AUTOGRAM MINI MIX 8 CONSOLE Instruction Manual

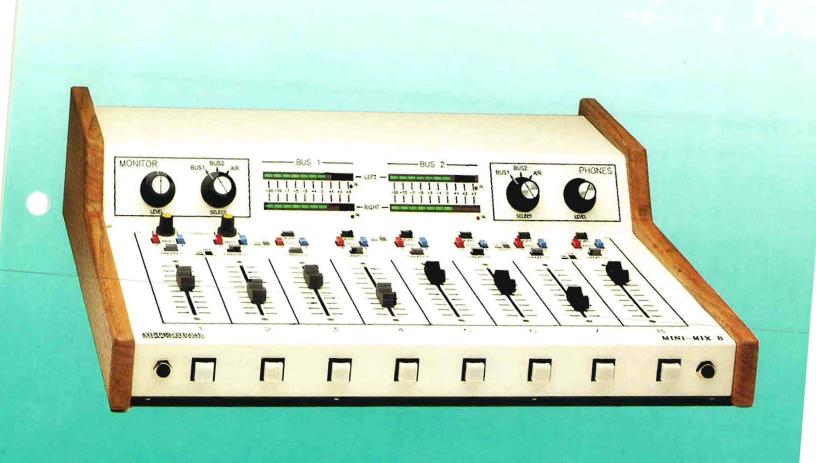


## MINI-MIX 8 AUDIO GONSOLE

INSTRUCTION MANUAL

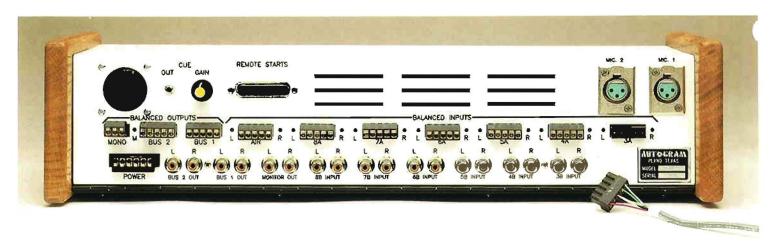
# Mini-Mix 8

# GOOD THINGS COME IN SMALL PACKAGES



The new compact console by AUTOCRAM

### Mini-Mix 8



#### **Features**

#### Professional audio console:

- · Aluminum case Oak endbells
- 2 Stereo output buses
- Mono output
- 8 plug-in slide pots
- 12 Stereo inputs
   6 Unbalanced Stereo Phono Jacks for Consumer Equipment
   6 High-level balanced Pro-stereo inputs
- · 2 Dedicated mike pots with pan
- · All VCA operated
- · Cue amplifier/speaker built in
- · Light weight/Compact size
- Made in the USA Plano, Texas

## AUT@CRAM

L500 Capital Avenue Plano, Texas 75074 (214) 424-8585 FAX (214) 423-6334 (800) 327-6901

#### **Input Characteristics**

#### Sources:

12 Stereo Inputs6 Unbalanced Consumer6 Balanced Professional2 Dedicated Mike inputs

#### Impedances:

Microphone, 150 ohm High-level, 20k External monitor, 20k

#### Levels:

Microphone, -65 to -50 dBm High-level -10 to +10 dBv External Monitor, -10 to +10 dBv

#### SNR:

Programs, better than -90dB at +18 dBm out

#### Power Source:

117 or 230 volt ac, 50-60 Hz

#### **Mounting & Dimensions:**

Table top with back connections Height: 4.75 inches (12.07 cm) Depth: 15.5 inches (39.37 cm) Width: 19.38 inches (49.21 cm) Weight: 9.5 lbs. (4.31 kg)

Shipping Weight: 25 lbs. (11.34 kg)

#### **Specifications**

#### **Output Characteristics**

#### **Outputs:**

Stereo balanced, 2 buses Stereo Unbalanced, 2 buses Mono, balanced Monitor amp feed, unbalanced 2 Headphone jacks

#### Impedances:

Programs 600 ohm balanced 10k unbalanced Monitor 10k unbalanced Phones 100 ohm Cue 300 mw at 8 ohm

#### Levels:

Programs, +8 dBm nominal +24 dBm maximum Monitor -10dBv Phones, 10 volts at 100 ohms

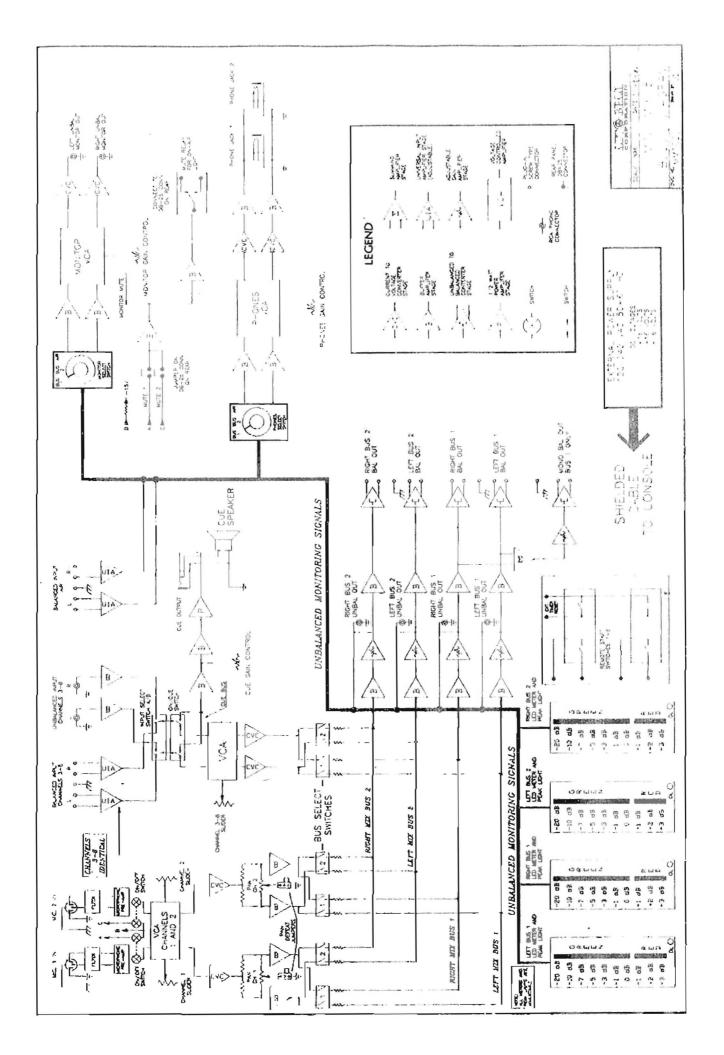
#### Distortion:

Programs/Monitor, less than .05% THD and IMD
Headphones less than 1% THD and IMD

#### Frequency Response:

Programs,  $\pm$  0.2 dB 20 to 20 kHz Monitor,  $\pm$  0.2 dB 20 to 20 kHz Phones,  $\pm$  0.5 dB 20 to 20 kHz

All specifications subject to change without notice, ©1992 Autogram Corp. /6350



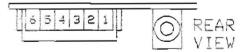
## **WARNING!**

POWER CONNECTOR ON CONSOLE IS INVERTED FROM ALL OTHER MULTI-PIN CONNECTORS.

## FAILURE TO INSTALL POWER CONNECTOR CORRECTLY WILL DAMAGE CONSOLE AND MAY VOID WARRANTY

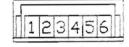
## CONSOLE CONNECTION

NOTE: POWER CONNECTOR IS INVERTED.



- 1 CHASSIS GROUND
- 2 ~15 VDC
- 3 +15 VDC
- 4 +6 VDC (VDSP)
- 5 AUDIO GROUND
- 6 AUDIO GROUND





- 1 CHASSIS GROUND
- 2 -15 VDC
- 3 +15 VDC
- 4 +6 VDC (VDSP)
- 5 AUDIO GROUND
- 6 AUDIO GROUND

#### AUTOGRAM PRODUCT WARRANTY

AUTOGRAM warrants that all products manufactured by AUTOGRAM COR-PORATION and sold hereunder, will at the date of delivery, meet or exceed all current published specifications for that product and will be free from defects in workmanship and material.

AUTOGRAM agrees to repair or replace equipment of its manufacture which fails to meet the warranty set forth above for two (2) years after delivery with the exception of lamps, fuses, and other expendable items. All major parts, such as, VU meters, attenuators, switches, etc., sold hereunder which are not of <u>AUTOGRAM CORP</u>. manufacture are sold subject to the supplier's warranty.

Warranties may not be honored when failure is cased by improper use or abuse, maintenance, repair or alteration by unauthorized persons.

In no event shall <u>AUTOGRAM</u> have any liability for consequential damages, or for the loss, damage, or expenses directly or indirectly arising from the use of the products, or any inability to use them either separately or in combination with other equipment or materials, or from any other cause.

Parts under warranty must be returned to <u>AUTOGRAM</u> per instructions. Warranted parts will be shipped freight prepaid by UPS regular or by US Mail, First Class. Any other method of shipment, such as AIR EXPRESS, will be shipped freight collect.

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#### AUTOGRAM MINI-MIX 8 AUDIO CONSOLE

#### INSTRUCTION MANUAL

#### SECTION 1

#### INTRODUCTION

The Mini-Mix 8 console is a full-functioned protessional audio mixing system. Space and cost saving measures have yielded a small package along with an attractive price without giving up the features needed in today's active studio.

#### BASIC FEATURES

#### Input

The Mini-Mix 8 features eight channels, the first two are dedicated to microphones while the last six provide 2 stereo inputs each. Each channel may be assigned to either Mix Bus One and/or Mix Bus Two. Both buses may be fed simultaneously.

The eight slide faders operate with D.C. only and drive an associated V.C.A. (voltage controlled amplifier) for level control.

A unique feature of the Mini-Mix 8 is that the "A" input on channels 3-8 is an electrically-balanced professional-type while the "B" input uses <u>Phono-Jacks</u> to be directly compatible with consumer-type equipment.

The balanced inputs use miniature plug-in screw-type connectors which make installation very simple. Sources may be moved around easily for different configurations. Each balanced input is adjustable to accept levels between -10 dBv and +10 dBv. A balanced adjustable input is provided for connecting an external air-monitor source.

The microphone inputs use convenient XLR type connectors and feature <u>Pan Pots</u> for controlling the spatial positioning. The pan pots may be disabled, if this feature is not desired. A front panel switch turns the microphone channel ON and OFF while activating the "Mute" circuit when the channel is "on". The muting may be programmed for either microphone channel.

#### Output

Balanced and unbalanced outputs are provided for the two mixing buses. As with the inputs, the balanced outputs use miniature plug-in screw-type connectors while the unbalanced outputs use phono jacks.

A balanced output is provided for the MONO sum of Mix bus 1.

#### Monitoring

Separate select switches and level controls are provided for the headphone and monitor circuits. Bus 1, Bus 2, or Air may be selected. An external monitor power amplifier is required which may be whatever power range desired. The monitor driver output appears on phono jacks and is compatible with consumer type amplifiers. Muting for the monitor output is included and may be programmed to operate from either/or both microphone channels.

The headphone outputs are on two standard 1/4 inch phone jacks and are designed to accommodate modern higher impedance headphones with ample volume.

A cue speaker and amplifier are built-in to provide cue monitoring. A front panel switch on channels 3-8 select CUE. When CUE is selected, that channel will be removed from the output buses.

#### Metering

Four LED bar graphs provide visual indication of output level for the Left and Right channels of Bus 1 and Bus 2. A special circuit enables the graphs to respond with "ballistics" which correspond to the standard Vu meter. Additional LEDs are used to give indication of an Overload condition (10 dB above 0 reference, adjustable) and are designed to give fast response to audio peaks.

#### Other Features

Eight front edge switches provide dry contacts which can be used for remote starting equipment or for other purposes. Connection for the switches is on a rear mounted DB-25 connector.

An internal relay is included to activate On-Air lights and may be programmed to either/or both microphone channels. The relay follows the monitor muting assignments.

A small jack is provided to give access to the cue output. When a plug is inserted into the jack, the internal cue speaker will be disabled.

#### SECTION 1

#### INSTALLATION

The Mini-Mix 8 console is small enough to be installed in almost any location and may be used in permanent as well as temporary situations. The Mini-Mix 8 console can be used at remote sites and in remote vehicles.

#### POWER SUPPLY CONNECTIONS

The Mini-Mix 8 power supply can be mounted up to eight feet from the console. A shielded interface cable is provided for this purpose. Unless requested, the power supply is wired for 115 v.a.c./ 60hz mains. The transformer can be rewired for 230 v.a.c. 50hz mains.

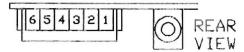
#### BEFORE APPLYING POWER

\*Note: The connector at the console end is inverted and will plug in upside down.

## FAILURE TO INSTALL POWER CONNECTOR CORRECTLY WILL DAMAGE CONSOLE AND MAY VOID WARRANTY

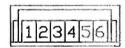
## CONSOLE CONNECTIONS

NOTE: POWER CONNECTOR IS INVERTED.



- 1 CHASSIS GROUND
- 2 -15 VDC
- 3 +15 VDC
- 4 +6 VDC (VDSP)
- 5 AUDIO GROUND
- 6 AUDIO GROUND

POWER SUPPLY CONNECTIONS



- 1 CHASSIS GROUND
- 2 -15 VDC
- 3 +15 VDC
- 4 +6 VDC (VDSP)
- 5 AUDIO GROUND
- 6 AUDIO GROUND

WARNING: DO NOT ALLOW ANYTHING TO FALL IN VENT OPENINGS!

Connect the IEC power cord to the proper outlet and the power supply IEC filter. The power switch may now be turned on.

#### POWER CABLE PIN-OUT

PIN	FUNCTION	WIRE COLOR
1	CHASSIS GROUND	SHIELD
2	15 VOLTS DC	WHITE
3	+ 15 VOLTS DC	RED
4	+ 6 VOLTS DC	GREEN
5	GROUND	NO CONNECTION
(PIN 5 MA	Y BE USED FOR SYSTEM GROUND)	
6	GROUND	BLACK

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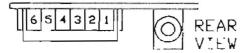
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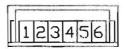
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POWER
SUPPLY
CONNECTIONS



- : CHASSIS GROUND
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Connect the IEC power cord to the proper outlet and the power supply IEC filter. The power switch may now be turned on

#### POWER CABLE PIN-CUT

PIN	FUNCTION	WIRE COLOR
1	CHASSIS GROUND	SHIELD
2	- 15 VOLTS DC	WHITE
3	+ 15 VOLTS DC	RED
4	+ 6 VOLTS DC	GREEN
5	GROUMD	MO CONNECTION
(PIN 5	MAY BE USED FOR SYSTEM GROUND)	
6	GROUND	BLACK

#### MICROPHONE CONNECTIONS

Any standard balanced low-impedance microphone may be used with the Minimus 8 console; however, the preamplifiers are optimized for 150 ohm source impedances. Pin 3 on the XLR connector is considered high or + while pin 2 is low or -. Pin 1 is ground. An unbalanced microphone can be used by wiring the center conductor to pin 3 and the shield to pin 1.

#### PAN POTS

The pan pots are used to adjust the position of the microphone in the stereo image. Turn the pot to the left to make the microphone appear to be on the left or turn the pot to the right to position the sound on the right. This feature is useful in interviews where the interviewer might be placed on the left and the subject placed on the right.

To DISABLE the pan pot, remove the four screws along the underside of the front panel lip. The front panel can then be raised up (it is hinged at the rear). There are jumper-headers located near each microphone pre-amplifier (refer to main parts layout drawing MM1021). Simply move the jumper to the other pin or just remove the jumper.

Muting of the monitor and the mute relay will be covered later.

#### BALANCED INPUT CONNECTIONS

(Refer to drawing at the end on this section for connector hookup.)

Balanced professional equipment can be connected to the plug-in screw-type connectors on channels 3-8. Levels between -10 dBv and +10 dBv may be accommodated. The inputs are 20k ohm bridging. If a terminated input is required, a 600 ohm resistor must be placed on the connector along with the wiring for both left and right channels. To connect a mono source, simply connect to the left channel then jumper to the right channel.

#### BALANCED CONNECTIONS

PIN	]	+ I,E	EFT CHANNEL
DIN	2	- LE	EFT CHANNEL
PIN	3	GROI	UND
PIN	4	+ RI	GHT CHANNEL
PIN	5	- RI	GHT CHANNEL

\*\*\*Note: Pin 1 is on the left side looking at console rear.

After the sources are connected, the levels may be trimmed by means of the small pots which are located on either side of the balanced input connector and are accessible through the respective small holes. A 3/32 inch "Greenie" screwdriver works nicely for adjusting the Mini-Mix 8 input level.

#### UNBALANCED INPUT CONNECTIONS

Connect consumer-type equipment directly to the phono-jack inputs. No adjustments are required.

#### OUTPUT CONNECTIONS

### BUS 1 AND EUS 2 MAIN OUTPUT CONNECTIONS \*\*DO NOT GROUND + OR - OUTPUT CONNECTIONS\*\*

(Refer to drawing at the end on this section for connector hookup.)

The balanced outputs for the Mini-Mix 8 console are calibrated at the factory for +8 dBm into a 600 ohm load. The actual output impedance is approximately 100 ohms. Internal master gain controls allow the output to be adjusted to another reference value; however, the metering system will require recalibration if these levels are changed. Do not ground either + or - output terminal. If an unbalanced feed is required, use the + terminal and ground.

#### EALANCED CONNECTIONS

PIN	J.	+ LEFT	CHANNEL
PIN	2	- LEFT	CHANNEL
PIN	3	GROUND	
PIN	4	+ RIGHT	CHANNEL
PIN	5	- RIGHT	CHANNEL

\*\*\*Note: Pin 1 is on the left side looking at console rear.

#### MONO OUTPUT

The balanced MONO output provides the monaural sum of Bus I. The output characteristics are identical to the main bus outputs. A level control is located adjacent to the connector.

Note: The MONO output could be used to interface to a telephone system. In this case use Eus 2 as the main output and use Bus 1 as an assignable MIX-MINUS output. Do not ground either + or - output terminal. If an unbalanced feed is required, use the + terminal and ground.

#### MONO CONNECTIONS

PIN	1	GROUND
PIN	2	- OUTPUT
D1N	3	+ OUTPUT

#### UNBALANCED OUTPUT CONNECTIONS

Unbalanced outputs are provided for BUS 1, BUS 2, and MONITOR. These outputs will interface directly to consumer type equipment.

#### CUE

While a cue speaker is built in, it may be desirable to employ a larger speaker or a more powerful external amplifier and speaker. An 1/8 inch mini-phone jack is provided to allow access to the cue amplifier output. When a plug is inserted into this jack, the internal cue speaker will be disconnected. The level will still be adjusted by the CUE GAIN control.

#### AUXILIARY FUNCTIONS

#### MUTING ASSIGNMENTS

The muting for the MONITOR output as well as the activation of the mute relay can be programmed to operate from either microphone channel.

Muting requires that the DB-25 male connector (supplied) be inserted into the REMOTE START connector on the rear panel. The connector is factory wired to provide muting for both microphones.

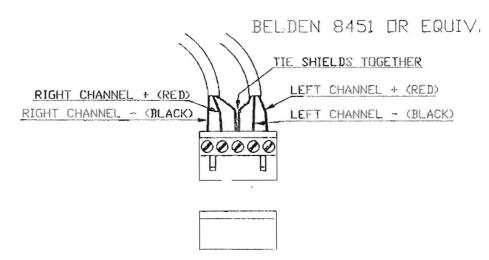
To modify the assignment, the jumper between pins 13 and 25 is removed to disable the muting for microphone channel 2. Remove the jumper between pins 12 and 24 to disable the muting for microphone channel 1.

#### MUTE RELAY CONNECTIONS

Contacts for the MUTE RELAY are brought out to the REMOTE START connector on the rear panel. These contacts can be used to activate an ON AIR light. Refer to the REMOTE START table for connection.

#### \*CAUTION\*

THE RELAY CONTACTS ARE RATED FOR 1 AMP D.C. AND 25 WATTS A.C ONLY. IF LARGER LAMPS ARE TO BE USED AN EXTERNAL CONTROLLER MUST BE INSTALLED.



TYPICAL PLUG IN INPUT CONNECTION

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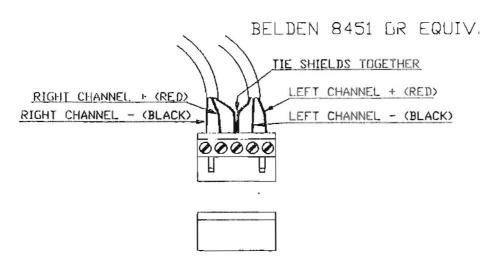
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TYPICAL PLUG IN INPUT CONNECTION

## REMOTE START CONNECTOR J35 (DE25 CONNECTOR ON REAR PANEL)

FUNCTION	PINS
Remote Start Switch I	1 and 14
Remote Start Switch 2	2 and 15
Remote Start Switch 3	3 and 16
Remote Start Switch 4	4 and 17
Remote Start Switch 5	5 and 18
Remote Start Switch 6	6 and 19
Remote Start Switch 7	7 and 20
Remote Start Switch 8	8 and 21
MUTE RELAY Common	23
MUTE RELAY Normally Closed	11
MUTE RELAY Normally Open	10
Mute Microphone Channel 1	12 and 24 (Jumper)
Mute Microphone Channel ?	13 and 25 (Jumper)
Note: Both microphone channels may	be assigned to mute.

#### MINI-MIX 8 CABLING RUN LIST

(J35) PIN 1 14	# X	FEMALE REMOTE START COLOR LENGTH GRN WHT/GRN	CONNECTOR FUNCTION REMOTE START 1+ REMOTE START 1-	TO SW1 PIN 1 SW1 PIN 3
2	X	BLU	REMOTE START 2+	SW2 PIN 1
15	X	WHT/BLU	REMOTE START 2-	SW2 PIN 3
3	X	MHT/XET	REMOTE START 3+	SW3 PIN 1
16	X	AET	REMOTE START 3-	SW3 PIN 3
4	X	VIO	REMOTE START 4+	SW4 PIN 1
17	X	WHT/VIO	REMOTE START 4-	SW4 PIN 3
5	X	BRN ·	REMOTE START 5+	SW5 PIN 1
18	X	WHT/BRN	REMOTE START 5-	SW5 PIN 3
6	X	ORG	REMOTE START 6+	SW6 PIN 1
19		WHT/ORG	REMOTE START 6-	SW6 PIN 3
7	X	GRY	REMOTE START 7+	SW7 PIN 1
20		WHT/GRY	REMOTE START 7-	SW7 PIN 3
8	X	BLK	REMOTE START 8+	SW8 PIN 1
21	X	WHT/BLK	REMOTE START 8-	SW8 PIN 3
10 11	Y CON1 201 201 201 201	GRN WHT	RELAY N.O. RELAY N.C. RELAY COMMON	P/J15 PIN 4 P/J15 PIN 3 P/J15 PIN 2 P/J15 PIN 1
MUTE 12 13 NC 24 25	202 202 202		MUTE 1 MUTE 2 MUTE 3 MUTE 4	P/J4 PIN 1 P/J4 PIN 2 P/J4 PIN 3 P/J4 PIM 4 P/J4 PIM 5
MICROPHONE CONNECTORS				
PIN 3 2 1 G	# 203 203 203 203	SHIELD GREEN	FUNCTION MIC. 1 + MIC. 1 - MIC. 1 GND MIC. 1 SHELL	TO P/J13 PIN 2 P/J13 PIN 3 P/J13 PIN 1 P/J13 PIN 4
PIN 3 2	# 204	VECTOR (MJ2) COLOR LENGTH RED BUK	FUNCTION MIC. 2 + MIC. 2 -	TO P/J14 PIN 2 P/J14 PIN 3

#### MINI-MIX 8 CABLING RUN LIST

CUE GAIN CONTROL PIN # COLOR LENGT 1 205 RED 2 205 GRN 3 205 BLK NC 205 SHIELD	TH FUNCTION  CUE GAIN INPUT  CUE GAIN OUTPUT  CUE GAIN COMMON  SHIELD	TO P/J16 PIN 4 P/J16 PIN 3 P/J16 PIN 2 P/J16 PIN 4
CUE SPEAKER/OUTPUT JACK W	FIRING .	
CUE JACK  1 206 RED  1 206 BLK  2 X ORG  3 X WHT/ORG  3 206 GRN  NC 206 SHIELD  NOTE PIN 1 HAS SPRING	CUE AMP OUTPUT CUE AMP OUTPUT CUE SPEAKER+ CUE SPEAKER- CUE AMP GND SHIELD	P/J18 PIN 1 P/J18 PIN 2 SPKR 1 SPKR 2 P/J18 PIN 4 P/J18 PIN 5
HEADPHONE JACK WIRING		
2 207 GRN 3 207 BLK 3 207 WHT JUMPER TO HJL NEAREST CHAP	RIGHT GND	P/J7 PIN 2 P/J17 PIN 1 P/J17 PIN 3 P/J17 PIN 4
2 208 GRN	LEFT HEADPHONE RIGHT HEADPHONE LEFT GND RIGHT GND	HJ1 PIN 1 HJ1 PIN 2 HJ1 PIN 3 HJ1 PIN 3

