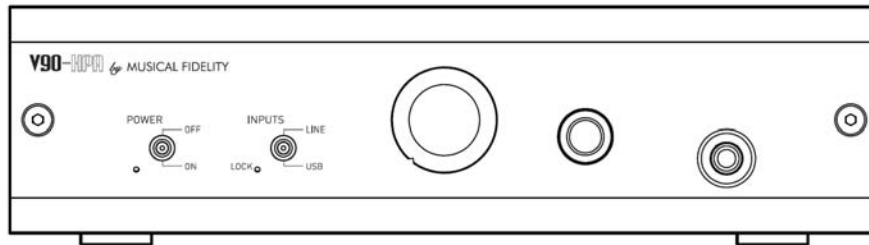


# V90-HPA Headphone Amplifier and 24 bit/96 kHz Asynchronous USB DAC

## Instructions



### USB input

A good quality USB A to B cable is required to connect the unit to the computer.  
Plug the B (square) end into the socket in the back of the V90-HPA  
Plug the A (rectangle) end into a free USB socket on your computer.

### Additional USB information

On the host computer, a new device will be available, whenever the V90-HPA is plugged in. Use this device to listen to music stored or played from this host computer. CD, MP3, WAV files played on any software should now play through the internal USB DAC.

This device works with the normal USB audio drivers as supplied with Windows XP, Windows VISTA, Windows 7, 8 and Apple OS-X and later. Musical Fidelity does not supply or support any third party or update drivers for this device. The computer drivers for the USB input of the V90-HPA should install automatically. If they do not, please consult computer system administrator/technical support. To check correct installation follow these steps:

### PC/Windows users

Check the computer has picked up the device and is currently using it by clicking: (most Windows versions)

- Start
- Settings
- Control panel
- Sounds and Multimedia
- Audio

Check "V90-HPA 24/96" appears under PREFERRED AUDIO DEVICE tab.

### Mac users

Check the computer has picked up the device and is currently using it by clicking: (MAC OS X)

- System preferences
- Hardware
- Sound

Check that "V90-HPA 24/96" is selected under the OUTPUT tab. If the computer's warning sounds/chimes are to played through the internal DAC, make sure it is selected under the SOUND EFFECTS tab too.

*This device is a high speed serial data processor, and by its nature, requires a very high volume of USB bandwidth. It will benefit greatly from being the only device connected on its USB 'port'. Sharing the same port with other devices may cause unwanted artefacts such as dropouts or temporary loss of signal. This especially includes the use of the unit on a USB hub/splitter alongside other USB components.*

With the USB cable plugged in, the internal USB DAC is automatically recognised no matter what input is currently selected. When INPUTS selector switch is set to USB, the green LOCK LED will light to show that the USB DAC is correctly setup. The green LOCK LED goes out when the INPUTS switch is set to LINE position but the internal USB DAC is still connected and ready to use whenever required.

### Use

With volume turned down, switch unit on and plug in headphones. Select USB or LINE INPUT as required using the input switch. Adjust the volume control for a comfortable listening level, sit back and enjoy the music.

These products have been designed so that it may be left on indefinitely, but please note that the mains adapter may become warm to the touch - this is normal.

### Introduction

Thank you for purchasing the V90-HPA headphone amplifier. We sincerely hope that it will bring you many years of outstanding listening pleasure.

### Installation Precautions

Your new V90-HPA is designed and built to provide trouble-free performance, but as with all electronic devices, it is necessary to observe a few precautions:

Do not use the V90-HPA near water. The unit must not be exposed to dripping or splashing and no objects filled with liquids, such as vases, must be placed on the unit.

Keep the V90-HPA away from heat such as radiators. No naked flame sources, such as lighted candles, should be placed on the unit.

### Power Supply Note:

Only use *approved* Musical Fidelity DC power supply. The use of other adaptors or supplies could seriously damage the V90-HPA.

This Hi-fi product has been tested to ensure that its operation is not adversely affected by normal background levels of Radio Frequency Interference (R.F.I.), and that it does not itself generate excessive amounts of interference. However, if a problem persists, please contact your Musical Fidelity agent.

Never open the case of the V90-HPA yourself, as this will invalidate the guarantee.

Place all connecting cables where they are not likely to be walked on or trapped by items placed on them.

The V90-HPA will operate in accordance with its specifications within the following environmental range:

Temperature 5 to 45 degrees Celsius

Humidity 10 to 90% non condensing

There are no user adjustments inside. Please refer all

service work to an authorised Musical Fidelity agent.

### Connections

All connections must be made before the mains adaptor is plugged in, and before any amplifier connected is switched on. Always switch off the equipment attached to the V90-HPA before connecting or disconnecting power, changing leads or inputs.

### Inputs

Using good quality RCA leads (not supplied), connect the left and right outputs from a CD player or other audio source to the V90-HPA **INPUT** sockets.

### Outputs

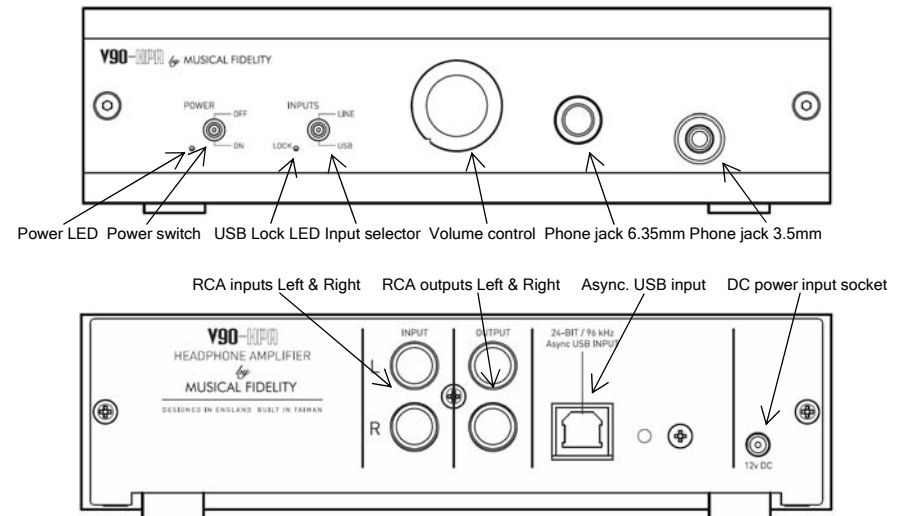
Two headphone sockets are available to allow a greater range of headphones to be used without need of adaptors. Connect headphones into the correct output socket of the V90-HPA.

Note: If connecting into an *existing* system, the V90-HPA can conveniently be connected to the TAPE REC outputs of any pre- or integrated amplifier. If the TAPE REC outputs are still required by e.g. tape or CD recorder, then the **OUTPUT** sockets (back panel) of the V90-HPA reproduce the input source currently selected by the setting of the **INPUTS** switch i.e. LINE or USB.

The back panel **OUTPUT** sockets are unaffected by the volume control and are therefore suitable for recording either from LINE or USB inputs.

### Power

Plug the DC connector lead from the power supply unit into the V90-HPA power inlet socket, and plug the adaptor itself into a convenient wall mains outlet. The blue LED will light to confirm the unit is ready for use.



Basic problem-solving with an amplifier is similar to troubleshooting other electrical or electronic equipment.

Problem	Probable Cause	Remedy
No power	Power supply not switched on.	Check power supply is plugged in and switched on (blue LED lit)
	Power plug is not fully inserted	Plug into rear socket securely
No sound - analogue	Wrong connections between input source and the V90-HPA	Check headphone lead is connected and secure Check INPUTS switch position and audio input lead connections.
	Volume turned right down	Check volume is adjusted accordingly. Take care not to turn up too high!
No sound - USB	USB device not working	Check USB input lead is securely connected. Green LOCK LED will light when an active digital/USB stream is detected <i>and</i> USB input selected. See "Additional USB Information section" to check computer has recognised and is using "V90-HPA 24/96" for playback.
Hum	Audio connector not secure	Insert plug so full contact is made.

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 V90-HPA, as this will invalidate the guarantee.

Specifications:	Power	0.25W /channel	into 32 Ohms
	Output devices	2	per channel
Output impedance	THD	50Ω	Suitable for 10-600Ω 'phones
	Signal/noise ratio	<0.005% typical	20Hz-20 kHz
Input impedance	>109dB		'A' weighted
	Frequency response	25 KΩ	20Hz to 80 kHz
Power requirement:	+0, -1dB		500mA
	12V DC		
Connections:	Line level inputs:	1 pair line level RCA connectors,	
	USB input	1 Type "B" asynchronous, 16-24 bits, up to 96kHz sample rate	
	Line level outputs:	1 pair RCA [switch-selected input, fixed output at 0dB or x1]	
	Headphone outputs	1 Stereo Jack socket 6.35mm, ¼"	
Power input		1 Stereo Jack socket 3.5mm, ⅛"	
		1.3mm DC power socket	
Dimensions:	Length	117mm	4½" including terminals and volume
	Width	170mm	6¾"
	Height	47mm	1¾" including "feet"
Weight:	Unit alone	600g	1½lbs
	Total packed carton	1.1Kg	2½lbs
Accessories (supplied)	Power Supply Unit	12V DC	500mA 1 off
	Leaflet	V90-HPA	Instruct ions 1 off

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

### Item disposal information for Europe



<p><b>DISPOSAL</b> 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 your local government office or your retailer for available collection facilities.</p>	<p><b>AFVAL</b> Het label op de achterzijde van dit apparaat, een afvalbak op wielen met een kruis doorgeschild, 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 inzamelpunten contact op met uw gemeentelijke reinigingsdienst of met uw elektronica leverancier.</p>
<p><b>DISPOSITION</b> 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 Røhs 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.</p>	<p><b>HÄVITTÄMINEN</b> Yläkäsittävää jätteenä tulla tuotteen takalevyssä kertoo, että tuotetta ei saa käsitellä normaalina talousjätteenä. Ympäristön suojelmiseksi on tuote pidettävä erillään muusta jätteestä ja se on kierrätettävä ekologisesti kestäväällä tavalla. Ota yhteyttä laitteen myyjään tai Pirkanmaan Ympäristökeskukseen lähimmän kierrätyskeskuksen löytämiseksi.</p>
<p><b>DISPOSAL</b> La etiqueta cruzada hacia fuera del compartimento 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.</p>	<p><b>AFSKAFNING</b> 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 brugt på en miljørigtig måde. Kontakt venligst de lokale myndigheder eller din forhandler for oplysning om nærmeste tilgængelige opsamlingssted for elektronikaffald.</p>
<p><b>RIFIUTI</b> 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, separe 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 governativo locale od il rivenditore del prodotto.</p>	<p><b>ΑΠΑΙΚΑΣΙΑ ΑΠΟΡΡΙΨΗΣ</b> ΤΟ ΣΗΜΑ ΜΕ ΤΟΝ ΔΙΑΓΕΓΡΑΜΜΕΝΟ ΤΡΟΧΗΛΑΤΟ ΚΑΔΟ ΑΠΟΡΡΙΨΑΤΩΝ ΣΤΗΝ ΠΙΣΩ ΟΨΗ ΤΟΥ ΜΗΧΑΝΗΜΑΤΟΣ ΔΗΛΩΝΕΙ ΟΤΙ ΤΟ ΠΡΟΪΟΝ ΑΥΤΟ ΔΕΝ ΠΡΕΠΕΙ ΝΑ ΔΙΑΧΕΙΡΙΣΤΕΙ ΣΑΝ ΣΥΝΗΘΕΣ ΜΕΝΟ ΟΙΚΙΑΚΟ ΑΠΟΒΛΗΤΟ. ΠΡΟΣ ΑΠΟΦΥΓΗ ΕΝΔΕΧΟΜΕΝΗΣ ΕΠΙΒΑΡΥΝΣΗΣ ΤΟΥ ΠΕΡΙΒΑΛΛΟΝΤΟΣ, ΣΕΧΩΡΙΣΤΕ ΤΟ ΠΡΟΪΟΝ ΑΠΟ ΤΑ ΆΛΛΑ ΑΠΟΡΡΙΨΑΤΑ ΩΣΤΕ ΝΑ ΕΞΑΣΦΑΛΙΣΘΕΙ Η ΑΝΑΚΥΚΛΩΣΗ ΤΟΥ ΜΕ ΤΟΝ ΠΡΕΠΟΝΤΑ ΤΡΟΠΟ. ΠΑΡΑΚΑΛΟΥΜΕ ΝΑ ΕΠΙΚΟΙΝΩΝΗΣΕΤΕ ΜΕ ΤΗΝ ΤΟΠΙΚΗ ΥΠΗΡΕΣΙΑ ΑΝΑΚΥΚΛΩΣΗΣ Η ΜΕ ΤΟ ΚΑΤΑΣΤΗΜΑ ΑΓΟΡΑΣ ΓΙΑ ΠΕΡΙΣΣΟΤΕΡΕΣ ΛΕΙΤΟΜΕΡΕΙΕΣ.</p>
<p><b>FACHGERECHTE ENTSORGUNG</b> Das auf der Geräterückseite angebrachte Label deutet darauf hin, dass das Produkt nicht mit konventionellem Hausmüll 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.</p>	

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