

RS-232 Protocol

Matrix / Routing Switcher Series RS-232 Protocol Table

INSTRUCTION MANUAL

HD-88 Series



AUDIO / VIDEO MANUFACTURER

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▶ SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

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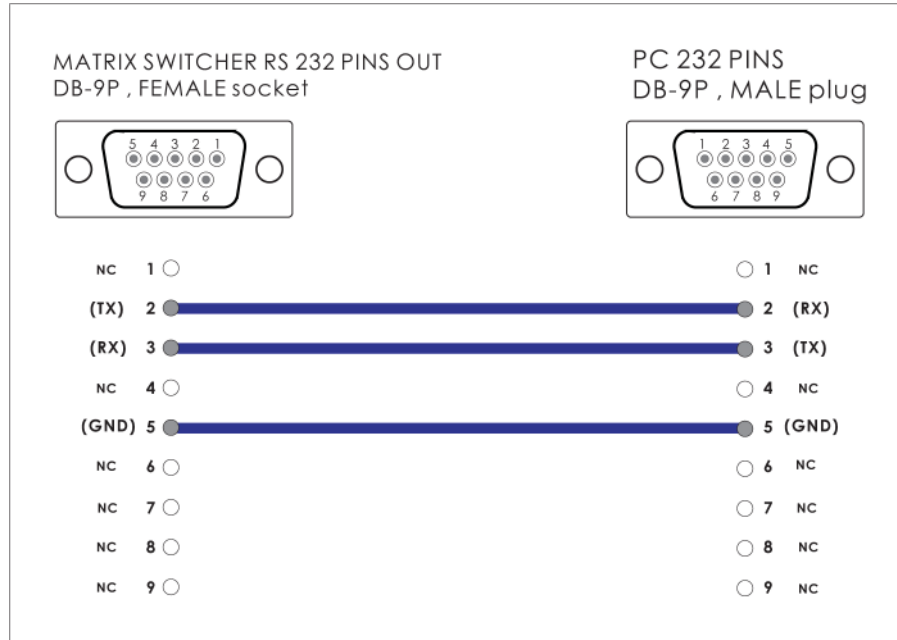
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▶ TRADEMARK ACKNOWLEDGMENTS

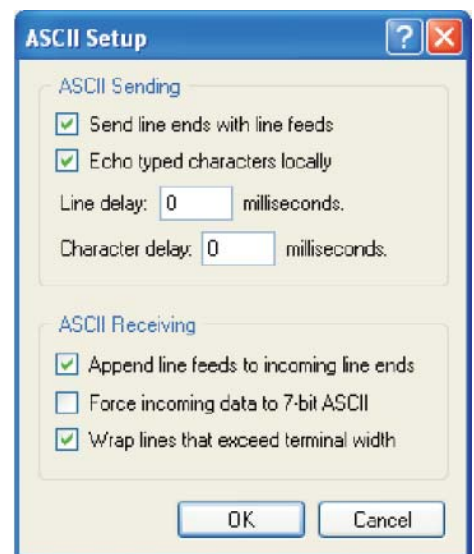
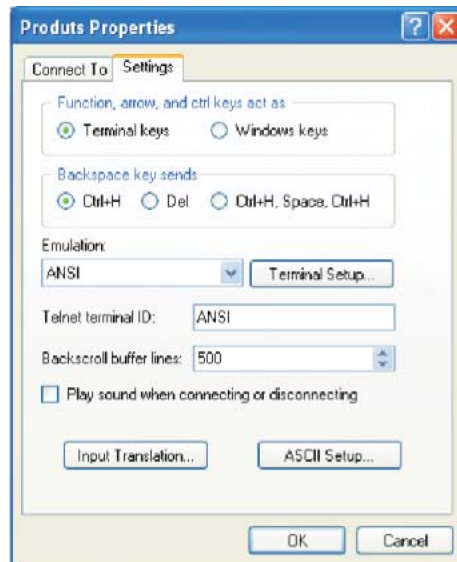
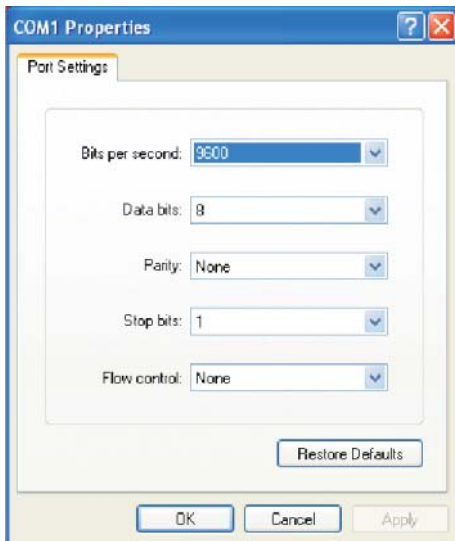
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RS-232 PROTOCOL AND COMMAND

RS-232 - CABLE PIN LINES



1. Transmission rate: 9600bps
 2. Data format: 8 data bits, No parity, 1 start bit and 1 stop bit
 3. Flowing control: None
- Also know as 9600,8,n,1



DATA STRING FORMAT

DATA STRING FORMAT

The Data String contains four elements.

[Command][][Data][:;]

The format is:

1. Command
2. Space
3. Data
4. ;

There is a single space after the Command and before the Data string.

The data string must conclude with an “;” (without the quotes).

All text is full ASCII Code and is NOT case sensitive.

LINK is the same as Link. You can use either capital letters or small letters and get the same result.

The LINK command must be sent first. This establishes a communications “link” between an external controller (or computer) and the device you wish to control. When you have an established link, communication via the IR port is disabled. The front panel remains operational.

The format is:

LINK 01; This will establish the link

Your commands

LINK 00;This will terminal the link

Devices that are firmware version x.x or higher will return a status.

Status is command dependent.

For example: Response: [SKU][][Status][:;]

The Status is a two digit numerical code.

See further in this document for specific details.

COMMANDS

Note: not all commands are supported on all devices.

Item	Command	Description
1	Link	Establish or disable data link between controller and device.
2	Power	Set/Check the status of Power
3	Output[dd]	Set/Check the state of single outputs
4	ActiveSource	Check the status of an Input for a signal present
5	OutputAll	Set/Check the state of all outputs
6	Memory	Save the current matrix configuration to memory
7	Recall	Recall a saved matrix configuration from memory
8	Recall[mm]	Check the data of memory address
9	Lock	Set/Check the status of Lock
10	EDID	Set/Check EDID (HDMI only)

1. LINK

Function	Command	Response	Description
Leave	Link 00;	HD-88 00;	Leave
		HD-88 01;	UN-KNOW Command
Link	Link 01;	HD-88 00;	Link
		HD-88 01;	UN-KNOW Command
Check Link Condition	Link ?;	Link 00;	System Leave
		Link 01;	System Link

2. POWER

Function	Command	Response	Description
Power OFF	Power 00;	HD-88 00;	Power OFF
		HD-88 01;	UN-KNOW Command
Power ON	Power 01;	HD-88 00;	Power ON
		HD-88 01;	UN-KNOW Command
Check the Status of Condition	Power ?;	Power 00;	Power OFF
		Power 01;	Power ON

COMMANDS

3. OUTPUT[DD]

Function	Command	Variables
OFF destination	OUTPUTXX 00;	xx = Output Channel

Command Example	Response	Description
OUTPUT04 00;	HD-88 00;	Output 4 is OFF
	HD-88 01;	UN-KNOW Command


Function	Command	Variables
Set channel status	OUTPUTxx yy;	xx = Output Channel yy = Input Channel

Command Example	Response	Description
OUTPUT02 04;	HD-88 00;	Set output 2 to input 4
	HD-88 01;	UN-KNOW Command

Function	Command	Variables
Check Output status	OUTPUTxx?;	xx = Output Channel

Command Example	Response	Description
OUTPUT04 ?;	Output04 01;	Output 4 to input 1
	Output04 02;	Output 4 to input 2
	Output04 03;	Output 4 to input 3
	Output04 04;	Output 4 to input 4
	Output04 05;	Output 4 to input 5
	Output04 06;	Output 4 to input 6
	Output04 07;	Output 4 to input 7
	Output04 08;	Output 4 to input 8

4. ACTIVE SOURCE

Function	Command Example	Response	Description
Check the status of a signal presence on an Input port	ACTIVESOURCE ?;	ActiveSource 0100000101010100;	Each position indicates which source is active or inactive 01 = Active 00 = Inactive
For Example:		01 00 00 01 01 01 01 00; 	

Note: this does not validate if the signal is within proper format (ex: 1VPP Video), only that one is present and active.

COMMANDS

5. OUTPUT ALL

Function	Command	Response	Description
OFF all output	OUTPUTALL 00;	HD-88 00;	OFF all output
		HD-88 01;	UN-KNOW Command

Function	Command	Variables
Set all outputs to one source	OUTPUTALL XX;	xx = Source number

Command Example	Response	Description
OUTPUTALL 02;	HD-88 00;	Set all output to Source 2
	HD-88 01;	UN-KNOW Command

Function	Command Example	Response	Description
Check the status of all outputs	OUTPUTALL ?;	OutputALL 0307050502010804;	Each position indicates which source is connect to which output.
For Example:		<p style="text-align: center;">03 07 05 05 02 01 08 04</p> <pre> graph TD subgraph Inputs I1[Input 1] I2[Input 2] I3[Input 3] I4[Input 4] I5[Input 5] I7[Input 7] end subgraph Outputs O1[Output 1] O2[Output 2] O3[Output 3] O4[Output 4] O5[Output 5] O8[Output 8] end I5 --> O3 I7 --> O2 I3 --> O1 I4 --> O8 </pre>	

6. MEMORY

Function	Command	Variables
Save current matrix configuration to memory address	MEMORY XX;	xx = Memory address <i>*See 7. Recall for all available</i>

Command Example	Response	Description
MEMORY 0F;	HD-88 00;	Save at memory address 16
	HD-88 01;	UN-KNOW Command

COMMANDS

7. RECALL

Function	Command	Variables				
Recall a saved configuration from memory	RECALL XX;	xx = Memory Location				
		XX	Location			
		00	1	4x4 Destination Row	8x8 Destination Row	
		01	2			
		02	3			
		03	4			
		04	5	4x4 Source Row		8x8 Source Row
		05	6			
		06	7			
		07	8			
		08	9	4x4 Source Row	8x8 Source Row	
		09	10			
		0A	11			
		0B	12			
		0C	13	4x4 Source Row		8x8 Source Row
		0D	14			
		0E	15			
0F	16					

Command Example	Response	Description
RECALL 07;	HD-88 00;	Recall a saved from memory08
	HD-88 01;	UN-KNOW Command

COMMANDS

8. RECALL[MM]

Function	Command	Variables
Check the data of memory address	RECALLXX ?;	xx = Memory Location

Command Example	Response	Description
RECALL00 ?;	RECALL00 0102030405060708; Note : "RECALL00" means recall from the memory address 1. "0102030405060708" is the input numbers that is connected to output 1-8, see left side description.	Output1=01 so the output1 to input1
		Output2=02 so the output2 to input2
		Output3=03 so the output3 to input3
		Output4=04 so the output4 to input4
		Output5=05 so the output5 to input5
		Output6=06 so the output6 to input6
		Output7=07 so the output7 to input7
		Output8=08 so the output8 to input8
RECALL0F ?;	RECALL 0102030405060708; Note : "RECALL" means recall from the memory address 16. "0102030405060708" is the input numbers that is connected to output 1-8, see left side description.	Output1=01 so the output1 to input1
		Output2=02 so the output2 to input2
		Output3=03 so the output3 to input3
		Output4=04 so the output4 to input4
		Output5=05 so the output5 to input5
		Output6=06 so the output6 to input6
		Output7=07 so the output7 to input7
		Output8=08 so the output8 to input8

9. LOCK

Function	Command	Response	Description
Unlock	LOCK 00;	HD-88 00;	Unlock
		HD-88 01;	UN-KNOW Command
Lock	LOCK 01;	HD-88 00;	Lock
		HD-88 01;	UN-KNOW Command
Check the status of lock	LOCK ?;	Lock 00;	System Unlock
		Lock 01;	System Lock

COMMANDS

10. EDID

Function	Command	Response	Description
Set EDID	EDID 00;	HD-88 00;	Set EDID to FSS
		HD-88 01;	UN-KNOW Command
	EDID 01;	HD-88 00;	Set EDID to H24-3D
		HD-88 01;	UN-KNOW Command
	EDID 02;	HD-88 00;	Set EDID to H24M-3D
		HD-88 01;	UN-KNOW Command
	EDID 03;	HD-88 00;	Set EDID to H36-3D
		HD-88 01;	UN-KNOW Command
	EDID 04;	HD-88 00;	Set EDID to H36-3D-M
		HD-88 01;	UN-KNOW Command
	EDID 05;	HD-88 00;	Set EDID to DVI-D 1280x1024
		HD-88 01;	UN-KNOW Command
	EDID 06;	HD-88 00;	Set EDID to DVI-D 1920x1200
		HD-88 01;	UN-KNOW Command
EDID 07;	HD-88 00;	Set EDID to Auto	
	HD-88 01;	UN-KNOW Command	

Function	Command	Response	Description
Check the Status of EDID	EDID ?;	EDID 00;	FSS Mode
		EDID 01;	H24-3D
		EDID 02;	H24M-3D
		EDID 03;	H36-3D
		EDID 04;	H36-3D-M
		EDID 05;	DVI-D 1280x1024
		EDID 06;	DVI-D 1920x1200
		EDID 07;	Auto

When issuing EDID commands, you need to incorporate a minimum of a 5 second delay before issue additional commands. When changing EDID settings, the switcher does a soft-reboot to implement the new EDID format.