



V-Type

OPERATING INSTRUCTIONS

CONGRATULATIONS

on purchasing your Trace Elliot V-Type amplifier / speaker set up.



SAFETY INSTRUCTIONS

WARNING

For continued protection against the risk of fire, replace fuses only with fuses of the same type and rating.

WARNING

To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.

WARNING

In the event of a suspected malfunction, always refer this equipment to a qualified service engineer.

WARNING

This apparatus must be earthed. The wires in this mains are coloured in accordance with the following code:-

Green & YellowEarth
BlueNeutral
BrownLive

As the colours of the wires in the mains lead of this appliance 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 symbol or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

If a 13 amp (BS1363) plug is used a 13 amp fuse must be fitted, or if any other type of plug is used a 15 amp fuse must be fitted either in the plug or adaptor or at the distribution board.



INSTRUCTIONS POUR LA SÉCURITÉ

AVERTISSEMENT

Par mesure de sécurité contre les risques d'incendie, remplacez les fusibles par des fusibles de type et courant nominal identiques.

AVERTISSEMENT

Afin de limiter les risques d'incendie ou de décharges électriques, n'exposez pas l'équipement à la pluie ou à l'humidité.

AVERTISSEMENT

Lorsque vous soupçonnez la présence d'une défaillance quelconque, vous devez toujours confier cet équipement à un membre qualifié du personnel d'entretien.

AVERTISSEMENT

Cet appareil doit être mis à la terre. La couleur des gains des conducteurs du câble secteur correspondent au code suivant:

Vert & JauneTerre
BleuNeutre
MarronSous tension

Etant donné que les couleurs de repère des conducteurs dans le câble secteur du présent appareil peuvent ne pas correspondre aux repères couleur identifiant les bornes de votre fiche, effectuez les opérations suivantes:

Le conducteur vert & jaune doit être relié, dans la fiche, à la broche portant la lettre E, le symbole de terre ou les couleurs vert ou vert & jaune.

Le conducteur bleu doit être relié à la borne portant la lettre N ou de couleur noire.

Le conducteur marron doit être relié à la borne portant la lettre L ou de couleur rouge.

Lorsqu'on utilise une fiche de 13 amp (BS1363), cette fiche doit contenir un fusible de 13 amp; en outre, si vous utilisez un autre type de fiche, un fusible de 15 amp doit être installé dans la fiche ou l'adaptateur, ou dans le tableau de distribution.

V-TYPE BASS AMPLIFICATION PREAMP FACILITIES

As well as being available on its own in rack mount format, the V-Type preamp also provides the front end of an all valve 220 watts amplifier head and a 250 watts MOSFET powered 15" combo.

The V-Type bass guitar preamp is a single channel all valve unit using two 12AX7 valves. The appearance and design of the V-Type has been kept traditional in most respects but uses modern design and production techniques to ensure the unit is as reliable as possible.

FRONT PANEL

INPUTS

Two jack sockets are provided for inputs to the preamp. These are designated PASSIVE and ACTIVE for use with a wide variety of basses. The passive input will accept signals up to approx. 1.5V peak to peak and is ideally suited to low output passive basses; these are usually the older more traditional instruments. The active input is for use with basses having internal electronic tone circuitry which generally have a higher output. This input will accept signals up to 6V peak to peak. If the bass being used has a higher output than this, the volume on the bass itself will have to be attenuated.

GAIN CONTROL

The amount of preamp GAIN and DRIVE is adjusted by using the single knob. It controls the amount of signal from the tone circuit passing into the second gain stage.

There is no overload indication as the overdrive achievable from the valves is often desirable for certain styles of playing. When the level of signal starts to clip dramatically it will be audible through the speakers being used and the gain control can then be turned down.

tone controls

Three tone controls are provided, these being BASS, MIDDLE and TREBLE. All are entirely passive and have been tailored to suit the frequencies developed by the bass guitar. Being passive controls means that they are interactive, with the treble control having a strong affect on the mid control. N.B. The tone control range has been designed so that a "12 o'clock" setting on all controls gives a basic good sound from which to start. This gives a slight mid cut at about 1kHz and a bass and treble boost.

The middle control incorporates a PULL-SHIFT function which shifts the centre frequency at which the mid control works at upwards to around 2kHz.

DEEP AND BRIGHT SWITCHES

The DEEP switch, located next to the bass control, cuts down the mid-range and treble frequencies to create a "deeper" tone with more bass emphasis.

The BRIGHT switch, located next to the treble control, switches in a high pass filter which accentuates the high frequency response. This is disabled at maximum gain due to the nature of the circuit.

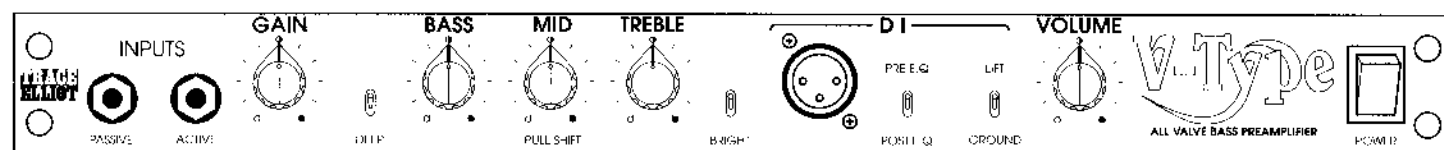
VOLUME CONTROL

The volume or OUTPUT LEVEL control is used to send the required level from preamp to the chosen power amplifier. The setting of this control will depend on how much stage volume is required in conjunction with how much power is available from the power amplifier. If the input (gain) control has been set correctly with no "clipping" then any distortion created by increase in the volume control will be associated with the power amplifier reaching its maximum output.

D.I. SECTION

A balanced D.I. output is provided on the front panel to send signals to mixing desks for live performance or recording purposes. This is switchable between pre-eq, where the signal is taken after the effects loop but before the tone circuitry and post-eq, where the signal is taken after the tone network but before the output volume control.

An earth-lift switch is also provided, to isolate the D.I. earth, Pin 1 on the XLR, from the chassis ground. This is used to prevent earth loops when connecting to external equipment



REAR PANEL

EFFECTS LOOP

The EFFECTS SEND AND RETURN sockets are found on the rear panel of each V-Type unit. This is a series effects loop in which the send can be used as a line out and the return can be used as a line in (for a music source or drum machine etc.).

LINE OUT

The LINE OUTPUT is the signal output from the preamp to the power amp. The level of signal from this socket is controlled by the volume knob.

If a two channel power amplifier is being used then stereo effects units may be used between this output and the inputs to the power amplifiers.

EARTH LIFT SWITCH

This is used to eliminate any earth loop problems between equipment. These could occur between preamp and power amp or between preamp and external main powered effects units. The EARTH LIFT SWITCH overcomes these problems by lifting the earth connection from the signal circuits of the unit.

The V-Type still maintains an earth connection to the chassis and all metal parts of the unit for safety even when the EARTH LIFT is used.

Never lift the earth or ground to any equipment by removing the earth connection in the mains plug; this can be a potentially dangerous practice and in some instances prove lethal to both the equipment and the user.

MAINS FUSE

In the event of having to replace the MAINS FUSE always use the same rating and type as marked on the rear panel of the unit. Using one of a higher rating will invalidate the guarantee.

If after replacement the mains fuse should blow a second time, immediately refer the unit to a Trace Elliot approved service engineer for checking

V-TYPE RACKMOUNTED PREAMP

All front panel facilities and the effects loop are as described before, with the addition of:

MAINS SWITCH

The MAINS SWITCH is located on the front right-hand side of the rack mount unit. Before switching on, ensure the unit has been correctly set to the appropriate voltage for your country. This voltage is factory preset and is written on the rear near to the mains inlet.

Once the unit is switched on, a red LED will light inside the mains switch.

V-TYPE HEAD

Everything in the design of the V-Type head has been done to provide exceptional results combined with long service and reliability. The valves are "Fan Cooled" which helps to lengthen their life by preventing them from working under extreme stress (i.e. too hot).

The user can also extend the valve life by always allowing them to fully cool down before transporting the unit. The majority of valve failure is due to mechanical vibration causing the valves internal grids to short out; when they are hot they are also very flexible and subject to mechanical vibration.

FRONT PANEL

For explanation of preamp controls see page 3.

STANDBY SWITCH

This is used to allow the valves to warm up before the HT voltages are applied. The amplifier should always be switched on with this switch in the standby position (up). Allow at least 40 secs for the valves to warm up before switching out of standby as this prolongs the life of valves quite considerably.

ON INDICATOR

This lamp will light when the mains is applied and the mains switch is in the ON position. It is independent of the standby switch.

REAR PANEL

EFFECTS LOOP

The EFFECTS SEND AND RETURN sockets are found on the rear panel of each V-Type unit. This is a series effects loop in which the send can be used as a line out and the return can be used as a line in (for a music source or drum machine etc.).

LINE OUTPUT

The LINE OUTPUT on the V-Type head is of a fixed level (i.e. the line out signal comes before the output volume control so the level is set by the input gain).

The line out is used to send a signal to an external power amplifier if more volume is required for the system.

EARTH LIFT SWITCH

The EARTH LIFT SWITCH is provided to allow removal of the mains earth connection from the signal circuits to eliminate ground loops between connected equipment.

The V-Type head, as with all Trace Elliot equipment, still maintains an earth connection to the chassis and all metal parts of the unit, for safety, even when the EARTH LIFT is used.

Never lift the earth or ground to any equipment by removing the earth connection in the mains plug; this can be a potentially dangerous practice and in some instances prove lethal to both the equipment and the user.

POWER SWITCH

Once the correct supply voltage has been plugged in, the V-Type head can be turned on with the POWER SWITCH. The amplifier is internally wired for

voltage marked adjacent to the mains inlet socket.

Always make sure the front panel STANDBY SWITCH is in the up (Standby) position prior to switching ON or OFF. This will ensure silent powering up and down and more importantly prolong the life of the valves.

MAINS FUSE

In the event of having to replace the MAINS FUSE always use the same rating and type as marked on the rear panel of the unit. Using one of a higher rating will invalidate the guarantee.

If after replacement the mains fuse should blow a second time, immediately refer the unit to a Trace Elliot approved service engineer for checking.

H.T. FUSES

Two fuses are provided to protect the valves in the event of any problems associated with the high D.C. voltages.

Always replace these with the same type and rating as marked on the rear panel.

N.B. Valves sometimes, especially when new, suffer from what is known as "Flash Over" which can blow the H.T. fuses and occasionally the mains fuse. This is caused by the burning off of any gases left in the vacuum tube after construction. The valves have small discs inside filled with magnesium oxide which will combust if there is any oxygen to allow this. This process causes the familiar silvering of the inside of the valves. "Flash Over" causes excessive current draw which can blow one or all of the fuses. In this event it is unlikely that any damage to the valves has occurred, so replace any blown fuses for the same type and rating as marked on the rear panel. This condition can cause the fuses to blow more than once, before all excess oxygen is used up but after the third time refer the amplifier to an approved service engineer as there may be one or more faulty valves.

SPEAKER OUTPUTS

Two SPEAKER OUTPUTS are supplied; one jack and one XLR (wired Pin 1 ground, Pin 2 +ve).

It is recommended that the XLR is used as far as possible as it has a higher current rating than the jack and makes better contact.

The jack socket should be restricted to use for add-on high frequency units which do not draw much current. If multiple cabinets are used then it is better to use the XLR into the first cabinet and then use a further XLR cable to link this cabinet to the next one.

IMPEDANCE SELECTOR

This switch should be set to match the impedance of the cabinet(s) used as closely as possible. If two 8 ohms cabinets are being used then their combined impedance will be 4 ohms as the cables will automatically connect them in parallel.

WARNING

It is most important that the amplifier is never used without a load (i.e. loudspeaker enclosure, or power soak) as this can permanently damage the output transformer and / or the output valves.

V-TYPE COMBO

The V-Type Combo is a 250 watts unit using a specially developed 15" loudspeakers to reproduce accurately the frequency range of the bass guitar.

The combo uses the V-Type preamp, details of which can be found on page 3.

OTHER FACILITIES

STANDBY SWITCH

This is used to allow the two preamp valves to warm up before the H.T. voltage is applied. The amplifier should always be switched on with this switch in the standby position (up). Allow at least 40 secs for the valves to warm up before switching out of standby as this prolongs the life of valves quite considerably.

ON INDICATOR

This lamp will light when the mains is applied and the mains switch is in the ON position. It is independent of the standby switch.

LINE OUTPUT

The LINE OUTPUT on the V-Type combo is of a fixed level (i.e. the line out signal comes before the output volume control so the level is set by the input gain).

The line out can be used to send a signal to an external power amplifier if more volume is required. This will obviously require further loudspeaker enclosures connected to the external power amplifier.

EARTH LIFT SWITCH

The EARTH LIFT SWITCH is provided to allow removal of the mains earth connection from the signal circuits to eliminate ground loops between connected equipment.

The V-Type combo, as with all Trace Elliot equipment, still maintains an earth connection to the chassis and all metal parts of the unit, for safety, even when the EARTH LIFT is used.

Never lift the earth or ground to any equipment by removing the earth connection in the mains plug; this can be a potentially dangerous practice and in some instances prove lethal to both the equipment and the user.

POWER SWITCH

Once the correct supply voltage has been plugged in, the V-Type combo can be turned on with the POWER SWITCH. The combo is internally wired for the voltage marked adjacent to the mains inlet socket.

Always make sure the front panel STANDBY SWITCH is in the up (Standby) position prior to switching ON or OFF. This will ensure silent powering up and down and more importantly prolong the life of the valves.

MAINS FUSE

In the event of having to replace the MAINS FUSE, always use the same rating and type as marked on the rear panel of the unit. Using one of a higher rating will invalidate the guarantee.

If after replacement the mains fuse should blow a second time, immediately refer the unit to a Trace Elliot approved service engineer for checking.

SPEAKER OUTPUTS

The V-Type combo is provided with two jack sockets for speaker connection. One of these is used to link the internal 15' 8 ohm driver to the power amplifier. The combo will deliver its maximum output power of 250 watts into a 4 ohm speaker system, i.e. the internal 8 ohm plus any other 8 ohm bass enclosure which is connected to the second speaker output jack.

Into just the internal loudspeaker the maximum output power will be approx 180 watts.

Never run the output into a combined impedance of less than 4 ohms as this will cause the amplifier to overheat and may result in loudspeaker failure.

LOUDSPEAKER CABINETS

There are two cabinets in the V-Type range, the 1248 and the 1248H. These have four Celestion 12" bass drivers rated at 200 watts each and the 1248H also has the addition of a high frequency horn which is at a fixed level. The horn extends the frequency response of the cabinets from 5 kHz up to 20 kHz.

Each cabinet is fitted with a connector panel incorporating two jack sockets and the male and female XLR sockets. All sockets are wired in parallel with the XLR's wired pin 2 positive and pin 1 negative. Wherever possible use XLR leads since they provide a more reliable connection and less signal loss than jack to jack leads.

The high end frequency response of any system can be further improved by the addition of either a high frequency horn unit or a 4052H "Bright Box". These should be connected to the jack sockets on the cabinets or the jacks on the combo or amp lead. The impedance of these high frequency units can be ignored as they have internal crossovers.

SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	Output RMS	Height	Width	Depth	Weight
V-type Preamp	–	44mm	480mm	220mm	3kgs
V-Type Head	220 watts	240mm	610mm	290mm	25kgs
V-Type Combo	250 watts	620mm	530mm	332mm	30kgs

Cabinets	Power Handling	Height	Width	Depth	Weight
1248	800 watts	750mm	740mm	350mm	45kgs
1248H	800 watts	750mm	740mm	350mm	46kgs

DRIVER SPECIFICATIONS

Model	Speakers	Power rating	Impedance	x/o	Freq. Response	SPL 1w @1m	Voice coil diameter
V-Type combo	1x 15"	200 watts	8Ω	–	45-3500Hz	99dB	2.5"
1248	4x 12"	200 watts	8Ω	–	50-5000Hz	97dB	2.5"
1248H	4x 12"	200 watts	8Ω	–	50-5000Hz	97dB	2.5"
	1x Horn	100 watts	8Ω	6 kHz 12dB/OCT	5kHz-20kHz	100dB	1"

TECHNICAL SPECIFICATIONS - ALL UNITS

Inputs	Passive Bass	Impedance 1M OHM Input range 25mV to 1.5V (peak - peak)
	Active Bass	Impedance 100K OHMS Input range 25mV to 6.0V (peak - peak)
	Effects Return	Impedance greater than 1M OHM Nominal input level 0dBu (0.775 VRMS)
Outputs	Effects Send	Impedance less than 1M OHM Nominal level 0dBu
	Line output (Head and combo)	Impedance 20K OHMS Nominal level 0dBu (0.775 VRMS) Maximum level +12dBu (3 VRMS)
	Line output (Rack mount)	Impedance 25K OHMS Nominal level 0dBu (0.775 VRMS) Maximum level +25dBu (14 VRMS)
	DI output	600 ohms balanced Nominal level 0dBu (pins 2 and 3)
Frequency response		-3dB at 22Hz and 25kHz
Sensitivity	Passive input	13mV
	Active input	56mV

V-TYPE HEAD

Output stage	Matched quartet of KT88 tubes
Output impedance	Switchable 4 / 8 ohms
Cooling	9 blade AC fan

V-TYPE COMBO

Output stage	Mosfet Solid State
Output impedance	Minimum 4 ohms
Cooling	5 blade DC fan



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