

# B & K Components, Ltd.

CT 610

CT 310

CT 600

CT 300

## Quick Reference Manual Multi-Zone Audio/Video Receivers

QUICK REFERENCE MANUAL - CT610/600/310/300  
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\*\*\*Warning - PC requirements - 128MB RAM, Pentium grade or better processor, Windows 98SE operating system or greater. (Exception - BKcSuite not supported on Windows NT) \*\*\*

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### **Accessories Included**

- 1 - MZ-128 Remote Control
- 4 - AAA Batteries
- 1 - Power Cord
- 1 - BK Toolbox CD-ROM
- 1 - CT610/600/310/300 User Manual
- 1 - CT610/600/310/300 Quick Reference Manual
- 1 - FM Dipole Antenna
- 1 - AM Antenna
- 1 - DB9 to RJ-45 Adapter
- 1 - Warranty Card

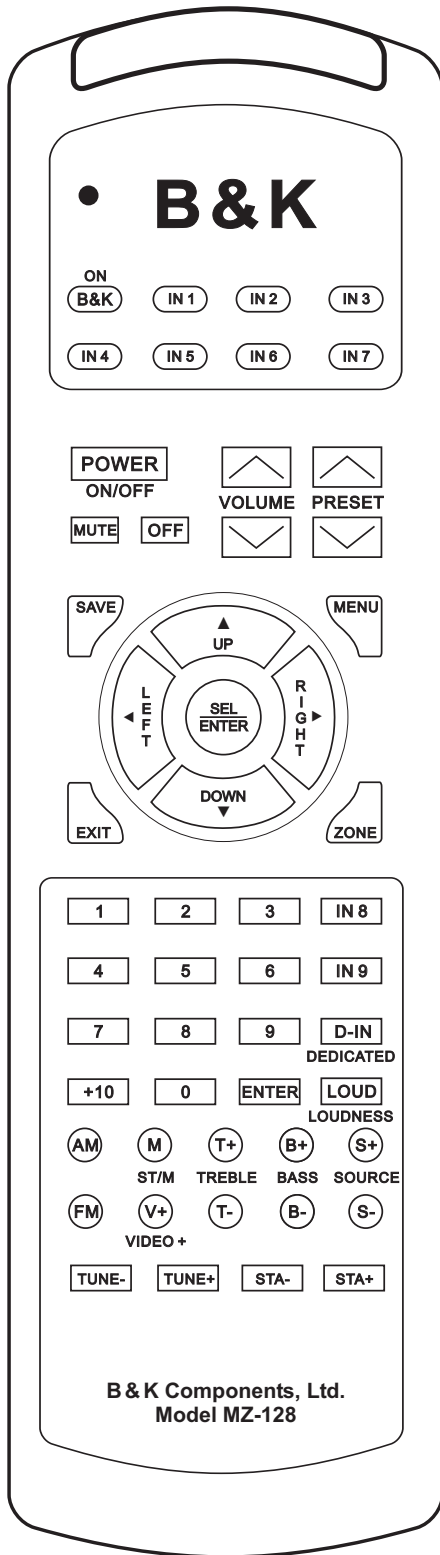


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# B & K CT Series MZ-128 Remote Controller Reference Sheet



The MZ-128 Remote Controller has multiple useful functions:

- 1) The MZ-128 Remote Controller may be used to control and setup a CT610/600310/300.
- 2) The MZ-128 may be used as a source of IR for use in programming learning keypads etc...
- 3) The MZ-128 may be set to source the B & K IR functions listed below, for code sets 000-128 and 999.

Setup the MZ-128 to use a discrete B & K code set:

- 1) Install 4 AAA batteries into the remote. Observe polarity.
- 2) Press and hold the B & K and MUTE buttons simultaneously for two seconds. The LED will light up solid red and stay illuminated.
- 3) Firmly press the desired B & K three digit code set. Always use three digits (i.e. 0-1-1 Zone A)
- 4) Press the B & K button again to confirm setup. The red LED will blink three times when the IR code has been successfully programmed.

## MZ-128 Default Factory Code-Set is: 0-0-0 Whole House Control

### CODE SET 000-128

MZ-128 BUTTON	B & K IR FUNCTION
B&K	[POWER STATE] POWER ON
POWER	POWER TOGGLE
OFF	POWER OFF
MUTE	[VOLUME] MUTE TOGGLE
VOLUME ^	MASTER VOL UP
VOLUME v	MASTER VOL DOWN
B+	[TONE CONTROL] BASS UP
B-	BASS DOWN
T+	TREBLE UP
T-	TREBLE DOWN
LOUD	LOUDNESS TOGGLE
S+	[INPUT SOURCE] SOURCE UP
S-	SOURCE DOWN
V+	VIDEO SOURCE UP
D-IN	ZONE DEDICATED IN
AM	TUNER AM
FM	TUNER FM
IN 1	IN 1 OR [V1]
IN 2	IN 2 OR [V2]
IN 3	IN 3 OR [TV]
IN 4	IN 4 OR [DVD]
IN 5	IN 5 OR [CD]
IN 6	IN 6 OR [SAT]
IN 7	IN 7 OR [TAPE]
IN 8	IN 8 OR [V4]
IN 9	IN 9 OR [V5]
PRESET ^	[FAVORITE PRESET] FAVORITE PRESET UP
PRESET v	FAVORITE PRESET DN

MZ-128 BUTTON	B & K IR FUNCTION
AM	[TUNER] SELECT THE AM BAND
FM	SELECT THE FM BAND
TUNE +	TUNE FREQUENCY UP
TUNE -	TUNE FREQUENCY DOWN
STA +	TUNER FAV PRESET UP
STA -	TUNER FAV PRESET DOWN
M	STEREO / MONO
MENU	[NAVIGATION] MENU UP/DOWN LEVEL
LEFT	LEFT OR BALANCE (L)
RIGHT	RIGHT OR BALANCE (R)
SEL/ENTER	SELECT OR ENTER
UP	UP
DOWN	DOWN
SAVE	SAVE
EXIT	TOTAL EXIT FROM ALL MENUS
ZONE	ZONE SELECT
0	[NUMERIC] 0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
+10	+10

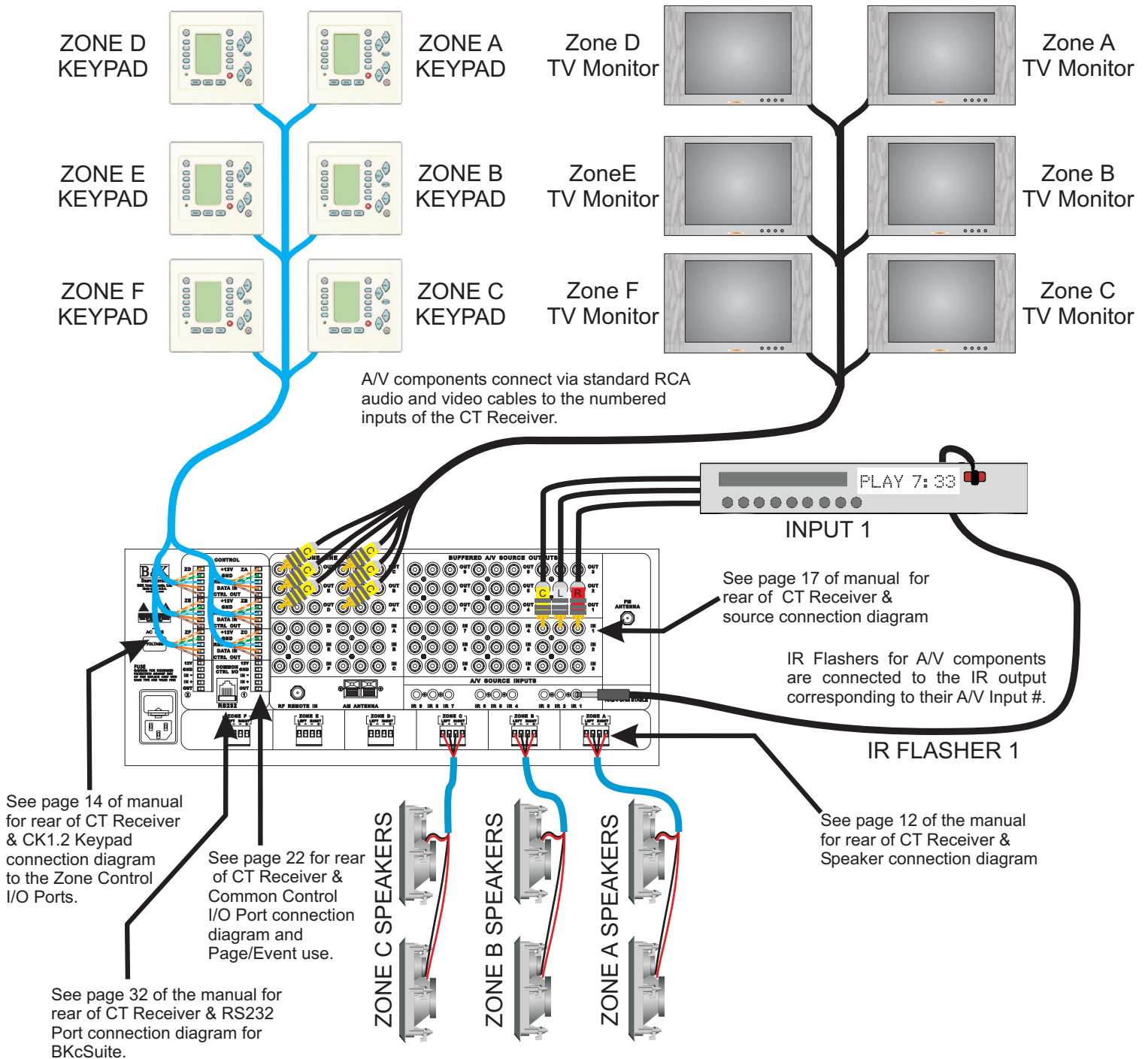
### CODE SET 999

MZ-128 BUTTON	B & K IR FUNCTION
ON/B & K/POWER	[B & K ALL COMMANDS] ALL B & K POWER ON
OFF	ALL B & K POWER OFF
VOLUME ^	ALL B & K VOLUME UP
VOLUME v	ALL B & K VOLUME DOWN
0	ALL B & K VOLUME 0 DB
2	ALL B & K VOLUME -20 DB
4	ALL B & K VOLUME -40 DB
6	ALL B & K VOLUME -60 DB
MUTE	ALL B & K MUTE TOGGLE

### Code-Set 128 Simply Explained

Code-Set 128 is a special code-set which allows individual control of the Hardware Zone that the IR Data is received by. It will not function when received by the unit's front panel. I.e., Two keypads are plugged into Zone A & B's Control I/O Ports, when the remote comes into IR view of the keypad in Zone A, the 128 Code-set remote will only control Zone A, when in Zone A. Take that same remote into Zone B and it will only control Zone B.

# Basic CT Receiver & CK1.2 System Hookup



**WARNING!** UNPLUG AC POWER FROM ALL UNITS BEFORE MAKING ANY CONNECTIONS **WARNING!**

ALL WORK SHOULD BE DONE BY A QUALIFIED/TRAINED PROFESSIONAL.

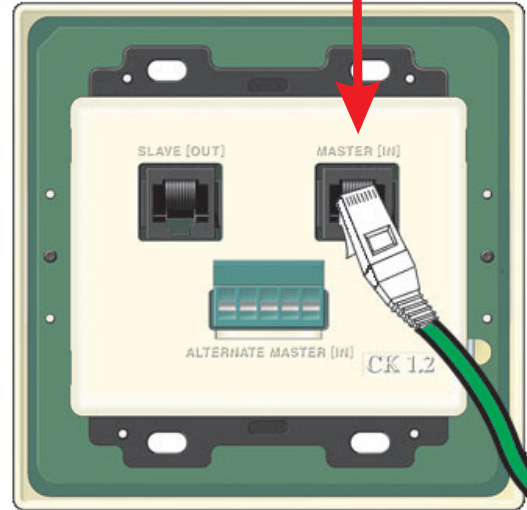
# Example Connection of a CK1.2 Keypad to a CT Receiver

## CK1.2 Keypad Connection

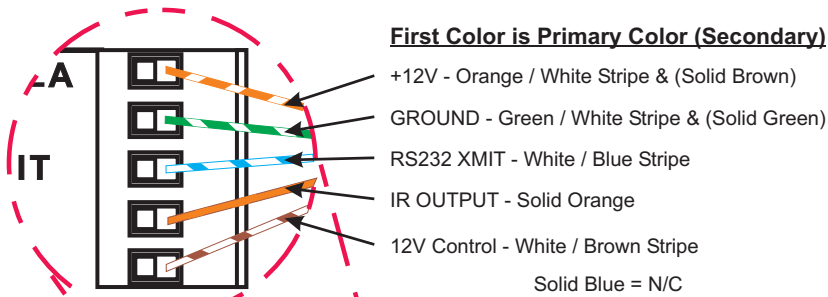
Plug the male RJ45 connector into the **Master [IN]** port on the CK1.2 Keypad. Additional keypads in a zone can be run out of the Slave [OUT].

### Using a EIA-T568B Cat-5 Cable

RJ45 termination on one end and bare wire on the other

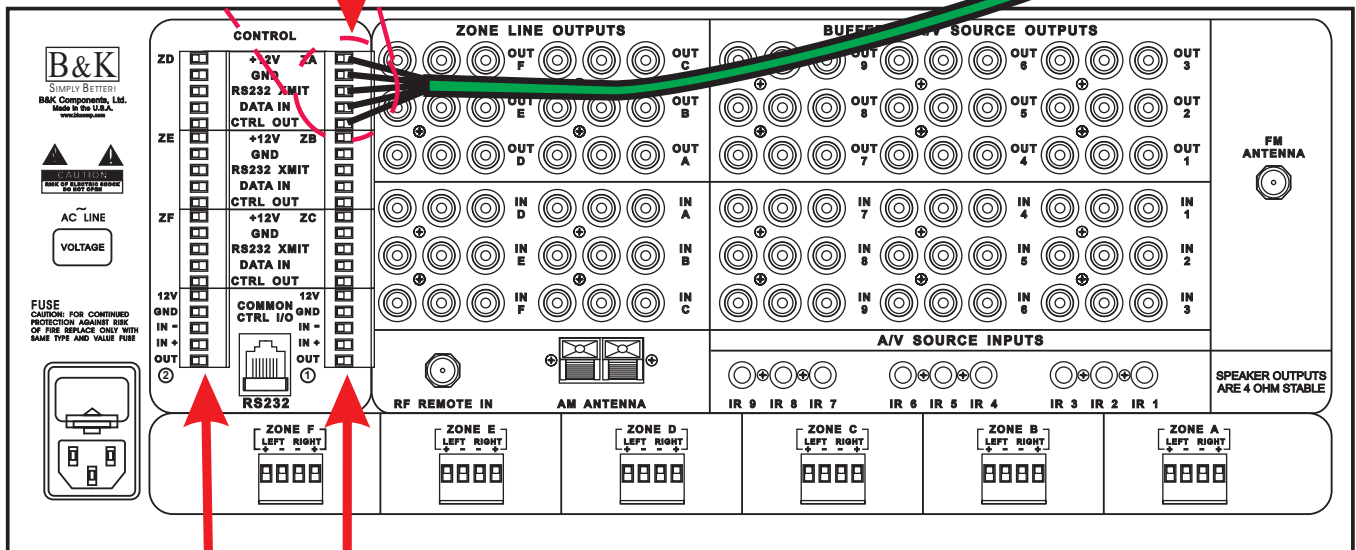


CK1.2 Keypad



## CT Receiver Connection

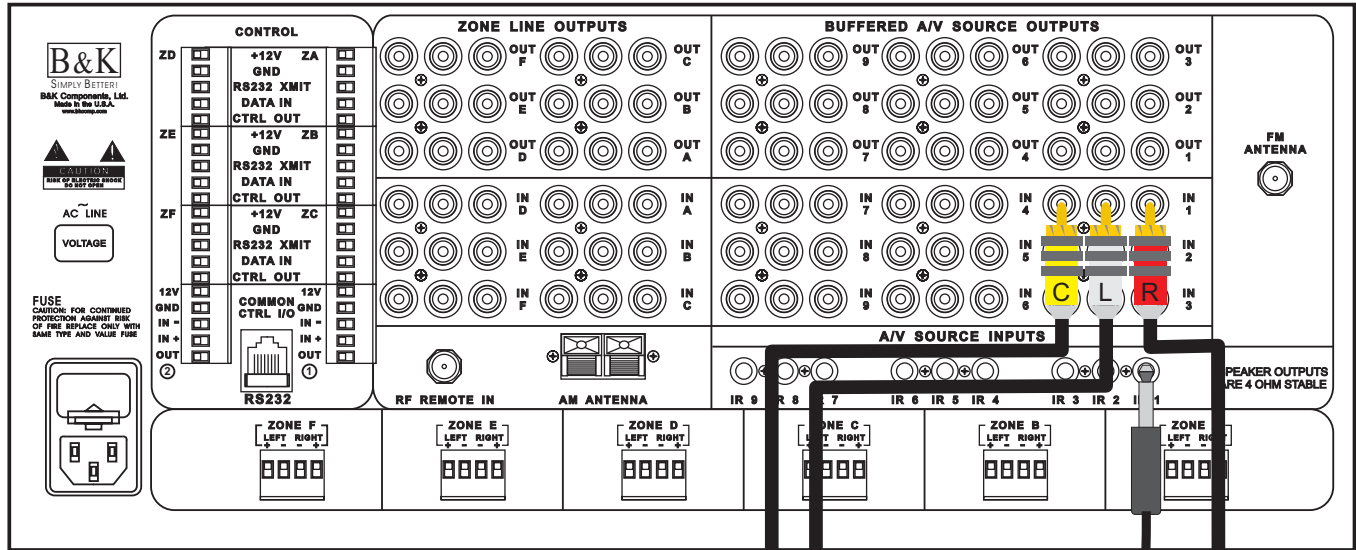
Insert and tighten the wires into the specific Hardware Zone Control I/O Port Phoenix plug of the Zone that you wish to control.



CT610

**DO NOT CONNECT KEYPADS TO COMMON CONTROL I/O PORTS.**

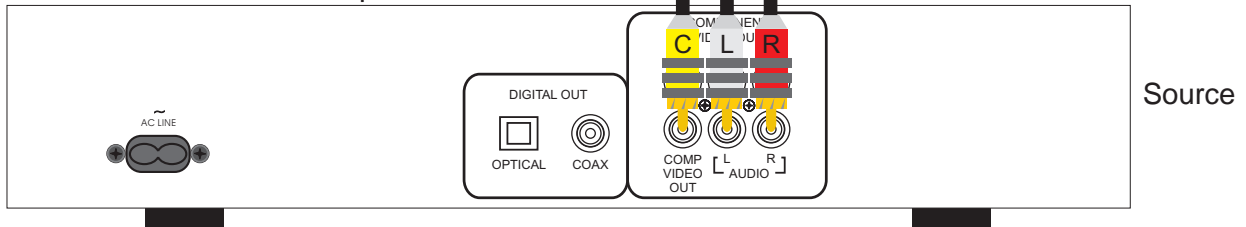
## Example connection of a Shared Source to a CT Receiver



### CT Receiver Connection

Plug the analog audio, composite video, and the IR Emitter into the back panel.

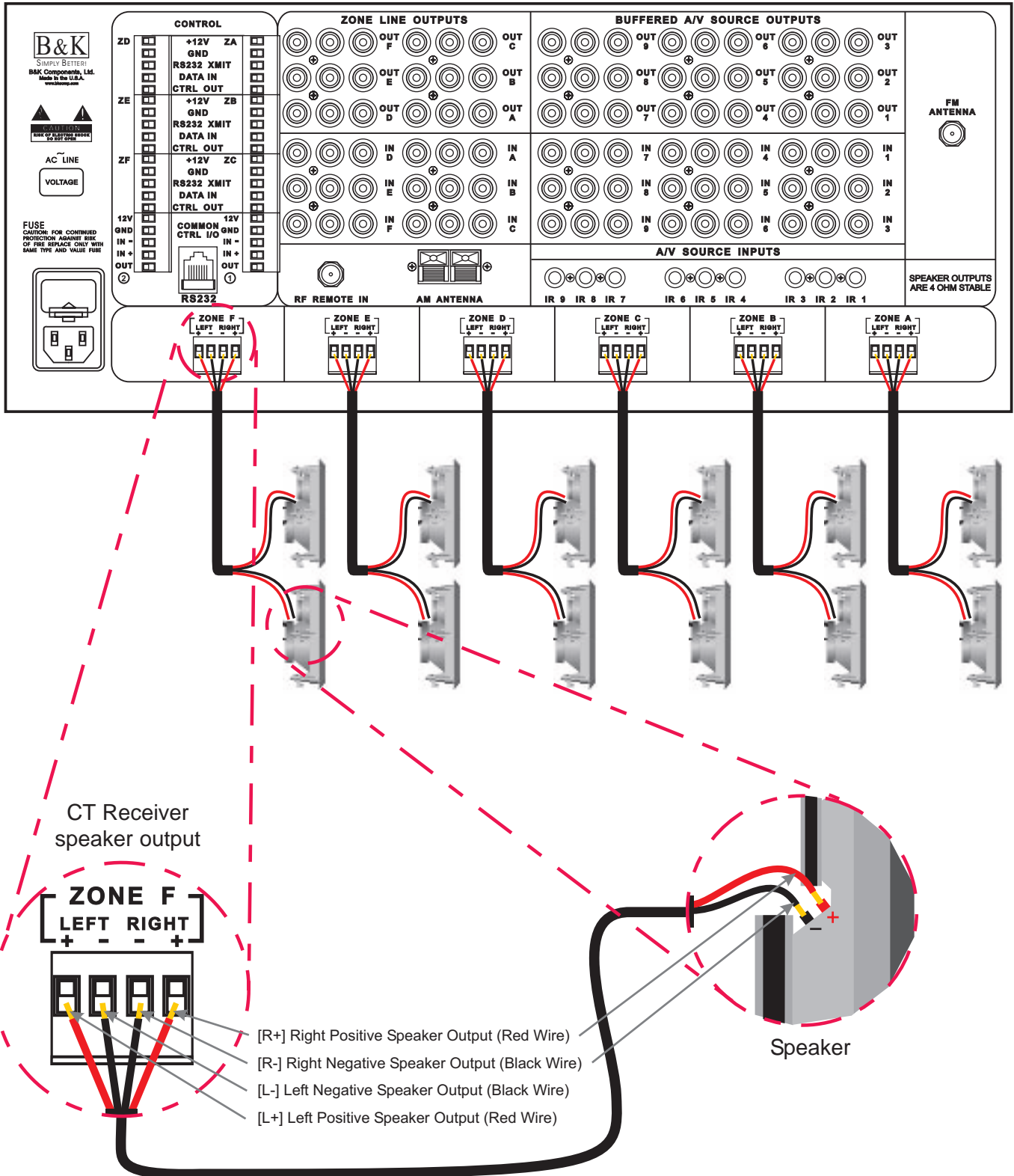
Mount IR Emitter on the front of the source in front of the IR receptor



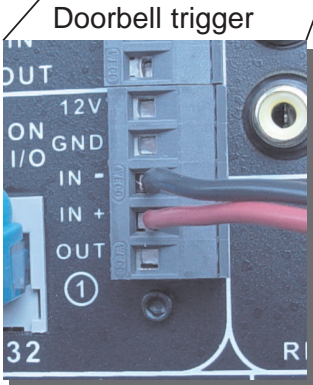
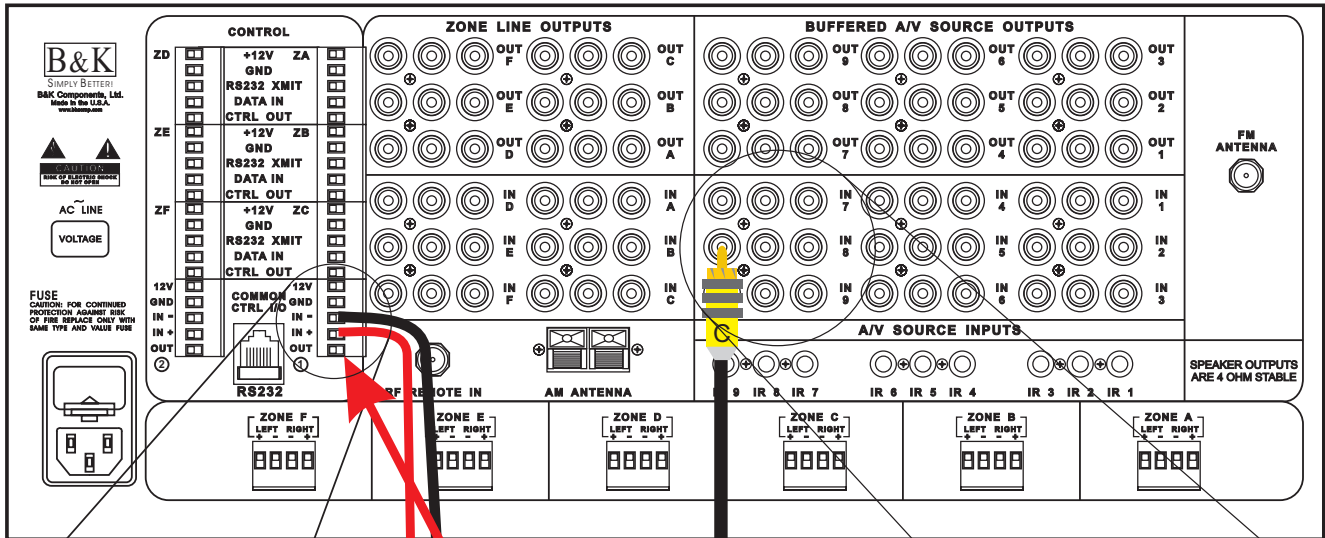
### DVD Connection

Use the analog audio and composite video from the source. The CT Receiver can process analog audio and composite video signals. Digital processing N/A.

# Example connection of Speakers to a CT Receiver



# Example of a Common Control trigger with a CT Receiver



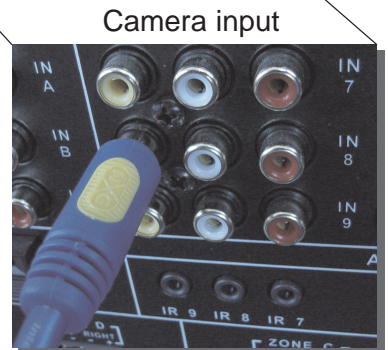
Doorbell trigger

**Common Control Connection**

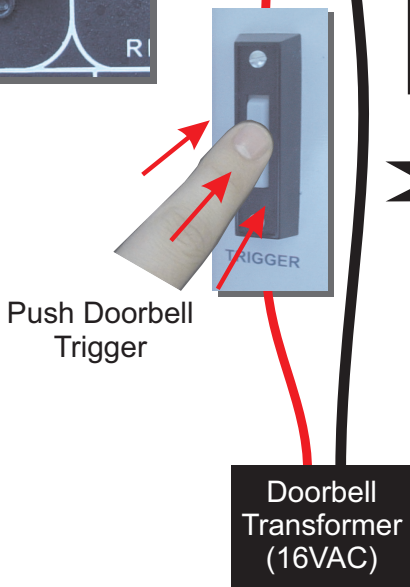
Connect the wires for the trigger to the [IN -] & [IN +] terminals on the 5 position Phoenix plug. The Page/Event is initiated by detection of up to 24V AC or DC.

**Example:**

Connect Common Control 1 to a doorbell to trigger a Page/Event



Camera input



Push Doorbell Trigger



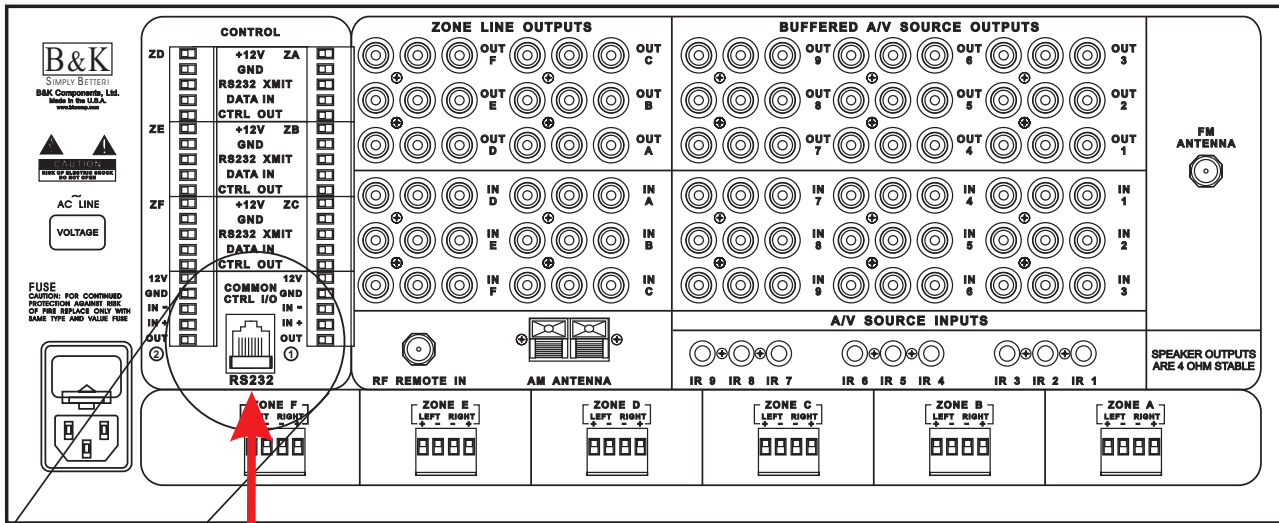
**Page/Event 1**

By default when Common Control 1 is triggered by pushing the doorbell, the CT Receiver will switch to INPUT 8.



CAMERA

# Example connecting a laptop computer to a CT Receiver



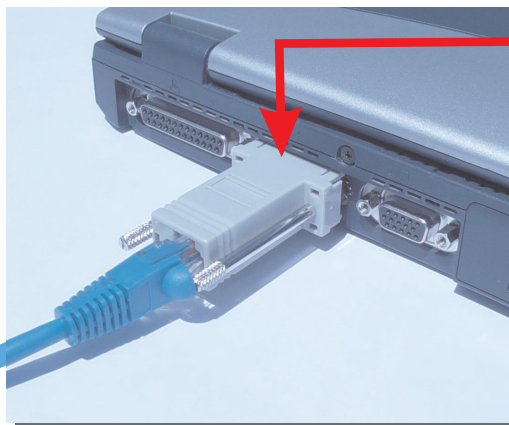
**CT Receiver Connection**

Plug one end of the RJ-45 terminated CAT5 into the main RJ-45 Jack labeled RS-232 on the back panel.



**Computer Connection**

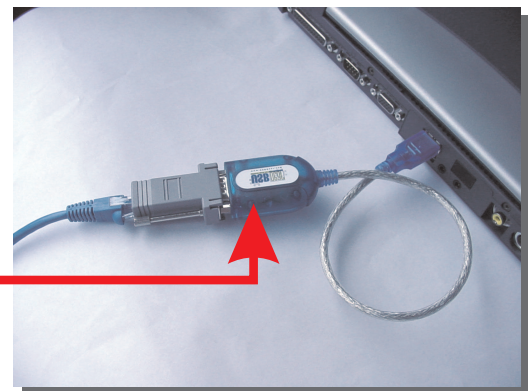
Plug one end of the RJ-45 terminated CAT5 cable into the serial communications port on the back of the computer using the serial DB9 to RJ-45 adaptor.



OR

**USB to Serial Adaptor**

USB to serial adaptors can be a convenient solution for connecting to a computer with no available serial ports. Install the required drivers and then verify what com port the USB adaptor is on. Once your com settings are determined, configure the BKcSuite and B & K CK1.2 / SR10.1 Editors for simple and easy setup.



\*\*\*Warning - PC requirements - 128MB RAM, Pentium grade or better processor, Windows 98SE operating system or greater. (Exception - BKcSuite not supported on Windows NT) \*\*\*

Connect the CT/CK/SR product's programming cord to the PC's serial port DB-9 (Not ethernet or network).

Be sure to select "Local Com" in BKcSuite, as "Network" is currently unsupported.

If the unit will not communicate using RS-232, perform a factory reset.

Disable all other programs when using BKcSuite for setup of any B & K product.

# BKcSuite Basic Mode Tab 1 & Tab 2 Explained

**Power On Preference - Video From**  
Each Zone can be configured to automatically switch to a specific source's video signal when that Zone is powered ON.

**Power On Preference - Tuner Frequency**  
When a Zone is set to Power-On with Tuner (AM or FM), you can set the Tuner to a specific frequency when that Zone is powered ON.

**Power On Preference - Audio From**  
Each Zone can be configured to automatically switch to a specific source's audio signal when that Zone is powered ON.

**Power On Preference - Volume**  
Each Zone can be configured to automatically switch to a specific volume level when that Zone is powered ON.

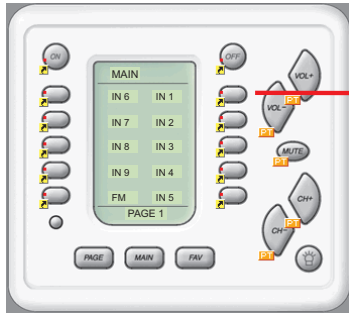
**Room Names**  
Each room can have its own user-friendly custom/intuitive name. That name is displayed on the Front Panel and the unit's On-Screen-Display. (11 character limit)

**Input Names**  
Each input can have its own user-friendly custom/intuitive name. That name is displayed on the Front Panel and the unit's On-Screen-Display. (5 character limit)

**Power On Titles**  
A customizable 2-line Power Up Title can be set for the customer.

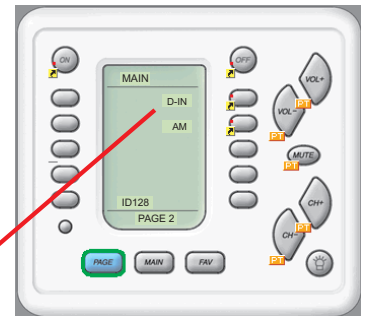
**Dedicated Input Names**  
Each dedicated input can have its own user-friendly custom/intuitive name. That name is displayed on the Front Panel and the unit's On-Screen-Display. (5 character limit)

Keypad Main Page # 1



To keep the keypad feedback feature functioning correctly, you must match the devices on the keypad buttons (you created in the CK1.2 editor) with the devices set for each location in the Basic Setup Page of the BKcSuite software.

Keypad Main Page # 2



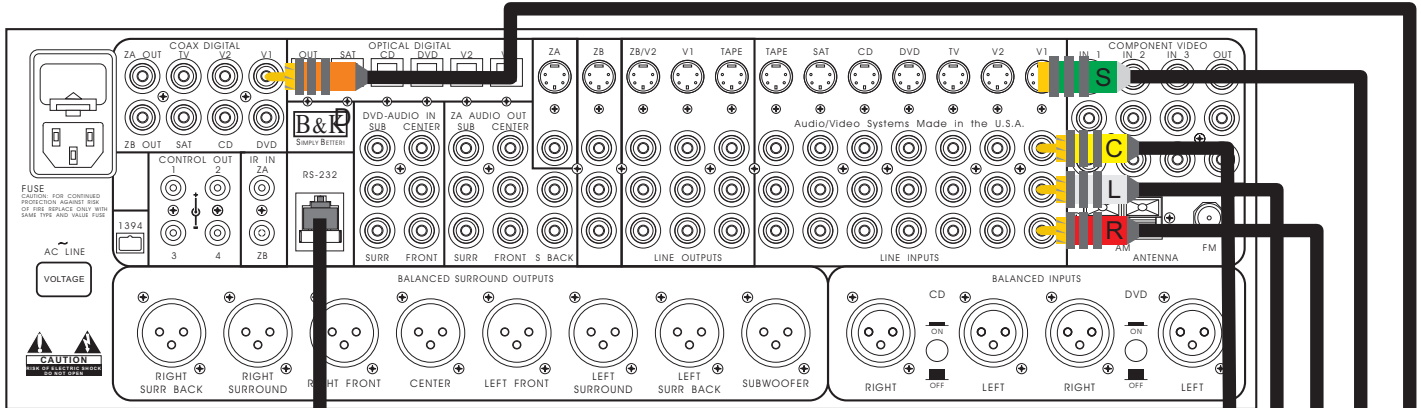
Keypad feedback is used to keep the keypad on the proper source and page. It insures the user has direct operation of the current source selected.

Keypad feedback can be turned off by choosing the option of "NONE".

# Integration of a B & K Home Theater and a CT Receiver together as a Complete System

## B&K surround processor Input Connection

Since the CT Receiver does not handle digital or S-Video signals, plug the analog audio and composite video directly into the source input section from the buffered outputs of the CT Receiver. Directly connect the Digital and S-Video output signals from the DVD player to the theater processor.

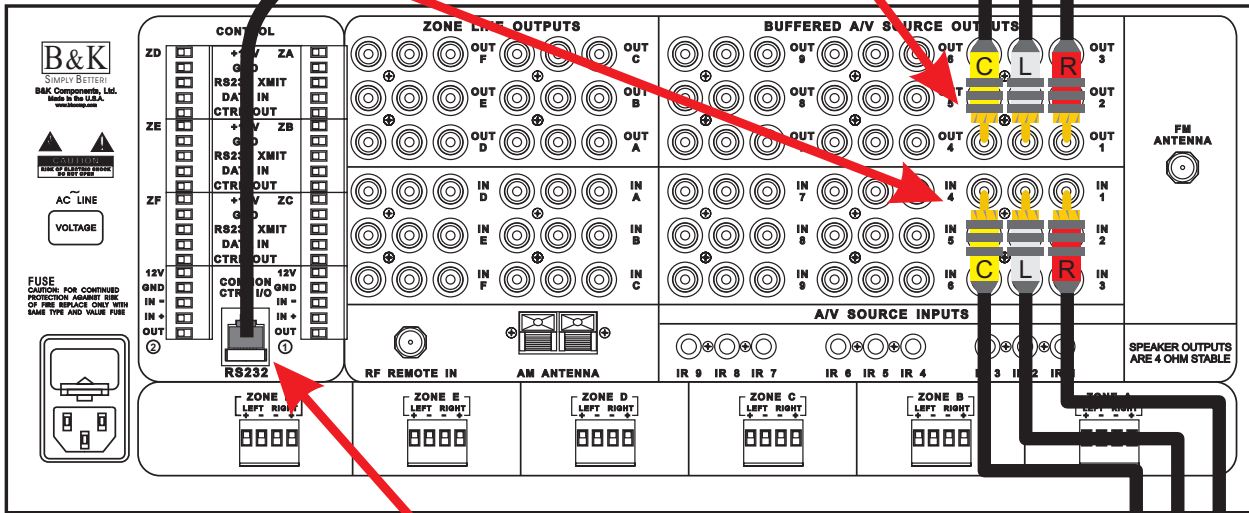


### Source Connection

Plug the analog audio and composite video outputs from the DVD Player into the A/V Source Input section.

### Buffered Output Connection

Plug the analog audio and composite video into the CT Receiver buffered output section. This analog buffered output will be used to "share" the source with the theater processor without any signal degradation.



CT600

### RS232 Interface

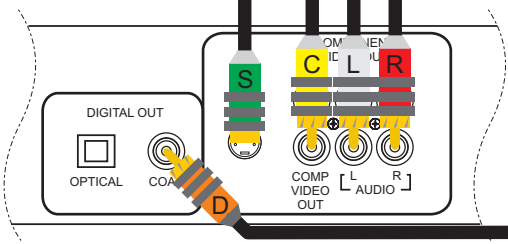
Connect the RS-232 from the CT Receiver to the RS-232 of the theater processor with a B&K swapped RS-232 cable provided from B&K by request. This cable keeps synchronization between the CT and the home theater unit.

Page 27 in User Manual.

### DVD Connection

Connect analog audio and composite video to the CT Receiver first before sending the signal to home theater. The CT Receiver can only process analog audio and composite video signals. Directly connect the Digital and S-Video output signals from the DVD player to the theater processor.

Page 17 in User Manual.



CT SERIES IR CODES MATCH HOME THEATER INPUT CODES AS DEFINED IN TABLE BELOW.

MULTI-ZONE	HOME THEATER
INPUT 1	← = → V1
INPUT 2	← = → V2
INPUT 3	← = → TV
INPUT 4	← = → DVD
INPUT 5	← = → CD
INPUT 6	← = → SAT
INPUT 7	← = → TAPE

Page 7 in User Manual.

# CT Receiver Info Sheet

**Zone Line Outputs -**  
Each zone has an A/V line level output (factory default setup is configured to FIXED)  
Page 19 in User Manual.

**Zone Control I/O (CK1.2 Keypad) Port - 5 pos. Phoenix plug**  
1A total maximum current per control card: ZA/ZB/ZC/CC1 = 1 CARD  
ZD/ZE/ZF/CC2 = 1 CARD

12V GND  
RS232 XMIT  
DATA IN  
CTRL OUT  
Page 14 in User Manual.

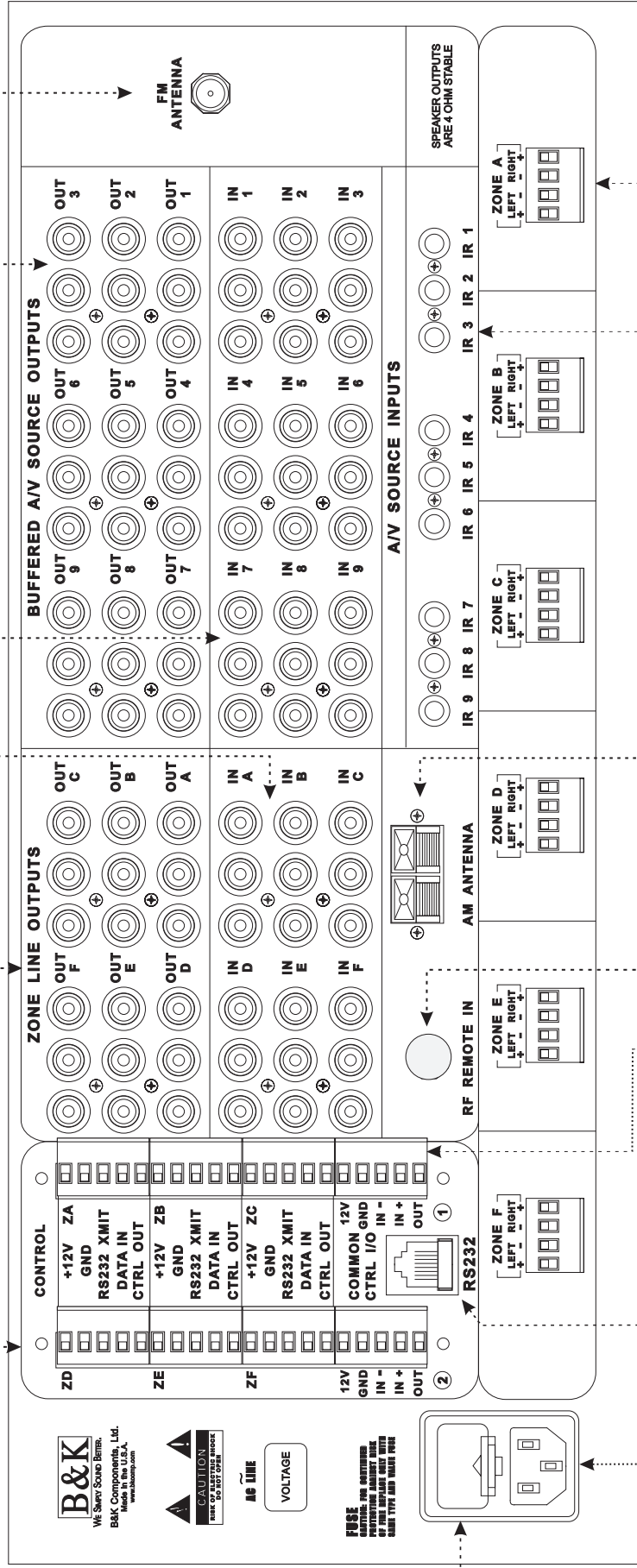
12 Volt power source  
Ground connection  
Transmits RS232 data  
IR input for keypads  
Programmable (12VDC 200mA max per each Control Out)  
Page 14 in User Manual.

**Shared A/V Source Inputs -**  
9 analog L/R audio and composite video.  
Page 17 in User Manual.

**Dedicated A/V Zone Inputs -**  
Each zone has a dedicated AN input (Dedicated) specific to that zone, no other zone may select this input.  
Page 20 in User Manual.

**FM Antenna - F-type connector**  
CT610/310 - 2 tuners  
CT600/300 - 1 - tuner  
Page 23 in User Manual.

**AV Buffered Source Outputs -**  
9 buffered analog L/R audio and composite video outputs used for connecting multiple A/V products.  
Page 18 in User Manual.



11, 9, 04

**Zone Speaker Outputs -**  
4 position Phoenix plug  
Supports 10 gauge speaker wire max. Speaker outputs are 4 ohm stable.  
Page 12 in User Manual.

**IR Flasher Outputs -**  
9 F/Flasher (1/8" mini jack) outputs that route IR data to individual source gear from Zone DATA IN or the front panel IR Receiver.  
Page 18 in User Manual.

**AM antenna connection.**  
Page 23 in Manual

**Common Control I/O Port - 5 pos. Phoenix plug**  
1A total maximum current per control card: ZA/ZB/ZC/CC1 = 1 CARD  
ZD/ZE/ZF/CC2 = 1 CARD

12V GND  
IN - / IN +  
CTRL OUT  
Page 22 and 48 in User Manual.

12 Volt power source  
Ground connection  
Programmable input (detection of up to 24VAC / 24VDC)  
i.e. doorbell trigger (select a security camera input or volume muting in selected zones etc.)  
Page 22 and 48 in User Manual.

**RS232 - 2 way communication**  
using B/KC-DIP or B/KcSuite Software.  
Page 33 and 54 in User Manual.

**AC input module**  
AC fuse location.  
Page 12 in User Manual.

RF Remote IN  
Not Supported.

