

GigRac 1000st Technical Manual





IMPORTANT

Please read ALL parts of this manual carefully, particularly the Safety Instructions in the User Manual before using your mixer for the first time.

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Part No. ZM0322-01

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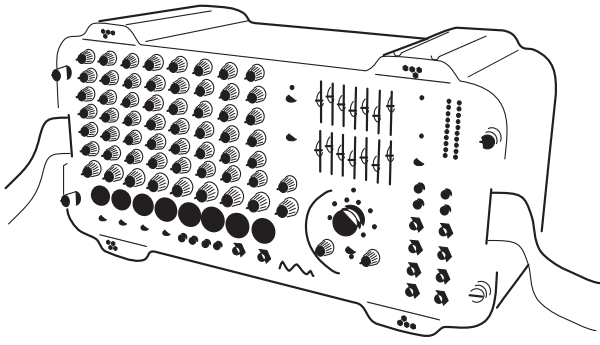
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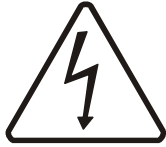


GREAT SOUND MADE EASY

GIGRAC

GIGRAC
1000st 
PROFESSIONAL POWERED MIXER

User Guide



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Issue: 1

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This equipment complies
with the EMC directive
89/336/EEC
Modified by
92/31/EEC
93/68/EEC
91/263/EEC
and LVD 73/23/EEC
modified by 93/68/EEC

This product is approved to
safety standards:

IEC 60065: 2001
EN60065:2002
UL6500 7th Edition: 2003
CAN/CSA-E60065-00

And EMC standards
EN55103-1: 1996 (E2)
EN55103-2: 1996 (E2)

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NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

IMPORTANT SAFETY INSTRUCTIONS

CAUTIONS

- To avoid the risk of fire, replace the mains fuse only with the correct type and value fuse, as marked on the rear of the product.
- **ATTENTION:** - Afin de réduire le risque de feu remplacer seulement avec fusible de même type.

- **MAINS VOLTAGE SELECTION**

This setting is NOT User Adjustable.

The units are capable of operating at either 230V AC or 115V AC mains voltages $\pm 10\%$.

- **REPLACING MAINS FUSE**

Remove the mains lead from the connector. Use a small screwdriver to unscrew the fuse carrier from its location to the left of the mains power connector. Check the fuse is of the correct type and value and replace if necessary; also check that the voltage rating as marked on the rear panel is correct for the mains supply level before switching the unit ON again.

If the mains fuse fails repeatedly this may be because an electrical safety hazard exists. The unit must be taken out of service and referred to the Soundcraft dealer from where the equipment was purchased.

- **THIS UNIT MUST BE EARTHED**


Under no circumstances should the mains earth be disconnected from the mains lead.

- **ATTENTION:** - Cet appareil doit être branché à la terre.

The wires in the mains lead are coloured in accordance with the following code:

	UK & EU	US & CAN
Earth / Ground:	Green and Yellow	Green and Yellow
Neutral:	Blue	White
Live:	Brown	Black

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Green and Yellow must be connected to the terminal in the plug which is marked with the letter E or by the earth / ground symbol: 

The wire which is coloured Blue or White must be connected to the terminal in the plug which is marked with the letter N.

The wire which is coloured Brown or Black must be connected to the terminal in the plug which is marked with the letter L.

Ensure that these colour codings are followed carefully in the event of the plug being changed.

Replacement Part No: FJ8016 (UK) : FJ8017 (EU) : FJ8018 (US & CAN)

- Do not install near any heat sources such as radiators, heat resistors, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not use this apparatus near water. The apparatus must not be exposed to dripping or splashing. Objects containing liquid must not be placed on the apparatus.
- The disconnect device is the mains plug or the appliance connector: either one must remain accessible so as to be readily operable in use.
- 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. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

- Protect the power cord from being walked on or pinched particularly at plugs and convenience receptacles.
- Only use cables and hardware specified by the manufacturer.

- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way such as, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, the apparatus does not operate normally or has been dropped.
- If the power cord is damaged obtain a replacement from your Soundcraft dealer.
- It is recommended that all maintenance and service on the product should be carried out by Soundcraft or its authorised agents. Soundcraft cannot accept any liability whatsoever for any loss or damage caused by service, maintenance or repair by unauthorised personnel.
- If a trolley is used, use caution when moving the trolley / apparatus combination to avoid injury from tip-over.

WARNINGS

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- This unit contains no user serviceable parts. Refer all servicing to a qualified service engineer, through the appropriate Soundcraft dealer.
- Clean the apparatus only with a dry cloth.
- DO NOT block any of the ventilation openings. DO NOT install where air cannot flow over the rear of the unit. DO Install in accordance with the manufacturers instructions.

Introduction

Firstly we'd like to thank you for choosing the Soundcraft GigRac 1000st. We hope you have many happy years together!

Features

- 8 Microphone Inputs
- 48V Phantom Power for condenser microphones (Inputs 1-4 only)
- PAD buttons for controlling loud input signals (Inputs 1-4 only)
- 4 Stereo inputs
- Treble, Mid and Bass controls
- Pan/Bal controls
- Individual volume controls on each channel for Monitor level.
- Individual volume controls on each channel for Main level.
- Individual send controls for GiGFX on each channel
- 2 x 7 Band Graphic Equaliser
- 10 x Digital Effects (24 Bit/48 kHz)
- Record Output
- Playback Input
- FX bypass switch
- FX bus output socket
- Submix input
- 2 x Amplifier 'Clip' warning lights
- 2 x 10 segment LED output level meters

The GigRac case.

Your GigRac is cased in a structural foam copolymer polypropylene resin, which gives an optimum combination of strength and impact resistance. This material also helps to keep the shell in good condition as it very resistant to dents and scratches.

The nature of the moulding process leaves the irregular streaky surface finish that gives the GigRac its tough and unique look.

Amplifier Power Ratings

GigRac 1000st

2 x 500W @ 4 Ohms.

2 x 300W @ 8 Ohms.

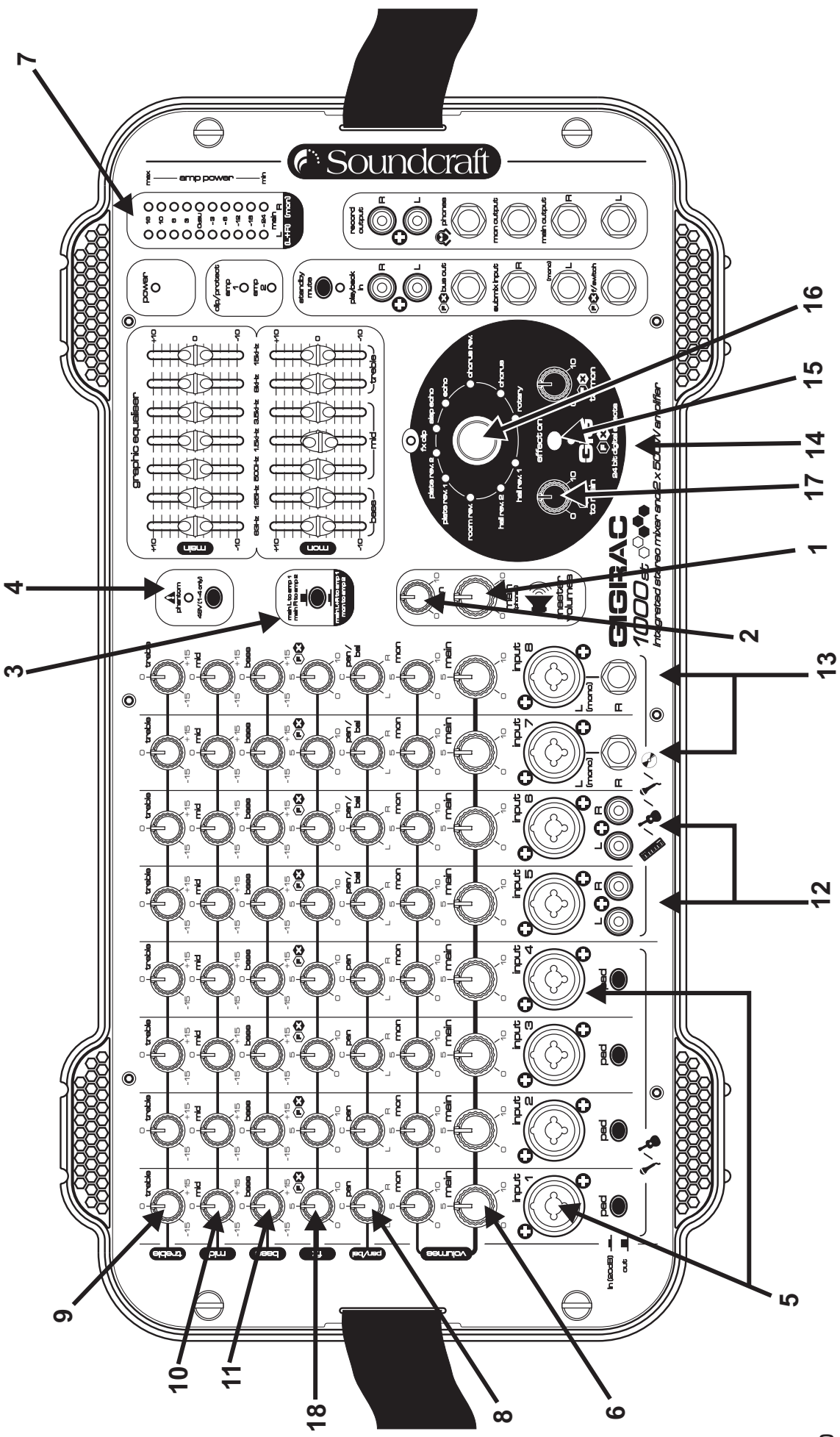
Quick Start Guide

If like most people you can't wait to use your GigRac for the first time, then use the Quick Start Guide to get things started. The Quick Start Guide covers the following:

- 1. Connecting up your loudspeakers to the GigRac**
- 2. Plugging in a vocal microphone**
- 3. Adding Treble, Mid or Bass to the signals**
- 4. Plugging in a guitar or stereo keyboard**
- 5. Apply one of the 10 GigFX digital effects to the signals**

Note: We recommend that you read through the entire GigRac user guide to familiarise yourself with all of the features on offer.

Quick Start Guide Key



1. Connecting up your loudspeakers to the GigRac

Note: Make sure your GigRac is not powered up. This is very important to prevent any damage to either the GigRac or your loudspeakers!

Using good quality speaker cables connect the loudspeakers to the Speaker outputs on the rear of the GigRac.

If you have cables equipped with Neutrik Speakon® connectors then use the Speakon® connectors on the rear of the GigRac. Alternatively if you have cables equipped with jack plugs then use the jack sockets on the rear of the GigRac.

Make sure that the Main Master Volume control **(1** - see the key on page 9) and the Monitor (Mon) Master Volume control **(2)** are turned fully down.

Decide if you want to configure the 2 internal amplifiers to work as a stereo pair, or mono mix and monitor. Set the amplifier source select switch **(3)** as desired. It is assumed in these quick start instructions that you have configured the amps as a stereo pair.

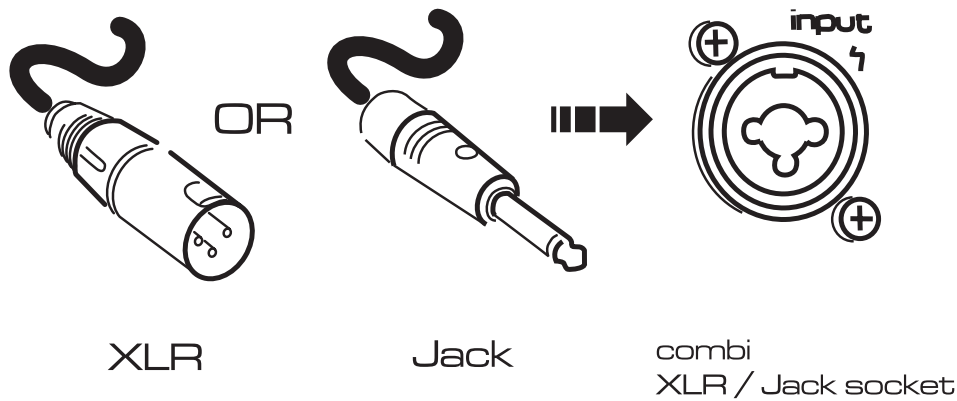
Now switch the GigRac on using the Power switch on the rear of the unit.

2. Plugging in a vocal microphone

Note: Before connecting a microphone to channels 1-4, make sure that the 48V phantom power switch (4) is switched off (The red LED should not be illuminated).

Connect the microphone cable to one of the first four inputs on the front of the GigRac **(5)**.

(The inputs on the GigRac can receive either 3-Pin XLR or standard Jack connectors.)



Turn the Main Master Volume control **(1)** up to about half-way.

Now gradually turn up the Main Volume control **(6)** on the microphone channel you have chosen to use. You should now hear the microphone signal appearing in the loudspeakers as you begin to speak.

You should also be able to see activity on the Output Meter **(7)**.

Assuming that you have configured the amps as a stereo pair, you can pan the microphone signal from left to right using the Pan control **(8)**.

Note: The XLR input on channels 1 - 4 is very sensitive. Depending on your microphone or your application, you may need to press the PAD button to prevent distortion occurring; don't worry, this is perfectly normal.

Note: Be careful not to point the microphone at the loudspeakers or you could accidentally create unpleasant feedback sounds.

A note on Condenser Microphones

If your microphone is a condenser microphone that requires phantom power you will need to switch on the 48V phantom power switch **(4)** located to the left of the Graphic Equaliser. Before doing this make sure that the Main Volume control **(6)** on the chosen channel is turned fully off to avoid causing an unpleasant sound that might damage your speakers.

3. Adding Treble, Mid or Bass to the signal

The GigRac offers Treble, Mid and Bass control for changing the tone of the signal.

Treble (9)

To add or remove some brightness or 'sparkle' to or from a signal, use the Treble control. In the center 'click' position (0) the Treble control has no effect. Turning it clockwise will boost the treble frequencies making the signal sound brighter. Turning it anti-clockwise will have the opposite effect by removing the treble frequencies and making the signal sound less bright.

The Treble control is handy for adding some sparkle for example to an acoustic guitar, or for reducing the 's' sound from sibilant vocals.

Mid (10)

Short for 'Midrange' this knob can be used to cut or boost important fundamental frequencies. In the centre 'Click' position the Mid control has no effect. Turning it clockwise will boost the mid frequencies adding 'body' to signals. This is particularly effective on snare drums and percussive instruments. Turning it anti-clockwise will have the opposite effect and is useful for removing 'boxy' resonant frequencies from acoustic guitars and other signals.

Bass (11)

To add some 'bass thump' to a signal or remove some 'boominess' or rumble, use the Bass control. In the center 'click' position (0) the Bass control has no effect. Turning it clockwise will boost the Bass frequencies making the signal sound punchier and more 'bassy'. Turning it anti-clockwise will have the opposite effect by removing the bass frequencies and making the signal sound less 'boomy'.

The Bass control is useful for making a bass drum sound punchier, or alternatively could be used for reducing explosive 'b' and 'p' sounds from a vocal signal.

4. Plugging in an Acoustic Guitar, Stereo Keyboard or CD Player

The GigRac will happily receive signals from instruments with either mono or stereo outputs such as guitars (Mono) or stereo keyboards and CD Players (Stereo).

Before plugging in, make sure the Main Volume control **(6)** for the chosen channel is turned fully off to avoid accidental damage to your speakers.

Acoustic Guitars

Set the Main Master Volume control **(1)** to about halfway.

Make sure the Main Volume control **(6)** on the channel you are about to use is turned fully down.

Plug the guitar lead into the jack socket in the center of the combination input socket **(5)** on the channel of your choice. Turn up the volume control on your guitar to about halfway, and then gradually turn up the Main Volume control **(6)** until you hear the guitar signal appearing in the loudspeakers. You should also see activity on the Main Output meter **(7)**.

Stereo Keyboards and CD Players

The GigRac offers four channels that can receive stereo inputs. Two of these channels are equipped with RCA/Phono connectors (Channel 5 and 6) **(12)** and two with Jack connectors (Channels 7 and 8) **(13)**.

Connect up the Left and Right outputs of your CD player or Cassette deck to the Left and Right RCA/Phono inputs on either Channel 5 or 6 of the GigRac. Turn up the Main Master Volume control **(1)** to about halfway, and then turn up the Main Volume control **(6)** on the chosen channel until you hear the signal appearing in the loudspeakers.

Connect up the Left and Right outputs of your Stereo Keyboard to the Left and Right Jack inputs on either Channel 7 or 8 of the GigRac. Set the volume control of your keyboard to about halfway. Turn up the Main Master Volume control **(1)** to about halfway, and then turn up the Main Volume control **(6)** on the chosen channel until you hear the signal appearing in the loudspeakers.

You may now use the Treble, Mid and Bass controls as mentioned above to change the tone of the signals.

5. Apply one of the 10 GigFX digital effects to the signals

The GigRac's GIGFX Processor **(14)** has a choice of 10 studio quality digital effects that can be added to any individual or group of signals running through the mixer. Usually vocals require some digital reverb or echo to be added to them in order to create a more spatial sound that is pleasing to the listener.

Make sure the 'effects On' button **(15)** is selected.

To try this out simply select one of the 10 GigFX presets, such as Hall Reverb, using the selector knob **(16)**.

Turn the 'FX to Main' control **(17)** to about halfway and then gradually turn up the individual 'FX' send control **(18)** on the channel you wish to add the effect to. As you turn up the 'FX' send level you should hear the signal change.

By pressing the 'effects On' **(15)** switch to the off position you can compare the original 'dry' signal with the 'wet' effect signal.

You can now turn the selector knob **(16)** to select different types of effects for comparative purposes.

A Note on Channel Use



Channels 1-4 are the most sensitive. It is better to use these channels for microphones (particularly if your microphones are fitted with jack plugs), and guitars with passive pickups. It is likely that you will need to have the pad buttons pressed in if you use mics fitted with XLRs.

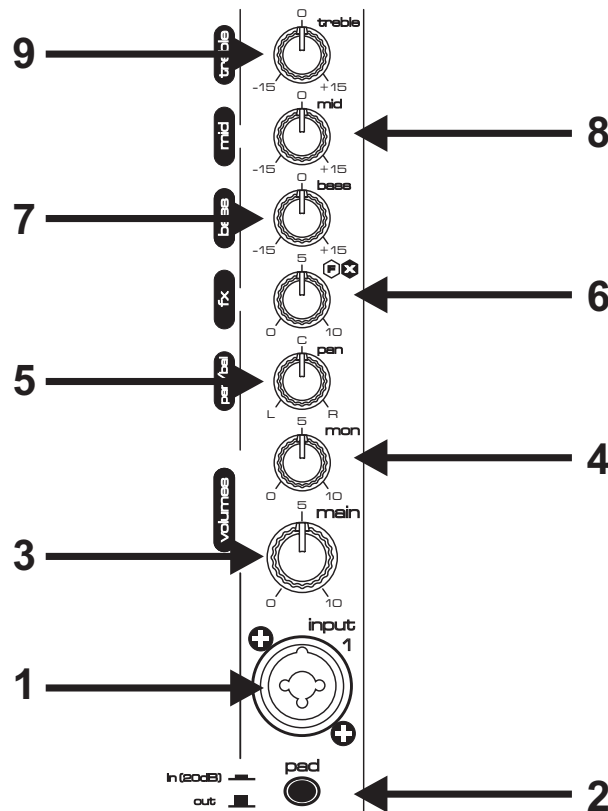


Channels 5-8 are less sensitive, they are ideal for line-level devices such as keyboards, CD players and tape players. They will also work with guitars with active pickups. Microphones fitted with XLRs will also work (unless they need phantom power).

Front Panel

Input channel

The GigRac 1000st has a total of 8 channels. Channels 1-4 are designed to handle mono microphone or mono line level signals only. Channels 5-8 are designed to handle mono microphone and stereo line level signals but will also accommodate mono line-level signals as well.



(1) Input Connector

This connector is a combination Jack/3 Pin XLR connector and can receive any of the following types of input connectors:

- Microphone cables with Jack connectors
- Microphone cables with 3 pin XLR connectors
- Line input cables with Jack connectors (e.g. guitars, keyboards etc.)
- Line input cables with 3 pin XLR connectors.

(2) PAD switch (Channels 1-4 only)

Pressing the PAD switch reduces the input level by 20dB allowing line or mic level signals that would normally be too loud for the Input stage to handle to be connected without any audible distortion.

(3) Main Volume Control

The Main Volume Control determines the amount of level sent from the channel to the main output mix.

This allows each channel's relative volume level to be 'blended' together to create the final mix whose overall level is then controlled by the Main Master Volume control **(10 - see the master section)**.

(4) Mon Volume Control

The Monitor (Mon) Volume Control determines the amount of level sent from the channel to the Monitor (Mon) Output **(23)**.

This allows each channel's relative volume level to be 'blended' together to create a separate monitor mix whose overall level is then controlled by the Mon Master Volume control **(11 - see the master section)**. This feature is used mainly for creating a 'foldback' mix for the musicians and would normally be sent to a monitor speaker with its own amplifier. (This could also be used for creating a headphone mix).

The Mon Volume Control operates independent of the Main Volume Control and will therefore not be affected if the Main Volume Control is turned up or down. (For the more technically minded, the signal is sourced Pre-Fader and Post EQ, see the block diagram for signal routing details.)

(5) PAN/Balance Control

This allows you to position the signal within the stereo image or, in the case of stereo signals, to balance the level of the signals between the L and R speakers.

(6) FX Control

The FX Control determines the amount of level sent from the channel to the GigFX digital effects processor and also to the 'FX Bus output' connector **(24)**.

This allows each channel's relative level to be 'blended' together to create a separate effects mix whose overall level is then controlled by the 'FX to Main' **(28 - see the master section)** and 'FX to Mon' **(29)**.

The FX Bus Output connector could also be used to connect to other external devices such as effects processors or recorders.

(7) Bass Control

The Bass Control is set at 80Hz and allows you to either add or remove the low frequency content of the signal by 15dB.

Rotating the control clockwise will 'boost' the signal, rotating the control anticlockwise will 'cut' the signal.

This control is useful for adding more 'thump' to low frequency signals such as bass guitars and kick drums but can also be used to remove unwanted rumble or boominess from signals such as vocal or instrument microphones.

(8) Mid Control

The Mid Control is set at 600Hz and allows you to either add or remove the high frequency content of the signal by 15dB.

Rotating the control clockwise will 'boost' the signal, rotating the control anticlockwise will 'cut' the signal.

This control is useful for adding 'body' to drums, bass guitars or percussion but can also be used to remove 'boxy' resonant frequencies from acoustic guitars and other signals.

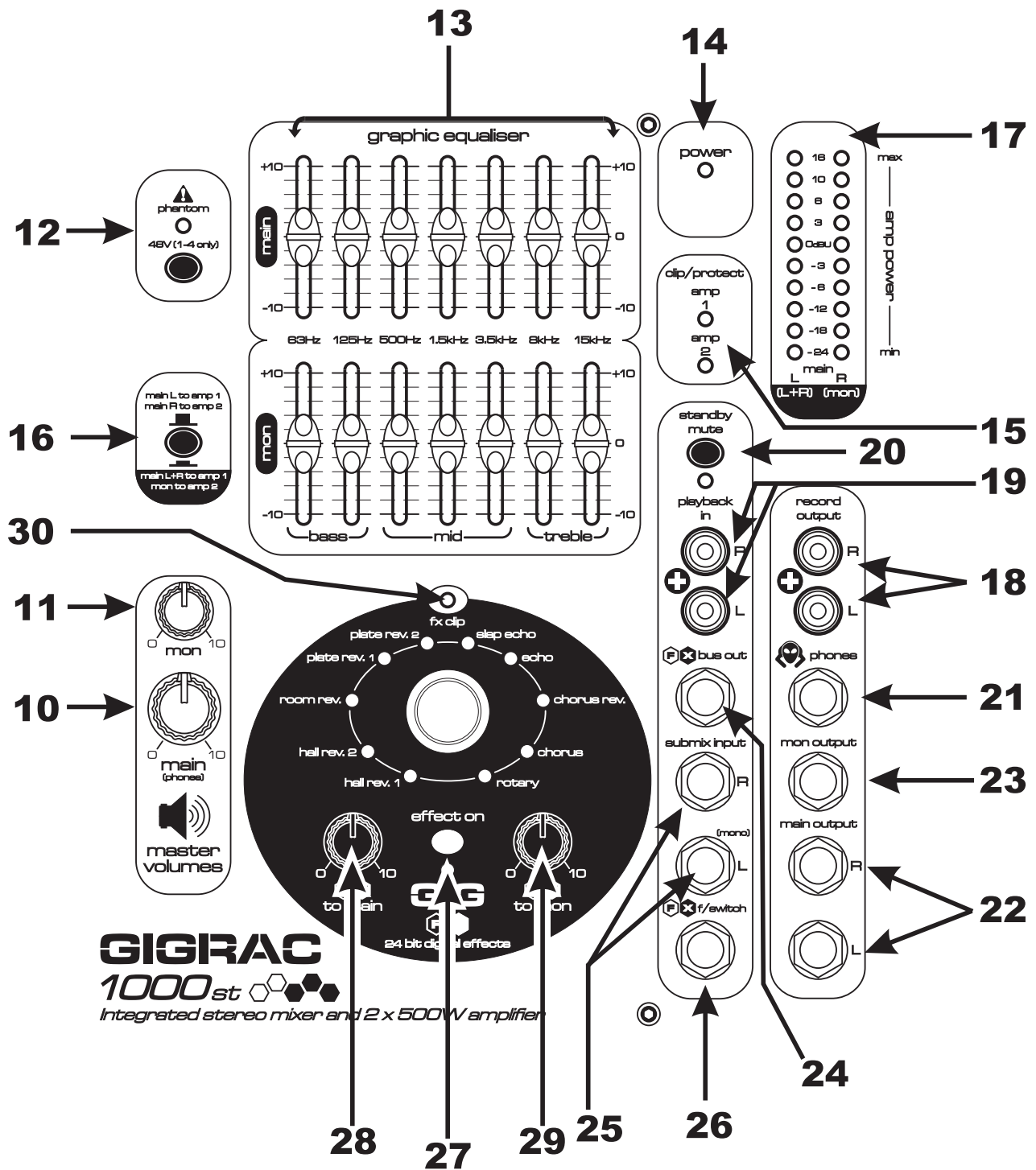
(9) Treble Control

The Treble Control is set at 12kHz and allows you to either add or remove the high frequency content of the signal by 15dB.

Rotating the control clockwise will 'boost' the signal, rotating the control anticlockwise will 'cut' the signal.

This control is useful for adding 'crispness' or 'sizzle' to signals with a lot of high frequency content such as guitars and cymbals but can also be used to remove unwanted sibilance from signals such as vocals.

Master Section



(10) Main Master Volume Control

This control determines the overall level that is sent to the internal amplification and to the Main Output sockets **(22)**. It also controls the volume of the headphone socket **(21)**.

(11) Mon Master Volume Control

This control determines the overall level that is sent to the Monitor Output (Mon Output) socket **(23)**.

(12) Phantom 48V Switch

This switch turns the 48v phantom power On/Off for the 3 pin XLR sockets on channels 1-4. When the switch is turned On the red LED will illuminate.

48V phantom power is used to power condenser microphones and DI boxes.

NB! To avoid possible damage to your loudspeakers, make sure that the Main and Monitor Master Volume controls are turned down fully before switching on the 48V phantom power.

(13) Graphic Equalisers

The Graphic Equalisers are divided into 7 frequency bands. Each frequency band can be used to either 'cut' or 'boost' the Main Output signal by up to 10dB. One is in the main (stereo) path, the other is in the monitor path.

They are very useful for compensating for poor room acoustics or improving the performance of your loudspeakers.

(14) Power LED

The red Power LED illuminates when the GigRac is switched on.

(15) Amp Clip LEDs

The red Amp Clip LEDs illuminate when the input levels to the internal amplifiers are too high. It is acceptable for these LEDs to come on momentarily every now and then but the Main or Monitor Master Volume (depending on which signals have been routed to the amplifiers: see **(16)** below) should be turned down if the Amp Clip LEDs illuminate consistently.

NB! Continued use of the GigRac with the Amp Clip LED illuminated could cause serious damage to your GigRac and your loudspeakers!

(16) Internal Amplifier Source Select Switch

This switch determines which signals are routed to the internal power amplifiers. The options are: Main L to amp 1, and Main R to amp 2, or, Main L + R to amp 1, and monitor to amp 2. See the diagram opposite.

(17) Main Output Meters

The dual 10-segment output meters show the signal levels being fed to the internal power amplifiers. See **(16)** above.

It is best to aim to have the red 10dB LEDs lighting up regularly during the loudest signals peaks playing through your GigRac and the 16dB LEDs flicking on very occasionally. This will ensure that a good level is passing through the mixer.

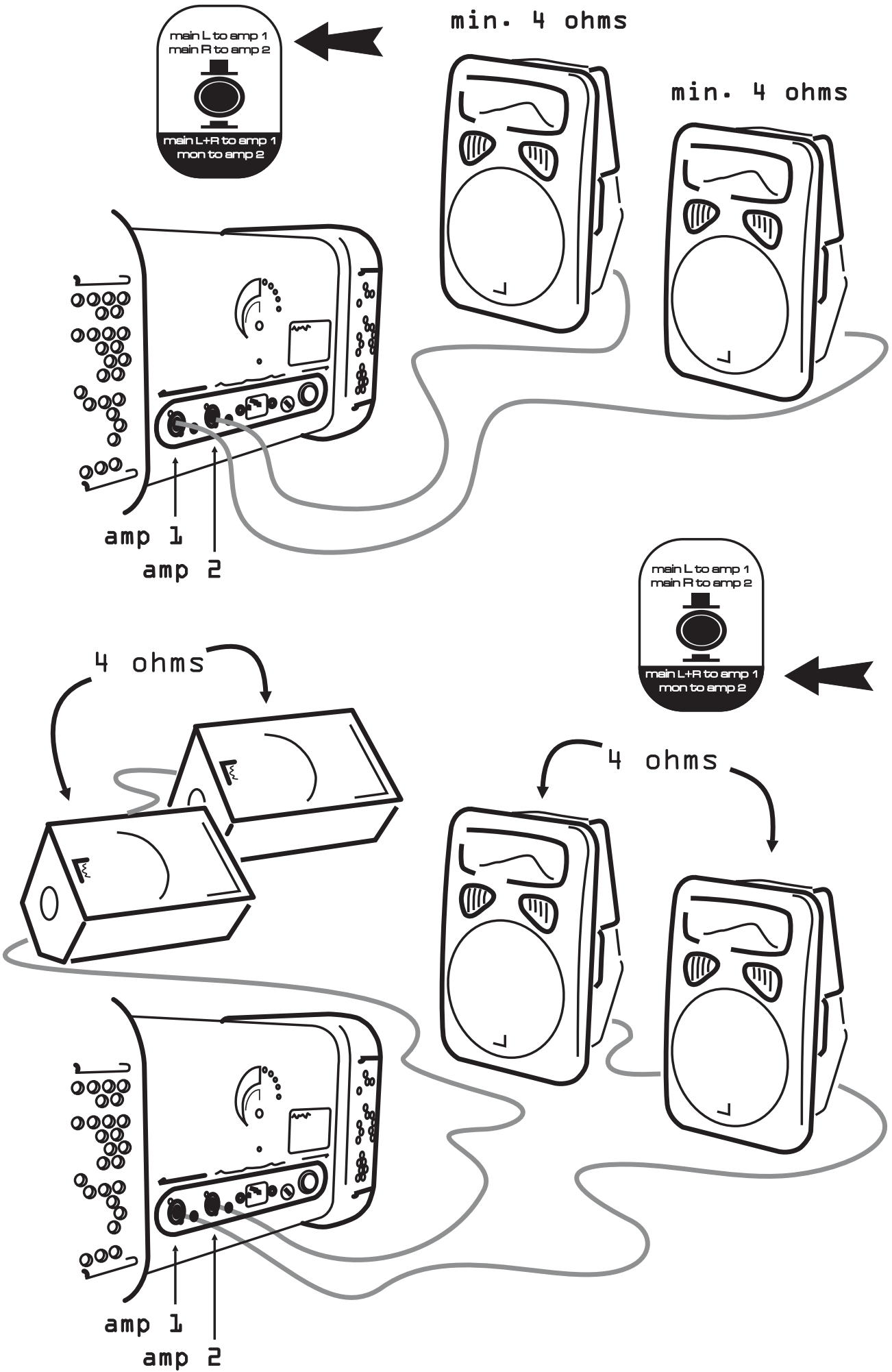
(18) Record Outputs

The Record Outputs (L & R) are for connecting a recording device such as a cassette or mini disk recorder.

The signal output at the Record Output sockets is a post fade signal derived from the Main Mix outputs. The amount of signal level leaving the GigRac via the Record Outputs is determined by the Main Master Volume control **(10)**.

(19) Playback In

The Playback In connectors allow you to playback from your recording device through the Main outputs/Speakers/Headphones. A useful tip is to press the standby mute switch **(20)**, this mutes all other inputs to



the GigRac and allows the playback in signal to be heard without interference from other signal sources.

(20) Standby Mute Switch

This switch mutes all inputs to the GigRac except for the signal from the playback in connectors. It also mutes the FX Bus Output and the Monitor Output. The red LED illuminates when the mute is active. See the block diagram for signal routing details.

(21) Phones Output

Connect headphones to the Phones Output. The Phones Output is driven from the main L and R signals. The overall volume of the headphones output is determined by using the Main (Phones) Master Volume control **(10)**.

(22) Main Outputs

The Main Outputs carry the Main Mix L and R signals after they have passed through the Main Master Volume control and the Graphic Equaliser. These outputs can be used to send the Main Mix to other amplifiers or powered speakers or alternatively it can be used to send a 'submix' to another mixer's input channel or another recording device.

(23) Mon Output

The Mon Output carries the Monitor Mix signal derived from the Mon controls on each channel. The Mon output level is controlled by the Mon Master Volume control **(11)**. The signal also passes through the Monitor Graphic Equaliser. This output is used mainly to send the Mon Mix signal to an on stage fold back speaker system of some kind.

(24) FX Bus Output

The FX Bus Output carries the FX Mix signal as derived from the FX controls on each channel. This allows additional external effects processing devices to be used in conjunction with the GigRac's built in GigFX digital effects processor.

(25) Submix Inputs

The Submix Inputs (L & R) allow the output from another mixer to be blended with the Main Mix Outputs of the GigRac. These inputs could also be used for connecting an effects return signal from an external effects processing device.

(26) FX Bypass Footswitch

The FX Bypass Footswitch socket is used for connecting an optional foot switch to turn the GigFX processor On and Off.

(27) Effect on switch

The effect on switch has a toggle action, the adjacent LED indicates when the FX unit is on.

(28) FX to Main Control

This controls the volume of Effects sent to the main mix.

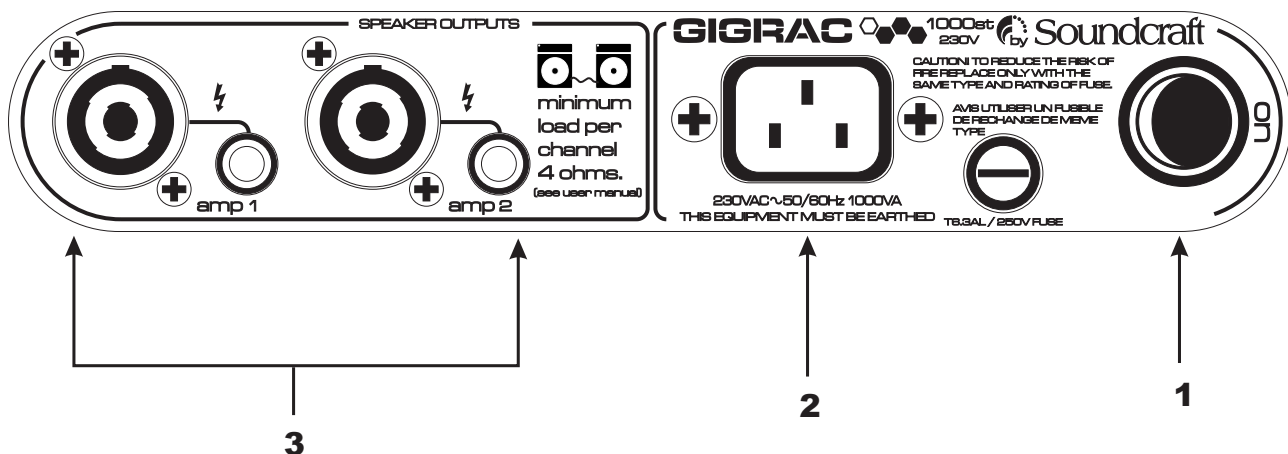
(29) FX to Mon Control

This controls the volume of Effects sent to the monitor mix.

(30) FX Clip LED

This illuminates when the signal level being fed to the GigFX processor is too high.

Rear Panel



(1) Power Switch

This switch turns the GigRac On or Off. The red Power LED **(14)** on the front panel will illuminate to confirm this.

NB! Before switching the GigRac On or Off, make sure that the Main and Mon Master Volume controls are turned fully down.

(2) Power Socket

Connect the supplied power cable to this socket.

(3) Speakers Outputs (Amp 1 and Amp 2)

The Speaker Outputs are available as Neutrik Speakon® connectors and standard ¼" Jack connectors.

The minimum load that either of the amplifiers inside the GigRac 1000st should be presented with is 4 ohms. This means that a single 4 or 8 ohm speaker can be connected to each amplifier outputs as shown in Fig 1. Alternatively, two 8 ohm speakers can be connected in parallel to each amplifier output, as shown in Fig 2. Two speakers connected like this gives a combined load of 4 ohms.

Use the appropriate connector type to match the input connectors on your loudspeakers. The GigRac 1000st is designed to work with loudspeakers rated at either 8 ohms or 4 ohms.

Connect your loudspeakers to these outputs. The signal sent to the Speakon® connectors and the Jack sockets is exactly the same.

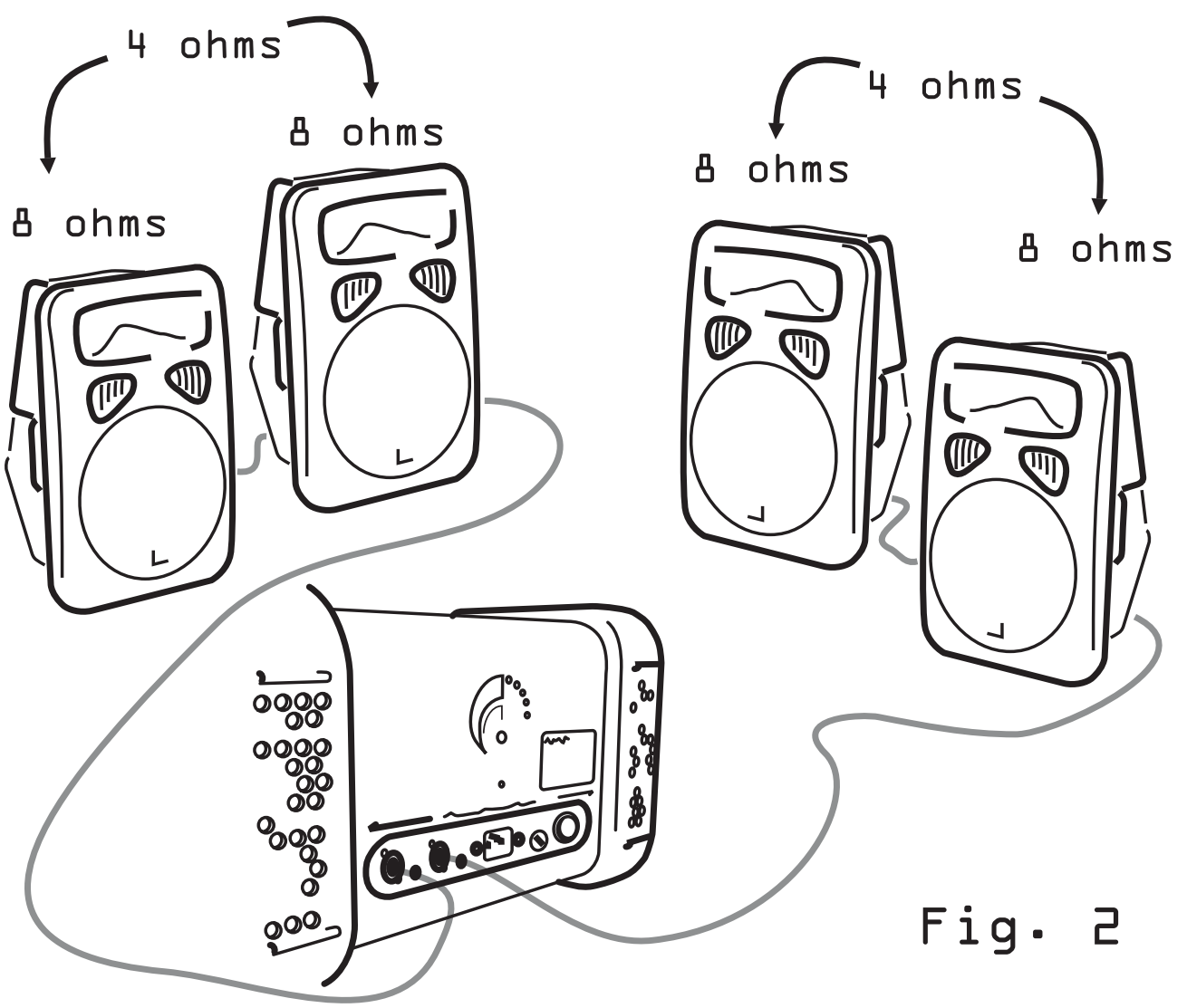
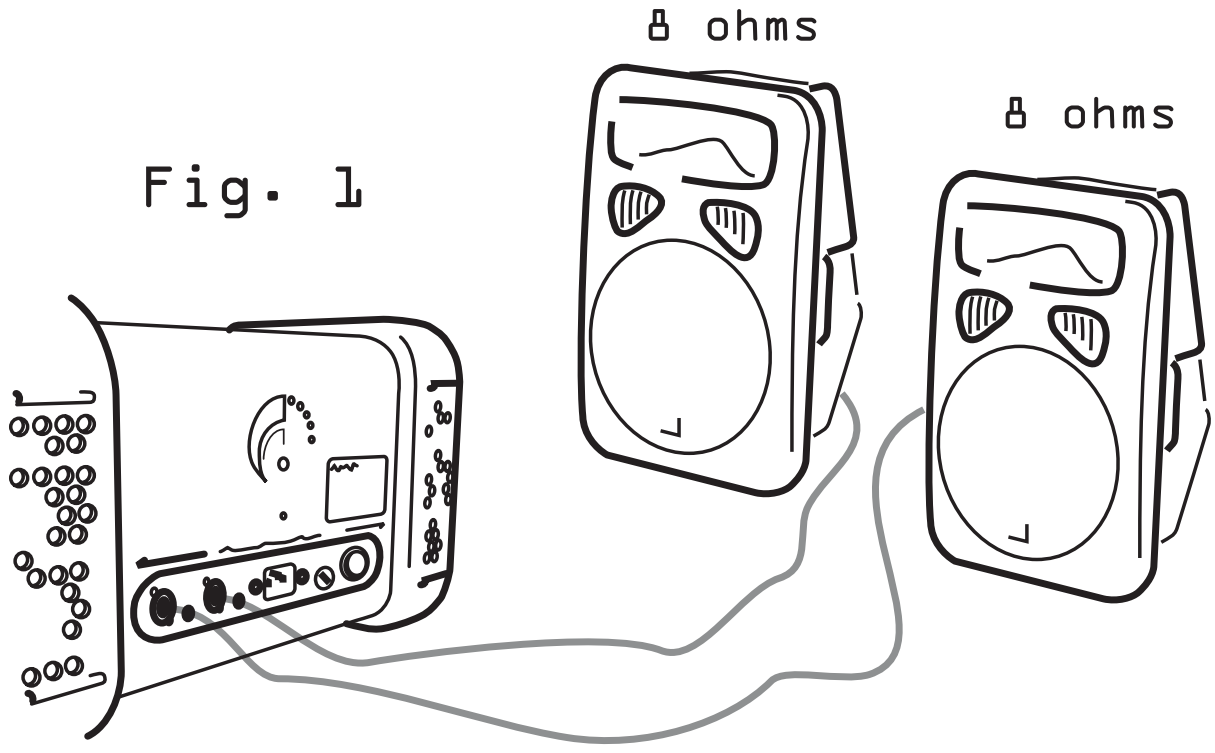
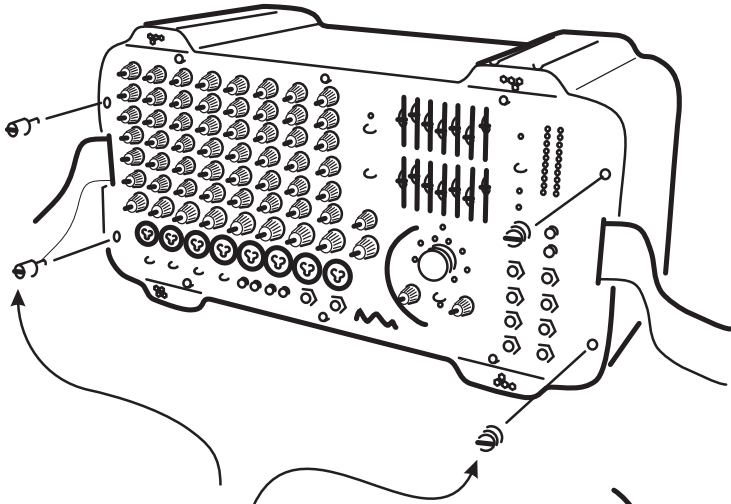


Fig. 2

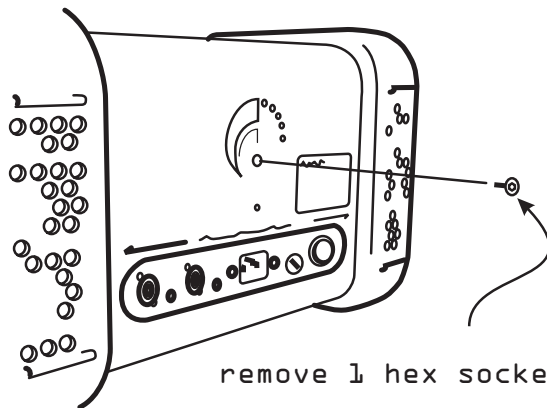
Rackmounting Your GigRac

The GigRac 1000st can be rack mounted into a standard 19" rack. This is useful for fixed installations or for applications where the GigRac might need to be installed into a portable 19" rack along with other equipment.

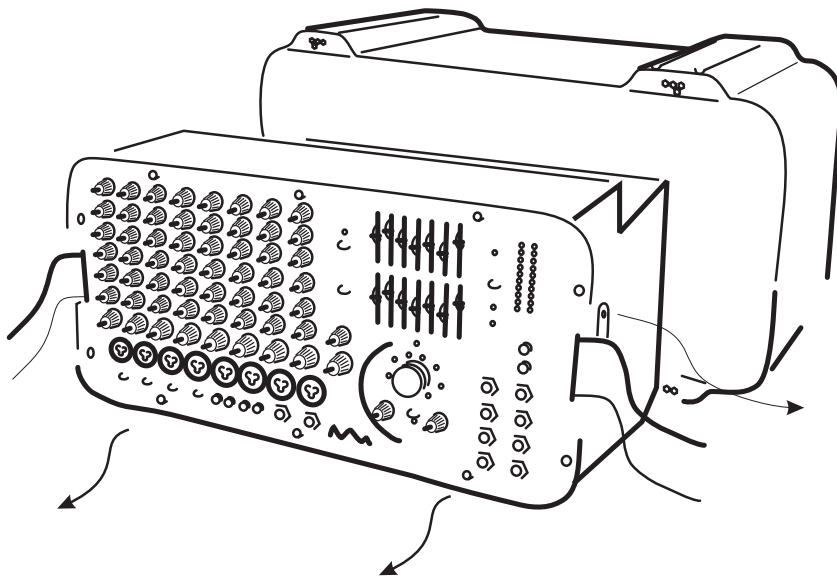
Caution: leave a free 1U space above the GigRac to allow internal heat to escape.



remove 4 rack bolts



remove 1 hex socket screw



remove gigrac from case.
Remove 4 screws that secure strap to side panels and remove strap.
GigRac is now ready for rack mounting.

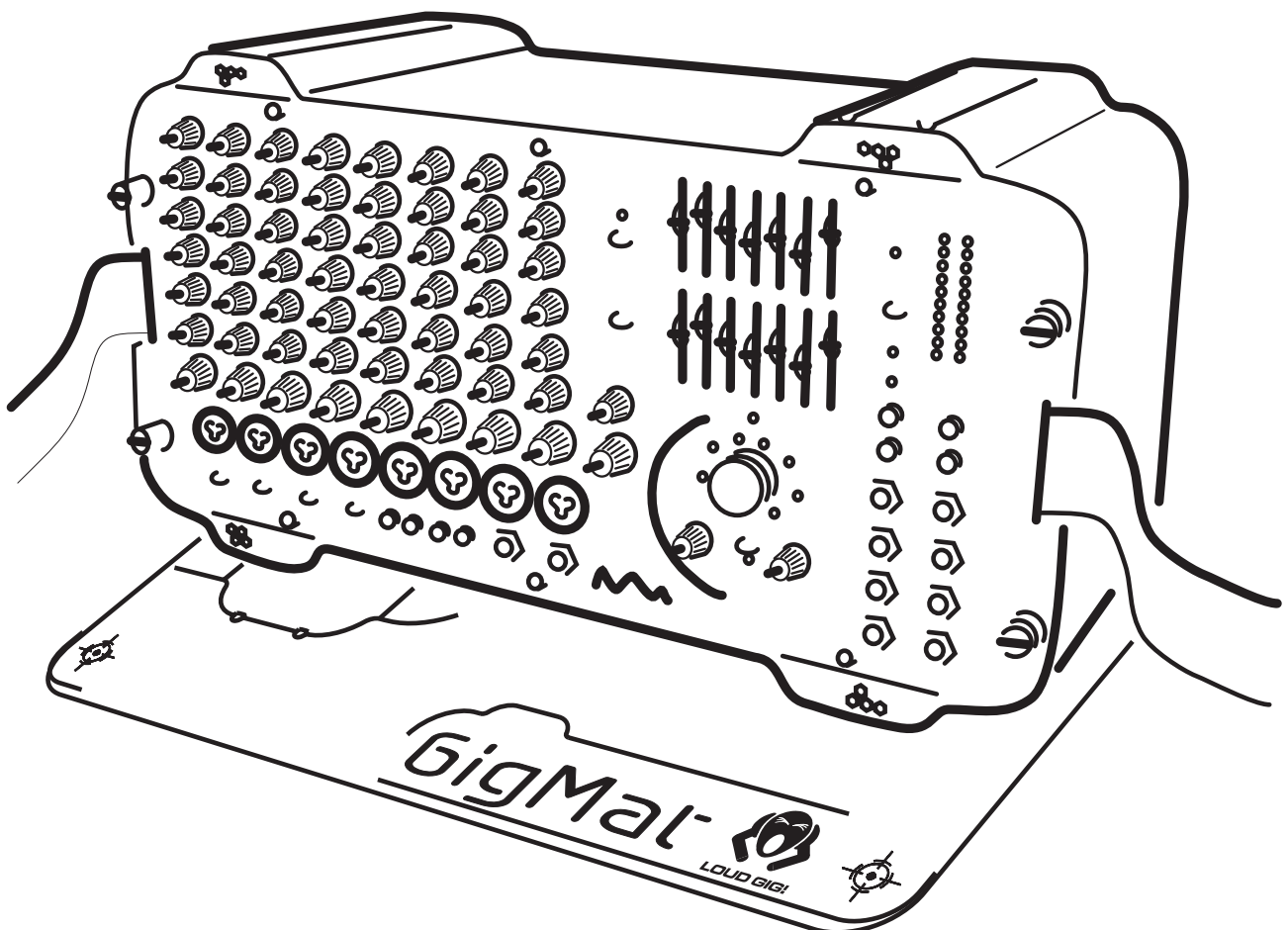
Using your GigMat

GigRac comes supplied with a unique non-slip 'GigMat' which can be placed underneath the GigRac when it has to be put onto a slippery surface such as a shiny table top.

Under normal circumstances the GigMat will prevent the GigRac from slipping around.

If necessary the GigMat can be cleaned using a damp cloth.

Please note - it is very important that the GigMat only be used on level surfaces.



Connectors and Leads

Audio Connectors Used With Gigrac



XLR



TIP RING SLEEVE

3-pole 1/4" (A gauge TRS) jack



Speakon®



RCA phono

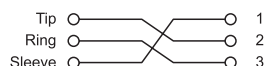
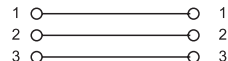
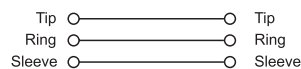
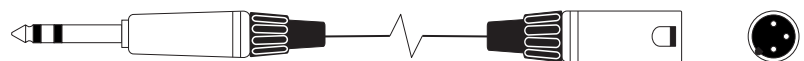
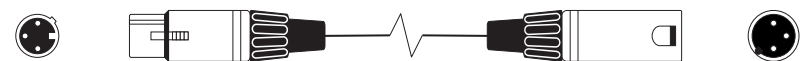
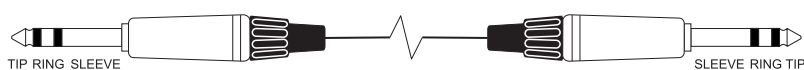


TIP SLEEVE

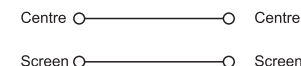
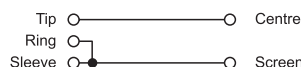
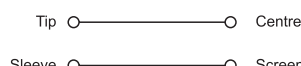
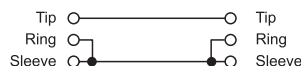
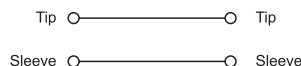
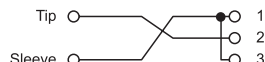
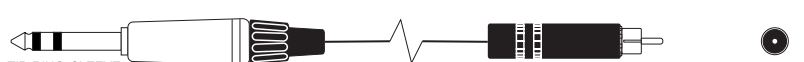
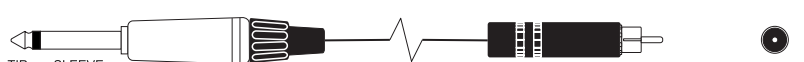
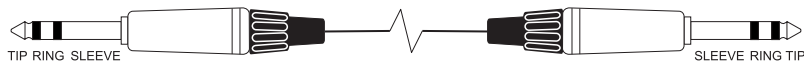
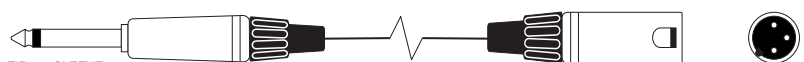
2-pole 1/4" (A gauge TS) jack

Details Of Audio Connecting Leads That You May Wish To Use

Balanced

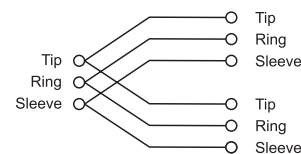
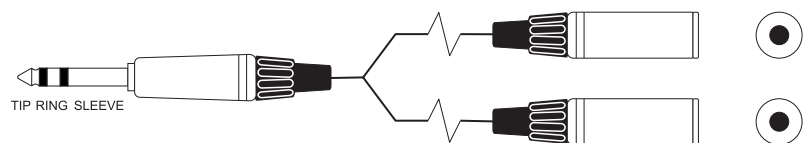


Unbalanced

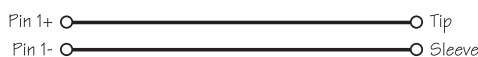
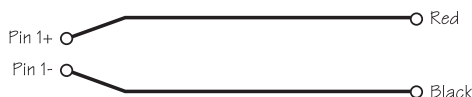


Headphone Separator

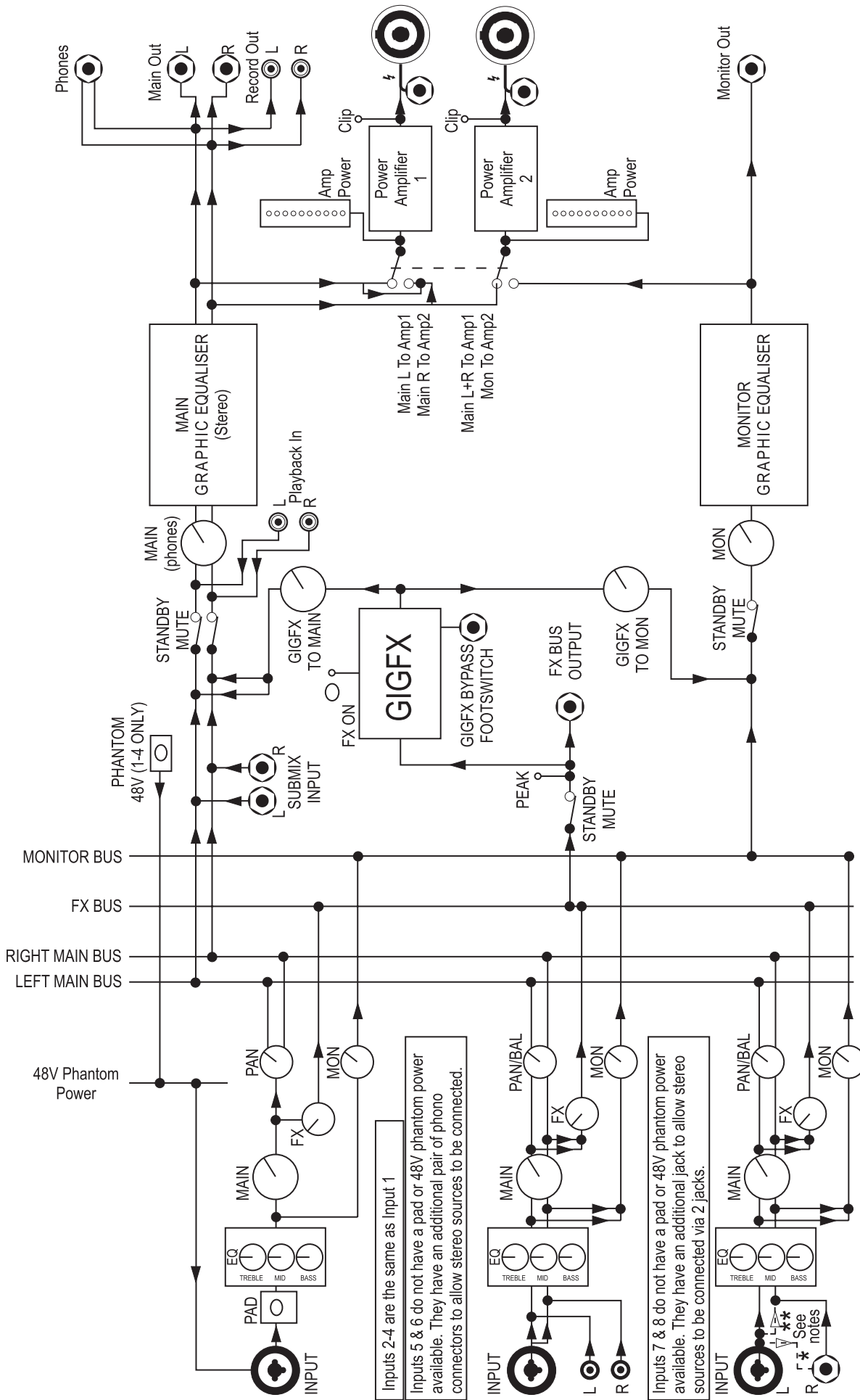
Note: for every doubling of headphones the load impedance is halved. Do not go below 200 ohms (Ω).



Speakon® Leads



Block Diagram



Inputs 2-4 are the same as Input 1
 Inputs 5 & 6 do not have a pad or 48V phantom power available. They have an additional pair of phono connectors to allow stereo sources to be connected.

Inputs 7 & 8 do not have a pad or 48V phantom power available. They have an additional jack to allow stereo sources to be connected via 2 jacks.

* There is a normalised connection between the jack part of the combiconnector (L) and the Right jack.
 ** This path is only active if an XLR is plugged in.

Warranty

- 1 Soundcraft is a trading division of Harman International Industries Ltd .
End User means the person who first puts the equipment into regular operation.
Dealer means the person other than Soundcraft (if any) from whom the End User purchased the Equipment, provided such a person is authorised for this purpose by Soundcraft or its accredited Distributor.
Equipment means the equipment supplied with this manual.
- 2 If within the period of twelve months from the date of delivery of the Equipment to the End User it shall prove defective by reason only of faulty materials and/or workmanship to such an extent that the effectiveness and/or usability thereof is materially affected the Equipment or the defective component should be returned to the Dealer or to Soundcraft and subject to the following conditions the Dealer or Soundcraft will repair or replace the defective components. Any components replaced will become the property of Soundcraft.
- 3 Any Equipment or component returned will be at the risk of the End User whilst in transit (both to and from the Dealer or Soundcraft) and postage must be prepaid.
- 4 This warranty shall only be valid if:
 - a) the Equipment has been properly installed in accordance with instructions contained in Soundcraft's manual; and
 - b) the End User has notified Soundcraft or the Dealer within 14 days of the defect appearing; and
 - c) no persons other than authorised representatives of Soundcraft or the Dealer have effected any replacement of parts maintenance adjustments or repairs to the Equipment; and
 - d) the End User has used the Equipment only for such purposes as Soundcraft recommends, with only such operating supplies as meet Soundcraft's specifications and otherwise in all respects in accordance with Soundcraft's recommendations.
- 5 Defects arising as a result of the following are not covered by this Warranty: faulty or negligent handling, chemical or electro-chemical or electrical influences, accidental damage, Acts of God, neglect, deficiency in electrical power, air-conditioning or humidity control.
- 6 The benefit of this Warranty may not be assigned by the End User.
- 7 End Users who are consumers should note their rights under this Warranty are in addition to and do not affect any other rights to which they may be entitled against the seller of the Equipment.

Specifications

NOISE

EIN 150 ohms 20 - 22kHz	-123 dBu
Main out Level control mid	-78 dBu
Mon out Level control mid	-80 dBu
Amp out	-57 dBu

CROSSTALK

Main cutoff	-80 dB
Mon cutoff	-80 dB
Frequency Response	
20 - 22Khz rel 1kHz Line in to Main out	+0.2/-2.5 dB

THD+N

Mic i/p -20dB Pad 0dBu I/P at Main out (22Hz-22kHz)	0.15 %
Mic i/p to Amp Out @ full power 22-22kHz	0.15%

INPUTS CH1 - CH4

Mic Input Impedance	5.5 kohms
Line Input Impedance	30 kohms
Max Input Mic (20dB pad)	-3.5 dBu
Max Input Line(20dB pad)	10 dBu
Max Mic gain to main out	60 dB

INPUTS CH5 - CH8

Mic Input Impedance	2.4 kohms
Line Input Impedance	40 kohms
Max Input Mic	-18 dBu
Max Input Line	3 dBu
Max Mic gain to main out	50 dB

OUTPUTS

Max out main / mon	18dBu
Power Output	2 X 500W into 4 Ohms

CONNECTORS

(All Jacks are 3 - pole ¼")

Mic: Balanced XLR combi connectors/ Balanced jack combi connectors

Line: Balanced Jack / combi connectors / Unbalanced RCA phono

FX bus output: Impedance Balanced Jack

Submix in: Unbalanced Jack

Main out: Impedance Balanced Jack

Mon out: Impedance Balanced Jack

Record out: unbalanced RCA phono

Phones: Jack

Speakers: Speakon (pins +1 and -1) and Jack

DIMENSIONS (WITH LID ON)

493mm x 267mm x 334mm (19.5" x 10.5" x 13.2")

WEIGHT

12kg/26.4lbs



Soundcraft

Harman International Industries Ltd

Cranborne House, Cranborne Road, Potters Bar, Herts, EN6 3JN, UK

TEL: +44 (0)1707 665000 FAX: +44 (0)1707 660742 EMAIL: info@soundcraft.com

Soundcraft USA

8500 Balboa Blvd., Northridge, CA 91329, USA

TEL: +1-818-920-3212 FAX: +1-818-920-3208 EMAIL: soundcraft-usa@harman.com

www.gigrac.com

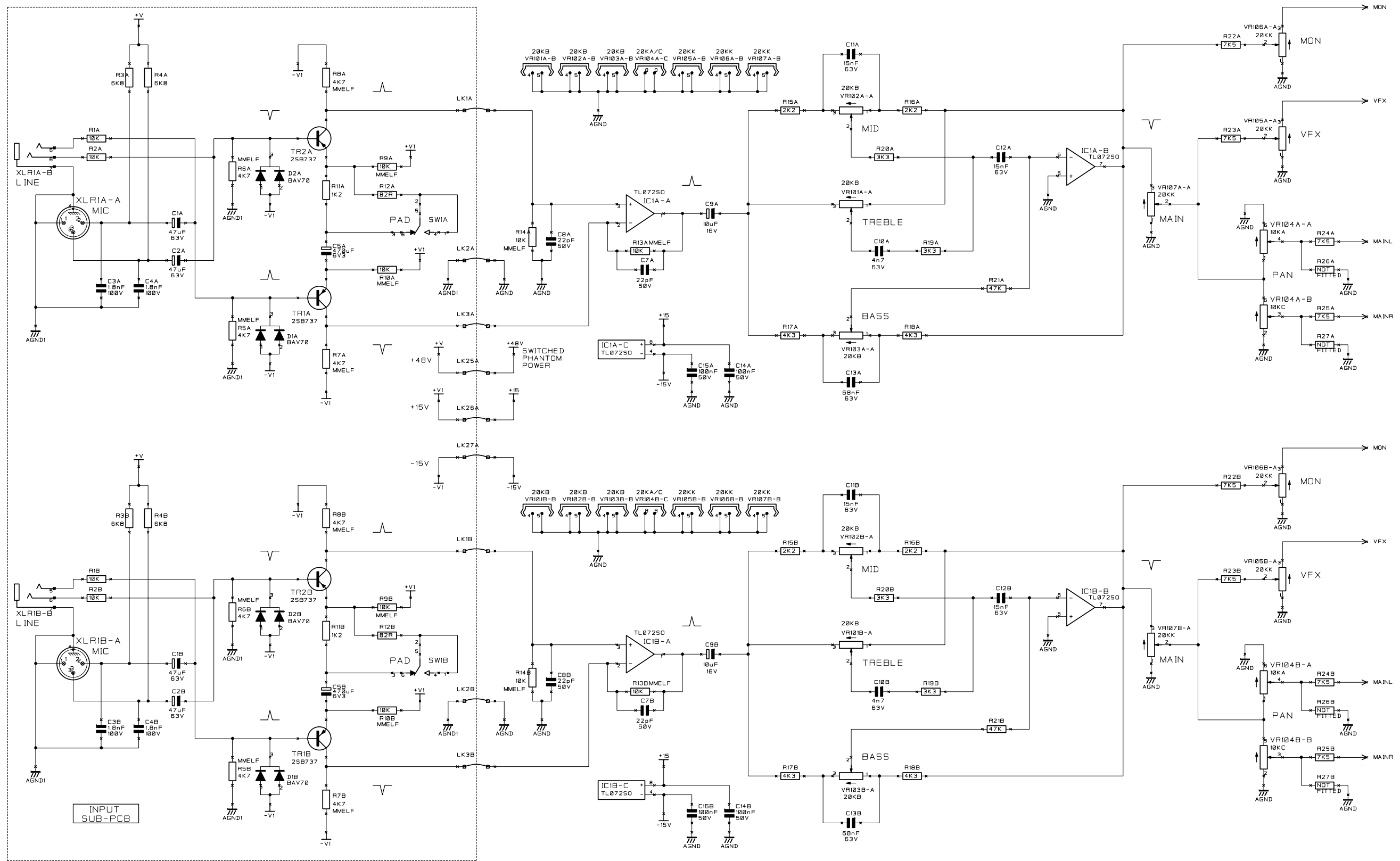
Soundcraft reserves the right to improve or otherwise alter any information supplied in this document or any other documentation supplied hereafter. E&OE 06/04.
This equipment complies with the EMC Directive 89/336/EEC

H A Harman International Company

Circuit Diagrams

Gigrac Main PCB	2-3 to 2-13
Lexicon FX	2-14
Power Supply	2-15
Power Amp	2-16

DRG NO.
CHANNEL 1/2



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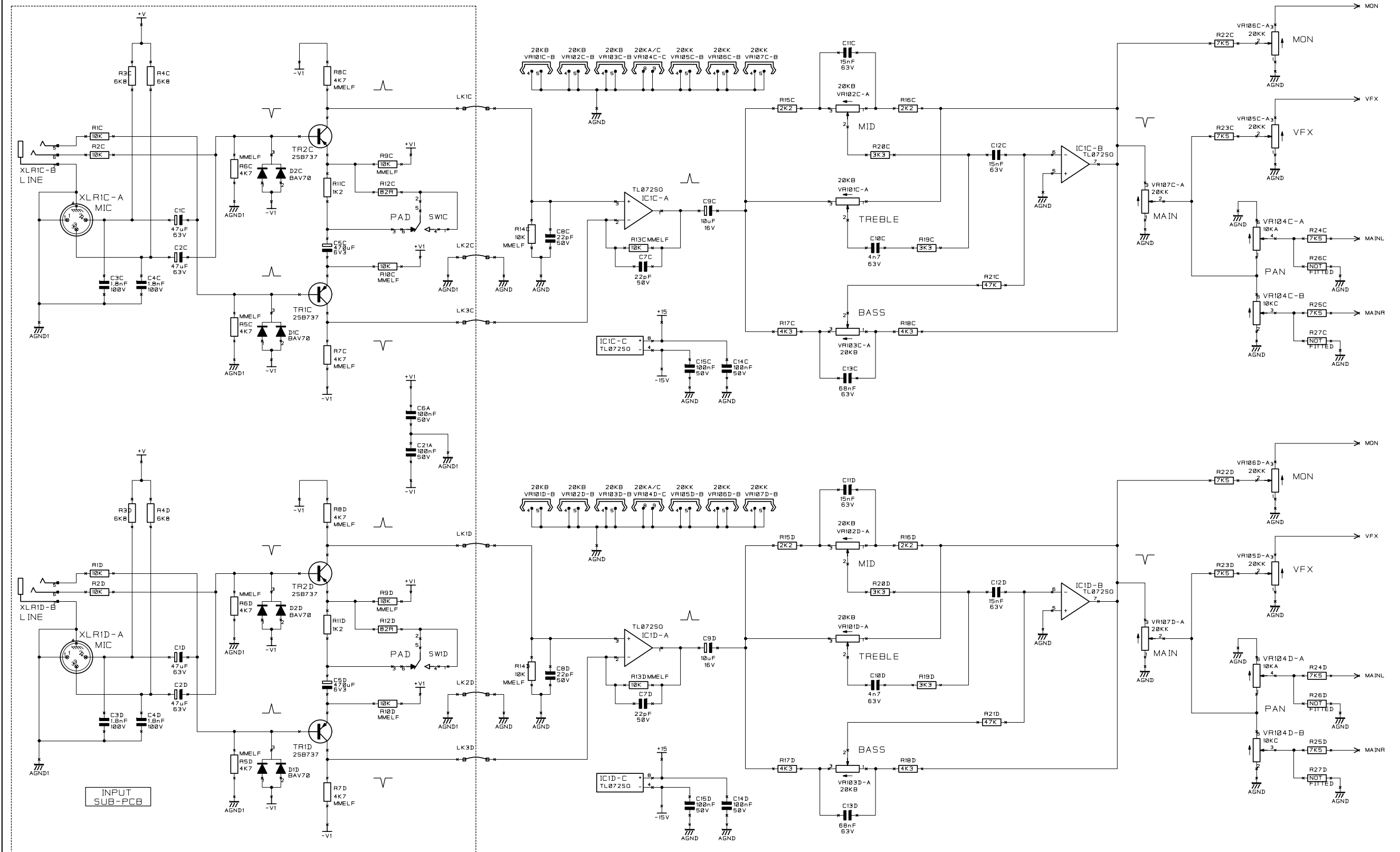
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02A. ECNH257 15/09/04

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DATE	11-02-04				
MASTER IF RED					

Gigrac 1000st
DRG NO. E2017A-03
SHT. 1 OF 11

DRG NO.
CHANNEL 3/4



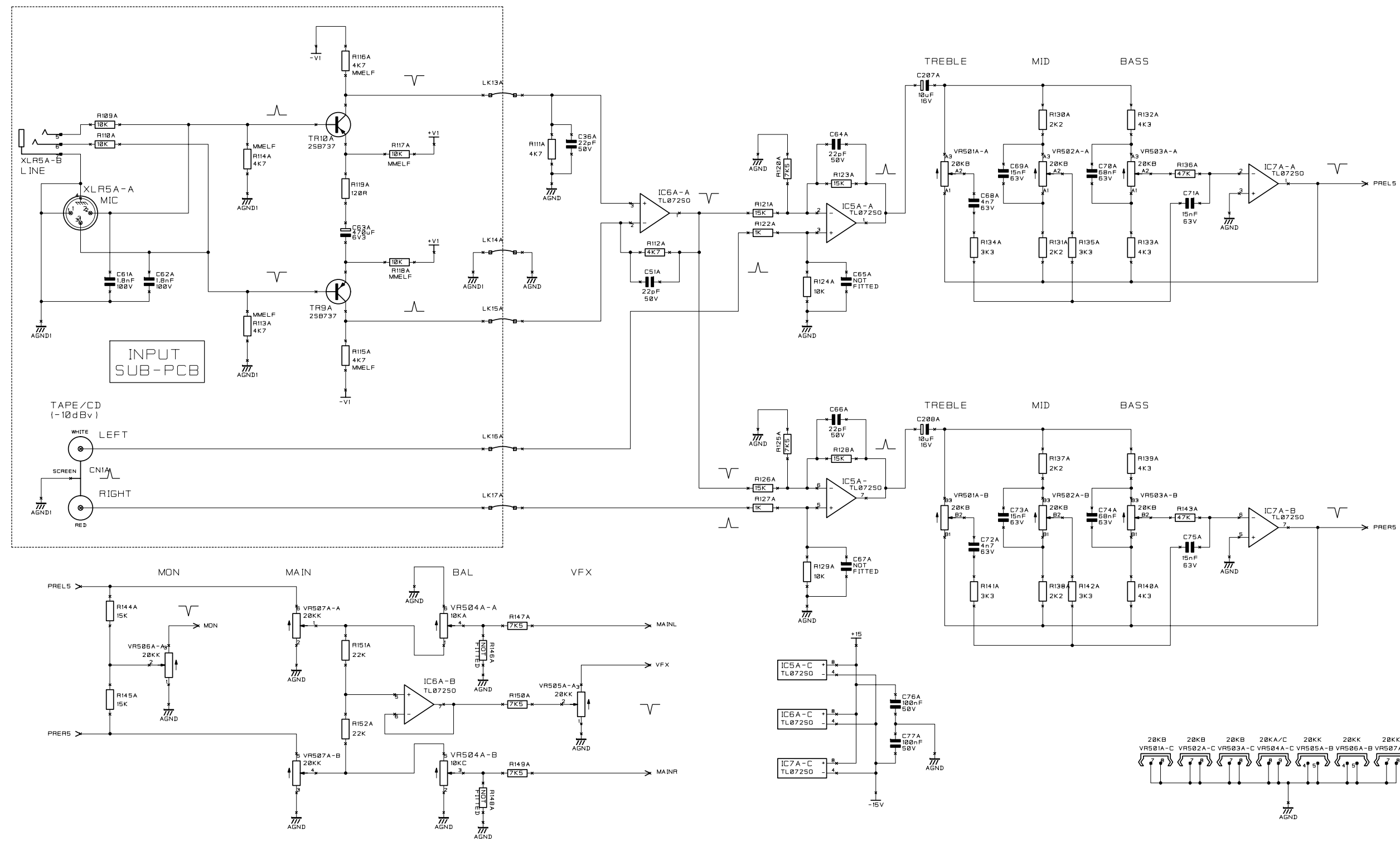
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SHT. 2 OF 11



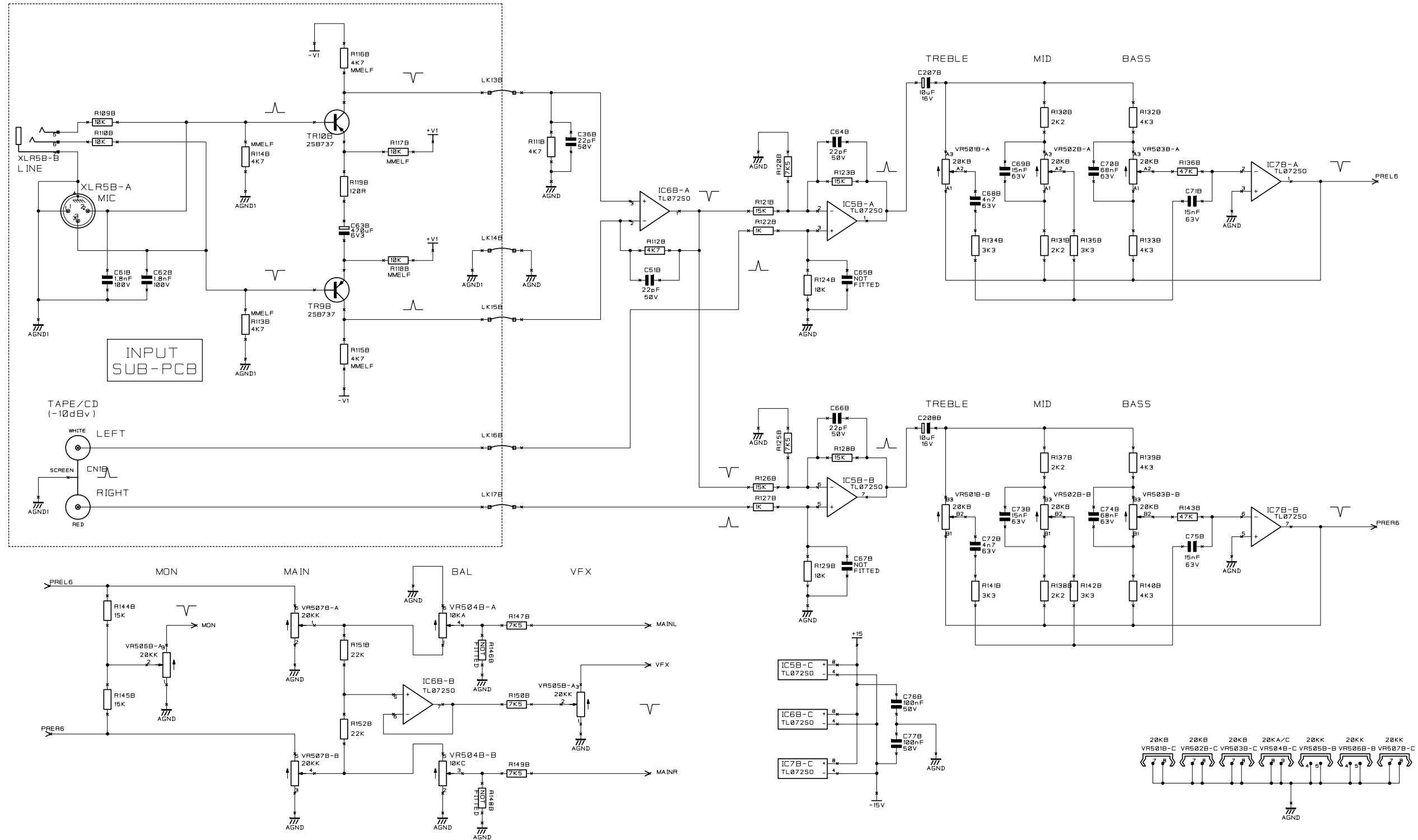
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Gigrac 1000st
DRG NO. E2017A-03
SHT. 3 OF 11



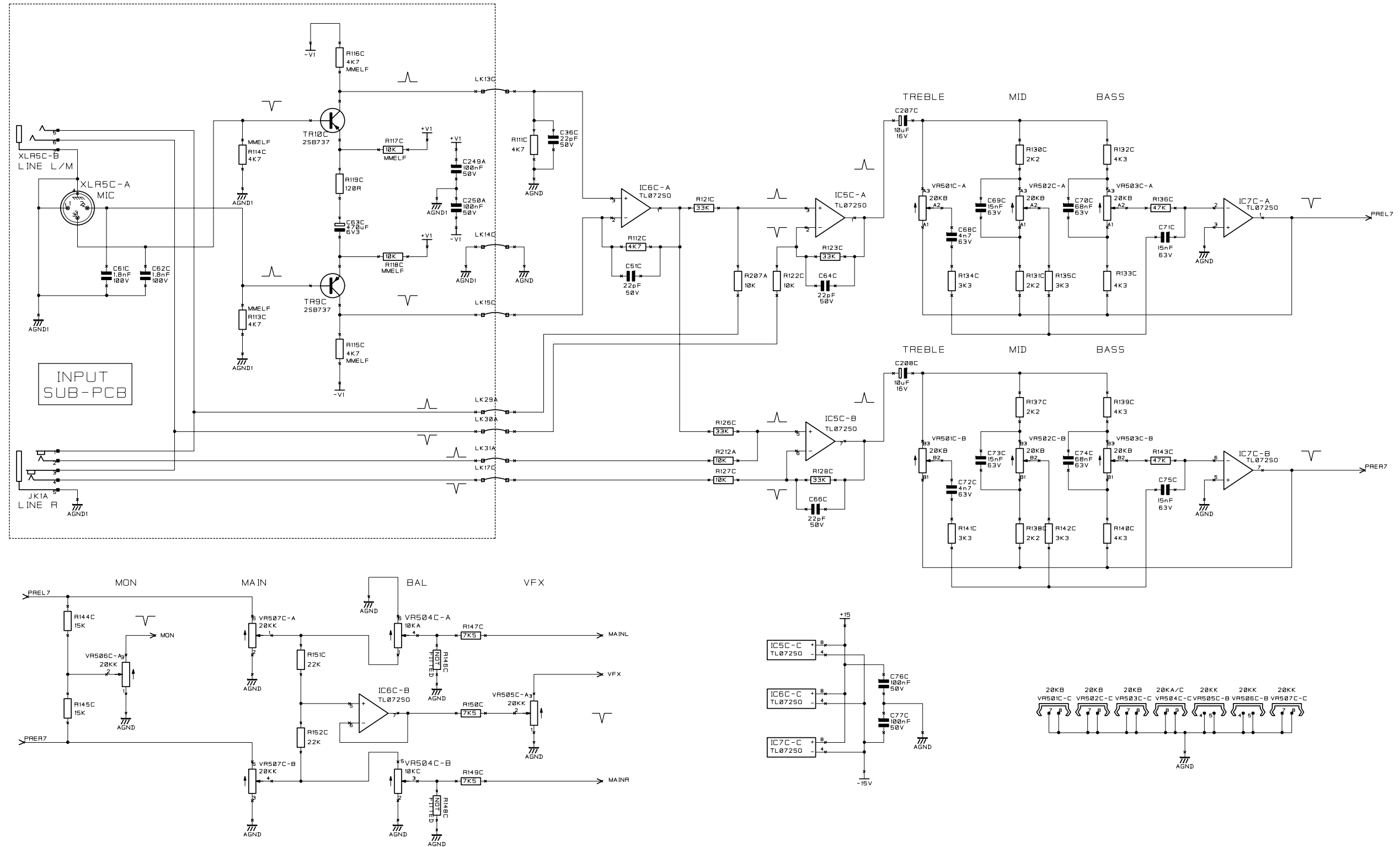
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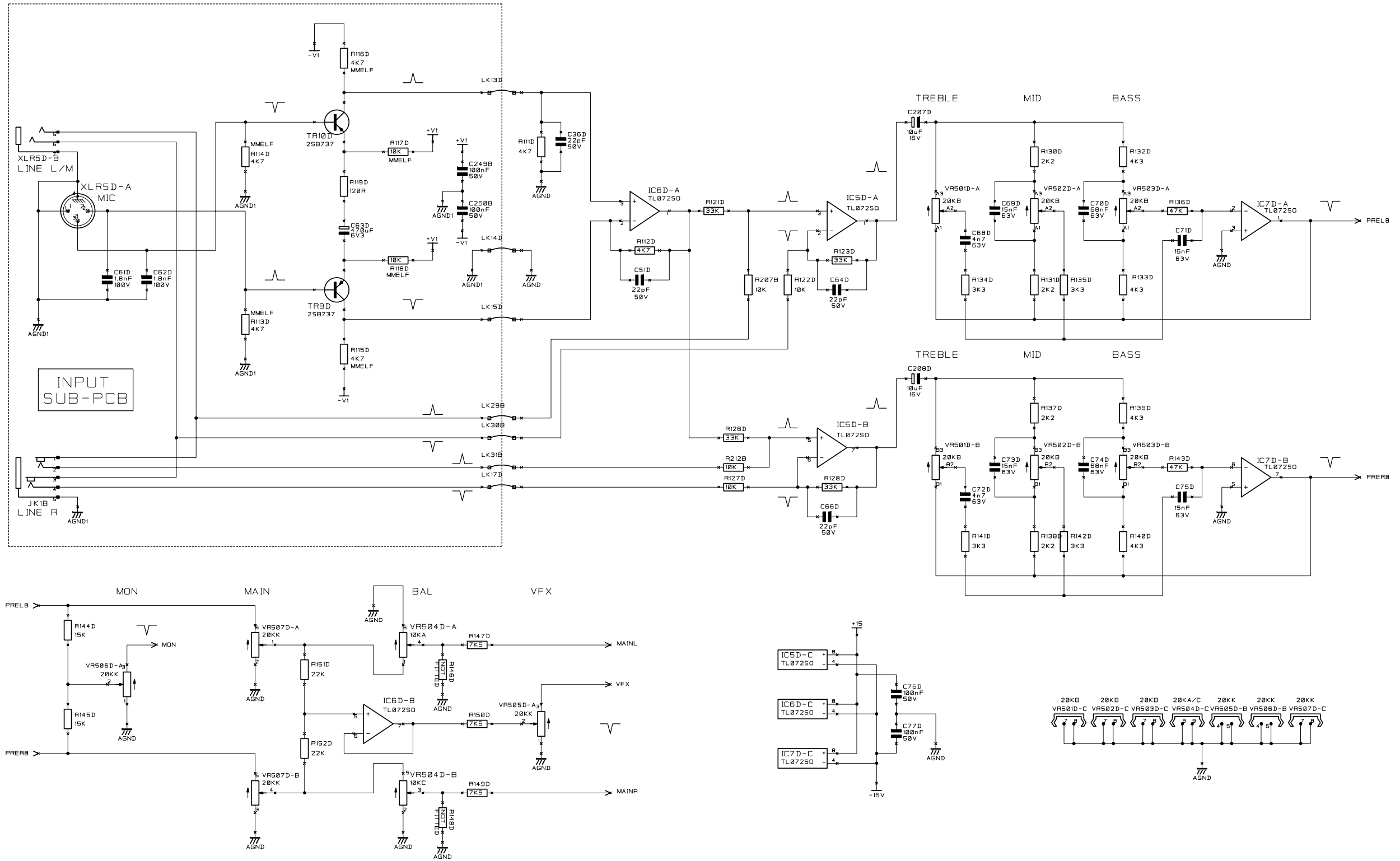
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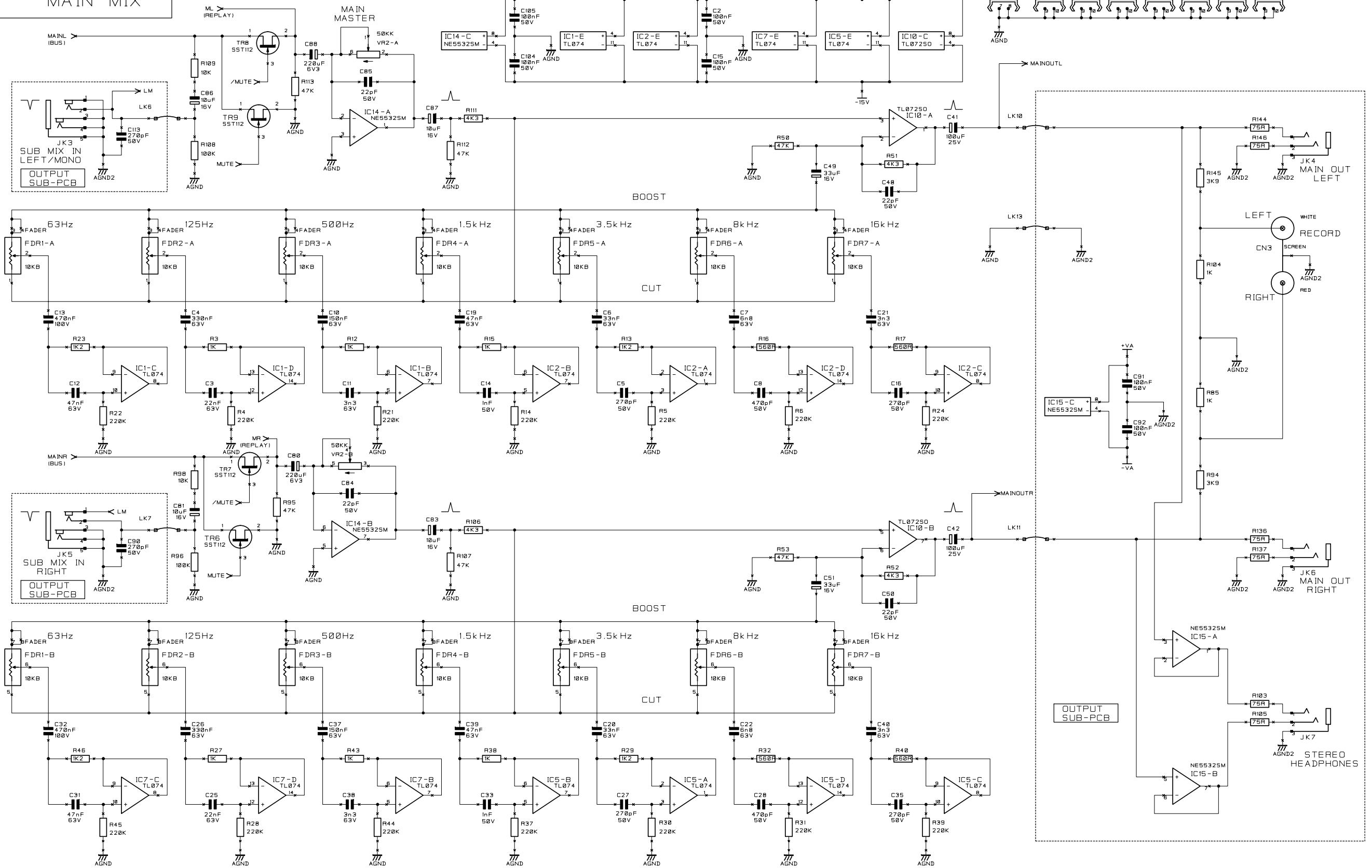
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DRG NO.

MAIN MIX



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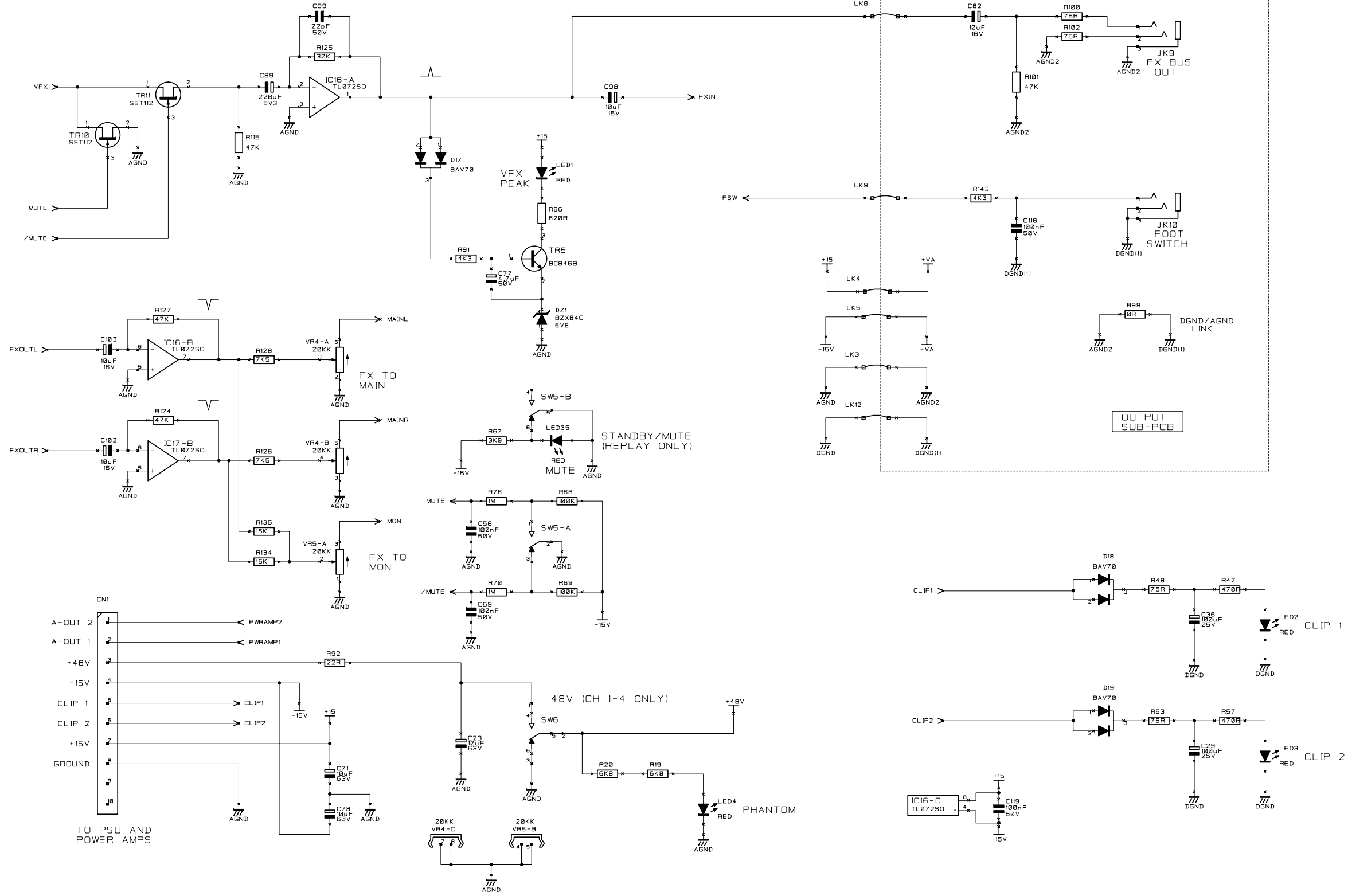
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NOTE: CHANGE VR49 TO DUAL 50KK (DM10042)

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DRG NO.
FX MIX/MISC



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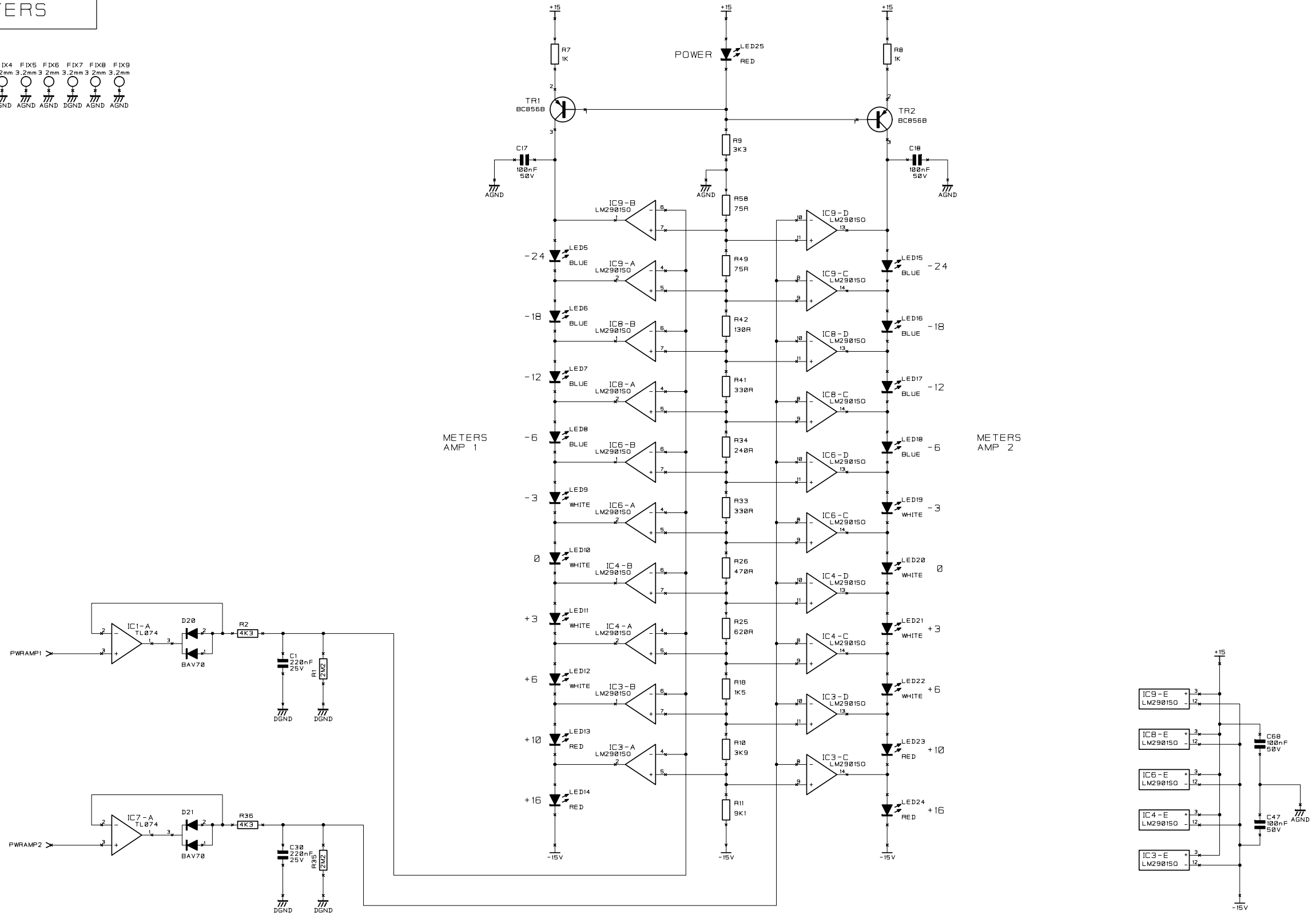
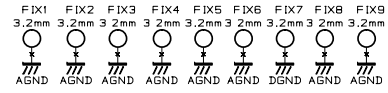
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METERS



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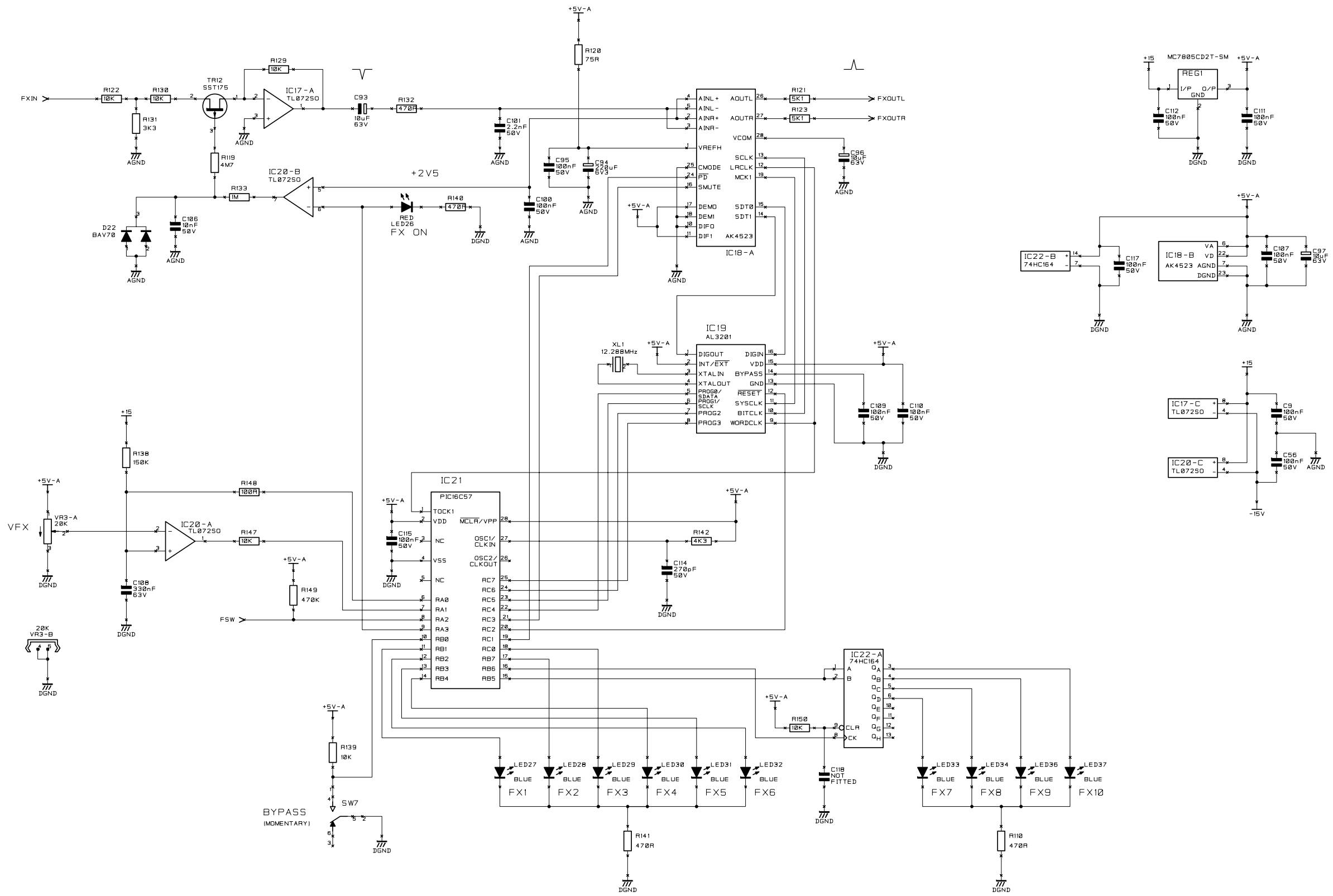
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Gigrac 1000st

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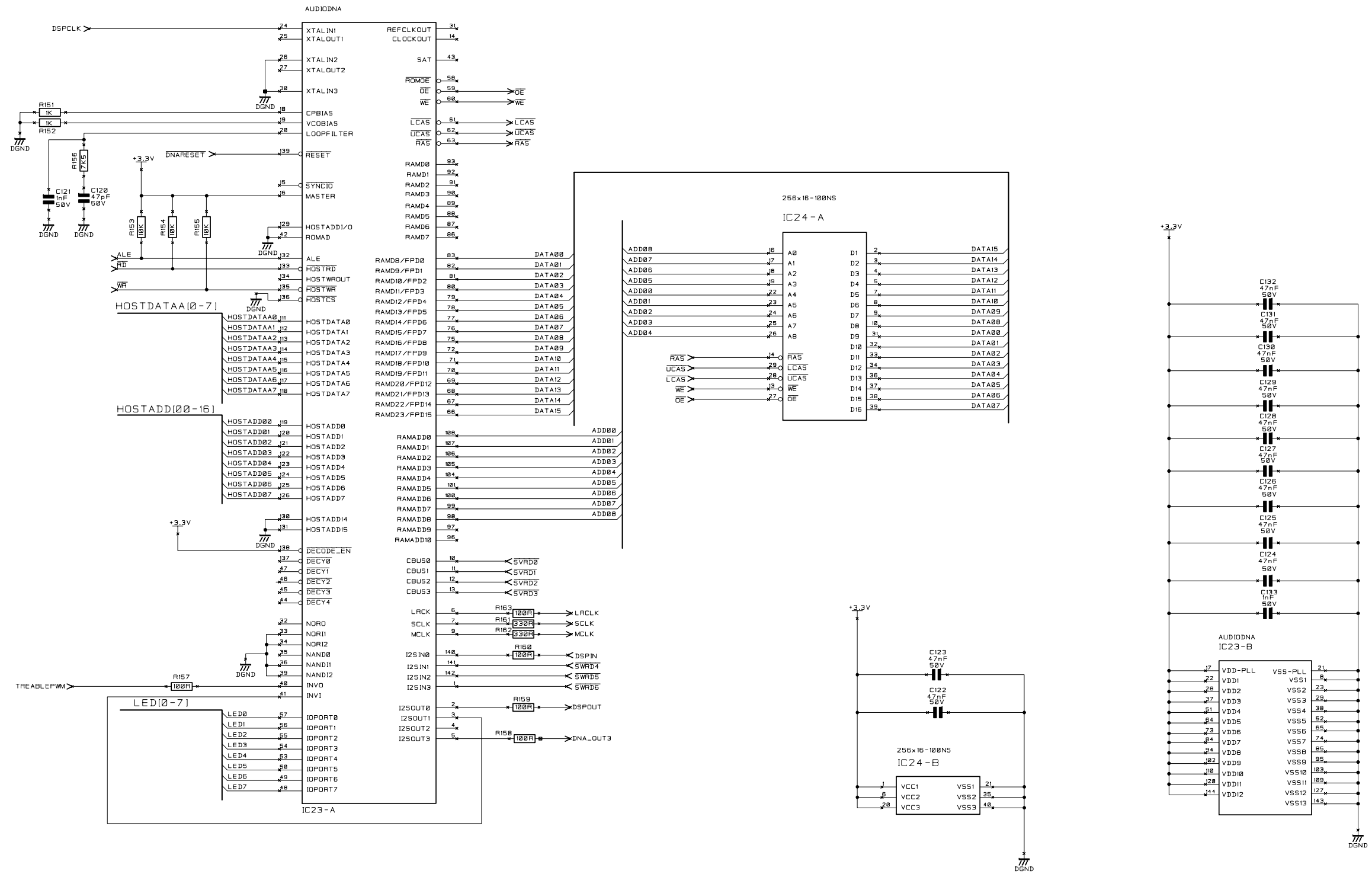
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EXTRA FX

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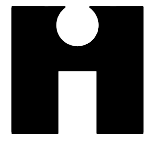
Gigrac 1000st

DRG NO. E2017A-03

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DRAWING NUMBER ISSUE

S-S2017BS-03A



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CRANBORNE ROAD
POTTERS BAR
HERTS
EN6 3JN
Tel 01707 660667
Fax 01707 660755

TITLE: GIGRAC 1000 SMPS

SHEET 1 OF 1

FILENAME: S-S2017BS-03A.SCH

DRAWN: CN

DATE: 10/05/04

CHECKED:

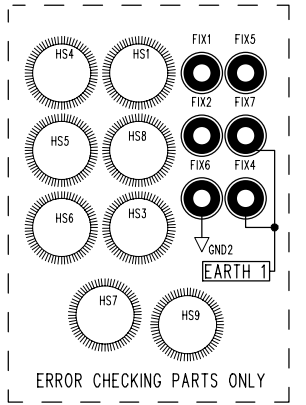
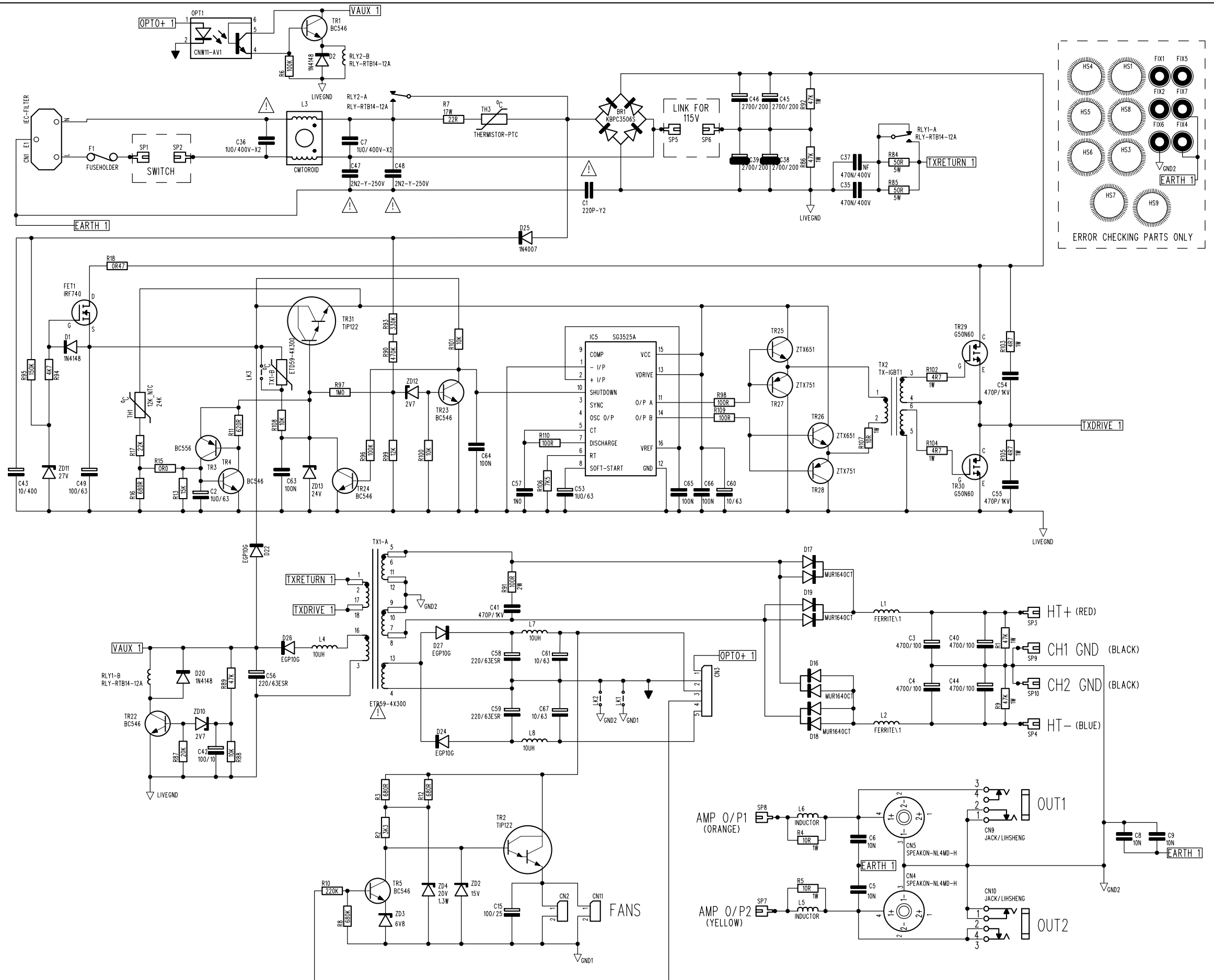
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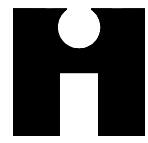
ISSUE COMMENTS:

1. PROTOTYPE RELEASE 12/03/04
2. EVALUATION RELEASE 19/05/04
3. PRODUCTION RELEASED TO CHINA
ECNH259 26/08/04
- 3A. ECNH263 06/09/04

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TITLE: **GIG-RAC DUAL POWER AMP**
 CIRCUIT DIAGRAM

SHEET 1 OF 1

FILENAME: S-S2010BS-04.SCH

DRAWN: BV

DATE: 12/12/02

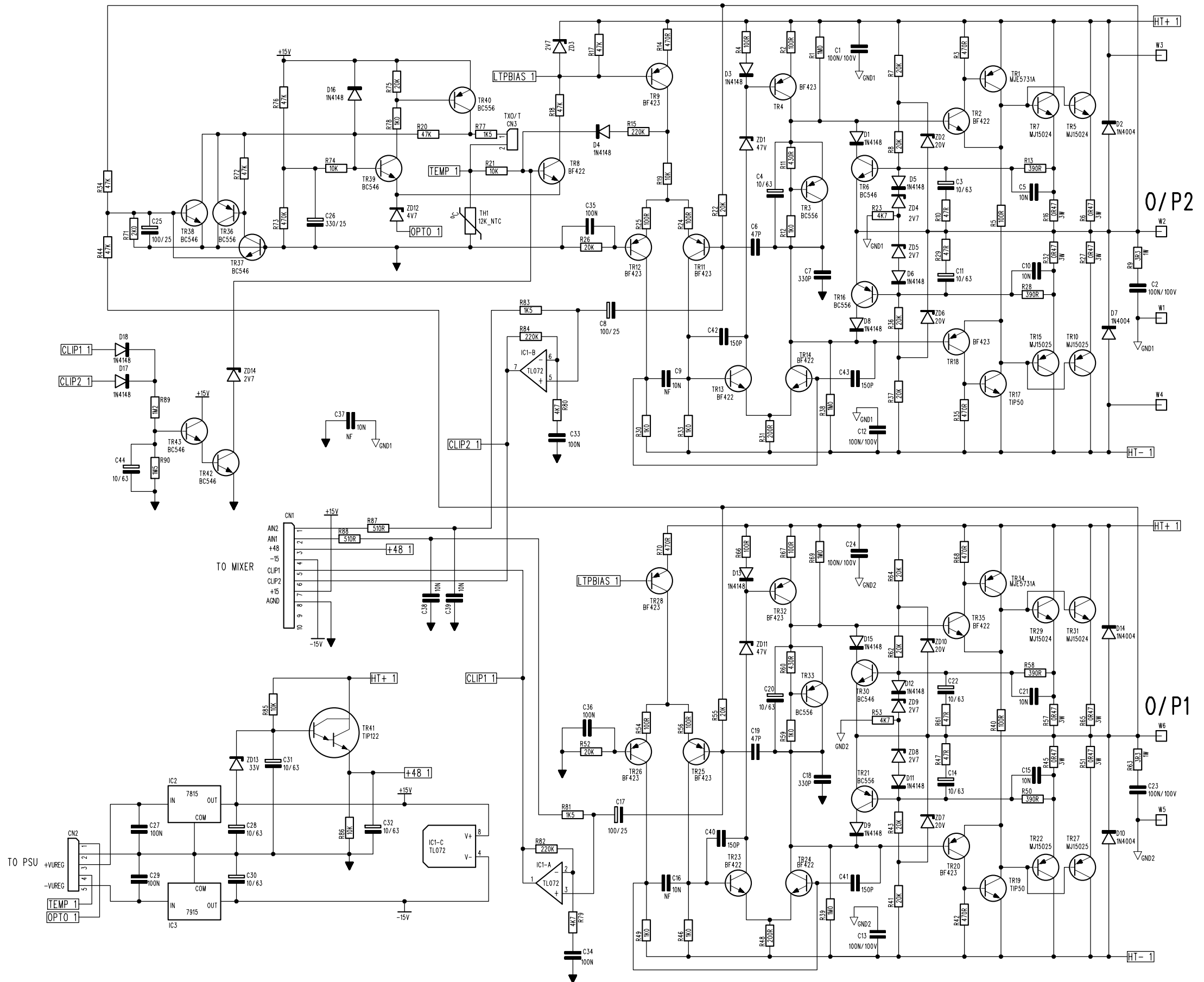
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GIGRAC 1000ST Spare Parts

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CONSOLES

GIGRAC I000ST AUS/NZ

Description Part Number
!CABLE POWER 7.5A,IEC.AUS.3PIN
LABEL-230V CONNECTOR GRI000
GIGRAC I000ST
LABEL-OUTER RW5673 EAN-13.
LABEL-INNER RW5673 EAN-13.
5X20MM T6.3AX250V(UL)FUSE

RW5673AZ

FJ8048
P-S2017J-01
RW5673
ZA0509
ZA0510
ZD0326

GIGRAC I000ST EU/UK

Description Part Number
!LEAD 10A IEC-UK 13A PLUGFSD
!LEAD 10A IEC SCHUKO PLUG
LABEL-230V CONNECTOR GRI000
GIGRAC I000ST
LABEL-OUTER RW5673 EAN-13.
LABEL-INNER RW5673 EAN-13.
5X20MM T6.3AX250V(UL)FUSE

RW5673EK

FJ8043
FJ8044
P-S2017J-01
RW5673
ZA0627
ZA0628
ZD0326

GIGRAC I000ST JP

Description Part Number
!LEAD 10A IEC US 3PIN PLGG
WIREFORM 115V LINK GIGRAC 900
LABEL-100V CONNECTOR-GRI000
GIGRAC ASSY I000 JP
LABEL-OUTER RW5673JP EAN-13
LABEL-INNER RW5673JP EAN-13.
!FUSE 10A SLOW T 215010 CA-EL

RW5673JP

FJ8045
L-S2017A-01
P-S2017N-01
RW5708
ZA0683
ZA0684
ZD10016

GIGRAC I000ST US

Description Part Number
!LEAD 10A IEC US 3PIN PLGG
WIREFORM 115V LINK GIGRAC 900
LABEL-115V CONNECTOR-GRI000
GIGRAC I000ST
LABEL-OUTER RW5673 EAN-13.
LABEL-INNER RW5673 EAN-13.
!FUSE 10A SLOW T 215010 CA-EL

RW5673US

FJ8045
L-S2017A-01
P-S2017K-01
RW5673
ZA0509
ZA0510
ZD10016

MAIN ASSEMBLIES

GIGRAC 1000ST

Ident	Description	Part Number
---	BUSH POT SHAFT - GIGRAC	P-S2010J-02
---	KNOB ST.STEEL-EFFECT SELECTOR	P-S2010Z-01
---	FRONT PANEL-GIGRAC 1000ST	P-S2017C-03
---	GIGRAC 1000ST PCB ASSY	R-S2017A-02-AF
---	(Safety Critical Part)! SWITCH MAINS ROCKER 6A 250V	DL10006
---	W/FORM 5WAY 2MM CRIMP TYPE	L-S2010A-01
---	W/FORM 10WAY 2MM CRIMP TYPE	L-S2010B-01
---	FAN ASSY MAIN UNIT-GIGRACGIGRA	L-S2010J-01
---	WIREFORM MAINS SWITCH-GRI000ST	L-S2017B-01
---	WIREFORM - CHASSIS GRI000ST	L-S2017C-01
---	CABLE TIE XV02-	LZ10008
---	DUCT EXTRUSION	P-S2010G-03
---	HEATSINK PLATE	P-S2010L-01
---	STRAP LOGO - GIGRAC	P-S2010R-03
---	GASKET FAN & DUCT-GIGRAC	P-S2010X-01
---	BASE PANEL-GIGRAC 1000	P-S2017D-02
---	SIDE PANEL L\HAND- GIGRAC900	P-S2017E-02
---	SIDE PANEL R\HAND GIGRAC 900	P-S2017F-02
---	DUAL AMPLIFIER PCB ASSY.	R-S2010B-04-AF
---	PSU BOARD-GIGRAC 1000	R-S2017B-03-AF
---	LABEL-FCC SAFETY - GIGRAC	P-S2010CC-01
---	ENDCAP-GIGRAC GR300/600/900	P-S2010H-03
---	RACK BOLT-GIGRAC GR300/600/900	P-S2010N-02
---	LABEL-SAFETY & SERIAL-GIGRAC	P-S2010W-03
---	CASE MOULDING-GIGRAC 1000ST	P-S2017A-03
---	LID MOULDING-GIGRAC 1000 ST	P-S2017B-03
---	BRACKET - GIGRAC 1000ST	P-S2017G-01
---	LID LINER - GIGRAC 1000ST	P-S2017H-01
---	BADGE MOULDING - GIGRAC 900	P-S2017L-01
---	LOGO STICKER SHEET-GIGAC ACCES	P-S2010AA-01
---	DESK GIGRAC MAT-ACCESSORY	P-S2010BB-01
---	CORNER PACKAGING-GIGRAC	T-S2010A-01
---	CARTON PACKAGING -GIGRAC 900	T-S2017A-01
---	POLY BAG 200G - 24X30	TZ2440
---	USER GUIDE- GIGRAC 1000ST	ZM0301-01
Pcb skt	PC JUMPER XL02-	FF10003

RW5673

GIGRAC ASSY 1000 JP

Ident	Description	Part Number
---	BUSH POT SHAFT - GIGRAC	P-S2010J-02
---	KNOB ST.STEEL-EFFECT SELECTOR	P-S2010Z-01
---	FRONT PANEL-GIGRAC 1000ST	P-S2017C-02
---	GIGRAC 1000ST PCB ASSY	R-S2017A-02-AF
---	(Safety Critical Part)! SWITCH MAINS ROCKER 6A 250V	DL10006
---	W/FORM 5WAY 2MM CRIMP TYPE	L-S2010A-01
---	W/FORM 10WAY 2MM CRIMP TYPE	L-S2010B-01
---	FAN ASSY MAIN UNIT-GIGRACGIGRA	L-S2010J-01
---	WIREFORM MAINS SWITCH-GRI000ST	L-S2017B-01
---	WIREFORM - CHASSIS GRI000ST	L-S2017C-01
---	CABLE TIE XV02-	LZ10008
---	DUCT EXTRUSION	P-S2010G-03
---	HEATSINK PLATE	P-S2010L-01
---	STRAP LOGO - GIGRAC	P-S2010R-02
---	GASKET FAN & DUCT-GIGRAC	P-S2010X-01
---	STRAP FIXING STRIP-GIGRAC	P-S2010Y-01
---	BASE PANEL-GIGRAC 1000	P-S2017D-02
---	SIDE PANEL L\HAND- GIGRAC900	P-S2017E-02
---	SIDE PANEL R\HAND GIGRAC 900	P-S2017F-02
---	DUAL AMPLIFIER PCB ASSY.	R-S2010B-03-AF
---	PSU BOARD-GIGRAC 1000	R-S2017B-03-AF
---	LABEL-FCC SAFETY - GIGRAC	P-S2010CC-01
---	ENDCAP-GIGRAC GR300/600/900	P-S2010H-03
---	RACK BOLT-GIGRAC GR300/600/900	P-S2010N-02
---	LABEL-SAFETY & SERIAL-GIGRAC	P-S2010W-03

RW5708

---	CASE MOULDING-GIGRAC 1000ST	P-S2017A-01
---	LID MOULDING-GIGRAC 1000 ST	P-S2017B-01
---	BRACKET - GIGRAC 1000ST	P-S2017G-01
---	LID LINER - GIGRAC 1000ST	P-S2017H-01
---	LOGO STICKER SHEET-GIGAC ACCES	P-S2010AA-01
---	DESK GIGRAC MAT-ACCESSORY	P-S2010BB-01
---	CORNER PACKAGING-GIGRAC	T-S2010A-01
---	CARTON PACKAGING -GIGRAC 900	T-S2017A-01
---	POLY BAG 200G - 24X30	TZ2440
---	USER GUIDE- GIGRAC 1000ST	ZM0301-01

SWITCH TOPS, FADER TOPS AND KNOBS

Description	Part Number	Used in (part number)
CAP ELLIPSE SW DK/GRY LONG	KB10020	RW5673, RW5708
CAP ELLIPSE SW DK/GRY SHORT	KB10021	RW5673, RW5708
ELIPT SW-CP RED PANTONE 201C	KB2328	RW5673, RW5708
KNOB 14MM DK/GREY PTR YELL	KA10031	RW5673
KNOB 14MM DK/GRY & PTR LT/GRY	KA10025	RW5673, RW5708
KNOB 14MM DK/GRY PTR BLUE	KA10027	RW5673, RW5708
KNOB 14MM DK/GRY PTR RED	KA10028	RW5673, RW5708
KNOB 14MM DK/GY PTR BLACK	KA10026	RW5673, RW5708
KNOB 18MM DK/GY PTR RED	KA10029	RW5673, RW5708
KNOB FADER - GIGRAC	KA10024	RW5673, RW5708

FADERS

Description	Part Number	Used in: (part number)
FADER 10K\10K-CD.30MM TRV.PAN.	DD0469	R-S2017A-02-AF
PAN GRAPHIC FADER 10KB	DD0411	R-S2017A-02-AF

MODULES AND FRAME PCBS

DUAL AMPLIFIER PCB ASSY.

Ident	Description
---	HEATSINK - GR300/600
---	PCB DUAL AMPLIFIER BOARD
---	TIP INS BUSH
---	TO-220 SIL PAD SELF ADHESIVE
---	TO3 INSULATING WASHER
C1	MICRO-BOX 5MM 5% 100V 100N
C2	MICRO-BOX 5MM 5% 100V 100N
C3	CAP ELEC VERT 10UF 63V SKP 5X1
C4	CAP ELEC VERT 10UF 63V SKP 5X1
C5	MICRO-BOX 5MM 5% 63V 10N
C6	CAP CER ML 47PF 100V 5% NPO
C7	CAP CER 330PF 100V TPD 0.2"
C8	CAP ELEC VERT 100UF 25V SKP
C10	MICRO-BOX 5MM 5% 63V 10N
C11	CAP ELEC VERT 10UF 63V SKP 5X1
C12	MICRO-BOX 5MM 5% 100V 100N
C13	MICRO-BOX 5MM 5% 100V 100N
C14	CAP ELEC VERT 10UF 63V SKP 5X1
C15	MICRO-BOX 5MM 5% 63V 10N
C17	CAP ELEC VERT 100UF 25V SKP
C18	CAP CER 330PF 100V TPD 0.2"
C19	CAP CER ML 47PF 100V 5% NPO
C20	CAP ELEC VERT 10UF 63V SKP 5X1
C21	MICRO-BOX 5MM 5% 63V 10N
C22	CAP ELEC VERT 10UF 63V SKP 5X1
C23	MICRO-BOX 5MM 5% 100V 100N
C24	MICRO-BOX 5MM 5% 100V 100N
C25	CAP ELEC VERT 100UF 25V SKP
C26	CAP ELEC VERT 330UF 25V SKP
C27	CAP CER ML 0.1UF 50V 5MM
C28	CAP ELEC VERT 10UF 63V SKP 5X1
C29	CAP CER ML 0.1UF 50V 5MM
C30	CAP ELEC VERT 10UF 63V SKP 5X1
C31	CAP ELEC VERT 10UF 63V SKP 5X1
C32	CAP ELEC VERT 10UF 63V SKP 5X1
C33	CAP CER ML 0.1UF 50V 5MM
C34	CAP CER ML 0.1UF 50V 5MM
C35	CAP CER ML 0.1UF 50V 5MM
C36	CAP CER ML 0.1UF 50V 5MM
C38	MICRO-BOX 5MM 5% 63V 10N
C39	MICRO-BOX 5MM 5% 63V 10N
C40	CAP CER 150PF 100V TPD 0.2"
C41	CAP CER 150PF 100V TPD 0.2"
C42	CAP CER 150PF 100V TPD 0.2"
C43	CAP CER 150PF 100V TPD 0.2"
CN1	10WY 2MM VERT ML HDR(CHINA)
CN2	5WY 2MM VERT ML HDR CHINA
CN3	2WY 0.1 ST&F/L CONN HDR CA-CO
D1	DIODE IN4148
D2	DIODE IN4004
D3	DIODE IN4148
D4	DIODE IN4148
D5	DIODE IN4148
D6	DIODE IN4148
D7	DIODE IN4004
D8	DIODE IN4148
D9	DIODE IN4148
D10	DIODE IN4004
D11	DIODE IN4148
D12	DIODE IN4148
D13	DIODE IN4148
D14	DIODE IN4004
D15	DIODE IN4148
D16	DIODE IN4148
IC1	JRC DUAL OP AMP 072BDE

R-S2010B-03-AF

Part Number
P-S2010K-02
S-S2010B-03
ZC0215
ZC0250
ZC10029
CC0250
CC0250
CE0462
CE0462
CC0244
CA0067R
CA0049R
CE0446
CC0244
CE0462
CC0250
CC0250
CE0462
CC0244
CE0446
CA0049R
CA0067R
CE0462
CC0244
CE0462
CC0250
CC0250
CE0446
CE0506
CA0026
CE0462
CA0026
CE0462
CE0462
CA0026
CA0026
CA0026
CA0026
CA0026
CC0244
CC0244
CA0045R
CA0045R
CA0045R
CA0045R
FF1003
FF10097
FF10046
BA0001
BA0012
BA0001
BA0001
BA0001
BA0001
BA0012
BA0001
BA0001
BA0012
BA0001
BA0001
BA0012
BA0001
BA0001
BE0413

IC2	V.REG 7815 +15V 1A	BE0416
IC3	V.REG 7915 -15V 1A	BE0417
R1	MF 0.25W RES 1% 1M BL	API421
R2	MF 0.25W RES 1% 100R BL	API325
R3	MF 0.25W RES 1% 470R BL	API341
R4	MF 0.25W RES 1% 100R BL	API325
R5	MF 0.25W RES 1% 100R BL	API325
R6	RES W/W 0R47 3W CA-RE	AGI0007
R7	MF 0.25W RES 1% 20K BL	API380
R8	MF 0.25W RES 1% 20K BL	API380
R9	RES 3R3 5% 1W MF PROI XA01-	AE10010
R10	MF 0.25W RES 1% 47R BL	API317
R11	MF 0.25W RES 1% 430R BL	API340
R12	AP 0.25W RES 1% 1K BL	API349
R13	MF 0.25W RES 1% 390R BL	API339
R14	MF 0.25W RES 1% 470R BL	API341
R15	MF 0.25W RES 1% 220K BL	API405
R16	RES W/W 0R47 3W CA-RE	AGI0007
R17	MF 0.25W RES 1% 47K BL	API389
R18	MF 0.25W RES 1% 47K BL	API389
R19	MF 0.25W RES 1% 10K BL	API373
R20	MF 0.25W RES 1% 47K BL	API389
R21	MF 0.25W RES 1% 10K BL	API373
R22	MF 0.25W RES 1% 20K BL	API380
R23	MF 0.25W RES 1% 4K7 BL	API365
R24	MF 0.25W RES 1% 100R BL	API325
R25	MF 0.25W RES 1% 100R BL	API325
R26	MF 0.25W RES 1% 20K BL	API380
R27	RES W/W 0R47 3W CA-RE	AGI0007
R28	MF 0.25W RES 1% 390R BL	API339
R29	MF 0.25W RES 1% 47R BL	API317
R30	AP 0.25W RES 1% 1K BL	API349
R31	MF 0.25W RES 1% 200R BL	API332
R32	RES W/W 0R47 3W CA-RE	AGI0007
R33	AP 0.25W RES 1% 1K BL	API349
R34	MF 0.25W RES 1% 47K BL	API389
R35	MF 0.25W RES 1% 470R BL	API341
R36	MF 0.25W RES 1% 20K BL	API380
R37	MF 0.25W RES 1% 20K BL	API380
R38	MF 0.25W RES 1% 1M BL	API421
R39	MF 0.25W RES 1% 1M BL	API421
R40	MF 0.25W RES 1% 100R BL	API325
R41	MF 0.25W RES 1% 20K BL	API380
R42	MF 0.25W RES 1% 470R BL	API341
R43	MF 0.25W RES 1% 20K BL	API380
R44	MF 0.25W RES 1% 47K BL	API389
R45	RES W/W 0R47 3W CA-RE	AGI0007
R46	AP 0.25W RES 1% 1K BL	API349
R47	MF 0.25W RES 1% 47R BL	API317
R48	MF 0.25W RES 1% 200R BL	API332
R49	AP 0.25W RES 1% 1K BL	API349
R50	MF 0.25W RES 1% 390R BL	API339
R51	RES W/W 0R47 3W CA-RE	AGI0007
R52	MF 0.25W RES 1% 20K BL	API380
R53	MF 0.25W RES 1% 4K7 BL	API365
R54	MF 0.25W RES 1% 100R BL	API325
R55	MF 0.25W RES 1% 20K BL	API380
R56	MF 0.25W RES 1% 100R BL	API325
R57	RES W/W 0R47 3W CA-RE	AGI0007
R58	MF 0.25W RES 1% 390R BL	API339
R59	AP 0.25W RES 1% 1K BL	API349
R60	MF 0.25W RES 1% 430R BL	API340
R61	MF 0.25W RES 1% 47R BL	API317
R62	MF 0.25W RES 1% 20K BL	API380
R63	RES 3R3 5% 1W MF PROI XA01-	AE10010
R64	MF 0.25W RES 1% 20K BL	API380
R65	RES W/W 0R47 3W CA-RE	AGI0007
R66	MF 0.25W RES 1% 100R BL	API325
R67	MF 0.25W RES 1% 100R BL	API325
R68	MF 0.25W RES 1% 470R BL	API341
R69	MF 0.25W RES 1% 1M BL	API421
R70	MF 0.25W RES 1% 470R BL	API341
R71	MF 0.25W RES 1% 2K BL	API356

R72	MF 0.25W RES 1% 47K BL	API 389
R73	MF 0.25W RES 1% 470K BL	API413
R74	MF 0.25W RES 1% 10K BL	API373
R75	MF 0.25W RES 1% 20K BL	API380
R76	MF 0.25W RES 1% 47K BL	API389
R77	MF 0.25W RES 1% 1K5 BL	API353
R78	AP 0.25W RES 1% 1K BL	API349
R79	MF 0.25W RES 1% 4K7 BL	API365
R80	MF 0.25W RES 1% 4K7 BL	API365
R81	MF 0.25W RES 1% 1K5 BL	API353
R82	MF 0.25W RES 1% 220K BL	API405
R83	MF 0.25W RES 1% 1K5 BL	API353
R84	MF 0.25W RES 1% 220K BL	API405
R85	MF 0.25W RES 1% 10K BL	API373
R86	MF 0.25W RES 1% 10K BL	API373
R87	MF 0.25W RES 1% 510R BL	API342
R88	MF 0.25W RES 1% 510R BL	API342
TH1	THERMISTOR NTC 12K	AZ10012
TR1	MJE5731A TRANSISTOR CA-TF	BD10014
TR2	BF422 NPN TRANS	BD0364
TR3	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR4	BF423 PNP TRANS	BD0365
TR5	MJ15024 NPN POWER TRANS TO3	BD0373
TR6	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR7	MJ15024 NPN POWER TRANS TO3	BD0373
TR8	BF422 NPN TRANS	BD0364
TR9	BF423 PNP TRANS	BD0365
TR10	MJ15025 PNP POWER TRANS TO3	BD0374
TR11	BF423 PNP TRANS	BD0365
TR12	BF423 PNP TRANS	BD0365
TR13	BF422 NPN TRANS	BD0364
TR14	BF422 NPN TRANS	BD0364
TR15	MJ15025 PNP POWER TRANS TO3	BD0374
TR16	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR17	HV NPN POWER TRANS TIP50 CA-TF	BD10020
TR18	BF423 PNP TRANS	BD0365
TR19	HV NPN POWER TRANS TIP50 CA-TF	BD10020
TR20	BF423 PNP TRANS	BD0365
TR21	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR22	MJ15025 PNP POWER TRANS TO3	BD0374
TR23	BF422 NPN TRANS	BD0364
TR24	BF422 NPN TRANS	BD0364
TR25	BF423 PNP TRANS	BD0365
TR26	BF423 PNP TRANS	BD0365
TR27	MJ15025 PNP POWER TRANS TO3	BD0374
TR28	BF423 PNP TRANS	BD0365
TR29	MJ15024 NPN POWER TRANS TO3	BD0373
TR30	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR31	MJ15024 NPN POWER TRANS TO3	BD0373
TR32	BF423 PNP TRANS	BD0365
TR33	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR34	MJE5731A TRANSISTOR CA-TF	BD10014
TR35	BF422 NPN TRANS	BD0364
TR36	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR37	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR38	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR39	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR40	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR41	TRANS TIP122 TO220 XE01-	BD10026
ZD1	ZENER DIODE 500MW 47V CA-DB	BB10011
ZD10	ZENER DIODE 400MW 20V	BBA20V0
ZD11	ZENER DIODE 500MW 47V CA-DB	BB10011
ZD12	ZENER DIODE 500MW 4.7V 5%CA-DB	BB10007
ZD13	ZENER DIODE 33V	BB0123
ZD2	ZENER DIODE 400MW 20V	BBA20V0
ZD3	ZENER DIODE 500MW 2V7 CA-DB	BB10002
ZD4	ZENER DIODE 500MW 2V7 CA-DB	BB10002
ZD5	ZENER DIODE 500MW 2V7 CA-DB	BB10002
ZD6	ZENER DIODE 400MW 20V	BBA20V0
ZD7	ZENER DIODE 400MW 20V	BBA20V0
ZD8	ZENER DIODE 500MW 2V7 CA-DB	BB10002
ZD9	ZENER DIODE 500MW 2V7 CA-DB	BB10002

DUAL AMPLIFIER PCB ASSY.**R-S2010B-04-AF**

Ident	Description	Part Number
---	HEATSINK - GR300/600	P-S2010K-02
---	PCB DUAL AMPLIFIER BOARD	S-S2010B-04
---	TIP INS BUSH	ZC0215
---	TO-220 SIL PAD SELF ADHESIVE	ZC0250
---	TO3 INSULATING WASHER	ZC10029
C1	MICRO-BOX 5MM 5% 100V 100N	CC0250
C2	MICRO-BOX 5MM 5% 100V 100N	CC0250
C3	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C4	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C5	MICRO-BOX 5MM 5% 63V 10N	CC0244
C6	CAP CER ML 47PF 100V 5% NPO	CA0067R
C7	CAP CER 330PF 100V TPD 0.2"	CA0049R
C8	CAP ELEC VERT 100UF 25V SKP	CE0446
C10	MICRO-BOX 5MM 5% 63V 10N	CC0244
C11	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C12	MICRO-BOX 5MM 5% 100V 100N	CC0250
C13	MICRO-BOX 5MM 5% 100V 100N	CC0250
C14	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C15	MICRO-BOX 5MM 5% 63V 10N	CC0244
C17	CAP ELEC VERT 100UF 25V SKP	CE0446
C18	CAP CER 330PF 100V TPD 0.2"	CA0049R
C19	CAP CER ML 47PF 100V 5% NPO	CA0067R
C20	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C21	MICRO-BOX 5MM 5% 63V 10N	CC0244
C22	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C23	MICRO-BOX 5MM 5% 100V 100N	CC0250
C24	MICRO-BOX 5MM 5% 100V 100N	CC0250
C25	CAP ELEC VERT 100UF 25V SKP	CE0446
C26	CAP ELEC VERT 330UF 25V SKP	CE0506
C27	CAP CER ML 0.1UF 50V 5MM	CA0026
C28	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C29	CAP CER ML 0.1UF 50V 5MM	CA0026
C30	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C31	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C32	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C33	CAP CER ML 0.1UF 50V 5MM	CA0026
C34	CAP CER ML 0.1UF 50V 5MM	CA0026
C35	CAP CER ML 0.1UF 50V 5MM	CA0026
C36	CAP CER ML 0.1UF 50V 5MM	CA0026
C38	MICRO-BOX 5MM 5% 63V 10N	CC0244
C39	MICRO-BOX 5MM 5% 63V 10N	CC0244
C40	CAP CER 150PF 100V TPD 0.2"	CA0045R
C41	CAP CER 150PF 100V TPD 0.2"	CA0045R
C42	CAP CER 150PF 100V TPD 0.2"	CA0045R
C43	CAP CER 150PF 100V TPD 0.2"	CA0045R
C44	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
CN1	10WY 2MM VERT ML HDR(CHINA)	FF1003
CN2	5WY 2MM VERT ML HDR CHINA	FF10097
CN3	2WY 0.1 ST&F/L CONN HDR CA-CO	FF10046
D1	DIODE 1N4148	BA0001
D2	DIODE 1N4004	BA0012
D3	DIODE 1N4148	BA0001
D4	DIODE 1N4148	BA0001
D5	DIODE 1N4148	BA0001
D6	DIODE 1N4148	BA0001
D7	DIODE 1N4004	BA0012
D8	DIODE 1N4148	BA0001
D9	DIODE 1N4148	BA0001
D10	DIODE 1N4004	BA0012
D11	DIODE 1N4148	BA0001
D12	DIODE 1N4148	BA0001
D13	DIODE 1N4148	BA0001
D14	DIODE 1N4004	BA0012
D15	DIODE 1N4148	BA0001
D16	DIODE 1N4148	BA0001
D17	DIODE 1N4148	BA0001
D18	DIODE 1N4148	BA0001
IC1	JRC DUAL OP AMP 072BDE	BE0413
IC2	V.REG 7815 +15V 1A	BE0416
IC3	V.REG 7915 -15V 1A	BE0417

R1	MF 0.25W RES 1% 1M BL	API421
R2	MF 0.25W RES 1% 100R BL	API325
R3	MF 0.25W RES 1% 470R BL	API341
R4	MF 0.25W RES 1% 100R BL	API325
R5	MF 0.25W RES 1% 100R BL	API325
R6	RES W/W 0R47 3W CA-RE	AG10007
R7	MF 0.25W RES 1% 20K BL	API380
R8	MF 0.25W RES 1% 20K BL	API380
R9	RES 3R3 5% 1W MF PROI XA01-	AE10010
R10	MF 0.25W RES 1% 47R BL	API317
R11	MF 0.25W RES 1% 430R BL	API340
R12	AP 0.25W RES 1% 1K BL	API349
R13	MF 0.25W RES 1% 390R BL	API339
R14	MF 0.25W RES 1% 470R BL	API341
R15	MF 0.25W RES 1% 220K BL	API405
R16	RES W/W 0R47 3W CA-RE	AG10007
R17	MF 0.25W RES 1% 47K BL	API389
R18	MF 0.25W RES 1% 47K BL	API389
R19	MF 0.25W RES 1% 10K BL	API373
R20	MF 0.25W RES 1% 47K BL	API389
R21	MF 0.25W RES 1% 10K BL	API373
R22	MF 0.25W RES 1% 20K BL	API380
R23	MF 0.25W RES 1% 4K7 BL	API365
R24	MF 0.25W RES 1% 100R BL	API325
R25	MF 0.25W RES 1% 100R BL	API325
R26	MF 0.25W RES 1% 20K BL	API380
R27	RES W/W 0R47 3W CA-RE	AG10007
R28	MF 0.25W RES 1% 390R BL	API339
R29	MF 0.25W RES 1% 47R BL	API317
R30	AP 0.25W RES 1% 1K BL	API349
R31	MF 0.25W RES 1% 200R BL	API332
R32	RES W/W 0R47 3W CA-RE	AG10007
R33	AP 0.25W RES 1% 1K BL	API349
R34	MF 0.25W RES 1% 47K BL	API389
R35	MF 0.25W RES 1% 470R BL	API341
R36	MF 0.25W RES 1% 20K BL	API380
R37	MF 0.25W RES 1% 20K BL	API380
R38	MF 0.25W RES 1% 1M BL	API421
R39	MF 0.25W RES 1% 1M BL	API421
R40	MF 0.25W RES 1% 100R BL	API325
R41	MF 0.25W RES 1% 20K BL	API380
R42	MF 0.25W RES 1% 470R BL	API341
R43	MF 0.25W RES 1% 20K BL	API380
R44	MF 0.25W RES 1% 47K BL	API389
R45	RES W/W 0R47 3W CA-RE	AG10007
R46	AP 0.25W RES 1% 1K BL	API349
R47	MF 0.25W RES 1% 47R BL	API317
R48	MF 0.25W RES 1% 200R BL	API332
R49	AP 0.25W RES 1% 1K BL	API349
R50	MF 0.25W RES 1% 390R BL	API339
R51	RES W/W 0R47 3W CA-RE	AG10007
R52	MF 0.25W RES 1% 20K BL	API380
R53	MF 0.25W RES 1% 4K7 BL	API365
R54	MF 0.25W RES 1% 100R BL	API325
R55	MF 0.25W RES 1% 20K BL	API380
R56	MF 0.25W RES 1% 100R BL	API325
R57	RES W/W 0R47 3W CA-RE	AG10007
R58	MF 0.25W RES 1% 390R BL	API339
R59	AP 0.25W RES 1% 1K BL	API349
R60	MF 0.25W RES 1% 430R BL	API340
R61	MF 0.25W RES 1% 47R BL	API317
R62	MF 0.25W RES 1% 20K BL	API380
R63	RES 3R3 5% 1W MF PROI XA01-	AE10010
R64	MF 0.25W RES 1% 20K BL	API380
R65	RES W/W 0R47 3W CA-RE	AG10007
R66	MF 0.25W RES 1% 100R BL	API325
R67	MF 0.25W RES 1% 100R BL	API325
R68	MF 0.25W RES 1% 470R BL	API341
R69	MF 0.25W RES 1% 1M BL	API421
R70	MF 0.25W RES 1% 470R BL	API341
R71	MF 0.25W RES 1% 2K BL	API356
R72	MF 0.25W RES 1% 47K BL	API389
R73	MF 0.25W RES 1% 470K BL	API413

R74	MF 0.25W RES 1% 10K BL	API 373
R75	MF 0.25W RES 1% 20K BL	API 380
R76	MF 0.25W RES 1% 47K BL	API 389
R77	MF 0.25W RES 1% 1K5 BL	API 353
R78	AP 0.25W RES 1% 1K BL	API 349
R79	MF 0.25W RES 1% 4K7 BL	API 365
R80	MF 0.25W RES 1% 4K7 BL	API 365
R81	MF 0.25W RES 1% 1K5 BL	API 353
R82	MF 0.25W RES 1% 220K BL	API 405
R83	MF 0.25W RES 1% 1K5 BL	API 353
R84	MF 0.25W RES 1% 220K BL	API 405
R85	MF 0.25W RES 1% 10K BL	API 373
R86	MF 0.25W RES 1% 10K BL	API 373
R87	MF 0.25W RES 1% 510R BL	API 342
R88	MF 0.25W RES 1% 510R BL	API 342
R89	MF 0.25W RES 1% 1M2 BL	API 423
R90	MF 0.25W RES 1% 1M5 BL	API 425
TH1	THERMISTOR NTC 12K	AZ10012
TR1	MJE5731A TRANSISTOR CA-TF	BD10014
TR2	BF422 NPN TRANS	BD0364
TR3	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR4	BF423 PNP TRANS	BD0365
TR5	MJ15024 NPN POWER TRANS TO3	BD0373
TR6	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR7	MJ15024 NPN POWER TRANS TO3	BD0373
TR8	BF422 NPN TRANS	BD0364
TR9	BF423 PNP TRANS	BD0365
TR10	MJ15025 PNP POWER TRANS TO3	BD0374
TR11	BF423 PNP TRANS	BD0365
TR12	BF423 PNP TRANS	BD0365
TR13	BF422 NPN TRANS	BD0364
TR14	BF422 NPN TRANS	BD0364
TR15	MJ15025 PNP POWER TRANS TO3	BD0374
TR16	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR17	HV NPN POWER TRANS TIP50 CA-TF	BD10020
TR18	BF423 PNP TRANS	BD0365
TR19	HV NPN POWER TRANS TIP50 CA-TF	BD10020
TR20	BF423 PNP TRANS	BD0365
TR21	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR22	MJ15025 PNP POWER TRANS TO3	BD0374
TR23	BF422 NPN TRANS	BD0364
TR24	BF422 NPN TRANS	BD0364
TR25	BF423 PNP TRANS	BD0365
TR26	BF423 PNP TRANS	BD0365
TR27	MJ15025 PNP POWER TRANS TO3	BD0374
TR28	BF423 PNP TRANS	BD0365
TR29	MJ15024 NPN POWER TRANS TO3	BD0373
TR30	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR31	MJ15024 NPN POWER TRANS TO3	BD0373
TR32	BF423 PNP TRANS	BD0365
TR33	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR34	MJE5731A TRANSISTOR CA-TF	BD10014
TR35	BF422 NPN TRANS	BD0364
TR36	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR37	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR38	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR39	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR40	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR41	TRANS TIP122 TO220 XE01-	BD10026
TR42	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR43	TRANSISTOR BC546BT NPN TAPED	BD0394R
ZD1	ZENER DIODE 500MW 47V CA-DB	BB10011
ZD10	ZENER DIODE 400MW 20V	BBA20V0
ZD11	ZENER DIODE 500MW 47V CA-DB	BB10011
ZD12	ZENER DIODE 500MW 4.7V 5%CA-DB	BB10007
ZD13	ZENER DIODE 33V	BB0123
ZD14	ZENER DIODE 500MW 2V7 CA-DB	BB10002
ZD2	ZENER DIODE 400MW 20V	BBA20V0
ZD3	ZENER DIODE 500MW 2V7 CA-DB	BB10002
ZD4	ZENER DIODE 500MW 2V7 CA-DB	BB10002
ZD5	ZENER DIODE 500MW 2V7 CA-DB	BB10002
ZD6	ZENER DIODE 400MW 20V	BBA20V0
ZD7	ZENER DIODE 400MW 20V	BBA20V0

ZD8 ZENER DIODE 500MW 2V7 CA-DB
ZD9 ZENER DIODE 500MW 2V7 CA-DB

BB10002
BB10002

GIGRAC 1000ST PCB ASSY

Ident	Description
---	GIGRAC 1000 PROG.PIC V1.00
---	GIGRAC 1000ST PCB SM ASSY
C3	MICRO-BOX 5MM 5% 63V 22N
C4	MICRO BOX 5MM 5% 63V 330N
C6	MICRO-BOX 5MM 5% 63V 33N
C7	MICRO-BOX 5MM 5% 63V 6N8
C10	POLY-CAP 5MM 5% 63V 150N
C11	MICRO-BOX 5MM 5% 63V 3N3
C12	MICRO-BOX 5MM 5% 63V 47N
C13	MICRO-BOX 5MM 5% 470NF 63/100V
C19	MICRO-BOX 5MM 5% 63V 47N
C1A	CAP ELEC VERT 47UF 63V SKP 0.2
C1B	CAP ELEC VERT 47UF 63V SKP 0.2
C1C	CAP ELEC VERT 47UF 63V SKP 0.2
C1D	CAP ELEC VERT 47UF 63V SKP 0.2
C20	MICRO-BOX 5MM 5% 63V 33N
C21	MICRO-BOX 5MM 5% 63V 3N3
C22	MICRO-BOX 5MM 5% 63V 6N8
C23	CAP ELEC VERT 10UF 63V SKP 5X1
C25	MICRO-BOX 5MM 5% 63V 22N
C26	MICRO BOX 5MM 5% 63V 330N
C29	CAP ELEC VERT 100UF 25V SKP
C2A	CAP ELEC VERT 47UF 63V SKP 0.2
C2B	CAP ELEC VERT 47UF 63V SKP 0.2
C2C	CAP ELEC VERT 47UF 63V SKP 0.2
C2D	CAP ELEC VERT 47UF 63V SKP 0.2
C31	MICRO-BOX 5MM 5% 63V 47N
C32	MICRO-BOX 5MM 5% 470NF 63/100V
C36	CAP ELEC VERT 100UF 25V SKP
C37	POLY-CAP 5MM 5% 63V 150N
C38	MICRO-BOX 5MM 5% 63V 3N3
C39	MICRO-BOX 5MM 5% 63V 47N
C40	MICRO-BOX 5MM 5% 63V 3N3
C41	CAP ELEC VERT 100UF 25V SKP
C42	CAP ELEC VERT 100UF 25V SKP
C44	MICRO-BOX 5MM 5% 63V 33N
C45	MICRO-BOX 5MM 5% 63V 6N8
C49	CAP ELEC VERT 33UF 16V SSP
C51	CAP ELEC VERT 33UF 16V SSP
C53	MICRO-BOX 5MM 5% 63V 47N
C55	MICRO-BOX 5MM 5% 63V 3N3
C5A	CAP ELEC VERT 470UF 6.3V SKP 8
C5B	CAP ELEC VERT 470UF 6.3V SKP 8
C5C	CAP ELEC VERT 470UF 6.3V SKP 8
C5D	CAP ELEC VERT 470UF 6.3V SKP 8
C61	CAP ELEC VERT 220UF 6.3V 6X11M
C63	CAP ELEC VERT 33UF 16V SSP
C64	CAP ELEC VERT 10UF 16V SSP
C65	CAP ELEC VERT 33UF 16V SSP
C66	CAP ELEC VERT 33UF 16V SSP
C69	MICRO-BOX 5MM 5% 63V 22N
C70	MICRO BOX 5MM 5% 63V 330N
C71	CAP ELEC VERT 10UF 63V SKP 5X1
C72	CAP ELEC VERT 10UF 16V SSP
C73	POLY-CAP 5MM 5% 63V 150N
C74	MICRO-BOX 5MM 5% 63V 3N3
C75	MICRO-BOX 5MM 5% 63V 47N
C76	MICRO-BOX 5MM 5% 470NF 63/100V
C77	CAP ELEC VERT 4.7UF 50V SKP
C78	CAP ELEC VERT 10UF 63V SKP 5X1
C79	CAP ELEC VERT 10UF 16V SSP
C80	CAP ELEC VERT 220UF 6.3V 6X11M
C81	CAP ELEC VERT 10UF 16V SSP
C82	CAP ELEC VERT 10UF 16V SSP
C83	CAP ELEC VERT 10UF 16V SSP
C86	CAP ELEC VERT 10UF 16V SSP
C87	CAP ELEC VERT 10UF 16V SSP

R-S2017A-02-AF

Part Number
M-S2017A-1.00
R-S2017A-02-SM
CC0246
CC0264
CC0247
CC0243
CC0261
CC0241
CC0248
CC0267
CC0248
CE0402
CE0402
CE0402
CE0402
CC0247
CC0241
CC0243
CE0462
CC0246
CC0264
CE0446
CE0402
CE0402
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CC0248
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CE0446
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CE0449
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CE0423
CE0457
CE0448
CE0457
CE0457
CC0246
CC0264
CE0462
CE0448
CC0261
CC0241
CC0248
CC0267
CE0440
CE0462
CE0448
CE0423
CE0448
CE0448
CE0448
CE0448
CE0448

C88	CAP ELEC VERT 220UF 6.3V 6X11M	CE0423
C89	CAP ELEC VERT 220UF 6.3V 6X11M	CE0423
C93	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C94	CAP ELEC VERT 220UF 6.3V 6X11M	CE0423
C96	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C97	CAP ELEC VERT 10UF 63V SKP 5X1	CE0462
C98	CAP ELEC VERT 10UF 16V SSP	CE0448
C9A	CAP ELEC VERT 10UF 16V SSP	CE0448
C9B	CAP ELEC VERT 10UF 16V SSP	CE0448
C9C	CAP ELEC VERT 10UF 16V SSP	CE0448
C9D	CAP ELEC VERT 10UF 16V SSP	CE0448
C102	CAP ELEC VERT 10UF 16V SSP	CE0448
C103	CAP ELEC VERT 10UF 16V SSP	CE0448
C108	MICRO BOX 5MM 5% 63V 330N	CC0264
C10A	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C10B	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C10C	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C10D	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C11A	MICRO-BOX 5MM 5% 63V 15N	CC0245
C11B	MICRO-BOX 5MM 5% 63V 15N	CC0245
C11C	MICRO-BOX 5MM 5% 63V 15N	CC0245
C11D	MICRO-BOX 5MM 5% 63V 15N	CC0245
C12A	MICRO-BOX 5MM 5% 63V 15N	CC0245
C12B	MICRO-BOX 5MM 5% 63V 15N	CC0245
C12C	MICRO-BOX 5MM 5% 63V 15N	CC0245
C12D	MICRO-BOX 5MM 5% 63V 15N	CC0245
C13A	MICRO-BOX 5MM 5% 63V 68N	CC0249
C13B	MICRO-BOX 5MM 5% 63V 68N	CC0249
C13C	MICRO-BOX 5MM 5% 63V 68N	CC0249
C13D	MICRO-BOX 5MM 5% 63V 68N	CC0249
C63A	CAP ELEC VERT 470UF 6.3V SKP 8	CE0449
C63B	CAP ELEC VERT 470UF 6.3V SKP 8	CE0449
C63C	CAP ELEC VERT 470UF 6.3V SKP 8	CE0449
C63D	CAP ELEC VERT 470UF 6.3V SKP 8	CE0449
C68A	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C68B	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C68C	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C68D	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C69A	MICRO-BOX 5MM 5% 63V 15N	CC0245
C69B	MICRO-BOX 5MM 5% 63V 15N	CC0245
C69C	MICRO-BOX 5MM 5% 63V 15N	CC0245
C69D	MICRO-BOX 5MM 5% 63V 15N	CC0245
C70A	MICRO-BOX 5MM 5% 63V 68N	CC0249
C70B	MICRO-BOX 5MM 5% 63V 68N	CC0249
C70C	MICRO-BOX 5MM 5% 63V 68N	CC0249
C70D	MICRO-BOX 5MM 5% 63V 68N	CC0249
C71A	MICRO-BOX 5MM 5% 63V 15N	CC0245
C71B	MICRO-BOX 5MM 5% 63V 15N	CC0245
C71C	MICRO-BOX 5MM 5% 63V 15N	CC0245
C71D	MICRO-BOX 5MM 5% 63V 15N	CC0245
C72A	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C72B	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C72C	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C72D	MICRO-BOX 5MM 5% 63V 4N7	CC0242
C73A	MICRO-BOX 5MM 5% 63V 15N	CC0245
C73B	MICRO-BOX 5MM 5% 63V 15N	CC0245
C73C	MICRO-BOX 5MM 5% 63V 15N	CC0245
C73D	MICRO-BOX 5MM 5% 63V 15N	CC0245
C74A	MICRO-BOX 5MM 5% 63V 68N	CC0249
C74B	MICRO-BOX 5MM 5% 63V 68N	CC0249
C74C	MICRO-BOX 5MM 5% 63V 68N	CC0249
C74D	MICRO-BOX 5MM 5% 63V 68N	CC0249
C75A	MICRO-BOX 5MM 5% 63V 15N	CC0245
C75B	MICRO-BOX 5MM 5% 63V 15N	CC0245
C75C	MICRO-BOX 5MM 5% 63V 15N	CC0245
C75D	MICRO-BOX 5MM 5% 63V 15N	CC0245
C207A	CAP ELEC VERT 10UF 16V SSP	CE0448
C207B	CAP ELEC VERT 10UF 16V SSP	CE0448
C207C	CAP ELEC VERT 10UF 16V SSP	CE0448
C207D	CAP ELEC VERT 10UF 16V SSP	CE0448
C208A	CAP ELEC VERT 10UF 16V SSP	CE0448
C208B	CAP ELEC VERT 10UF 16V SSP	CE0448
C208C	CAP ELEC VERT 10UF 16V SSP	CE0448

C208D	CAP ELEC VERT 10UF 16V SSP	CE0448
CN1	10WY 2MM VERT ML HDR(CHINA)	FF1003
CN2	DUAL PC PHONO VERT 24MM CLIFF	FH0768
CN3	DUAL PC PHONO VERT 24MM CLIFF	FH0768
CN1A	DUAL PC PHONO VERT 24MM CLIFF	FH0768
CN1B	DUAL PC PHONO VERT 24MM CLIFF	FH0768
FDR1	FADER 10K\10K-CD.30MM TRV.PAN.	DD0469
FDR10	PAN GRAPHIC FADER 10KB	DD0411
FDR11	PAN GRAPHIC FADER 10KB	DD0411
FDR12	PAN GRAPHIC FADER 10KB	DD0411
FDR13	PAN GRAPHIC FADER 10KB	DD0411
FDR14	PAN GRAPHIC FADER 10KB	DD0411
FDR2	FADER 10K\10K-CD.30MM TRV.PAN.	DD0469
FDR3	FADER 10K\10K-CD.30MM TRV.PAN.	DD0469
FDR4	FADER 10K\10K-CD.30MM TRV.PAN.	DD0469
FDR5	FADER 10K\10K-CD.30MM TRV.PAN.	DD0469
FDR6	FADER 10K\10K-CD.30MM TRV.PAN.	DD0469
FDR7	FADER 10K\10K-CD.30MM TRV.PAN.	DD0469
FDR8	PAN GRAPHIC FADER 10KB	DD0411
FDR9	PAN GRAPHIC FADER 10KB	DD0411
JK3	JACK SKT STEREO 5PIN LIH SHENG	FH0793
JK4	JACK SKT STEREO 3PIN LIH SHENG	FH0792
JK5	JACK SKT STEREO 5PIN LIH SHENG	FH0793
JK6	JACK SKT STEREO 3PIN LIH SHENG	FH0792
JK7	JACK SKT STEREO 3PIN LIH SHENG	FH0792
JK8	JACK SKT STEREO 3PIN LIH SHENG	FH0792
JK9	JACK SKT STEREO 3PIN LIH SHENG	FH0792
JK10	JACK SKT STEREO 3PIN LIH SHENG	FH0792
JK1A	JACK SKT STEREO 5PIN LIH SHENG	FH0793
JK1B	JACK SKT STEREO 5PIN LIH SHENG	FH0793
LED1	LED 3MM ULTRA RED ROUND	JA10025
LED1	LED SPACER 0.1"PITCH 12MM	JZ2230
LED2	LED 3MM ULTRA RED ROUND	JA10025
LED2	LED SPACER 0.1"PITCH 12MM	JZ2230
LED3	LED 3MM ULTRA RED ROUND	JA10025
LED3	LED SPACER 0.1"PITCH 12MM	JZ2230
LED4	LED 3MM ULTRA RED ROUND	JA10025
LED4	LED SPACER 0.1"PITCH 12MM	JZ2230
LED5	LED 3MM ULTRA BLUE ROUND	JA10027
LED5	LED SPACER 0.1"PITCH 12MM	JZ2230
LED6	LED 3MM ULTRA BLUE ROUND	JA10027
LED6	LED SPACER 0.1"PITCH 12MM	JZ2230
LED7	LED 3MM ULTRA BLUE ROUND	JA10027
LED7	LED SPACER 0.1"PITCH 12MM	JZ2230
LED8	LED 3MM ULTRA BLUE ROUND	JA10027
LED8	LED SPACER 0.1"PITCH 12MM	JZ2230
LED9	LED 3MM ULTRA WHITE ROUND	JA10026
LED9	LED SPACER 0.1"PITCH 12MM	JZ2230
LED10	LED 3MM ULTRA WHITE ROUND	JA10026
LED10	LED SPACER 0.1"PITCH 12MM	JZ2230
LED11	LED 3MM ULTRA WHITE ROUND	JA10026
LED11	LED SPACER 0.1"PITCH 12MM	JZ2230
LED12	LED 3MM ULTRA WHITE ROUND	JA10026
LED12	LED SPACER 0.1"PITCH 12MM	JZ2230
LED13	LED 3MM ULTRA RED ROUND	JA10025
LED13	LED SPACER 0.1"PITCH 12MM	JZ2230
LED14	LED 3MM ULTRA RED ROUND	JA10025
LED14	LED SPACER 0.1"PITCH 12MM	JZ2230
LED15	LED 3MM ULTRA BLUE ROUND	JA10027
LED15	LED SPACER 0.1"PITCH 12MM	JZ2230
LED16	LED 3MM ULTRA BLUE ROUND	JA10027
LED16	LED SPACER 0.1"PITCH 12MM	JZ2230
LED17	LED 3MM ULTRA BLUE ROUND	JA10027
LED17	LED SPACER 0.1"PITCH 12MM	JZ2230
LED18	LED 3MM ULTRA BLUE ROUND	JA10027
LED18	LED SPACER 0.1"PITCH 12MM	JZ2230
LED19	LED 3MM ULTRA WHITE ROUND	JA10026
LED19	LED SPACER 0.1"PITCH 12MM	JZ2230
LED20	LED 3MM ULTRA WHITE ROUND	JA10026
LED20	LED SPACER 0.1"PITCH 12MM	JZ2230
LED21	LED 3MM ULTRA WHITE ROUND	JA10026
LED21	LED SPACER 0.1"PITCH 12MM	JZ2230
LED22	LED 3MM ULTRA WHITE ROUND	JA10026

LED22	LED SPACER 0.1"PITCH 12MM	JZ2230
LED23	LED 3MM ULTRA RED ROUND	JA10025
LED23	LED SPACER 0.1"PITCH 12MM	JZ2230
LED24	LED 3MM ULTRA RED ROUND	JA10025
LED24	LED SPACER 0.1"PITCH 12MM	JZ2230
LED25	LED 3MM ULTRA RED ROUND	JA10025
LED25	LED SPACER 0.1"PITCH 12MM	JZ2230
LED26	LED 3MM ULTRA RED ROUND	JA10025
LED26	LED SPACER 0.1"PITCH 12MM	JZ2230
LED27	LED 3MM ULTRA BLUE ROUND	JA10027
LED27	LED SPACER 0.1"PITCH 12MM	JZ2230
LED28	LED 3MM ULTRA BLUE ROUND	JA10027
LED28	LED SPACER 0.1"PITCH 12MM	JZ2230
LED29	LED 3MM ULTRA BLUE ROUND	JA10027
LED29	LED SPACER 0.1"PITCH 12MM	JZ2230
LED30	LED 3MM ULTRA BLUE ROUND	JA10027
LED30	LED SPACER 0.1"PITCH 12MM	JZ2230
LED31	LED 3MM ULTRA BLUE ROUND	JA10027
LED31	LED SPACER 0.1"PITCH 12MM	JZ2230
LED32	LED 3MM ULTRA BLUE ROUND	JA10027
LED32	LED SPACER 0.1"PITCH 12MM	JZ2230
LED33	LED 3MM ULTRA BLUE ROUND	JA10027
LED33	LED SPACER 0.1"PITCH 12MM	JZ2230
LED34	LED 3MM ULTRA BLUE ROUND	JA10027
LED34	LED SPACER 0.1"PITCH 12MM	JZ2230
LED35	LED 3MM ULTRA RED ROUND	JA10025
LED35	LED SPACER 0.1"PITCH 12MM	JZ2230
LED36	LED 3MM ULTRA BLUE ROUND	JA10027
LED36	LED SPACER 0.1"PITCH 12MM	JZ2230
LED37	LED 3MM ULTRA BLUE ROUND	JA10027
LED37	LED SPACER 0.1"PITCH 12MM	JZ2230
R3A	MF 0.25W RES 1% 6K8 BL	API369
R3B	MF 0.25W RES 1% 6K8 BL	API369
R3C	MF 0.25W RES 1% 6K8 BL	API369
R3D	MF 0.25W RES 1% 6K8 BL	API369
R4A	MF 0.25W RES 1% 6K8 BL	API369
R4B	MF 0.25W RES 1% 6K8 BL	API369
R4C	MF 0.25W RES 1% 6K8 BL	API369
R4D	MF 0.25W RES 1% 6K8 BL	API369
SW5	ALPS SWITCH L/TRAVEL VERT	DF0660
SW6	ALPS SWITCH L/TRAVEL VERT	DF0660
SW7	ALPS SWT L/TRAVEL VERT MOM	DF0662
SW8	ALPS SWITCH L/TRAVEL VERT	DF0660
SW1A	ALPS SWITCH L/TRAVEL VERT	DF0660
SW1B	ALPS SWITCH L/TRAVEL VERT	DF0660
SW1C	ALPS SWITCH L/TRAVEL VERT	DF0660
SW1D	ALPS SWITCH L/TRAVEL VERT	DF0660
TR1A	PNP TRANS 2SB737 LOW RBB	BD0346
TR1B	PNP TRANS 2SB737 LOW RBB	BD0346
TR1C	PNP TRANS 2SB737 LOW RBB	BD0346
TR1D	PNP TRANS 2SB737 LOW RBB	BD0346
TR2A	PNP TRANS 2SB737 LOW RBB	BD0346
TR2B	PNP TRANS 2SB737 LOW RBB	BD0346
TR2C	PNP TRANS 2SB737 LOW RBB	BD0346
TR2D	PNP TRANS 2SB737 LOW RBB	BD0346
TR9A	PNP TRANS 2SB737 LOW RBB	BD0346
TR9B	PNP TRANS 2SB737 LOW RBB	BD0346
TR9C	PNP TRANS 2SB737 LOW RBB	BD0346
TR9D	PNP TRANS 2SB737 LOW RBB	BD0346
TR10A	PNP TRANS 2SB737 LOW RBB	BD0346
TR10B	PNP TRANS 2SB737 LOW RBB	BD0346
TR10C	PNP TRANS 2SB737 LOW RBB	BD0346
TR10D	PNP TRANS 2SB737 LOW RBB	BD0346
VR1	POT 50KK 9MM VRT MTG TW-ALPHA-	DM10031
VR2	POT 50KK X2 12MM VERT TA RV1 I2	DM10042
VR3	POT 20K 9MM VERT 41 CLKS TWA R	DM10033
VR4	POT 20KK DUAL 12MM TWA RV1 I2	DM10035
VR5	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR101A	POT 20K VRT MTG 9MM C/D TWA RV	DM10029
VR101B	POT 20K VRT MTG 9MM C/D TWA RV	DM10029
VR101C	POT 20K VRT MTG 9MM C/D TWA RV	DM10029
VR101D	POT 20K VRT MTG 9MM C/D TWA RV	DM10029
VR102A	POT 20K VRT MTG 9MM C/D TWA RV	DM10029

VR102B	POT 20K VRT MTG 9MM C/D TWA RV	DM10029
VR102C	POT 20K VRT MTG 9MM C/D TWA RV	DM10029
VR102D	POT 20K VRT MTG 9MM C/D TWA RV	DM10029
VR103A	POT 20K VRT MTG 9MM C/D TWA RV	DM10029
VR103B	POT 20K VRT MTG 9MM C/D TWA RV	DM10029
VR103C	POT 20K VRT MTG 9MM C/D TWA RV	DM10029
VR103D	POT 20K VRT MTG 9MM C/D TWA RV	DM10029
VR104A	POT 10KAC CD 14MM VERT TWA RVI	DM10034
VR104B	POT 10KAC CD 14MM VERT TWA RVI	DM10034
VR104C	POT 10KAC CD 14MM VERT TWA RVI	DM10034
VR104D	POT 10KAC CD 14MM VERT TWA RVI	DM10034
VR105A	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR105B	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR105C	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR105D	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR106A	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR106B	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR106C	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR106D	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR107A	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR107B	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR107C	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR107D	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR501A	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR501B	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR501C	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR501D	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR502A	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR502B	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR502C	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR502D	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR503A	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR503B	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR503C	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR503D	POT 12MM VERT 20KBX2 TWA RVI 12	DM10036
VR504A	POT 10KAC CD 14MM VERT TWA RVI	DM10034
VR504B	POT 10KAC CD 14MM VERT TWA RVI	DM10034
VR504C	POT 10KAC CD 14MM VERT TWA RVI	DM10034
VR504D	POT 10KAC CD 14MM VERT TWA RVI	DM10034
VR505A	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR505B	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR505C	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR505D	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR506A	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR506B	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR506C	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR506D	POT 20KK 9MM VRT MTG TW-ALPHA-	DM10030
VR507A	POT 20KK DUAL 12MM TWA RVI 12	DM10035
VR507B	POT 20KK DUAL 12MM TWA RVI 12	DM10035
VR507C	POT 20KK DUAL 12MM TWA RVI 12	DM10035
VR507D	POT 20KK DUAL 12MM TWA RVI 12	DM10035
XLI	XTAL 12.288MHZ HC49/4 XI01-	ZE10005
XLR1A	JACK/XLR COMBO NCJ6FI-V-0	FHI0004
XLR1B	JACK/XLR COMBO NCJ6FI-V-0	FHI0004
XLR1C	JACK/XLR COMBO NCJ6FI-V-0	FHI0004
XLR1D	JACK/XLR COMBO NCJ6FI-V-0	FHI0004
XLR5A	JACK/XLR COMBO NCJ6FI-V-0	FHI0004
XLR5B	JACK/XLR COMBO NCJ6FI-V-0	FHI0004
XLR5C	JACK/XLR COMBO NCJ6FI-V-0	FHI0004
XLR5D	JACK/XLR COMBO NCJ6FI-V-0	FHI0004

PSU BOARD-GIGRAC 1000

Ident	Description
---	WIREFORM EARTH GIGRAC E
---	CABLE TIE XV02-
---	PCB PSU BOARD GIGRAC 900
---	HEATSINK THERMALLOY 7121D XV05-
---	POWER STN MIXER PSU HEATSINK
---	DRIVER MOUNTING CLIP
BRI	BRIDGE REC 35A 600V
C1	(Safety Critical Part)! CAP CER 220PF 250VAC Y2 MURAT
C2	CAP ELEC VERT 1UF 63V SSP 4D 7

R-S2017B-03-AF

Part Number
L-S2010C-01
LZ10008
S-S2017B-03
PN10004
PN1240
ZC0231
BC10004
CC8004
CE0485

C3	CAP ELEC VERT 4700 100V LPW		CE0467
C4	CAP ELEC VERT 4700 100V LPW		CE0467
C5	CAP CER ML 10N 100V 5MM		CA0027
C6	CAP CER ML 10N 100V 5MM		CA0027
C7	(Safety Critical Part)! CAP 275V 1UF X2	XC09-	CX10000
C8	CAP CER ML 10N 100V 5MM		CA0027
C9	CAP CER ML 10N 100V 5MM		CA0027
C15	CAP ELEC VERT 100UF 25V SKP		CE0446
C35	POLY-CAP 400V 470N	XC09-	CC10078
C36	(Safety Critical Part)! CAP 275V 1UF X2	XC09-	CX10000
C38	CAP ELEC 2700UF 200V RAD RM10		CE10055
C39	CAP ELEC 2700UF 200V RAD RM10		CE10055
C40	CAP ELEC VERT 4700 100V LPW		CE0467
C41	CAP CER 470PF 1000V	XC03-	CA10023
C42	CAP ELEC VERT 100UF 10V TPD SK		CE0403
C43	CAP ELEC VERT 10UF 400V TKP 10		CE0509
C44	CAP ELEC VERT 4700 100V LPW		CE0467
C45	CAP ELEC 2700UF 200V RAD RM10		CE10055
C46	CAP ELEC 2700UF 200V RAD RM10		CE10055
C47	(Safety Critical Part)! POLYPROPYLENE 2200PF 250VAC (C		CC0288
C48	(Safety Critical Part)! POLYPROPYLENE 2200PF 250VAC (C		CC0288
C49	CAP ELEC VERT 100UF 63V SKP 5M		CE0430
C53	CAP ELEC VERT 1UF 63V SSP 4D 7		CE0485
C54	CAP CER 470PF 1000V	XC03-	CA10023
C55	CAP CER 470PF 1000V	XC03-	CA10023
C56	CAP ELEC 220UF 63V 105C	XC06-	CE10033
C57	MICRO-BOX 5MM 5% 63V 1N		CC0238
C58	CAP ELEC 220UF 63V 105C	XC06-	CE10033
C59	CAP ELEC 220UF 63V 105C	XC06-	CE10033
C60	CAP ELEC VERT 10UF 63V SKP 5X1		CE0462
C61	CAP ELEC VERT 10UF 63V SKP 5X1		CE0462
C63	CAP CER ML 0.1UF 50V 5MM		CA0026
C64	CAP CER ML 0.1UF 50V 5MM		CA0026
C65	CAP CER ML 0.1UF 50V 5MM		CA0026
C66	CAP CER ML 0.1UF 50V 5MM		CA0026
C67	CAP ELEC VERT 10UF 63V SKP 5X1		CE0462
CN1	(Safety Critical Part)! IEC FILTERED 10AMP CONN XL02-		FJ10005
CN2	2WY 0.1 ST&F/L CONN HDR CA-CO		FF10046
CN3	5WY 2MM VERT ML HDR CHINA		FF10097
CN4	SPEAKON ML HORIZ PCB		FK0991
CN5	SPEAKON ML HORIZ PCB		FK0991
CN9	JACK SKT MONO SW HORIZ		FH10005
CN10	JACK SKT MONO SW HORIZ		FH10005
CN11	2WY 0.1 ST&F/L CONN HDR CA-CO		FF10046
D1	DIODE IN4148		BA0001
D2	DIODE IN4148		BA0001
D16	RECTIFIER MUR1640CT	XD04-	BC10003
D17	RECTIFIER MUR1640CT	XD04-	BC10003
D18	RECTIFIER MUR1640CT	XD04-	BC10003
D19	RECTIFIER MUR1640CT	XD04-	BC10003
D20	DIODE IN4148		BA0001
D22	DIODE FAST TYPE EGP10G 400V 1A		BA10014
D24	DIODE FAST TYPE EGP10G 400V 1A		BA10014
D25	DIODE IN4007		BA0010
D26	DIODE FAST TYPE EGP10G 400V 1A		BA10014
D27	DIODE FAST TYPE EGP10G 400V 1A		BA10014
F1	(Safety Critical Part)! FUSEHOLDER 10A 250V PCB MTG		ZD0332
FET1	IRF740 MOSFET TO220		BD10030
IC5	(A) PWM CONT SG3525AN	XF04-	BZ10000
L1	FERRITE BEAD AX 5X3.5MM TAPED		HC0021
L2	FERRITE BEAD AX 5X3.5MM TAPED		HC0021
L3	CHOKE COMMON MODE TYPE		H-S2017B-01
L4	INDUCTOR 10UH TOKO R621LY-100K		HC0028
L5	CHOKE 15 TURN MEDIUM	CA-EL	HC10004
L6	CHOKE 15 TURN MEDIUM	CA-EL	HC10004
L7	INDUCTOR 10UH TOKO R621LY-100K		HC0028
L8	INDUCTOR 10UH TOKO R621LY-100K		HC0028
OPTO1	(Safety Critical Part)! OPTO TRANSISTR HI IAVI AVM		BD0396
R1	RES 47K0 5% 1W MF PRO1	XA01-	AE10002
R2	MF 0.25W RES 1% 3K3 BL		AP1361
R3	MF 0.25W RES 1% 680R BL		AP1345
R4	MF 1W RES 5% 10R PRO1		AE0100
R5	MF 1W RES 5% 10R PRO1		AE0100

R6	MF 0.25W RES 1% 100K BL	API397
R7	RES W/W 22R 17W 5%	AM0069
R8	MF 0.25W RES 1% 680K BL	API417
R9	RES 47K0 5% 1W MF PRO1 XA01-	AE10002
R10	MF 0.25W RES 1% 220K BL	API405
R11	MF 0.25W RES 1% 620R BL	API344
R12	MF 0.25W RES 1% 680R BL	API345
R13	MF 0.25W RES 1% 15K BL	API377
R15	ZERO OHM RESISTOR (METAL SLUG)	AZ2222
R16	MF 0.25W RES 1% 680R BL	API345
R17	MF 0.25W RES 1% 22K BL	API381
R18	RES 0R47 5% 2W MF PF02	AE10036
R84	RES 50R 5W THICK FILM XA01-	AJ10002
R85	RES 50R 5W THICK FILM XA01-	AJ10002
R86	RES 47K0 5% 1W MF PRO1 XA01-	AE10002
R87	MF 0.25W RES 1% 20K BL	API380
R88	MF 0.25W RES 1% 10K BL	API373
R89	MF 0.25W RES 1% 47K BL	API389
R90	MF 0.25W RES 1% 470K BL	API413
R91	100R 2W MF RESISTOR PRO2	AE10027
R92	RES 47K0 5% 1W MF PRO1 XA01-	AE10002
R93	MF 0.25W RES 1% 330K BL	API409
R94	MF 0.25W RES 1% 4K7 BL	API365
R95	MF 2W RES 5% 150K	AE2154
R96	MF 0.25W RES 1% 100K BL	API397
R97	MF 0.25W RES 1% 1M BL	API421
R98	MF 0.25W RES 1% 100R BL	API325
R99	MF 0.25W RES 1% 12K BL	API375
R100	MF 0.25W RES 1% 10K BL	API373
R101	MF 0.25W RES 1% 10K BL	API373
R102	MF 1W RES 5% 4R7 PRO1	AE0047
R103	MF 1W RES 5% 4R7 PRO1	AE0047
R104	MF 1W RES 5% 4R7 PRO1	AE0047
R105	MF 1W RES 5% 4R7 PRO1	AE0047
R106	MF 0.25W RES 1% 7K5 BL	API370
R107	MF 1W RES 5% 10R PRO1	AE0100
R108	MF 0.25W RES 1% 10K BL	API373
R109	MF 0.25W RES 1% 100R BL	API325
R110	MF 0.25W RES 1% 100R BL	API325
RLY1	RELAY SPCO 16A 48V XK06-	DZ10012
RLY2	RELAY SPCO 16A 48V XK06-	DZ10012
SP1	1/4" PC MNTNG BLADE VERT	FF0676
SP2	1/4" PC MNTNG BLADE VERT	FF0676
SP3	1/4" PC MNTNG BLADE VERT	FF0676
SP4	1/4" PC MNTNG BLADE VERT	FF0676
SP5	1/4" PC MNTNG BLADE VERT	FF0676
SP6	1/4" PC MNTNG BLADE VERT	FF0676
SP7	1/4" PC MNTNG BLADE VERT	FF0676
SP8	1/4" PC MNTNG BLADE VERT	FF0676
SP9	1/4" PC MNTNG BLADE VERT	FF0676
SP10	1/4" PC MNTNG BLADE VERT	FF0676
TX1	TRANSFORMER	H-S2017A-03
TX2	TRANSFORMER FET DRIVER W	H-C300A-01
TH1	THERMISTOR NTC 12K	AZ10012
TH3	(Safety Critical Part)! THERMISTOR MAIN VOLTAGE CA-DB	BZ10002
TR1	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR2	TRANS TIP122 TO220 XE01-	BD10026
TR3	TRANSISTOR BC556BT PNP TAPED	BD0395R
TR4	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR5	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR22	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR23	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR24	TRANSISTOR BC546BT NPN TAPED	BD0394R
TR25	ZTX651 NPN TRANSISTOR	BD10042
TR26	ZTX651 NPN TRANSISTOR	BD10042
TR27	ZTX751 PNP TRANSISTOR	BD10043
TR28	ZTX751 PNP TRANSISTOR	BD10043
TR29	TRANS IRG4PC50KD IGBT XE01-	BD10025
TR30	TRANS IRG4PC50KD IGBT XE01-	BD10025
TR31	TRANS TIP122 TO220 XE01-	BD10026
ZD10	ZENER DIODE 500MW 2V7 CA-DB	BB10002
ZD11	ZENER DIODE 500MW 27V	BB0128
ZD12	ZENER DIODE 500MW 2V7 CA-DB	BB10002

ZD13	ZENER DIODE 500MW 24VOLT I	BB10022
ZD2	ZENER DIODE 500MV 15V CA-DB	BB10005
ZD3	ZENER DIODE 500MW 6V8 CA-DB	BB10009
ZD4	ZENER DIODE 400MW 20V	BBA20V0

MISCELLANEOUS HARDWARE

Description	Part Number	Used in: (part number)
BLK FIBRE 5.54X3.05X.8X.1 WSHR	NC0301	RW5673, RW5708
CORD-ELASTICATED 3MM DIA. BLK	NZ10017	RW5673, RW5708
CUP WASHER M6	NC10025	RW5673, RW5708
GIGRAC 1000ST OUTER CARTON	TA10032	RW5673
M3 NYLON INSERT NUT ZINC	NB0113	R-S2017B-03-AF, RW5673, RW5708
M3 PLAIN NUT ZINC	NB0122	R-S2010B-03-AF, R-S2010B-04-AF
M3 S/PROOF WASHER ZINC	NC0221	RW5673, RW5708
M3 SPLIT WASHER	NCA0000	R-S2010B-03-AF, R-S2010B-04-AF
M3.5X30 PAN HD SCREW POZIZINC/	NA10068	RW5673, RW5708
M3X12MM PAN POZI ZINC SCR	NA0323	R-S2010B-03-AF, R-S2010B-04-AF
M3X30 SPACER HEX BRASS NKL PLT	ND0464	RW5673, RW5708
M3X6 HEX HD SKT SCREW Z/P	NA10070	RW5673, RW5708
M3X6 PAN POZI SELF COLOUR ISO	NA0155	RW5673, RW5708
M3X6MM GRUB SKT HD CONE PNT	NA0313	RW5673, RW5708
M3X8MM PAN POZI PLTD SCR ISO	NA0116	R-S2017B-03-AF
M4X8 CSK HEX HD SKT SCREWZ/PAS	NA10069	RW5673, RW5708
M4X8MM PAN POZI SCR ZINC	NA0225	RW5673, RW5708
M4X8MM PAN POZI TAPTITE ZINC	NA0295	RW5673, RW5708
NO.4X3/8" PAN POZI S/T BLK SCR	NA0249	RW5673, RW5708
NO.6X1/4" PAN POZI S/T TYPE B	NA0137	RW5673, RW5708
NO.8X3/8" PLASTITE BLK	NA0392	RW5673, RW5708
RIVET 4MM DOMED (MONEL 4.5)	NF0509	RW5673, RW5708
SPACER NYLON 3.2IDX4.8ODX3.2LG	ND10042	R-S2010B-03-AF, R-S2010B-04-AF
VIB RES CRIMP TAG V3 TIN PLT	NE0415	L-S2010C-01