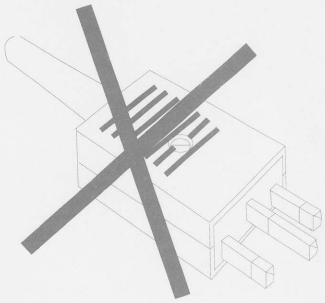
66
PREAMPLIFIER
&
CONTROL PANEL

INSTRUCTION BOOK

QUAD



IMPORTANT

Do not use unshrouded IEC connectors with this equipment.

These can be incorrectly inserted into moated AC power outlet sockets, possibly causing a safety hazard.

BRIEF OPERATING INSTRUCTIONS

Fit the PP3 battery supplied into the control panel.
Connect the preamplifier to the AC power supply with the mains cable supplied (fit suitable mains plug).
Connect power and signal cables (supplied with the amplifier) to the Quad power amplifier. Connect input sources.

- Switch preamplifier on with the **ON/OFF** switch.
- Use the **CONTROL PANEL** to select the required sound source.
- Adjust **VOLUME** and **BALANCE** as required.
- Set **TILT**, **BASS STEP** and **FILTER** if necessary.
- When you have finished listening use the **STAND-BY** button to switch off.
- To switch on again, from **STAND-BY**, just press **STAND-BY** or any **INPUT SELECTOR** button.
- The Quad CD player and 66FM tuner can be operated via the **CD FUNCTION** buttons.
- For more details on the operation of the 66 preamplifier please refer to the main instruction book.

IMPORTANT NOTE

It is always good practice to switch off equipment before connecting or disconnecting signal leads. This will prevent unpleasant and loud noises coming from the loudspeakers and avoid the risk of damage to equipment.

It is also important that equipment is earthed according to the manufacturers instructions. This becomes more important as the number of units which are connected together increases.

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This instruction book covers
66 preamplifiers from serial number 210600 (Mk-II)

INTRODUCTION

The Quad 66 is a high quality preamplifier system with full remote operation. It comprises two units; a mains operated preamplifier to which the various sound sources are connected and a separate battery operated control panel incorporating all the main function controls for operating the preamplifier, Quad 66FM tuner and Quad CD player, or any other remote control CD player using the standard RC5 infrared controls. If the battery fails the control panel can be directly powered from the preamplifier.
A display on the preamplifier shows all functions selected.
The preamplifier unit will accept inputs from seven sources; Disc, CD, Radio, A-V, Aux 1, Aux 2, and Tape (with off tape monitoring). A second tape recorder may be connected to the Aux 2 input and both the A-V and Aux 1 inputs have anti hum-loop circuitry.
The control panel has rotary Volume and Balance adjustment plus press buttons for Disc, CD-Play, Radio, A-V, Aux 1, Aux 2, Tape, Tilt (2), Bass Step (2), Filter (2), Cancel, Stand-By, Search (2), Track, Pause, Stop and Store.
The Stand-By facility enables the 66 preamplifier and equipment connected to the AC power out socket, to be switched on and off via the remote control panel.

Later versions of the microprocessor software offer the facilities to programme the relative volume and tone control setting for each source input. See separate programming instruction sheet for full details.

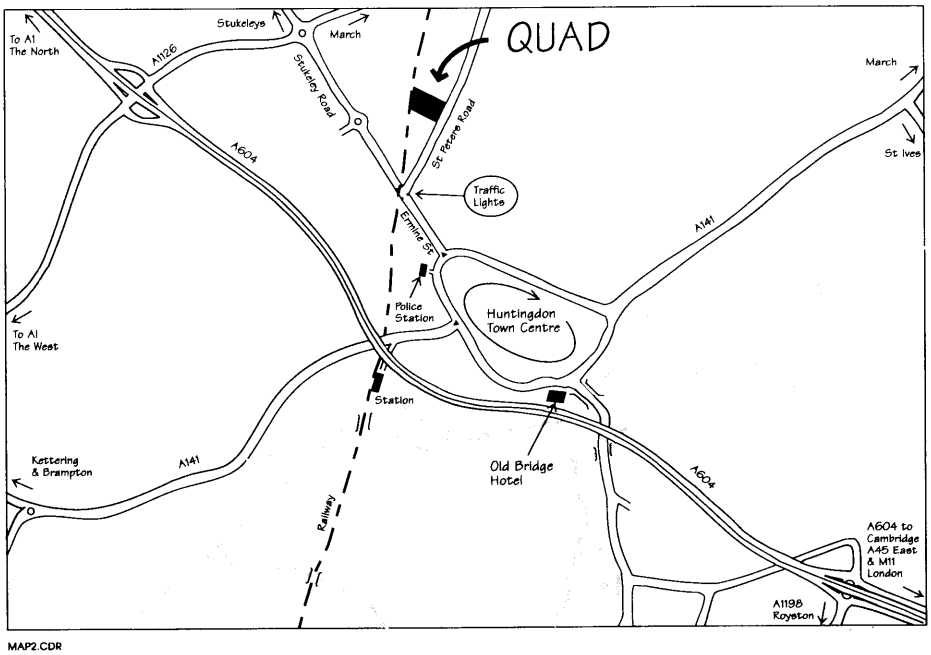
GUARANTEE

The Quad 66 is guaranteed against any defect in material and workmanship for a period of twelve months from the date of purchase. Within this period we undertake to supply replacement parts free of charge provided that the failure was not caused by misuse, accident or negligence. Freight and labour costs are not covered unless by local agreement.
Within the UK this guarantee does not limit your statutory rights. A separate guarantee card is not supplied and your guarantee begins on the day of purchase.

SERVICE

If servicing is required it should be returned to the supplier, the distributor for the country of purchase or Quad Electroacoustics Ltd. A brief note should be enclosed giving your name and address and the reason for returning it.
Quad offers same-day service from Monday to Friday except for bank holidays. Please contact us to make an appointment.

How to Find us



MAP2.CDR

Important The original packing should be retained in case the unit has to be returned for service.

ACCESSORIES SUPPLIED (UK versions only)

AC power lead 2m with 13A 3 pin plug (13A fuse)	Stock No. QUKES2A
AC output connector	Stock No. PPR0413
Alkaline PP3 battery (for control panel)	Stock No. N4022AA

INSTALLATION

Checking the AC power Supply

The rating plate on the back of the preamplifier shows the AC supply voltage for which it is set. If your AC supply is different from that indicated, ask your dealer or our Service Department to change the voltage setting for you.

Connecting to the AC power Supply

The 66 preamplifier is supplied with an AC power lead with a 13A 3 pin plug with 13A fuse. Do not cut off this plug or use it with its fuse cover removed. If however for any reason the plug has to be removed then it must be disposed of and ***under no circumstances*** plugged into a 13A socket outlet. A suitable plug can be fitted, as explained below:-

WARNING: THIS APPARATUS MUST BE EARTHED

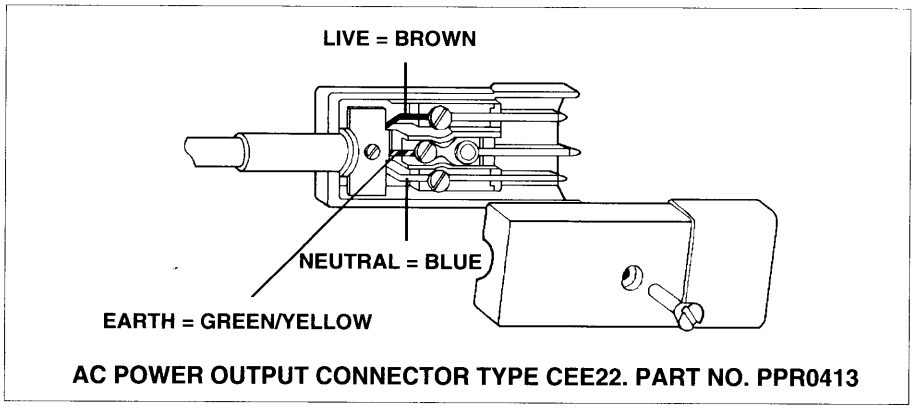
IMPORTANT - Fitting a mains plug.
The wires in the mains lead are coloured:

Brown = Live Blue = Neutral Green/Yellow = Earth

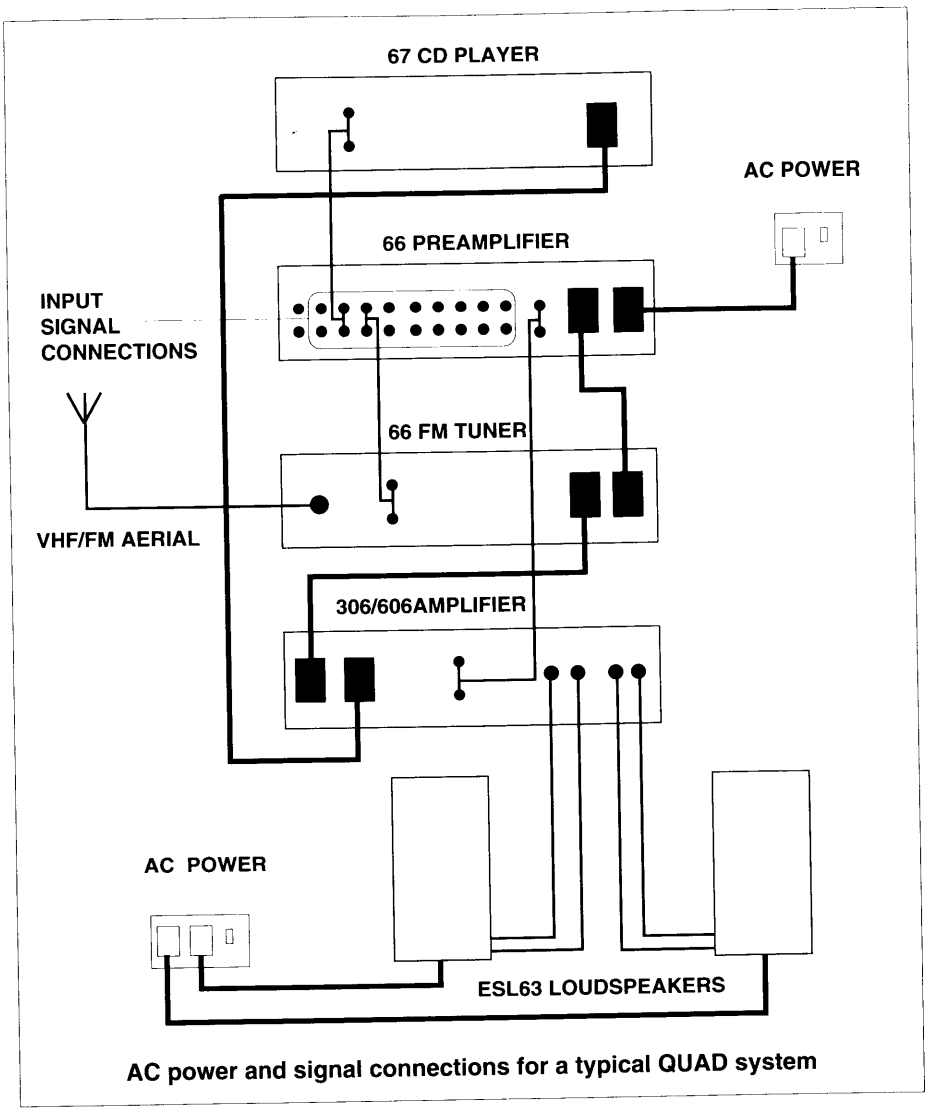
The ***Brown*** wire must be connected to the terminal marked **L** or coloured **Red**.
The ***Blue*** wire must be connected to the terminal marked **N** or coloured **Black**.
The ***Green/Yellow*** wire must be connected to the terminal marked **E** or coloured **Green** or **Green/Yellow**.

Note When a fused 13A plug is used a 13A fuse (ASTA approved to BS1362) will be adequate for a typical Quad system. For other types of plug, then fit a 13A fuse either in the plug, or adaptor, or at the distribution board. If in doubt consult a qualified electrician.

AC Power Out The preamplifier is fitted with a switched **AC power out** socket for feeding other units. Quad power amplifiers and tuners are provided with the appropriate interconnecting cables and the diagram overleaf shows how to link the units. Do not exceed the maximum current ratings of (4A for 220/240V).
If required a spare AC output connector is provided which should be wired as shown in the diagram below.



AC POWER OUTPUT CONNECTOR TYPE CEE22. PART NO. PPR0413



AC power and signal connections for a typical QUAD system

POSITIONING THE 66 PREAMPLIFIER

The preamplifier can be positioned free-standing or stacked with other units. Never place it in persistent direct sunlight or near any heat source.

Free Standing

If free standing, stand on a flat firm surface.

Stacked

Do not stand directly on top a high power amplifier, such as the Quad 606, as such amplifiers can generate a substantial amount of heat.

Warning

Do not place audio or video cassettes on top of the preamplifier because the magnetic fields produced by its mains transformer may affect the quality of the recording.

AMPLIFIER CONNECTIONS

The output of the 66 preamplifier is 0.5V which is suitable for all Quad transistor amplifiers (can be up to 1.5V max. for other amplifiers). Phono sockets are fitted and the cable supplied should be used to make connection to the power amplifier signal input connections.

SIGNAL CONNECTIONS

All input connections are clearly marked on the back of the preamplifier. Phono sockets are used for all inputs and an earth/ground terminal is provided for the Disc input if separate grounding is required.

DISC

The signal cable from the turntable should be plugged into the **DISC L** and **R** sockets. The signal cable will normally incorporate a separate earth/ground lead which must be connected to the **chassis earth/ground terminal** marked with an earth/ground symbol.
The 66 preamplifier is supplied fitted with a disc input module suitable for most high quality moving magnet cartridges. Other modules are available with different input impedances and sensitivities for moving magnet and moving coil cartridges, or to provide a normal input for a tuner, CD player or similar source. Contact your Quad dealer or Quad direct for further details.

CD

The signal cable from the CD player should be connected to the **CD L** and **R** sockets. This input is intended primarily for compact disc players but can be used as an auxiliary input for tuner or similar source.

RADIO

For a Quad FM tuner or other tuners of a similar output level. The tuner signal cable should be connected to the **RADIO L** and **R** sockets.

AV

Short for **A**udio **V**isual. Will accept the output from a television set or video recorder with audio output connections. The signal cable should be connected to the **AV L** and **R** sockets.
This input is provided with an anti-hum circuit which prevents hum due to earth/ ground loops.

AUX 1

Auxiliary input for other input sources such as a second tuner, television tuner etc. The signal cable should be connected to the **AUX 1 L** and **R** sockets. This input is provided with an anti-hum circuit which prevents hum due to earth/ ground loops.

AUX 2

Auxiliary input for a second tape recorder, video recorder etc. Record and replay levels have been chosen to match most recorders currently available.
The signal playback cable should be connected to the **IN L** and **R** sockets and the record cable to the **OUT L** and **R** sockets.

TAPE

Record and playback connections for tape or cassette recorders. Record and replay levels have been chosen to match most recorders currently available.
The signal playback cable should be connected to the **IN L** and **R** sockets and the record cable to the **OUT L** and **R** sockets.
Off tape monitoring is provided from these sockets.

OPERATION

Switching On and Off

Press the **ON-OFF** button on the front of the 66 preamplifier. This has a sequential action so pressing it again will switch the unit off. Any equipment connected to the **AC power out** socket will also be switched at the same time. When switched on the 66 preamplifier selects the last used input, volume tone and filter settings are as when the unit was switched off. Other inputs and functions can easily be selected using the remote control panel.
In normal use the preamplifier is left switched on and the equipment turned on and off using the **STANDBY** function on the control panel, see full details for **STANDBY** operation in the following section.

CONTROL PANEL

All input switching and operating functions are carried out from the control panel which can be used at the listening position or any other convenient position. It is not necessary to point the control panel directly at the preamplifier for correct operation. The preamplifier display shows which input is selected and the volume level, filter settings etc.
Operation is extremely simple and much more straightforward than it might first seem from the following instructions. We suggest that you experiment with the control panel functions so as to become familiar with its operation.

Note

If the volume control is rotated fairly rapidly, during programmes, the stepping action will introduce changes in level which may be heard as faint clicks. This is quite normal and will not affect the performance or quality of reproduction.

PREAMPLIFIER CONTROL FUNCTIONS (selected via control panel)

Stand-By

When you have finished listening simply press the **STAND-BY** button. The volume is slowly reduced to zero and the preamplifier is set to the **STAND-BY** mode indicated by an ***orange LED*** on the preamplifier front panel, all other display functions being extinguished. The power to the **AC power out** socket will also be switched off.
Pressing **STAND-BY** again will cause the preamplifier to resume operation with the same input and control settings as when stand-by was selected. Selecting an input will also switch the preamplifier on from stand-by.
The volume will slowly increase from zero to its original setting but can be stopped at any point by pressing any of the control buttons with the exception of the CD functions, **STOP-STORE-TRACK-SEARCH**. Slight movement of either the **BALANCE** or **VOLUME** controls will have the same effect.
The 66 preamplifier can safely be left in the stand-by mode for long periods but it is recommended to switch the main power off, with the 66 preamplifier on/off switch, for extended periods; eg holiday breaks etc.

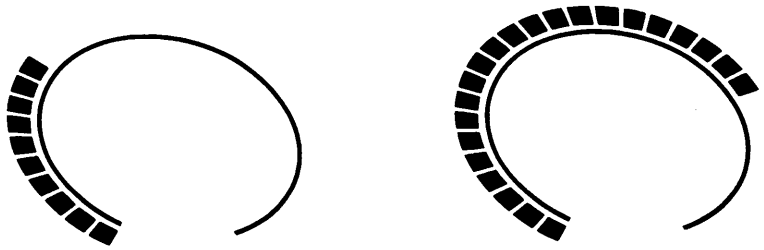
Input Selectors

Press the button for the input required; **DISC**, **CD-PLAY**, **RADIO**, **A-V**, **AUX 1**, **AUX 2**, **TAPE**. The **CD** input selector button has two positions. Pressing the **CD-PLAY** button halfway selects **CD**, pressing all the way selects **CD-PLAY**. The appropriate symbol will appear in the preamplifier display.
A volume fade is performed between each selection. Except when **TAPE** has been selected to allow for direct A - B monitoring.

Note

Once **TAPE** has been selected the **TAPE** button has to be pressed a second time, to deselect the tape monitor function, before any other input source can be played through the loudspeakers.

Volume Turn the volume control knob until the required volume is obtained. The volume level is shown by the number of segments lit on the volume display oval on the preamplifier, the more segments lit the higher the volume setting. Each segment is approximately 4 dB at low levels and 2 dB at high levels.



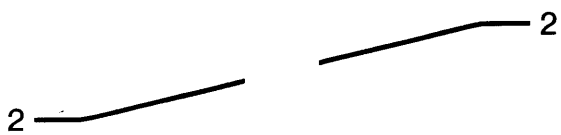
LOW VOLUME HIGH

Balance Adjust the **BALANCE** control for correct interchannel sound balance. When only the thin centre line is lit the balance is set to its central position. As the control is turned clockwise or anticlockwise the balance is shifted from right to left which is indicated by the position of the segment lit just below the volume display oval on the preamplifier, the further this is from the thin centre line the greater the setting. Each segment is approximately 1 dB.

LH BALANCE CENTRAL BALANCE RH BALANCE

Tilt This control operates exactly as its name implies by tilting the audio frequency response about a centre point. This alters the overall sound balance without introducing unwanted colouration. Six tilt positions are provided, three boosting treble and cutting bass, and three cutting treble and boosting bass (See graphs). Pressing **TILT** ↗ rotates the frequency response anticlockwise about its centre point and pressing **TILT** ↖ rotates the frequency response clockwise about its centre point. Each position alters the response by approximately 1 dB at the frequency extremes.
The tilt positions are shown on the preamplifier display as they are selected.

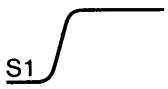
Example; 1dB bass boost, 1 dB treble cut.

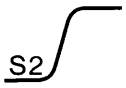


Example; 2dB bass cut, 2 dB treble boost.

Bass Step

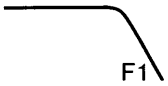
Provides two positions of step cut at the low end of the frequency band to remove unwanted low frequency resonances without rolling off the extreme lower bass frequencies (See graphs).
Pressing **BASS STEP ▼** steps through **S1** and **S2** positions, pressing **BASS STEP ▲** steps through from **S2**, **S1** to the flat response position.
The step position selected is shown on the preamplifier display.

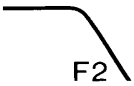




Filters

Provides two positions of cut at high frequencies to remove severe high frequency distortion without effecting the musical information, mainly used to reduce tracing distortion from records (See graphs).
Pressing **FILTER ▼** steps through **F1** and **F2** positions, pressing **FILTER ▲** steps through from **F2**, **F1** to the flat response position.
The filter position selected is shown on the preamplifier display.





Cancel

Pressing this button returns all tone and filter settings to their level positions. As this is a level response, only **'step filter tilt'** will be shown in the preamplifier display. Pressing it again will return to the last selected settings. Volume and balance levels remain as set. By alternately pressing cancel it is possible to toggle between 'flat' response and 'tailored' response.

TAPE RECORDING

Two tape recorders may be connected, one to the **TAPE** sockets and another to the **AUX 2** sockets. To make a recording it is only necessary to set the recorder to record. If required both recorders can be operated at the same time.

Recording

Select the source to be recorded (eg Radio, CD, etc) which will be heard through the loudspeakers as well as being fed to both the **TAPE OUT** and **AUX 2 OUT** sockets. Recording will commence as soon as the recorder is started. Monitoring (which is not possible on the **AUX 2** input) is achieved by pressing **TAPE**, and **TAPE** will be shown in the display. To return to listening to the source, press **TAPE** again, the **TAPE** display will go out.

Tape Dubbing

With two recorders dubbing is possible in both directions, as follows.

To Record from AUX2 to TAPE

Press **AUX 2**. Set the recorder connected to the **AUX 2** sockets to playback and the recorder connected to the **TAPE** sockets to record.

To Record from TAPE to AUX 2

Press **AUX 2**. A signal at **TAPE IN** is now fed directly to **AUX 2 OUT** for recording. Set the recorder connected to the **TAPE** sockets to playback and the recorder connected to the **AUX 2** sockets to record. As **AUX 2** is selected the speakers will play the signal at **AUX 2 IN** which is the tape 'monitor signal' (off tape monitoring for a three head machine). To listen to the source signal press **TAPE**, and **TAPE** will be shown in the display. To return to monitoring press **TAPE** again, the **TAPE** display will go out.

Warning

Take care **NOT** to set **BOTH** recorders to record while **AUX 2** is selected as a feedback howl would be generated which could damage the loudspeakers.

Tape Monitoring

Off tape monitoring is automatically provided from any input, when **TAPE** is selected, via a recorder connected to the **TAPE** sockets.

CD PLAYER CONTROL FUNCTIONS

The Quad CD player (or other players using the RC-5 system) is controlled via the control panel. Full CD player operation is covered by its own instruction book but the main functions, via the remote control panel, are as follows.

CD-Play Press fully, to its second pressure position, to initially start play or to restart after pressing **STOP**. The CD player will start from track one.

Pause Press for short interruptions. To restart press **PAUSE** again and play will start from the exact point where it was interrupted.

Stop Press to stop play before the end of a disc.

Store For storing tracks when programming to play tracks in a selected sequence. Select each required track number in turn, with the **TRACK < >** buttons. Press **STORE** after each track has been selected to enter it into the player's memory.

Search Press, and hold down, **SEARCH >>** or **SEARCH <<** to find a later or earlier passage in a track.

Track Press **TRACK >** or **TRACK <** to select a later or earlier track.

66FM TUNER CONTROL FUNCTIONS

The Quad 66FM tuner is controlled via the control panel using the CD function buttons. Full tuner operation is covered by its own instruction book but the main functions, via the remote control panel, are as follows. First press **RADIO** to set the remote control and preamplifier to radio operation.

Stop Press to select the number 1 station preset position.

Store Press to store a station into one of the 19 preset positions, after searching.

Search Press to tune stations. **SEARCH >>** selects ascending frequency scan and **SEARCH <<** selects descending frequency scan.

Track Press to select a station preset number. To listen to stored station or to select a different station preset prior to tuning. **TRACK >** steps upwards through the 19 preset positions and **TRACK <** steps downwards.

MAINTENANCE

No routine maintenance is required. If necessary the case can be cleaned with a soft brush or, for more stubborn marks, a slightly moistened lint-free cloth. Remove the mains plug from the supply socket. Do not use cleaning agents, solvents or abrasives.

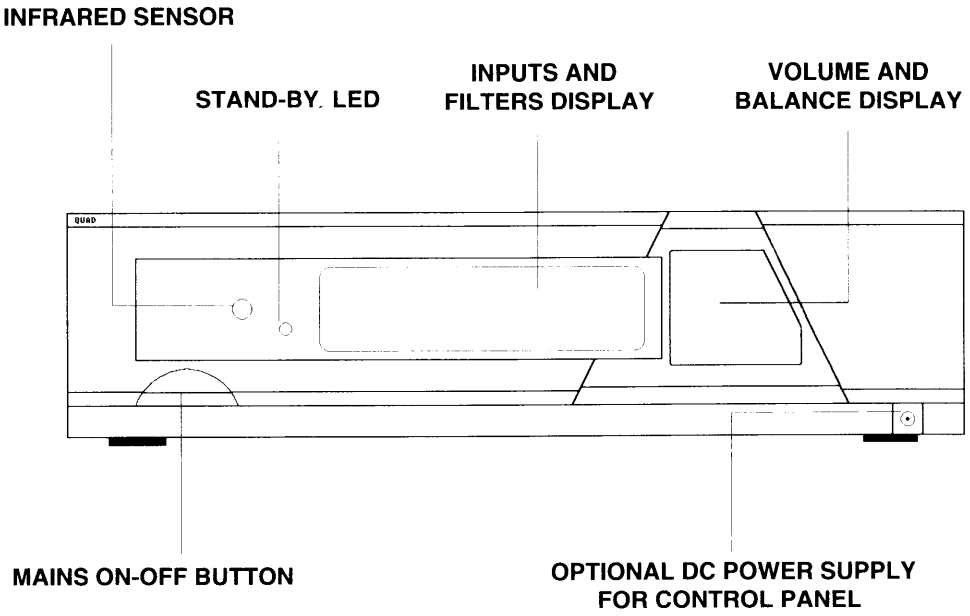
Control Panel Battery Replacement

In normal use the battery fitted should last for approximately one year. A low battery will cause erratic operation and reduce the operating range.
To replace the battery turn the unit upside down and slide off the battery compartment lid as shown. Insert the new battery carefully and refit the battery compartment lid. Always use a leakproof battery (alkaline type PP3).

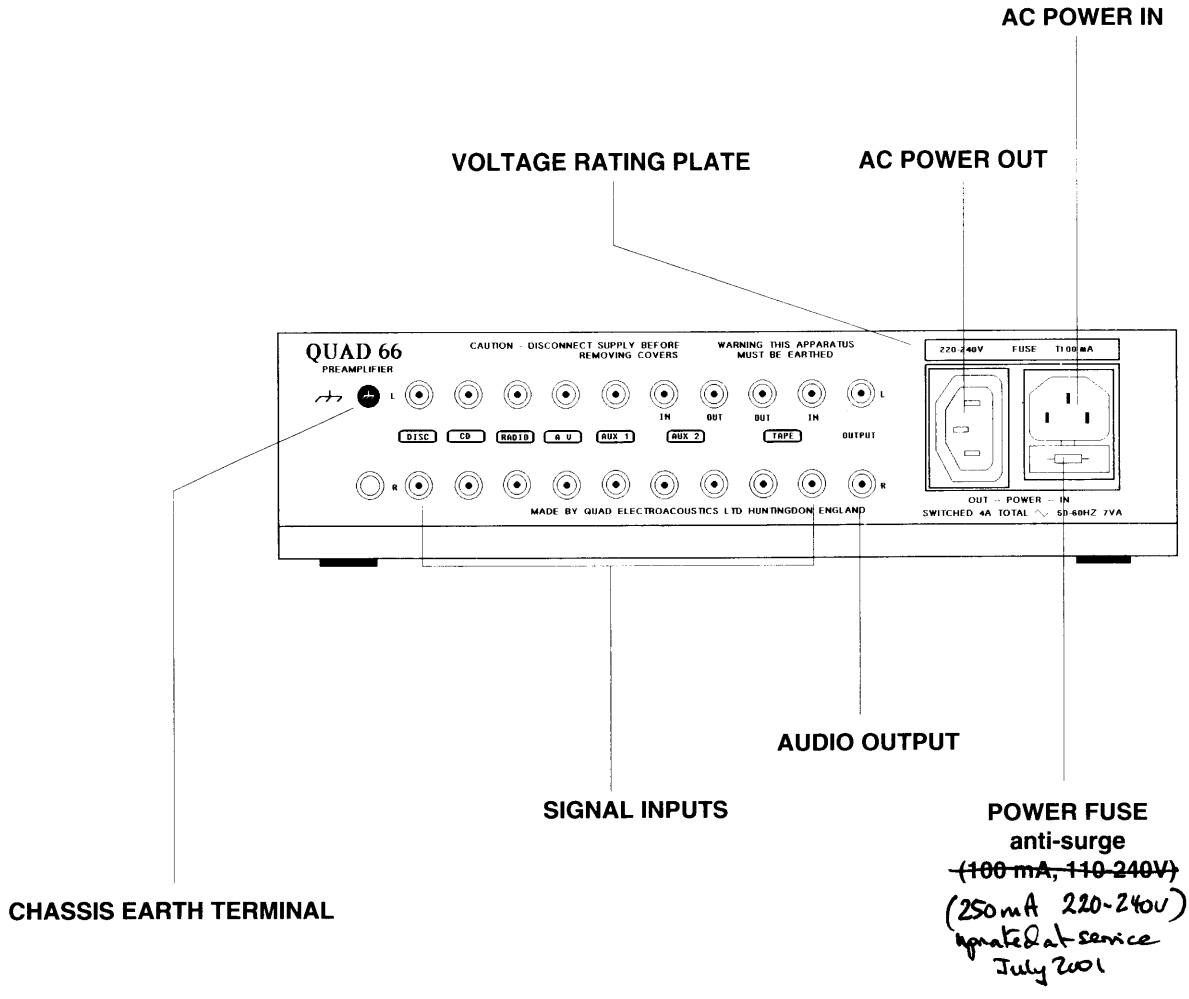
Powering the Control Panel via the Preamplifier

It is possible to power the control panel from the preamplifier if a replacement battery is not available or if you want the control panel permanently sited by the preamplifier. Slide off the battery compartment lid, pull out the 50 cm connecting lead and plug this into the DC power supply socket on the front right hand side of the preamplifier. Remove the battery if operated in this way.

FRONT VIEW



REAR VIEW



SPECIFICATION

Preamplifier

Operation:		Full function by infrared remote control panel.		
Control Functions:		Volume, Tilt, Bass Step, Balance, Filters, Input selection and Standby. All operated from infrared remote control panel. No controls on preamplifier.		
			S/N: Vol Max.	Vol 23
Inputs:	Disc*;	3 mV/ 47 kΩ/220 pF	75 dB	90 dB
	CD;	300 mV/100 kΩ	99 dB	105 dB
	Radio;	100 mV/100 kΩ	93 dB	104 dB
	A-V;	300 mV/ 33 kΩ (anti-hum)	93 dB	104 dB
	Aux 1;	300 mV/ 33 kΩ (anti-hum)	93 dB	104 dB
	Aux 2;	300 mV/100 kΩ	99 dB	105 dB
	Tape;	300 mV/100 kΩ	99 dB	105 dB
		(Noise figures 'A' weighted , dB below 500 mV output)		
Outputs:	Amplifier;	500 mV/940Ω (1.5V max).		
	Aux 2;	300 mV/3k3Ω (tape record).		
	Tape;	300 mV/3k3Ω (tape record).		
Distortion:		Worst case, any input 0.05%.		
Residual Noise:		'A' weighted. Volume control at minimum -105 dB.		
Frequency Response:		Any input (except Disc) ±0.2 dB from 15 Hz - 20 kHz. Disc RIAA flat within 0.5 dB from 30 Hz - 20 kHz.		
Interchannel Balance:		±0.5 dB volume control settings max. to -60 dB.		
Filters,Bass Step and Tilt (+3 to -3):		See graphs.		
Remote Control Interface:		Quad system with dedicated microprocessor.		
Mains voltage:		110-120V or 220-240V (changed by links on PCB) 50-60 Hz: see rating plate on back of control unit.		
Power consumption:		12W approx.		
Fuse (anti-surge):		~~125 mA~~, 220-240V. → Updated to 250 mA HRC at Service 250 mA, 110-120V.		
AC power out:		Maximum current; 4A, 220-240V systems. 8A, 110-120V systems.		
Dimensions:		Width 321 mm; height 80 mm; depth 255 mm approx. (plus connectors)		
Weight:		3.3 kg approx.		

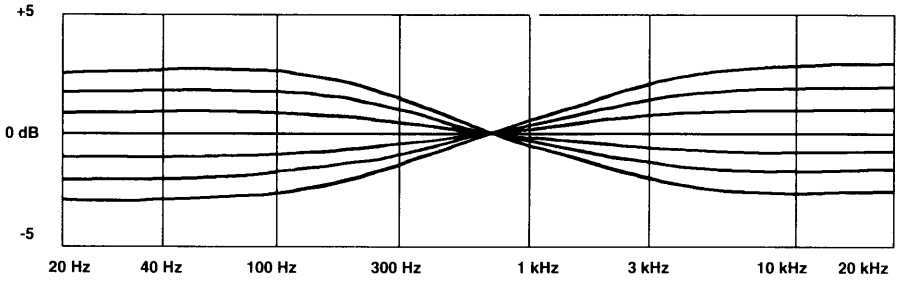
* Other options available.

Control Panel

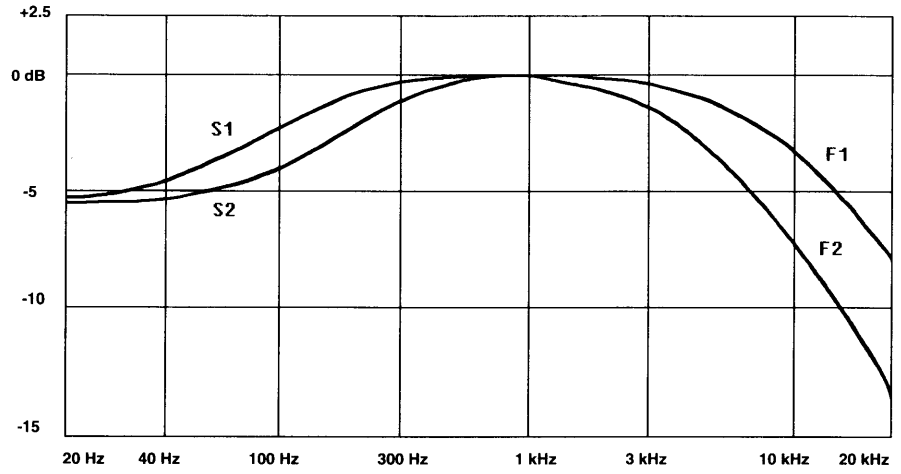
System:		Infrared. Dual system; Quad system with dedicated microprocessor. Philips RC-5 system for Quad CD Player or any other player using this system.
Controls:	Rotary;	Volume and Balance.
	Press Button;	Disc, CD-Play, Radio, A-V, Aux 1, Aux 2, Tape, Tilt (2), Bass Step (2), Filter (2), Cancel, Stand-By, Search (2), Track (2), Pause, Stop and Store.
Dimensions:		Width 241 mm; depth 175 mm; thickness 50 mm approx.
Weight:		0.76 kg (inc battery) approx.
Battery life:		One year approximately with normal operation, using an alkaline battery.
Battery type:		Alkaline PP3 size.

GRAPHS

TILT CONTROL



BASS STEP AND FILTER



The right is reserved to alter performance and specifications as required.

This equipment has been designed and manufactured to conform to the relevant electrical safety and radio interference requirements as laid down in EEC (European EconomicCommunity) regulations.

QUAD

66 Preamplifier - Programming Instructions

(from serial number 210600)

Please read the main instruction book first, to become fully accustomed with your 66 preamplifier operation, before trying to use the special programming feature explained below.

There is a special programming feature which is not visible in normal operation. This allows you to programme and store specific settings of **step**, **tilt** , **filter** and **volume** for each input except **TAPE**.

You can move from the ***'programmed'*** mode and back by pressing any input button, except **TAPE**, 3 times. You are in the ***'Normal'*** mode when the '**STEP TILT FILTER**' icons, in the display, are lit and in '***programmed'*** mode when they are not.

To programme an input press the input button 3 successive times followed by **STAND-BY** (da-da-da-dum). The '**STEP TILT FILTER**' icons and a single top segment of the '**volume**' display together with the '**flag**' for the input selected, will '**flash**' to show it is in the ***'programming'*** mode.

If the 66 preamplifier switches to stand-by you have got the timing wrong !. Possibly too fast or too slow. Don't worry just press the ***STAND-BY*** *button again, to switch on, and repeat the above steps.*

Step, **tilt** and **filter** functions can now be set as required. The **volume** can also be adjusted by up to 4 notches above or below the nominal setting - this is shown by flashing segments either side of the flashing top segment. Press the input button again to store the settings and return to the ***'programmed'*** mode.

If required a number of inputs can be programmed consecutively by changing inputs between settings and pressing the last programmed input button a second time, to store all the chosen inputs and settings and revert to the '***programmed'*** mode.

The 66 preamplifier will go to its ***'programmed'*** mode (the display will stop flashing) and when any input is chosen the stored **step**, **tilt**, **filter** and **volume** settings will always be selected. These can of course be altered, if required, with the remote control. Switching to another input and back again will restore the stored settings.

If you want to clear all the stored settings from the memory and revert back to ***'flat'*** settings for all inputs, reselect the ***'programming'*** mode and press the **CANCEL** button. The 66 preamplifier will go to ***'normal'*** mode with all stored settings cleared from its memory.

Note: To allow for **A - B** monitoring the **TAPE** input cannot be programmed and the volume does not decrease and increase on selection or if changing inputs when in the tape monitor mode. Neither is it possible to toggle between modes with the **TAPE** button.

ACCESSORIES

Quad accessories are designed to match Quad equipment and to provide the best possible performance. Please contact your dealer or Quad direct for further information.

Item	*Order No*
Disc modules M/M 1 mV 47 kΩ/220 pF (6L)	Q66DMKL
Disc modules M/M 3 mV 47 kΩ/220 pF (6M)*	Q66DMKM
Flat input modules 300 mV 100 kΩ	Q66FMKA
Disc modules M/C 100 μV 100Ω/22 nF (6B)	Q66DMKB
Disc modules M/C 200 μV 100Ω/22 nF (6A)	Q66DMKA
Disc modules M/C 400 μV 100Ω/22 nF (6C)	Q66DMKC
Quad rack 67CD/66Pre/66FM	QF6CDRK
Quad pedestal	QPEDASG
Signal lead Phono (0.5m)	QP2P2SA
Signal lead Phono (1m)	QP2P21A
AC interconnect supply lead Euro/Euro (0.45m)	QSPESSB
AC interconnect supply lead Euro/Euro (1m)	QSPES1B
AC supply lead Euro/free end (2m)	QESOE2A
AC Euro output connector	PPR0413

* Supplied as standard

QUAD

Quad Electroacoustics Ltd Huntingdon PE18 7DB United Kingdom
Telephone:0480 52561 Fax:0480 413403

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