



## **DV-HMSW4K-88 Matrix Command Protocol Manual**

Based on firmware revision 1.20

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# 1 General Notes

## 1.1 Revision

This protocol manual corresponds to the FSR DV-HMSW4K-88's firmware version 1.20. Please check our website for the latest protocol manual and firmware release.

## 1.2 Special Characters

Carriage returns (Enter Key, 0Dh) will be referred to in the document as *<cr>*. Linefeeds (0Ah) will be referred to in the document as *<lf>*.

## 1.3 Field Separators

Fields are separated by *white* space. That is, any number of spaces or tabs as long as the entire command is less than 80 characters. A *<cr>* terminates the command. Below is an example describing a (fictitious) command.

<b>EX</b>	05	<i>&lt;cr&gt;</i>
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So the actual message would look like this:

*EX 05<cr>*

## 1.4 Command Request Syntax

This document uses the following notation when describing the syntax of a command request:

<b>BOLD</b>	Identifies the command
lower case	Identifies data to be entered which is described in the text following the syntax description.
"	Entry defined within double quotes is to be entered exactly as shown.
< >	Entry defined within these brackets is required.
[ ]	Entry defined within these brackets is optional.
{ }	Entry defined within curly brackets must be entered at least once.
	A vertical bar denotes a logical choice of entry.
*	An asterisk following either type of bracket above denotes that data within brackets may be entered multiple times.
<i>number sequence</i>	This refers to a single number or a sequence of numbers, each number separated from the next by a comma and may also include a range of numbers (e.g. 1,3,5-8).

## 1.5 Default Communication settings

Ethernet	RS-232			
<b>IP:</b> 192.168.5.71 <b>Gateway:</b> 192.168.5.1 <b>Subnet mask:</b> 255.255.255.0 <b>Port:</b> 23 <b>Connection type:</b> Straight-through or crossover	<b>Baud rate:</b> 57600 bps	DTE	DB-9	DCE
	<b>Data bits:</b> 8	<b>PC</b>	<b>Pin</b>	<b>Matrix</b>
	<b>Parity:</b> None	Rx	2	Tx
	<b>Stop bits:</b> 1	Tx	3	Rx
	<b>Flow control:</b> None	GND	5	GND
	<b>Connection type:</b> Straight-through			

## 2 DV-HMSW4K-88 Matrix Command List Quick Reference

COMMAND	DESCRIPTION	PAGE
APM	Advanced Process Mode Request	8
BEEP	Onboard Beep Request	9
CON	Connect Request	10
DIS	Disconnect Request	11
ECH	Echo Request	12
EDID	EDID Request	13
EDID RST	EDID Reset	15
FPL/FPU	Front Panel Lock/Unlock Request	16
GWAY	Gateway Request	17
HLP	Help – Request list with format	18
IP	IP Request	22
IR	Set System IR Control Request	23
MOD	Model Request	24
PSW	Password Request	25
PWR	Power ON/OFF Request	26
RFD	Return-to-Factory defaults	27
RSP	Response Request	28
SMSK	SMSK Request	29
STA	Status Request	30
VER	Version Number Request	32
VRB	Verbose Error Message Request	33

## 3 Request/Response Format

All requests and responses will be entirely in ASCII.

All requests/responses will typically have a two to three character type field, with some exceptions, followed by the data required for that specific request/response. All requests may be terminated with a carriage return (0Dh), the typical terminator, which will be referred to in this document as <cr>. Responses are terminated with a carriage return and line feed (0Ah) <lf>.

## 4 Acknowledging Receipt of Commands

Each request sent to the DV-HMSW4K-88 matrix will have two possible responses in addition to the *prompt* "DV-HMSW4K-88>", one for the acknowledgement of a correct request and an error response. The normal acknowledge response will be "Ok" followed by the <cr> <lf> and the *prompt*. The <cr> <lf> and the *prompt* termination characters are understood in the responses shown below and are omitted.

**Example:**

Ok

## 5 Error Response

It is inevitable that errors occur in the requests sent to the DV-HMSW4K-88 matrix. If an invalid *command* is sent to the DV-HMSW4K-88 MATRIX, the DV-HMSW4K-88 matrix will respond with the message "**ERR: unknown command**". If an invalid parameter is sent to the DV-HMSW4K-88 matrix, the DV-HMSW4K-88 matrix will respond with the message "**ERR:**" followed by the valid syntax for the errored entry.

### **Example:**

A connect request with an incorrect output number:

CON 1 (9)

The error response would be:

ERR: CON {<input> <"outputSequence">}\*

Note that the returned error response may be expanded to a more detailed version by entering *verbose mode*. This mode may be turned on by issuing a **VRB Y** command. The expected syntax for the command will be returned, as above, and a description of each parameter.

For example, if verbose mode was turned on and the above command issued, the response would be:

ERR: CON {<input> <"outputSequence">}\*<cr>

Connect specified input to specified output(s).

input

Input to connect "1" to number of available inputs.

outputSequence

Outputs as a *number sequence*.

## 6 APM Request

The user will be able to turn Advanced Process Mode ON or OFF by sending the APM request. The format for the APM request is as follows:

<b>APM</b>	"ON"   "OFF"	<cr>
------------	--------------	------

**Syntax:** APM <"ON" | "OFF"><cr>

Where:

**APM** Start of APM message.

"ON" | "OFF" ON = turns Advanced Process Mode ON, OFF = turns Advanced Process Mode OFF.

**Example:**

APM ON<cr> – Turns Advanced Process Mode on.

**Example Response:**

Ok



## 7 BEEP Request

The user will be able to turn Onboard Beep ON or OFF by sending the mute BEEP request. The format for the BEEP request is as follows:

<b>BEEP</b>	"ON"	"OFF"	<cr>
-------------	------	-------	------

**Syntax:** BEEP <"ON" | "OFF"><cr>

Where:

**BEEP** Start of BEEP message.

"ON" | "OFF" ON = turns onboard beep on, OFF = turns onboard beep off.

**Example:**

BEEP ON<cr> – Turns Onboard Beep on.

**Example Response:**

Ok

## 8 Connect Request

The Connect request will instruct the DV-HMSW4K-88 matrix to an input to one or more outputs. The format for the connect request is as follows:

<b>CON</b>	input	"("outputSequence")"	<cr>
------------	-------	----------------------	------

### Syntax:

CON {<input> <"("outputSequence")">}\*<cr>

Where:

**CON** Connection request header  
input Input to connect "1" to number of available inputs.  
outputSequence Outputs as a *number sequence*.

### Example 1:

CON 3 (1-4)<cr>

Instructs the matrix input 3 to outputs 1, 2, 3 and 4.

### Example Response:

OK

This response means that the command has been received and is valid.

### Example 2:

CON 4 (1,3) 2(2,4)<cr>

Instructs the matrix to connect input 4 to outputs 1 and 3, input 2 to outputs 2 and 4.

### Example Response:

OK

This response means that the command has been received and is valid.

### Error Example:

CON 9 (1)<cr>

Instructs the DV-HMSW4K-88 MATRIX to connect input 9, which is invalid since there are only 8 inputs for this model of matrix, to output 1.

### Error Response:

ERR: CON {<input> <"("outputSequence")">}\*

## 9 Disconnect Request

The Disconnect request is used to disconnect a specified output from its currently connected input.

<b>DIS</b>	output ["output ]	<cr>
------------	-------------------	------

**Syntax:** DIS <output> ["<output>]\*<cr>

Where:

**DIS** Disconnect request header  
output Output being disconnected.

**Example:**

To disconnect 1, 3, 4 the user would send the following message:

DIS 1, 3, 4<cr>

**Example Response:**

Ok

If the user attempted to disconnect a non-existent output then an error would be reported. In the example below, the user attempts to disconnect output 9.

DIS 9<cr>

ERR: DIS <output> ["<output>]\*<cr>

## 10 Echo Commands Request

This request allows the user to configure whether an echo of the originally received serial input is output back to the sender. Echo of input defaults to OFF and is reset to OFF on a power cycle.

The format for this request is as follows:

<b>ECH[O]</b>	<b>"ON" "OFF"</b>	<b>&lt;cr&gt;</b>
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**Syntax:** ECH[O] <"ON"|"OFF"><cr>

Where:

**ECH** Echo request header.

**"ON"|"OFF"** ON to enable echo, OFF to disable.

### **Example:**

To enable echoing of input the user would send the following message:

**ECH ON<cr>**

The matrix will respond with an Ok message.

To disable echoing of input:

**ECH OFF<cr>**

## 11 EDID Request

The EDID request will instruct the DV-HMSW4K-88 matrix to configure the video and audio characteristics of the device. The user can request that the specified input copy the characteristics from the specified output or may configure to a default value. The format for the EDID request is as follows:

EDID CP command:

The EDID CP command configures the EDID characteristics of the specified input to that of the EDID characteristics of the specified output.

<b>EDID</b>	input	<b>CP</b>	output	<cr>
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### Syntax:

EDID <input> CP <output><cr>

Where:

<b>EDID</b>	EDID request header
input	Input EDID to configure, 1 to number of available inputs.
<b>CP</b>	Designates the COPY directive.
Output	Output to copy EDID from.

### Example:

EDID 3 CP 4<cr>

Instructs the matrix to copy output 4 EDID characteristics to input 3 EDID characteristics.

### Example Response:

OK

This response means that the command has been received and is valid.

EDID DF command:

The EDID DF command configures the EDID characteristics of the specified input to that of the EDID characteristics of the respective table entry.

<b>EDID</b>	input	<b>DF</b>	EDID_config_num	<cr>
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### Syntax:

EDID <input> DF <EDID\_config\_num><cr>

Where:

<b>EDID</b>	EDID request header
input	Input EDID to configure, 1 to number of available inputs.
<b>DF</b>	Designates the DEFAULT directive.
EDID_config_num	EDID configuration number corresponding to table below

- 00: HDMI 1080p@60Hz, Audio 2CH PCM
- 01: HDMI 1080p@60Hz, Audio 5.1CH PCM/DTS/DOLBY
- 02: HDMI 1080p@60Hz, Audio 7.1CH PCM/DTS/DOLBY/HD
- 03: HDMI 1080i@60Hz, Audio 2CH PCM
- 04: HDMI 1080i@60Hz, Audio 5.1CH PCM/DTS/DOLBY
- 05: HDMI 1080i@60Hz, Audio 7.1CH PCM/DTS/DOLBY/HD
- 06: HDMI 1080p@60Hz/3D, Audio 2CH PCM
- 07: HDMI 1080p@60Hz/3D, Audio 5.1CH PCM/DTS/DOLBY
- 08: HDMI 1080p@60Hz/3D, Audio 7.1CH PCM/DTS/DOLBY/HD
- 09: HDMI 4K2K, Audio 2CH PCM
- 10: HDMI 4K2K, Audio 5.1CH PCM/DTS/DOLBY
- 11: HDMI 4K2K, Audio 7.1CH PCM/DTS/DOLBY/HD
- 12: DVI 1280x1024@60Hz, Audio None
- 13: DVI 1920x1080@60Hz, Audio None
- 14: DVI 1920x1200@60Hz, Audio None

**Example:**

EDID 1 DF 14<cr>

Instructs the matrix to configure input 1 to entry 14 in the table, ie DVI 1920x1200@60Hz, Audio None.

**Example Response:**

OK

This response means that the command has been received and is valid.

## 12 EDID Reset

The EDID RST request will instruct the DV-HMSW4K-88 matrix to reset all the EDID to the default setting, 1080p 60Hz 2Ch PCM. The format for this request is as follows:

<b>EDID RST</b>	<b>&lt;cr&gt;</b>
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**Syntax:** EDID RST<cr>

Where:

**EDID RST**                  Reset Request

**Example:**

EDID RST<cr> – Resets all the EDID to 1080p 60Hz 2Ch PCM

**Example Response:**

Ok

## 13 Front Panel Lock/Unlock Request

This request is used to disable/enable configuration of the DV-HMSW4K-88 matrix via the front panel interface. When the front panel is locked a message will be displayed on the front panel interface screen indicating such and all button action will be disabled. It may only be unlocked via the appropriate command or by the front panel *Lock* button. Front panel access defaults to *unlocked* and is reset to unlocked on a power cycle. The format for this request is as follows:

FPL		FPU		<cr>
-----	--	-----	--	------

**Syntax:** FPL | FPU<cr>

Where:

**FPL**            Lock the Front Panel interface.  
**FPU**            Unlock the Front Panel interface.

**Example:**

To lock the Front Panel interface the user would send the following message:

FPL<cr>

**Example Response:**

OK

To unlock the Front Panel Interface:

FPU<cr>

**Example Response:**

OK



## 14 GWAY Request

The user can configure or inquire the current static Gateway IP address with this command. The format for the GWAY request is as follows:

<b>GWAY</b>	<i>ip_address</i>	"?"	<cr>
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**Syntax:** GWAY <*ip\_address* | "?"><cr>

Where:

**GWAY** Start of GWAY message.

*ip\_address* The IP address specified as a 4-tuple, ie xx.xx.xx.xx

"?" Inquiry for the current Gateway IP address.

**Example:**

**GWAY 192.168.0.10<cr>** – Sets the Gateway IP address to 192.168.0.10.

**Example Response:**

Changes take effect after reboot!

**Note:** The matrix must be rebooted by removing the power.

## 15 HLP Request

The user will have the ability to get a list of all commands from the DV-HMSW4K-88 matrix. The user will issue the following request:

<b>HLP</b>	<b>HELP</b>	"?"	[cmd]	<cr>
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**Syntax:** HLP [cmd]<cr>

Where:

<b>HLP</b>	Help Request header
cmd	optional command identifier

If the optional **cmd** is omitted, the DV-HMSW4K-88 matrix will respond with the following text message:

**Response** (*cmd* omitted):

APM	Configure Advanced Process Mode, ON or OFF.
BEEP	Configure Onboard Beep, ON or OFF.
CON	Connect specified input to specified output(s).
DIS	Disconnect specified output(s).
ECH	Echo request
EDID	Configure EDID characteristics.
EDID RST	Resets the EDID
FPL/FPU	Lock or Unlock Front Panel keys.
GWAY	Configure unit's Gateway IP address.
HLP	Access help information for command set.
IP	Configure unit's IP address.
IR	Configure System IR Control, ON or OFF.
MOD	Obtain Model identification.
PWR	Configure current Power state, Normal or Power Save, ON or OFF, respectively.
RFD	Return to factory defaults.
PSW	Login with password.
RSP	Configure ability to receive response to a command from unit.
SMSK	Configure the subnet mask of unit.
STA	Obtain status from the unit.
VER	Obtain the current part # and f/w version number of unit.
VRB	Configure Verbose error reporting, Y or N.

Entering **HLP <cmd><cr>**, where cmd is any valid DV-HMSW4K-88 matrix command in the above list, will return specific help for the command requested.

Specific command help is listed below:

**Response** (*cmd* included):

APM <"ON" "OFF"><cr>	Configure Advanced Process Mode, ON or OFF.
BEEP <"ON" "OFF"><cr>	

Configure Onboard Beep, ON or OFF.

CON {<input> <"("outputSequence")">}\*<cr>  
 Connect specified input to specified output(s).  
 input Input to connect "1" to number of available inputs.  
 outputSequence Outputs as a *number sequence*.

DIS <output> [", "<output>]\*<cr>  
 Disconnect specified outputs.  
 output Output being disconnected.

ECH[O] <"ON"|"OFF"><cr>  
 Enable/disable echoing of serial input.  
 "ON"|"OFF" ON to enable echo, OFF to disable.

EDID <input> CP <output><cr>  
 Configure EDID characteristics of input from output.  
 input Input EDID to configure, 1 to number of available inputs.  
 CP Designates the COPY directive.  
 Output Output to copy EDID from.

EDID <input> DF <EDID\_config\_num><cr>  
 Set EDID characteristics of input from table.  
 input Input EDID to configure, 1 to number of available inputs.  
 DF Designates the DEFAULT directive.  
 EDID\_config\_num EDID configuration number corresponding to table below.

- 00: HDMI 1080p@60Hz, Audio 2CH PCM
- 01: HDMI 1080p@60Hz, Audio 5.1CH PCM/DTS/DOLBY
- 02: HDMI 1080p@60Hz, Audio 7.1CH PCM/DTS/DOLBY/HD
- 03: HDMI 1080i@60Hz, Audio 2CH PCM
- 04: HDMI 1080i@60Hz, Audio 5.1CH PCM/DTS/DOLBY
- 05: HDMI 1080i@60Hz, Audio 7.1CH PCM/DTS/DOLBY/HD
- 06: HDMI 1080p@60Hz/3D, Audio 2CH PCM
- 07: HDMI 1080p@60Hz/3D, Audio 5.1CH PCM/DTS/DOLBY
- 08: HDMI 1080p@60Hz/3D, Audio 7.1CH PCM/DTS/DOLBY/HD
- 09: HDMI 4K2K, Audio 2CH PCM
- 10: HDMI 4K2K, Audio 5.1CH PCM/DTS/DOLBY
- 11: HDMI 4K2K, Audio 7.1CH PCM/DTS/DOLBY/HD
- 12: DVI 1280x1024@60Hz, Audio None
- 13: DVI 1920x1080@60Hz, Audio None
- 14: DVI 1920x1200@60Hz, Audio None

EDID RST<cr>  
 Resets all the EDID to 1080p 60Hz 2Ch PCM

FPL | FPU<cr>  
 Front Panel Lock/Unlock command.

GWAY <ip\_address> | <"?"><cr>  
 Set the IP address of the gateway.  
 ip\_address - IP four-tuple address, eg 192.168.5.48  
 ? to query for current gateway IP address

HLP[cmd]<cr>  
 Provides help information for the DV-HMSW4K-88 MATRIX command set.  
 cmd optional command identifier

IP <ip\_address> | <"?"><cr>  
 Set the static IP address of the matrix.  
 ip\_address - IP four-tuple address, eg 192.168.5.244  
 ? to query for current matrix IP address

IR <"ON" | "OFF"><cr>  
 Sets the System IR Control ON or OFF.

MOD <"?"><cr>  
 Returns the model type of the matrix.

PSW <""password""><cr>  
 Login using previously specified password.  
 password The preconfigured FSR password which allows access to reserved features. The password must be enclosed within single or double quotes.

PWR <"ON"|"OFF"|"?"><cr>  
 Configure current Power state, Normal or Power Save, ON or OFF, respectively.

RFD <"Y"|"N"><cr>  
 Return to Factory defaults.  
 "Y"|"N" Y = return to factory defaults, N = do not return to factory defaults.

RSP <"Y"|"N"><cr>  
 Enable or disable a response to a command from DV-HMSW4K-88 MATRIX.  
 "Y"|"N" Y = response enabled, N = response disabled.

SMSK <subnet\_mask | "?"><cr>  
 Configure the subnet mask of the unit.  
 subnet\_mask The subnet mask specified as a 4-tuple, ie xx.xx.xx.xx  
 "?" Inquiry for the current Subnet Mask.

STA<cr>  
 Obtain status from the unit.

=====  
 <Matrix\_model\_name>  
 <Firmware\_version\_number>

Power IR FP APM Beep  
 <pwr> <ir> <fp> <apm> <beep>

InputPort EdidIndex HDMIconnect  
 <iport #> <EdidIndex> <HDMIconnect>

OutputPort SelectInput HDMI/HDBTconnect EnableOutput  
 <oport #> <sel\_iport #> <HDMI/HDBTconnect> <EnableOutput>

=====

<i>Matrix_model_name</i>	Model name and number of the unit.
<i>Firmware_version</i>	The firmware version number of the unit.
<i>pwr</i>	Current Power state, ON or OFF, Normal and Power Save, respectively.
<i>ir</i>	System IR Control state, ON or OFF.
<i>fp</i>	Front Panel Lock state, ON or OFF.

<i>apm</i>	Advanced Process Mode state, ON or OFF.
<i>beep</i>	Onboard Beep state, ON or OFF.
<i>iport #</i>	Input Port number, 1 to maximum number of inputs.
<i>EdidIndex</i>	The output port number EDID used for the specified input.
<i>HDMIconnect</i>	The signal state of the HDMI terminal, Yes or No.
<i>oport #</i>	Output Port number, 1 to maximum number of outputs.
<i>sel_iport #</i>	The Input Port number to which the output port is currently connected.
<i>HDMI/HDBTconnect</i>	The current status of HDMI and HDBT connect for the respective output port, Yes or No.
<i>EnableOutput</i>	The Enable state of the respective output port, Yes or No.

VER<cr>

Version request returns the following:

Part# VER Version#

Where Part# = DV-HMSW4K-88 and Version # = <XX.xx>

XX.xx          XX = Major version number, xx = Minor version number.

VRB <"Y"|"N"><cr>

Enables or disables verbose mode.

"Y"|"N"          Y turns verbose on, N turns verbose off.

## 16 IP Request

The user can configure or inquire the current static IP address with this command. The format for the IP request is as follows:

<b>IP</b>	<i>ip_address</i>	"?"	<cr>
-----------	-------------------	-----	------

**Syntax:** IP <*ip\_address* | "?"><cr>

Where:

<b>IP</b>	Start of IP message.
<i>ip_address</i>	The IP address specified as a 4-tuple, ie xx.xx.xx.xx
"?"	Inquiry for the current IP address.

**Example:**

IP 192.168.0.5<cr> – Sets the static IP address to 192.168.0.5.

**Example Response:**

Changes take effect after reboot!

**Note:** The matrix must be rebooted by removing the power.

## 17 IR Request

The user will be able to set System IR Control ON or OFF by sending the IR request. Default is ON. The format for the IR request is as follows:

IR	"ON"	"OFF"	<cr>
----	------	-------	------

**Syntax:** IR <"ON" | "OFF"><cr>

Where:

**IR** Start of IR message.

"ON" | "OFF" ON = turns System IR Control ON, OFF = turns System IR Control OFF.

**Example:**

IR OFF<cr> – Turns System IR Control OFF.

**Example Response:**

Ok

## 18 Model Request

The MOD Model request returns the identification of the model type of the matrix. The format for the model request is as follows:

<b>MOD</b>	"?"	<cr>
------------	-----	------

**Syntax:** MOD <"?"><cr>

Where:

<b>MOD</b>	Model request header.
"?"	Inquire the matrix model number. Return string is in format as described below.

**Example:**

To obtain the model number the user would issue the following command:

MOD ?<cr>

**Example Response:**

DV-HMSW4K-88



## 19 Password Request

The PSW Password request allows access to additional special commands. This command is generally reserved for use by FSR technical personnel only. Enhanced access returns to the limited command set on a power cycle.

<b>PSW</b>	<code>""password""</code>	<code>&lt;cr&gt;</code>
------------	---------------------------	-------------------------

**Syntax:** PSW `<""password""><cr>`

Where:

**PSW** PSW password request header  
*password* The preconfigured FSR password which allows access to reserved features.  
The password must be enclosed within single or double quotes.

### **Example:**

To prepare the matrix for access to a special command set the user would send the following message:

`PSW "password"<cr>`

### **Example Response:**

`OK`

## 20 PWR Request

The user will be able to configure the unit to run in a Normal state or a Power Save state by sending the PWR request. Default is Normal state, i.e. ON. The format for the PWR request is as follows:

PWR	"ON"	"OFF"	"?"	<cr>
-----	------	-------	-----	------

**Syntax:** PWR <"ON" | "OFF" | "?"><cr>

Where:

<b>PWR</b>	Start of PWR message.
"ON"   "OFF"   "?"	ON = System run in Normal state.
	OFF = System run in Power Save state.
	? = Inquiry for the current power status.

**Example:**

PWR ON<cr> – System run in Normal state.

**Example Response:**

Set system Power ON, Please wait a moment...Ok

**Note:** Commands are not honored while the matrix is booting up, the matrix will reply with an "Ok" after booting up.

## 21 Return-to-Factory-Defaults Request

The user may return the unit to default factory settings by issuing this command. (This command is generally intended for use by FSR personnel only and is password protected). The format for the Return-to-Factory-Defaults request is as follows:

RFD	"Y"	"N"	<cr>
-----	-----	-----	------

**Syntax:** RFD <"Y"><cr>

Where:

**RFD** Return-to-Factory Defaults Request header.

"Y" | "N" Y = Return to factory defaults, N = Do not return to factory defaults.

**Example:**

RFD Y<cr> – Return to factory defaults requested.

**Example Response:**

RESET system to Factory default setting, please wait a moment...Ok

## 22 Response Request

The user will be able to suppress all responses from the DV-HMSW4K-88 matrix if they like. The user should ensure that all subsequent requests to the DV-HMSW4K-88 matrix are properly formatted as it would be difficult to ascertain their correctness without a response. The format for the Response request is as follows:

<b>RSP</b>	"Y"	"N"	<cr>
------------	-----	-----	------

**Syntax:** RSP <"Y" | "N"><cr>

Where:

**RSP** Response Request header.

"Y" | "N" Y = response enabled, N = response disabled

**Example:**

RSP Y<cr> – Response requested.

**Example Response:**

Ok

**Example**

RSP N<cr> – Response suppressed.

**Example Response:**

Ok

## 23 SMSK Request

The user can configure or inquire the current Subnet Mask with this command. The format for the SMSK request is as follows:

<b>SMSK</b>	<i>subnet_mask</i>   "?"	<cr>
-------------	--------------------------	------

**Syntax:** SMSK <*subnet\_mask* | "?"><cr>

Where:

**SMSK** Start of SMSK message.

*subnet\_mask* The subnet mask specified as a 4-tuple, ie xx.xx.xx.xx

"?" Inquiry for the current Subnet Mask.

**Example:**

**SMSK 255.255.240.0<cr>** – Sets the Subnet Mask to 255.255.240.0.

**Example Response:**

Changes take effect after reboot!

**Note:** The matrix must be rebooted by removing the power.

## 24 Status Request

The user may request status from the DV-HMSW4K-88 matrix at any time. The format of the Status request is as follows:

<b>STA[TUS]</b>	<b>&lt;cr&gt;</b>
-----------------	-------------------

**Syntax:** STA[TUS]<cr>

Where:

**STA**            Status Request header

### Response for Status request:

```

=====
  <Matrix_model_name>
  <Firmware_version_number>

Power IR Key APM Beep
<pwr> <ir> <fp> <apm> <beep>

InputPort EdidIndex Cableconnect
<iport #> <EdidIndex> <Cableconnect>

OutputPort SelectInput Cableconnect EnableOutput
<oport #> <sel_iport #> <Cableconnect> <EnableOutput>
=====

```

<i>Matrix_model_name</i>	Model name and number of the unit.
<i>Firmware_version_number</i>	The firmware version number of the unit.
<i>pwr</i>	Current Power state, ON or OFF, Normal and Power Save, respectively.
<i>ir</i>	System IR Control state, ON or OFF.
<i>fp Key</i>	Front Panel Lock state, ON or OFF.
<i>apm</i>	Advanced Process Mode state, ON or OFF.
<i>beep</i>	Onboard Beep state, ON or OFF.
<i>iport #</i>	Input Port number, 1 to maximum number of inputs.
<i>EdidIndex</i>	The output port number EDID used for the specified input.
<i>Cableconnect</i>	The connect state of the HDMI terminal, Yes or No.
<i>oport #</i>	Output Port number, 1 to maximum number of outputs.
<i>sel_iport #</i>	The Input Port number to which the output port is currently connected.
<i>EnableOutput</i>	The Enable state of the respective output port, Yes or No.

**Example:**  
STA<cr>

**Example Response:**

```
=====
```

Power	IR	Key	APM	Beep
ON	ON	ON	ON	ON

  

InputPort	EdidIndex	CableConnect
01	DEFAULT_00	No
02	DEFAULT_00	No
03	DEFAULT_00	No
04	DEFAULT_00	No
05	DEFAULT_00	No
06	DEFAULT_00	No
07	DEFAULT_00	No
08	DEFAULT_00	No

  

OutputPort	SelectInput	CableConnect	EnableOutput
01	04	Yes	Yes
02	04	Yes	Yes
03	04	Yes	Yes
04	04	Yes	Yes
05	04	Yes	Yes
06	04	Yes	Yes
07	04	No	No
08	04	No	No

```
=====
```

## **25 Version Number Request**

The user has the ability to request the matrix model and the current firmware version number. The request is formatted as follows:

<b>VER</b>	<b>&lt;cr&gt;</b>
------------	-------------------

**Syntax:** VER<cr>

Where:

**VER**            Version Request header

**Response:** *Part# VER Version#*

Where:

*Part#*            **DV-HMSW4K-88**

*Version#*        XX.xx, where XX = Major version number and xx = Minor version number.

**Example:**

*VER<cr>*

To which the DV-HMSW4K-88 matrix and firmware revision XX.xx will respond with the following:

*DV-HMSW4K-88 VER XX.xx*



## 26 Verbose Request

The user can, during debugging, turn on verbose mode. This mode will expand the standard error messages to include the expected command syntax along with a description of the commands and possible parameters, as formatted above in the specific help for that errored command. If an input command is unidentified, verbose mode will output the contents of the general HLP command. If verbose mode is OFF, then any errored input will result in just the command syntax being output as described in **Syntax** for each command. The verbose request is defined as follows:

<b>VRB</b>	"Y"	"N"	<cr>
------------	-----	-----	------

**Syntax:** VRB <"Y" | "N"><cr>

Where:

<b>VRB</b>	Verbose request header
"Y"   "N"	"Y" turns verbose ON, "N" turns verbose OFF.

### **Example:**

If the user tries to connect input 9 (which is not in valid range of 1-8 for an 8x8 matrix) using the CON command, the error message would appear as follows:

ERR: CON {<input> <("outputSequence")>}\*<cr>

Connect specified input to specified output(s).

input                    Input to connect "1" to number of available inputs.

outputSequence        Outputs as a *number sequence*.