

Edition 5a

Hand-Held Digital Generator

HDG-8000Pro

USER MANUAL



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1. Before You Start

WARNING: To prevent any risk from your workstation, please attention important safety instruction as below;

AC POWER

Please, unplug the Power Cord of HDG-8000Pro, after turning off the power key on the side panel. The power cord of the appliance should be unplugged from the outlet, when left unused for a long period of time. Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

OBJECT AND LIQUID ENTRY

- Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

WATER AND DUST

- Do not use this product near wet or dirty place.

ATTACHMENTS WITH OTHER DEVICES

- Do not use disapproval attachments by the product manufacturer as they may cause hazards.

SHOCK DAMAGE

- Do not shock or heat this product.

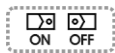
THE SETUP METHOD

- Do not place this product on an unstable cart or table etc, as well as not vertically.

TROUBLESHOOTING

- Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

REFERENCE: International Electrical Symbols



On / Off Switch



Conforms to European Union directives



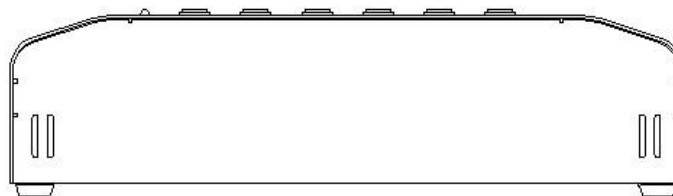
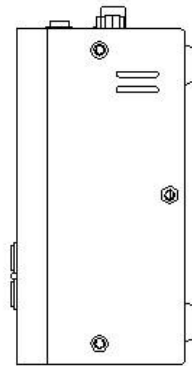
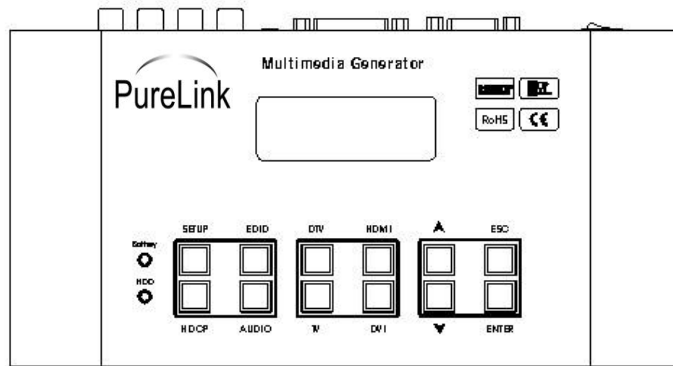
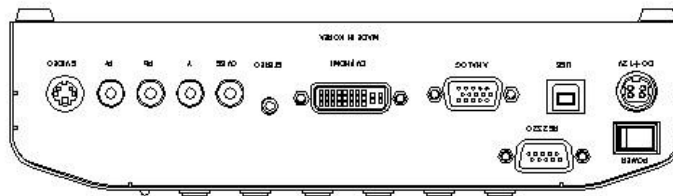
High Definition Multimedia Interface

2. Product's Composition

What's in the box, Please confirm that the accessory are in the box when you open it.

< Accessory >

- Include Adapter (12V/5A)
- Power Cable
- USER MANUAL
- DVI CABLE (1ea)



3. About HDG-8000Pro

3.1 The Definition

This HDG-8000Pro is a battery powered, portable multimedia generator that enables you to conduct quick, on-site verification testing of your video systems. This product can output the Audio, Video and Image format stored from internal HDD Memory through each output port as Digital/ Analog signal. HDG-8000Pro is the Multi-Media Test Device for display Inspection with variable Projector, HDTV, PDP, TFT-LCD etc, moreover comparing HDG-8000Pro with DVD player, It can especially support both ATSC and DVB Formats of the COMPONENT, Analog, HDMI, such as 1080i/p, 720P, 576i/p, 480i/p etc.

3.2 The Features

- Battery powered for portability. Device is powered via internal batteries or externally via an AC charger.
- Handheld compact size and easy operation, 220mm (W) x 110mm (D) x 55mm (H) (W/D/H)
- Offers analog and digital video signals including VESA, SMPTE and CEA international standards.
- Verify HDCP on sources and displays.
- Reads EDID data of connected display and scale a source to fit the display.
- Support the DVI (Single) & HDMI – Connector type: **DVI**
- Supports all VESA resolutions up to WUXGA (1,920x1,200) /RB
- Provides various test patterns used by field technicians and engineer.
- Provides easy GUI on LCD panel for Resolution change, EDID, HDCP and Audio.
- Offers media player function to play movie, music and image.
- Includes 80GB HDD for storing and playing AV files.
- Includes 7.4V/6A battery for field usage, powering for 2 hours, which depends on operational condition.
- Provides video range function. (Full range for DVI and limited range for HDMI)
- Provides RS-232 port to be remotely controlled.
- Easy firmware updates.

3.3 The Specification Output Format

- TV/ S-VHS : NTSC, PAL
- DTV (Y/Pb/Pr) : 480i/p, 576i/p, 720p, 1080i/p
- DVI format : VESA standard up to 1920 X1200(RB)
- HDMI format : 1.2ver (480i/p, 576p, 720p, 1080i/p)

- Analog(15pin) : 8MHZ-250MHZ(±25ppm)
 - H :10KHZ~200KHZ(±25ppm)
 - V :10KHZ-200HZ(±25ppm)
 - Audio : Stereo

- Internal storage : 2.5' HDD (80GB)

- Video Format: MPG(MPEG1/2/4), AVI(MPEG1/2/4-V3, DivX3/4/5, XVID, VC-1, DX50), WMV(WMV9),ASF, TS(MPEG Layer), TS(MPEG Layer), TRP(MPEG Layer): Up to 1920x1080P/50.60HZ

- Audio Format : MP3, WMA, AAC, PCM, AC3, WAV, BSAC, WMAPRO
- Image Format : JPEG, BMP, PNG, GIF, BMP, PNG
- Image Resolution : Up to 2048 x 2048
- HDCP Function : Receivable (Ver.1.1)
- Dimension (mm)/ Weight (KGs) : 220(W) X 110(D) X 55(H) / 1kgs
- IP CODE : IPXO

4. Environmental and Reliability Specifications

1. Operating Conditions

- **Temperature** : 10°C ~ 40°C
- **Humidity** : 10% - 80%, non-condensing
- **Altitude** : maximum 3,000m

2. Transportation Conditions

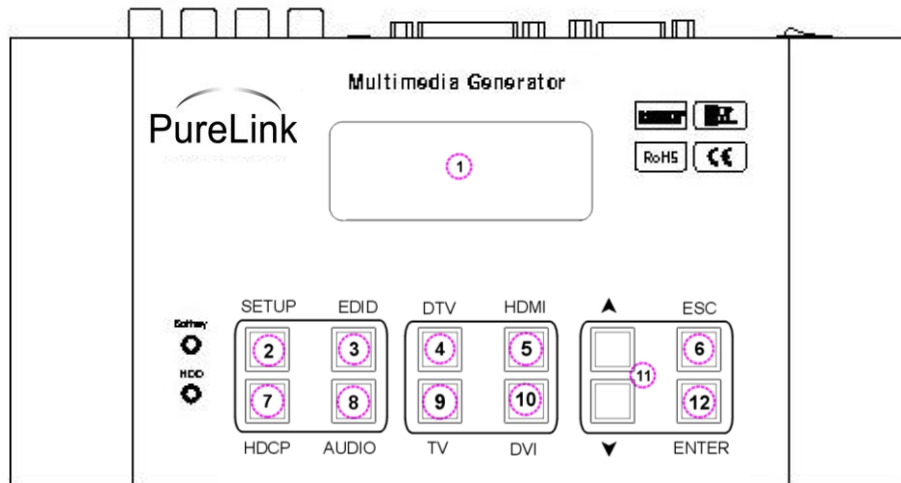
- **Temperature** : -25°C ~ 60°C
- **Humidity** : 5% ~ 95%, non-condensing
- **Altitude** : maximum 15,000m

3. Storage Conditions

- **Temperature** : -20°C - 45°C
- **Humidity** : 5% - 95%, non-condensing
- **Altitude** : maximum 3,000m

5. Each Part's Name and Function

5.1 Front View



- ① **LCD** : Displaying the data on the LCD as 20 letters and 4 rows.
- ② **SETUP** : Move to initial Menu.
- ③ **EDID** : Check the EDID data or not.

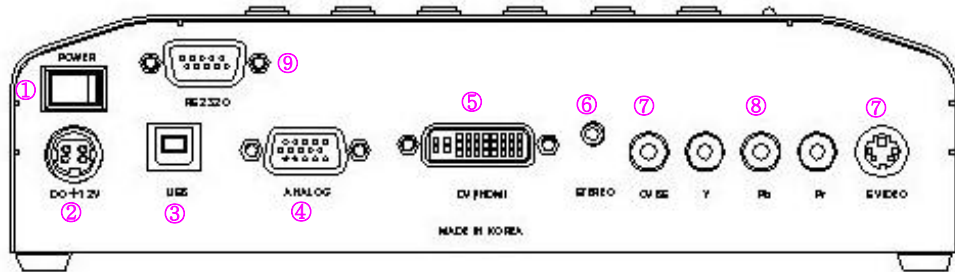
EDID On : Output the signal in accordance with the display's EDID data through Checking the EDID data.

EDID Off : Output the signal unrelated to the display's EDID data.

※ If display hasn't the EDID data or abnormal data, the signal is not going out when the EDID is "On" mode.

- ④ **DTV** : To change the output mode as DTV.(Component)
- ⑤ **HDMI** : To change the output mode as HDMI.
- ⑥ **ESC** : Exit or Cancel to move.
- ⑦ **HDCP** : Key for HDCP on/ off.(High-Bandwidth Digital Content Protection)
- ⑧ **AUDIO** : Select the condition of audio output. (On or Mute)
- ⑨ **TV** : To change the output mode as TV.(NTSC, PAL)
- ⑩ **DVI** : To change the output mode as DVI.
- ⑪ **▲▼** : Move up/down the file list or Preview or Next the movie & pattern.
- ⑫ **ENTER** : Enter key.
- ⑬ **BATTERY LED** :It shows the battery condition

5.2 Side View



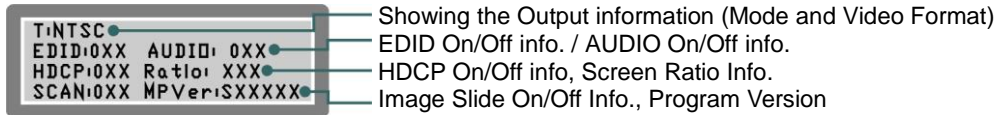
- ① Power 'On/Off' switch.
- ② DC 12V/5A Power receptacle.
- ③ USB A port. (Up-load or Download the firmware / Media files)
- ④ Analog output port. (15pin D-sub)
- ⑤ DVI port (DVI/HDMI format): Digital Audio and Video signal.
- ⑥ Audio output port. (Stereo)
- ⑦ TV format output port. (CVBS / S-Video).
- ⑧ D-TV format output port. (Component-YPbPr)
- ⑨ RS-232C port. (Remote control).

6. Initial Setting Menu

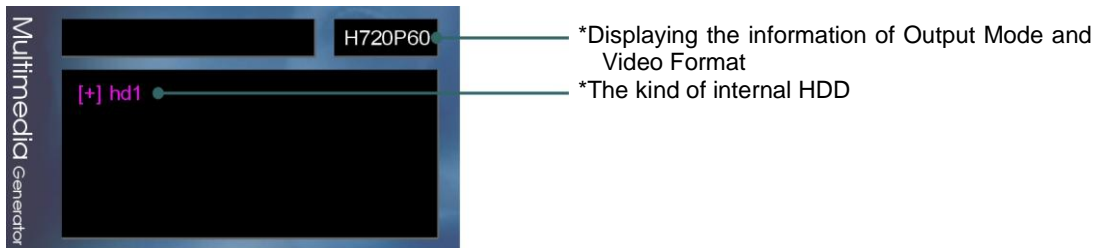
6.1 Using Initial Setting Menu

Turn on the power and push the 'setup' key.
Video and audio data are perfectly controlled through this initial menu.

6.2 Initial LCD Window, After Power On



6.3 Initial Display Screen, After Power On



6.4 Initial Menu Setup Screen

Initial setting Direction

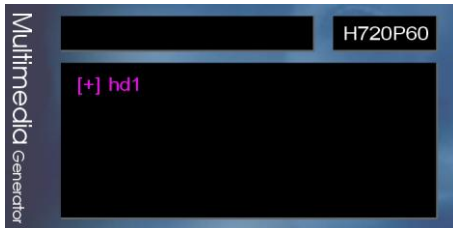


[Key directions] *Enter key: Select contents. *Up/Down key: Changing value.

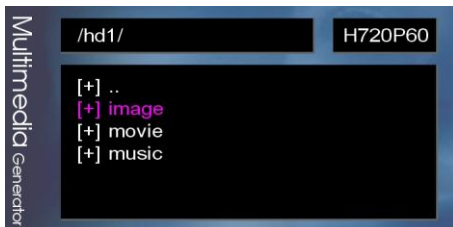
Output Mode	Selecting a resolution
Range Setup Level	Set the level of range (3 mode) ① AUTO: Range setup automatically. ② Full range: 0 - 255 / PC/DVI formats. ③ Limit range: 16 - 235 / HDMI formats.
HDCP	Set the HDCP (On/Off)
EDID	Set the EDID (On/Off)
Ratio	Select ratio (16:9/4:3)
Real Image	Real image size ① On: Showing a real size ② Off: Showing a resolution size
Slide show	Image slide show On/Off.
Slide Time	Set the slide time

7.How to play each function

7.1 How To Play The Images



1) Select the [+] hd1 using 'Enter' key

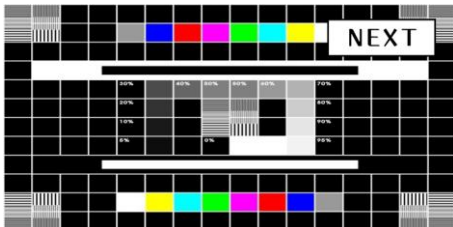


2) Select the [+] images folder, and then push the **ENTER** key.

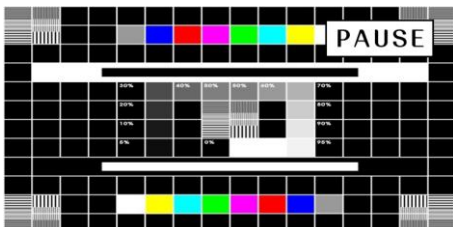
3) Select a kind of Image files, and then push the **ENTER** key to play the Image.



Push the ▲ key, there will be message PREV and previous files are play.
(But when play the first file, if you push ▲ key, it goes file list.)



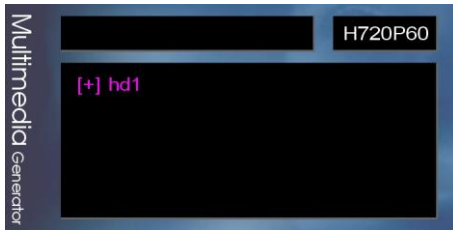
Push the ▼ key, there will be message NEXT and Next files are play.
(But when play the last file, if you push ▼ key, it goes file list.)



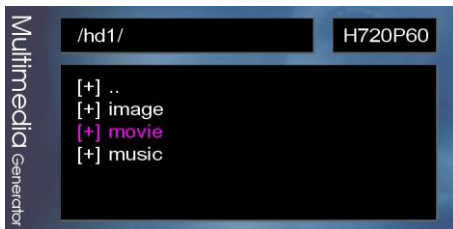
If you using the image slide function, there will be message for PAUSE and slide function will be pause as push the ENTER key. Also, PLAY message are marked and slide function will be restored as push the ENTER key again.

4) Push the ESC key for stopping the video playing and going previous display menu.

7.2 How To Play The Video



1) Select the [+] hd1 using 'Enter' key



2) Select the [+] movies, and then push the ENTER key.

3) Select a kind of Video files, and then push the ENTER key to play the Video.



Push the ▲ key, there will be message PREV and previous files are play.
(But when play the first file, if you push ▲ key, it goes file list.)



Push the ▼ key, there will be message NEXT and Next files are play.
(But when play the last file, if you push ▼ key, it goes file list.)

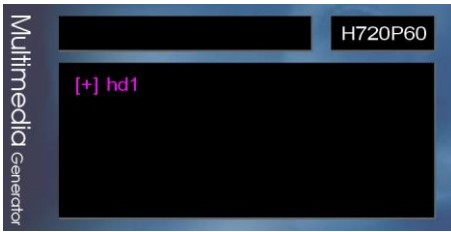


If you playing the video file, there will be message for PAUSE and video are paused as push the ENTER key. Also there will message like PLAY and video are Play as the push the ENTER key again

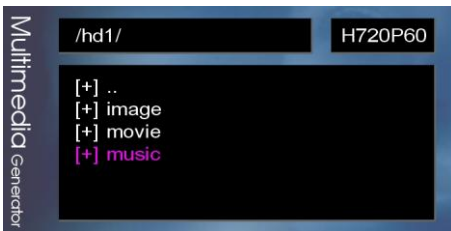
4) When the last file is end, the first file will be play automatically

5) Push the ESC key for stopping the video playing and going previous display menu.

7.3 How To Play The Audio



1) Select the [+] hd1 using 'Enter' key



2) Select the [+] movies, and then push the **ENTER** key.

3) Select a kind of Audio files, and then push the **ENTER** key to play the Audio.
Below pictures are showing during the Audio file is playing



There will be message PREV and previous files are play by push the ▲ key



There will be message NEXT and Next files are play by push the ▼ key,



If you playing the Audio file, there will be message for
*PAUSE: Audio are paused as push the ENTER
*PLAY: Audio are Play by push the ENTER key again

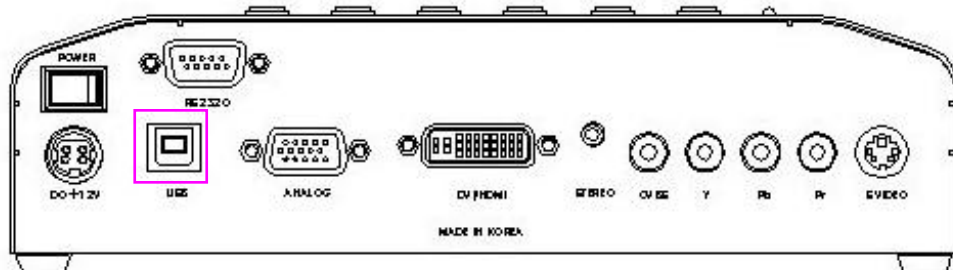
4) When the last file is end, the first file will be play automatically

5) Push the ESC key for stopping the video playing and going previous display menu.

8. PC Download

8.1 USB (Firmware download / copy the media files)

1) Definition: It can be able to edit the system data and copy the media files between PC and HDG-8000Pro using USB port.



2) How to use

- ① Turn off the main power.
- ② Connect to the PC's USB port using exclusive cable from HDG-8000Pro's USB connector.
- ③ Turn on the main power.
- ④ USB driver will install automatically and you'd be able to see the message like below.



▶ Firmware Download

- Only replace the system files (Wongane file) by copy or cut the files.
- ※ Caution Please do not access the system folder.

▶ Copy the media files from PC

- Make a new folder in HDG-8000Pro HDD and copy to internal HDD.
- Capacity: 80GB

9. A/S Service

9.1 Customer's Right

(One) Year Warranty

Dtrovision warrants HDG-8000Pro, Multimedia Player to be free from defects in workmanship and materials, under normal use and service, for a period of one (1) year from the date of purchase from Dtrovision or its authorized resellers.

If a product does not work as warranted during the applicable warranty period, Dtrovision shall, at its option and expense, repair the defective product or part, deliver to customer an equivalent product or part to replace the defective item, or refund to customer the purchase price paid for the defective product.

All products that are replaced will become the property of Dtrovision.

Replacement products may be new or reconditioned.

Any replaced or repaired product or part has a ninety (90) day warranty or the remainder of the initial warranty period, whichever is longer.

Dtrovision shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to Dtrovision for repair under warranty or not.

9.2 Warranty Limitations and Exclusion

Dtrovision shall have no further obligation under the foregoing limited warranty if the product has been damaged due to abuse, misuse, neglect, accident, unusual physical or electrical stress, unauthorized modifications, tampering, alterations, or service other than by Dtrovision or its authorized agents, causes other than from ordinary use or failure to properly use the Product in the application for which said Product is intended.

9.3 Contact

Dtrovision LLC

9A Bergen Tpke Little Ferry, NJ 07643 USA

Tel: +1.201.488.3232

Fax: +1.201.621.6118

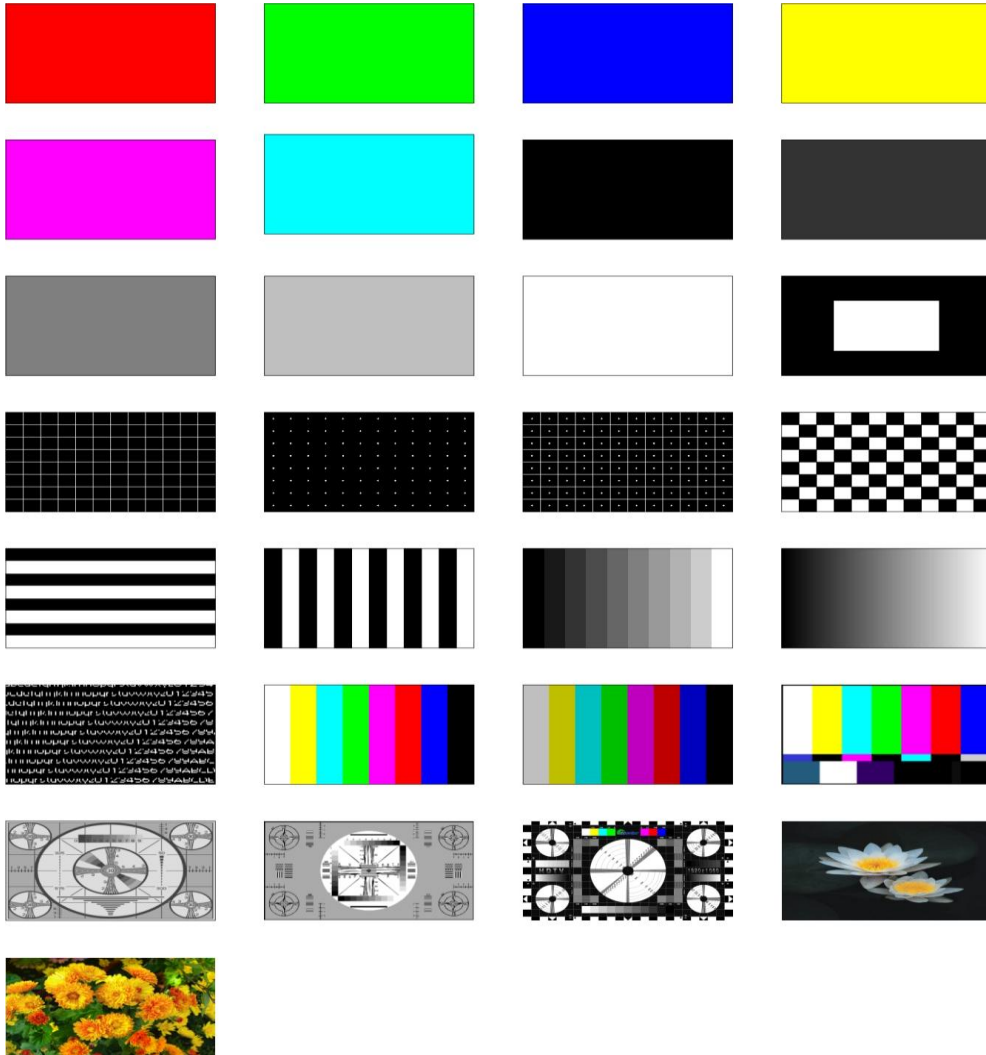
E-mail: support@dtrovision.com

www.dtrovision.com

For support, please contact your local dealer.

10. Appendix

10.1 Pattern Images



10.2 Fixed default time data (Default)

Time No.	DVI MODE
1	VESA – 640x480 / 60hz
2	VESA – 800x600 / 60hz
3	VESA – 1024x768 / 60hz
4	VESA – 1024x768 / 75hz
5	VESA – 1152x864 / 75hz
6	VESA – 1280x960 / 60hz
7	VESA – 1280x1024 / 60hz
8	VESA – 1280x1024 / 75hz
9	VESA – 1600x1200 / 60hz
10	VESA – 1920x1200 / 60hz
11	VESA – 1280x720 / 50hz
12	VESA – 1280x720 / 60hz
13	VESA – 1280x800 / 60hz
14	VESA – 1280x800 / 75hz
15	VESA – 1360x768 / 60hz
16	VESA – 1440x900 / 60hz
17	VESA – 1440x900 / 75hz
18	VESA – 1680x1050 / 60hz
19	VESA – 1920x1080 / 50hz
20	VESA – 1920x1080 / 60hz

Time No.	TV MODE
11	NTSC
12	PAL

Time No.	DTV MODE
13	480i/60
14	480P/59
15	720p/60
16	1080i/60
17	1080p/60
18	576i/50
19	576p/50
20	720p/50
21	1080i/50
22	1080p/50

Time No.	HDMI MODE
23	480i/60
24	480P/60
25	720p/60
26	1080i/60
27	1080p/60
28	576i/50
29	576p/50
30	720p/50
31	1080i/50
31	1080p/50

10.3 RS-232C communication command

*Baud rate 19200

1) 1-byte Command

HEX	HDG-8000Pro	HEX	HDG-8000Pro	HEX	HDG-8000Pro
0x40	SCAN On	0x50	EDID Info	0x60	DTV50
0x41	SCAN Off	0x51	Size check	0x61	DTV60
0x42	P-DTV	0x52	DTV	0x62	HDMI50
0x43	I-DTV	0x53	HDMI	0x63	HDMI60
0x44	TIME	0x55	RATIO	0x64	720P
0x45	TV (CVBS)	0x57	MENU	0x65	1080I
0x46	COPY	0x59	HDCP	0x66	1080P
0x47	HDCP ON	0x5B	AUDIO ON	0x67	PC1
0x48	HDCP OFF	0x5D	AUDIO OFF	0x68	PC2
0x49	SCAN	0XF2	DOWN	0x69	PC3
0x4A	EDID	0XF5	UP	0x6A	PC4
0x4B	EDID ON	0X0D	ENTER	0x6B	PC5
0x4C	EDID OFF	0X90	S2 Ratio 4:3	0x94	D5 Ratio4:3LT
0x4D	RATIO 16:9	0X91	S2 Ratio4:3LT	0x95	D5 Ratio 16:9
0x4E	RATIO 4:3	0X92	S2 Ratio 16:9		
0x4F	ESC	0X93	D5 Ratio 4:3		

2) Many-byte Command: PC Control Command

HEX	HDG-8000Pro	HEX	HDG-8000Pro
0x07	Resolution Change	0x08	Mode Change (file name)
0x09	File Select	0x0A	Slideshow (Image file)

*Example command

1) Select the time number (3) three.

Command: **02070730303103**

Start code

0x02 ① Data Length 1

Command Length

0x07 ② Data Length 2

Command Length

0x07 ③ Data Length 3

Resolution Number

0x30 ④ Data Length 4

0x30 ⑤ Data Length 5

0x31 ⑥ Data Length 6

End code

0x03 ⑦ Data Length 7

Note:



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For order support, please contact your local dealer.

For technical support, please contact us at support@dtrovision.com