

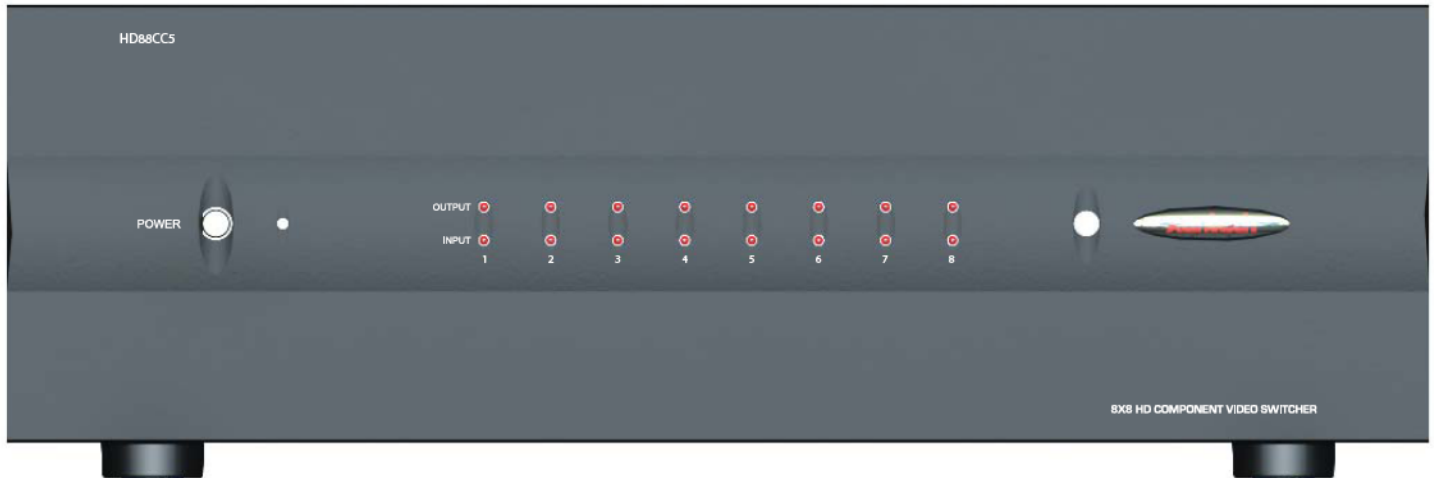
INSTALLATION INSTRUCTIONS

HD88CC5

High Definition Video Matrix Switcher,
Coaxial and CAT5

HD88C

High Definition Video Matrix Switcher,
Coaxial Only



DESCRIPTION

The HD88CC5 eight-source, eight-zone, high-definition matrix switcher allows Hi-Definition Video and digital Audio signals to be sent over standard Coax cable or CAT5 cable with virtually no loss. Both coaxial component and CAT5 video outputs are active simultaneously, making it possible to distribute eight sources to sixteen outputs at the same time.

The HD88C has the same great features as the HD88CC5 without the CAT5 output. The HD88C is ideal for installations requiring local switching and distribution up to 250'.

The HD88CC5 and HD88C units are expandable up to 32 discreet Outputs (ZONES) by paralleling the inputs of up to 4 8x8 units.

SPECIFICATIONS

- Size: 17" W x 7-3/4" D x 5-3/4" H
- Weight: 12.6 lbs (12.6 kilos)
- Controllable through IR and RS232 commands
- Optional Rack Mount kit available (RM3UKIT)
- Power Requirements (120VAC, 0.25A, 50-60Hz) Supports 220VAC with appropriate Switch setting (See Rear Panel, Item #3)
- Operates in temperatures up to 55 degrees Celsius
- Video Input: Component Video YPbPr (YCbCr) – Gold Plated RCA
- Audio Input: SPDIF PCM Coaxial – Gold Plated RCA
- Active A/V Loop Thru (for Expansion): Gold Plated RCA
- Bandwidth supports resolutions of 1080p, 1080i, 720p, 480p and 480i
- Coax Output Distance: 250ft (76m) – Gold Plated RCA
- CAT5/E Output Distance: 1,000ft (304m) – RJ45

Safety Information



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR SHOCK,
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT SAFETY INFORMATION

Read Information — All the safety and operating information should be read before the appliance is operated.

Follow Information — All operating and use information should be followed.

Retain Information — The safety and operating information should be retained for future reference.

Heed Warnings — All warnings on the appliance and in the operating instructions should be heeded.

Wall Mounting — Mounting of this appliance should be done only by an authorized installer.

Ventilation — The appliances should be situated so that their location or position does not interfere with their proper ventilation. These appliances should never be placed near or over a radiator or heat register. These appliances should not be placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

Non-Use Periods — Appliances that are left unattended and unused for long periods of time should be de-energized.

Grounding or Polarization — Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one blade wider than the other blade. A grounding type plug has two blades and a third grounding prong. The polarized wide blade and the third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.

Power Cord Protection — Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.

Water — Do not use the apparatus near water.

Cleaning — Unplug the apparatus from the power outlet before cleaning. Use only a dry cloth to clean the apparatus.

Power Lines — An outdoor antenna should be located away from power lines. When installing an outside antenna system, extreme care should be taken to avoid touching power lines or circuits, as contact with them may be fatal.

Object and Liquid Entry — Never insert objects of any kind through the openings of these appliances, as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Care should be taken so that objects do not fall and liquids are not spilled into the appliance through openings in the enclosure.

Servicing — Do not attempt to service these appliances yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring Service — These appliances should be serviced by qualified service personnel when:

- A power supply connection or a plug has been damaged or
- If liquid has been spilled into the appliance or objects have fallen into the appliance or
- The appliance has been exposed to water or moisture or
- The appliance does not appear to operate normally or exhibits a marked change in performance or
- The appliance has been dropped or the enclosure damaged.

Replacement Parts — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Safety Check — Upon completion of any service or repairs to this audio product, ask the service technician to perform safety checks to determine that the audio product is in proper operating condition.

Lightning Storms — Unplug this apparatus during lightning storms or when unused for long periods of time.

Attachments and Accessories — Use only attachments/accessories specified by the manufacturer.

Cart, Stand, Tripod, Bracket or Table — Use only with a cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip over.

Disconnect Device — Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain operable.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications not expressly approved by Xantech could void the user's authority to operate the equipment

Caring For the HD88 High Definition Video Matrix Switcher

Clean only with a dry soft cloth.

It is important to properly care for your HD88 High Definition Video Matrix Switcher. Follow these guidelines to ensure your device is preserved and protected.

- Do not expose the HD88 to rain, liquids or moisture for an extended period of time.
- Do not expose the HD88 to temperature extremes.
- Do not place any objects on top of the HD88 to prevent chassis damage.

Precautions

- Always exercise care when operating the HD88 High Definition Video Matrix Switcher.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- In the unlikely event that smoke, abnormal noise, or strange odor is present, immediately power the HD88 off. Please report the problem to your dealer immediately.
- Never attempt to disassemble the HD88. You will lose any product warranty on the unit.

IMPORTANT NOTICE

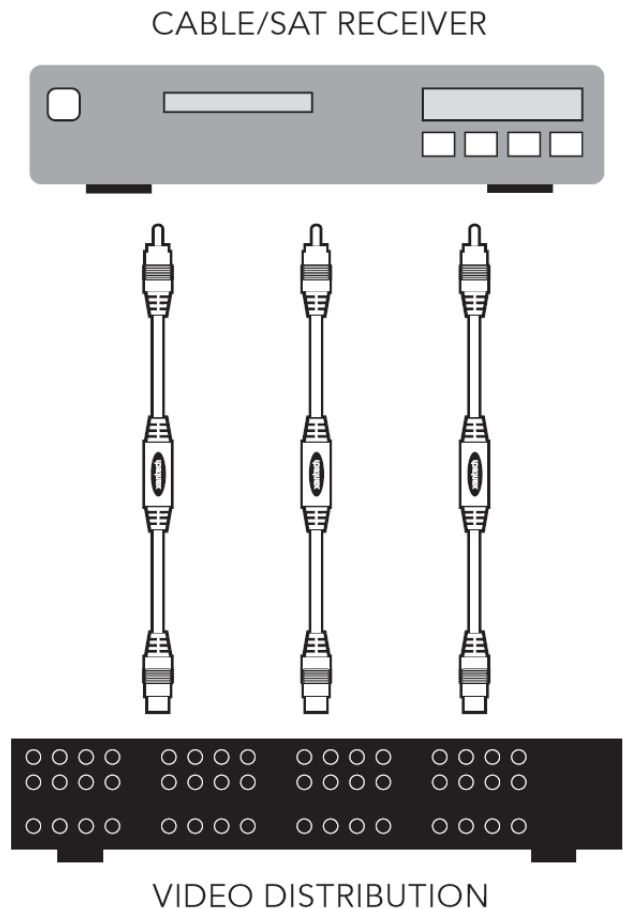
HD44 Series and HD88 Series

INTRODUCTION

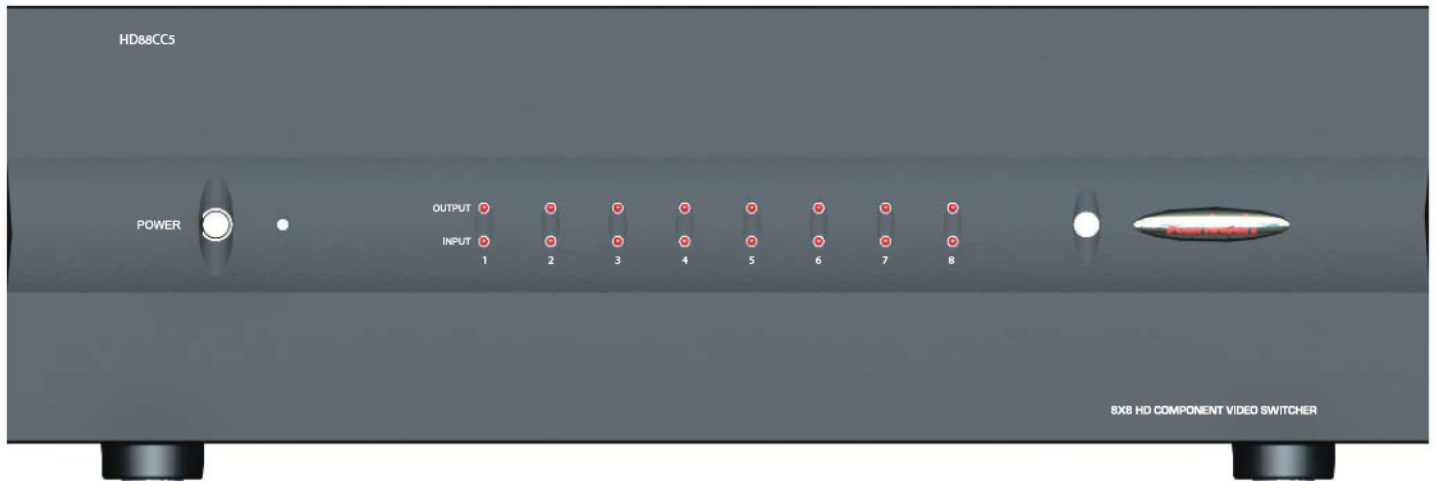
In some installation scenarios, an audio/video source component (such as a cable box or DVD player) may fail to work properly with distribution products or even a display. The problem is often related to the source component's video outputs exhibiting too much DC offset voltage on the signal line. The result of poor DC offset voltage conditioning on the output often results in color problems such as color bleeding, picture clarity, definition, and stability issues.

VS100 DC BLOCKER

To resolve this issue, use a Xantech 'VS100' Video Stabilizer DC Blocker. The 'VS100' is placed in between the source component output and the input to the distribution product. Packaged in convenient inline dongles, the 'VS100' requires no additional cables or power connections. A 'VS100' DC Blocker set needs to be connected between each source component with a DC offset issue and its corresponding input on the HD88 or HD44.



DETAIL OVERVIEW



FRONT PANEL

The front panel is designed to provide the unit's current Output/Input setting status. Note that only one Output/Input status setting is displayed at any given moment. The top row of LED indicators represents the current ZONE output selection. The bottom row of LED indicators represents the current SOURCE input selection. The LED columns are numbered 1 to 8, from left to right.

To review the Zone/Input assignment, you must first perform a Zone Selection by pressing the desired ZONE on the remote control. The unit will automatically update its display to show the selected Output (ZONE) and its associated selected Input (SOURCE). The Output (ZONE) OFF condition is identified by lighting the specified Output (ZONE) LED and leaving all (SOURCE) LED's off. To change the Input (SOURCE), press the desired SOURCE button. Modifying the Output (Zone) to Input (Source) association for an Output (Zone) other than the one currently displayed on the front panel will require two button presses. The first one changes the active Output (ZONE). The second updates the Input (SOURCE) pairing.

REAR PANEL

[1] SOURCE LOOP-THROUGH CONNECTION

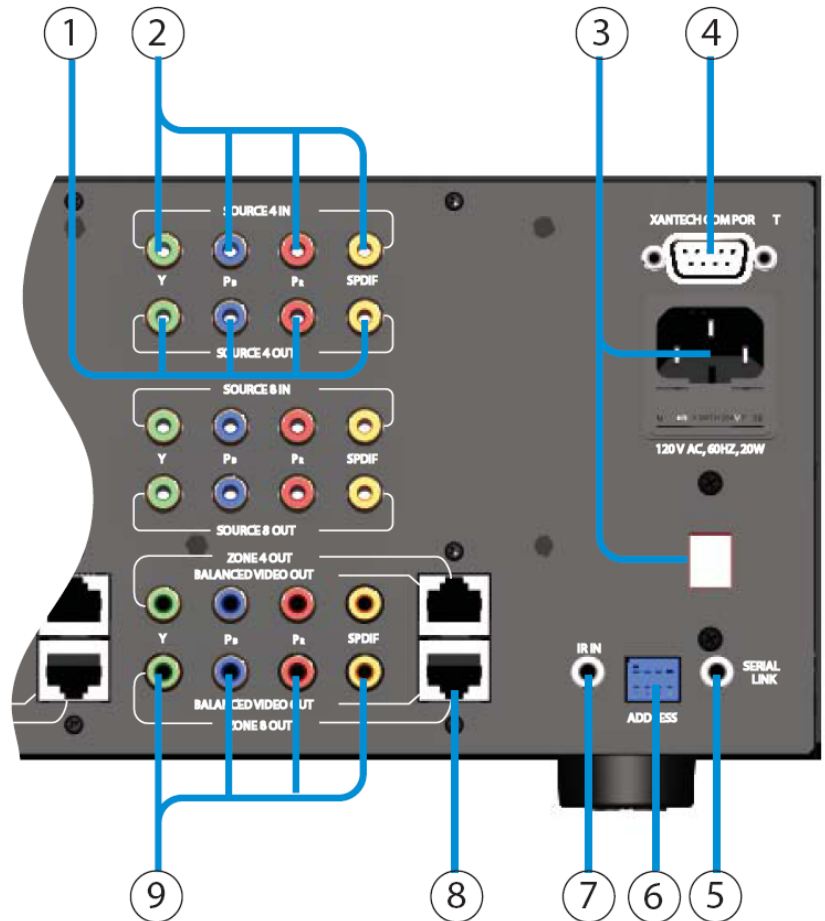
The source inputs are buffered to provide an output at the same level as the input – i.e. Unity Gain (assuming a 75-ohm termination is on the output). Use these connections for HD88 expansion systems. The buffers are an active circuit. The HD88 must be powered on for an active connection. The jacks are color-coordinated to match the HD source component output color scheme.

[2] SOURCE INPUTS

These are Gold-plated RCA jacks providing a connection from the output of a source component to the HD88. The jacks are color-coordinated to match the HD source component output color scheme.

[3] AC POWER INPUT AND EUROPEAN POWER SELECTION SWITCH

This Standard IEC 3-Conductor AC Line Cord Receptacle is utilized to plug-in a 3-conductor power line cord. Be sure to note if the power receptacle is Domestic (120VAC) or International (240VAC).



[4] RS232 (SERIAL) COMMANDS

The RS232 Port is bi-directional. The communication parameters are set to 9600 Baud 8-N-1.

DB9 CONNECTOR

CIRCUIT	PIN
TX	2
RX	3
GND	5

RS232 COMMAND STRUCTURE

Where:

{z#} - Zone Number. Range is 1..4 (1..16 if expanded)

{s#} - Source Input Number. Range is 1..4

{0/1} – Either 0 (zero) or 1 (one). 0 – Off, 1 – On.

NAME	COMMAND	REMARKS
Zone Power	!{z#}PR{0/1}+	To turn on Zone 2: !2PR1+
		To turn off Zone 1: !1PR0+
Zone Power Toggle	!{z#}PT+	
All Zones Off	!AO+	
All Zones On	!AA+	
Input (Source) Select	!{z#}SS{s#}+	To set Zone 1 to Source Input 5: !1SS5+

RS232 QUERIES

NAME	QUERY	RESPONSE	EXAMPLE	EXPLANATION
Zone Power	?{z#}PR+	?{z#}PR{0/1}+	?7PR0+	Power in zone 7 is OFF.
Input Select	?{z#}SS+	?{z#}SS{s#}+	?5SS3+	Zone 5 is Source 3.

[5] RS232 EXPANSION

The HD88C and HD88CC5 can be expanded into larger systems. By using any combination of the HD88C and HD88CC5 (up to 4 units), a larger High-Definition distribution system can be created for up to 32 Zones of Component Video and Digital Audio Distribution.

The expanded HD88C units must have their own unique address (see ADDRESS (DIP SWITCH) section). The included RS232 expansion cable allows the units to be daisy chained via the RS232 control ports. This is done by connecting the SERIAL LINK port of the master to the XANTECH COM PORT of the other unit. The XANTECH COM PORT of the master is utilized to provide control of the entire system. Note that the Master is the main controlling unit. This unit is in charge of coordinating the communications between all expanded units. It is identified as the master by the unit address assigned to it. Refer to the ADDRESS (DIP SWITCH) section for further details.

DB9 MALE

CIRCUIT	PIN
TX	2
RX	3
GND	5

3.5MM PLUG

PLUG	CIRCUIT
TIP	TX
RING	RX
SLEEVE	GND

[6] ADDRESS (DIP SWITCH)

Switch 1 & 2: Unit Address (for Expansion mode)

ADDR	SW 1	SW 2
UNIT 1 (Master)	OFF	OFF
UNIT 2	OFF	ON
UNIT 3	ON	OFF
UNIT 4	ON	ON

Switch 3: Group Code Write Protect

Wr Protect	SW 3
Protected	OFF
Unprotected	ON

Switch 4: IR Receiver Select

IR Select	SW 4
Front IR Sensor Enable	OFF
Rear IR Sensor Enable	ON

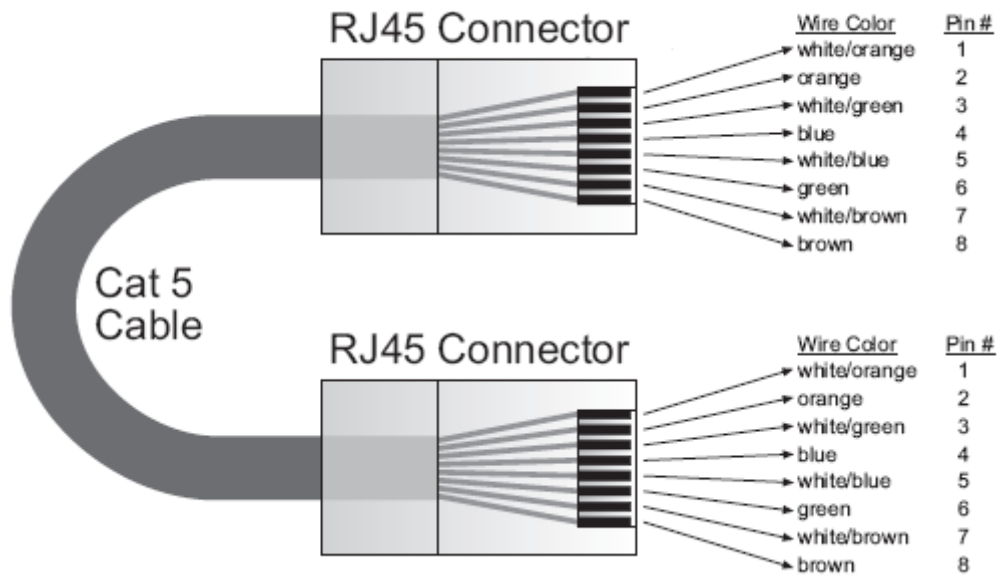
[7] IR BUS

The IR_IN port utilizes a 3.5mm mono jack. Use this port to connect to an IR emitter output port of a Xantech connecting block.

PLUG	CIRCUIT
TIP	IR SIGNAL
SLEEVE	GROUND

[8] CAT5 ZONE OUTPUT

This is an Output connection to the HDRXSG01 receiver module. It utilizes standard CAT5 cable. Be sure to verify CAT5 wiring connection is correct before installation.



[9] COAXIAL ZONE OUTPUT

These Gold-plated RCA jacks provide for a connection to HD monitors. The jacks have been color-coordinated to match the HD monitor input color scheme. Note that the CAT5 and coaxial Zone Outputs can be used at the same time.

IMPORTANT NOTICE

After connecting the CAT5 cable to the receiver (HDRXSG01), the power supply to the receiver should be unplugged for a few seconds and then reconnected. This allows the receiver to go through the full process of line length and line quality self-calibration.

As an alternate process to this procedure, the power may be cycled off for a few seconds and reapplied to accomplish the same full self-calibration process.

If for some reason the system loses power at the receiving end (HDRXSG01), the transmitting end (HD88CC5), or both ends, the full self-calibration process will automatically occur.

QUICK INSTALLATION: HD88CC5 and HDRXSG01

- [1]** Connect the High-Definition Source to the HD88CC5 or HDTXSG01. Figure 1 below shows an HD88CC5 (video matrix transmitter) connected to the HDRXSG01 (receiver).
- [2]** Using CAT5 cable, connect the HD88CC5 zone output or the output from the HDTXSG01 to the HDRXSG01. Connect power to the HD88CC5 first, then connect power to the HDRXSG01.
- [3]** On the HD88CC5, make the desired Zone/Source assignment. See HD88CC5 manual on how to use RS232 and IR RC68+ controls.
- [4]** Installation Complete! No adjustments needed!

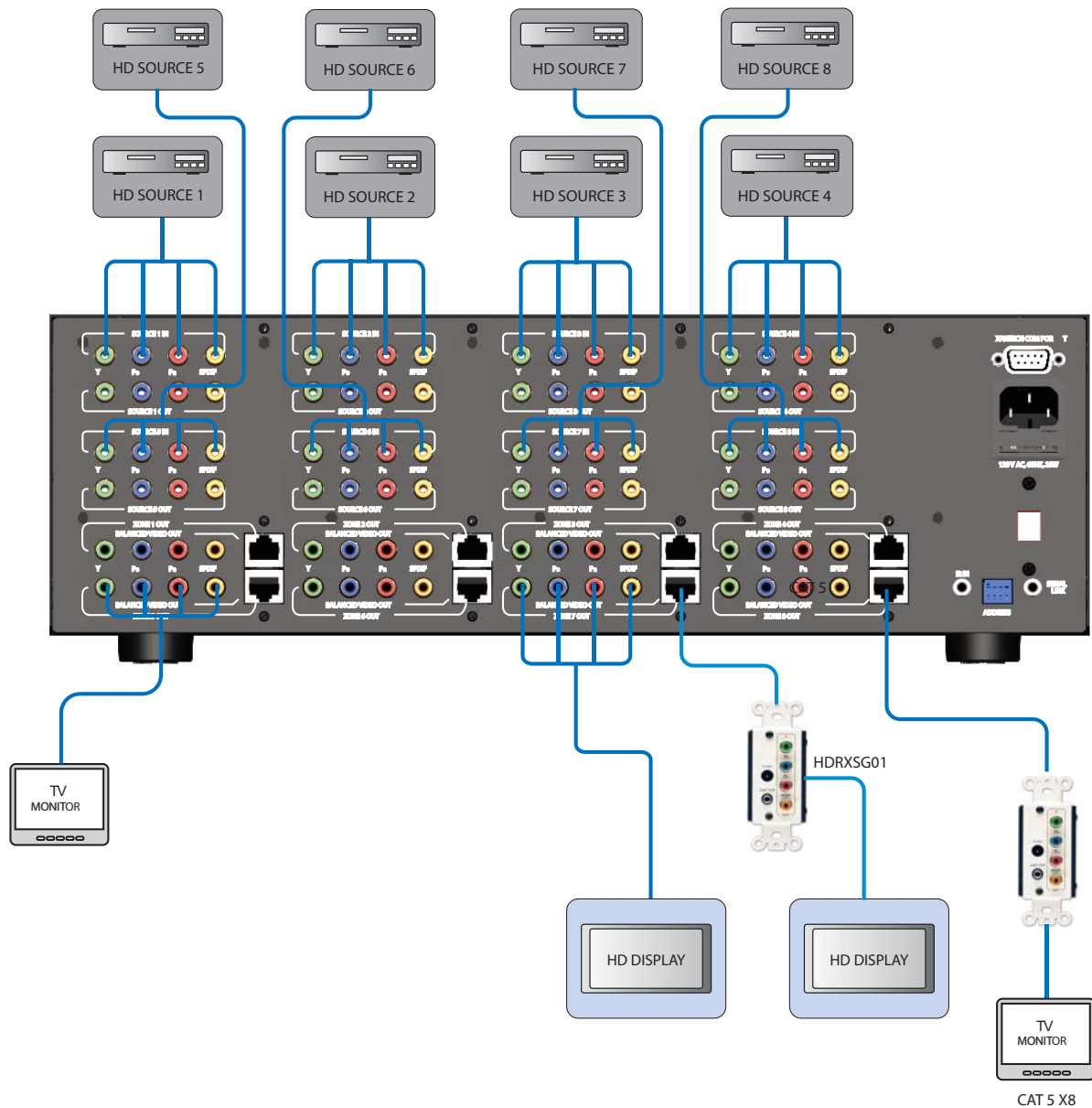


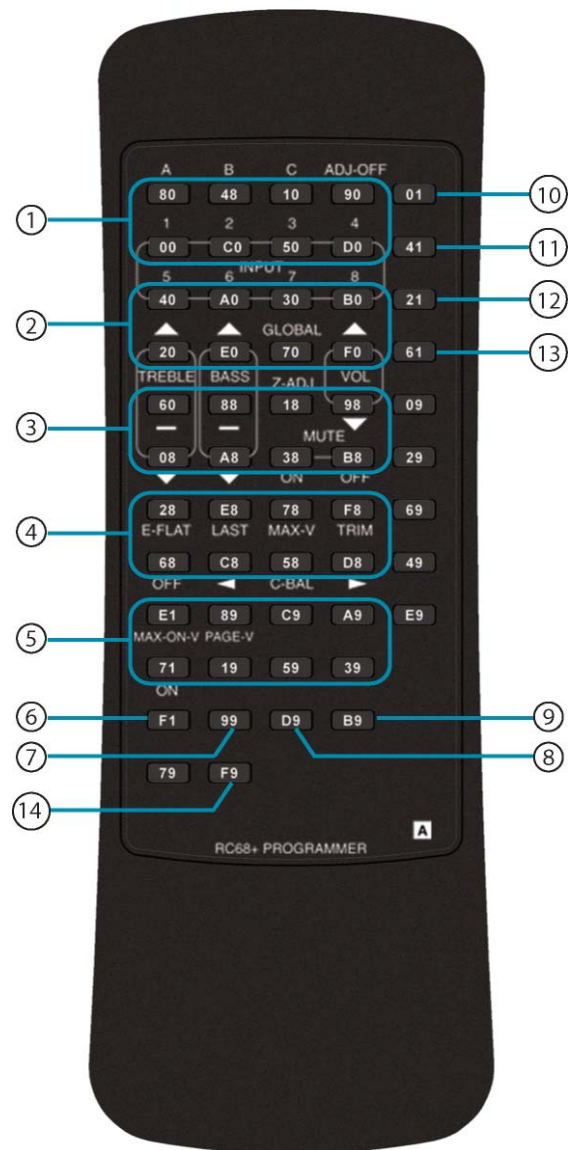
FIGURE 1

RC68+ (IR) COMMANDS

The RC68+ should be set to Group Code "F1".

		ZONE							
		1	2	3	4	5	6	7	8
1	Zone Selection	80	48	10	90	00	C0	50	D0
2	Source Selection	40	A0	30	B0	20	E0	70	F0
3	Zone Power On	60	88	18	98	08	A8	38	B8
4	Zone Power Off	28	E8	78	F8	68	C8	58	D8
5	Zone Power Toggle	E1	89	C9	A9	71	19	59	39

6	Zone All On	F1
7	Zone All Off	99
8	Save Preset	D9
9	Clear Preset	B9
10	Preset One	01
11	Preset Two	41
12	Preset Three	21
13	Preset Four	61
14	Restore All Zones	F9



ADVANCE INSTALLATION

Sports Bar

The figure below shows a diagram for a sports bar application. With the equipment rack located near or behind the bar area, the coaxial outputs can be used for local HD monitors. The CAT5 outputs can be used to deliver HD content to areas such as outdoor patios and pool table recreational areas.

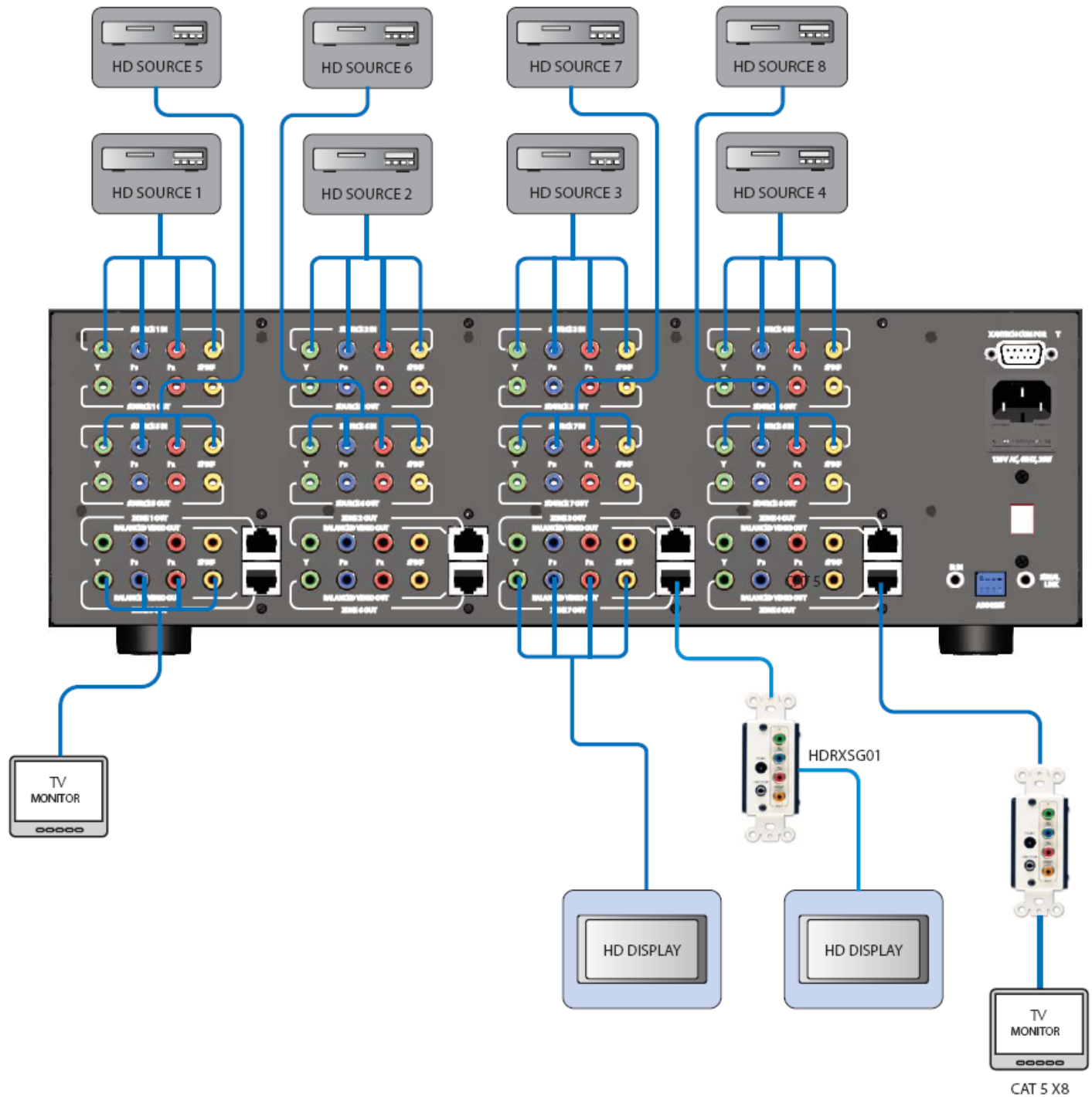


FIGURE 2

Expanded System

The figure below shows an expanded HD88CC5 (16 Zones and up to 32 HD monitors) system. With two HD88CC5 devices, HD content can be distributed to 32 displays (16 with CAT5 outputs, 16 with coaxial outputs). The included RS232 expansion cable allows a single RS232 control port to be used to command the entire system. Expansion specific communications between units is accomplished via the Expansion Cable.

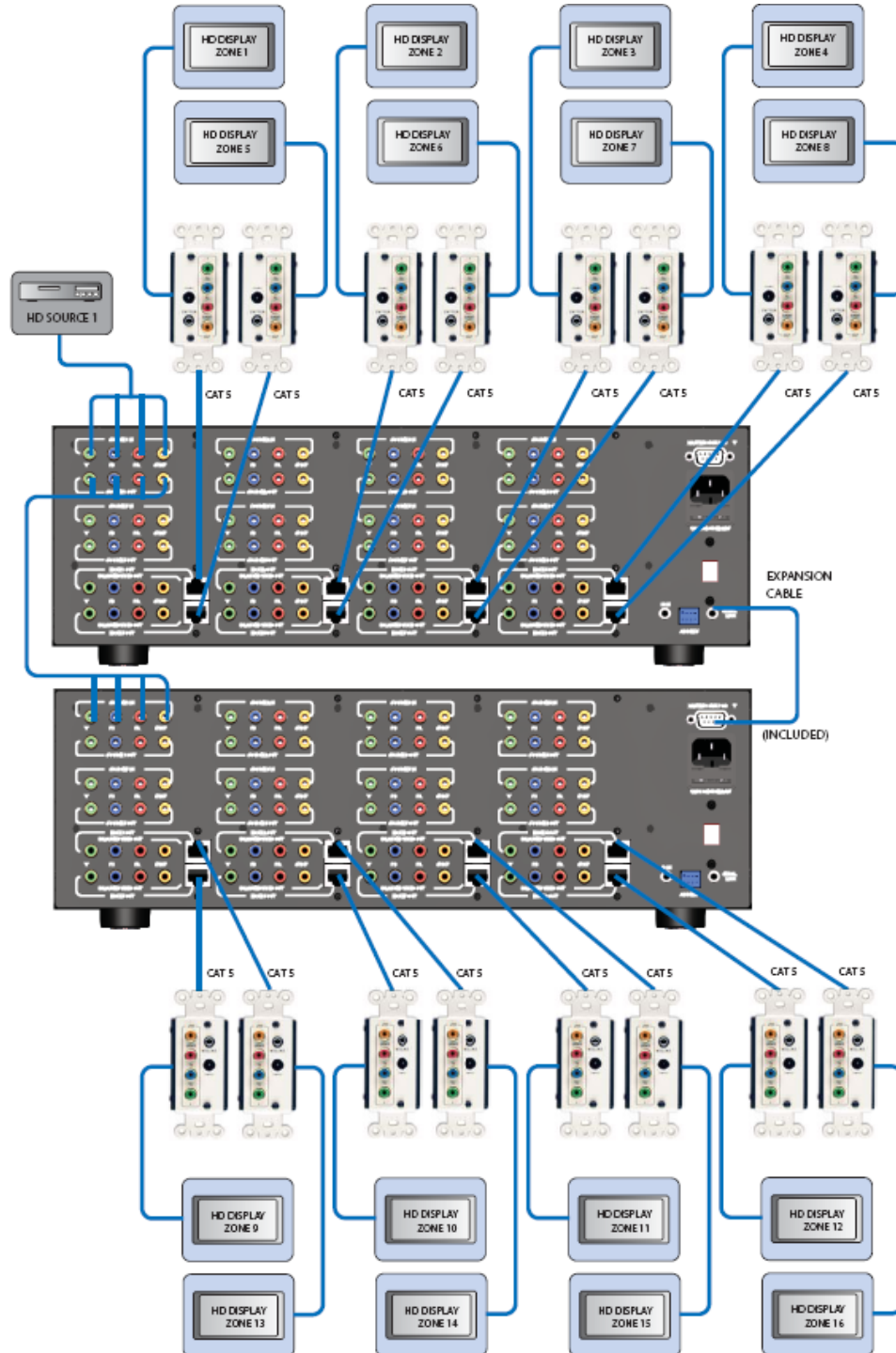


FIGURE 3

Notes:

Xantech Limited Warranty

(Effective for products sold after July 1, 2006)

Xantech Corporation ("Xantech") warrants to the holder of a valid proof of purchase as the first end-user purchaser ("You"), its products to be free from defects in materials and workmanship for the periods specified below from the date of purchase. This limited warranty extends only to You for product purchased and used in the United States of America. For product purchased outside of the United States of America, You must contact the Xantech authorized distributor in your region for warranty services. Product is not intended for end user installation. If within the applicable warranty period above You discover such item was not as warranted above and You promptly notify Xantech in writing, Xantech shall repair or replace the items at its option. Xantech may elect which remedy or combination of remedies to provide in its sole discretion. Xantech may use functionally equivalent reconditioned/refurbished/pre-owned or new products or parts under this limited warranty. This warranty shall not apply (a) to product which shall have been installed by other than an authorized Xantech installer, (b) to installed product which is not installed to Xantech's specifications, (c) to product which shall have been repaired or altered by others than Xantech, (d) to charges for installation or set up or adjustment of customer controls, (e) to product that has suffered normal cosmetic deterioration (f) to product which shall have been subjected to negligence, misuse, abuse, accident, or damage by circumstances beyond Xantech's control, including, but not limited to, lightning, flood, electrical surge, tornado, earthquake, or any other catastrophic events beyond Xantech's control, or (g) to product which shall have been subjected to improper operation, connected equipment failure or malfunction, inadequate packing or shipping damage, maintenance or storage, or to other than normal use of service. The foregoing warranties do not cover reimbursement for labor, transportation, shipping, removal, installation, or other expenses which may be incurred in connection with repair or replacement. All claims for product shipping damage must be processed within 3 days of receipt by You.

A Xantech Return Authorization (RA) must be obtained from Xantech by You, your installer or your distributor for Product covered under this warranty. Covered product must be sent to Xantech together with proof of purchase, RA number, prepaid and insured to Xantech. Freight collect shipments will be refused. Risk of loss or damage in transit is borne by the sender. Xantech's warranty does not cover Products which have been received improperly packaged, altered, or physically damaged. Products will be inspected upon receipt.

Except as may be expressly provided and authorized in writing by Xantech, Xantech shall not be subject to any other obligations or liabilities whatsoever with respect to equipment manufactured or sold by Xantech or services rendered by Xantech.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ATTENTION: TO OUR VALUED CONSUMERS

To insure that consumers obtain quality pre-sale and after-sale support and service, Xantech products are sold exclusively through authorized dealers and authorized distributors. The warranties on Xantech products are NOT VALID if the products have been purchased from an unauthorized dealer or distributor. In order to determine if your Xantech re-seller is authorized, please call Xantech (800) 843 - 5465.

XANTECH PRODUCT (go to Xantech.com/warranty for model numbers)	WARRANTY DURATION
IR Receivers and IR Emitters	Limited Lifetime
Remote Control Switchers	Limited Lifetime
Modules and Connecting Blocks	Limited Lifetime
Accessories	Limited Lifetime
Speakers	Limited Lifetime
Volume Controls and Speaker Selectors	5 year Limited
DIGI-5, MRC, BX, ZPR and Commercial Products	2 year Limited
Amplifiers	2 year Limited
Control Interfaces	2 year Limited
Hand Held Remote Controls	1 year Limited
SPLCD Product	1 year Limited
Source Components, XIS100	1 year Limited



Xantech Corporation
13100 Telfair Avenue
Sylmar, CA 91342

www.xantech.com

Phone: (818) 362-0353, Fax: (818) 362-9506

Installation Instructions, HD88CC5, HD88C © 2009 Xantech Corporation

This document is copyright protected. No part of this manual may be copied or reproduced in any form without prior written consent from Xantech Corporation.

Xantech Corporation shall not be liable for operational, technical, or editorial errors/omissions made in this document.

Document Number 08905150B