

# 5088

Fully Discrete Analog Mixer



## Operations Manual

# Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. 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.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This apparatus shall not be exposed to dripping or splashing, and no object filled with liquids, such as vases or beer glasses, shall be placed on the apparatus.
16. Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
17. This apparatus has been designed with Class-I construction and must be connected to a mains socket outlet with a protective earthing connection (the third grounding prong).
18. This apparatus has been equipped with a rocker-style AC mains power switch. This switch is located on the rear panel and should remain readily accessible to the user.
19. The MAINS plug or an appliance coupler is used as the disconnect device, so the disconnect device shall remain readily operable.



20. 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 installed 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 the 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 to this device not expressly approved by Rupert Neve Designs LLC, could void the user's authority to operate the equipment under FCC rules.

21. This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

**ATTENTION** — *Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.*

22. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart. According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent permanent hearing loss if exposure is in excess of the limits set forth here:

Duration, per day in hours	Sound Level dBA, Slow Response	Typical Example
8	90	Duo in small club
6	92	
4	95	Subway Train
3	97	
2	100	Typical music via head phones
1.5	102	
1	105	Siren at 10 m distance
0.5	110	
0.25 or less	115	Loudest parts at a rock concert

**CAUTION AVIS**

RISK OF ELECTRIC SHOCK. DO NOT OPEN RISQUE DE CHOC ELECTRIQUE. NE PAS OUVRIR

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL  
ATTENTION: POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE. AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L'USAGER. CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIE  
AVIS: POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE A LA PLUIE OU A L'HUMIDITE

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.  
*Le symbole éclair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampleur suffisante pour constituer un risque d'électrocution.*

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.  
*Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour le fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.*

This symbol indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city recycling office or the dealer from whom you purchased the product.

**WARNING** — To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

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**Introduction** Thank you for purchasing a Rupert Neve Designs 5088 Fully Discrete Analogue Mixing Console. We hope you will enjoy this versatile centerpiece in your studio for many years to come. It has been a great pleasure to design and build a console of this caliber, taking the utmost care to uphold the standards and attention to detail that you have come to expect from the Rupert Neve name.

In an industry where digital technology is increasingly prevalent, we have taken care to ensure that our console topologies will integrate seamlessly into your modern studio workflow while simultaneously imparting an unparalleled sonic character. Tracking, mixing, and overdubbing become effortless within the scope of the 5088, allowing the engineer, producer and artist to focus on that which is paramount: making quality recordings.

## Safety Guidelines

While most of these warnings are common sense, they still warrant reiteration:

Because +/- 45VDC rails power the Class A discrete amplifiers, extra care should be taken when removing or installing modules. **ALWAYS** power down the console before removing or installing any modules to ensure console longevity.

**DO NOT** attempt to service any part of the Console Power Supply (no user serviceable parts inside). High voltages are present and the power supply can deliver large amounts of current. Disregarding this warning may cause harm to you or to the console power supply. Contact our support staff at the following email address for troubleshooting if you encounter an issue: [service@rupertneve.com](mailto:service@rupertneve.com)

**DO NOT** operate the 5088 near any water sources or in areas with high indoor air pollution (smoke, dust, etc.)

**DO NOT** place any beverages on or around the 5088 console. If liquids (water, coffee, soda, etc.) are spilled on the console, immediately turn off all console power supplies. Please contact our support staff as soon as possible for resolution: [service@rupertneve.com](mailto:service@rupertneve.com)

**DO NOT** setup the 5088 Console or its Power Supplies in an unventilated or tightly enclosed space.

**DO NOT** block any of the chassis ventilation holes. The 5088's class-A discrete circuits generate heat during operation and the ventilation holes allow the internal console fans to properly dissipate the heat. Modifying the fans or blocking the chassis ventilation holes will shorten the life of electronic components and could cause circuit instabilities.

## Unpacking

1. Use a drill with a Phillips head bit to unscrew the top panel of the crate.
2. Carefully slide the top panel off the crate and set it safely to the side.
3. Starting with the bottom center screw, remove the longer side panel by alternately loosening the screws on the left and right sides of the panel. Leave the upper left and upper right screws for last, so that the panel doesn't fall as the screws are removed. After all screws have been removed, set the side panel safely out of the way.
4. A) For 16 and 32 Channel consoles, unscrew the brace that supports the Meter Bridge; carefully lift it out of the crate, then unscrew the brace that lays across the faders and carefully lift it out of the crate.  
  
B) For 8 Channel consoles and Expansion Chassis, unscrew the brace that lays across the faders. Carefully lift it out of the crate, then unscrew the brace that supports the cheek and remove it as well.
5. With the help of 4+ people, remove the 5088 Chassis from the crate. The easiest method is to slide the console chassis across the foam until one person has a firm grip on each corner of the console. Persons who lift the front of the console should hold it by the metal frame, **NOT** by the arm rest.

6. Once the 5088 is out of the crate, you may begin removing the boxes from the bottom section of the crate.

**BE CAREFUL to install the 541 CHANNEL and 561 GROUP Modules in the correct slots. CHANNEL and GROUP modules are NOT interchangeable.**

## Installing Modules

Note: 561 Group modules should always be installed in the four available slots immediately left of the Master Section Module. The 561 Group modules and Master Section are housed in a separate receptacle from the 541 Channel modules.

**BEFORE** loading the 5088 chassis with modules, make sure to secure the chassis inside of the console stand in its final location within the studio. It is important to note that a fully loaded 5088 console weighs on average 550lbs, making it significantly more difficult to reposition once it is loaded. To reiterate, it is important to install the console chassis in its final location **BEFORE** loading the modules.

**AFTER** the 5088 Chassis is installed in the console stand, unpack each module and slide it into the correct slot in the appropriate console receptacle.

Once every module is inserted into the correct console module slot, carefully hand-tighten the thumb screws at the top and bottom of each module to firmly secure them to the 5088 frame.

## Guarding Against Interference

Although the 5088 Console circuitry is very well shielded by the console chassis and individual module frames, it is impossible to guarantee immunity from all potential sources of Electromagnetic (EMI) and Radio Frequency Interference (RFI).

The average recording studio environment has many potential noise sources in the form of radiating energy fields from external power supplies, computer monitors, speaker power amplifiers, fluorescent lights and dimmers.

Therefore, it may be necessary to take precautions to prevent these radiated noise sources from coupling into your 5088 console's audio path. As a first measure, the solution may be as simple as relocation of certain electronic devices to minimize their effect. However, if interference issues persist, please contact our support staff so that we may help troubleshoot for potential problems: [service@rupertneve.com](mailto:service@rupertneve.com)

## Connecting Audio

We recommend that you only use high quality, balanced audio-grade cable for all of the input and output connections to and from your 5088 console. Although the 5088's back panel I/O can be directly connected to external destinations, we strongly advise you to consult a professional studio technician for interfacing the 5088 Console's I/O to a patch bay. Installing a patch bay will protect the 5088's rear panel I/O from unnecessary wear and will make signal routing more convenient. The 5088 console's rear panel I/O consists of the following connections:

### **Channel I/O** (per module):

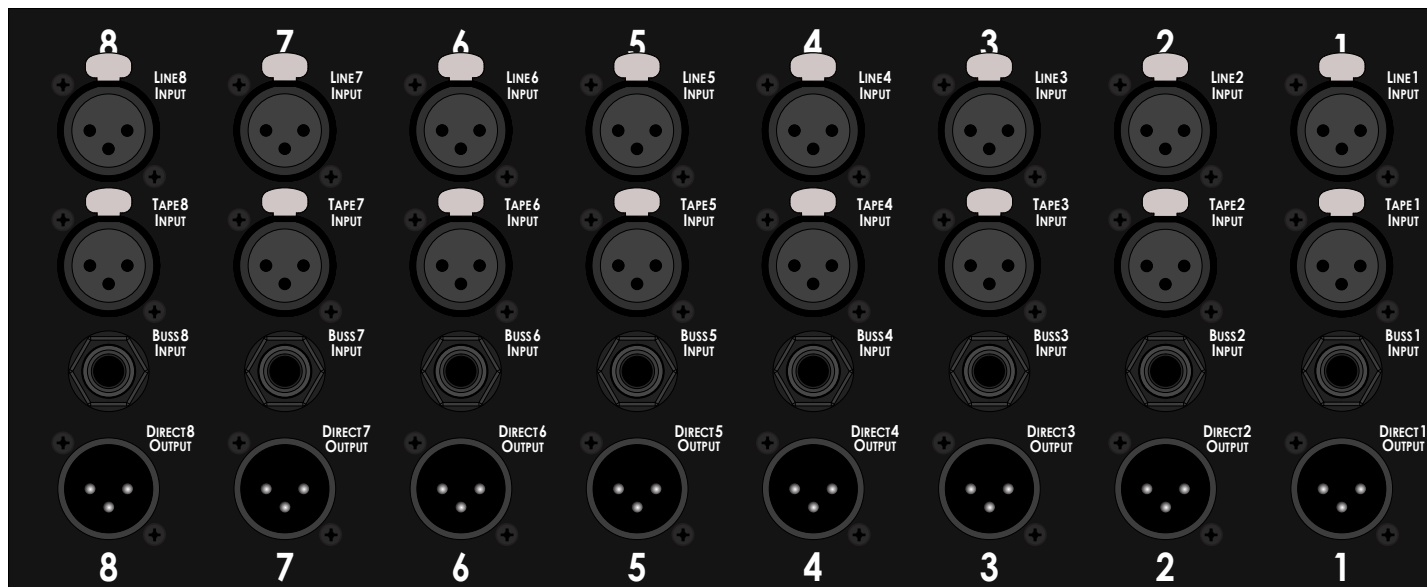
- 2 x XLR-F (Line In, Tape In)
- 1 x XLR-M (Direct Output)
- 1 x TRS (Buss Input)

For a more detailed view of the I/O section, refer to the Back Panel Diagram on page 5.



# Back Panels

## Channel I/O

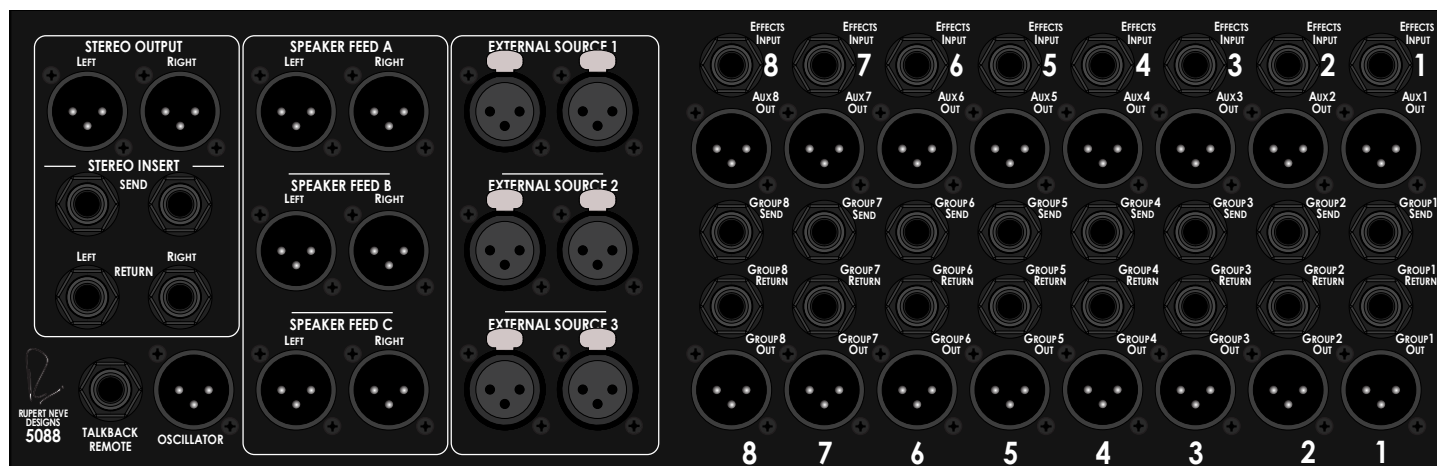


## Master Section I/O

- 6 x XLR Female
  - 3 Stereo External Source Inputs
- 9 x XLR Male
  - 3 Stereo Speaker Feed Outputs
  - Stereo Buss Output
  - Oscillator Out
- 5 x TRS
  - Stereo Buss Insert Send
  - Stereo Buss Insert Return
  - Talkback Remote

## Group I/O (per module)

- 3 x TRS
  - Effects Input
  - Group Insert Send
  - Group Insert Return
- 2 x XLR Male
  - Auxiliary Send Output
  - Group Output



## Connecting the Power Supply

The 4 rack unit 5088 Power Supply included with your 5088 Console is designed to supply power to 32 channels maximum. If another 16 Channel Expansion Chassis is added, an additional power supply will be required.

Although the Console Power Supply is relatively quiet, we recommend that it is installed in an area outside of the control room, such as a well ventilated machine room. If the power supply is installed in a rack, leave at least one slot of empty space (1RU) above and below the Power Supply for ventilation purposes. Blocking the Power Supply's ventilation holes or modifying the fans can cause permanent damage to the 5088 Power Supply.

## Studio Configuration Suggestions

The 5088 can be incorporated into a recording system in several ways. The simplest method is to use a patch bay to route microphone signals from the recording room into the microphone inputs of your Portico or Shelford series preamps, and connect their line outputs directly to your AD Converter inputs. Route each DA Converter output to a corresponding tape input on the 5088 (if latency is acceptably low), and create stereo and cue mixes with the 5088's 541 Channel and 561 Group routing controls for recording or mixing.

Alternatively, if you would like to add the 5088's sonic character during tracking, or if DAW latency performance is poor, the preamp outputs can be routed to the line inputs on the 5088, and the 5088's Direct Outputs can be connected to the Converter inputs for recording through the 5088, using Auxes 1-8 and Groups 1-8 to create cue mixes and effects sends/returns.

Another option available to users with enough channel modules is to operate the 5088 in a split configuration for tracking, using one half of the console for tape sends, and the other half for tape returns. On a smaller console, the DAW can be used to sub-mix tracks and return the sub-mixed outputs to the Group Master returns and Effects returns for monitoring.

**5088 Console Dimensions****“Super 8” Main Chassis**

Width: 76 cm / 29.9 in  
 Depth: 74.4 cm / 29.3 in  
 Height: 27.2 cm / 10.7 in

**“Super 8” with Penthouse and Meterbridge**

Width: 76 cm / 29.9 in  
 Depth: 105 cm / 41.4 in  
 Height: 58.2 cm / 22.9 in

**16 Channel Main Chassis**

Width: 116.8 cm / 46.17 in  
 Depth: 74.4 cm / 29.3 in  
 Height: 27.2 cm / 10.7 in

**16 Channel Console with Penthouse and Meterbridge**

Width: 116.8 cm / 46.17 in  
 Depth: 105 cm / 41.49 in  
 Height: 58.2 cm / 22.95 in

**16 Channel Expansion Chassis**

Width: 73 cm / 28.52 in  
 Depth: 74.4 cm / 29.3 in  
 Height: 27.2 cm / 10.7 in

**16 Channel Expansion Chassis with Penthouse and Meterbridge**

Width: 73 cm / 28.52 in  
 Depth: 105 cm / 41.49 in  
 Height: 58.2 cm / 22.95 in

**5088 Console Weights****16 Channel Console (No Penthouse or Meterbridge)**

Unloaded Frame Weight: 127 lbs.  
 Fully Loaded Weight: 255 lbs.

**16 Channel Console with Penthouse and Meterbridge**

Unloaded Frame weight: 196 lbs.  
 Fully Loaded Weight: 474 lbs.

**32 Channel Console (No Penthouse or Meterbridge)**

Unloaded Frame Weight: 199 lbs.  
 Fully Loaded Weight: 387 lbs.

**32 Channel Console with Penthouse and Meterbridge**

Unloaded Frame Weight: 310 lbs.  
 Fully Loaded Weight: 744 lbs.

**48 Channel Console (No Penthouse or Meterbridge)**

Unloaded Frame Weight: 199 lb. & 72 lb. sections  
 Fully Loaded Weight: 539 lbs. fully assembled

**48 Channel Console with Penthouse and Meterbridge**

Unloaded Frame Weight: 310 lb. & 114 lb. sections  
 Fully Loaded Weight: 1034 lbs. fully assembled

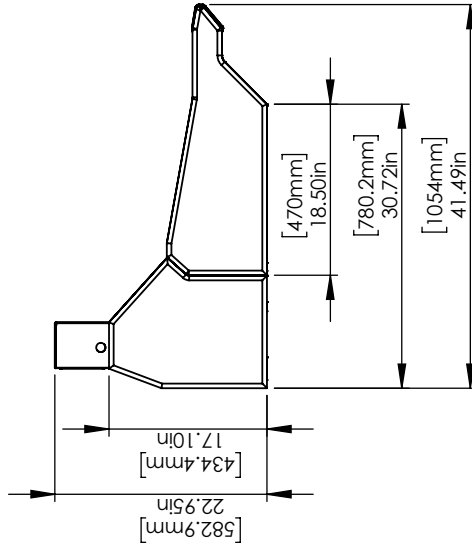
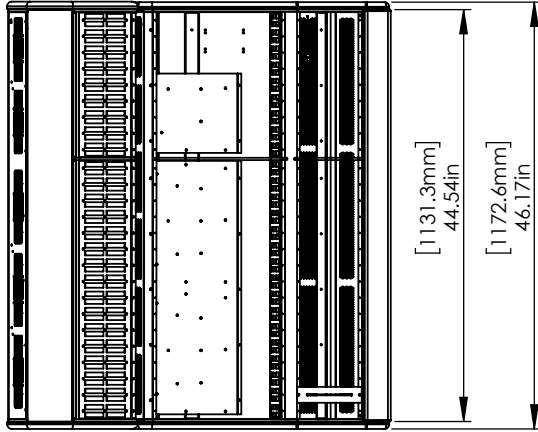
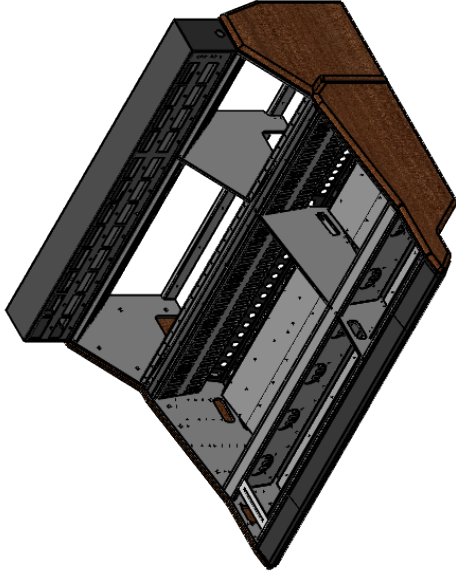
**64 Channel Console (No Penthouse or Meterbridge)**

Unloaded Frame Weight: 199 lb. & 144 lb. sections  
 Fully Loaded Weight: 691 lbs. fully assembled

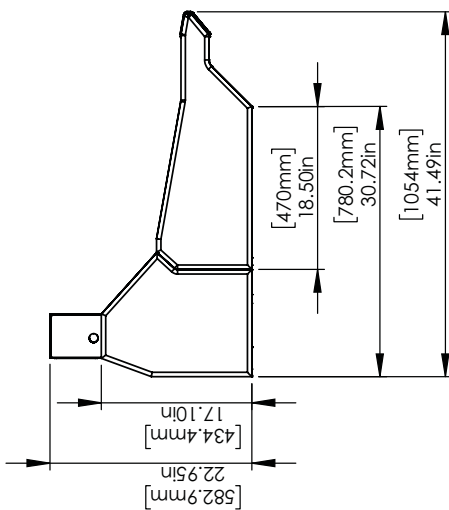
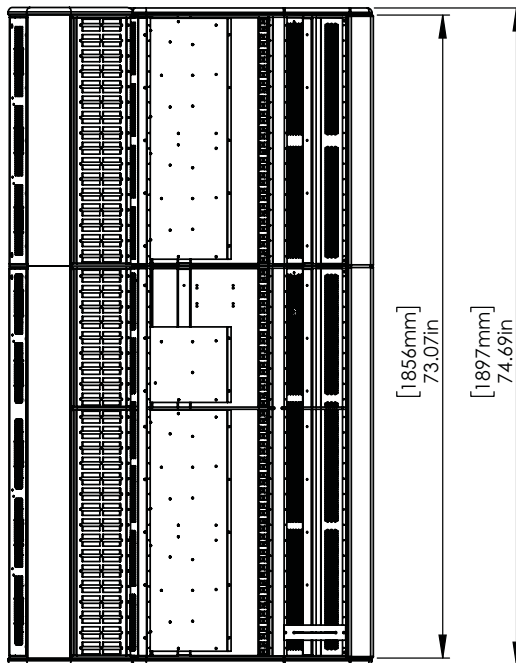
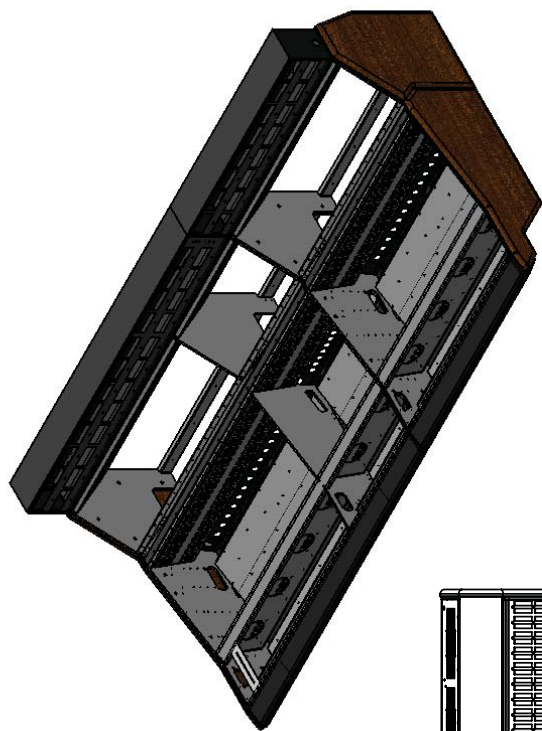
**64 Channel Console with Penthouse and Meterbridge**

Unloaded Frame Weight: 310 lb. & 228 lb. sections  
 Fully Loaded Weight: 1324 lbs. fully assembled

# Dimensions

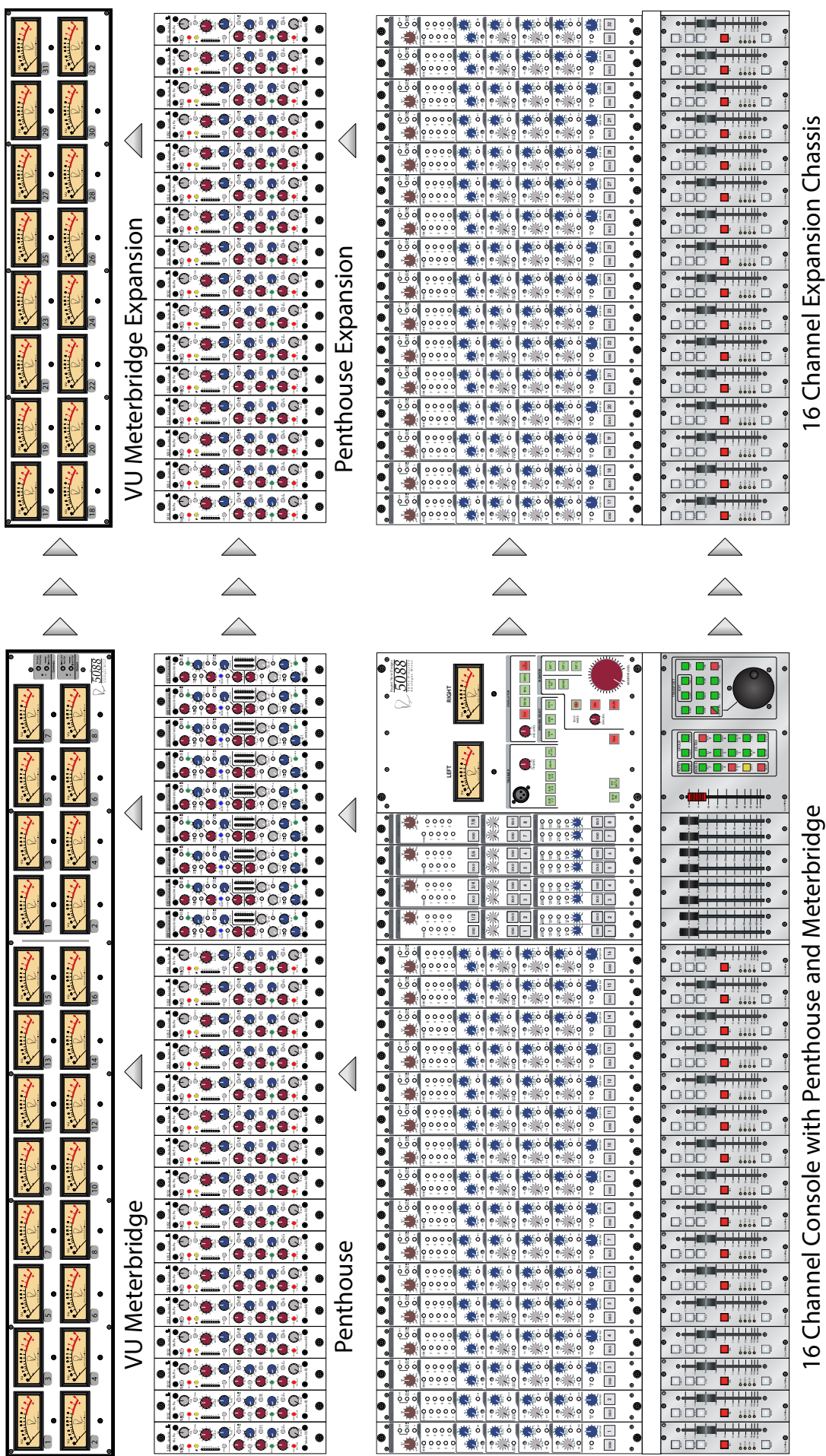


16 Channel 5088, Penthouse, Meterbridge



## 32 Channel 5088, Penthouse, Meterbridge

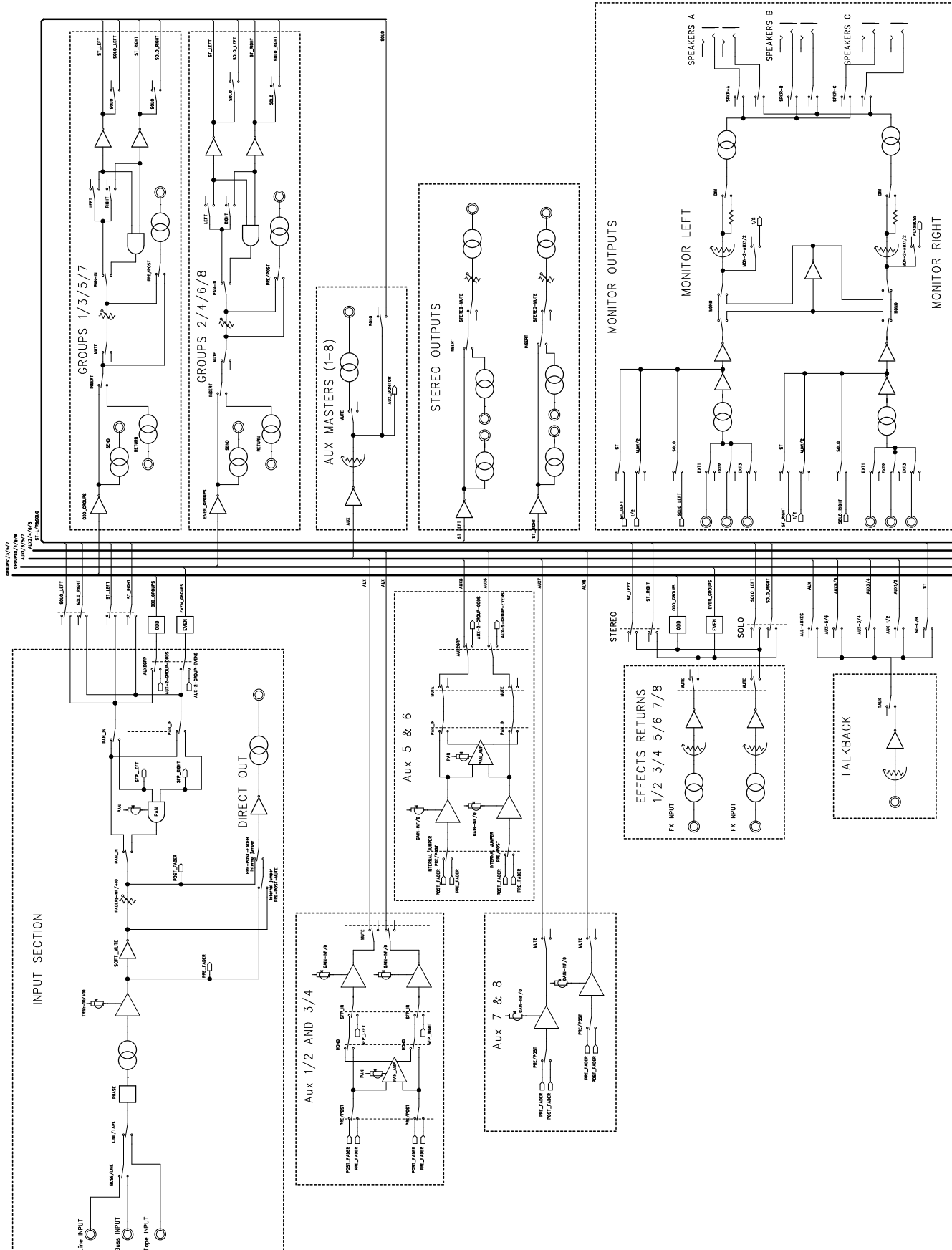
# Dimensions



16 Channel Expansion Chassis

16 Channel Console with Penthouse and Meterbridge

# Configuration Guide



5088 Console Block Diagram





## Cleaning Instructions

When cleaning the 5088, do not spray cleaning solutions directly onto the console surface. Only apply cleaning solutions to a lint-free cloth, then gently wipe the console surface.

## Shipping Instructions

To remove a 541 Channel or 561 Group module for servicing, power off the 5088, unscrew the thumbscrews at the top and bottom of the module and carefully slide the module out of the slot by pulling upwards on the thumbscrews. Contact our support staff for shipping instructions.

Additional 541 Channel or 561 Group modules may be purchased as spares in the event of a module requiring service.

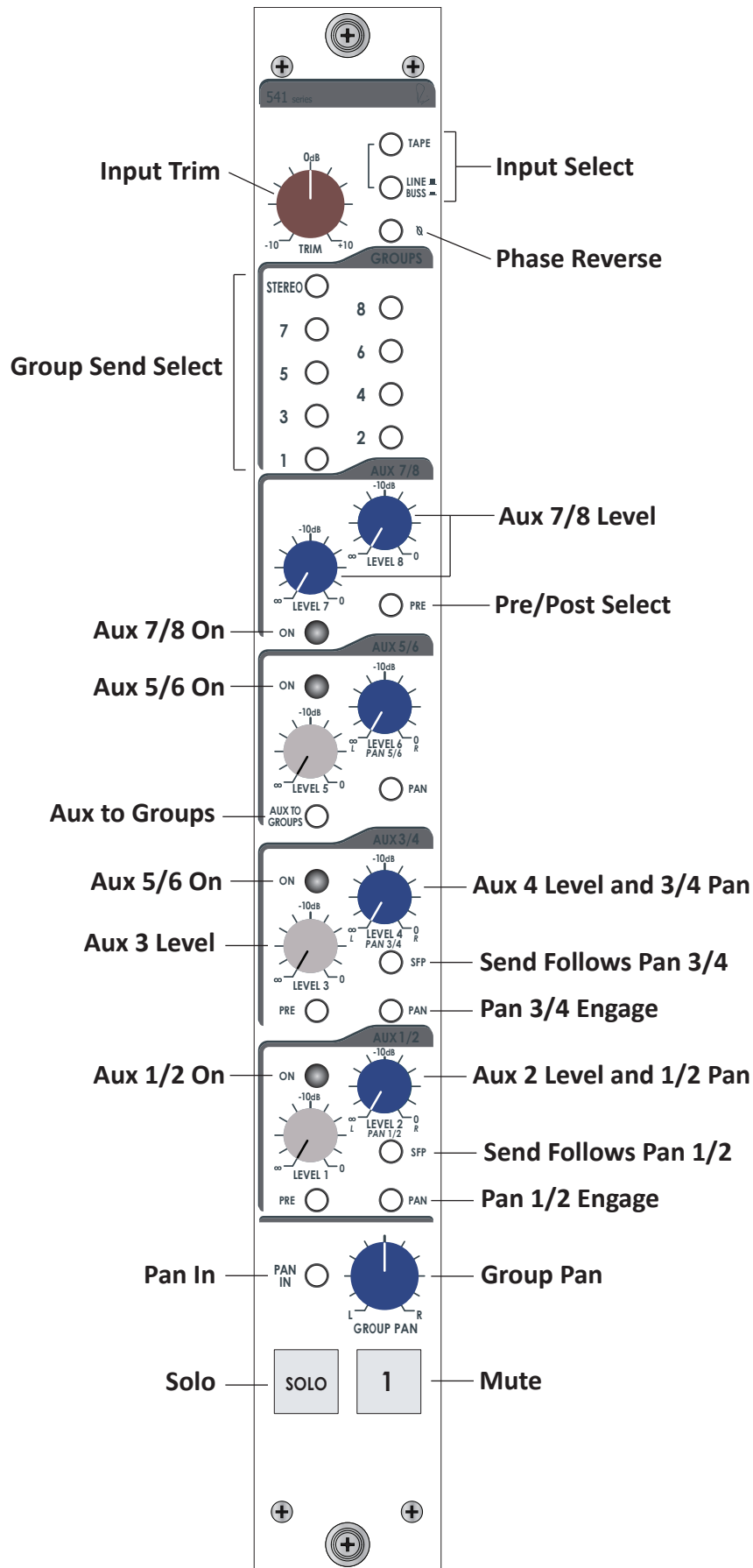
If the Master module needs to be serviced, please call our support team for instructions prior to removal.

## Disclaimer

Rupert Neve Designs, LLC has an established policy of seeking improvements to designs, specifications and manufacture of its products. Alterations to existing products take place continually, often without notice.

Despite considerable efforts to produce the most up to date information, this user guide must not be considered an infallible guide to the latest specifications available.

# 541 Channel Module



## Channel Module

The push-buttons at the top of each 541 Channel select between transformer-coupled **LINE**, **BUSS** or **TAPE** inputs. The **BUSS** input is not a line input, and should only be used with **BUSS** outputs from Portico modules.

Each 541 Channel features:

- An input **TRIM** control with - 10dB/+10dB fully variable input level adjustment.
- Push-button assignment to the 8 Group Busses and Stereo Buss.
- **SOLO** and **MUTE** illuminated latching buttons. The **SOLO** button lights red when there is a signal overload present on the channel.

The pan control at the bottom of the 541 Channel has a **PAN IN** push-button which engages the Pan control for Stereo, Group, and Solo Buss assignment.

The eight Auxiliary Sends come in three different configurations:

Aux 1/2 and Aux 3/4 are identical. They are dual mono sends by default. When the **PAN** push-button is engaged, they become stereo sends, and the **LEVEL 2** and **LEVEL 4** controls become pan controls. The **ON** push-button engages the Aux Sends, and the **PRE** push-button changes Pre/Post Fader assignment. Engaging the **SFP** (Send Follows Pan) push-button allows the stereo panning between Aux 1/2 or Aux 3/4 to be controlled by the Channel Pan.

Aux 5/6 is a dual mono send by default. When the **PAN** push-button is engaged, Aux 5/6 becomes a stereo send and the **LEVEL 6** control becomes a Pan control. The **ON** push-button engages the Aux 5/6 send. The **AUX TO GROUPS** push-button routes the Aux 5/6 signal to the Group Busses selected in the Group Send Select section.

Aux 7/8 is a dual mono send. The **ON** push-button engages the Aux 7/8 send, and the **PRE** push-button changes Pre/Post Fader assignment (always pre-mute).

Every channel module has a transformer-coupled direct output that can be assigned Pre/Post Fader and Pre/Post Mute via internal jumpers (Post Fader/ Post Mute by default).

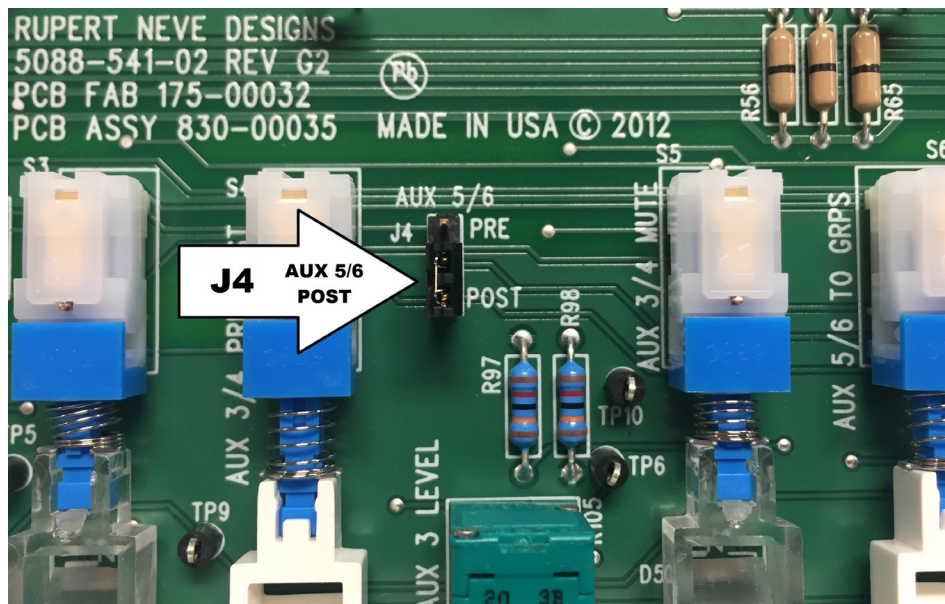
Each 541 Channel has an associated 100mm fader for controlling the Channel level to the Stereo Buss.

## Channel Module Jumpers

The 541 Channel has internal jumpers that can be changed to alter the functionality of Aux 5/6 as well as the Direct Output. Before removing Channel modules to change jumper positions, power off the 5088. Grab the jumpers using your fingers or a small set of needle-nose pliers.

### Aux 5/6: Pre-Fader/Post Fader

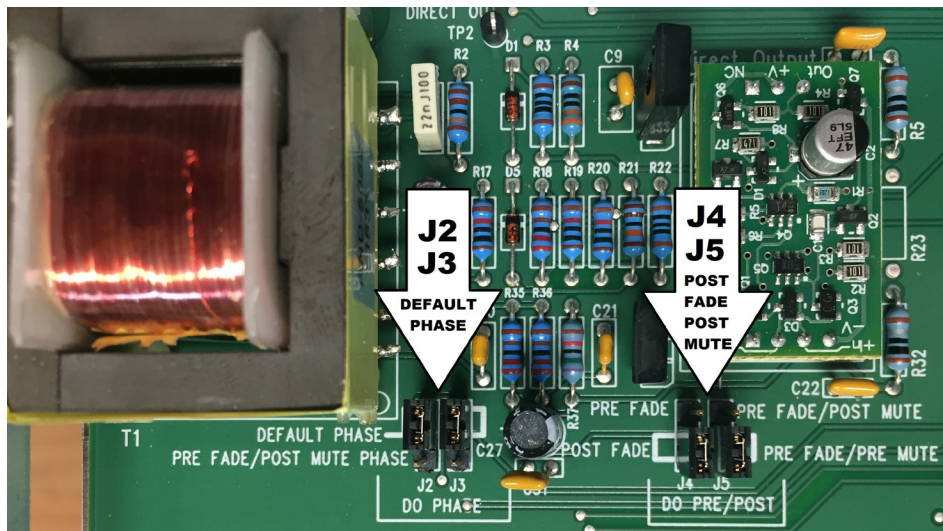
The Aux 5/6 jumper J4 is physically located on the upper (daughter) board between the **AUX 3/4 PRE/POST** and **AUX 3/4 MUTE** push-button switches.



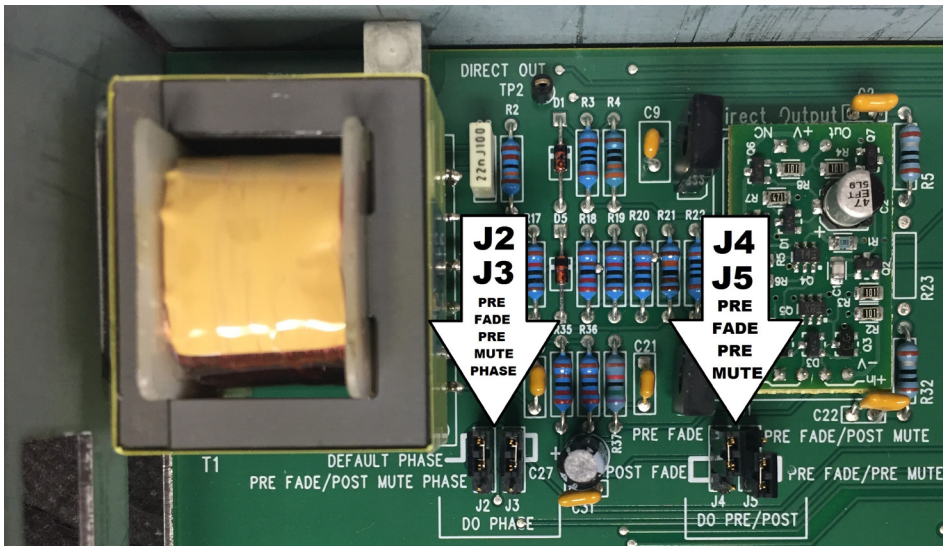
### Direct Output: Pre-Fader/Post Fader & Pre-Mute/Post-Mute

The 541 Channel's transformer-coupled Direct Output can be assigned in three different ways via internal jumpers. The jumpers are located in the bottom corner of the Mother Board (J2, J3, J4, and J5).

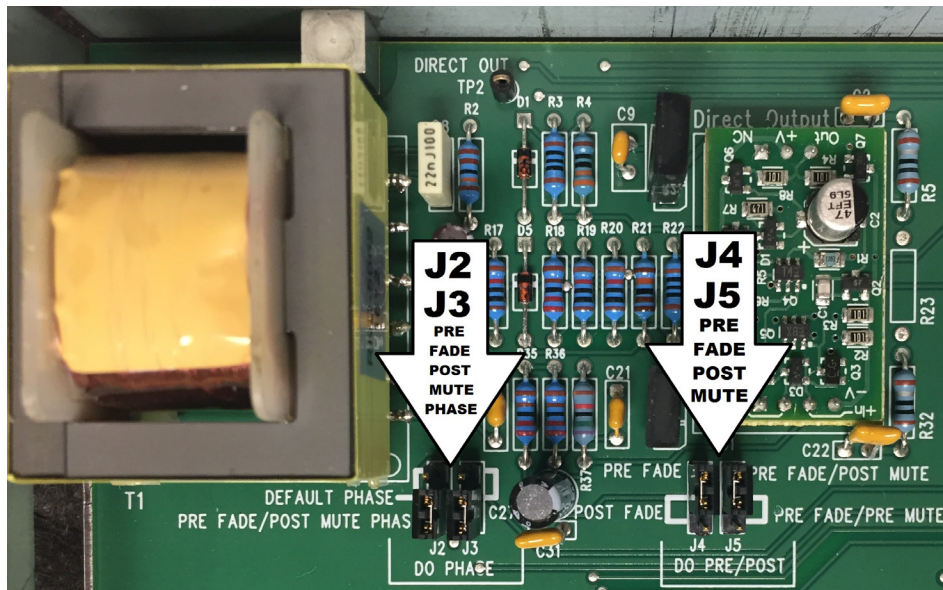
Post-fader / Post-mute (default)



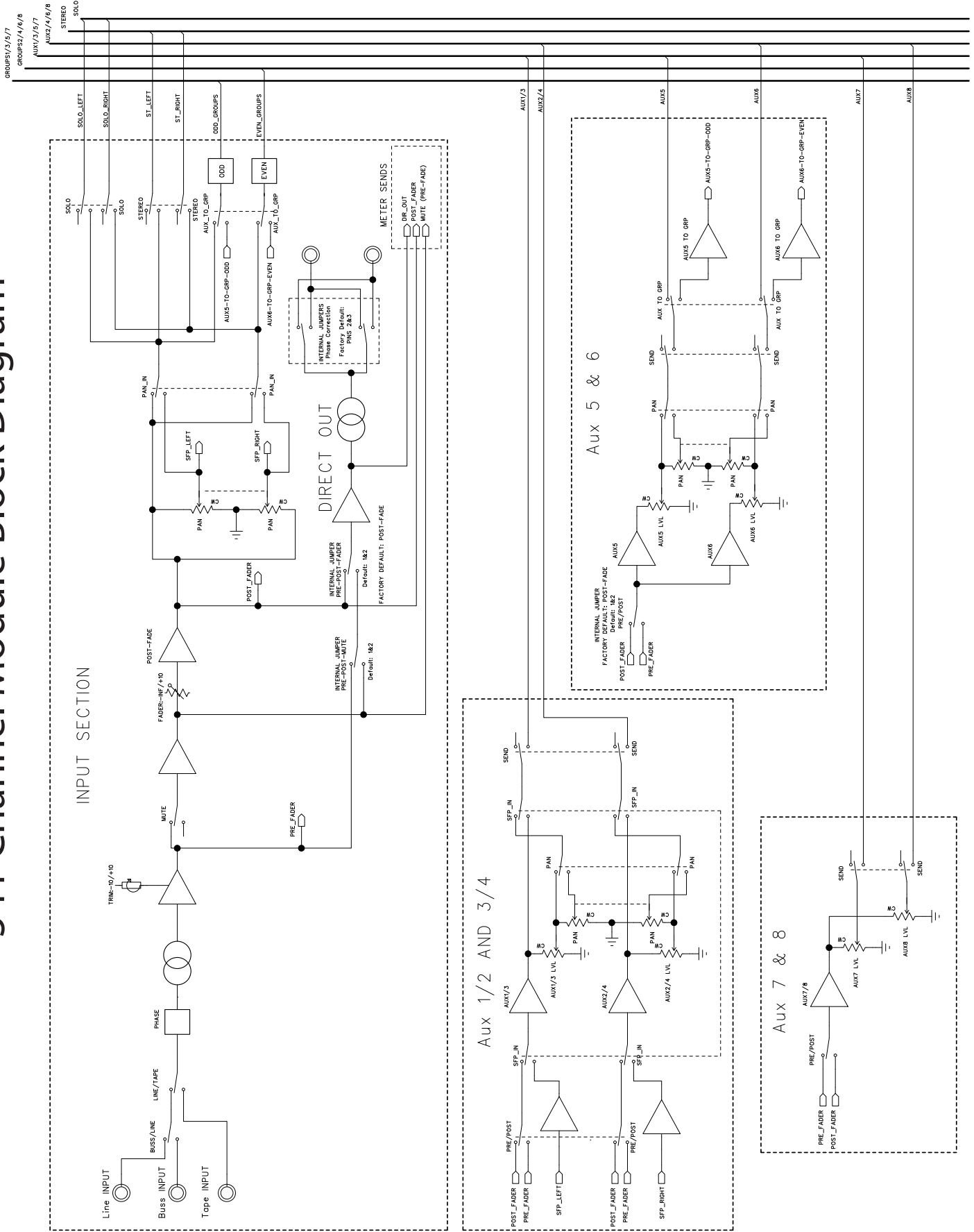
Pre-fader / Pre-mute



Pre-fader / Post-mute

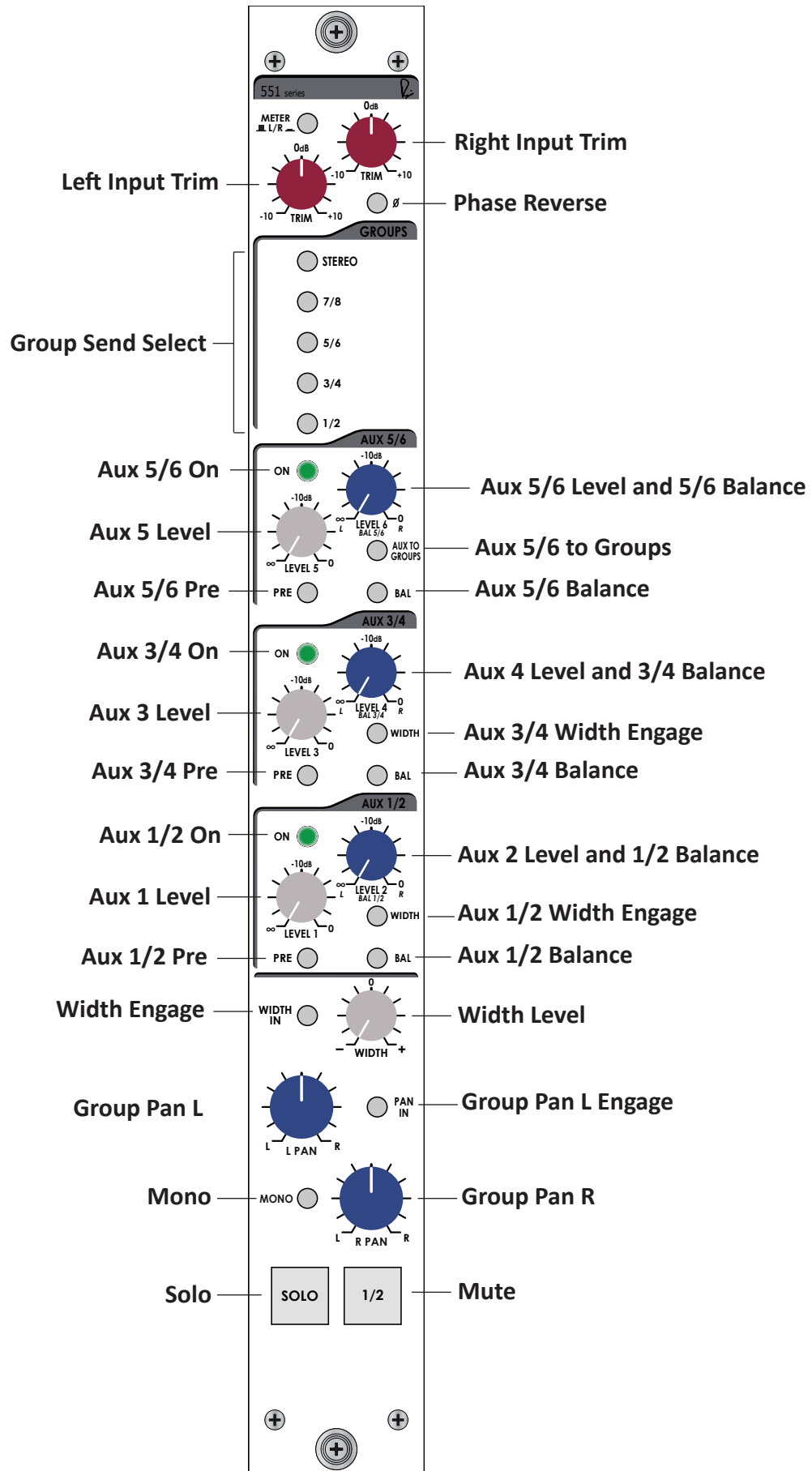


# 541 Channel Module Block Diagram





# 551 Stereo Channel Module





## Stereo Channel Module

At the top of the stereo channel module, there are push-buttons that allow the user to select between metering the left and right inputs, as well as a phase reverse.

Each 551 Channel features:

- A Left and Right input **TRIM** control with - 10dB/+10dB fully variable input level adjustment.
- Push-button assignment to the 8 Group Busses and Stereo Buss.
- **SOLO** and **MUTE** illuminated latching buttons. The **SOLO** button lights red when there is a signal overload present on the channel.

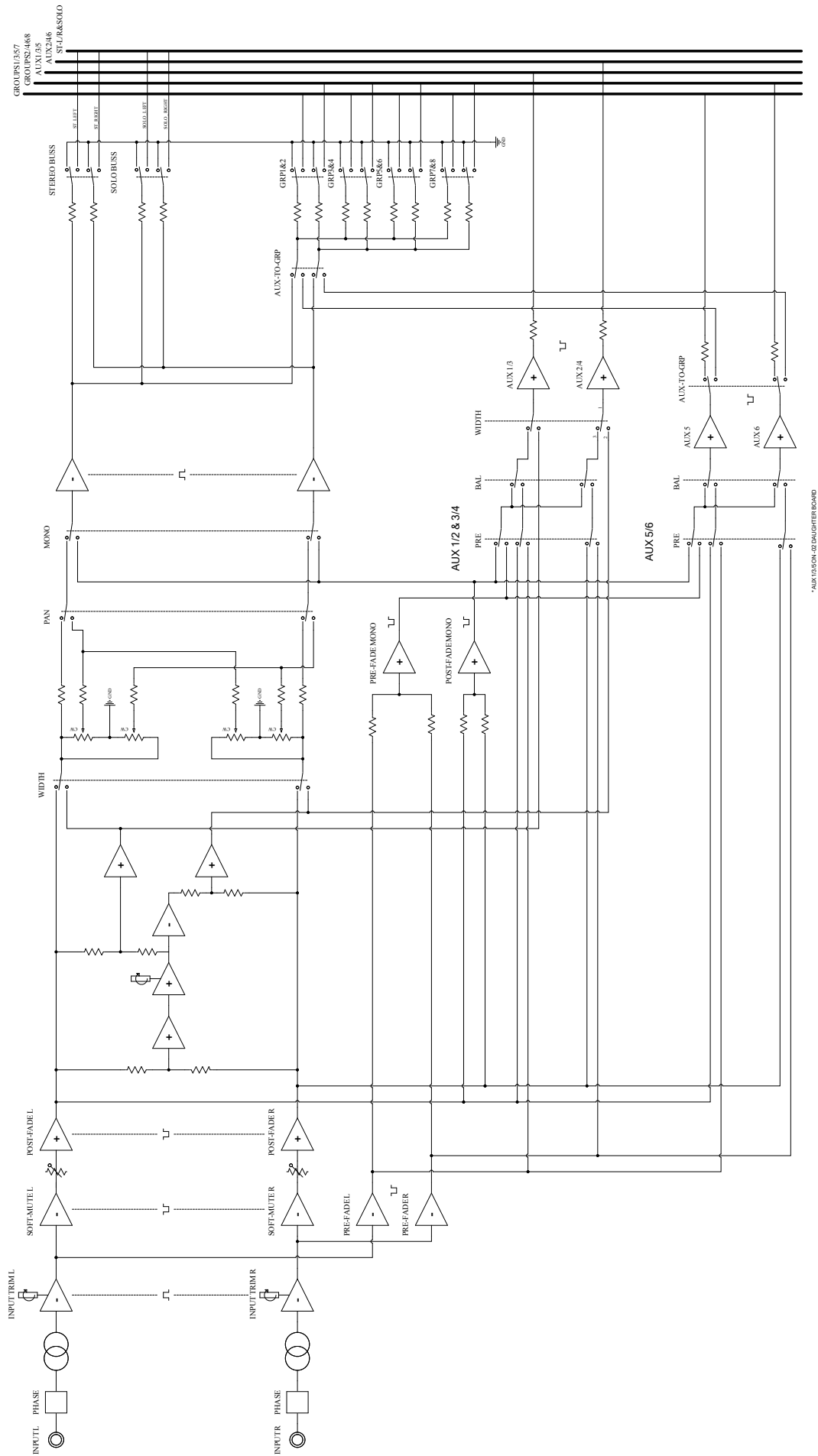
The Group L and R **PAN** controls at the bottom of the 551 Channel have a **PAN IN** push-button which engages the Pan control for Stereo, Group, and Solo Buss assignment. In addition to the group pan controls, there is a **MONO** push-button.

The six Auxiliary Sends come in two different configurations:

Aux 1/2 and Aux 3/4 are identical. They are dual mono sends by default. When the **BAL** push-button is engaged, they become stereo sends, and the **LEVEL 2** and **LEVEL 4** controls become pan controls. The **ON** push-button engages the Aux Sends, and the **PRE** push-button changes Pre/Post Fader assignment. Engaging the **WIDTH** allows for the 551 Stereo widening to be applied to the Aux sends.

Aux 5/6 is a dual mono send by default. When the **PAN** push-button is engaged, Aux 5/6 becomes a stereo send and the **LEVEL 6** control becomes a Pan control. The **ON** push-button engages the Aux Sends, and the **PRE** push-button changes Pre/Post Fader assignment. The **AUX TO GROUPS** push-button routes the Aux 5/6 signal to the Group Busses selected in the Group Send Select section.

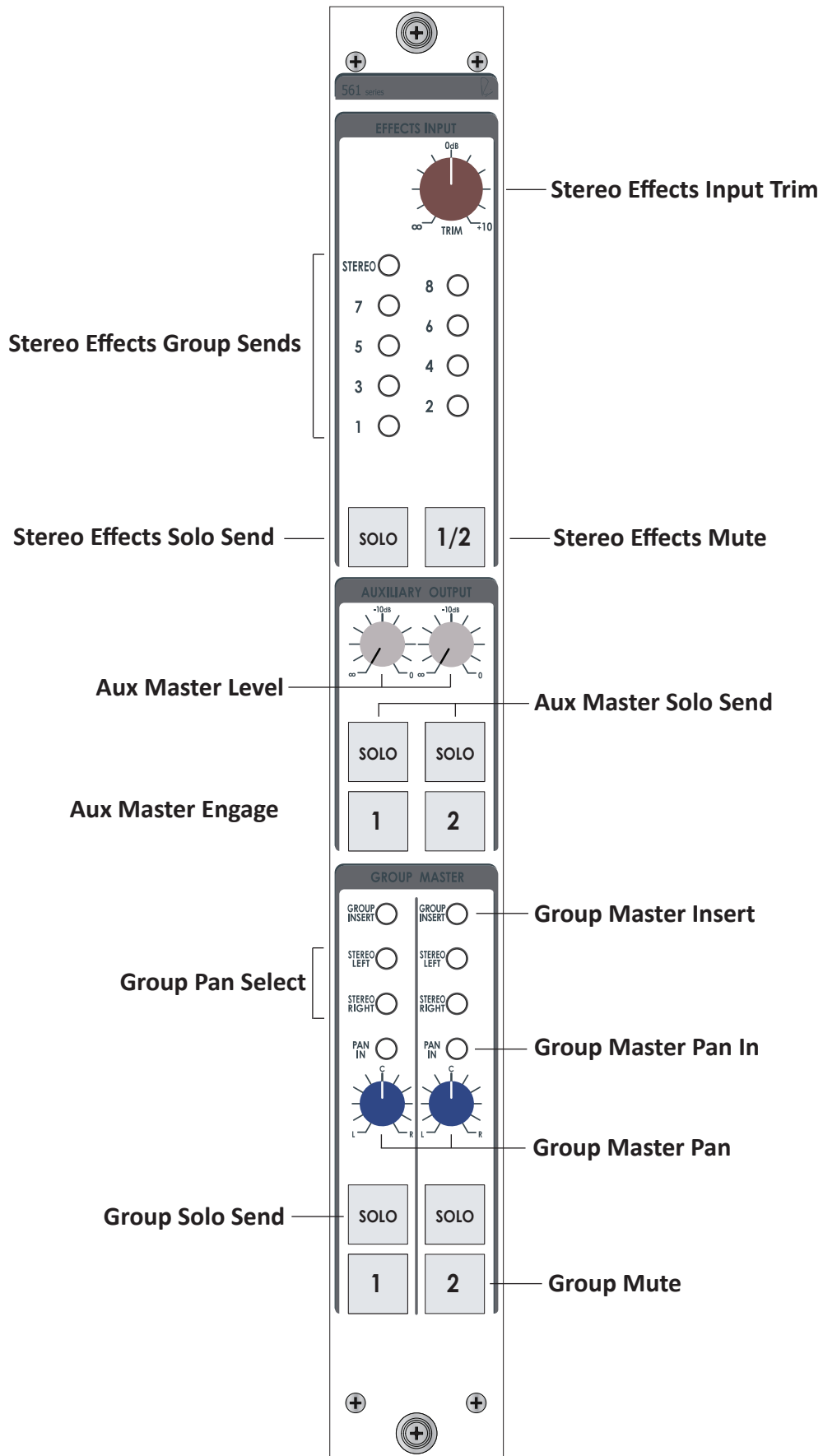
Each 551 Channel has an associated 100mm fader for controlling the Channel level to the Stereo Buss.



\*AUX 1/2/3/4 - 80 DAUGHTERBOARD



# 561 Group Module



## Group Module

Each 561 Group features four dual inputs with Stereo Effects Returns. Each input features:

- An Effects input **TRIM** control with  $-\infty$  /+10dB fully variable input level adjustment.
- Push-button assignment to the 8 Group Busses and Stereo Buss.
- **SOLO** and **MUTE** illuminated latching buttons.

Each Stereo Effects Return consists of two transformer-coupled line inputs which connect to TRS jacks on the 5088's Back Panel I/O.

The 561 Group includes a pair of transformer-coupled Auxiliary Master Outputs that are accessible on the 5088's Back Panel I/O via XLR jacks. Each of the Auxiliary Master Outputs features:

- Individual level control.
- **SOLO** and **MUTE** illuminated latching buttons.

Each 561 Group has a set of Group Master Output controls. These features include:

- **GROUP MASTER INSERT** push-button which brings the insert send and return into the Group signal path. TRS jacks are available on the 5088's Back Panel I/O for this feature.
- Individual **STEREO LEFT** and **STEREO RIGHT** push-buttons that assign the Group Master directly to the left or right Stereo Buss.
- **GROUP MASTER PAN** control that allows the user to pan between the left and right Group Busses.
- **SOLO** and **MUTE** illuminated latching buttons.
- Transformer-coupled Direct Outputs available on the 5088's Back Panel I/O via male XLR connectors. By default, the Group Direct Output is Post Fader, Post Mute.

Each 561 Group has an associated 100mm fader for controlling the Group level to the Stereo Buss.

## Group Module Jumpers

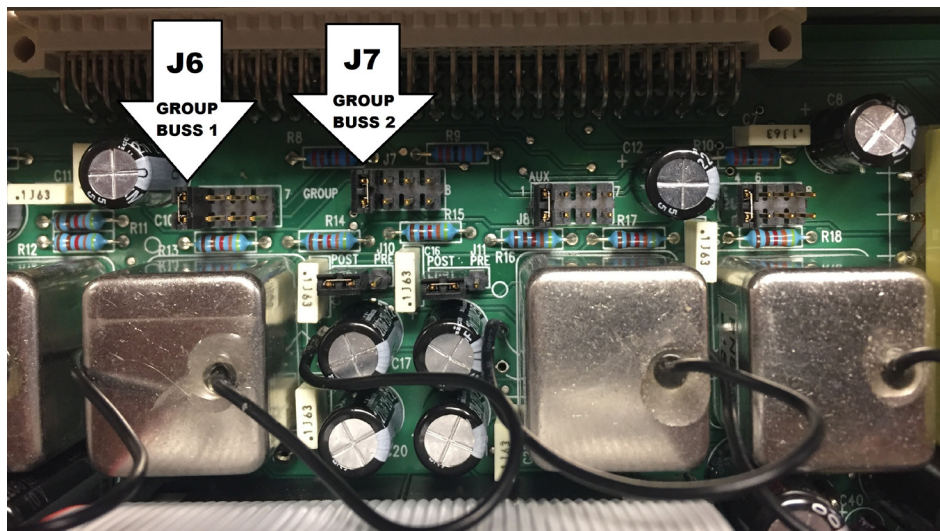
### Group Module Direct Output: Pre-Fader/Post Fader

By default, the 561 Group Direct Outputs are set to Post-Fader, Post-Mute. This can be changed via internal jumpers (J1, J2, J4, J5, J10 and J11). Before attempting this change, please contact our support staff at the following email address:

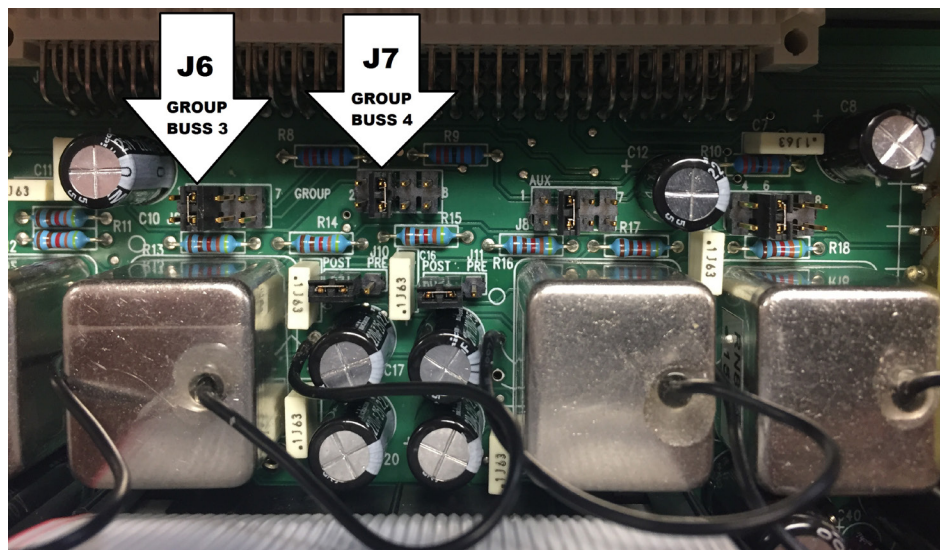
[service@rupertneve.com](mailto:service@rupertneve.com)

### Group Module Buss Selector

The Group Buss that each 561 Group module receives is determined by the position of two jumpers, J6 and J7. In the photo below, Group Module 1/2 has internal jumpers J6 and J7 set to receive Group Busses 1 and 2.

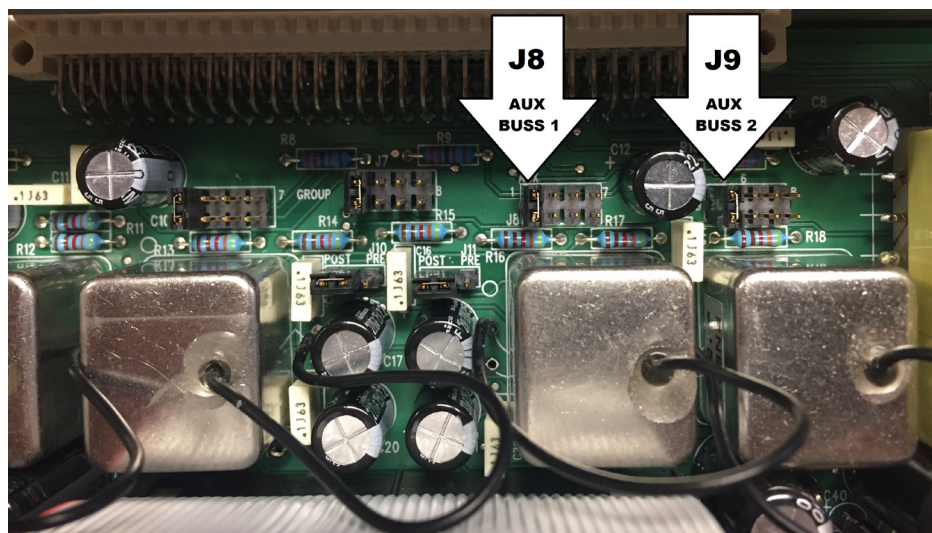


Group Module 3/4 is set to receive Group Busses 3 and 4, etc.



## Group Module Aux Buss Selector

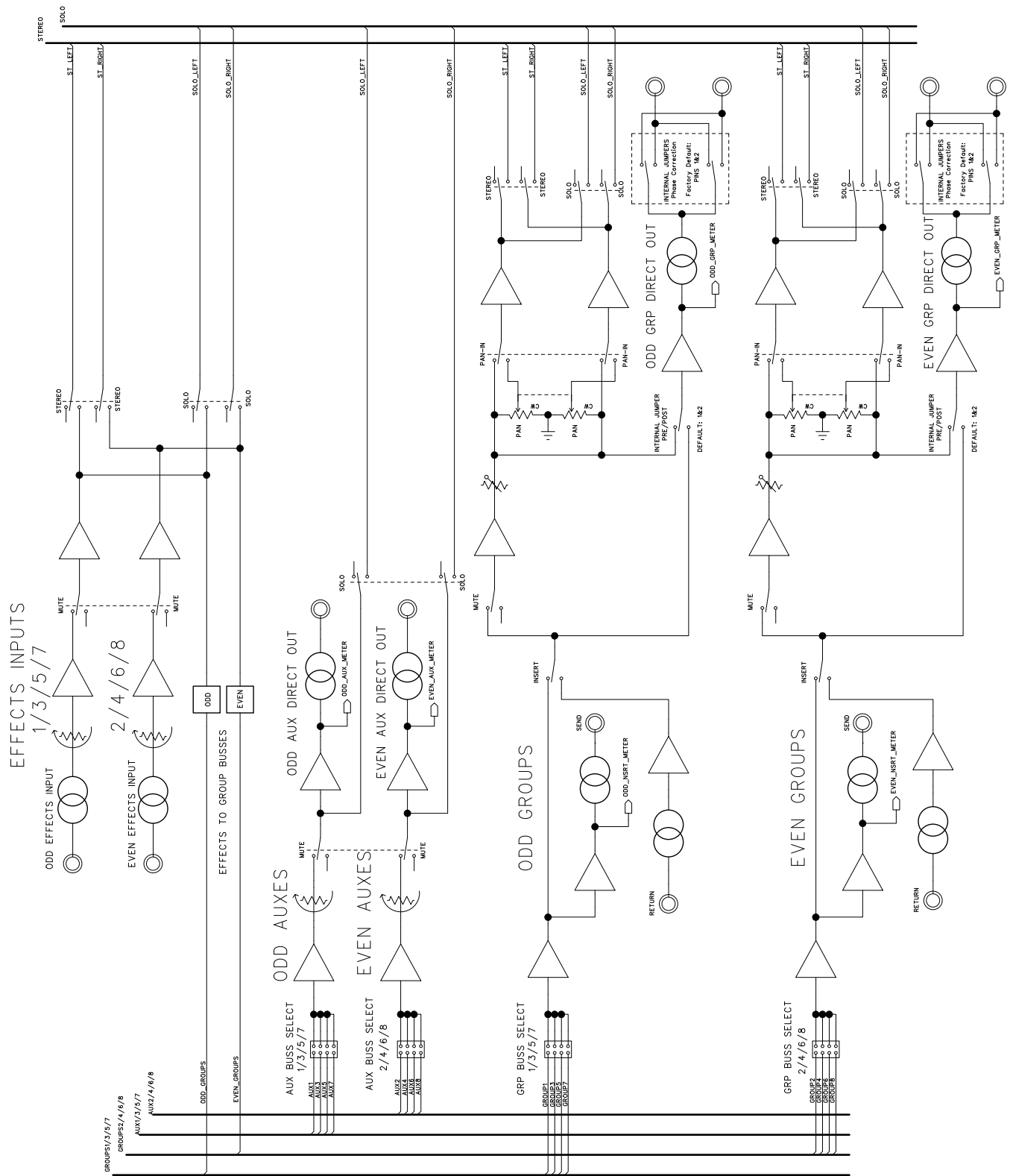
The Aux Buss that each 561 Group module receives is determined by the position of jumpers J8 and J9. In the photo below, Group Module 1/2 has internal jumpers J8 and J9 set to receive Aux Buss 1 and 2.



The Aux Master Buss Selector jumpers J8 and J9 function the same way as the Group Buss Selector jumpers J6 and J7. Group module 3/4 is set to receive Aux Buss 3 and 4, etc.

**VU Meterbridge** The VU Meter bridge has 24 independent VU meters for monitoring the Channel and Group module signals.

The Channel section meters can be toggled between reading Pre-Fader, Post-Fader, and Direct Output using the push-buttons on the right side of the Meterbridge. The Group section meters can be toggled between Aux Out, Group Insert Out, and Group Direct Output monitoring.

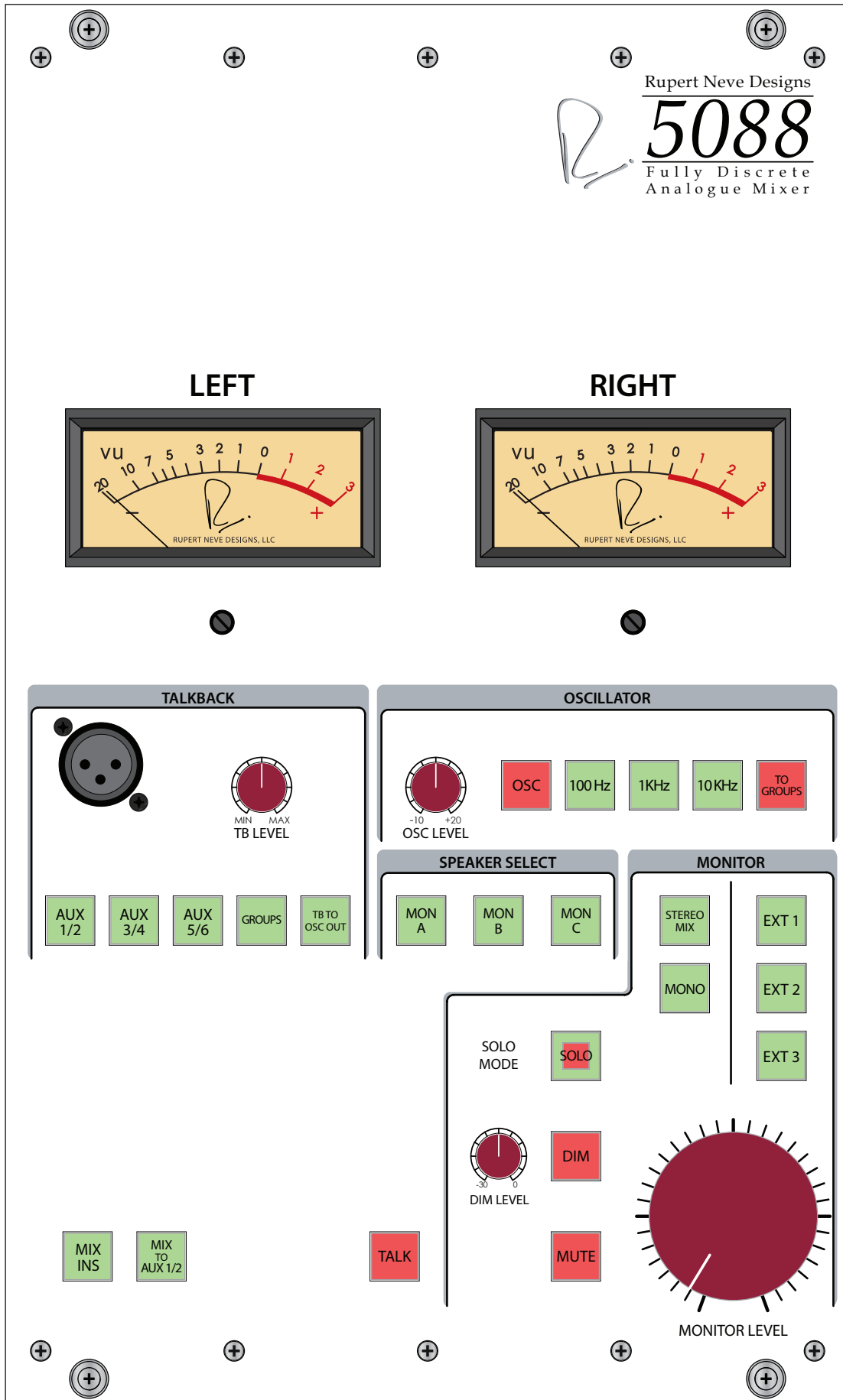


561 Group Module Block Diagram





# Master Section



## Master Section

The master section includes:

- Left and right VU Meters.
- Talkback facilities with Talkback level control.
- Oscillator facilities with Oscillator level control.
- A, B, and C Speaker Output selection.
- Monitor Section with a Monitor Level control and **MONO**, **SOLO**, Variable **DIM** and **MUTE** buttons.
- Stereo Mix Insert and Stereo Mix to Aux 1/2.
- Stereo 100mm Fader to adjust the Stereo Buss level.

The left and right transformer-coupled Master Stereo Buss Outputs are accessible on the 5088's Back Panel I/O via male XLR connectors.

### Talkback Facilities

The Master Section has a front panel female XLR input for a Talkback microphone. By default, +48V Phantom is engaged on this Talkback input, and the microphone gain is at a low setting. The Talkback features an auto-compressor designed to eliminate the need for level adjustment in a typical studio scenario. There is also a **TB LEVEL** control on the Master Section front panel so that the engineer can adjust the Talkback level output manually. Pressing and holding the momentary **TALK** button will engage the Talkback feature. Alternatively, Talkback can be operated by an external switch, such as a footswitch, connected to the **TALKBACK REMOTE** female TRS on the 5088's Back Panel I/O.

There are Talkback routing buttons that allow the Talkback signal to be sent to **AUX 1/2**, **AUX 3/4**, **AUX 5/6**, and **TO GROUPS**. If additional external Talkback signal routing is required, the **TB TO OSC OUT** button routes the Talkback signal to the male XLR on the 5088's Back Panel I/O labeled **OSCILLATOR**. All five of these Talkback routing options can be used individually or simultaneously.

### Oscillator Facilities

The 5088's Back Panel I/O has a male XLR connector labeled **OSCILLATOR**. Pressing the **OSC** button on the Master Section

will turn the Oscillator on, and the **OSC LEVEL** control adjusts the Oscillator send level from -10dB to +20dB. The Oscillator section has three different selectable frequencies: 100Hz, 1kHz, and 10kHz. Pressing the **TO GROUPS** button will send the Oscillator to all eight of the Group Busses simultaneously with the selected level and frequency.

### Speaker Select Section

Three buttons, **MON A**, **MON B**, and **MON C** allow the transformer-coupled Monitor outputs to be assigned to one of 3 sets of stereo male XLR loudspeaker outputs on the 5088's Back Panel I/O.

### Monitor Section

The Monitor source can be selected via the **STEREO MIX** and **EXT 1**, **EXT 2**, and **EXT 3** buttons. The External Sources are connected to the female XLR inputs on the 5088's Back Panel I/O. In addition to a high precision stepped **MONITOR LEVEL** control, there is a **MONO** button that sums the left and right signals of the selected stereo monitor signal.

The **DIM** button has an associated **DIM LEVEL** control with a range of -30dB to 0dB, and is accompanied by a monitor **MUTE** button.

### Stereo Insert and Mix to Aux 1/2

The illuminated **STEREO INSERT** button engages the left and right transformer-coupled Insert Returns, which are available on the 5088's Back Panel I/O via TRS connectors. The stereo Insert Send is always active, and is pre-fader, pre-soft mute. The **MIX TO AUX 1/2** button routes the Stereo Buss to AUX 1/2 for cue mix purposes.

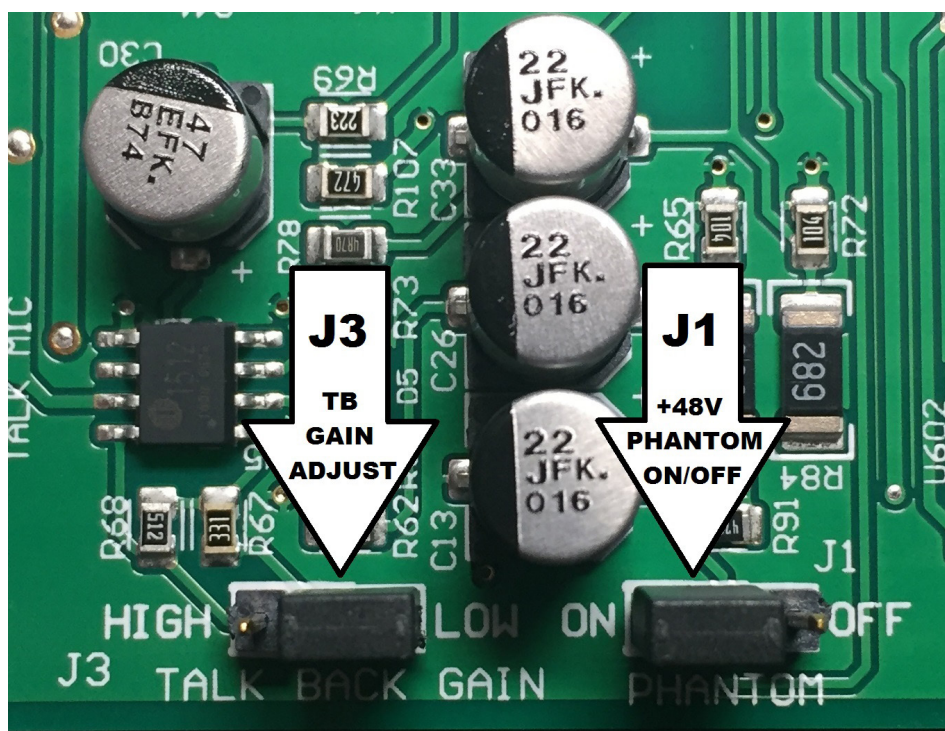
## Master Section Jumpers

There are two jumpers available in the Master Section, located on the Master Facilities card. Jumper J1 allows Phantom power to be connected or disconnected from the Talkback XLR on the Master Section front panel. Jumper J3 allows the Talkback gain to be changed between a high or a low gain setting.

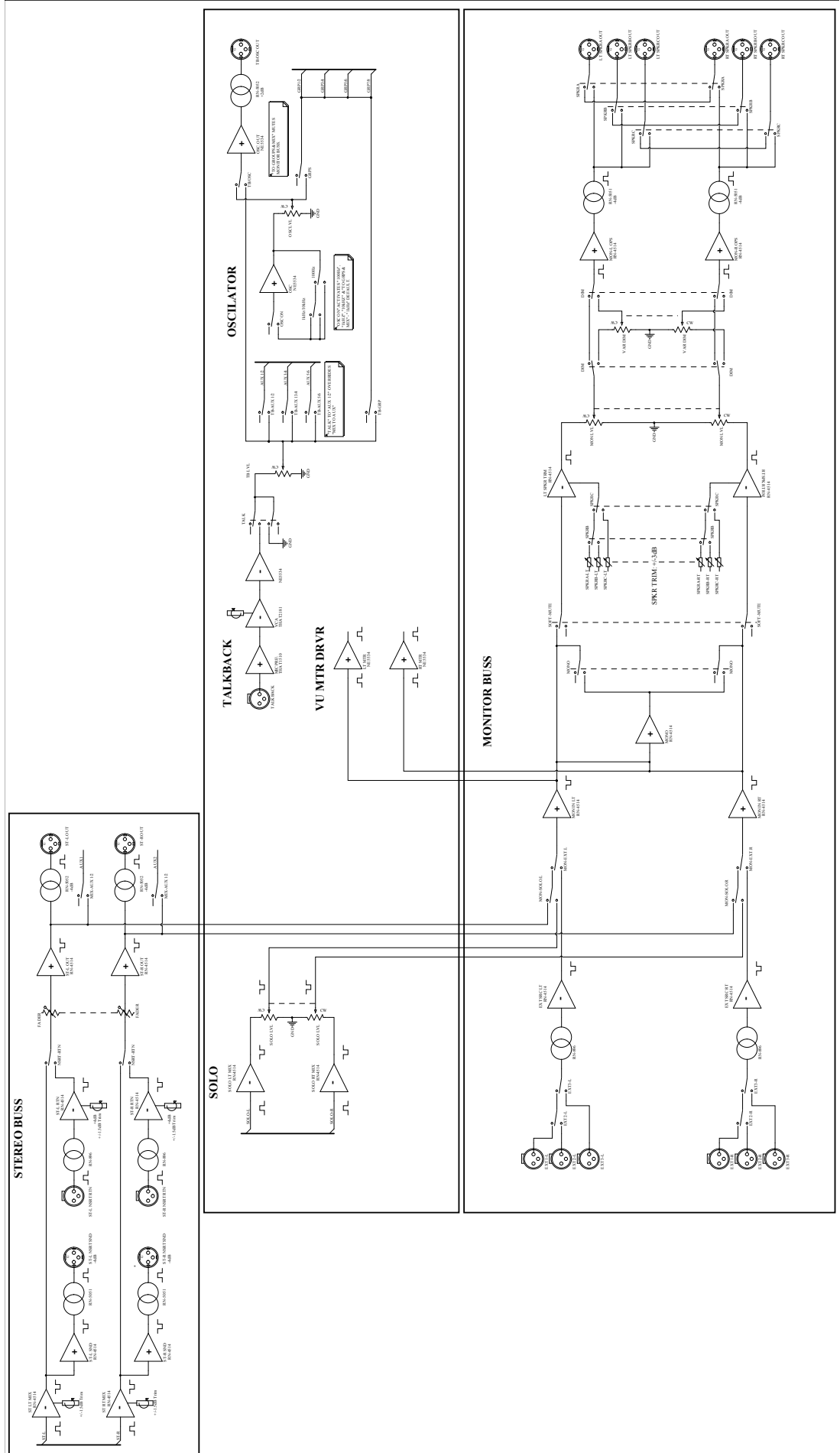
Jumper J1 is set by default to +48V Phantom engaged, and Jumper J3 is set by default to a low gain Talkback setting, intended for use with a condenser microphone.



To change these jumper settings, first power down the 5088 Console. Loosen the thumbscrews on the 561 Group modules 5/6 and 7/8. Removing these two 561 Group modules will provide enough space to change the jumper settings without removing the Master Section.

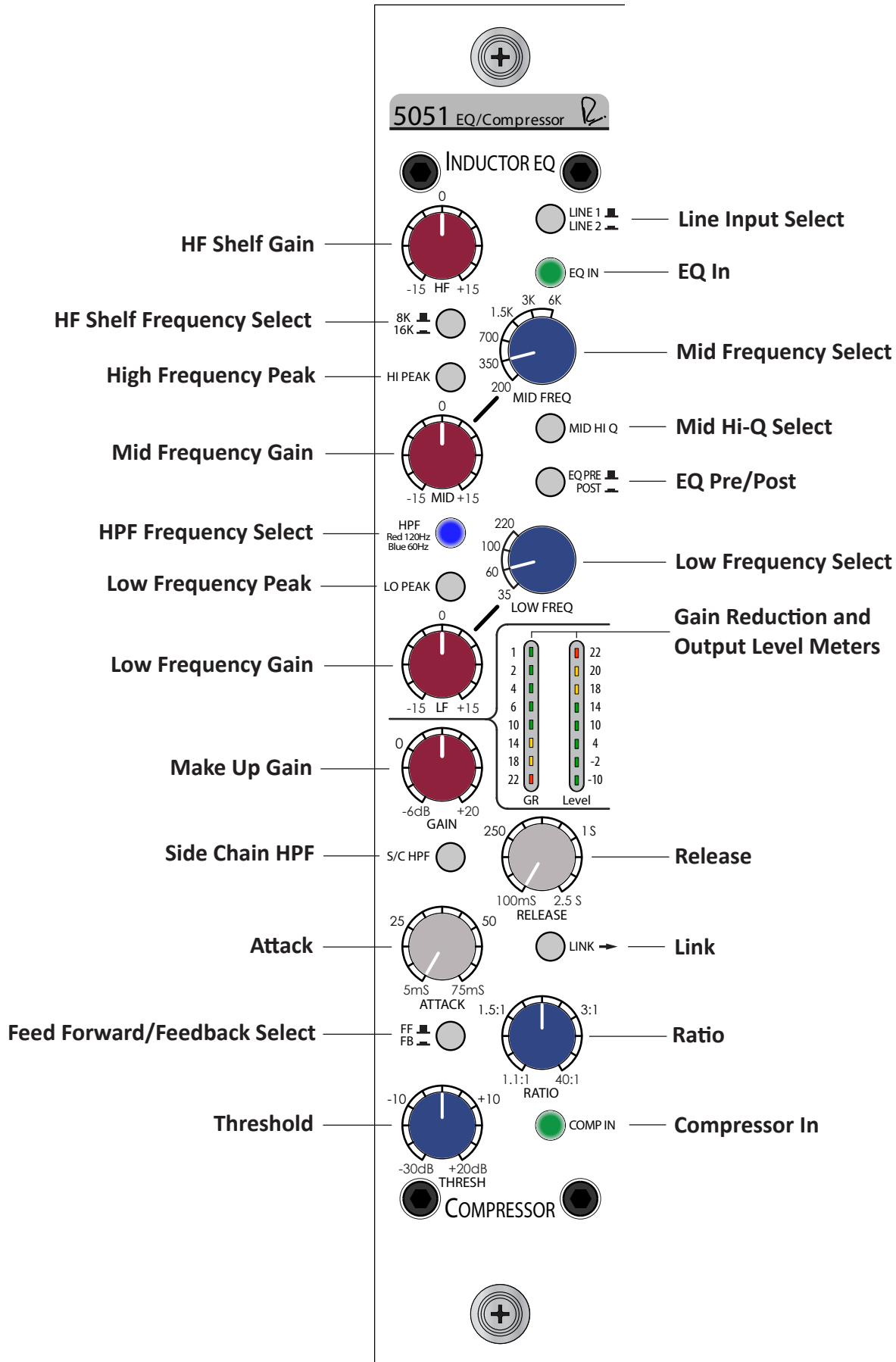


# Master Section Block Diagram





# 5051 EQ/Compressor





**5051 Features** The 5051 EQ/Compressor requires its own standalone power supply to operate. The power supply features proprietary 4-pin polarized outputs at +24 and -24V DC, and will power up to twenty-five 5051 modules.

### **LINE 1 / LINE 2**

Allows you to have two sources pre-patched into the 5051. For example you may have an outboard Microphone Pre-Amp patched into Line 1 and a DAC channel from your DAW into Line 2.

### **EQ IN**

Engages all bands of the equalizer except the HPF.

### **HF**

Adjusts up to 15 dB of boost or cut at selected high frequencies.

### **8K /16K**

With the switch out, the center or corner frequency of the high band is 8 kHz. With the button pressed, the center or corner frequency changes to 16 kHz. Between this switch and the HI PEAK switch, you have 4 different EQ curves to finesse the high frequency content.

### **HI PEAK**

When the button is out, the high frequency band operates in shelf mode, boosting or cutting above the corner frequency at approximately 6 dB/octave. Below the corner frequency the amount of boost or cut gradually diminishes. With the HI PEAK button pressed, the high frequency band changes to peak mode with a bell shaped boost or cut curve. The Peak mode utilizes an inductor and capacitor circuit to create the bell-shaped curve.

## **MID FREQ**

The MID FREQ rotary switch has 6 positions to select the center frequency of the mid band EQ stage. This circuit utilizes an inductor and capacitors to shape the EQ curve, the same way as Rupert Neve's console designs of the 70's. The frequencies chosen are 200 Hz, 350 Hz, 700 Hz, 1.5kHz, 3 kHz and 6 kHz. 200 Hz is especially useful for cuts on individual tracks within a dense mix.

## **MID HI Q**

The resonance or Q of the mid band at maximum boost is typically 2 when the button is out. When the MID HI Q is pressed at maximum boost, the Q narrows to approximately 3.5. The Q widens nicely with less boost or cut as is typical for passive EQ circuits. The Q tends to be slightly wider when the frequency is set lower, and slightly higher for higher frequency selections. The Q is also narrower for cuts than it is for boosts and the mid band is non-symmetrical by design.

## **MID LEVEL**

Adjusts up to 15 dB of boost or cut at the selected mid frequencies. Remember to reduce the signal level at the source to minimize the potential for distortion when any of the 3 bands are boosted significantly.

## **EQ PRE / POST**

Switches the order of the equalizer and compressor sections. With the button out, the equalizer is before the compressor, which means that moderate changes to the EQ settings may require some adjustment of the compressor threshold to maintain a similar amount of compression, or make up gain to maintain a target output level. With the switch pressed in post mode, the EQ follows the compressor. Now moderate changes to the EQ will not affect the compressor, but one may miss having the compressor responding to EQ settings. Also, the EQ will likely have a greater effect on output levels, which may in turn be compensated for with the compressor gain. Each mode has benefits and drawbacks, and many engineers have preferences as to whether they like the EQ pre or post compression.

**HPF**

Engages an 18 dB per octave Butterworth high pass filter to remove unwanted low frequency sounds. This button actually allows two different corner frequencies. The first press selects a 60 Hz filter denoted by the light illuminating blue. The second press selects a 120 Hz filter denoted by the button illuminating red. The third press cycles the filter back to “off” or “bypass” which extinguishes the LED.

**LOW FREQ**

The LOW FREQ rotary switch has 4 positions for selecting one of four corner or center frequencies for the low band EQ section. The frequencies are 35 Hz, 60 Hz, 100 Hz and 220 Hz.

**LO PEAK**

When the button is out, the low frequency band operates in shelf mode, boosting or cutting below the corner frequency. Above the corner frequency the amount of boost or cut gradually diminishes at approximately 6 dB/octave. With the HI PEAK button pressed the low frequency band changes to peak mode with a bell shaped boost or cut curve. Between the LO PEAK button and LO FREQ rotary switch, an engineer has 8 tonal variations of EQ shapes to finesse the bottom end, plus the 2 high pass filter choices can be introduced for further tightening and manipulation.

**LF**

Adjusts up to 15 dB of boost or cut at the selected low frequencies. Cut can be used as a variable, and perhaps more gentle alternative to using the HPF. Remember to reduce the signal level at the source to minimize the potential for distortion when any of the 3 bands are boosted significantly.

**GAIN**

Adjusts the final output level of the compressor, and is operationally the same as “Make-Up Gain”. Gain is used to restore the signal back up to a relatively normal level, and is often used to finely control sending the final signal level, for example, to an analog to digital converter.

### **S/C HPF**

Engages a 250Hz, 12dB per octave high pass filter to prevent low frequency material from excessively controlling the compressor. With mixes or wide spectrum sounds, there is often significant amounts of low frequency energy that can cause occasional deep compression, yet it is often the mid frequency sounds that are associated with apparent loudness and the zone that needs compression. The S/C HPF is designed for those situations and 250 Hz is well suited for both vocals and mixes and most other dynamic wide spectrum sounds.

### **ATTACK**

Sets the attack time of the compressor with a range from 5ms to 75 ms. This adjusts the rate that the compressor will reduce gain given the onset of a loud sound. Faster settings will let the compressor respond to quick transients such as the initial hit of a drum and reduce those hits. Slower settings may let the initial transient be relatively untouched but may reduce the part of the drum's decay, which tends to exaggerate the balance of initial transient to decay. Moderate settings are most useful for preserving the tonal balance of the source, while still effectively taming louder sections of the music.

### **RELEASE**

Sets the release time of the compressor with a range of 100 ms to 2.5 s. When the source signal drops below the threshold after being engaged, the release determines how fast the gain returns to normal. Faster settings tend to be most useful for maximizing loudness, however, there is a greater chance of audible compression, including "pumping" and a slight modulation distortion in the presence of loud low notes. Medium settings are sometimes nice for having the compression act in time with the music. Slow release settings tend to be the least audible and most safe, which may also be said about using lower Ratios, and less compression.

**LINK**

Allows multiple 5051 modules to be linked together such that at any given time, the 5051 with the highest control voltage will control the compression of all the linked units. To create a stereo pair, first adjust the two modules so that they have identical compression and EQ setting. Then engage the link switch on the front of the left-most 5051.

**FF / FB**

Selects either feed-forward or feed-back modes of compression. Feed-forward uses the input signal to trigger compression, and feed-back uses a signal from after the gain change element to trigger compression. Feed-forward is often associated with modern compressors and feed-back was generally the method of vintage compressors. Feed-forward typically allows for high ratios, tends to be faster and may offer more dramatic compression effects. Feed-back is often considered to be more traditional, softer, gentler and smoother.

**RATIO**

Adjusts the ratio of compression above the threshold. The range is from 1.1 to 1 up to 40:1 (in FF mode). Ratio is related to the input signal over the threshold versus the output signal. Lower ratios mean that loud sounds will only cause slight gain reduction and high ratios can cause deep amounts of gain reduction. For example, consider a voice that gets louder than the a threshold by 10 dB, 10:1 will only let the output rise by 1 dB implying 9 dB of compression, 2:1 will cause the output to increase 5 of those initial 10 dB suggesting 5 dB of reduction. Some engineers relate ratios of 20:1 and higher with limiting, however technically traditional limiting also requires very fast attack times to respond to transients and prevent signals from actually going above a certain level.

## **COMP IN**

Engages the compressor, and is indicated by a green button. Other than simply engaging the compressor, engineers often toggle this button to aid adjusting the make-up gain for similar average levels. The comp in button is also used to compare the untreated signal to the compressed signal to verify a positive change is being made.

## **THRESHOLD**

Sets the level where the compressor begins to react and respond to signals above the set threshold. With the knob set clockwise, only extremely loud signals might cause any gain reduction. With the knob set counter-clockwise, even relatively quiet sounds can cause compression.

## **GR METER**

Indicates how many dB's of gain reduction are happening at a given time. This particularly aids in choosing threshold and ratio settings. While the GR meter is great to confirm what we think we are hearing, usually our listening skills provide a more direct path to choosing compressor settings than meters. The meter will generally indicate very brief gain reductions but will tend to exaggerate the duration so that the eye can see transient compression.

## **LEVEL METER**

Displays the final peak output level of the 5051 regardless of whether the unit is set for EQ PRE or POST. This meter assists adjusting the compressor gain, and helps prevent equipment that the 5051 may be feeding from clipping or overloading. In the case of A to D converters, one should primarily depend on the converters own meters due to possible converter calibration variables. The 5051 level meter is calibrated for dBu, and the red LEDs may not necessarily match up with the destination device. It is often advisable to maintain levels 10 to 20 dB below the destination's maximum input for ease of later processing.

### **S/C INSERT SEND**

A 1/4" unbalanced phone jack used to send the signal to an external device, primarily EQ, to create a key signal (it can be any old EQ or device since the audio isn't effected). For example, you may EQ the signal, cutting all the lows and boosting somewhere between 5 kHz and 8 kHz to cause the compressor to respond to frequencies associated with sibilance, and become a de-esser. An engineer can also gently reduce lows and increase mid highs so that the compressor may respond similarly to how our ears may perceive apparent loudness.

### **S/C INSERT RET**

A 1/4" phone unbalanced input jack that is receives the signal from the external device described above. The S/C insert return may also be used as a key input. For example, an engineer might wish to patch in a kick drum to control the compression happening on a bass guitar being run through the 5051.

*IMPORTANT NOTE:* The S/C insert return is a half-normal connection, meaning that if a plug is inserted into the jack, it will interrupt the S/C signal path, and whatever signal is present on the plug will now be the controlling the compressor side-chain, i.e., if there is no signal present on the plug, there will be no compression.

### **LINK IN / OUT**

1/4" phone jacks on the back used to connect the compressor VCAs.

The suggested setup for linking multiple units is to do the following:

On the back panel of the left most 5051, plug the link cable into the link out jack. Plug the other end of the cable into the link in jack of the 5051 to its right. In the same way, connect all of the 5051 units together.

### **LINE 1**

XLR female transformer balanced floating input associated with the LINE 1 position of the front panel input switch. Pin 2 high, 10 k Ohm input impedance.

### **LINE 2**

XLR female transformer balanced floating input associated with the LINE 2 position of the front panel input switch. Pin 2 high, 10 k Ohm input impedance.

### **OUTPUT**

XLR male transformer coupled floating output. Pin 2 high, less than 50 Ohm output impedance.

### **POWER**

Proprietary 4 pin polarized input for +24 and -24V DC power input. There are currently 5-way and 25-way supplies available.



## 5051 Specifications

**LINE IN (All measurements typical)****Frequency Response**

Main Output  
2.5 Hz to 125 kHz -3dB

**Noise (BW 22Hz - 22kHz)**

Main Output Better than -102 dBu

**Maximum Input Level**

20 Hz to 20 kHz +25 dBu

**Maximum Output Level**

20 Hz to 20 kHz +25 dBu

**THD+N% @ +20dBu (BW 10Hz - 80kHz)**

20Hz	Better than 0.12%
1kHz	Better than 0.002%
20kHz	Better than 0.010%

**EQUALIZER****Noise (BW 22Hz - 22kHz)**

Main Output Better than -92 dBu

**Maximum Input**

20 Hz to 20 kHz +24.5 dBu

**Maximum Output**

20 Hz to 20 kHz +24.5 dBu

**THD+N% @ +20dBu (BW 10 Hz - 80 kHz)**

20Hz	Better than 0.12%
1kHz	Better than 0.007%
20kHz	Better than 0.07%

**COMPRESSOR (All measurements typical)**

**Noise (BW 22Hz - 22kHz)**

Main Output Better than -92 dBu

**THD+N% (BW 10 Hz - 80kHz) @ +20dBu**

20Hz Better than 0.14%

1kHz Better than 0.02%

20kHz Better than 0.07%

**Threshold** -30dBu to +20dBu

**Ratio** 1.1:1 to 40:1

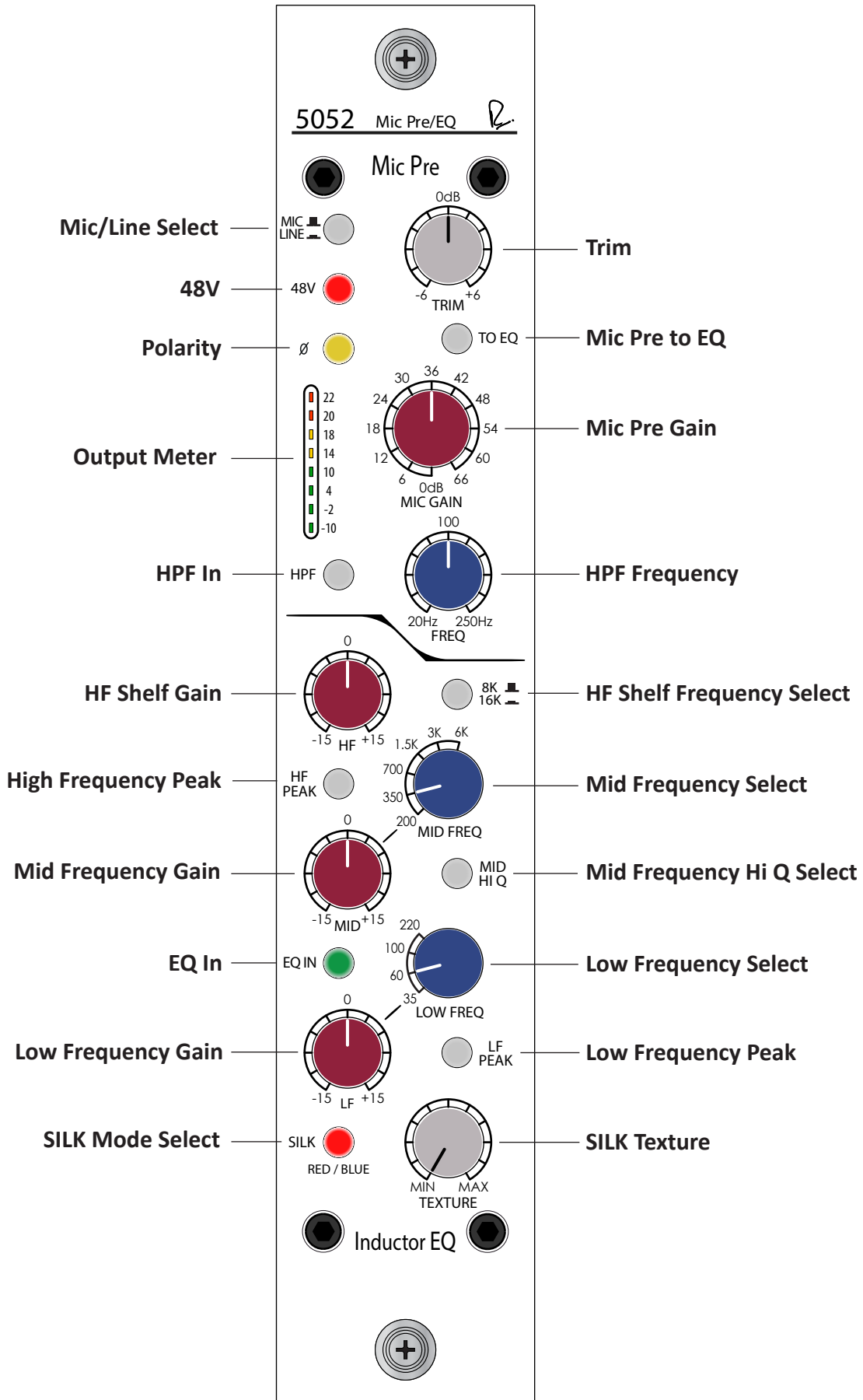
**Gain** -6 dB to +20 dB

**Attack** 20 mS to 75 mS

**Release** 100mS to 2.5 Seconds



# 5052 Mic Pre/EQ



## 5052 Features **MIC GAIN**

A 12-way precision rotary switch controls gain from 0 to 66 dB in 6 dB steps.

### **TRIM**

Continuously variable +/-6 dB level control.

### **48V**

Engages phantom power on the microphone input.

### **POLARITY**

Push button inverts the polarity of the signal path, and illuminates when engaged. The symbol “Ø” is often used to denote opposite polarity.

### **MIC / LINE**

Selects between between the Line and Mic inputs on the back panel of the 5052.

### **EQ IN**

Engages all bands of the equalizer except the hpf.

### **HF**

Adjusts up to 15 dB of boost or cut at selected high frequencies.

### **8K /16K**

With the switch out, the center or corner frequency of the high band is 8 kHz. With the button pressed, the center or corner frequency changes to 16 kHz. Between this switch and the HI PEAK switch, you have 4 different EQ curves to finesse the high frequency content.

### **HI PEAK**

When the button is out, the high frequency band operates in shelf mode, boosting or cutting above the corner frequency at approximately 6 dB/octave. Below the corner frequency the amount of boost or cut gradually diminishes. With the HI PEAK button pressed, the high frequency band changes to peak mode with a bell shaped boost or cut curve. The Peak mode utilizes an inductor and capacitor circuit to create the bell-shaped curve.

### **MID FREQ**

The MID FREQ rotary switch has 6 positions to select the center frequency of the mid band EQ stage. This circuit utilizes an inductor and capacitors to shape the EQ curve, the same way as Rupert Neve's console designs of the 70's. The frequencies chosen are 200 Hz, 350 Hz, 700 Hz, 1.5kHz, 3 kHz and 6 kHz. 200 Hz is especially useful for cuts on individual tracks within a dense mix.

### **MID HI Q**

The resonance or Q of the mid band at maximum boost is typically 2 when the button is out. When the MID HI Q is pressed at maximum boost, the Q narrows to approximately 3.5. The Q widens nicely with less boost or cut as is typical for passive EQ circuits. The Q tends to be slightly wider when the frequency is set lower, and slightly higher for higher frequency selections. The Q is also narrower for cuts than it is for boosts and the mid band is non-symmetrical by design.

### **MID LEVEL**

Adjusts up to 15 dB of boost or cut at the selected mid frequencies. Remember to reduce the signal level at the source to minimize the potential for distortion when any of the 3 bands are boosted significantly.

### **HPF**

The HPF switch engages a 12dB per octave high pass filter. The HPF potentiometer is variable from 20Hz to 250Hz, and can be used to filter out unwanted low frequencies, or in conjunction with the EQ to help shape source material.

## **LOW FREQ**

The LOW FREQ rotary switch has 4 positions for selecting one of four corner or center frequencies for the low band EQ section. The frequencies are 35 Hz, 60 Hz, 100 Hz and 220 Hz.

## **LF PEAK**

When the button is out, the low frequency band operates in shelf mode, boosting or cutting below the corner frequency. Above the corner frequency the amount of boost or cut gradually diminishes at approximately 6 dB/octave. With the HI PEAK button pressed the low frequency band changes to peak mode with a bell shaped boost or cut curve. Between the LF PEAK button and LF FREQ rotary switch, an engineer has 8 tonal variations of EQ shapes to finesse the bottom end, plus the high pass filter can be introduced for further tightening and manipulation.

## **LF**

Adjusts up to 15 dB of boost or cut at the selected low frequencies. Cut can be used as a variable, and perhaps more gentle alternative to using the HPF. Remember to reduce the signal level at the source to minimize the potential for distortion when any of the 3 bands are boosted significantly.

## **SILK / TEXTURE**

Pushing the Silk button cycles the silk modes from red silk to blue silk to off. Silk reduces the negative feedback on the output transformer, adding harmonic content as the texture is increased. Red Silk accentuates the saturation in the mid and high frequencies, similar to that of the red silk mode on the Portico II Channel. Blue Silk accentuates low frequencies. By manipulating the Texture control, the amount of Silk can be changed from essentially absent, to roughly 4-5% THD (mostly second order) depending on how hard the output transformer is being driven.

## **LEVEL METER**

Displays the final peak output level of the 5052. In the case of feeding the 5052 into A to D converters, one should primarily depend on the converters own meters due to possible converter calibration variables. The 5052 level meter is calibrated for dBu, and the red LEDs may not necessarily match up with the destination device.

## **MIC IN**

XLR female transformer balanced floating input associated with the Mic position of the front panel input switch. Pin 2 high, 10 k Ohm input impedance.

## **LINE IN**

XLR female transformer balanced floating input associated with the LINE position of the front panel input switch. Pin 2 high.

## **EQ IN**

XLR female balanced input that feeds the EQ section when the TO EQ switch is disengaged. Pin 2 high, 10 k Ohm input impedance.

## **MIC OUTPUT**

XLR male transformer coupled floating output. Pin 2 high.

## **MAIN OUTPUT**

XLR male transformer coupled floating output. Pin 2 high. The main output is the only output that incorporates the Silk and Texture Circuitry.

## **POWER**

Proprietary 4 pin polarized input for +24 and -24V DC power input. This power requirement and connector is meant to be used with a special shared power supply. Be sure to align the key in the cable to the keyway in the unit and power supply socket connectors.



## 5052 Specifications

**MIC PRE (All measurements typical)****Noise (BW 22Hz - 22kHz)****Mic Pre Out**

0dB Better than -102dBV

**Main Output**0dB Better than -103dBV  
+66dB Better than -60dBV**Equivalent Input Noise** Better than -126dB**Frequency Response**

10Hz to 31.5kHz +/- 0.1dB

120kHz -2.6dB

**Maximum Output Level** +25dBu**THD+N% at +20dBu**

20Hz Better than 0.25%

1kHz Better than 0.002%

**LINE INPUT****Noise (BW 22Hz - 22kHz)**

Main Output Better than -102dBV

**Frequency Response**

10Hz to 40kHz +/- 0.1dB

174kHz -1dB

**Maximum Output Level** +25dBu

**LINE INPUT (continued)****THD+N% @ +20dBu**

20Hz	Better than 0.08%
1kHz	Better than 0.002%

**EQUALIZER**

<b>Noise (BW 22Hz - 22kHz)</b>	Better than -95dBV
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**Frequency Response**

10Hz to 40kHz	+/- 0.1dB
174kHz	-1dB

<b>Maximum Output Level</b>	+26dBu
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**THD+N% @ +20dBu**

20Hz	Better than 0.006%
1kHz	Better than 0.002%

**Power Requirements**

<b>Maximum (+/- 24VDC)</b>	+0.26A/-0.20A
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## Limited Warranty

Rupert Neve Designs warrants this product to be free from defects in materials and workmanship for a period of three (3) years from date of purchase, and agrees to remedy any defect identified within that period by, at our option, repairing or replacing the product.

### Limitations and Exclusions

This warranty, and any other express or implied warranty, does not apply to any product which has been improperly installed, subjected to usage for which the product was not designed, misused or abused, damaged during shipping, damaged by any dry cell battery, or which has been altered or modified in any way. This warranty is extended to the original end user purchaser only. A purchase receipt or other satisfactory proof of original purchase is required before any warranty service will be performed. **THIS EXPRESS, LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, TO THE EXTENT ALLOWED UNDER APPLICABLE STATE LAW. IN NO EVENT SHALL RUPERT NEVE DESIGNS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT.** Some states do not allow the exclusion or limitation of consequential damages or limitations on how long an implied warranty lasts, so this exclusion may not apply to you.

## Warranty Service

If you suspect a defect in your device, please call us at 512-847-3013 or contact our support staff ([service@rupertneve.com](mailto:service@rupertneve.com)) for troubleshooting. If it is determined that the device is malfunctioning, we will issue a Return Material Authorization and provide instructions for shipping the device to our service department.



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