

MediaHub Programming Guide

Model MH4-HD



AscenticTM
RETAIL ENGINEERING
by Audio Authority®

MediaHub MH4-HD Programming Guide

This guide explains basic RS-232 commands and protocol for the MH4HD and MH4-HS MediaHubs. Query the MH4-HD directly by sending RS-232 commands to address “0”. The default device ID is 253. Note: responses and commands sent from the device will be received referencing the device’s actual address, not address “0”.

Command Format

#	replace with a single number
\$	replace with one or more numbers (use a comma between each number)
*	should be left as a star – it represents all valid devices for that command

Response Format

%u	replaced with a number
%s	replaced with a string
%02X	replaced with hexadecimal numbers

Query Commands

Note: A “Local” serial command is used onboard this device. Commands that are not Local are repeated on the RS-485 bus to other devices.

Command	Response	Local	Function
[DEV=#;DEV?]	(DEV=%u;DEV=%u)	Yes	Queries the device ID.
[DEV=#;VERSION?]	(DEV=%u;VERSION=%s)	Yes	Query the application firmware version.
[DEV=#;FWNAME?]	(DEV=%u;FWNAME=%s)	Yes	Query the application firmware name.
[DEV=#;BVERSION?]	(DEV=%u;BVERSION=%s)	Yes	Query the bootloader firmware version.
[DEV=#;BFWNAME?]	(DEV=%u;BFWNAME=%s)	Yes	Query the bootloader firmware name.
[DEV=#;UP;COUNT?]	(DEV=%u;UP;COUNT=%u)	Yes	Query how many times the devices has been powered.
[DEV=#;UP;TIME?]	(DEV=%u;UP;TIME=%u)	Yes	Query how long in seconds the device has been up since its last boot.
[DEV=#;CFG;SERNUM?]	(DEV=%u;CFG;SERNUM=%02X:...)	Yes	Query the serial number. Length of the response depends on the device type.
[DEV=#;NET;LINK?]	(DEV=%u;NET;LINK=%s)	NO	Query the link status.
[DEV=#;NET;LINK;IP?]	(DEV=%u;NET;LINK;IP=%u.%u.%u.%u)	NO	Query the IP address.
[DEV=#;NET;LINK;MASK?]	(DEV=%u;NET;LINK;MASK=%u.%u.%u.%u)	NO	Query the net mask.
[DEV=#;NET;LINK;GW?]	(DEV=%u;NET;LINK;GW=%u.%u.%u.%u)	NO	Query the gateway.
[DEV=#;NET;CFG?]	(DEV=%u;NET;CFG=%s)	NO	Query DHCP or STATIC network configuration.
[DEV=#;NET;STATIC;IP?]	(DEV=%u;NET;STATIC;IP=%u.%u.%u.%u)	NO	Query the static network IP address.
[DEV=#;NET;STATIC;MASK?]	(DEV=%u;NET;STATIC;MASK=%u.%u.%u.%u)	NO	Query the static network mask.
[DEV=#;NET;STATIC;GW?]	(DEV=%u;NET;STATIC;GW=%u.%u.%u.%u)	NO	Query the static gateway address.
[DEV=#;NET;MACADDR?]	(DEV=%u;NET;MACADDR=%02X:%02X:%02X:%02X:%02X:%02X)	NO	Query the MAC address.

Other Responses

Response>	Function
(DEV=%u;BTN=%u;PRESS)	Occurs when a button is pressed.
(DEV=%u;BTN=%u;RELEASE)	Occurs when a button is released.
(DEV=%u;KNOB;LEFT=%u)	Will be seen when knob is turned counter-clockwise
(DEV=%u;KNOB;PUSH)	Will be seen when knob is pressed
(DEV=%u;KNOB;RIGHT=%u)	Will be seen when knob is turned clockwise
(DEV=%u;KNOB;LED=%u;VAL=%u)	- Probably not seen
(DEV=%u;KNOB;LED=*;VAL=%u)	- Probably not seen
(DEV=%u;KNOB;MODE=OFF)	- Probably not seen
(DEV=%u;KNOB;MODE=BREATHE)	- Probably not seen
(DEV=%u;KNOB;MODE=ALL)	- Probably not seen
(DEV=%u;KNOB;MODE=SINGLE)	- Probably not seen
(DEV=%u;KNOB;MODE=CHASE)	- Probably not seen

Configuration Commands

NOTE: All configuration data is saved across reboots.

Command	Local	Function
[DEV=#;DEV=#]	Yes	Sets the device ID to a new value. Will change after next reboot.
[DEV=#;NET;CFG=DHCP]	NO	Set network configuration to DHCP.
[DEV=#;NET;CFG=STATIC]	NO	Set network configuration to STATIC.
[DEV=#;NET;STATIC;IP=#.#.#]	NO	Set the static network IP address.
[DEV=#;NET;STATIC;MASK=#.#.#]	NO	Set the static network mask.
[DEV=#;NET;STATIC;GW=#.#.#]	NO	Set the static gateway address.
[DEV=#;RESET;DEFAULT]	Yes	Restores the device back to factory default. The device will reboot.
[DEV=#;REBOOT]	Yes	Reboots the device.

Request Commands

Command	Local	Function
[DEV=#;LED=\$;OFF]	Yes	Turns off one or more LEDs.
[DEV=#;LED=\$;ON]	Yes	Turns on one or more LEDs.
[DEV=#;LED=#;PWM=#]	NO	Sets the indicated LED to the PWM brightness value.
[DEV=#;LED=\$;BLNK]	Yes	Puts one or more LEDs into blink mode.
[DEV=#;LED=*;OFF]	Yes	Turn off all LEDs.
[DEV=#;LED=*;ON]	Yes	Turn on all LEDs.
[DEV=#;LED=*;PWM=#]	NO	Sets all LEDs to the PWM brightness value.
[DEV=#;LED=*;BLNK]	Yes	Puts all LEDs into blink mode.
[DEV=#;OPTICAL=\$;OFF]	Yes	Turn off one or more optical outputs.
[DEV=#;OPTICAL=*;OFF]	Yes	Turn off all optical outputs.
[DEV=#;OPTICAL=\$;ON]	Yes	Turn on one of more optical outputs.
[DEV=#;OPTICAL=*;ON]	Yes	Turn on all optical outputs.
[DEV=#;ANALOG=\$;OFF]	Yes	Turn off one or more analog outputs.
[DEV=#;ANALOG=*;OFF]	Yes	Turn off all analog outputs.
[DEV=#;ANALOG=\$;ON]	Yes	Turn on one or more analog outputs.
[DEV=#;ANALOG=*;ON]	Yes	Turn on all analog outputs.
[DEV=#;KNOB;LED=#;VAL=#]	No	Set the given LED to the given brightness
[DEV=#;KNOB;LED=*;VAL=#]	No	Set all LEDs to the given brightness
[DEV=#;KNOB;MODE=OFF]	No	Turn all knob LEDs off
[DEV=#;KNOB;MODE=BREATHE]	No	Put the knob in breathe mode
[DEV=#;KNOB;MODE=ALL]	No	Turn on all knob LEDs
[DEV=#;KNOB;MODE=SINGLE]	No	Turn on a single knob LED?
[DEV=#;KNOB;MODE=CHASE]	No	Put the knob into chase mode.
[DEV=#;CECSELECT=#]	Yes	Selects which ...
[DEV=#;PORT=#;BAUD=#]	Yes	Used to configure the baud rate of a UART (Only port 1 currently supported)

Firmware Releases

199-754-F00 Firmware Release Information

Name and Version	Release Date	Changes
199-754-F00-V1.0	2020-08-04	Released.
199-754-F00-V1.1	2020-08-14	RS-485 interface improvements.