

MULTI *CONVERTER* *BOX*

User Manual



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Feature

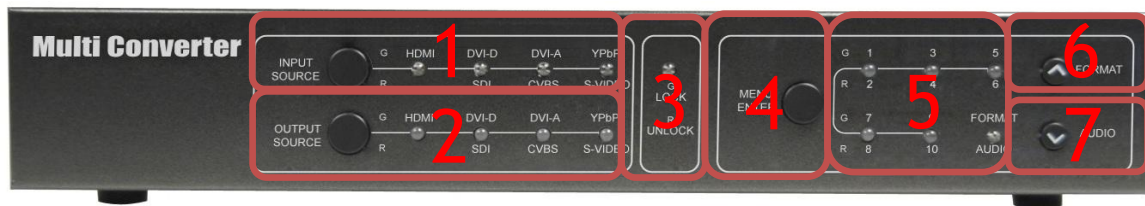
- Support Multi-signal input and Multi-signal output
 - HDMI
 - SDI
 - DVI-D
 - DVI-A
 - YPbPr
 - Composite
 - S-Video
- External Button Configuration
- FULL HDMI Support including embedded audio
- Firmware is upgradable in the field using the integrated USB port
- The converter is Plug-and-Play

Rear Panel



NO	Component	Function
1	YPbPr Output Port	From your YPbPr Display device plug into these ports
2	SDI Output Port	From your SDI Display device plug into these ports
3	S-Video Output Port	From your S-Video Display device plug into these ports
4	CVBS Output Port	From your CVBS Display device plug into these ports
5	DVI-I Output Port	From your DVI-A or DVI-D Display device plug into these ports
7	HDMI Output Port	From your HDMI Display device plug into these ports
8	YPbPr Input Port	From your YPbPr Source plug into these ports
9	SDI Input Port	From your SDI Source plug into these ports
10	DVI-I Input Port	From your DVI-A or DVI-D Source plug into these ports
11	S-Video Input Port	From your S-Video Source plug into these ports
12	CVBS Input Port	From your CVBS Source plug into these ports
13	HDMI Input Port	From your HDMI Source plug into these ports
14	Line in Input Port	From your L/R Audio Source plug into these ports
15	USB Port	Upgrade firmware/Control Mutli-Conveter Box
16	Power Jack	The Power adapter plug into here.

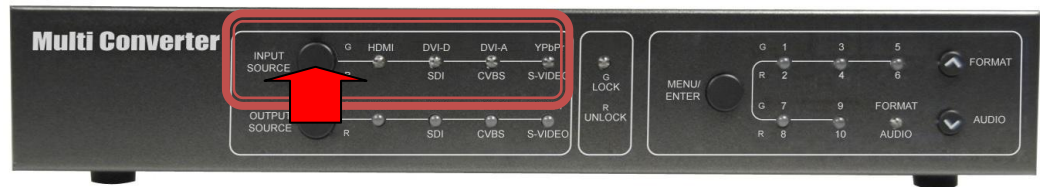
Front Panel



NO	Component	Function
1	Input Source	Select Input Source and LED indicate.
2	Output Ports	Select Output Port and LED indicate.
3	Signal indicate	When have signal, the LED is turn Green light else is Red light.
4	Menu	Menu button
5	Format	Select output format
6	Audio	Select audio source(Embedded/Line in 1 and 2)

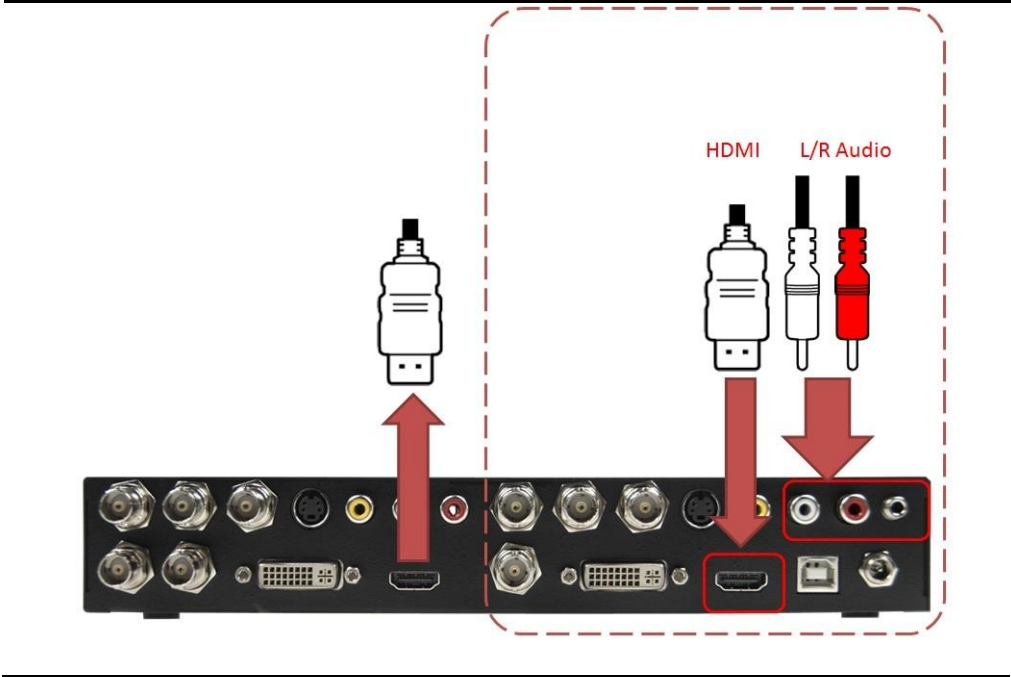
Button/LED Indicate

1. Input Source Mode:

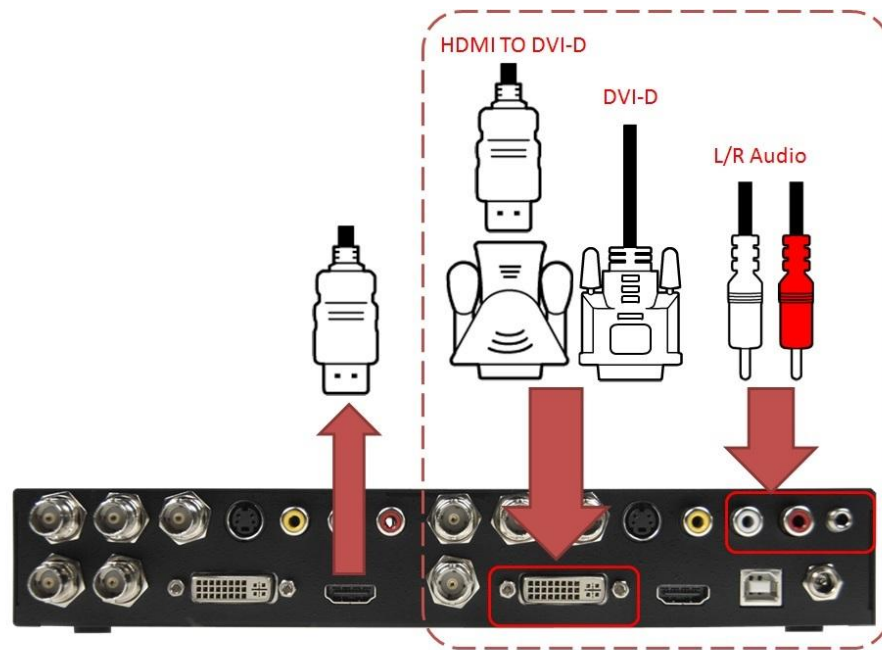


	LED 1	LED 2	LED 3	LED 4
HDMI	<div></div>	<div></div>	<div></div>	<div></div>
DVI-D		<div></div>	<div></div>	<div></div>
DVI-A	<div></div>	<div></div>	<div></div>	
YPbPr	<div></div>	<div></div>	<div></div>	<div></div>
SDI	<div></div>	<div></div>	<div></div>	<div></div>
CVBS	<div></div>	<div></div>	<div></div>	<div></div>
S-Video	<div></div>	<div></div>	<div></div>	<div></div>

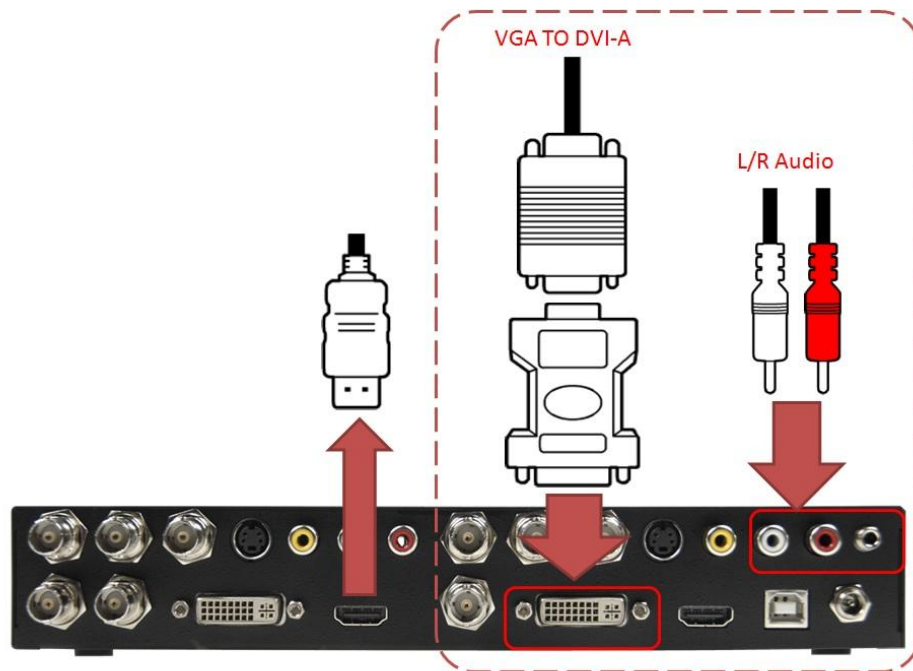
a. HDMI Input



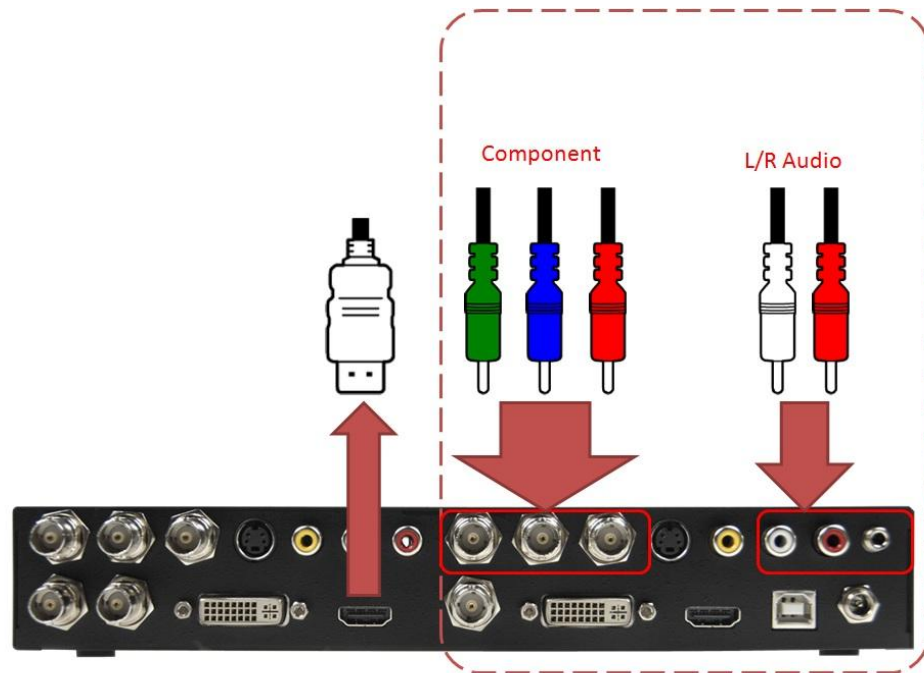
b. DVI-D Input



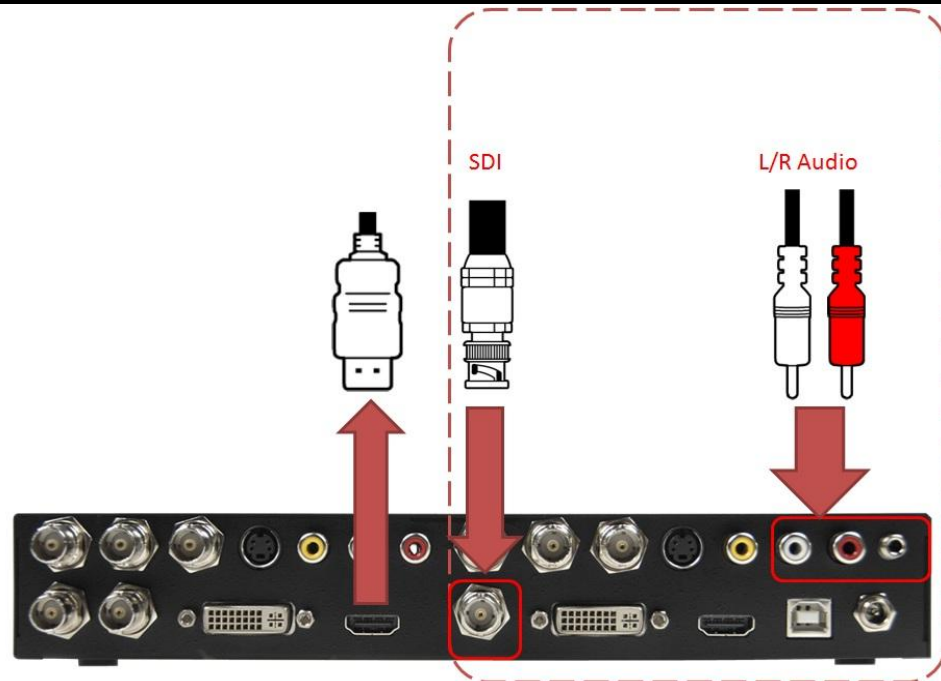
c. DVI-A Input



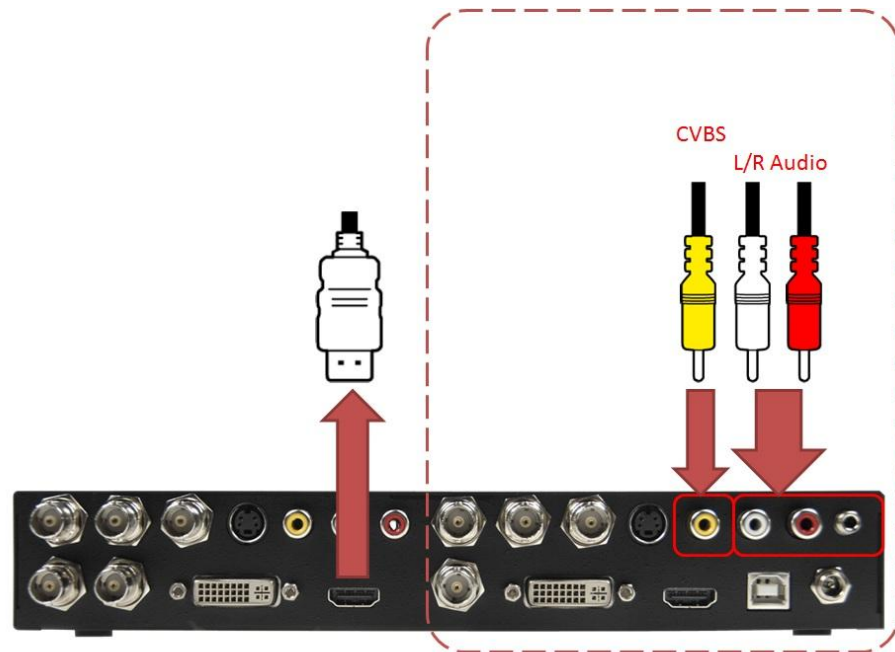
d. YPbPr Input



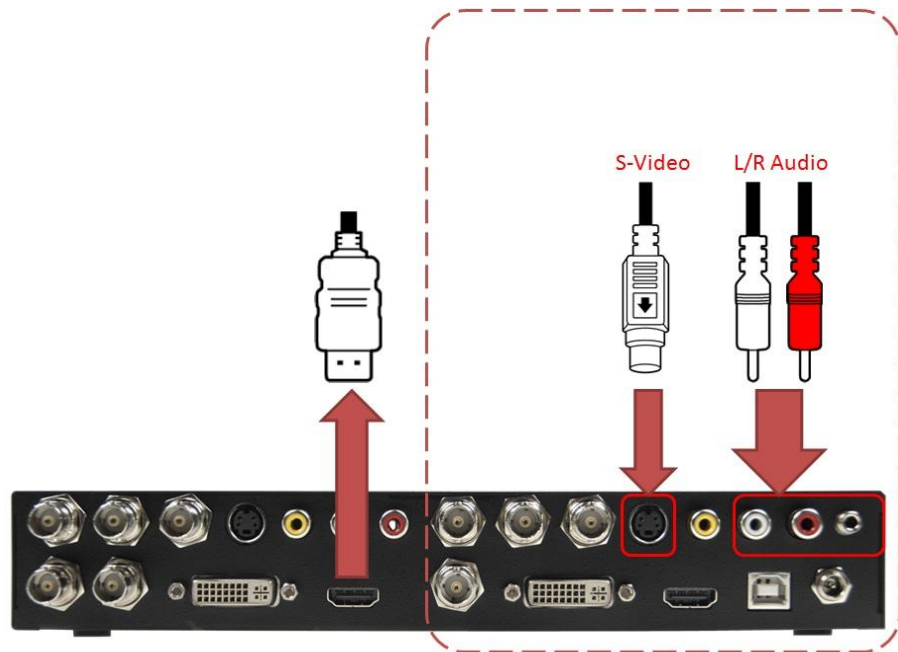
e. SDI Input



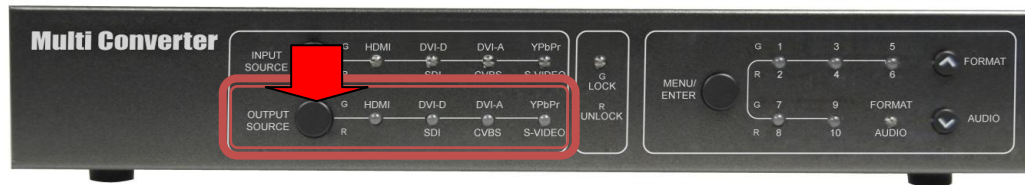
f. CVBS Input



g. S-Video Input

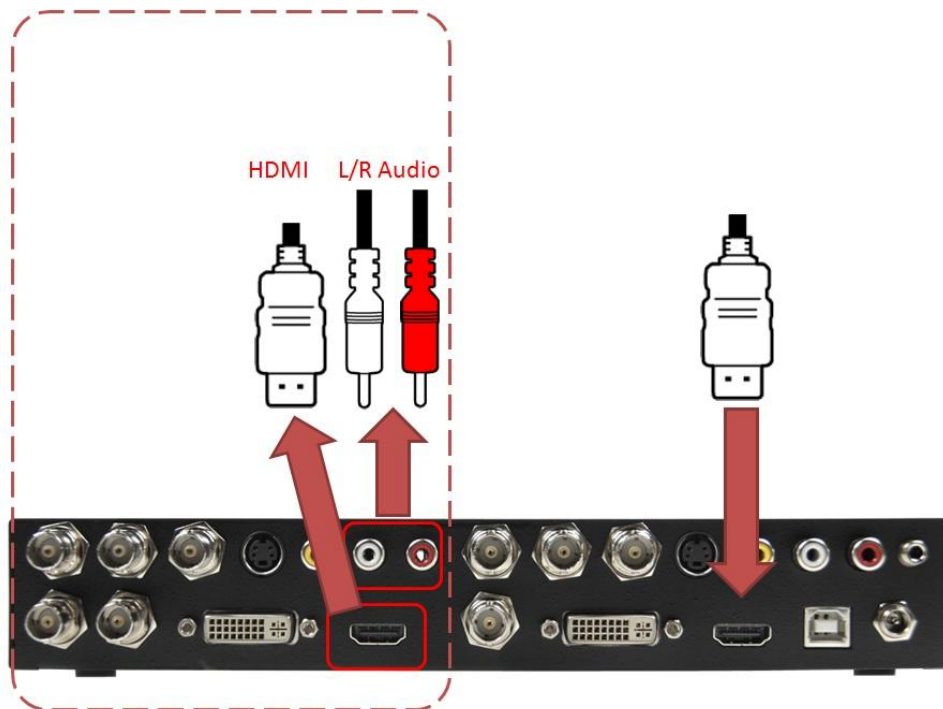


2. Output Port Mode:

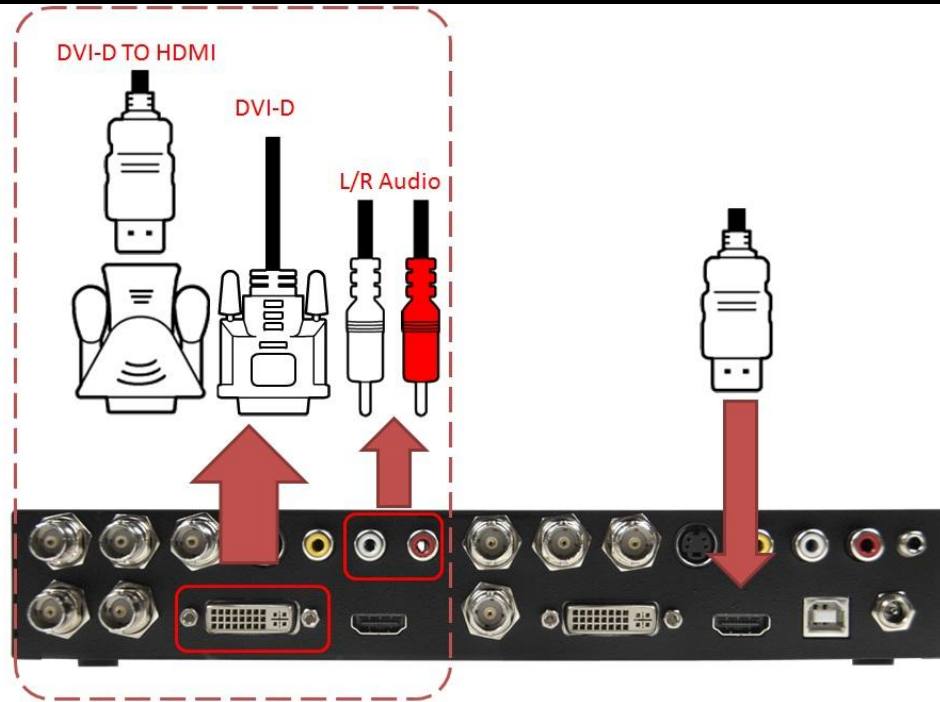


	LED 1	LED 2	LED 3	LED 4
HDMI	●	○	○	○
DVI-D	○	●	○	○
DVI-A	○	○	●	○
YPbPr	○	○	○	●
SDI	○	●	○	○
CVBS + S-Video	○	○	●	●

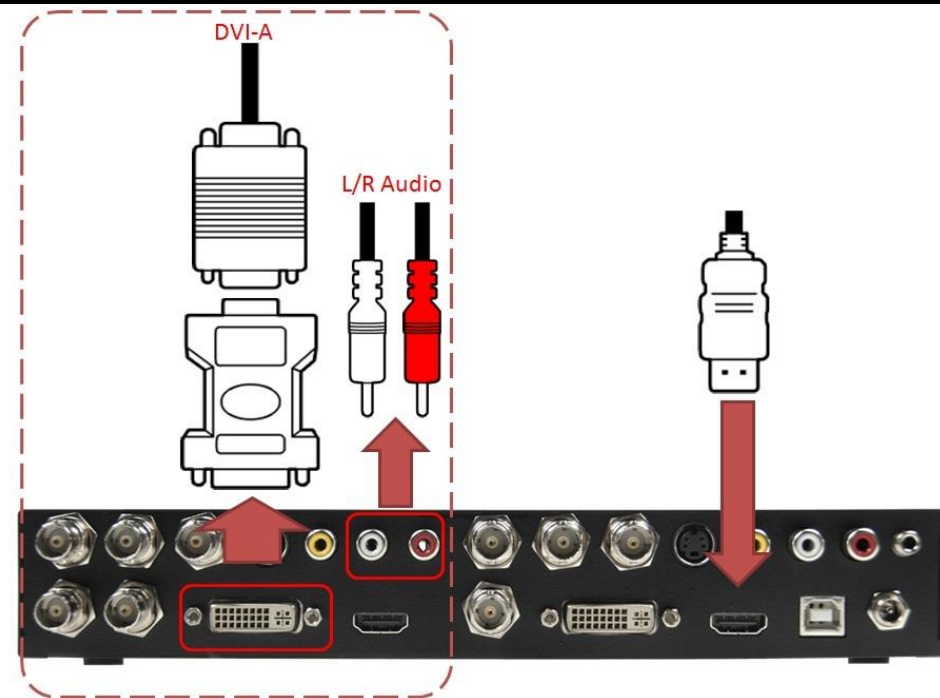
a. HDMI Output



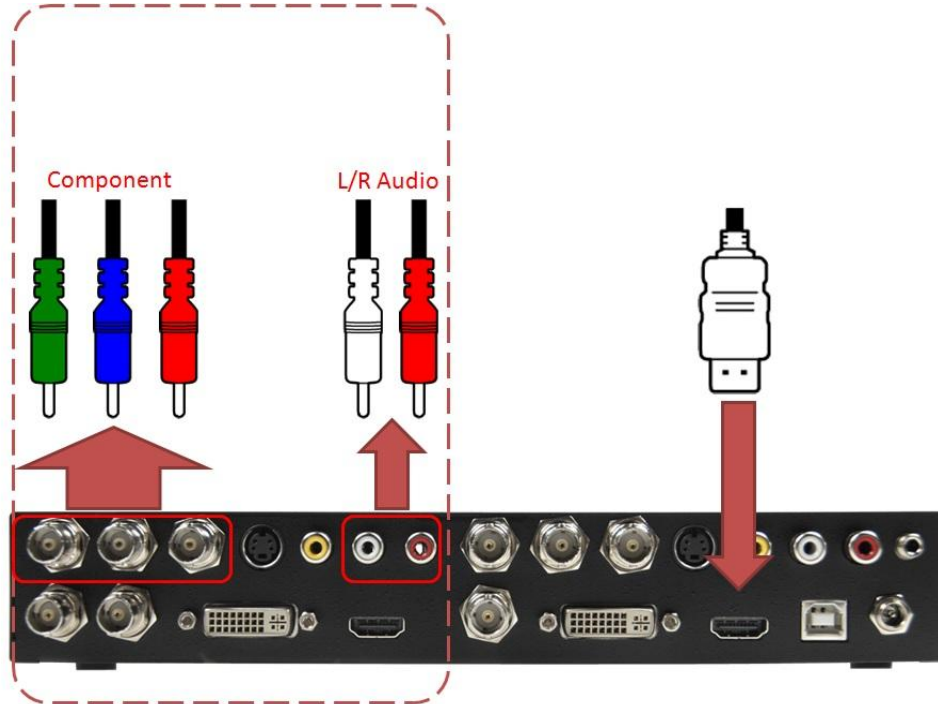
b. DVI-D Output



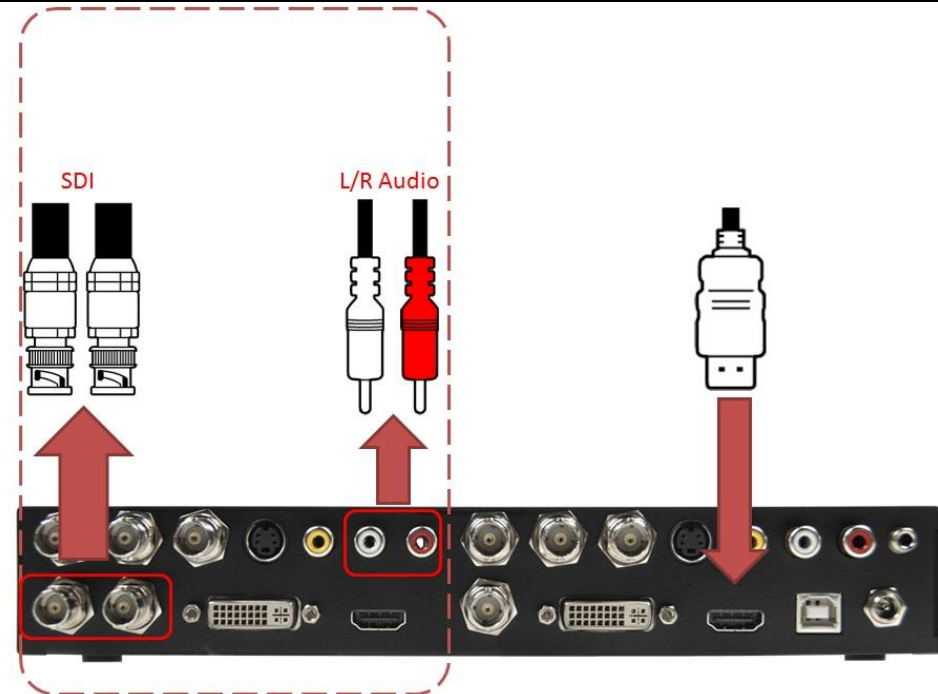
c. DVI-A Output



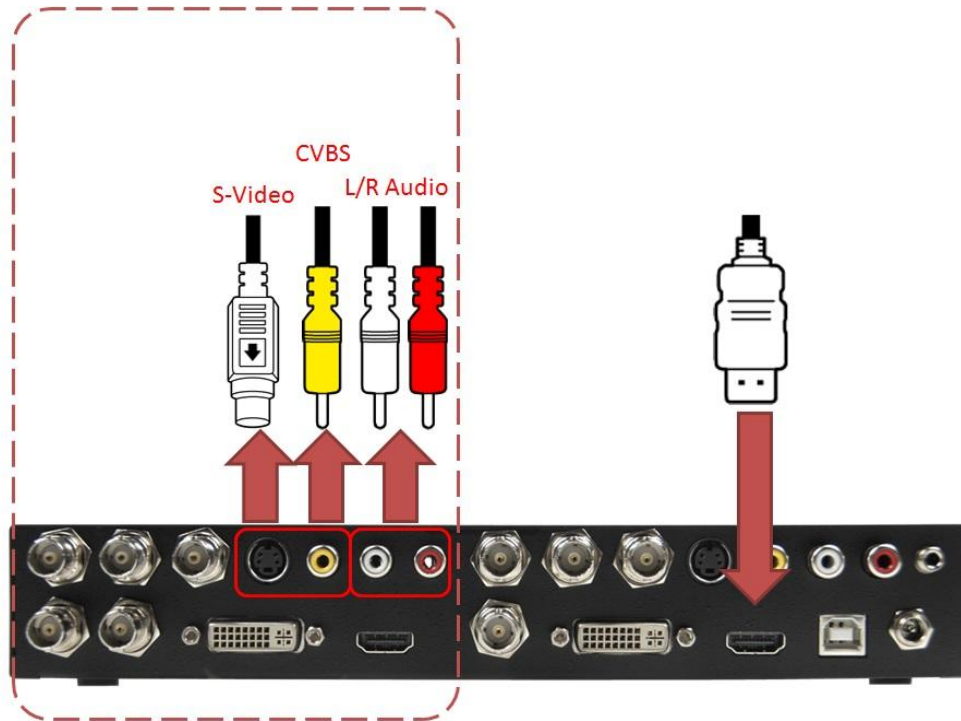
d. YPbPr Output



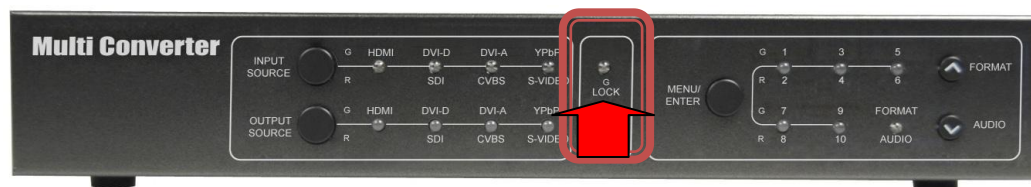
e. SDI Output



f. CVBS + S-Video Output

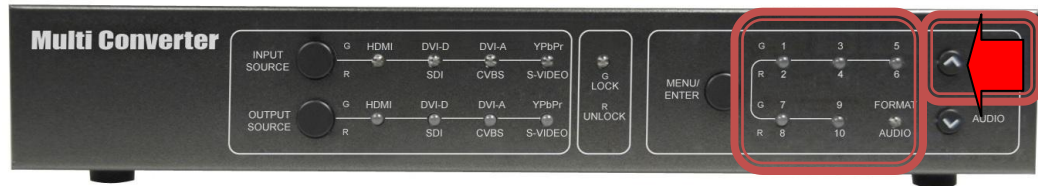


3. Signal Locked Mode



	LED
Locked	Green
Un-Locked	Red

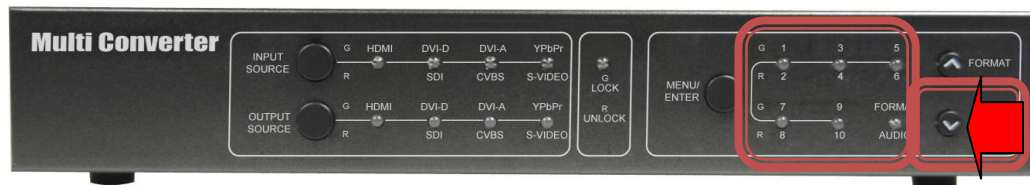
3. Output Format Mode:



DVI-A Output	640x480 60Hz	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	800x600 60Hz	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	1024x768 60Hz	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	1280x720 60Hz	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	1280x1024 60Hz	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	1366x768 60Hz	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	1400x1050 60Hz	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	1600x1200 60Hz	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	1680x1050 60Hz	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	1920x1080 60Hz	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
Other Output Port	720x480i (NTSC)	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	720x576i (PAL)	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	720x480p60	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>
	720x576p50	<div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div>

	1280x720p60	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/>
	1280x720p50	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/>
	1920x1080i60	<input type="radio"/> <input type="radio"/> <input type="radio"/>
	1920x1080i50	<input type="radio"/> <input type="radio"/> <input type="radio"/>
	1920x1080p60	<input type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/>
	1920x1080p50	<input type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/>

4. Audio Source Mode:







Audio Input	Embedded(Default)	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>
	Line 1	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>
	Line 2	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/>
	Mute	<input type="radio"/> <input type="radio"/> <input type="radio"/>

5. Aspect Ratio Mode:

Hold on the auto button 3 until show the Func button Mode



Description		
Aspect Ratio	16 : 9	
	4 : 3	
	1 : 1	
	Pan Scan 16 : 9	

Installation

Multi-Converter Box installation consists of the following:

1. Disconnect +12DC adaptor to converter.
2. Connect Video Source to the Input Connector.
3. Connect Display Equipment to the output's connector
4. Connect the +12DC adaptor to the converter.

Package Contents

The Multi-Converter package contains the following items:

- User Manual x 1
- +12 DC Adapter x 1
- Mutli-Converter x 1

Specifications

DESCRIPTION	
SDI Format	SD-SDI, HD-SDI & 3G-SDI
SDI Transition Rate	2.970Gb/s, 10485Gb/s and 270Mb/s
Audio Support	Stereo 2-Channel (L/R Audio)
Re-Sample Clock	Auto Resample audio clock to 48Khz
Coaxial Cable Type	RG6/RG59(75Ω)
Cable Equalization	3G: 100m of RG6/ 86m of RG59 HD: 170m of RG6/ 120m of RG59 SD: 400m of RG6/ 280m of RG59 *1 RG6: CANARE L-5CFB Cable / RG59: Belden 9275 Cable *2 Cable Length Performance: Depending on SDI Signal and Cable Quality
Input Format Support	Appendix Table A
Output Format Support	Appendix Table A
Firmware Updates	Via Mini-USB
Output Connector	2 x BNC [SDI] 3 x BNC [YPbPr] 3 x RCA [CVBS + LINE IN] 1 x DVI –I [DVI-D + DVI-A] 1 x HDMI 1 x S-Video
Input Connector	1 x BNC [SDI] 1 x DVI-I [DVI-D + DVI-A] 3 x BNC [YPbPr or YC + CVBS] 3 x RCA [CVBS + LINE IN] 1 x Phone Jack
BNC Connector	3G 75 Ω inter-locked socket
USB Connector	B-Type
Bottom	Output Format/Input Source/Output Port/Audio Input
Housing	SECC
Dimension	L:235.9mm x W145.8mm x H:40.2mm
Power Source	Power Adapter: AC 100 ~ 240 V/DC (+6 ~ 15 V)

Operation Temperature	0~50°C [32~114°F]
Storage Temperature	-20~+60°C

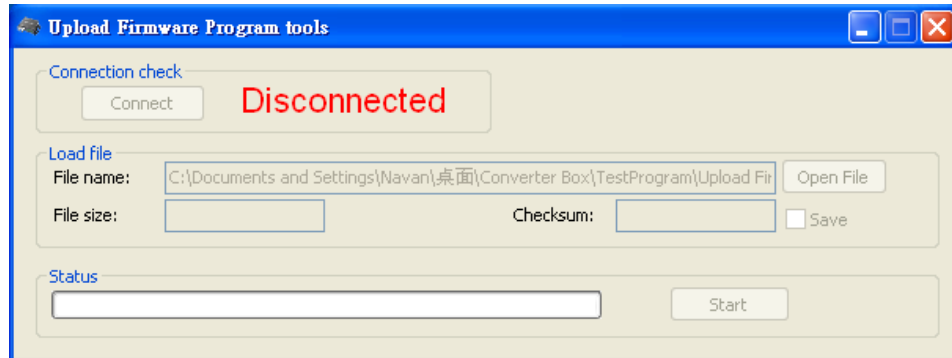
Firmware Upload

Firmware is upgradable in the field using the integrated USB port

How to Firmware upgrade:

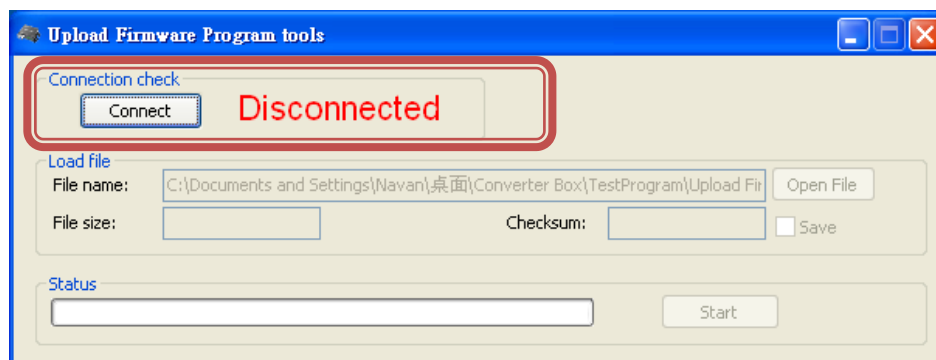
Step1.

Open Upload Firmware Program tools.exe and connect box to PC by USB Cable.



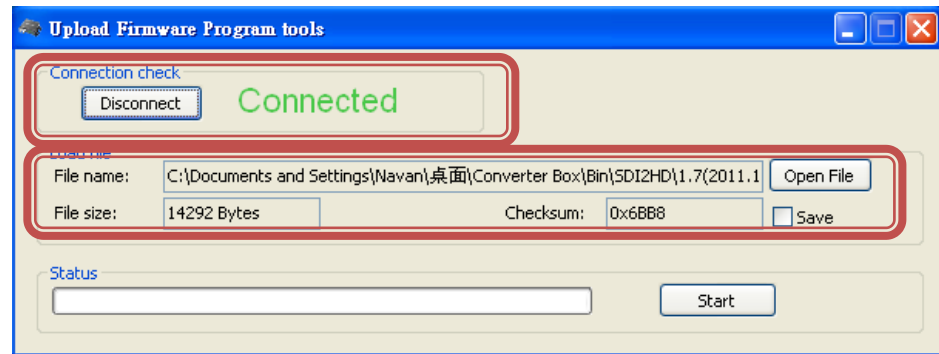
Step2.

Plug and un-plug "DC adapter" to power on/off the converter box (the connection check status will be changed to "Connect")



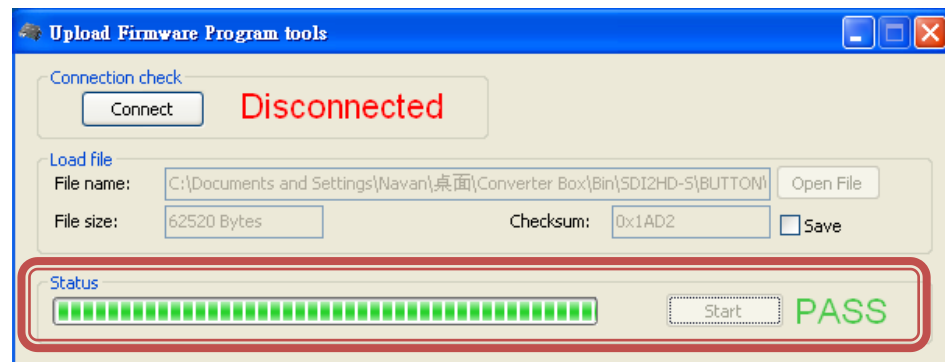
Step3.

Plug and un-plug “DC adapter” again (the connection check status will be changed to “Connected”) and Please click the Open File button to select the firmware bin file.



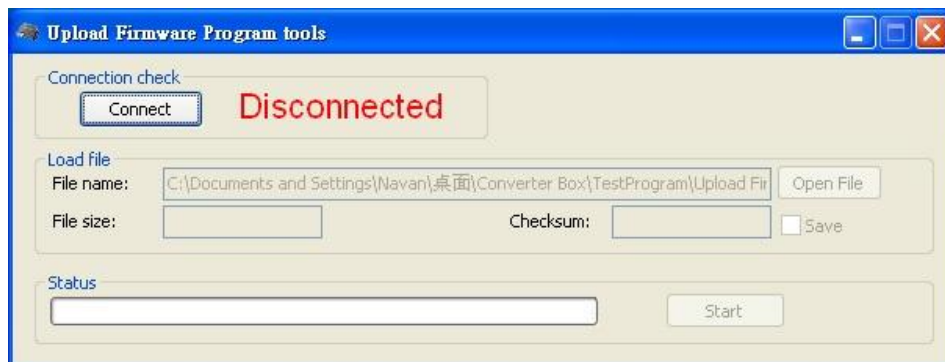
Step4.

Please click “Start’ Button to proceed with new firmware programming. The PASS message will appear when the procedures finished.



Step5.

Close Upload Firmware Program tools



Appendix Table A

Support Input Format:

720x480i60	720x576i50	720x480 p60	720x576 p50
1280x720p60	1280x720p50	1920x1080i60	1920x1080i50
1920x1080p24	1920x1080p25	1920x1080p30	1920x1080p60
1920x1080p50			
640x350p85	640x400p85	720x400p85	640x480p60
640x480p72	640x480p75	640x480p85	800x600p56
800x600p60	800x600p72	800x600p75	800x600p85
848x480p60	1024x768p50	1024x768p59	1024x768p60
1024x768p70	1024x768p75	1024x768p85	1152x864p70
1152x864p75	1280x768pRB	1280x768p60	1280x768p75
1280x768p85	1280x800p60	1280x800p75	1280x800p85
1280x960p60	1280x960p75	1280x960p85	1280x1024p60
1280x1024p75	1280x1024p85	1360x768p60	1366x768p50
1366x768p60	1400x1050p50	1400x1050p59	1400x1050p60
1400x1050p75	1440x900p60	1440x900p75	1440x900p85
1600x1200p50	1600x1200p59	1600x1200p60	1600x1200pRB
1680x1050pRB	1680x1050p60	1920x1200pRB	

Support Output Format:

VESA Mode		
1920x1080 p60	1680x1050 p60	1600x1200 p60
1440x900 p60	1400x1050 p60	1366x768 p60
1280x1024 p60	1024x768 p60	800x600 p60
640x480 p60		

HDMI Mode		
720x480 i60	720x576 i50	720x480 p60
720x576 p50	1280x720 p60	1280x720 p50
1920x1080 i60	1920x1080 i50	1920x1080 p60
1920x1080 p50		

Update List

Data	Version	Command
2013.08.06	V1.0	Release
2014.05.06	V1.1	1. Add Aspect Ratio Mode