on the state of both the HDMI HPD and TMDS signals. If a sink is detected on an output, then a 1 will be returned. Outputs with no source connected will return a 0. Note that the number of 1 and 0 values returned, is dependent upon the number of outputs on the unit. For example, the AT-HDR-CAT-4 has one HDMI output and four HDBaseT outputs, for a total of five outputs. Therefore, if all outputs were connected to a sink device, then the OutputStatus command would be formatted as: OutputStatus 11111

Syntax

```
OutputStatus X
```

Parameter	Description	Range
X	Returned result (outputs)	0 ... 1

Example

```
OutputStatus
```

NOTE: Example for an AT-HDR-CAT-8 with all HDBaseT outputs in use and the local HDMI display disconnected: the control system (RS-232 or Telnet) receives OutputStatus 111111110. The last digit always indicates the HDMI output; HDBaseT outputs are read from left to right, with HDBaseT OUT 1 in the left-most digit. Reconnecting the display returns OutputStatus 111111111. If all displays are powered off using CEC, the control system receives OutputStatus 000000000 (some displays only mute video while the HDMI HPD line is kept high). To poll the status, send OutputStatus.

Feedback

```
OutputStatus 111111110
```

PWOFF

Executing this command will power-off the AT-HDR-CAT-XX. Use the PWON command to power-on the unit.

Syntax

```
PWOFF
```

This command does not require any parameters.

Example

```
PWOFF
```

Feedback

```
PWOFF
```

PWON

Executing this command will power-on the AT-HDR-CAT-XX. Use the PWOFF command to power-off the unit.

Syntax

```
PWON
```

This command does not require any parameters.

Example

```
PWON
```

Feedback

```
PWON
```

PWSTA

Displays the current power state of the AT-HDR-CAT-XX.

Syntax

```
PWSTA
```

This command does not require any parameters.

Example

```
PWSTA
```

Feedback

```
PWON
```

RHostName

Displays the hostname of the unit. Execute the SHostName command to set the hostname.

Syntax

```
RHostName
```

This command does not require any parameters.

Example

```
RHostName
```

Feedback

```
RHOSTNAME CAT-8-06072D
```

SHostName

Sets the hostname of the unit. Execute the RHostName command to display the hostname.

Syntax

```
SHostName X
```

Parameter	Description	Range
X	Hostname	string

Example

```
SHostName CAT-8-ConfRm
```

Feedback

```
SHOSTNAME CAT-8-ConfRm
```

System

Displays the status of the unit. Use the argument to display the information on a single line using the ";" dev delimeter.

Syntax

```
System X
```

Parameter	Description	Range
X	Format	sta, dev

Example

```
System sta
```

Feedback

```
Model: AT-HDR-CAT-8
MAC Addr: b8-98-b0-06-07-2d
Address Type: DHCP
IP: 10.20.20.36
Netmask: 255.255.255.0
Gateway: 10.20.20.1
HTTP Port: 80
Telnet Port: 23
Firmware: 1.0.00
On/Up Time (dd HH:mm:ss): 11 06:32:42
Hostname: CAT-8-06072D
Power Status: PWON
```

TrigCEC

Sends the specified command to the display using CEC. The first parameter is the zone output: 1 = HDBaseT OUT 1, 2 = HDBaseT OUT 2, 3 = HDMI OUT, etc. Specify the argument for all outputs. Note that CEC is an HDMI all protocol. Therefore, HDBaseT outputs will trigger CEC commands from the connected receiver. Do not add a space between the command and the first argument.

Syntax

```
TrigCECX Y
```

Parameter	Description	Range
X	Zone (device dependent)	1, 2 (CAT-2) 1 … 4 (CAT-4 / 4ED) 1 … 8 (CAT-8)
Y	Command	on, off

Example

```
TrigCEC1 on
```

Feedback

```
TrigCEC1 on
```

Type

Displays the model information of the unit.

Syntax

```
Type
```

This command does not require any parameters.

Example

```
Type
```

Feedback

```
AT-HDR-CAT-4ED
```

Unlock

Unlocks the buttons on the front panel. Also refer to the Lock command.

Syntax

```
Unlock
```

This command does not require any parameters.

Example

```
Unlock
```

Feedback

```
Unlock
```

Version

Displays the current firmware version of the unit.

Syntax

```
Version
```

This command does not require any parameters.

Example

```
Version
```

Feedback

```
1.0.0
```

VOUT

Increases / decreases the audio output volume. In addition to specifying an integer value, the + and - arguments can be used to increment or decrement the volume level by 1. Specify the argument to display the current setting. sta

Syntax

```
VOUT X
```

Parameter	Description	Range
X	Value	-90 ... 10, +, -, sta

Example

```
VOUT -10
```

Feedback

```
VOUT -10
```