

# SUPERCHARGER

## 550K

MONOBLOCK BRIDGED POWER AMPLIFIER

### INSTRUCTIONS FOR USE



*Thank you for purchasing the Musical Fidelity Supercharger 550K monoblock.*

*The Supercharger 550K uses the latest in low distortion circuitry in a bridged configuration which delivers 550 watts rms.*

*The Supercharger 550K is designed to increase the dynamic range of an existing lower powered amplifier (from 50 watts to 200 watts) to 550 watts. The dynamic range will increase by up to 10dB. This does not necessarily mean that the average listening level will be much louder; it's just that musical transients will now be delivered without distortion or limiting. Overall the listening experience is greatly improved because of dramatically lower distortion and increased dynamic range.*

*The 550K accepts both speaker level and line level inputs. When driven from an existing amplifier the sound quality is greatly improved because the 550K presents an easy load for the existing amplifier to drive and at the same time gives up to 10dB increase in dynamic range.*

*Alternatively, the Supercharger 550K can be used as a conventional power amplifier driven by a high quality preamp.*

*The Supercharger 550K is a perfect answer to improve dynamic range in a single beautifully engineered package. 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 there are further questions about any Musical Fidelity component, please consult the dealer from whom it was purchased, who is there to help and give advice.*

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, you need to cut off 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 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 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 and USER INFORMATION

Your new 550K 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 550K 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.

This unit features a **BRIDGED** speaker output and should **NOT** be grounded on either speaker output terminal as both terminals are effectively “hot”, i.e. carry signal. Please check if using *any* active “sub”, electrostatic, or other non standard potentially grounded speaker types directly connected to the outputs of the Supercharger 550K. Consult speaker manual or supplier if in doubt.

Do not use near water, or place water-filled containers on the 550K, 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 your dealer, who should then check the unit before further use. Entry of liquid into the 550K 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.

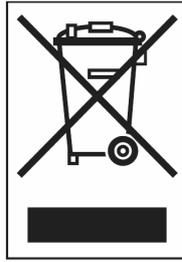
Do not remove any covers or try to gain access to the inside. There are no internal adjustments or fuses you can replace yourself. Refer all service work to an authorised Musical Fidelity agent.

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

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 your audio system during electrical storms, remove the mains plugs and disconnect any aerial lead.

If after-sales service is required, to help your dealer identify the 550K please quote the serial number located on the rear panel of the unit.



### 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

ΤΟ ΣΗΜΑ ΜΕ ΤΟΝ ΔΙΑΓΕΓΡΑΜΜΕΝΟ ΤΡΟΧΗΛΑΤΟ ΚΑΔΟ ΑΠΟΡΡΙΜΑΤΩΝ ΣΤΗΝ ΠΙΣΩ ΟΨΗ ΤΟΥ ΜΗΧΑΝΗΜΑΤΟΣ

ΔΗΛΩΝΕΙ ΟΤΙ ΤΟ ΠΡΟΙΟΝ ΑΥΤΟ ΔΕΝ ΠΡΕΠΕΙ ΝΑ ΔΙΑΧΕΙΡΙΣΘΕΙ ΣΑΝ ΣΥΝΗΘΙΣΜΕΝΟ ΟΙΚΙΑΚΟ ΑΠΟΒΛΗΤΟ. ΠΡΟΣ ΑΠΟΦΥΓΗ ΕΝΔΕΧΟΜΕΝΗΣ ΕΠΙΒΑΡΥΝΣΗΣ ΤΟΥ ΠΕΡΙΒΑΛΛΟΝΤΟΣ, ΞΕΧΩΡΙΣΤΕ ΤΟ ΠΡΟΙΟΝ ΑΠΟ ΤΑ ΑΛΛΑ

ΑΠΟΡΡΙΜΑΤΑ 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 ΛΕΠΤΟΜΕΡΕΙΕΣ.

## SETTING UP

Position the 550K on a stable, horizontal surface where there is no risk of it being knocked. We have supplied a wire so the unit can be situated close to the speaker and use the existing amplifier's speaker wire as the inputs

Make sure ALL units involved are switched off and unplugged from mains supply before making or removing any connections.

During normal use, the unit develops a certain amount of internal heat and therefore should be sensibly situated where it can radiate this heat most efficiently. If this is not realised, heat build-up will occur and may cause the amplifier to prematurely shut itself down. It is thus recommended that the unit is situated in an open rather than enclosed space and away from other sources of heat.

## AUDIO CONNECTIONS

**Inputs:** The 550K has one line level input and a speaker level input for power boosting. Choose the input to be used, speaker level or line level:

### **FOR SPEAKER LEVEL INPUT:**

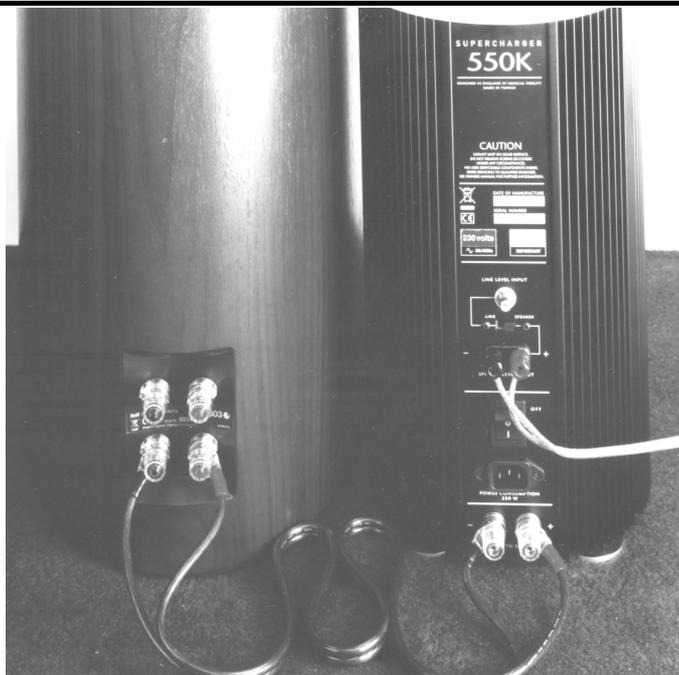
The speaker input allows direct connection from an existing amplifier's speaker outputs. This provides a low impedance input that the amplifier can drive easily, with greatly reduced distortion (It's now approximately 10 times less work for the existing amplifier to drive).

Disconnect the existing amplifier speaker wires at the *speaker* ends. These ends will now be connected to the **speaker level input** terminals of the Supercharger 550K.

Make sure that the positive lead is connected to the red input terminal, and the negative lead to the black input terminal of the Supercharger 550K

Some cables have an identifying mark to help set up the equipment correctly.

Make sure the input selector slide switch on the back panel is set to **SPEAKER**



Loudspeaker

Supercharger 550K

### Recommended wiring of Supercharger 550K for speaker input

### **FOR LINE LEVEL INPUT:**

The line input allows direct connection from a preamplifier or amplifier's preamp outputs (47K input impedance).

Use a single phono to phono cable to connect output on the preamplifier output to the line level input on the 550K.

Make sure the input selector slide switch on the back panel is set to **LINE**.

**Note:** in *both* input cases it is assumed that the driving amplifier or preamplifier have a **VOLUME CONTROL** to allow setting of listening level. This is important as the 550K has no control of its own.

### OUTPUTS:

Connect loudspeakers to the terminals near the base of the back panel marked as **OUTPUT TO SPEAKER**. For setups using more than one 550K it is important to get the phase of these leads correct in all units.

Use the **RED** ends of the supplied brown cable to connect positive on the Supercharger output to the positive binding post on the speaker, and the **BLACK** ends to connect the negative on the Supercharger output to the negative binding post on the speaker.

### MAINS POWER INPUT

Check the rear panel mains switch is set to "off".

Connect the supplied mains lead to the IEC socket near base of back panel. Connect the other end to a mains power socket.

### CAUTION!!

This unit features a **BRIDGED** output and should **NOT** be grounded on either output terminal as both are effectively "hot". Please check if using *any* active "sub", electrostatic, or other non standard speaker types directly connected to the outputs of the Supercharger 550K. Consult speaker manual or supplier if in doubt.

Most high quality speakers will comfortably cope with large power *transients*. By their nature, these are very quick and will present no thermal problems for a good commercial quality loudspeaker.

However please note that most loudspeakers are *not* designed for very high sustained listening levels. The Supercharger 550K is a very powerful amplifier and will faithfully deliver what is asked of it. If listening levels are set significantly higher (plus 3dB or so, double the power) than normal, it is possible that the loudspeakers could get into thermal problems and be damaged. Musical Fidelity will not be responsible for any loss or damage to loudspeakers.

Please take care with listening levels, which can damage hearing, and consider the noise suffered by others, such as neighbours.

The object of the Supercharger 550K is to increase dynamic range. All that needs to be done is to set the volume level to normal level and the Supercharger will do the rest: providing dramatically increased dynamic range with very low distortion.

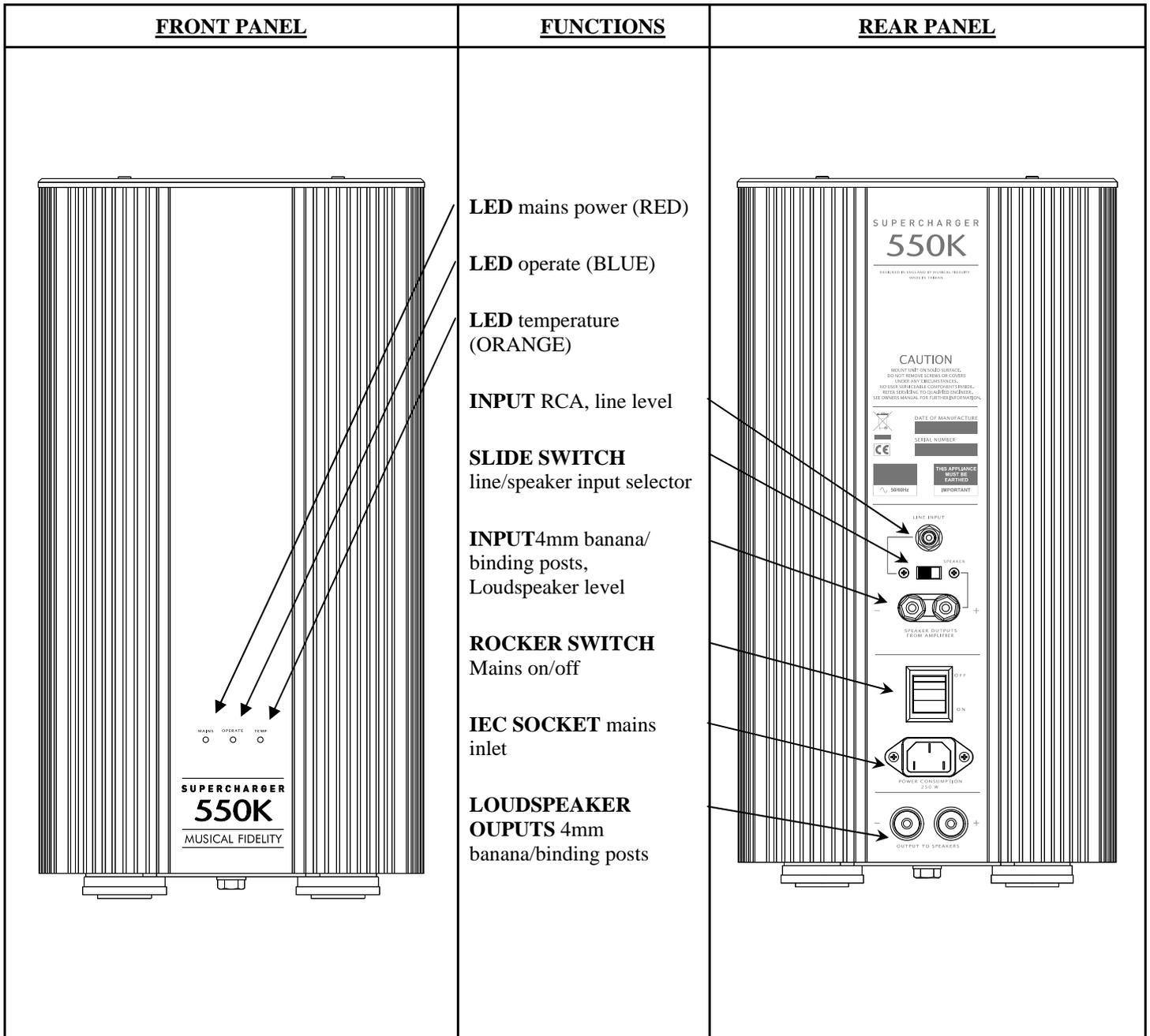
### **Additional note-**

If bi-amping, please ensure that speaker shorting links linking treble and bass units are removed. Failure to do so may result in damage to connected amplifier(s). See loudspeaker instructions for more information.

### CLEANING

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

Clean the cabinet and remote control unit using a moist cloth. We do not advise using solvents, white spirit or thinners as they could damage the surface finish.



### **POWER ON**

Once all connections are made, switch on the unit, using the ON/OFF switch on the back panel. On the front panel of the 550K the front LED glows red to indicate mains is present and the unit is in “standby” mode; and outputs are muted, so no sound will be heard from the speakers.

The 550K is designed to switch on automatically, when a signal is detected at the selected input (provided the mains switch at the rear is set to “on”).

When a signal is detected, the blue LED will glow to indicate unit is now operating. At this point sound output is now available.

**Note:** if the amplifier sees no signal on selected input for more than 30 minutes, it will automatically revert to standby mode.

### **OVERHEAT**

Should any internal overheat situation have been reached, the amplifier will cut out, there will be no more sound output, and the orange LED will light.

Unit will remain in this state until it has cooled down again. If overheat mode persists, check wiring for errors; driver amplifier for instability; and locate unit where it can cool down more easily.

### **FAULT CONDITION**

Should the amplifier be driven into clipping for sustained periods or a wiring fault develop, the red mains LED will flash repeatedly and sound output will be disabled (muted). Check wiring and if all looks secure, reset the unit:

- power off for 30 seconds using rocker switch on rear panel
- switch rocker switch back to on position
- apply music signal to switch unit back 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 <b>POWER</b> switched turned on	Mains power plug is not fully inserted into rear socket No mains power	Plug in securely Check socket with another appliance
No sound	Wrong input selected  Wrong connections between input sources and the unit  Speakers not connected, or incorrectly wired	Move input switch to required position  Check correct input has been wired in (loudspeaker or line input) Check speaker cables at both ends
Sound is not precise, lacking in bass and stereo image (when used in conjunction with other unit(s))	Speakers are connected out of phase, i.e., connections to one speaker (+ and -) are reversed on one or more units  Speaker level inputs incorrectly wired	Ensure speakers are connected correctly on all units: + terminal on amplifier goes to + terminal on speaker, - terminal on amplifier goes to - terminal on speaker. If using speaker level inputs, check the connections are correct at both ends as above. Note: Most cables have polarity markings to help get this right.
Unit cuts out, orange LED lit	Overheating  Short circuit in speaker (output) leads  Problem in speakers Grounded via speaker	Make sure unit is situated to allow free air circulation. Check speaker leads connected to SPEAKER OUTs on 550K and speaker ends for stray strands or short circuits. Check speakers Both the + and - speaker output terminals on this unit are "hot". Some speakers e.g. active subs and electrostatics have "grounded" inputs. Such speakers are incompatible with the 550K.
Unit cuts out, red LED lit	Clipping  Grounded via speaker	Reduce volume level on driving amplifier Switch off unit using rear panel mains switch Wait 30 seconds before switching back on, and apply music source. Both the + and - speaker output terminals on this unit are "hot". Some speakers e.g. active subs and electrostatics have "grounded" inputs. Such speakers are incompatible with the 550K.
Hum	Audio connector plug not fully pushed in Cable Fault Unsuitable Cable (e.g. cable grounds not connected)	Insert plug securely Check cable is connected at both ends. N.B. some esoteric cables have internal wiring intentionally disconnected/modified. For best results on all inputs, please use good quality fully screened coax; signal connected both ends and earth/screen connected both ends.

If none of these actions affect a cure, please contact your dealer, or an authorised Musical Fidelity service agent. Remember; never open the case of the 550K yourself, as this will invalidate the guarantee.

Output:	Power	550 Watts per channel into 8 Ohms (27dBW), 750 Watts per channel into 4 Ohms
	Voltage, RMS	66 Volts 20Hz to 20 kHz
	Voltage, Peak-to-peak	186 Volts
	Current peak-to-peak	250 Amps
	Damping factor	220
	Output devices	12
	Thermal cut out (internal temp)	70°C
Line input:	THD + noise, 20Hz to 20 kHz	< 0.016%
	Signal / noise ratio	> 120dB 'A'-weighted
	Input sensitivity for 550 Watts	2.23V
	Input impedance	50k Ohms
	Frequency response	20Hz to 30 kHz, +0, -0.2dB
Speaker input:	Signal / noise ratio	> 115dB 'A'-weighted
	Input sensitivity for 550 Watts	33V
	Input impedance	50 Ohms
Connections:	Line level inputs:	1 line level RCA connector
	Speaker inputs:	1 pair 4mm banana plug/binding posts
	Speaker outputs:	1 pair 4mm banana plug/binding posts
	Power requirement:	100 / 115 / 230Volts AC 50 / 60Hz (factory pre-set), 1000 Watts maximum into 8 Ohms, 53 Watts idle
Weight:	12.1 kg, 26¾ lbs	unit only, unboxed
	15 kg, 33lbs	in shipping carton
Dimensions:	215 mm, 8½ inches diameter	
	404mm, 16 inches high including feet	
	220mm, 8¾ inches deep (front to back) including terminals	
Standard accessories:		IEC type mains lead (10-Amp type), Speaker lead



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

RELEASE	DATE	CHANGES
Issue 1	16 <sup>th</sup> June 2007	[1 <sup>st</sup> release]