



Installation and Operation Manual



CC-5 ***Console Controller-5***

Manual Update: 5/6/2004

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INTRODUCTION

Thank you for your purchase of a Broadcast Tools® CC-5, Console Controller 5 (referred to as the CC-5 throughout this manual). We're confident that this product will give you many years of dependable service. This manual is intended to give you all the information needed to install and operate the Broadcast Tools® CC-5.

SAFETY INFORMATION

Only qualified personnel should install Broadcast Tools® products. Incorrect or inappropriate use and/or installation could result in a hazardous condition.

WHO TO CONTACT FOR HELP

If you have any questions regarding your product or you need assistance, please contact your distributor from whom you purchased this equipment.

If you would like more information about Broadcast Tools® products, you may reach us at:

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BROADCAST TOOLS® BRAND PRODUCTS!***



CAUTION!

Broadcast Tools® Products, as with any electronic device, can fail without warning. Do not use this product in applications where a life threatening condition could result due to failure.



NOTE:

This manual should be read thoroughly before installation and operation.

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PRODUCT DESCRIPTION

The Broadcast Tools® CC-5, provides the solution for interfacing non-Broadcast consoles and digital workstations to the broadcast studio. The CC-5 is supplied with a desk-top switch console and controller. The Controller may be used independent of the desktop in cases where the user may utilize custom applications. The CC-5 is equipped with five channels of insert switching. The five channels allow for ON/OFF control of each microphone channel when connected to the console's insert points or between a source's output and the device's input. The CC-5 desk top provides front panel switching for internal (console) and external (air signal) monitor inputs. This allows monitoring of the console's output or an external source. The microprocessor within the CC-5 provides all muting and external warning light/skimmer control. The CC-5 utilizes sealed relays bifurcated-crossbar silver alloy with gold overlay contacts allowing any input level and impedance to be used. Monitor inputs and outputs may be balanced or unbalanced, while levels, impedance, distortion, noise and balancing will match that of the selected input. Insert switching is unbalanced and allows levels, impedance, distortion and noise to match that of the selected I/O.

The CC-5 is controlled by means of front panel switches and LED indicators providing channel status. The controller provides remote control and status via screw terminals. The CC-5 may be configured for many different logic operations. Refer to the configuration grids starting on page five.

DESK TOP PANEL DESCRIPTION

Insert Channel Switches: (1-2-3-4-5)

Each of the five channel switches represents a channel to be turned on or off. Each switch is paired with bright green LED's to indicate the on or off channel status. To turn a channel **ON**, press the switch once. The LED will light or flash indicating that the channel is **ON**. To turn the channel **OFF**, press the switch once again. The LED will extinguish and the channel will turn **OFF**. During power-up, the logic defaults to ALL channels being **OFF**. Activating any one or combination of channel switches will MUTE (If configured) the monitor amplifier feed and close the Warning light/Skimmer relay. The switches are highly reliable, giving the user years of dependable service.

Int-Ext Switch: (Monitor Input Select)

This switch is paired with a bright green LED to indicate which monitor source is being monitored. With the Int-Ext Status LED extinguished, the **EXTERNAL** monitor input is being monitored. By pressing the switch once, the LED will light denoting that the **INTERNAL** monitor source is being monitored. During power-up, the logic defaults to monitoring the **EXTERNAL** monitor source. Simply reversing the Int/Ext monitor inputs may change this.

CONTROLLER PANEL DESCRIPTION

The CC-5 Controller contains all the input, output, insert and remote control interfacing connectors. Stereo monitor inputs, outputs are balanced, while the inserts are unbalanced 1/4" T/R/S jacks. Remote control connections via screw terminals. Please refer to the set up drawing and the label attached to this chassis. **NOTE: On some versions, the INSERT labels are reversed. It should read from left to right 1 2 3 4 5.**

Configuration Grids:

Channel 3 Operation	DIP SW2-2	DIP SW2-3
Normal, with mute	OFF	OFF
Normal, but with no mute	ON	OFF
Momentary Channel operation with mute	OFF	ON
Momentary Channel operation with no mute	ON	ON

Operation	DIP SW2-1
Channels 1 thru 5 LED's FLASH	OFF
Channels 1 thru 5 LED's are solid	ON

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DESCRIPTION

CONTROLLER PANEL DESCRIPTION

Channel 4 Operation	DIP SW2-4	DIP SW2-5
Normal, with mute	OFF	OFF
Normal, but with no mute	ON	OFF
Momentary Channel operation with mute	OFF	ON
Momentary Channel operation with no mute	ON	ON

Channel 5 Operation	DIP SW2-6	DIP SW2-7
Normal, with mute	OFF	OFF
Normal, but with no mute	ON	OFF
Momentary Channel operation with mute	OFF	ON
Momentary Channel operation with no mute	ON	ON

Power:

Connect the 2.1mm power connector to the controller’s power connector. Connect the 9 Vac/500ma wall transformer into a 120 Vac 50-60 Hz power source. (CE, 220 Vac 50-60 Hz transformer, OPTIONAL)

INSTALLATION GUIDELINES

Installation of the Console Controller- 5 consists of five steps:

1. Inspect both units.
2. Bench Test.
3. Mount both units.
4. Connect your equipment to both units.
5. Label the front panel desk top switches.

STEP 1: INSPECTION

Please examine your CC-5 carefully for any damage that may have been sustained during shipping; if any is noted, please notify the shipper immediately and retain the packaging for inspection by the shipper. The package should contain the CC-5 Desk top, CC-5 Controller, this manual and the 9VAC/500 ma wall transformer.



NOTE:

Preassembled T/R/S patch cords may be purchased and modified to suit most situations from your Broadcast Equipment Dealer, Radio Shack or your local music store.

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INSTALLATION

INSTALLATION GUIDELINES

STEP 2: BENCH TEST

Place the unit on a workspace and connect power to the unit. Verify that ***NONE*** of the LED's are lit. Insert one end of the customer supplied (see the ***HOOK-UP EXAMPLES*** section of this manual) T/R/S 1/2" connector or patch cord into insert channel one of the CC-5 and the other end into the console's insert point channel requiring control. Complete this for each channel that is to be controlled; proceed by connecting the second T/R/S/ 1/2" connector or patch cord from the monitor jacks on the console and the other end of this T/R/S/ 1/2" connector or patch cord into the INT jack on the CC-5. Finally connect a T/R/S 1/2" connector or patch cord from the Monitor Amp jack on the CC-5 to your monitor amp input. Feed stereo audio into a console channel not being controlled by the CC-5. You should be able press any of the five insert channel switches and mute the monitors. Now connect a microphone to the channel being controlled by insert channel one. Turn up the channel one fader to the normal position, and turn on insert channel one on the CC-5. Speak into the microphone, you should see movement on the meters of the console and the monitor speakers should mute. If the above scenario performs satisfactory, the CC-5 is operating correctly.

STEP 3: MOUNTING

Mount both units in a convenient place. Rubber feet on the desktop are attached to protect your cabinetry.

STEP 4: CONNECT YOUR EQUIPMENT

Follow the install procedure as you performed in step number 2. Bench Test and also check the HOOK-UP EXAMPLES section of this manual for additional installation tips.

STEP 5: DESIGNATION STRIP

The designation strip is provided to write function descriptions under each switch.

Reapply power to the unit. Your CC-5 should now be fully functional.

REMOTE CONTROL CONNECTOR PIN OUTS

Remote control & Status:

Follow the legends on the printed circuit board associated with each terminal.

CC - 5 SPECIFICATIONS

Insert Channels:	<i>Any I/O level and impedance can be used. Inputs and Outputs are unbalanced. Output levels, impedance, distortion and noise will match that of the selected input.</i>
Monitor Inputs/Outputs:	<i>Any input level and impedance can be used. Inputs may be balanced or unbalanced. Output levels, impedance, distortion, noise and balancing will match that of the selected input.</i>
Switching Method:	<i>Passive. Sealed relays utilizing 2-form-C Bifurcated-Crossbar silver alloy with gold overlay contacts.</i>
Logic:	<i>Flash microprocessor</i>
Operation Control:	<i>Desk top Front Panel - Momentary switches Controller Remote Control - Closure to ground</i>
Status:	<i>Desk top Front Panel -LED Indicator Controller Remote Control - Relay contact to ground.</i>
Interfacing:	<i>Controller - Monitor and Insert T/R/S 1/2" jacks. Remote Control – Screw Terminals. Warning light/skimmer relay SPDT contacts rated at 30vdc, 1 Amp. External power supply - 5vdc @ 200 ma, MAX.</i>
Power Requirements:	<i>9 Vac @ 500 ma. 120 Vac, 50-60Hz wall transformer. Supplied. Optional CE 220vac/50-60 Hz</i>
Physical Dimensions:	<i>Controller: 7.75" x 4.00"x 1.00" (WDH) Desk Top: 7.0" x 2.55 x 1.25" Sloped front (WDH)</i>
Weight:	<i>3.0 lb.</i>
Shipping Weight:	<i>3.5 lb.</i>



NOTE:

For safety, do NOT connect 120VAC circuits to the relays.

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SPECIFICATIONS

LIMITED WARRANTY

The term “Buyer” as used in this document refers to and includes both (but only) (a) any person or entity who acquires such an item for the purpose of resale to others (i.e., a dealer or distributor of an item), and (b) the first person or entity who acquires such an item for such person’s or entity’s own use.

Broadcast Tools warrants to each Buyer of any item manufactured by Broadcast Tools that the item will be free from defects in materials and workmanship at the time it is shipped by Broadcast Tools if the item is properly installed, used and maintained.

EXCLUSIVE REMEDIES

If Broadcast Tools is notified, in writing, of a failure of any item manufactured by Broadcast Tools to conform to the foregoing Limited Warranty within one (1) year following the date of the Buyer’s acquisition of the item, and if the item is returned to Broadcast Tools in accordance with Broadcast Tools’ instructions for confirmation by inspection of the defect (which at Broadcast Tools’ election may include, without limitation, a requirement that the Buyer first obtain a Return Authorization number from Broadcast Tools, that the Buyer furnish proof of purchase in the form of an invoice and/or receipt, and that the Buyer prepay all freight charges associated with any return of the item to Broadcast Tools using such freight service as Broadcast Tools reasonably may specify, Broadcast Tools will repair or replace the defective item, or will refund the purchase price paid by the Buyer for the item. Broadcast Tools shall have the exclusive right to choose between these alternative remedies.

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