

# OFFICIAL WARWICK AMP OWNER MANUAL

## ENGLISH

**Warwick®**

***Basses, Amps & Rock'n Roll.***

Congratulations on the purchase of the new Warwick amplifier head/combo.

Please read these instructions through before connecting and operating the device.

If you keep to the guidelines set out in this manual, you will soon be able to appreciate the quality of

this new Warwick amplifier. Please keep this instruction booklet handy in case you need to consult it again.

Please send the **PASSPORT** to the address indicated therein.

## RECOMMENDATIONS

The following recommendations are designed to ensure that the device always functions reliably: **Never open the casing!** To do so would expose you to the risk of an electric shock. Should repairs prove necessary, leave them to qualified service personnel.

Avoid dust and high moisture levels, direct sunlight and extremely high or low temperature. Safeguard the device from excessive vibration. Always place the unit on a stable and horizontal surface.

See to adequate ventilation. The device should not be placed on soft surfaces (carpet, cushions, etc.). When mounting it in a rack, make sure that the rear and lateral cooling vents remain unobstructed (amp heads), resp. that the rear cooling vents remain unobstructed (combos).

Avoid leaving the unit near radiators or other

objects producing heat.

Internal components should only be adjusted or cleaned by qualified service technicians.

Ensure no object or liquid penetrates the device through its cooling vents.

**When replacing a fuse make sure you fit in one of identical value!**

Have the device examined by a qualified service technician in the following cases:

- the mains lead or mains switch have been damaged,
- objects or liquids have penetrated the device,
- it has been exposed to excessive moisture,
- malfunctions or abnormal operating conditions have occurred,
- the device has been dropped or the casing damaged.

## HINTS

To ensure secure rack or sleeve mounting you will find two nuts on the bottom side of the amplifier for additional fastening (all amp heads).

Do only operate effects pedals in-between the instrument and the amplifier, as these devices are not designed for the supplied load of an effects loop.

- Remove the plug whenever changing a fuse.
- Only ever replace a fuse with another of the same type. Never bridge defective fuses.
- Make sure the top and bottom of the device are properly ventilated and that the vents are not blocked. In the rack, leave at least 2cm free above the unit and do not remove the feet.
- Do not subject the device to excessive vibration or hard jolts as these could damage the valves ("tubes").
- After using the device, allow around 10 minutes for the valves to cool down before moving it.
- At power-up, the valves (tubes) need at least 30 seconds to warm up before achieving operation

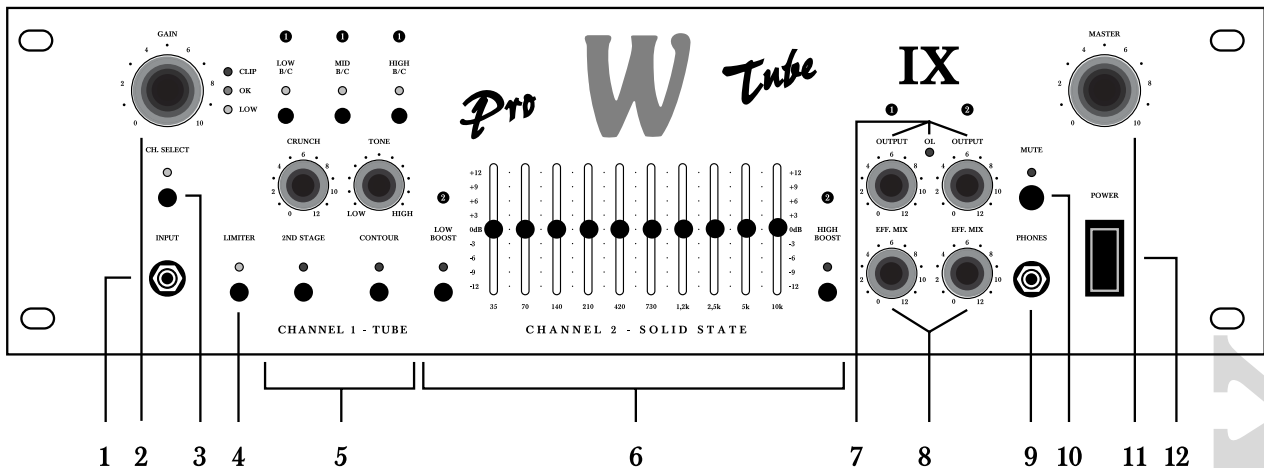
Each W-Pro unit has been conceived to match perfectly as a system-component within this series. Therefore best sound results can be achieved by mutual combination of these devices.

Many combinations are possible and allow gradual upgrading of several high-quality systems within different performance scales and for almost every kind of application.

readiness and a further few minutes before they can deliver full power.

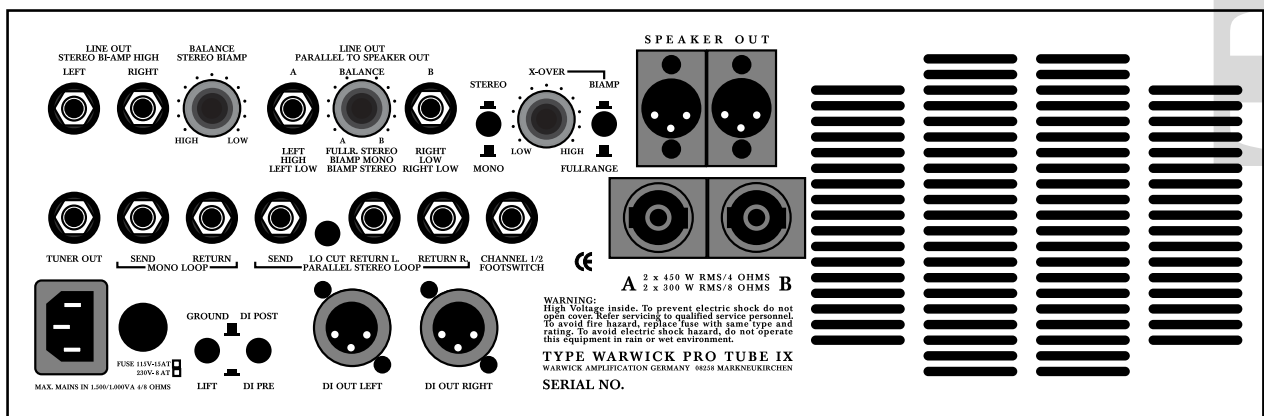
- When changing the valves, replace them only with valves selected by Warwick, to avoid problems like noise, microphonism and imbalance. (special selection criteria).
- Valves can become very hot. Danger of combustion.
- Don't undertake repairs yourself.
- Only allow the case to be opened by qualified personnel. (Remove the plug).
- Repairs and valve changes should only be undertaken by qualified personnel.

## FRONT PANEL CONTROLS



- INPUT** socket to plug in a bass guitar.
- GAIN** control + 3 LEDs to adjust the input level:
  - CLIP** too high,
  - OK** optimum,
  - LOW** too low.
- CH. SELECT** + 2-colored LED to switch from channel 1 (red) to channel 2 (green).
- LIMITER** switch + 2-colored LED to compress the signal (channel 2 only):
  - green Limiter on,
  - red the signal level is actually bein reduced.
- For features of **CHANNEL 1**, please refer to the chapter CHANNEL 1-TUBE.
- For features of **CHANNEL 2**, please refer to the chapter CHANNEL 2-SOLID STATE.
- OUTPUT** control for each channel + **OL** (overload) LED to mutually balance both channel levels. Should the **OL** LED light up, reduce **OUTPUT** of the respective channel. The standard setting, i.e. with neither attenuation nor amplification, is position 8 (when tone controls are set linearly).
- EFF. MIX** controls determine the degree to which the effects within the parallel stereo loop (rear panel) affect the signal of each channel.
- PHONES** socket for connecting a headphone (min 200 Ω).
- MUTE** switch + red LED cuts the signal from all outputs, except from the **PHONES** socket, and activates the **TUNER** output (rear panel).
- MASTER** control determines the mains level.
- POWER** switch for turning the amplifier on and off.

## REAR PANEL



**GROUND LIFT** switch isolates the earth connection from the ground of signal. Should several devices be simultaneously connected to earth by the same conductor as well as via line connections, a so called hum loop might appear. In this case operate **GROUND LIFT** to eliminate the current hum.

**DI PRE/POST** switches the signal lying at the **DI OUT** sockets.

**PRE** the unmodified bass signal is retained on both **DI OUT** sockets,  
**POST** the tone control and effects loops are inserted into the signal path in stereo.

**DI OUT LEFT** and **DI OUT RIGHT** sockets for supplying a stage or studio mixing console.

**TUNER OUT** socket for the connection of a tuner. When MUTE mode is activated, the unmodified bass signal is retained here.

**MONO LOOP** for the serial insertion of dynamic effects units (e.g. compressor, auto wah, etc.). Connect **SEND** with the input and **RETURN** with the output of the effects device.

**PARALLEL STEREO LOOP:** the degree to which external effects influence the signal can be determined with the EFF. MIX control located on the front panel. Connect **SEND** with the input and **RETURN L.** and **RETURN R.** with the outputs of the effects device.

**LO CUT** switch confines the SEND output to frequencies above 200 Hz. Modulation effects (e.g. chorus) remain clear this way.

**Note:**

You can also use the RETURN sockets as LINE INs in case you wish to operate the amplifier as a power amp. To this purpose rotate the EFF. MIX controls on the front panel to their full clockwise positions.

**CHANNEL 1/2 FOOTSWITCH** allows to connect a footswitch for selecting between both channels. To do so use a switch (latch) and not a key (unlatch).

**SPEAKER OUT** sockets designed to supply loudspeaker cabinets. Each channel of the 2 x 450

watts power amplifier provides respectively one XLR and one Speakon socket in parallel. The signal from the Speakon outputs is leaded by 1+ and 1-.

**LINE OUT PARALLEL TO SPEAKER OUT** sockets allow to connect additional power amplifiers.

**BIAMP/FULLRANGE** switches over between two operation modes of the power amplifier. In FULLRANGE mode the whole frequency range is provided by both SPEAKER OUT sockets. In BIAMP mode the signal is splitted by an active crossover.

**X-OVER** control sets the transition frequency between 80 Hz and 4 kHz.

**STEREO/MONO** switch to use the amplifier whether in stereo or in mono.

The combination of **BIAMP** and **STEREO** switch settings give access to different operation modes. Signal splittings at the respective sockets are as follows:

**SPEAKER OUT A,**

**LINE OUT PARALLEL TO SPEAKER OUT A,** called "A" hereafter;

**SPEAKER OUT B,**

**LINE OUT PARALLEL TO SPEAKER OUT B,** called "B" hereafter;

**LINE OUT STEREO BIAMP HIGH - LEFT** and **RIGHT,** called HIGH L and HIGH R hereafter, are shown in the following chart:

Mode	A	B	HIGH L	HIGH R
<b>Fullrange Mono</b>	Fullrange Left und Right	Fullrange Left und Right	no signal	no signal
<b>Fullrange Stereo</b>	Fullrange Left	Fullrange Right	no signal	no signal
<b>BiAmp Mono</b>	High Left und Right	Low Left und Right	no signal	no signal
<b>BiAmp Stereo</b>	Low Left	Low Right	high left	high right

Balances can be determined with the respective **BALANCE** controls. The right one acts on the outputs **A** and **B** (LINE OUTs and SPEAKER OUTs), whereas the left one regulates between low and high frequencies in **STEREO BIAMP** mode. In this operation mode whether external power amplifiers with cabinets or active loudspeakers must be connected to the **LINE OUT STEREO BIAMP HIGH** sockets.

**IMPORTANT:**

The **BALANCE STEREO BIAMP CONTROL** should be **centered or pointing to the right-hand range** in the operation modes mono-fullrange, mono biamp and stereo fullrange, **OTHERWISE NO SIGNAL WILL BE SENT TO A AND B, RESPECTIVELY THE INPUT LEVEL AT THE POWER AMPLIFIER WILL BE TOO LOW.**

## CHANNEL 1 - TUBE

This channel is equipped with two tubes. One preamp tube is always included within the signal flow.

**2ND STAGE** switch adds one output stage tube into the circuit. This feature offers the choice between a so called hybrid amplifier (tube preamp with transistor power amp) and the sound of an all tube amplifier head.

**CONTOUR** switch boosts bass and treble at once. **CRUNCH** control adjusts the tube pre-amplification.

**TONE** control sets the basic sound characteristics (frequency control 300 Hz - 14 kHz, see below). **LOW B/C** 3-way switch for the boost/flat/cut of sub-bass frequencies. In boost position (red LED) the bottom-end is boosted, in cut position (yellow LED) it remains unmodified, but the deep-mids region is attenuated to obtain a clearer sound (chords, tapping, harmonics, etc.).

**MID B/C** 3-way switch for the boost/flat\*/cut of the frequency determined via **TONE** control. In boost position (red LED) this frequency is boosted, in cut position (yellow LED) it is attenuated.

\* The respective frequency will be slightly boosted when the switch is centered (flat). All boosts and attenuations are less intense in deeper frequency ranges than in higher spectra (300 Hz +6/+12 dB, 14 kHz +15/+20 dB, flat/boost).

**HIGH B/C** 3-way switch to boost/flat/cut high sound attributes. In boost position (red LED) treble is boosted (fixed preset), in cut position (yellow LED) the **TONE** control works as a low-pass-filter, means that frequencies higher than the **TONE** control setting are eliminated. Moreover the **MID**-boosts are softened by about 5 dB.

As you can see, the three 3-way switches and **TONE** control act in a very complex way. Therefore I would like to introduce some remarks and suggestions regarding sound adjustments:

### 1. Simulation of different pickup characteristics:

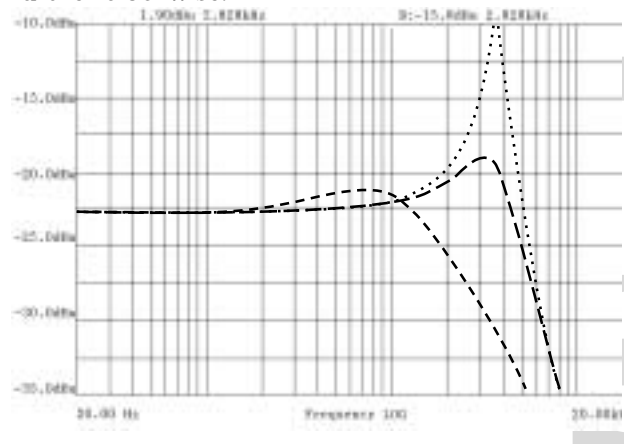
Each pickup has a peak in its resonance frequency in excess of which no treble can be transmitted. The main distinction in sound characteristics between different pickups is that this frequency is located elsewhere depending on pickup types. This is exactly what you can simulate in switch positions

**MID boost** and **HIGH cut** by shifting the resonance frequency with the **TONE** control (12 o'clock until full clockwise position). This requires that the resonance frequency of your bass pickups lies beyond that of the desired simulation. Furthermore this adjustment allows to boost highest trebles that your bass can produce, by cutting even higher pitches so as to diminish unnecessary noise.

### 2. Speaker Emulator (when **CRUNCH** is driven highly until distortion):

In case you have adjusted a distorted sound with the **CRUNCH** control and use a loudspeaker cabinet with tweeter (or send the sound via the **DI OUTs** to a mixer), you should eliminate high-pitched frequencies with **HIGH cut**, as they can be very unpleasant for the human ear. When **MID boost** is activated at the same time, the sound will be more aggressive, whereas the simultaneous use of **MID cut** results in a smooth but however deeper cut of treble (see graph).

If necessary you can turn the **TONE** control further clockwise.



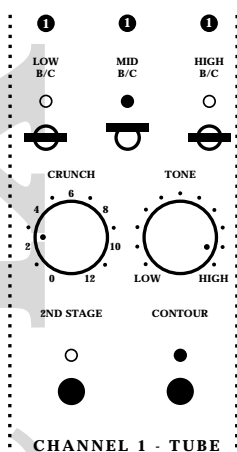
### 3. Semi-parametric EQ:

When the **MID** 3-way switch is set to boost, flat (center position, slight boost) or cut, you can pre-adjust the basic timbre of your sound with the **TONE** control like with a semi-parametric filter. As already mentioned, the degree of boosts or cuts depends on frequency ranges. These have been determined so as to obtain efficient results by quick adjustment.

## EXAMPLES

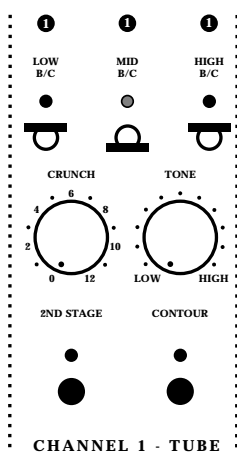
### Clean Funk

2ND STAGE OFF  
 CONTOUR ON  
 TONE S. PICTURE  
 CRUNCH S. PICT.  
 LOW FLAT  
 MID BOOST  
 HIGH FLAT



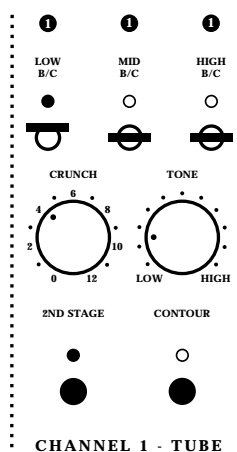
### Hard Funk

2ND STAGE ON  
 CONTOUR ON  
 TONE S. PICTURE  
 CRUNCH S. PICT.  
 LOW BOOST  
 MID CUT  
 HIGH BOOST



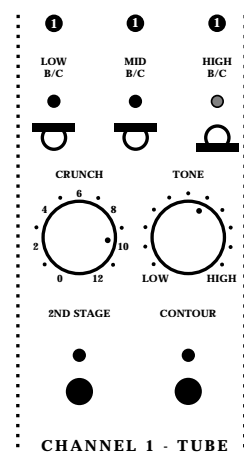
### Straight Rock

2ND STAGE ON  
 CONTOUR OFF  
 TONE S. PICTURE  
 CRUNCH S. PICT.  
 LOW BOOST  
 MID FLAT  
 HIGH FLAT



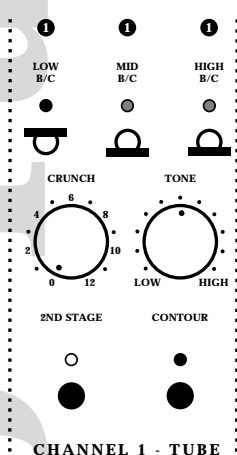
### Fat and ugly

2ND STAGE ON  
 CONTOUR ON  
 TONE S. PICTURE  
 CRUNCH S. PICT.  
 LOW BOOST  
 MID BOOST  
 HIGH CUT



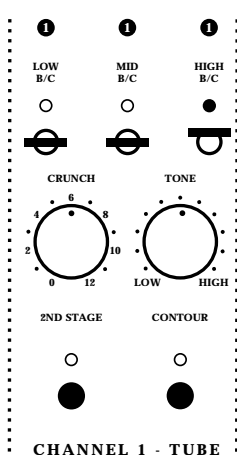
### Hollow Reggae

2ND STAGE OFF  
 CONTOUR ON  
 TONE S. PICTURE  
 CRUNCH S. PICT.  
 LOW BOOST  
 MID CUT  
 HIGH CUT



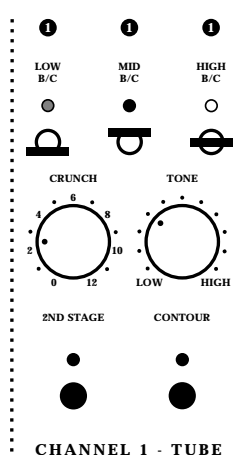
### Clear compress

2ND STAGE OFF  
 CONTOUR OFF  
 TONE S. PICTURE  
 CRUNCH S. PICT.  
 LOW FLAT  
 MID FLAT  
 HIGH BOOST



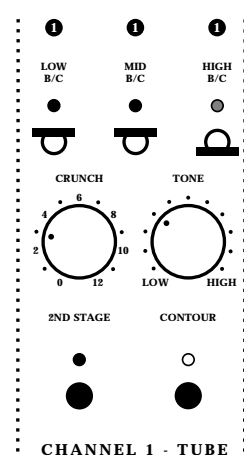
### Tapping/chords

2ND STAGE ON  
 CONTOUR ON  
 TONE S. PICTURE  
 CRUNCH S. PICT.  
 LOW CUT  
 MID BOOST  
 HIGH FLAT



### Ballade

2ND STAGE ON  
 CONTOUR OFF  
 TONE S. PICTURE  
 CRUNCH S. PICT.  
 LOW BOOST  
 MID BOOST  
 HIGH CUT



These setting examples aim at helping you to better handle with the control stage and to utilise it for the realisation of your sound conceptions. Set channel 1 according to the examples and adjust the **TONE** control to the left and to the right within the suggested area, respectively. press the switches to learn more about their efficiency.

**CRUNCH** settings are level-dependent. The examples suppose **GAIN** has been set to **OK**. As Rock-parts are usually performed harder than tapping-techniques, rather than compensating for this gap with **GAIN** to obtain the desired compression, you could just raise the **CRUNCH** control in this case.

## CHANNEL 2 - SOLID STATE

Two switches **LOW BOOST** and **HIGH BOOST** to pre-adjust the basic sound characteristics.

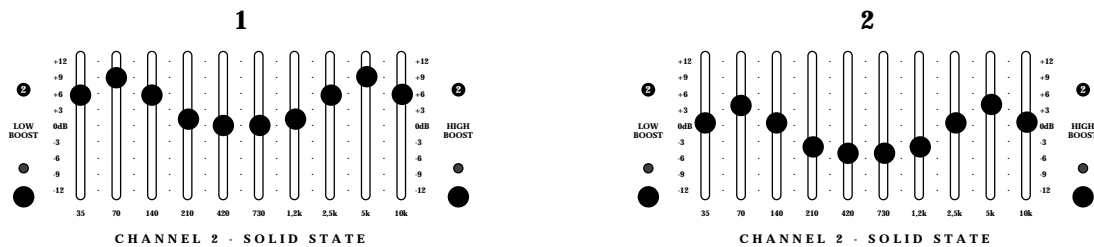
Ten faders

**35/70/140/210/420/730/1.2k/2.5k/5k/10k Hz** to amplify/soften the respective frequency band by +/-12 dB.

You should generally adjust the graphic EQ to approximately 0 dB. This means boosts and cuts should be effected with moderation.

When adjusting the faders mostly within the positive area (1) the **OL LED** of the master

section might illuminate, which means you enter the overload range before the master control. In this case reduce **OUTPUT** from channel 2. If the **LIMITER** is activated and threshold appears too high, readjust the EQ curve to lower levels (2). Reducing **GAIN** would result in a worse S/N ratio and can eventually not be recommended. Should you find the threshold is too low, i.e. more intense compression is desired, shift the EQ curve further to the positive area.



## GETTING STARTED

1. Make sure that loudspeakers capable of sustaining the load of a bass signal are connected to the **SPEAKER OUT** sockets. The speaker cables should meet a cross-section of at least 2 x 1.5 mm.
2. Check that the mains supply has been plugged in and that all external (effects) units possibly used are correctly connected and operational.
3. Select the mode in which you wish to operate (Fullrange/BiAmp, Mono/Stereo).
4. Set the **MASTER** control to zero.
5. Plug your bass guitar into the amplifier's **INPUT** with a shielded line-cable.
6. Press the **POWER** switch to turn the device on.
7. Switch **MUTE** off and the red LED will extinguish. (Should the **CH. SELECT** switch be set to channel 1, it will take a few seconds before a signal can be processed, as the tubes must be heated first.)
8. Turn all volume controls of your bass guitar on to their maximum.
9. Adjust the **GAIN** control until the (loudly) played bass signal illuminates the **OK LED**.
10. Set both **OUTPUT** controls to their positions 8.
11. Set the **MASTER** control to the volume you wish to play at.
12. Adjust the controls and switches of both channels according to your sound conceptions. If it appears necessary, reduce **OUTPUT** again with the appropriate controls. The **OL LED** might actually flash only occasionally, but it should not remain permanently lit.
13. Balance the levels from one channel to another with the **OUTPUT** controls and set the **EFF. MIX** of the parallel stereo loop for both channels to regulate the amount of effects within the signal path.
14. If necessary readjust balances on the rear panel.

### IMPORTANT:

Make sure that gain of the elected louder channel is correctly determined and occasionally illuminates the **OL LED**, as either full power can actually not be used (level set too low), or undesired distortions might appear (level set too high).

# NOTES

SETTING: \_\_\_\_\_

**1**      **1**      **1**

LOW B/C      MID B/C      HIGH B/C

CRUNCH      TONE

4      6      8      10      12

2      0      12      LOW      HIGH

2ND STAGE      CONTOUR

CHANNEL 1 - TUBE

*Pro*      **W**      *Tube*

**2**      **2**

LOW BOOST      dB      HIGH BOOST

+12      +12

+9      +9

+6      +6

+3      +3

0dB      0dB

-3      -3

-6      -6

-9      -9

-12      -12

35      70      140      210      420      730      1.2k      2.5k      5k      10k

CHANNEL 2 - SOLID STATE

SETTING: \_\_\_\_\_

**1**      **1**      **1**

LOW B/C      MID B/C      HIGH B/C

CRUNCH      TONE

4      6      8      10      12

2      0      12      LOW      HIGH

2ND STAGE      CONTOUR

CHANNEL 1 - TUBE

*Pro*      **W**      *Tube*

**2**      **2**

LOW BOOST      dB      HIGH BOOST

+12      +12

+9      +9

+6      +6

+3      +3

0dB      0dB

-3      -3

-6      -6

-9      -9

-12      -12

35      70      140      210      420      730      1.2k      2.5k      5k      10k

CHANNEL 2 - SOLID STATE

SETTING: \_\_\_\_\_

**1**      **1**      **1**

LOW B/C      MID B/C      HIGH B/C

CRUNCH      TONE

4      6      8      10      12

2      0      12      LOW      HIGH

2ND STAGE      CONTOUR

CHANNEL 1 - TUBE

*Pro*      **W**      *Tube*

**2**      **2**

LOW BOOST      dB      HIGH BOOST

+12      +12

+9      +9

+6      +6

+3      +3

0dB      0dB

-3      -3

-6      -6

-9      -9

-12      -12

35      70      140      210      420      730      1.2k      2.5k      5k      10k

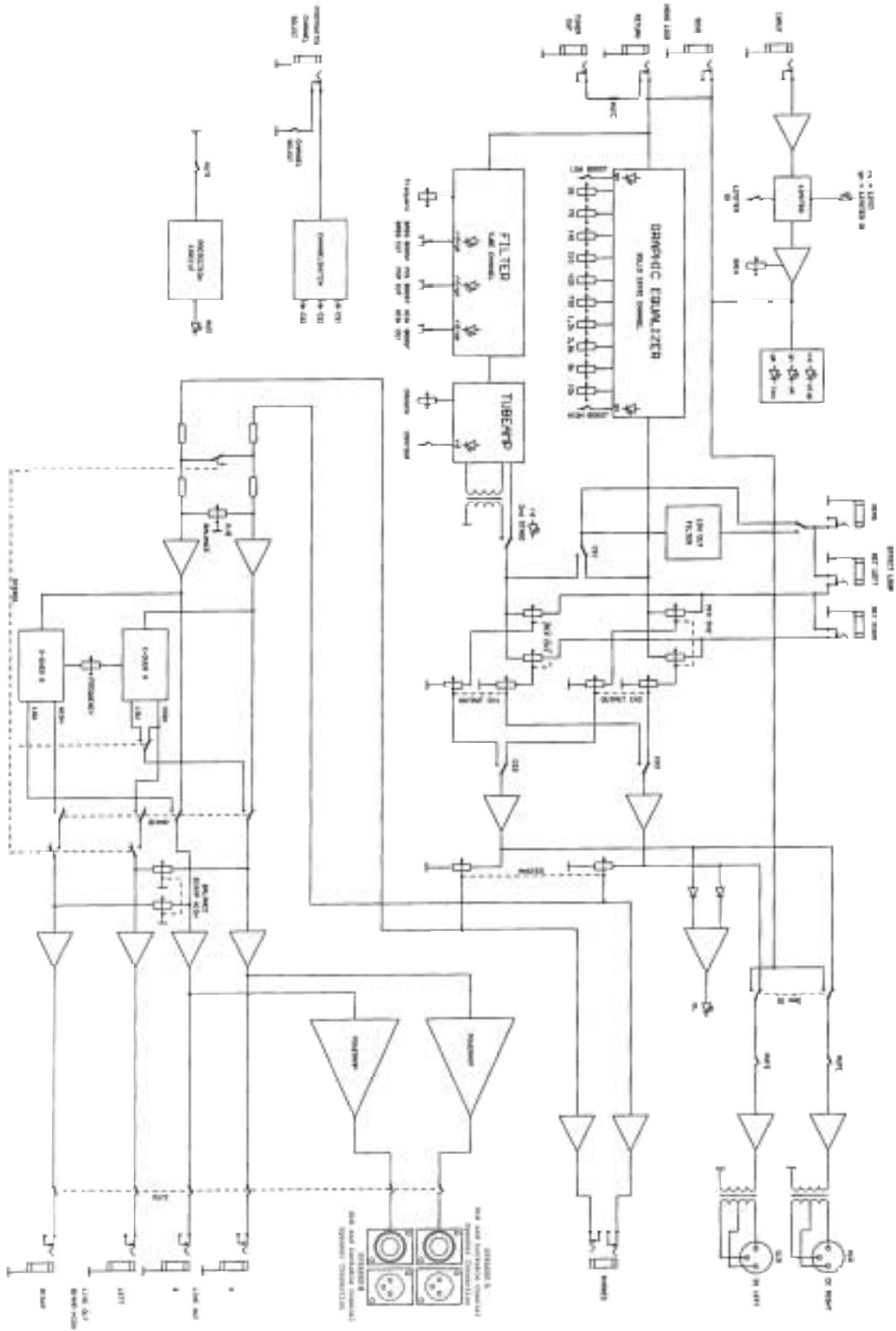
CHANNEL 2 - SOLID STATE

IX  
Pro Tube



<b>Sonic II / III</b>	<b>Pro Fet III</b>	<b>Pro Fet IV</b>	<b>Pro Tube IV</b>	<b>Pro Tube IX</b>	<b>Quad IV / VI</b>
25 mV	25 mV	25 mV	25 mV	25 mV	25 mV
transistor, active controlled	transistor, active controlled	transistor, active controlled	transistor, active controlled	transistor, active controlled	all tube
none	none	none	dual tube	dual tube	none
fan cooled (non permanent)	fan cooled (non permanent)	fan cooled (non permanent)	fan cooled (non permanent)	fan cooled (non permanent)	fan cooled (temperature controlled)
bass, mid low, mid high, treble controls, low boost and high boost switches	bass, punch, param. mids with freq. and level controls, attack, treble, low boost and high boost switches. Dyn. control with switchable limiter	3-way switches for low boost/flat/cut mid boost/flat/cut high boost/flat/cut param.freq.contr., 8-band graph. EQ +/-12 dB, dyn.contr. with switchable limiter (3-way)	3-way switches for low boost/flat/cut mid boost/flat/cut high boost/flat/cut param.freq.contr. contour switch, dyn. control with 2nd tube and crunch control.	3-way switches for low boost /flat/cut mid boost/flat/cut high boost /flat /cut param. freq.contr.,contour switch, dyn. control with 2nd tube and crunch control.	Quadrumatrix bass, mid 1 (+shift), mid 2 (+shift), treble, low boost and high boost switches
none	none	none	8-band graph. EQ, +/- 12dB, switches for low boost and high boost. Dyn. control with switchable limiter	10-band graph. EQ, +/- 12dB, switches for low boost and high boost. Dyn. control with switchable limiter	none
200 Ω	200 Ω	200 Ω	200 Ω, stereo	200 Ω, stereo	200 Ω, stereo
	0 dB, 600 Ω	0 dB, 600 Ω	2x0 dB, 600 Ω, stereo or 2x mono	2x0 dB, 600 Ω, stereo or 2x mono	0 dB, 600 Ω
mono serial send 0 dBu, 600 Ω return 0 dBu, 10 kΩ	mono serial send 0 dBu, 600 Ω return 0 dBu, 10 kΩ	mono serial send 0 dBu, 600 Ω return 0 dBu, 10 kΩ	stereo serial send 0 dBu, 600 Ω return 2x0dBu, 10kΩ	mono serial send 0 dBu, 600 Ω return 0dBu,10kΩ stereo parallel, send fullrange or 200 Hz low cut, same values	mono parallel send 0 dBu, 600 Ω return 0 dBu, 10 kΩ
DI pre/post	ground lift, DI pre/post	ground lift, DI pre/post	ground lift, DI pre/post	ground lift, DI pre/post, stereo, biamp, low cut	ground lift, DI pre/post
none	none	none	none	X-over, 2x balance	Effects mix
none	none	graph. EQ on	CH 1/2	CH 1/2	none
II: 200 W/4Ω III: 300 W/4Ω	250 W/4Ω jack XLR & Speakon	400 W/4Ω jack XLR & Speakon	400 W/4Ω jack XLR & Speakon	2x450 W/4Ω jack XLR & Speakon	IV: 400 W/4Ω VI: 600 W/4Ω
<0.1%	<0.1%	<0.1%	<0.1%	<0.1%	<0.1%
II: 8,3 ; III: 10,7	11,5	12,5	15,0	22,3	IV: 15,0 ; VI: 16,5
500x90x285	19"/483x90x375	19"/483x90x375	19"/483x90x430	19"/483x135x455	483x90x430

## CIRCUIT DIAGRAM



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