

LBC-PSW52

Link Bridge™ Presentation
Scaling Switch with
5 Inputs and Two Mirrored Outputs



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SAFETY INSTRUCTIONS AND COMPLIANCE DECLARATIONS

PLEASE OBSERVE THE FOLLOWING SAFETY
PRECAUTIONS

SURGE PROTECTION DEVICE RECOMMENDED

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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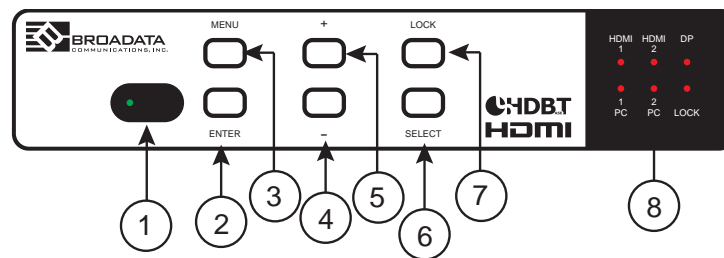
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1.0 PRODUCT DESCRIPTION

- LBC-PSW52 is a small-scale presentation scaling switch
- Features 5 video inputs, two HDMI inputs, one DisplayPort, and two VGA input
- Two simultaneous video outputs of the selected source through the one HDBaseT and one HDMI output
- HDBaseT outputs extend HDMI/VGA signals up to 70 meters over CAT-5e/6
- Supports scaling of any input signal to a wide range of HDTV and VGA output resolutions up to 1080p and WUXGA
- Supports control via RS-232, Telnet, WebGUI, front panel control buttons, or contact closures
- HDBaseT output supports remote powering
- Supports one microphone input (with phantom power), three unbalanced audio input and one stereo audio output
- Compatible with Link Bridge LBH & LBC Series transmitters and receivers

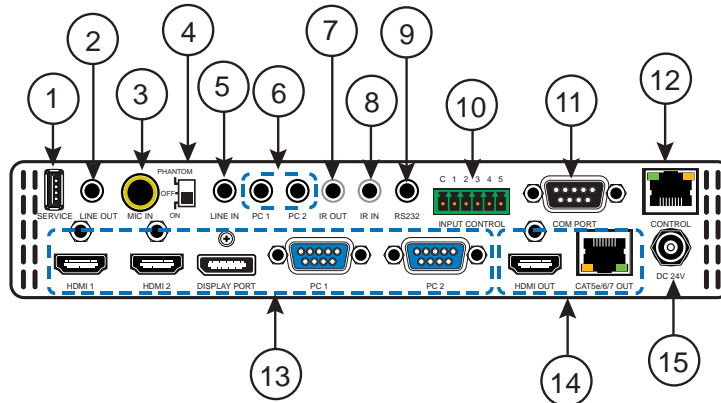
2.0 OPERATION CONTROLS AND FUNCTIONS

2.1 Front Panel



1. **IR Window:** Receiving IR signal from remote control unit which comes with scaler box.
2. **“Enter” button:** Press this button to confirm the selection on On Screen Display (OSD) menu.
3. **“Menu” button:** Press this button to enter On Screen Display (OSD) menu.
4. **“-“ (Minus) button:** Press button to navigate down on OSD menu.
5. **“+“ (Plus) button:** Press button to navigate up on OSD menu.
6. **“Select” button:** Press this button for source selection. The active source will be indicator on LEDs at front panel.
7. **“Lock” button:** Press this button to lock front panel.
8. **LEDs:** This LED for selected source indication. The LED for the selected source will illuminate for indicating active source.

2.2 Rear Panel



1. Service: The service slot is for firmware update via USB.
2. Line out: Connects with amplifier for audio source broadcasting.
3. MIC IN: Plug microphone in for audio source output. The phantom microphone is well supported.
4. Phantom on/off: Arrange the slide switch to “on” for condenser microphone (5V) or “phantom” for professional 48V phantom microphone. When slide switch arrange to “off”, the audio output will be mute.
5. Line In: To output HDMI embedded audio of HDMI 1, 2 and display port source to DVD players.
6. PC1 / PC2: To output HDMI embedded audio of PC1 and PC2 source to DVD players.
7. IR Out: Connect with supplied IR blaster cable to sending IR single which comes from remote control unit to compatible Receivers.
8. IR IN: Connect with supplied IR extender cable to receive the IR signal from the included IR remote. Ensure that the remote is within the direct line-of-sight of the IR extender.
9. RS-232: For sending RS-232 command to compatible Receivers.

10. Input Control: This input control reserving for direct source input selection. Connect ground pin (mark as C on panel) with following pin number for individual source selection.

Pin Number	Source
Pin 1	HDMI 1
Pin 2	HDMI 2
Pin 3	DisplayPort
Pin 4	PC1
Pin 5	PC2

11. Com Port: Connect with D-Sub 9 pin cable with PC or laptop for this scaler box controlled by RS-232 commands.
12. Control: This port is the link for WebGUI control; connect to an active Ethernet link with an RJ45 terminated cable. Use BCI's IP Discovery program to obtain devices IP address to access WebGUI Control.
13. Input Sources:
- PC 1 & PC2: Connect to a PC/Laptop source for video signal input with D-Sub 15pin cable.
 - Display port: Connect to a PC / Laptop source for video signal input.
 - HDMI 1 & HDMI2: Connect to HDMI sources such as Blu-ray/DVD player for both video and audio signal.
14. Output:
- CAT5e/6/7 Out: Connects with compatible Receiver for video and/or audio output.
 - HDMI Out: Connect to an HDMI display or AV Receiver for video and/or audio output.
15. DC 24V: Plug the 24V DC power supply into the unit and connect the adaptor to an AC outlet.

2.3 Functional Configurations

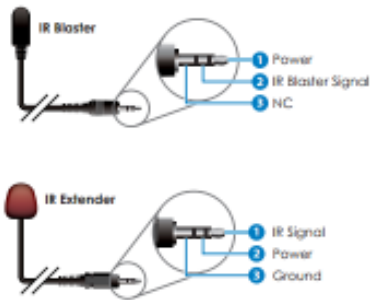
LBC-PSW52 comes with RS-232/Telnet commands. Please refer to Appendix A for details. LBC-PSW52 is also equipped with OSD and WebGUI for various device configurations.

Appendix B provides description of remote control units.

Appendix C shows screen shot of the WebGUI.

3.0 CONNECTOR PIN ASSIGNMENT

3.1 IR Cable Pin Assignment



3.2 D-Sub 9 Pin Definitions

Pin	Define TX/RX
1	N/C
2	TxD
3	RxD
4	N/C
5	GND
6	N/C
7	N/C
8	N/C
9	N/C

Baud Rate: 19200bps

Data Bit: 8 bits

Parity: None

Flow Control: None

Stop Bit: 1

4.0 DC POWER CONNECTION

In order to make sure that you have a proper installation, please observe the following:

- 1 Your AC jack has power.
2. The 24VDC power supply is working.
3. Your electrical system has proper grounding (this ensures that your power supply does not suffer from voltage variations).
4. Power Surge Protection. This is optional, but highly recommended. A UPS system provides voltage regularity as well as prevents spikes from occurring, thus protecting your LBC-PSW52 from sensitive voltage conditions.

The LBC-PSW52 derives power from an external 24VDC power supply. This power supply is a wall mounted AC/DC adapter, 100-240 VAC, 50-60 Hz, at 1A. This power supply comes standard for the LBC-PSW52 unless otherwise specified. To provide power to the LBC-PSW84, simply connect the power cord, already provided with the units, and connect it to the wall jack. (You will find one power cord per unit). Once the power cord has been connected to the wall jack, connect 24VDC to the unit and the unit should power up immediately flipping the power toggle switch. If you have any problems or concerns, regarding the installation, make sure that you have taken the proper steps to ensure a proper power connection. Otherwise, feel free to contact us for any questions you may have.

Note 1: During installation, the installer may need to connect the power supply output to an appropriate Listed NEC type cable before it is routed behind a wall. Simply routing the power supply output cable behind a wall will most likely not comply with applicable installation requirements. Unit should only be powered by a power source that is Listed (NEC) Class 2 or a Listed ITE Power Supply marked/rated as LPS or Limited Power Source.

Note 2: The installation shall be in accordance with the applicable provisions of the National Electrical Code ANSI/NFPA 70, Article 725 and the Canadian Electrical Code, Part 1, Section 16.

Note 3: The power supply shall not be permanently fixed to the building structure or similar structures.

Note 4: The power supply shall not be located within environmental air handling spaces or within the wall cavity.

Note 5: The power supply is to be located within the same vicinity as the A/V processing equipment in an ordinary location, Pollution Degree 2, secured to the equipment rack within the dedicated closet, podium or desk

5.0 MAINTENANCE AND TROUBLESHOOTING

5.1 Maintenance

There is no operator maintenance other than keeping the units clean. However, observe the following light indicators to make sure that the unit is working properly:

5.2 Troubleshooting

If the LBC-PSW52 units do not operate properly after installation, check for possible cable breaks, loose connections, and incorrect cable connections. If problems persist that may be fiber related, contact BCI at 1-800-214-0222 for further assistance.

6.0 SPECIFICATIONS

VIDEO SPECIFICATIONS

Resolution	Up to 1080p or 1920x1200@60Hz
Input Connectors	2x HDMI Female Plug, 2x HD-15 VGA Female*, 1x DisplayPort
Output Connectors	1x HDMI Female Plug, 1x HDBaseT RJ45
Protocol	DDC/EDID/HDCP Capable *VGA input does not support YPbPr video format

AUDIO

Input Channel Capacity	1x microphone, 3x L/R analog
Input Connectors	3mm jack
Output Channel Capacity	1 L/R Analog
Output Connectors	3mm jack

CONTROL DATA

LAN/Telnet	1, RJ-45
RS-232	1, DB9
IR	2, 3mm jack
Others	Input control, terminal block

PHYSICAL

<i>Dimensions</i>	8.62"(W) x 6.14"(D) x 1.7"(H)
Power Consumption	+24VDC @ 1 Amps (Max.)
Operating Temperature	0 to +40°C
Humidity	20 to 90% RH, Non-Condensing

7.0 SERVICE PROCEDURE

7.1 Replacement Policy

Standard products found defective on arrival (DOA) will be replaced, based on availability, within 24 to 48 hours anywhere in the U.S. Please call Customer Service at **800-214-0222** for information.

7.2 Return/Repair Service

The LBC-PSW52 System contains no user serviceable components. If you have a problem with your unit, please contact the Customer Service Department. To facilitate our return/repair processing please contact Broadata Communications, Inc. to obtain a Return Material Authorization (RMA). Please include the following information:

- Product model number
- Serial Number
- Complete description of problem
- Hardware installation description

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Torrance, CA 90505
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(310) 530-1416
(310) 530-5958 (Facsimile)
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Website: www.broadatacom.com

8.0 LIMITED WARRANTY

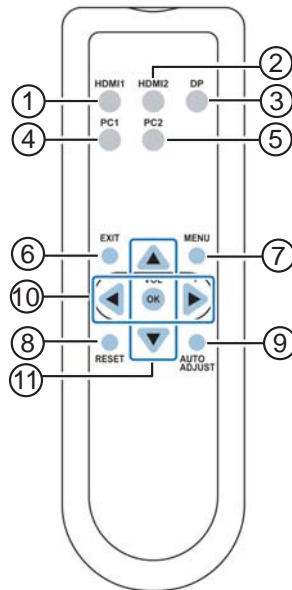
Broaddata Communications, Inc. (BCI) warrants, for a period of one year from date of shipment, each product sold shall be free from defects in material and workmanship. BCI will correct, either by repair, or at BCI's election, by replacement, any said products that in our sole discretion prove to be defective and are returned to the manufacturing location within 30 days after such defect is ascertained. All warranties are limited to defects arising under normal use and do not include malfunctions or failure resulting from misuse, abuse, neglect, alterations, electrical power problems, usage not in accordance with product instructions, improper installation, or damage determined by BCI to have been caused by the Buyer or repair made by a third party. Limited warranties granted on products are to the initial customer end-user and are not transferable. OUR LIABILITY UNDER THIS WARRANTY SHALL IN ANY CASE BE LIMITED TO THE INVOICE VALUE OF THE PRODUCT SOLD AND BCI SHALL NOT BE LIABLE TO ANYONE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING FROM THE USE OF ITS PRODUCTS OR THE SALE THEREOF. We make NO WARRANTY AS TO THE MERCHANTABILITY OF ANY GOODS, OR THAT THEY ARE FIT FOR ANY PARTICULAR PURPOSE OR END APPLICATION NOR DO WE MAKE ANY WARRANTY, EXPRESSED OR IMPLIED OTHER THAN AS STATED ABOVE.

9.0 APPENDIX A: RS-232/TELNET COMMANDS

1	? : command list
2	R VERSION : get version x,yz(x:0~9,y:0~9,z:0~9)
3	S FACTORY-RESET : default for factory
4	S SOURCE x(x:0~4) : 0-hdmi1,1-hdmi2,2-dp,3-pc1,4-pc2
5	R SOURCE : get input source
6	S LOCK x(x:0,1) : 0-unlock,1-lock
7	R LOCK : get key-lock state
8	S OUTPUT x(x:0~23) : 0-640X480,1-800X600,2-1024x768,...
9	R OUTPUT : get output timing
10	S SIZE x(x:0~6) : 0-over scan,1-full,2-follow input,...
11	R SIZE : get output size
12	S HDMI1-HDCP x(x:0,1) : 0-on,1-off
13	R HDMI1-HDCP : get hdcp setting of hdmi1
14	S HDMI2-HDCP x(x:0,1) : 0-on,1-off
15	R HDMI2-HDCP : get hdcp setting of hdmi2
16	S DP-HDCP x(x:0,1) : 0-on,1-off
17	R DP-HDCP : get hdcp setting of dp
18	S MIC-VOL x(x:0~100) : 0-min,100-max
19	R MIC-VOL : get volume of microphone
20	S MUTE x(x:0,1) : 0-unmute,1-mute
21	R MUTE : get mute setting of audio out
22	S OUT-VOL x(x:0~100) : 0-min,100-max
23	R OUT-VOL : get volume of audio out
24	S HDMI1-VOL x(x:0~100) : 0-min,100-max
25	R HDMI1-VOL : get volume of audio-in of hdmi1
26	S HDMI2-VOL x(x:0~100) : 0-min,100-max
27	R HDMI2-VOL : get volume of audio-in of hdmi2
28	S DP-VOL x(x:0~100) : 0-min,100-max

29	R DP-VOL : get volume of audio-in of dp
30	S PC1-VOL x(x:0~100) : 0-min,100-max
31	R PC1-VOL : get volume of audio-in of pc1
32	S PC2-VOL x(x:0~100) : 0-min,100-max
33	R PC2-VOL : get volume of audio-in of pc2
34	S IP-MODE x(x:0,1) : 0-static,1-dhcp
35	R IP-MODE : get ip mode
36	S IP-ADDR xyz.xyz.xyz.xyz(xyz:000~255) : 000-min,255-max
37	R IP-ADDR : get ip address
38	S GATE-WAY xyz.xyz.xyz.xyz(xyz:000~255) : 000-min,255-max
39	R GATE-WAY : get gate-way address
40	S SUB-NET xyz.xyz.xyz.xyz(xyz:000~255) : 000-min,255-max
41	R SUB-NET : get sub-net address
42	S MIC-VOL ++ : increase mic volume
43	S MIC-VOL -- : decrease mic volume
44	S OUT-VOL ++ : increase out volume
45	S OUT-VOL -- : decrease out volume
46	S HDMI1-VOL ++ : increase hdmi1 volume
47	S HDMI1-VOL -- : decrease hdmi1 volume
48	S HDMI2-VOL ++ : increase hdmi2 volume
49	S HDMI2-VOL -- : decrease hdmi2 volume
50	S DP-VOL ++ : increase dp volume
51	S DP-VOL -- : decrease dp volume
52	S PC1-VOL ++ : increase pc1 volume
53	S PC1-VOL -- : decrease pc1 volume
54	S PC2-VOL ++ : increase pc2 volume
55	S PC2-VOL -- : decrease pc2 volume

10.0 APPENDIX B: REMOTE CONTROL UNIT



1. HDMI1 : HDMI 1 source input
2. HDMI2 : HDMI 2 source input
3. DP: Display Port source input
4. PC1: PC1 source input
5. PC2: PC2 source input
6. MENU: Access to On Screen Display (OSD)
7. EXIT: Exit from On Screen Display (OSD)
8. RESET: Return to factory default setting (Ethernet setting remain the same)
9. AUTO ADJUST: Auto adjust PC picture in central
10. ▲/▼: Navigate down/up of On Screen Display selection items
11. ◀(-) / ▶(+): Adjust selection items parameter (+) or (-) of On Screen Display or output volume adjustment

11.0 APPENDIX C: WEBGUI



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