Gefen tv ®

HD Mini Pattern Signal Generator

GTV-HD-MPSG
User Manual

gefentv.com

ASKING FOR ASSISTANCE

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Congratulations on your purchase of the GefenTV HD Pattern Signal Generator. Your complete satisfaction is very important to us.

About Gefen

We specialize in total integration for your home theater, while also focusing on going above and beyond customer expectations to ensure you get the most from your hardware. We invite you to explore our distinct product line. Please visit http://www.gefen.com for the latest offerings in High-Definition signal solutions or call us between the hours of 8:00 am and 5:00 pm Monday-Friday, Pacific Standard Time for assistance with your A/V needs. We'll be happy to assist you.

GefenTV

The GefenTV line offers portable and easy-to-install solutions for common A/V system integration setups using HDMI connectivity. GefenTV products are wall-mountable and small in size. GefenTV products are easily transported in the field and are ready for immediate and simple installations in working environments.

The GefenTV HD Mini Pattern Signal Generator

The GefenTV HD Mini Pattern Signal Generator is the most advanced testing device for your audio and video equipment. 19 built-in timings, 6 patterns, and 1 3D pattern provide hundreds of testing combinations for both analog and digital devices. The front panel LCD screen provides easy viewing of functions and features for each timing / pattern. This device can be conveniently controlled via the front panel buttons, the IR remote or the downloadable software from the Gefen Web site. In addition to its portability, this signal generator is wall-mountable and field-upgradeable.

How It Works

Connect the HDMI output port of the GefenTV HD Mini Pattern Signal Generator to your HDTV display. Power-on all equipment. The front panel LCD will display all features and options of the active timing and pattern. You can feed digital or analog audio into the generator's rear panel and hear multi-channel digital audio or use the built-in sine wave test tone.

**READ THESE NOTES BEFORE INSTALLING OR OPERATING
THE GEFENTV HD MINI PATTERN SIGNAL GENERATOR**

- Firmware updates for the GefenTV HD Mini Pattern Signal Generator can be downloaded under the Support -> Downloads section of the Gefen Web site.

Features

- Supports SD and HD resolutions up to 1080p Full HD
- Supports VESA resolutions up to 1920x1200 (WUXGA) @ 60Hz
- 19 built-in timings
- 6 patterns and 1 3D pattern in three different formats
- 3D pattern support
- HDCP pattern
- Up to 12-bit Deep Color support at 1080 Full HD
- Signal Generator bypass mode for analyzing an external source
- Supports LPCM 7.1CH 48/96Khz, LPCM 5.1CH 48/96Khz and LPCM 2CH 48/96Khz
- Analyzes input source info-frame and output sink EDID
- Touch button control
- OLED show Input / Output timing information
- Supports ARC (Audio Return Channel) using TOSLINK output
- Firmware upgradeable via 3.5mm plug (requires DB-9 to 3.5mm adapter)

Sample Applications

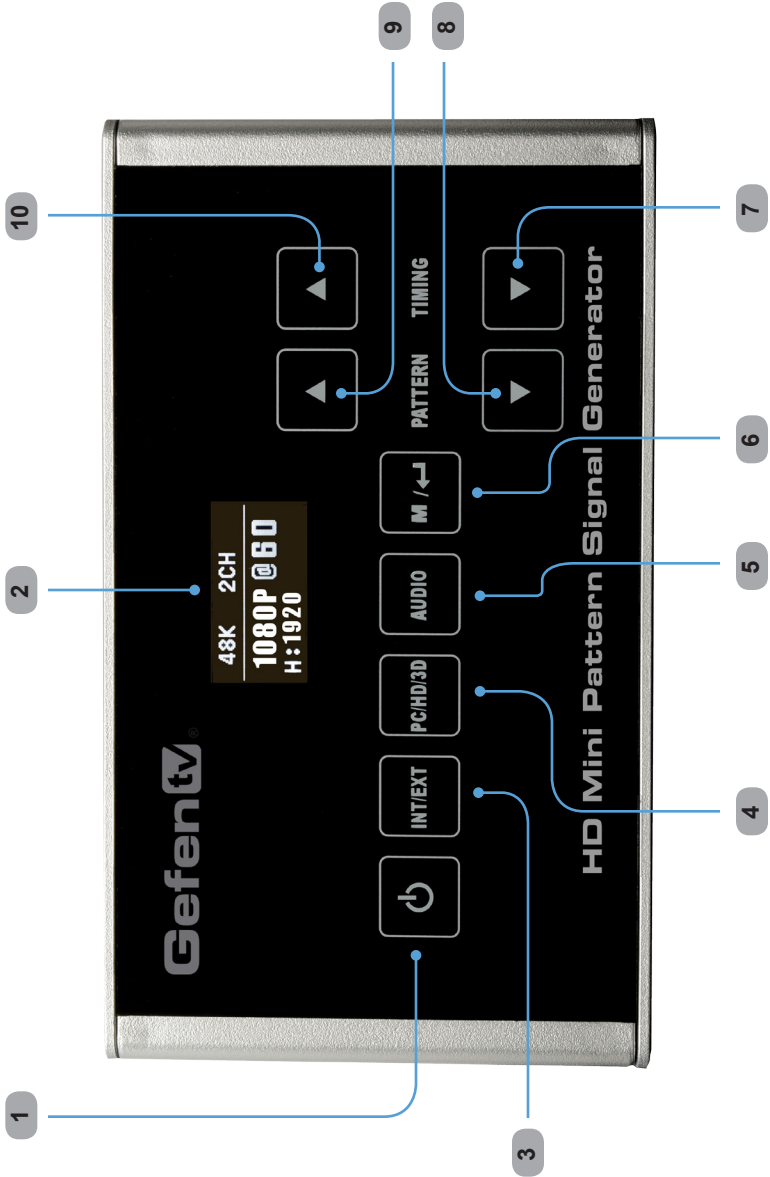- Apparatus Testing and Troubleshooting
- Equipment Adjustment
- EDID checking
- Source / Sink definition
- HDCP Verification

Package Includes

(1) GefenTV HD Mini Pattern Signal Generator (GTV-HD-MPSG)
(1) 5V / 1A DC Power Supply (EXT-PS51AIP-O)
(1) Quick-Start Guide (QSG-GTV-HD-MPSG)

Top Panel

TOP PANEL DESCRIPTIONS

1   Power
Press this button to turn the Signal Generator power ON or OFF. The Power button will glow red when the Signal Generator is in Standby Mode. In Standby Mode the unit consumes less than 1W of power.

2   Display window
The high-resolution OLED display shows pattern, timing, and audio information. Additional information is displayed when using an external source. See page 10 for more information.

3   INT / EXT
Press this button to toggle between External and Internal modes. When analyzing a sink device (e.g., HDTV display, A/V Receiver, etc), the Signal Generator should be set to Internal (INT) mode. When the Signal Generator is used with an external source, the Signal Generator should be set to External (EXT) mode. This button will glow bright blue when set to External mode.

4   PC / HD / 3D
Press this button to toggle between PC (VESA) resolutions, HD resolutions, and the 3D test pattern.

5   AUDIO
Pressing this button consecutively will cycle through the different audio output options. See page 14 for details.

6   M /
Displays the Main Menu. See page 17 for more information.

7   TIMING ▼
Cycles backward through the list of timings.

8   PATTERN ▼
Cycles backward through the list of patterns.
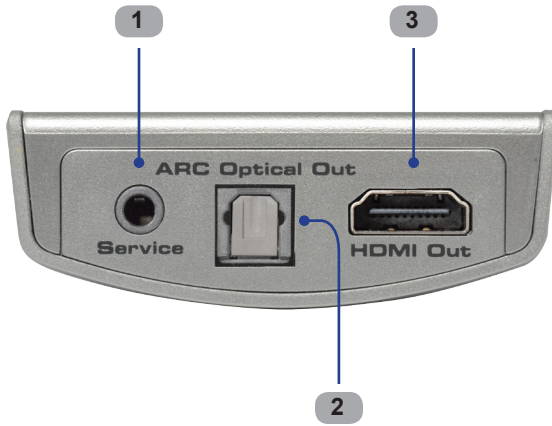
9   TIMING ▲
Cycles forward through the list of timings.

10 PATTERN ▲
Cycles forward through the list of patterns.

SIDE PANEL LAYOUT

Left Side

Right Side
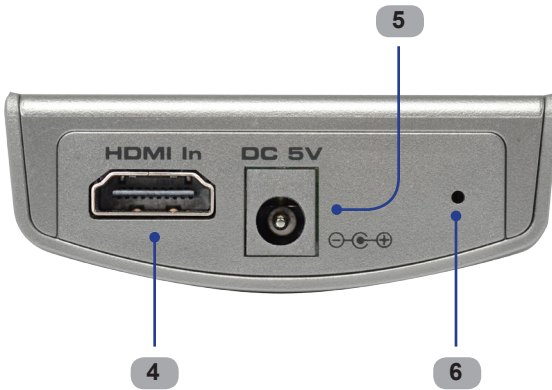
1 ***Service***
This port is used for performing firmware updates. An RS-232 to 3.5 mm adapter is required for the update process.

2 ***ARC Optical Out***
Connect an optical cable from this TOSLINK connector to an audio amplifier. This TOSLINK connector can only be used when using the Audio Return Channel (ARC) feature in HDMI 1.4.

3 ***HDMI Out***
Connect an HDTV display to this HDMI port. DVI displays can be connected using an HDMI to DVI cable or adapter.

4 ***HDMI In***
Used to connect a Hi-Def source to the Signal Generator using an HDMI cable. DVI sources can be connected using an HDMI to DVI cable or adapter. Connect a sound device to the HDMI In port to obtain infoframe and other information from the source device.

5 ***DC 5V***
Connect the included 5 V DC power supply to this connector

6 ***Service button***
Used during the firmware update procedure.

How to Connect the HD Mini Pattern Signal Generator

1. Connect an HDMI cable from the HD Mini Pattern Signal Generator to the HDTV Display.

2. OPTIONAL: Connect an optical cable from the TOSLINK connector on the Signal Generator to an audio amplifier.

> **i** **NOTE:** The TOSLINK™ audio output connector can only be used when using the Audio Return Channel (ARC) feature in HDMI 1.4.

3. OPTIONAL: Use an HDMI cable to connect a Hi-Def source to the HDMI In on the Signal Generator. See page 16 for more information on using an input source.

4. Connect the included 5V DC power supply to the power receptacle on the HD Mini Pattern Signal Generator and connect the AC adapter to an available electrical outlet.

Wiring Diagram for the GefenToolbox HD Pattern Signal Generator

Gefen**tv**.

DIGITAL AUDIO (TOSLINK) CABLE
HDMI CABLE

Hi-Def Source

HD Mini Pattern Signal Generator

HD Display

Audio Receiver

GTV-HD-MPSG
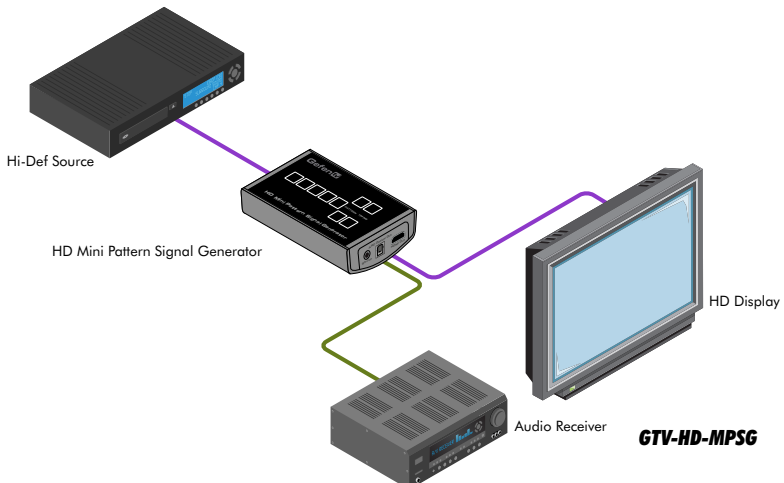
Powering the Signal Generator

Once the Signal Generator is connected to a power source, the Power button will glow bright red. Press the Power button to power ON the Signal Generator. When the Signal Generator is powered, the power button will glow bright blue. Use the Power button to turn the Signal Generator ON or OFF.

> **NOTE:** If the power cord is disconnected from the Signal Generator, then the Signal Generator will automatically return to the last powered state (ON or OFF) when the power cord is reconnected.

Power button
Press to turn ON or turn OFF the
HD Mini Pattern Signal Generator.

Standby Mode
Power button is RED
(power must be connected)

Powered
Power button is BLUE
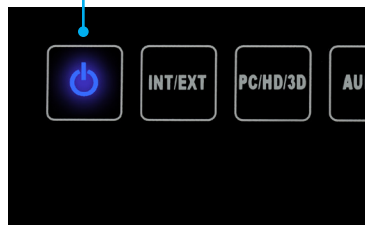
Display Window

The **Display window** of the GefenTV HD Mini Pattern Signal Generator uses a high-resolution OLED display. This display will show the currently selected timing and pattern on the output. In addition, this display is also used for providing information or messages about an input source. When the unit is powered on, a screen similar to the following will be displayed:

Audio Sampling Rate
Displays the current sampling rate of the audio signal.

Audio Channels
Displays the number of audio channels (see page 14).
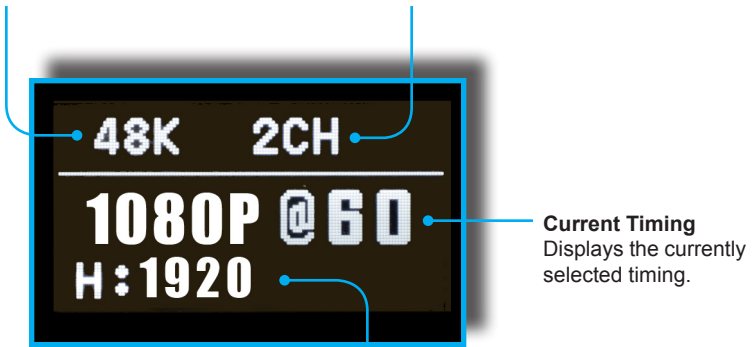
Current Timing
Displays the currently selected timing.

Horizontal Resolution
Displays the number of vertical scanlines. Some timings will also display the Vertical Resolution.
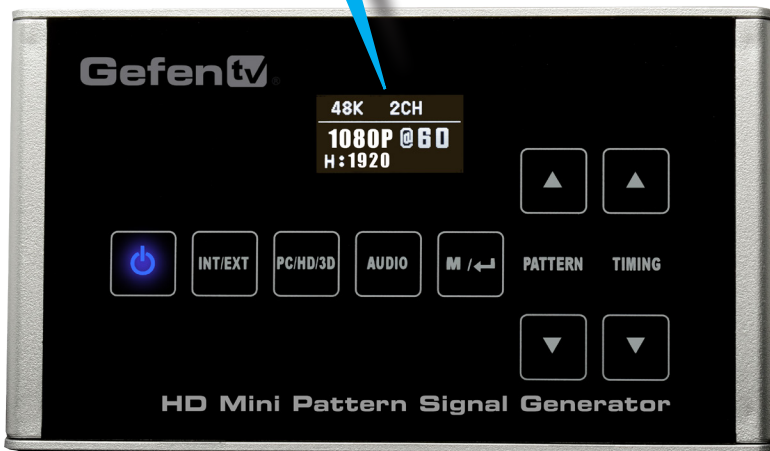
Pattern Buttons

To change the pattern, use the ▲ and ▼ Pattern buttons. The ▲ button will move forward through the patterns. Use the ▼ button to move backward through the patterns. The Signal Generator contains 6 test patterns and 1 3D pattern with three different formats. The current timing is displayed in upper left-hand corner of the OLED screen.

▲ button
Cycles forward through the timings.

▼ button
Cycles backward through the timings.
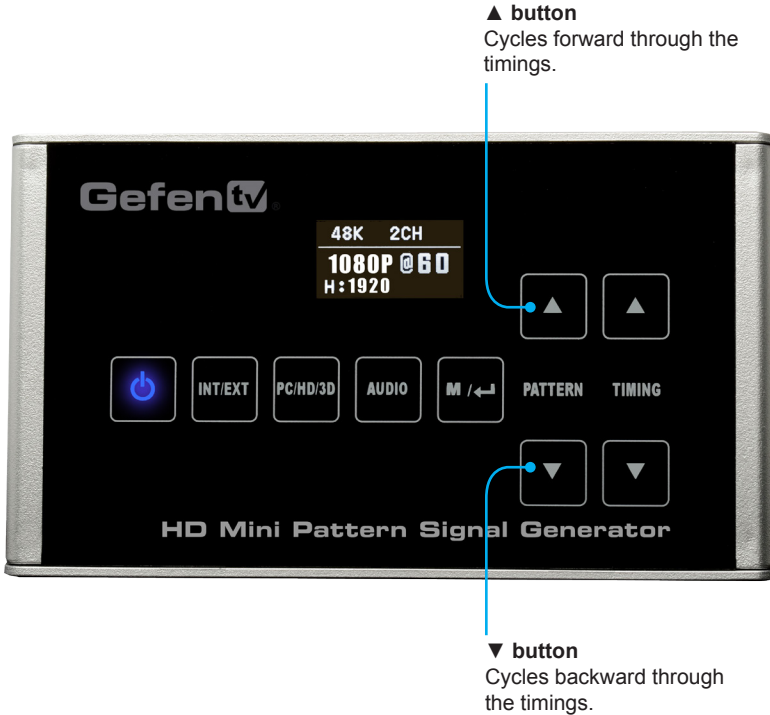
HDCP Pattern
If the output device does not support HDCP content, then the output device will not display a signal.

Purity (Red)
This pattern is typically used to check color purity.
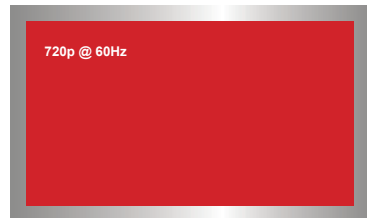
Purity (Green)
This pattern is typically used to check color purity.

720p @ 60Hz

Purity (Blue)
This pattern is typically used to check color purity.

720p @ 60Hz

Color Bar
The Red, Green, Blue color bar pattern is typically used to test for color convergence.

720p @ 60Hz

Needle
This grey and black pattern is typically used to test horizontal bandwidth and phase behavior of color monitors.

720p @ 60Hz
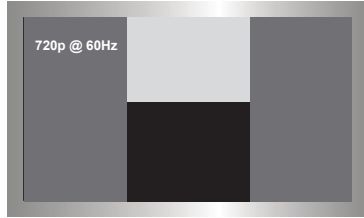
Side-by-Side (3DSH)
Side-by-Side 3D Pattern.

720p @ 60Hz 720p @ 60Hz

Side-by-Side Side-by-Side

3D 3D

Top-Bottom (3DTB)
Top-Bottom 3D Pattern.

720p @ 60Hz Top-and-Bottom

720p @ 60Hz Top-and-Bottom
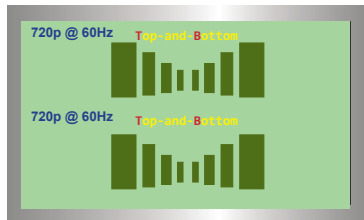
Frame Packing (3DFP)
Frame-Packing 3D Pattern (not shown)

Timing Buttons

To change the timing, use the ▲ and ▼ Timing buttons. The ▲ button will move forward through the timings. Use the ▼ button will move backward through the timings. See page 33 for a list of supported timings.

▲ button
Cycles forward through the timings.
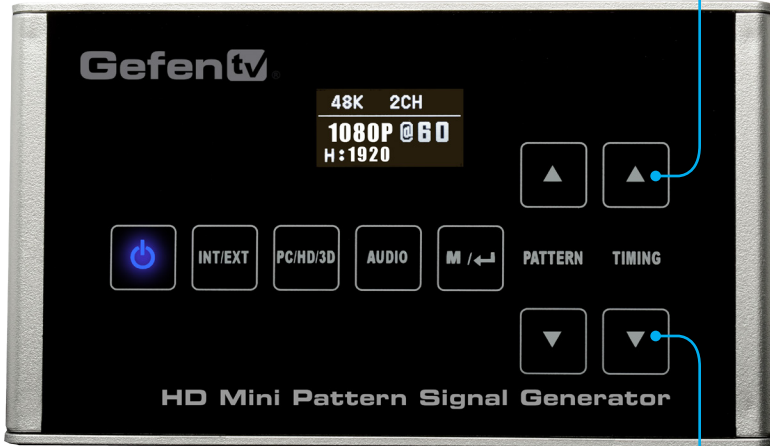
▼ button
Cycles backward through the timings.

Selecting the 3D format

Use the Timing buttons to select the 3D-format when using the 3D testing pattern.

The following 3D formats are available:

Pattern	*Shown on display as:*
• Side-by-Side	3DSH
• Top-Bottom	3DTB
• Frame Packing	3DFP

NOTE: Because the HD Mini Pattern Signal Generator uses a touch screen, each button will momentarily glow bright blue when it is pressed.

Audio Button

Press the **AUDIO** button to cycle through the different audio output formats. Note that audio is only output over HDMI. The TOSLINK connector is reserved for the Audio Return Channel (ARC).
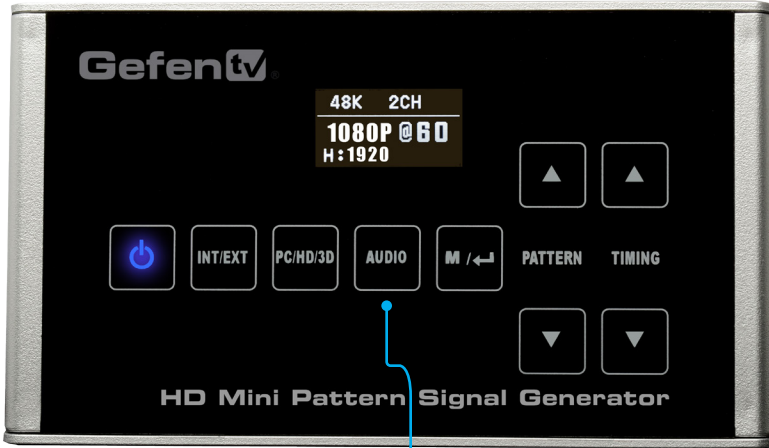
AUDIO
Press to cycle through the audio output formats.

The table below lists the order in which each of the audio settings will appear after each press of the AUDIO button. The audio frequency is always 1 kHz.

Sampling Rate	Number of Audio Channels
48 kHz	2 Channel
48 kHz	5.1 Channel
48 kHz	7.1 Channel
96 kHz	2 Channel
96 kHz	5.1 Channel
96 kHz	7.1 Channel
192 kHz	2 Channel

NOTE: The highlighted audio settings are only available when using 3D timings (3DFP, 3DSH, 3DTB).

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Switching between PC, HD, and 3D signal types

Press the **PC/HD/3D** button to switch between PC (VESA), HD, and 3D signal types.
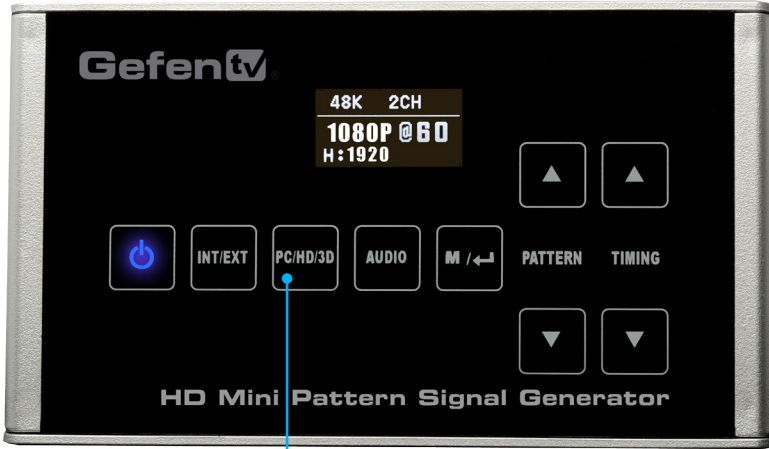
PC/HD/3D button
Press to cycle through the
audio output formats.

PC Signal
Displayed in VESA format along with the refresh rate. PC signals also show both the number of Horizontal and Vertical scan lines.

HD Signal
Includes resolutions from 480i to 1080p. The refresh rate is listed along with the number of active vertical scan lines (horizontal resolution).

3D Signal
Only 720p and 1080p signals provide 3D support on the Signal Generator. See page 33 for a list of available 3D transmission methods.

The 3D transmission format is abbreviated in the lower-right of the display.

Switching between Internal and External Mode

By default, the Signal Generator will output a signal to a display or other output device. Pressing the INT / EXT button will enable or disable the HDMI In connector on the Signal Generator. Connecting an external source to the HDMI In connector will provide information on attributes such as color space, color depth, extended colorimetry, video and audio infoframe information, and KSV count.
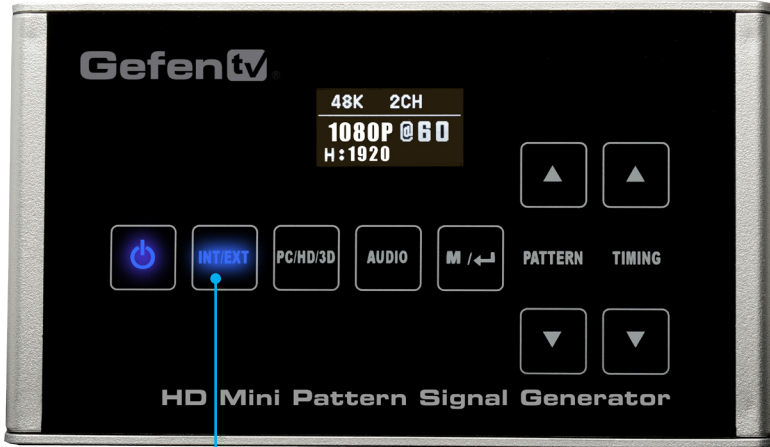
INT / EXT button
Press to toggle between Internal and External Mode.

When the Signal Generator is in External Mode, the INT / EXT button will glow bright blue

External (EXT) Mode without source
The Signal Generator display indicates that no source signal is being received.
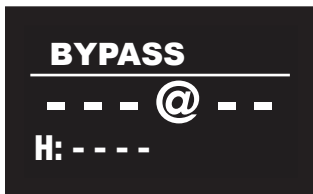
External (EXT) Mode with source
The display shows the current resolution and timing information of the source device.

Accessing the Menu System

The HD Mini Pattern Signal Generator has a built-in on-screen Menu System which provides access to additional functions during testing. Press the **M /↵** button to display the Main Menu.

M /↵
Press this button to display the built-in on-screen Menu System.

---
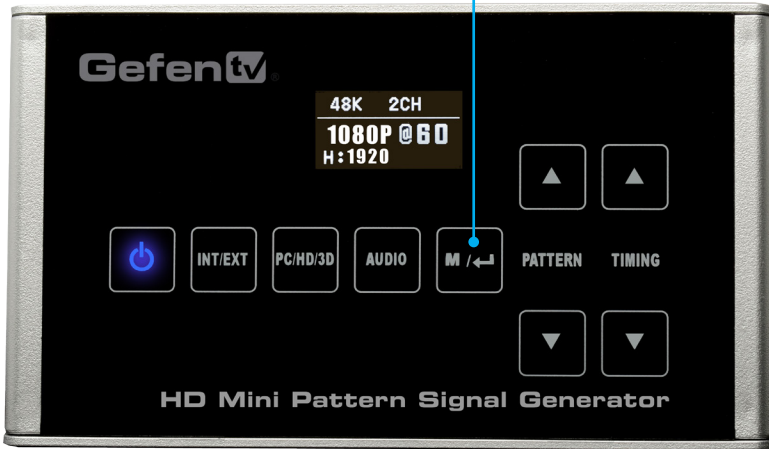
i **NOTE:** If an external source is being used, the Main Menu will appear in the foreground of the input signal. If no external source is being used then the currently displayed pattern will be replaced by a black background with the Main Menu in the foreground.

17
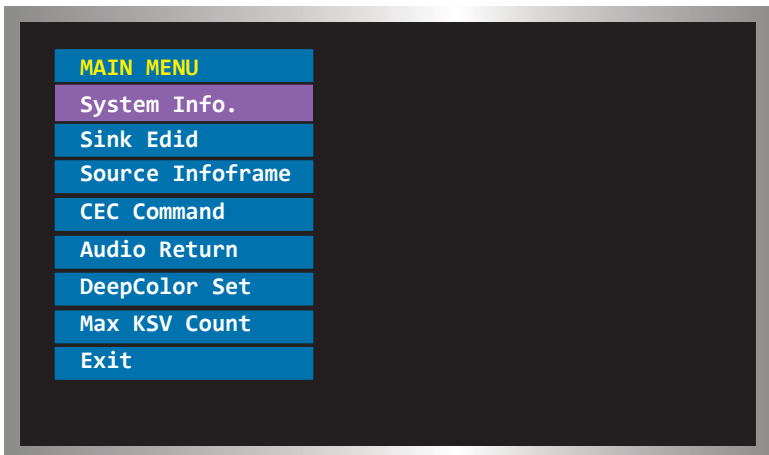
Menu System

System Info

Provides basic information about the sink and the source. If an external source is connected to the Signal Generator, the Input Device Information will also be displayed.

MAIN MENU
System Info.
Sink Edid
Source Infoframe
CEC Command
Audio Return
DeepColor Set
Max KSV Count
Exit

1. Press the MENU button on the Signal Generator. The *System Info* option will be highlighted.

2. Press the MENU button to display the device information.

3. Press the MENU button again to return to the Main Menu.

```
** Input Device Information **
Source Name  : --------
Video Signal : HDMI
Resolution   : 1080i @ 60Hz
Color Space  : 8-bit
** Output Device Information **
Sink Name    : GEF300XUT
DeepColor Support: Y444=0
    48bit=0 36bit=0 30bit=0
3D Format    : Not Support
GTV-HD-MPSG          FW: V1.0r
```
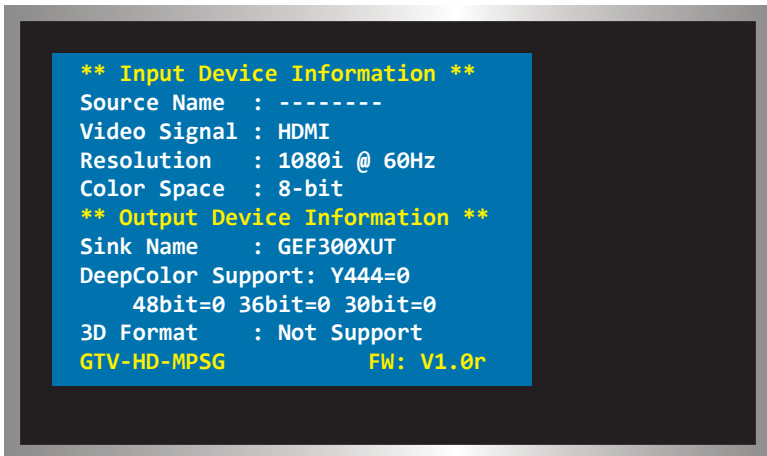
Sink Edid

Displays EDID information from the downstream device. Options: Block Data, Description.

Sink Edid > Block Data

Displays the EDID block data in hexadecimal format.

MAIN MENU		
System Info.		
Sink Edid	>>	Block Data
Source Infoframe		Description
CEC Command		INT (GEF) *
Audio Return		EXT
DeepColor Set		Save to INT
Max KSV Count		Exit
Exit		

1. Press the MENU button on the Signal Generator.

2. Use the ▲ and ▼ Pattern buttons to highlight the *Sink Edid* function, then press the MENU button to access the *Sink Edid* submenu.

3. Use the ▲ and ▼ Pattern buttons to select *Block Data*, then press the MENU button to display Block 0.

4. Use the ▲ and ▼ Pattern buttons to switch between Block 0 and Block 1.

5. Press the MENU button to return to the Main Menu.

```
                    EDID BLOCK 0
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  00  00 FF FF FF FF FF FF 00 59 3A 65 00 00 00 00 00
  10  32 13 01 03 80 33 1D 78 23 90 85 A3 58 53 9F 26
  20  0F 50 54 25 CE 00 01 01 01 01 01 01 01 01 01 01
  30  01 01 01 01 01 02 3A 80 18 71 38 2D 40 58 2C
  40  45 00 FD 1E 11 00 00 1E 00 00 00 FD 00 38 4C 1F
  50  52 0F 00 0A 20 20 20 20 20 20 00 00 00 FC 00 56
  60  4D 32 33 30 58 56 54 0A 20 20 20 20 00 00 00 FF
  70  00 4C 49 49 49 47 43 41 30 36 35 31 33 0A 01 EA

        CheckSum : 0x EA     PASS!!        <DOWN>
```

MENU SYSTEM

Sink Edid > Description
Displays a verbose description of the EDID data structure.

MAIN MENU	
System Info.	
Sink Edid >>	Block Data
Source Infoframe	Description
CEC Command	INT (GEF) *
Audio Return	EXT
DeepColor Set	Save to INT
Max KSV Count	Exit
Exit	

1. Press the MENU button on the Signal Generator.

2. Use the ▲ and ▼ Pattern buttons to highlight the *Sink Edid* function, then press the MENU button to access the *Sink Edid* submenu..

3. Use the ▲ and ▼ Pattern buttons to select *Description*, then press the MENU button.

4. Use the ▲ and ▼ Pattern buttons to scroll through each of the pages.

5. Press the MENU button to return to the Main Menu.

```
ID Manufacturer Name  : GEF
ID Product Code(Hex)  : 0065
ID Serial Number(Hex) : 00000000
Week of Manufacture   : 50
Year of Manufacture   : 2009
EDID Version          : 1
EDID Revision         : 3
VESA DFP 1.x          : Not Support
MAX Horz Size         : 051cm
MAX Vert Size         : 029cm
Gamma value           : 2.20
                              <PAGE 01>
```
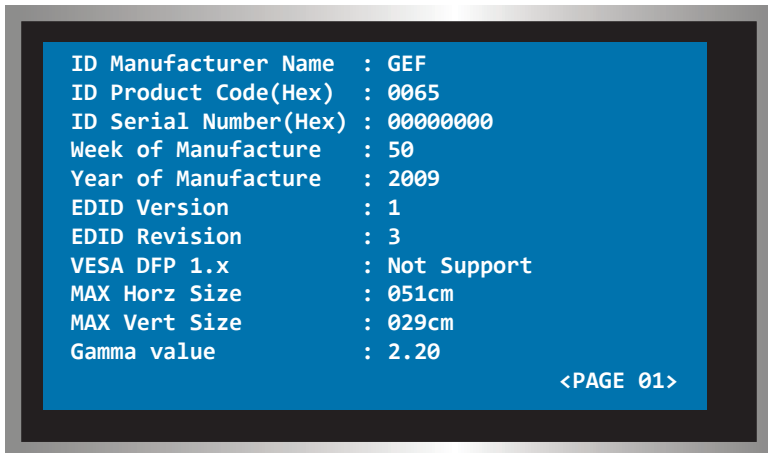
Sink Edid > INT
Sets the Signal Generator to use the Internal EDID. The Manufacturer ID of
the EDID will be indicated next to the INT option (a Gefen EDID is shown in the
example, below). Use the *Save to INT* option to store an Internal EDID. See
page 23 for details. The active EDID (Internal or External) will be highlighted in
orange text.

MAIN MENU	
System Info.	
Sink Edid >>	Block Data
Source Infoframe	Description
CEC Command	INT (GEF) *
Audio Return	EXT
DeepColor Set	Save to INT
Max KSV Count	Exit
Exit	

1.   Press the MENU button on the Signal Generator.

2.   Use the ▲ and ▼ Pattern buttons to highlight the *Sink Edid* function, then
     press the MENU button to access the *Sink Edid* submenu.

3.   Use the ▲ and ▼ Pattern buttons to select *INT ([Manufacturer ID])*, then
     press the MENU button. An asterisk will appear next to the selection,
     indicating that the Signal Generator will use the (stored) Internal EDID.

4.   Use the ▲ and ▼ Pattern buttons to scroll down to the Exit option, then
     press the MENU button to return to the Main Menu.

Sink Edid > EXT

Sets the Signal Generator to use the External EDID. The active EDID (Internal or External) will be highlighted in orange text. The External EDID is equivalent to the downstream (pass-through) mode.

MAIN MENU	
System Info.	
Sink Edid >>	Block Data
Source Infoframe	Description
CEC Command	INT (GEF)
Audio Return	EXT *
DeepColor Set	Save to INT
Max KSV Count	Exit
Exit	

1. Press the MENU button on the Signal Generator.

2. Use the ▲ and ▼ Pattern buttons to highlight the *Sink Edid* function, then press the MENU button to access the *Sink Edid* submenu.

3. Use the ▲ and ▼ Pattern buttons to select *EXT*, then press the MENU button. An asterisk will appear next to the selection, indicating that the Signal Generator will use the External EDID.

4. Use the ▲ and ▼ Pattern buttons to scroll down to the Exit option, then press the MENU button to return to the Main Menu.

Sink Edid > Save to INT
Saves the downstream EDID to the Signal Generator. The Manufacturer ID of
the EDID will be indicated next to the INT option (a Gefen EDID is shown in the
example, below).

MAIN MENU	
System Info.	
Sink Edid >>	Block Data
Source Infoframe	Description
CEC Command	INT (GEF)
Audio Return	EXT *
DeepColor Set	Save to INT
Max KSV Count	Exit
Exit	

1. Press the MENU button on the Signal Generator.

2. Use the ▲ and ▼ Pattern buttons to highlight the *Sink Edid* function, then
    press the MENU button to access the *Sink Edid* submenu.

3. Use the ▲ and ▼ Pattern buttons to select *Save to INT.* The source EDID
    will be saved to the Signal Generator.

4. Use the ▲ and ▼ Pattern buttons to scroll down to the Exit option, then
    press the MENU button to return to the Main Menu.

Source Infoframe
Displays information on the transmission of Infoframe packets. Options: AVI, AUD

Source Infoframe > AVI
Displays information about the AVI (Video) Infoframe packet.

MAIN MENU	
System Info.	
Sink Edid	
Source Infoframe >>	AVI
CEC Command	AUD
Audio Return	Exit
DeepColor Set	
Max KSV Count	
Exit	

1. Press the MENU button on the Signal Generator.

2. Use the ▲ and ▼ Pattern buttons to highlight the *Source Infoframe* function, then press the MENU button to access the *Source Infoframe* submenu.

3. Use the ▲ and ▼ Pattern buttons to select *AVI*, then press the MENU button.

4. Use the ▲ and ▼ Pattern buttons to scroll through each of the pages.

5. Press the MENU button to return to the Main Menu.

```
AVI InfoFrame Packet
DataByte(HEX) : 82 02 0D 1C A8 00 05 00 0F 00 2A 02 18 01 97 08
InfoFrame Type Code        : 02h
InfoFrame Version Number   : 02h
Length of AVI InfoFrame    : 0Dh
CheckSum                   : B3h
Video Code                 : [5] 1920x1080i @ 59.94/60Hz
Pixel Repetition           : No Repetition
RGB or YCbCr               : RGB
Active Format Information   : Active Format(R0...R3)
Bar Info                   : Vert. and Horiz.
Scan Information           : No Data              <DOWN>
```
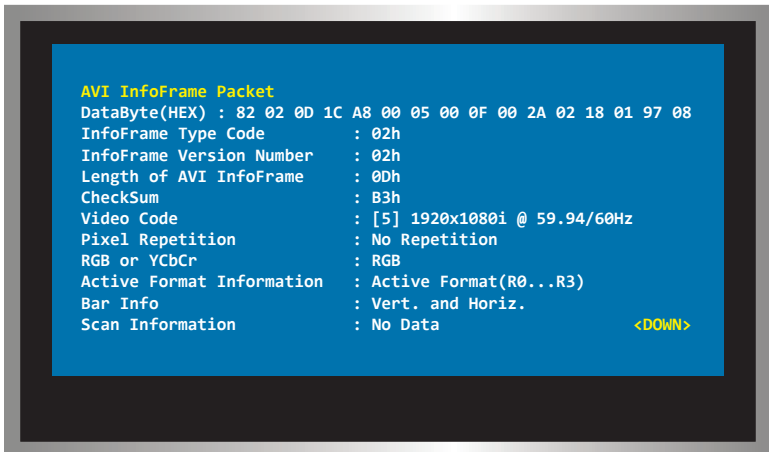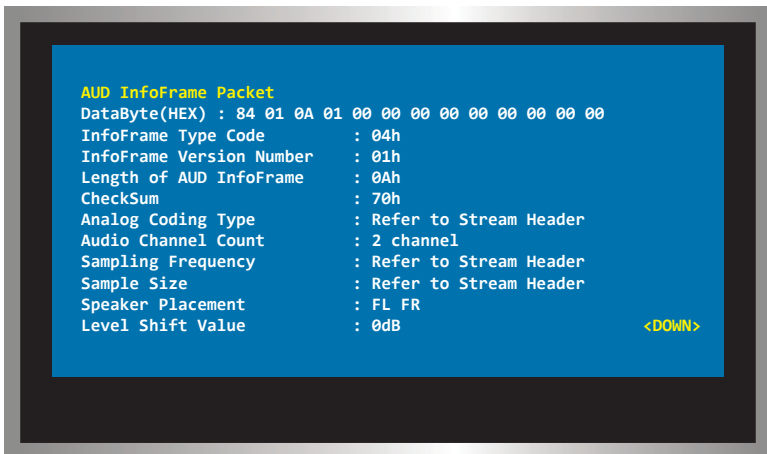
Source Infoframe > AUD
Displays information about the Audio Infoframe packet.

MAIN MENU	
System Info.	
Sink Edid	
Source Infoframe >>	AVI
CEC Command	AUD
Audio Return	Exit
DeepColor Set	
Max KSV Count	
Exit	

1. Press the MENU button on the Signal Generator.

2. Use the ▲ and ▼ Pattern buttons to highlight the *Source Infoframe* function, then press the MENU button to access the *Source Infoframe* submenu.

3. Use the ▲ and ▼ Pattern buttons to select *AUD*, then press the MENU button.

4. Use the ▲ and ▼ Pattern buttons to scroll through each of the pages.

5. Press the MENU button to return to the Main Menu.

```
AUD InfoFrame Packet
DataByte(HEX) : 84 01 0A 01 00 00 00 00 00 00 00 00 00
InfoFrame Type Code        : 04h
InfoFrame Version Number   : 01h
Length of AUD InfoFrame    : 0Ah
CheckSum                   : 70h
Analog Coding Type         : Refer to Stream Header
Audio Channel Count        : 2 channel
Sampling Frequency         : Refer to Stream Header
Sample Size                : Refer to Stream Header
Speaker Placement          : FL FR
Level Shift Value          : 0dB                    <DOWN>
```

CEC Command
Sends a CEC command to the downstream device. There are three CEC commands that can be transmitted: Standby, Active Source, Monitor.

CEC Commands > Standby
Command Type: *Request*. Issues a System Standby message which places all connected devices in Standby Mode.

MAIN MENU	
System Info.	
Sink Edid	
Source Infoframe	Standby
CEC Command >>	Active Source
Audio Return	Monitor(Read)
DeepColor Set	Exit
Max KSV Count	
Exit	

1.   Press the MENU button on the Signal Generator.

2.   Use the ▲ and ▼ Pattern buttons to highlight the *CEC Command* function, then press the MENU button to access the *CEC Command* submenu.

3.   Use the ▲ and ▼ Pattern buttons to select *Standby*, then press the MENU button.

4.   The Signal Generator will send a *Standby request* message to all devices connected to the sink. All connected devices will be placed in standby mode.

CEC Commands > Active Source
Command Type: *Request*. This command switches to the (next) active source. If the next active source is not connected or not powered, then the display will appear blank.

MAIN MENU	
System Info.	
Sink Edid	
Source Infoframe	Standby
CEC Command >>	Active Source
Audio Return	Monitor(Read)
DeepColor Set	Exit
Max KSV Count	
Exit	

1. Press the MENU button on the Signal Generator.

2. Use the ▲ and ▼ Pattern buttons to highlight the *CEC Command* function, then press the MENU button to access the *CEC Command* submenu.

3. Use the ▲ and ▼ Pattern buttons to select *Active Source*, then press the MENU button.

4. The Signal Generator will send an *Active Source request* message to the downstream sink. The Active Source request will switch away from the current input to the next active input on the sink.

CEC Commands > Monitor(Read)
Command Type: *Informative*. Displays the traffic on the CEC line from the monitor / display.

MAIN MENU	
System Info.	
Sink Edid	
Source Infoframe	Standby
CEC Command >>	Active Source
Audio Return	Monitor(Read)
DeepColor Set	Exit
Max KSV Count	
Exit	

1. Press the MENU button on the Signal Generator.

2. Use the ▲ and ▼ Pattern buttons to highlight the *CEC Command* function, then press the MENU button to access the *CEC Command* submenu.

3. Use the ▲ and ▼ Pattern buttons to select *Monitor(Read)*, then press the MENU button.

4. The Signal Generator will send a *Monitor Read* information request to the downstream sink. Any CEC messages sent to the downstream sink, by other source devices, will be displayed on the screen.

Audio Return
The Audio Return option enables / disables the Audio Return Channel (ARC). When ARC is enabled, the audio is returned from the downstream device. The audio signal is carried over an HDMI 1.4 cable from the downstream device to the Signal Generator and outputted via the TOSLINK connector.

Audio Return > ON
Enables the Audio Return Channel (ARC)

Audio Return > OFF
Disables the Audio Return Channel (ARC)

The active ARC status will be highlighted in orange text.

MAIN MENU	
System Info.	
Sink Edid	
Source Infoframe	
CEC Command	ON
Audio Return >>	OFF
DeepColor Set	Exit
Max KSV Count	
Exit	

1. Press the MENU button on the Signal Generator.

2. Use the ▲ and ▼ Pattern buttons to highlight the *Audio Return* function., then press the MENU button to access the *Audio Return* submenu.

3. Use the ▲ and ▼ Pattern buttons to select *ON*, to enable the Audio Return Channel (ARC).

4. Select OFF to disable the Audio Return Channel (ARC).

DeepColor Set
Sets the bit depth for Deep Color.

DeepColor Set > 8bit
Sets the output signal to 8-bit Deep Color

DeepColor Set > 10bit
Sets the output signal to 10-bit Deep Color

DeepColor Set > 12bit
Sets the output signal to 12-bit Deep Color

The active color depth will be highlighted in orange text.

MAIN MENU	
System Info.	
Sink Edid	
Source Infoframe	8bit
CEC Command	10bit
Audio Return	12bit
DeepColor Set >>	Exit
Max KSV Count	
Exit	

1. Press the MENU button on the Signal Generator.

2. Use the ▲ and ▼ Pattern buttons to highlight the *DeepColor Set* function, then press the MENU button to access the *DeepColor Set* submenu.

3. Use the ▲ and ▼ Pattern buttons to highlight either 8-bit, 10-bit, or 12-bit Deep Color output settings.

4. Press the MENU button to select the desired bit depth.

Max KSV Count
Returns the KSV count of the source device.

MAIN MENU
System Info.
Sink Edid
Source Infoframe
CEC Command
Audio Return
DeepColor Set
Max KSV Count
Exit

1.   Connect an external source device to the HDMI In on the Signal Generator.

2.   Press the INT/EXT button to turn on External mode.

3.   Press the MENU button on the Signal Generator.

4.   Use the ▲ and ▼ Pattern buttons to highlight the *Max KSV Count* function.

5.   Press MENU button to begin the KSV count process.

     The KSV count process may take several minutes to complete. During the
     KSV count process, a progress bar indicates that the Signal Generator is
     still processing the KSV count request.

The **INT/EXT** button glows
blue when set to External
mode.

5.   After the Max KSV Count process has completed, the Signal Generator will display a message similar to the following:
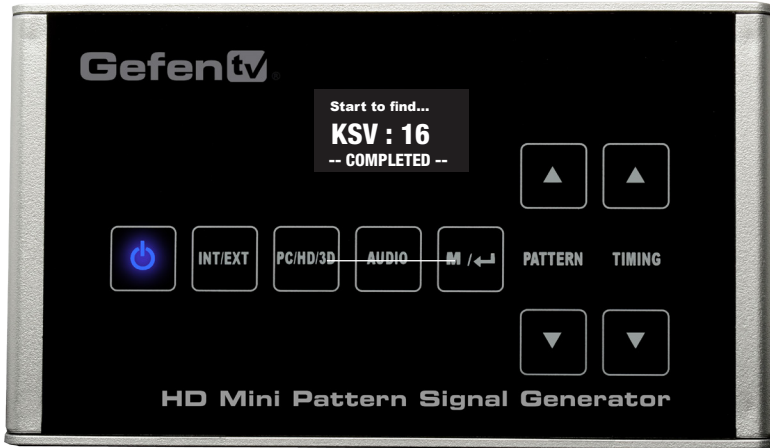
It is important to note that not all devices will report a KSV count. In this case, the Signal Generator will not perform a KSV count.

NOTE: When running the Max KSV Count, the source signal will occasionally "blank out". This is normal behavior.

Table of Supported Timings

The table below lists the supported timings available in the HD Mini Pattern Signal Generator.

Timing Name	Resolution	3D Transmission Method
VGA @ 60	640 x 480	---
SVGA @ 60	800 x 600	---
XGA @ 60	1024 x 768	---
SXGA @ 60	1280 x 1024	---
WUXGA	1920 x 1200	---
480I @ 60	720 x 480i	---
480P @ 60	720 x 480p	---
576I @ 50	720 x 576i	---
576P @ 50	720 x 576p	---
720P @ 50	1280 x 720p	---
720P @ 50	1280 x 720p	3DFP (Frame Packing)
720P @ 50	1280 x 720p	3DSH (Side-by-Side)
720P @ 50	1280 x 720p	3DTB (Top-Bottom)
720P @ 60	1280 x 720p	---
720P @ 60	1280 x 720p	3DFP (Frame Packing)
720P @ 60	1280 x 720p	3DSH (Side-by-Side)
720P @ 60	1280 x 720p	3DTB (Top-Bottom)
1080I @ 50	1920 x 1080i	---
1080I @ 60	1920 x 1080i	---
1080P @ 50	1920 x 1080p	---
1080P @ 60	1920 x 1080p	---
1080P @ 24	1920 x 1080p	---
1080P @ 24	1920 x 1080p	3DFP (Frame Packing)
1080P @ 24	1920 x 1080p	3DSH (Side-by-Side)
1080P @ 24	1920 x 1080p	3DTB (Top-Bottom)

SPECIFICATIONS

Maximum Pixel Clock... 225 MHz

Video Input Connector... (1) HDMI Type-A, 19-pin, female

Video Output Connector...................................... (1) HDMI Type-A, 19-pin, female

Audio Output.. (1) TOSLINK

Service Port.................................... (1) 3.5 mm mini-stereo (for firmware upgrade)

Display... OLED (Organic Light Emitting Diode)

Power Supply.. 5V DC

Power Consumption... 3W (max.)

Operating Temperature... 0° - 40° C

Dimensions (W x H x D)... 4.70" x 0.98" x 2.76"
(119mm x 22mm x 70mm)

Shipping Weight..1.0 lb. (0.5 kg)

Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.

2. Customers outside the US are responsible for shipping charges to and from Gefen.

3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at www.gefen.com.

PRODUCT REGISTRATION

Please register your product online by visiting the Register Product page under the Support section of the Gefen Web site.

MA-GTV-HD-MPSG