

PRIMO

ZERO FEEDBACK FULLY BALANCED VALVE PRE-AMPLIFIER INSTRUCTION MANUAL



Thank you for purchasing the Musical Fidelity Primo Valve Preamplifier.

This preamplifier uses our top quality, finely tuned balanced valve preamplifier circuits to deliver the absolute best in audio quality with no listener fatigue, or transistor harshness. In addition there is no global feedback which reduces feedback related artefacts in the music. The unit features five fully balanced signal inputs, which allow direct connection to balanced sources and outputs for the ultimate in dynamic range and low-noise performance. The power supply and associated mains transformer are screened off in a mu-metal enclosure to isolate the sensitive preamplifier circuits from mains noise and interference

This results in an astounding improvement in musicality and tonal neutrality and visually pleasing setup

Ease of use is augmented by the unit producing a trigger output to switch on any amplifier which accepts 5-12V trigger input, as well as trigger input which will automatically allow the preamp itself to be controlled from a trigger source.

The Primo Valve Preamplifier is designed to be partnered with all current and future AMS and TITAN products, connecting directly balanced inputs The Primo Valve Preamplifier is a perfect preamplifier for the 550K or 750K superchargers, and was designed with this in mind. It can be connected to the line level inputs of the Superchargers (or, recommended, the XLR input on the 750K) as a normal preamplifier. This combination yields one of the best amplification systems available at any price.

Used properly and carefully, it should give many years of outstanding musical reproduction.

Dust regularly with a soft duster or soft brush, but be careful when using cleaning or polishing agents - they may harm the surface finish.

*If you have any questions about your audio system,
Please consult your dealer who is there to help and advise.*

MUSICAL FIDELITY

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IMPORTANT! (U.K. only)

This unit is supplied in the U.K. with mains lead fitted with a moulded 13 amp plug. If, for any reason, it is necessary to remove the plug, please remove the fuse holder and dispose of the plug safely, out of reach of children.


It must not be plugged into a mains outlet.

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

Green and yellow.....Earth
Blue.....Neutral
Brown.....Live

WARNING - This appliance MUST be earthed

As the colours of the wires of the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in the 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 coloured green or green-and-yellow, or by the earth symbol : 

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

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

If connecting to a BS1363 plug, a 13 amp fuse must be used.

WARNING:

**ANY MODIFICATIONS TO THIS PRODUCT NOT EXPRESSLY APPROVED
BY MUSICAL FIDELITY WHO IS THE PARTY RESPONSIBLE FOR
STANDARDS COMPLIANCE COULD VOID THE USER'S AUTHORITY TO
OPERATE THIS EQUIPMENT.**

INSTALLATION PRECAUTIONS & USER INFORMATION

This new Primo Valve Preamplifier is designed and built to provide trouble-free performance, but as with all electronic devices it is necessary to observe a few precautions:

Heed all warnings shown on the back of the product.

Only connect the Primo Valve Preamplifier to a mains outlet having the same voltage as marked at the back of the unit.

Always ensure that when disconnecting and reconnecting your audio equipment the mains supply is switched off.

Position the mains lead and signal interconnects where they are not likely to be walked on or trapped by items placed on them.

Do not use near water, or place water-filled containers on the Primo, for example, a flower vase or potted plants. **If water does spill inside, immediately pull out the mains plug from the wall socket and inform the dealer, who should then check the unit before further use. Entry of liquid into the Primo Valve Preamplifier is dangerous, and may cause electric shock or fire hazard.**

Do not place the unit near direct heat sources such as radiators, direct sunlight or other equipment.

Dust regularly with a soft cloth or soft brush but be careful when using cleaning or polishing agents - they may harm the surface finish.

The electronics in modern hi-fi equipment is complex and may, therefore, be adversely affected or damaged by lightning. For protection of the audio system during electrical storms, remove the mains plugs and disconnect any aerial lead.

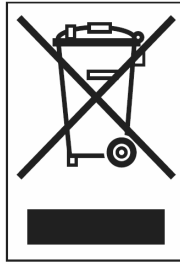
If after-sales service is required, to help the dealer identify the Primo Valve Preamplifier please quote the serial number located on the rear panel of the unit.



DANGER!
HIGH VOLTAGE

Do not remove any covers or try to gain access to the inside. The voltages contained within can cause death or serious injury. There are no internal user adjustments or fuses to replace. All service work **MUST be referred to an authorised Musical Fidelity agent.**

Note: Unauthorised opening of the equipment will invalidate any warranty claim.

**DISPOSAL**

The crossed out wheeled bin label that appears on the back panel of the product indicates that the product must not be disposed of as normal household waste. To prevent possible harm to the environment please separate the product from other waste to ensure that it can be recycled in an environmentally safe manner. Please contact local government office or retailer for available collection facilities.

**DISPOSITION**

La poubelle sur roulettes barrées X, qui apparaît en logo sur le panneau arrière du produit, indique que celui-ci ne doit pas être traité comme un déchet domestique commun. Afin de protéger l'environnement, ce produit électronique devra être géré séparément et donc recyclé selon les nouvelles normes Européennes Rohs concernant les déchets d'appareils électroniques. Prière de contacter les services concernés gouvernementaux ou votre point de vente pour l'élimination et l'enlèvement de déchets électroniques équipés de composants électroniques.

**DISPOSAL**

La etiqueta cruzada hacia fuera del compartimiento que aparece en el panel trasero del producto indica que el producto no se debe reciclar como basura normal de la casa. Para prevenir daños posible al ambiente separe por favor el producto de otras basura para asegurarse de que puede ser reciclada de una manera ambientalmente segura. Entre en contacto por favor a su oficina gubernamental local o a su minorista para las instalaciones disponibles de la colección.

**RIFIUTI**

L'etichetta del cassonetto barrato riportato sul retro dell'apparecchio indica che il prodotto non deve essere smaltito tramite la procedura normale di smaltimento dei rifiuti domestici. Per evitare eventuali danni all'ambiente, separare questo prodotto da altri rifiuti domestici in modo che possa venire riciclato in base alle procedure di rispetto ambientale. Per maggiori dettagli sulle aree di raccolta disponibili, contattate l'ufficio govenativo locale od il rivenditore del prodotto.

**FACHGERECHTE ENTSORGUNG:**

Das auf der Geräterückseite angebrachte Label deutet darauf hin, dass das Produkt nicht mit konventionellem Hauskehricht entsorgt werden darf. Um Schäden und Verschmutzungen an Umwelt und Mensch zu vermeiden, muss das Produkt fachgerecht entsorgt und von anderem Abfall getrennt werden. Wenden Sie sich bei Fragen hierzu an Ihren Fachhändler oder an eine öffentliche Informationsstelle.

**AFVAL**

Het label op de achterzijde van dit apparaat, een afvalbak op wielen met een kruis doorgehaald, geeft aan dat dit apparaat niet samen met gewoon huishoudafval mag worden weggegooid. Om mogelijke schade aan onze leefomgeving te voorkomen dient dit apparaat, gescheiden van gewoon huishoudelijk afval, te worden afgevoerd zodat het op een milieuvriendelijke manier kan worden gerecycled. Neem voor beschikbare inzamelplaatsen contact op met uw gemeentelijke reinigingsdienst of met uw elektronica leverancier.

**HÄVITTÄMINEN**

Yliüksattua jäteastiaa kuvaava tarra tuotteen takalevyssä kertoo, että tuotetta ei saa käsitellä normaalina talousjätteenä. Ympäristön suojelemiseksi on tuote pidettävä erillään muusta jätteestä ja se on kierrätettävä ekologisesti kestävällä tavalla. Ota yhteyttä laitteen myyjään tai Pirkanmaan Ympäristökeskukseen lähimmän kierrätyskeskuksen löytämiseksi.

**AFSKAFNING**

Logoet med en skraldespand med kryds over på bagsiden af apparatet indikerer at dette produkt ikke må kasseres som normal husholdningsaffald. For at forebygge mulig skade på miljøet, bedes De separere dette produkt fra andet affald, og sikre at det bliver genbrugt på en miljørigtig måde. Kontakt venligst de lokale myndigheder eller din forhandler for oplysning om nærmeste tilgængelige opsamlingssted for elektronikaffald.

**ΔΙΑΔΙΚΑΣΙΑ ΑΠΟΡΡΙΨΗΣ**

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INTRODUCTION

Congratulations on the purchase of the new Primo Valve Preamplifier. The Primo is entirely valve based, with fully balanced *and* single ended signal paths from input via fully balanced input switches and balanced volume control right the way through to the balanced and single ended outputs.

It is recommended that, to obtain the best performance, the balanced features are used, to keep noise and interference to an absolute minimum, inherently allowing 6dB more headroom within the circuitry.

The single-ended side features our finely tuned and tweaked valve preamplifier circuits, for smooth sound coupled with low noise and virtually no distortion.

Great attention has been paid to internal layout, isolating each circuit section to prevent possible interaction.

The resultant performance achieved by this unit is among the best in the world. It has excellent signal to noise ratio, low distortion, wide bandwidth and dynamic range, with extraordinary resolution and fine detail.

CLEANING

Before cleaning the units, switch off power at the mains switch and remove the mains plug from the wall socket.

Clean the cabinets and remote control unit using a moist cloth. Using solvents, white spirit or thinners is not advised, as they could damage the surface finish.

INSTALLATION

Position the Primo Valve Preamplifier on a stable, horizontal surface where there is no risk of it being knocked, or subjected to vibration such as from loudspeakers. This is of particular importance for the Primo, as all valves can be prone to some "microphony" and this could result in undesired feedback artefacts in the signal.

The Primo also features a high input impedance circuit which is *very* sensitive. Keep all mains and power supply leads well away from the input leads and sockets, and keep the input leads as far apart from each other as possible to avoid any crosstalk. Unconnected inputs may experience a certain amount of signal bleed through from adjacent connected inputs. This is normal for high input impedance, and does not indicate a fault.

POWER CONNECTIONS

The Primo Valve Preamplifier is supplied with a standard IEC mains cable which plugs into the IEC socket at the back of the preamplifier.

AUDIO CONNECTIONS

Inputs: Connect all sources to relevant input RCA or XLR sockets (see p.7 For more information).

Use good quality fully connected (signal and ground) coaxial phono cables for all RCA signal connections.

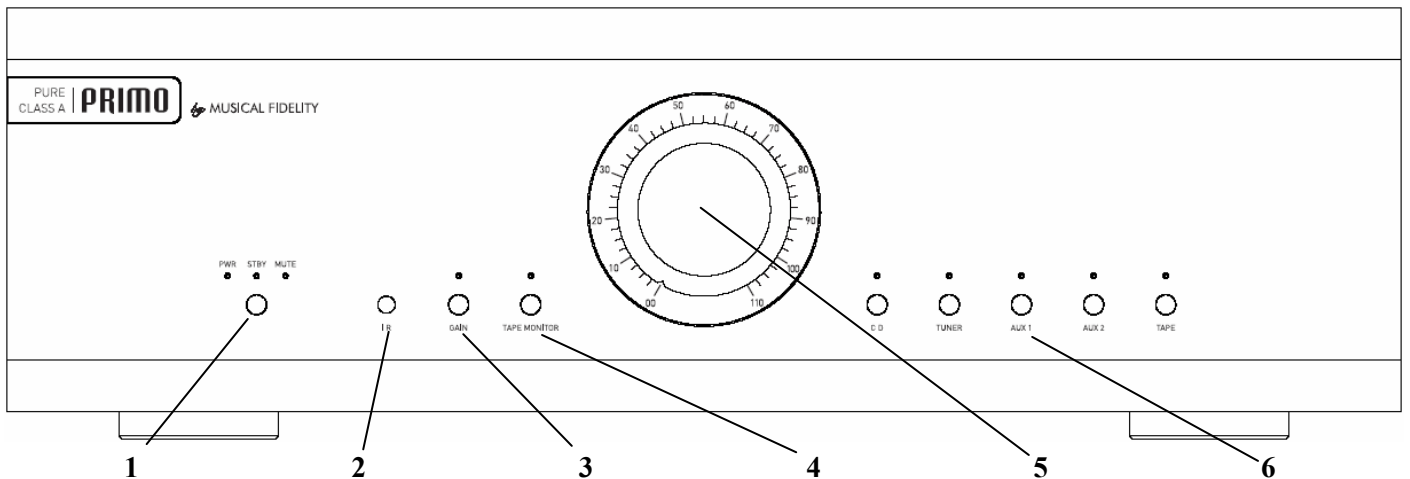
Fully balanced inputs (XLR) are available for connecting to suitable components. For these, we recommend any good quality straight-through connected balanced cables.

Outputs: Connect power amplifier(s) to the RCA sockets on the back panel marked as **LEFT** and **RIGHT** outputs

Fully balanced outputs are available for connecting to suitable components. For these, we recommend any good quality straight-through balanced cables

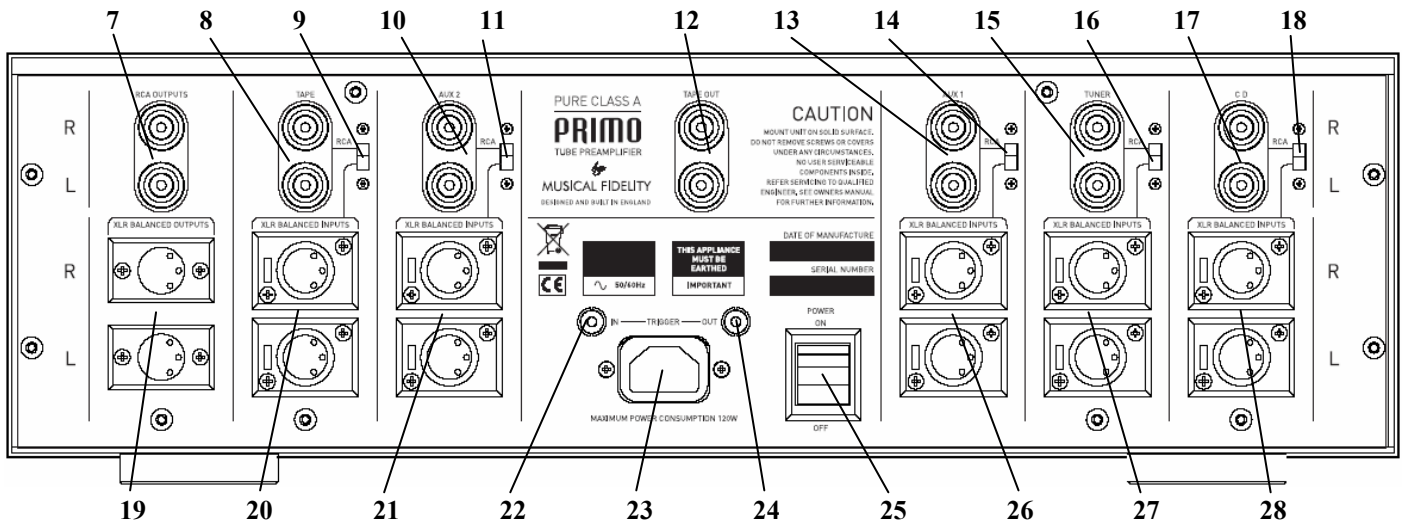
The **TAPE** output allows loop through of selected source signals for example, to pass on to recorder or monitor. It is also the ideal output to connect our headphone amps into.

Primo FRONT PANEL



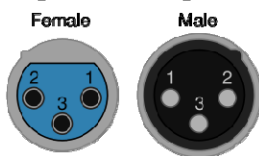
- | | |
|-----------------------------|----------------------------------|
| 1. ON/STANDBY Button | 4. TAPE MONITOR button |
| 2. IR RECIEVER lens | 5. VOLUME control |
| 3. GAIN button | 6. INPUT selector buttons |

Primo REAR PANEL



- | | | |
|---|---|--|
| 7. MAIN OUTPUT RCA sockets | 15. TUNER RCA input sockets | 22. TRIGGER IN 3.5mm (mono) socket |
| 8. TAPE RCA input sockets | 16. TUNER Input type selector switch | 23. POWER INPUT IEC from mains supply |
| 9. TAPE Input type selector switch | 17. CD RCA input sockets | 24. TRIGGER OUT 3.5mm (mono) socket |
| 10. AUX 2 RCA input sockets | 18. CD Input type selector switch | 25. MAINS ON/OFF switch |
| 11. AUX 2 Input type selector switch | 19. MAIN OUTPUT XLR sockets | 26. AUX 1 XLR input sockets |
| 12. TAPE OUTPUT RCA sockets | 20. TAPE XLR input sockets | 27. TUNER XLR input sockets |
| 13. AUX 1 RCA input sockets | 21. AUX 2 XLR input sockets | 28. CD XLR input sockets |
| 14. AUX 1 Input type selector switch | | |

XLR Balanced input and output lead connections:



(for reference only, no XLR signal leads supplied)

Pin functions:

- 1 Ground (cable shield)
- 2 Normal polarity ("hot" or "+")
- 3 Inverted polarity ("cold" or "-")

Remote control Handset (supplied with the battery already installed).

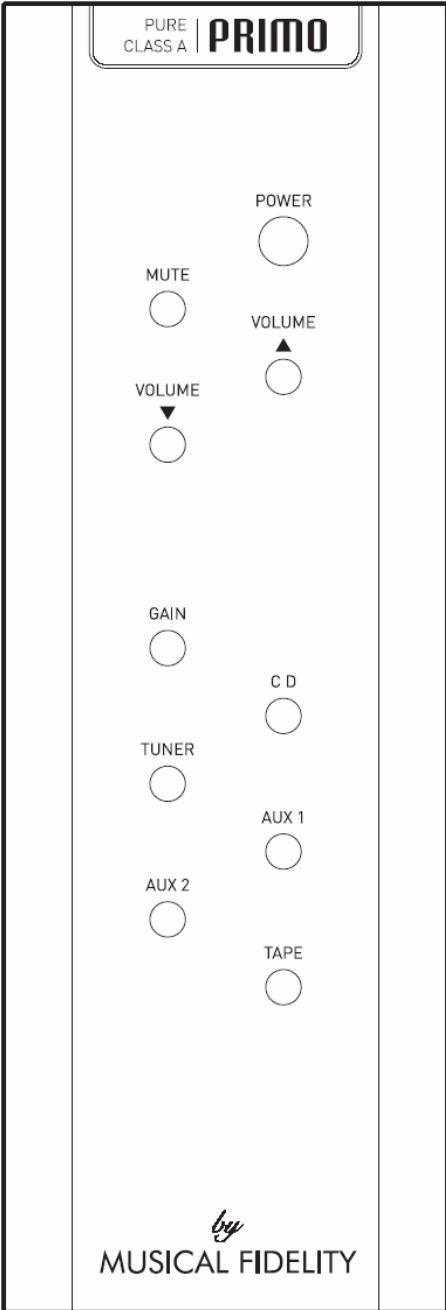
The Primo remote control shown below enables functions from this unit to be operated from a convenient distance. Equivalent buttons on the remote control have the same functions as those on the front panel of the unit. Other functions are only available by remote control.

As the handset uses an invisible infra-red light beam, the front edge must be pointed directly towards the receiver window at the front of the player, without visual obstruction between them.

For reliable remote control operation, the Primo Preamplifier should also be positioned so that direct sunlight, fluorescent or other bright lights do not fall directly on the IR receiver lens (see P.7). Such light can interfere with remote control operation and/ or maximum operating range.

If the range of the remote control greatly decreases, replace the battery, Lithium button type CR2450.

Please dispose of used batteries in accordance to local regulations.

<p>POWER – Switches unit to standby mode. MUTE – Mutes outputs until pressed again VOLUME ▲ – increases volume VOLUME ▼ – decreases volume</p> <p>GAIN – Selects overall gain</p> <p>CD – Selects CD input</p> <p>TUNER – Selects TUNER input AUX 1 – Selects AUX 1 input</p> <p>AUX 2 – Selects AUX 2 input</p> <p>TAPE – Select TAPE input</p>		<p style="text-align: center;"><u>Changing the Battery</u></p> <p>If the remote fails to operate the Primo functions correctly, or a substantial reduction in range is observed, the battery may be exhausted.</p> <ol style="list-style-type: none"> 1. Remove the six screws in the base of the remote control. 2. Remove the base to gain access to the battery holder in the bottom left of the remote. 3. Gently Lift the spent battery from the holder. 4. Discard the spent battery according to local regulations. 5. Replace with a new CR2450 <u>Lithium</u> battery. <p>If there are any problems with changing the battery please contact the dealer for assistance.</p> <p style="text-align: center;"><u>RC5 codes used by this remote control</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>HEX</th> <th>DECIMAL</th> </tr> </thead> <tbody> <tr> <td>SYSTEM CODE FOR PREAMP</td> <td>10</td> <td>16</td> </tr> <tr> <td>POWER</td> <td>0C</td> <td>12</td> </tr> <tr> <td>MUTE</td> <td>0D</td> <td>13</td> </tr> <tr> <td>VOLUME ▲</td> <td>10</td> <td>16</td> </tr> <tr> <td>VOLUME ▼</td> <td>11</td> <td>17</td> </tr> <tr> <td>GAIN</td> <td>22</td> <td>34</td> </tr> <tr> <td>CD</td> <td>01</td> <td>1</td> </tr> <tr> <td>TUNER</td> <td>02</td> <td>2</td> </tr> <tr> <td>AUX 1</td> <td>03</td> <td>3</td> </tr> <tr> <td>AUX 2</td> <td>04</td> <td>4</td> </tr> <tr> <td>TAPE</td> <td>05</td> <td>5</td> </tr> </tbody> </table>		HEX	DECIMAL	SYSTEM CODE FOR PREAMP	10	16	POWER	0C	12	MUTE	0D	13	VOLUME ▲	10	16	VOLUME ▼	11	17	GAIN	22	34	CD	01	1	TUNER	02	2	AUX 1	03	3	AUX 2	04	4	TAPE	05	5
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Important notice- The remote control supplied is expensively machined from solid aluminium.

Please take great care of this remote control as it would be costly to replace.

STARTING

For all the inputs, there is a switch which selects the type of input being used (see P.7).

Each switch must be set according to the sockets being used.

For an input using the RCA input sockets the switch should be in the RCA (up) position.

For an input using XLR, the corresponding switch must be set to XLR (down) position.

Once all connections are made, switch on the unit, using the **POWER** switch on the back of the unit. The standby LED will light on the front panel. Push the **ON/STANDBY** button, and the **POWER** and **MUTE** LEDs will light. Outputs are muted, for about forty-five seconds, so no sound will be heard until the **MUTE** LED goes out. The unit is now warmed up and settled, ready for use.

VOLUME

The volume should be adjusted for normal listening levels. This is done by turning the volume control up or down on the front panel. The volume level is readily identifiable on the dial for reference.

Adjusting the volume can also be achieved using the remote handset, using the volume up/down buttons (see p. 8).

GAIN

The gain is used to correctly set the amplification factor of single ended mode (RCA) and balanced (XLR) inputs. Select input that is to be used in single ended mode. Press **GAIN** button so LED above is alight for input using single ended source.

The unit is designed to remember which inputs are set and which are not, even when unplugged. To “un-set” an input, simply select that input, and push the **GAIN** button again, to extinguish the LED.

Selecting the input **GAIN** can also be achieved using the corresponding button on the remote handset, (see p. 8) The remote **GAIN** button must be held in for about 3 seconds to enable/disable the additional gain. This is a design feature, to prevent accidental activation/deactivation. The front panel button operates normally.

Input and output	Maximum Gain	
	LED ON	LED OFF
Balanced in and out	18dB	12dB
Single ended in balanced out	18dB	12dB
Single ended in and out	12dB	6dB
Balanced in single ended out	12dB	6dB

MUTE (remote only)

The sound from the preamplifier may be muted by use of the **MUTE** button on the remote. Press once and **MUTE** LED will light indicating muted state. No sound will be heard from the speakers.

To return to listening; simply press the **MUTE** button again so **MUTE** LED is no longer lit.

CD

To use the **CD** input, connect **CD** player outputs to the **CD** input RCA or XLR sockets (see p.7). Select **CD** input using the **CD** source button so the LED above is lit.

Selecting the **CD** input can also be achieved using the corresponding button on the remote handset, (see p. 8).

TUNER

To use the **TUNER** input, connect **TUNER** outputs to the **TUNER** input RCA or XLR sockets (see p.7). Select **TUNER** input using the **TUNER** source button so the LED above is lit.

Selecting the **TUNER** input can also be achieved using the corresponding button on the remote handset, (see p. 8).

AUX1

To use the **AUX1** input, connect source outputs to the **AUX1** input RCA or XLR sockets (see p.7). Select **AUX1** input using the **AUX1** source button so the LED above is lit.

Selecting the **AUX1** input can also be achieved using the corresponding button on the remote handset, (see p. 8).

AUX2

To use the **AUX2** input, connect source outputs to the **AUX2** input RCA or XLR sockets (see p.7). Select **AUX2** input using the **AUX2** source button so the LED above is lit.

Selecting the **AUX2** input can also be achieved using the corresponding button on the remote handset, (see p. 8).

TAPE

To use the **TAPE** input, connect source outputs to the **TAPE** input RCA or XLR sockets (see p.7). Select **TAPE** input using the **TAPE** source button so the LED above is lit.

Selecting the **TAPE** input can also be achieved using the corresponding button on the remote handset, (see p.8)

RECORDING AND TAPE MONITOR

To record to tape, (or alternatively CD recorder, DAT, minidisk or computer soundcard analogue input) connect the tape out to the recorder line in. Press the input selector button on the front panel or remote control. This source will now be routed to the Primo Valve Preamplifier **TAPE OUT**, without any changes, for recording by tape deck.

The recording can be directly monitored through the loudspeakers by pressing the **TAPE MONITOR** button. Press again to return back to the input being recorded.

On some 3 head tape decks there is an additional tape/source switch which should be in the tape position for this to work. If in doubt, please consult tape deck operating manual.

Note - adjustment of the volume control has no effect on the recording level.

TRIGGER input and output

The trigger input allows the preamplifier to be switched on by another device supplying between 5-12VDC trigger output. The trigger signal can be either polarity, + or -, but must be between 5 and 12V DC.

The trigger output allows the remote triggering of other units that accept up to +12V DC trigger input. This includes our AMS and TITAN power amplifiers. On our amplifiers the trigger input automatically takes over the **ON and off** functions overriding the power amplifier **ON/OFF** button.

This trigger output also passes on the state of the trigger input. This allows both the preamp and following unit to be simultaneously controlled by an external trigger source.

Note: Triggering *will not* override the MAINS on/off buttons. If any of the apparatus does not trigger on check all MAINS SWITCHE(S) are set to ON

Basic problem-solving with an amplifier is similar to troubleshooting other electrical or electronic equipment. Always check the most obvious possible causes first, such as the following examples:

Problem	Probable Cause	Remedy
No power when POWER button is pressed Unit(s) not coming on by trigger signal	Mains power plug is not fully inserted into rear socket or mains socket Mains to unit(s) switched off Trigger signal too weak or not present Trigger leads disconnected or faulty	Plug in securely. Check all units to be triggered have their MAINS SWITCHES set to ON The trigger will not work with them in the off position Check Trigger signal, and trigger sending unit Check Trigger lead(s)
No sound	Mute function is still active Wrong connections between input sources and the unit Volume turned down	Press the MUTE button on the remote control to cancel. Check audio input lead connections and correct source is selected Check volume level
Sound cut(s) out	Loose connection	Check input and output connections When all has been double-checked reduce volume and switch unit back on.
Hum	Audio connector plug not fully pushed in Incorrect input switch position Cable Fault Unsuitable Cable (e.g. cable grounds not connected)	Insert plug securely Check cable is connected at both ends. Check the corresponding input switch is correctly set for RCA or XLR input N.B. Some esoteric cables have internal wiring intentionally disconnected/modified. For best results on all inputs, please use good quality screened coax; signal and screens both separately connected at both ends.
No audio output, or too low level output	Incorrect or missing connections	Check connections and make sure they are secure.
Remote control does not work	Amplifier's POWER switch is set to off Battery fitted the wrong way round Battery is flat Remote control is not pointed directly towards the front panel of the amplifier Interference from another source	Set switch to on Insert battery correctly Change battery for a new one Ensure there is no obstruction between the remote control and amplifier front. Lighting such as fluorescent, incandescent, or even sunlight contains large amounts of infra red radiation. Ensure such sources are not shining directly on the infra red window as this could swamp the signal from the remote control. Also check the system and any other nearby remotes for stuck buttons
Remote control range has greatly reduced	Battery is running out	Change battery for a new one.

If none of these actions affect a cure, please contact the dealer, or an authorised Musical Fidelity service agent. Remember; never open the case of the Primo, as this will invalidate the guarantee.

Specification:	Maximum Output Voltage	32Vrms	
	Output impedance	600 ohms	
	THD + N, 20Hz to 20 kHz	0.0035% typical	
	Signal / noise ratio	>119dB	
	Input sensitivity for full output	8V	
	Input impedance	150K ohms CT (centre-tapped)	
	Overload margin	30dB	
	Channel separation	105dB	
	Frequency response	5Hz- 50KHz -0.5dB	
	Power requirement:	115/230V (factory preset) or 100V only 120 W maximum (operating) <20W (standby)	
Connections: (Main unit)	Line level inputs	5 pairs line level RCA connectors	
	Line level outputs	5 pairs XLR (female) balanced line level inputs 1 pair RCA preamp line outputs (level controlled by volume) 1 pair XLR (male) balanced outputs	
	Tape outputs	1 pair RCA tape line outputs (fixed level)	
	Trigger Input	3.5mm mono jack socket ± 5 to ± 12 V	
	Trigger Output	3.5mm mono jack socket +5 to +12V (tip +, sleeve -)	
	Power input:	3 pin IEC from mains	
Accessories:	Mains lead	10 Amp IEC type	1 off
	Remote control	PRIMO Preamplifier remote control	1 off
	Batteries	Size CR2450, Lithium button type	1 off (supplied, fitted)
Dimensions:	Unit only		
	483mm	19 Inches	Wide
	150mm	6 Inches	High inc. feet
	410mm	16¼ Inches	Deep inc. volume control and rear panel sockets
Weight:	16.8kg,	37lbs	
Dimensions:	Unit in shipping carton		
	695mm	27⅓ inches	
	610mm	24 inches	
	385mm	15⅞ inches	
Weight:	22kg,	44½lbs	



Musical Fidelity reserves the right to make improvements which may result in specification or feature changes without notice.

RELEASE	DATE	CHANGES
Issue 1	11 th March 2009	1 st issue
Issue 2	25 th January 2011	Gain table added P.9