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AV Link / Matrix HRM-2214 driving from a JED T460 second RS232

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Part A of the JED T460 manual set, pages 29 onwards shows how and where to load RS232/1 commands.

The control strings for the HRM-2214 are loaded manually into the T460 non-volatile EEPROM memory using the “**Edit EEPROM**” menu discussed on page 29. Note you can get to the starting address for auxiliary control commands from SER1 quickly by using the “Volume Up” button to step in 10’s of addresses (actually 16’s as it is hex we are using).

Once at a channel location say, 140h (say, the start of the Channel 1 command)) press “Volume Down” and start using the “On-Source” key to increment the high-nibble of the code and the “Volume Down” key to increment the low nibble of the hex code to be loaded. The bottom line shows the ASCII equivalent of the hex code, (if it is a valid code ... not a factor here as all commands are 5 bytes of hex data):

The display of ASCII codes (codes under 080h) gives the text equivalent of the data bytes:

Control codes are from 00h (NUL), 0Ah (LF), 0Dh (CR), to 1Fh.

Punctuation marks are from 20h () to 2Fh (/), 3Ah (:), 40h (@), 5Bh (l) to 60h (ˆ) and 7Bh (}) to 7Fh .

Numbers are from 30h (0) to 39h (9).

Upper case text is from 41h (A) to 5Ah (Z).

Lower case text is from 61h (a) to 7Ah (z).

Setting Baud rate:

Location 4Fh: Baud rate parameter for SER1 communications. To set the rate of 9600 for the HRM-2214, set this location to 0Eh

Setting control flag: FlagA sets up the second serial port for external switcher operation, so set this to =1 in the second flag menu.

“Standard Message” structure: The structure of user defined messages has as its first byte of the string, length, followed by the bytes of data. A CR (code 0Dh) can end the string (but this must be included in string length count) (not needed for the HRM-2214).

There are no “Power On” or “Power Off” commands for this unit, so just set a ‘00h’ (zero) into the “power” string locations (70h and F0h) so nothing is sent at Power On and Power Off.

Note: After setting a 00h into an initial length byte, anything else following in memory is ignored.

Locations 1C0h ...1DFh: Configure command(s) to switcher/aux display via SER1 (sent at end of warm-up, can go to 1DFh with queued commands to switcher.)

No configure commands are used for the HRM-2214, so just set location 1C0h to 00h to disable sending here.

Channel-specific and configure/control commands sent to switcher/aux display via SER1

Enabled by **FLAGA=1**.

In this example, we will set channels 5, 6, 7 & 8 to be switcher channels 1, 2, 3 & 4 respectively. Channels 1, 2, 3 & 4 are unswitched, so set 00h into their first bytes, as shown below. Use the “Remap” menu to map the projector for channels 5 ... 8 to a projector HDMI input fed from the HRM-2214 output.

Locations 140h ... 14Fh: Channel 1 set to 00h. **Locations 150h ... 15Fh:** Channel 2 set to 00h.

Locations 160h ... 16Fh: Channel 3 set to 00h. **Locations 170h ... 17Fh:** Channel 4 set to 00h.

Locations 180h ... 18Fh: Channel 5 Ser1 code to HRM-2214 switcher for its channel 1.

Locations 190h ... 19Fh: Channel 6 Ser1 code to HRM-2214 switcher for its channel 2.

Locations 1A0h ... 1AFh: Channel 7 Ser1 code to HRM-2214 switcher for its channel 3.

Locations 1B0h ... 1BFh: Channel 8 Ser1 code to HRM-2214 switcher for its channel 4.

Following sets T460 channel 5 to select Input 1 on the HRM-2214

(As this command is executed, the red flashing front panel LED indicator shows channel selection. Switching will not occur unless a n active HDMI input is detected on that channel, as shown by the green LED above it.)

Address	Data	ASCII value/meaning
180h	0Ah	Data length (count of following bytes)
181h	20h	Command start
182h	02h	Switch Audio
183h	01h	Output channel
184h	01h	Input channel
185h	A5h	CRC
186h	20h	Command start
187h	01h	Switch Video
188h	01h	Output channel
189h	01h	Input channel
18Ah	41h	CRC

Following sets T460 channel 6 to select Input 2 on the HRM-2214

Address	Data	ASCII value/meaning
190h	0Ah	Data length (count of following bytes)
191h	20h	Command start
192h	02h	Switch Audio
193h	01h	Output channel
194h	02h	Input channel
195h	47h	CRC
196h	20h	Command start
197h	01h	Switch Video
198h	01h	Output channel
199h	02h	Input channel
19Ah	A3h	CRC

Following sets T460 channel 7 to select Input 3 on the HRM-2214

Address	Data	ASCII value/meaning
1A0h	0Ah	Data length (count of following bytes)
1A1h	20h	Command start
1A2h	02h	Switch Audio
1A3h	01h	Output channel
1A4h	03h	Input channel
1A5h	19h	CRC
1A6h	20h	Command start
1A7h	01h	Switch Video
1A8h	01h	Output channel
1A9h	03h	Input channel
1AAh	FDh	CRC

Following sets T460 channel 8 to select Input 3 on the HRM-2214

Address	Data	ASCII value/meaning
1B0h	0Ah	Data length (count of following bytes)
1B1h	20h	Command start
1B2h	02h	Switch Audio
1B3h	01h	Output channel
1B4h	04h	Input channel
1B5h	9Ah	CRC
1B6h	20h	Command start
1B7h	01h	Switch Video
1B8h	01h	Output channel
1B9h	04h	Input channel
1BAh	7Eh	CRC

Other direct channels can be set, or left unused by setting their channels to “skip” in the Channel setting menu.