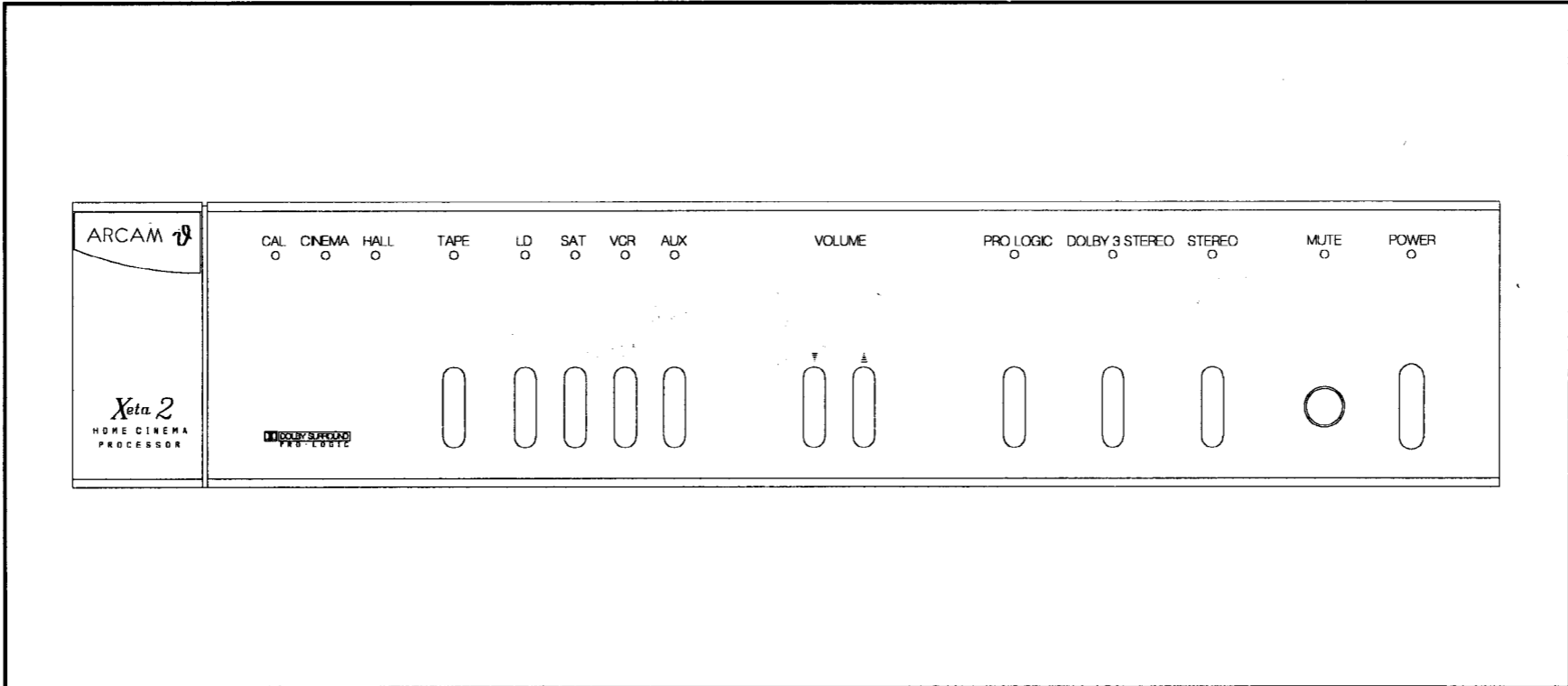
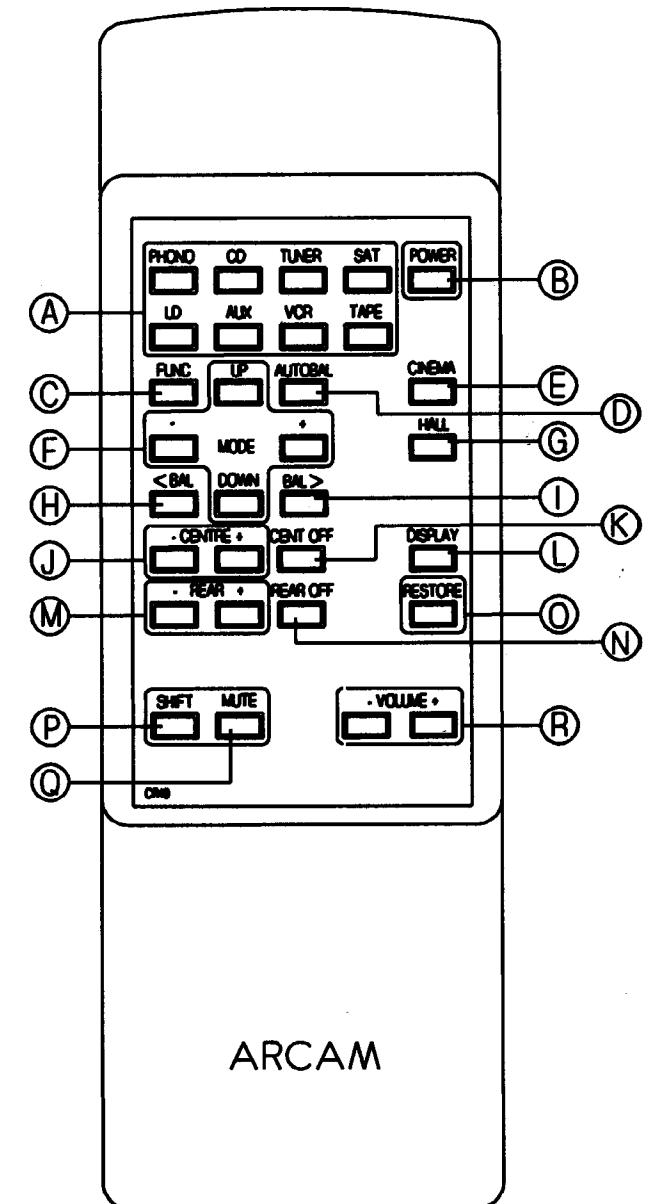
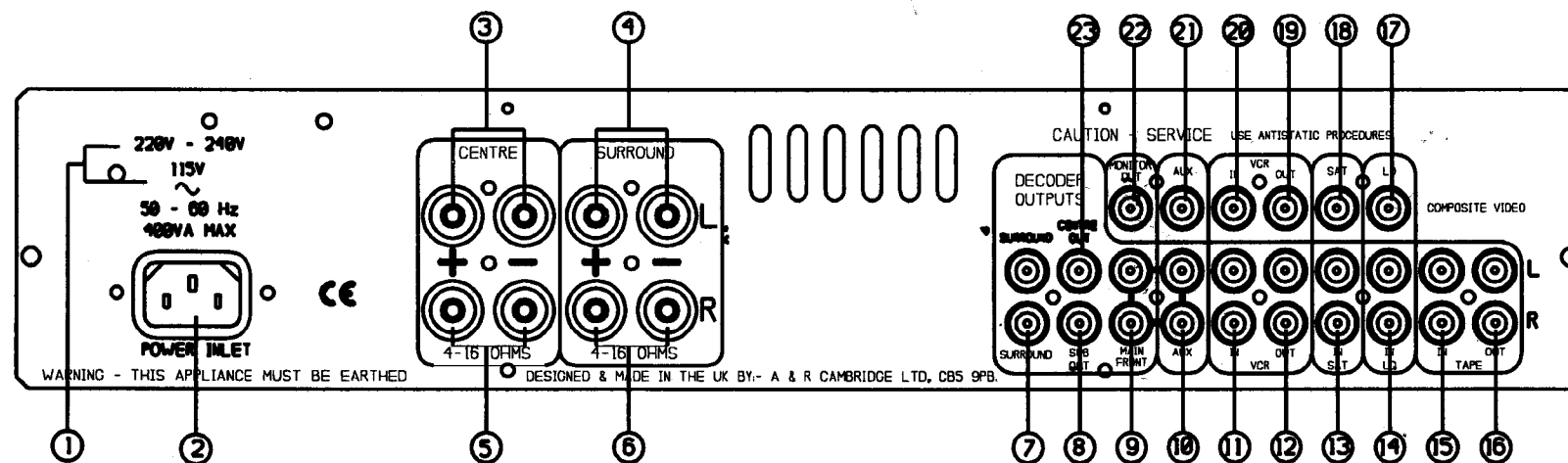
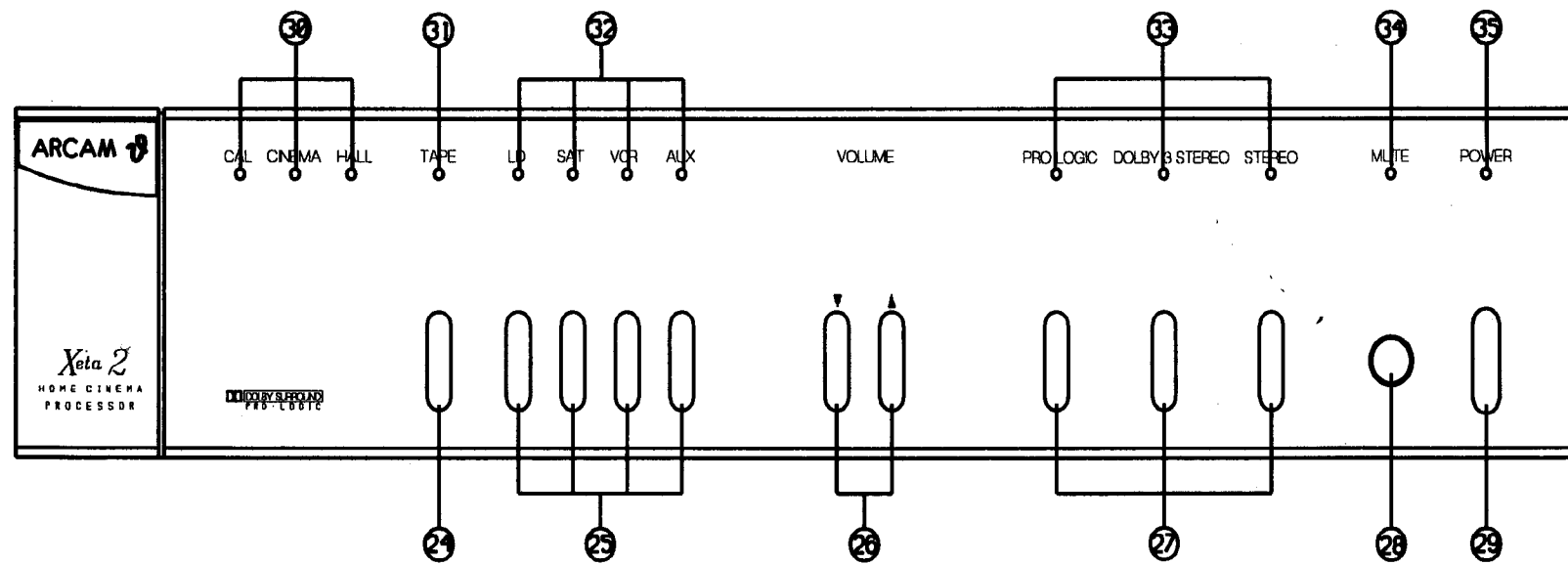


# ARCAM



# XETA 2 A/V PROCESSOR HANDBOOK



### PROBLEMS?

If your dealer is unable to answer any query regarding this or any other Arcam product please contact Arcam Customer Services on +44 (0)1223 440964 or write to us at the address on the back cover of this handbook.

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## INTRODUCTION

Thank you for purchasing this Arcam product.

The Xeta 2 is a sophisticated Home Cinema Dolby Pro Logic processor which offers superb sound and picture quality. It must be used with an integrated amplifier or a power amplifier to drive the front left and right speakers.

The Xeta 2 is a little more complicated to connect up than an ordinary amplifier. Please read these instructions carefully and refer to the relevant diagrams on the following pages. Inside the front cover are diagrams of the Xeta 2's front and rear panels. Each input/output socket, function button and indicator is clearly numbered. The numbers correspond with those given in the instructions. For ease of use, the Xeta 2 is supplied with the CR40 infra-red remote control handset. Many functions are only available via the remote control.

The Xeta 2 uses On Screen Graphics (OSG) which are displayed on your TV screen via the composite video MONITOR OUT connection, to show which functions have been selected and which system adjustments have been set.

If your TV does not have a composite video or SCART input it is not possible to view the On Screen Graphics in normal use, but it is still possible to use the Xeta 2 by following the **BASIC SET UP** procedure on page 8 and figure 6.

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## SYSTEM CONFIGURATION

You may choose from one of three basic connection configurations when using the Xeta 2. These are discussed below and illustrated in figures 1-3.

### 1. BASIC CONFIGURATION WITHOUT COMPOSITE VIDEO (see figure 1)

The On Screen Graphics are not visible in normal use. The A/V source's video signal is connected directly to the TV either on composite video or by the remodulated (RF) connection. Dolby decoding and processing is possible only with the A/V sources connected to the Xeta 2.

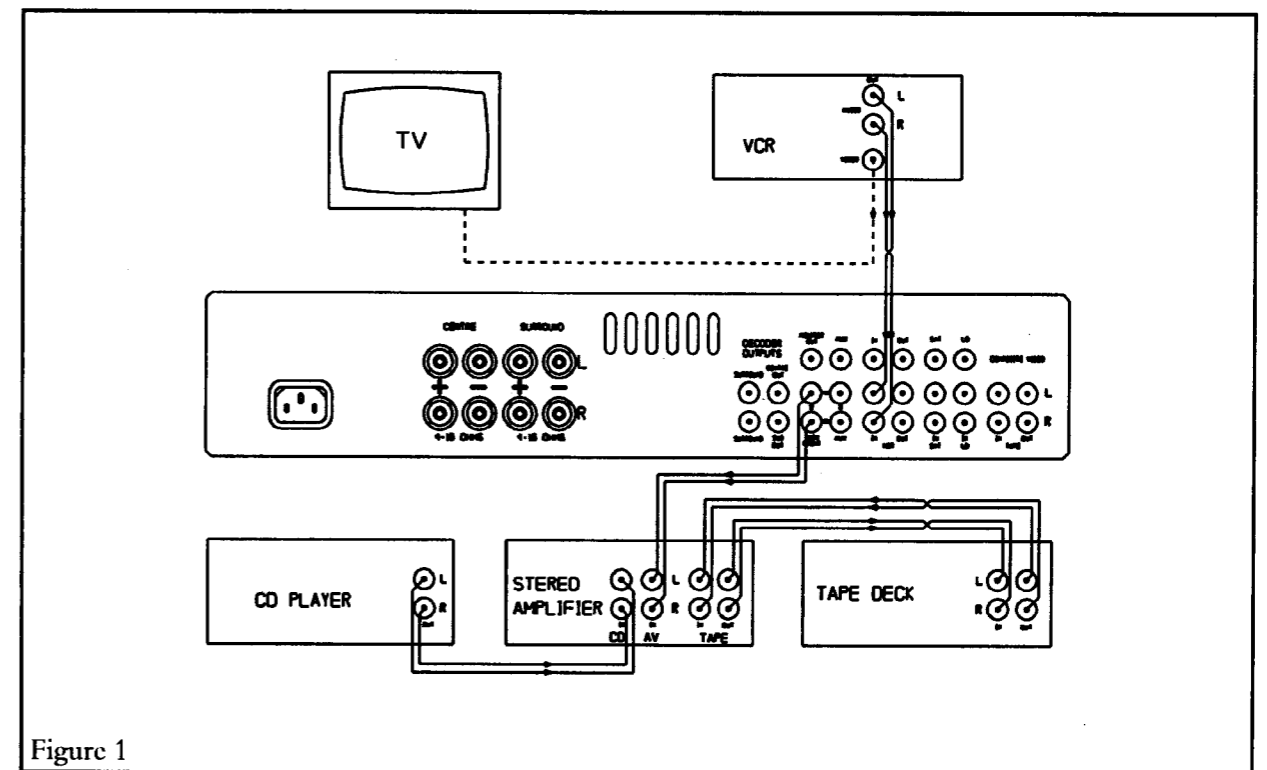


Figure 1

## 2. USING THE XETA 2 AS AN INPUT EXTENDER FOR A/V SOURCES (see figure 2)

Figure 2 shows the suggested wiring for use with a power amplifier (e.g. an Arcam Delta 290P, Xeta 290P) Delta 290 integrated amplifiers up to serial number 9934 or any other integrated amplifier without a spare tape monitor facility.

Dolby decoding and processing is possible only on the audio from the A/V sources which are connected to the Xeta 2. The video sources are routed through the Xeta 2 and the composite video MONITOR OUT connection ② is made to the TV to enable the On Screen Graphics to be seen.

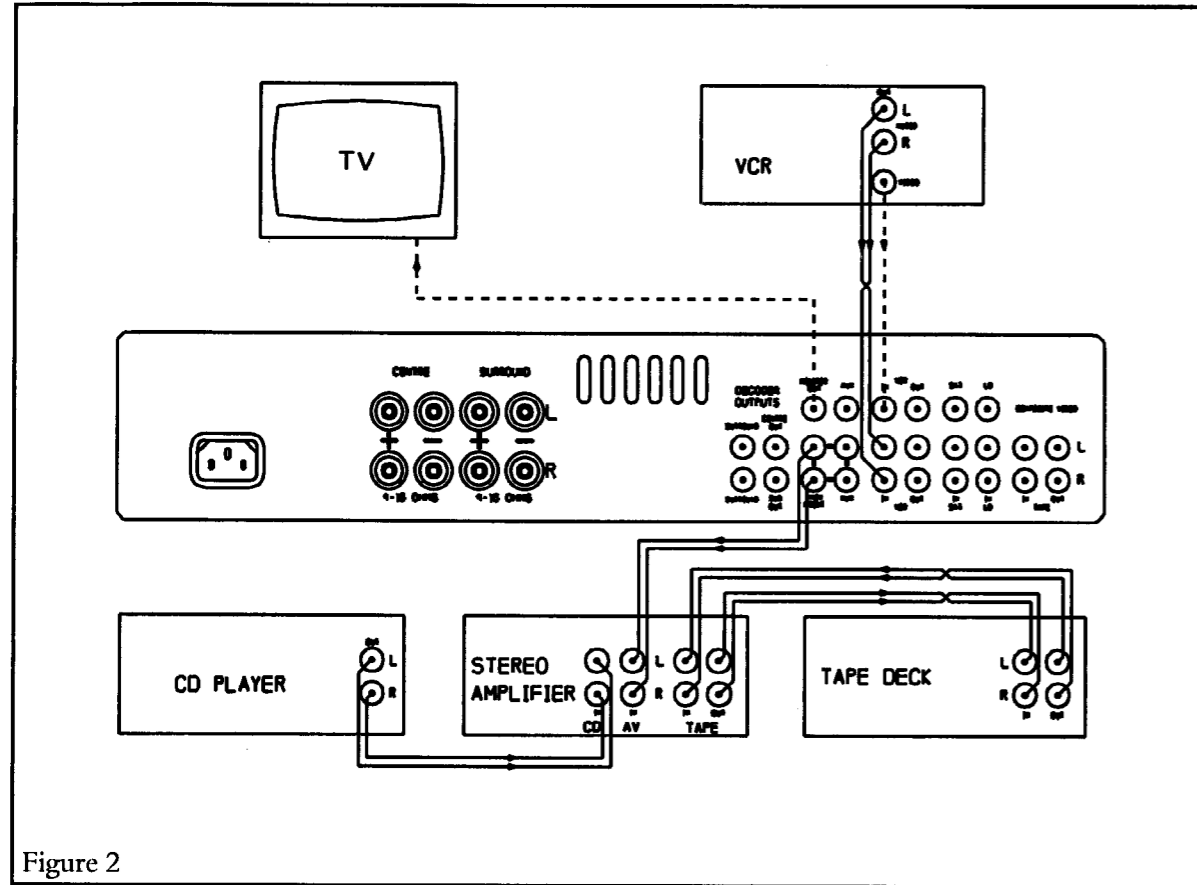


Figure 2

## 3. TAPE LOOP CONNECTION (see figure 3)

This allows Dolby Pro Logic decoding and processing of all the sources connected to both the amplifier and the Xeta 2.

This is the suggested configuration if you are using an Arcam A/V Delta 290 (serial no. 9935 onwards) These units are recognisable by the PROCESSOR/ TAPE 2 button on the front panel and a switch on the rear panel marked AV READY/NORMAL. The tape out connections of your stereo amplifier are connected to the AUX input of the Xeta 2. This allows sources connected to the stereo amplifier to be processed if required. The main front out connections of the Xeta 2 are connected to the tape in of the stereo amplifier in order to hear the left and right front signals. The PROCESSOR/TAPE 2 button on the Delta 290 **must** be pushed in to enable the signals to be processed via the Xeta 2.

You should also set the AV READY switch to AV READY (see your Delta 290 handbook for details). This bypasses the Delta 290's volume control when the PROCESSOR/ TAPE 2 input is selected to allow the Xeta 2 to control the volume level of the system.

If the tape or processor loop of your amplifier has been used up by the connections to the Xeta 2, then your cassette deck should be connected to the TAPE IN ⑤ and TAPE OUT ⑥ of the Xeta 2. The monitoring of the tape deck, provided it is a 3 head model, is carried out by use of the TAPE button on the Xeta 2.

**IMPORTANT NOTE:** If you wish to optimise the signal path when listening to audio only sources you can switch the Delta 290 to the required input and release its PROCESSOR / TAPE 2 switch. If you change the Delta 290 input via the remote handset the Xeta 2 will automatically change to the AUX input. However unless you switch off the Xeta 2, or put it into standby, it may also continue to respond to the VOLUME commands from the remote handset which are directed at the Delta 290.

Under these conditions the volume control of the Xeta 2 can be inadvertently set very high, leading to very high sound levels when the Xeta 2 is switched back into the system. To minimise this possibility you can continuously display the current volume setting of the Xeta 2 on your TV screen by pushing the DISPLAY button on the remote handset. Additionally the Xeta 2 will default to a factory set volume level of approximately one-third (22dB below the maximum) when switching away from its AUX input to any video input, if the current setting is higher than this default setting.

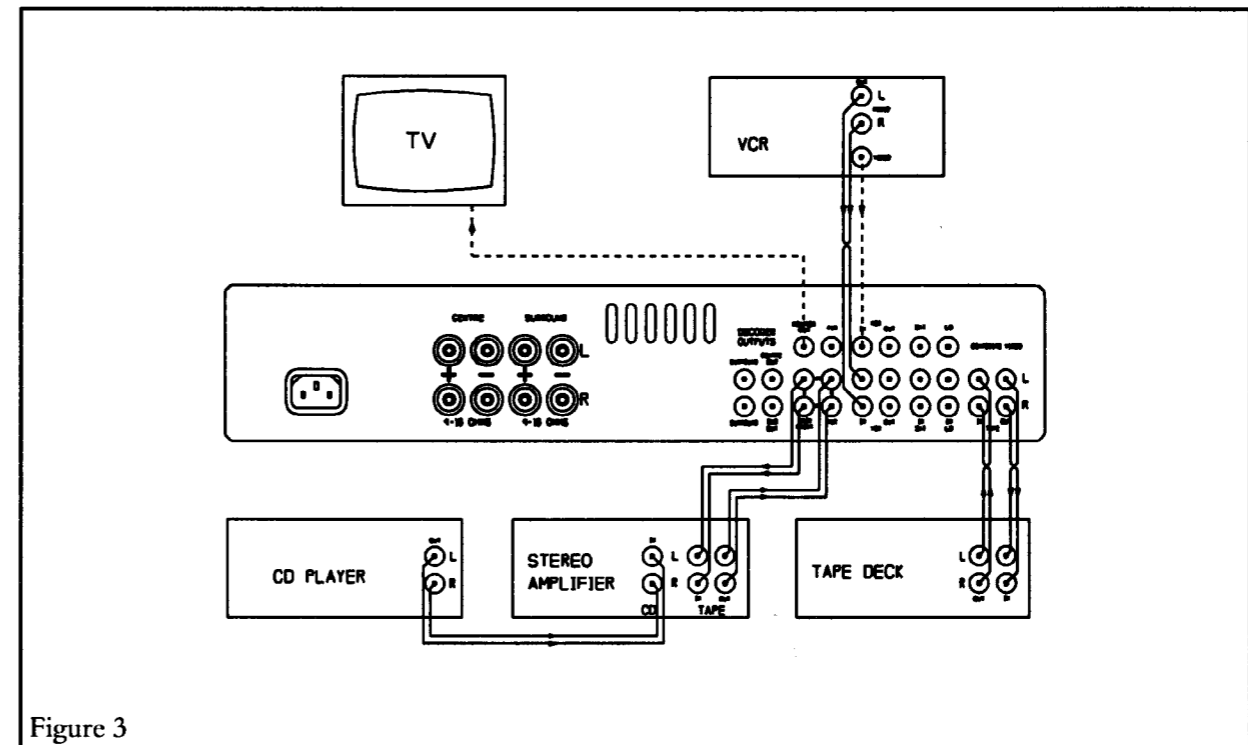


Figure 3

## INSTALLATION

### MAINS SUPPLY CONNECTIONS

- ① Check that your mains supply voltage agrees with the voltage setting indicated on the rear panel of the unit.
  - If your mains supply voltage is different, consult your Arcam dealer.

### MAINS SAFETY

- This product is normally supplied with a moulded mains plug already fitted to the lead. If for any reason the plug needs to be removed, **it must be disposed of immediately and securely**, as it is a potential shock hazard when inserted into a mains socket.

- If the plug is removed then the remaining lead must be wired as follows:

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

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

The **green and yellow** wire must be connected to the terminal which is coloured **green and yellow**, or marked with the letter **E** or the safety earth symbol.

- When replacing the fuse in the supplied moulded mains plug, the integral fuse holder/cover must always be refitted. Use a 5 amp fuse (UK models only).

- **Warning:** This apparatus must be earthed.

- ② Insert the IEC line socket of the mains lead fully into the power inlet on the rear panel. Connect the other end to your mains supply.

**NOTE:** Always switch the Xeta 2 on and off using the front panel POWER switch. When you are installing the system you are advised to disconnect or turn down the volume level on your subwoofer (if using one) before switching the mains supply to the Xeta 2 on at the wall socket. This will avoid any unwanted clicks or thumps through your subwoofer.

### LOCATING YOUR LOUDSPEAKERS

A true Home Cinema set up conforming to Dolby Surround requirements will need five loudspeakers in order to recreate the surround sound experience: a front pair, rear pair and a centre channel loudspeaker.

If you have good quality stereo loudspeakers then you will probably wish to use these as the main front loudspeakers. They should be positioned roughly equidistant to, and either side of your TV and typically 8-10 feet (2.4 - 3m) apart. The centre loudspeaker must be located close to your TV screen so that the picture and centre sound come from the same location. In a Home Cinema set up, the centre speaker is very important, as much of the sound comes from this source. Its sound balance should be as similar as possible to the main stereo speakers.

The rear surround loudspeakers should ideally be placed behind the listening position or, if this is not possible, then to either side. The object of the rear speakers is to produce a diffuse, room filling sound. Locate the rear loudspeakers away from you and above your head so that they do not fire directly into your ears. The addition of a subwoofer to enhance the bass end of your system should also be considered. The location of a subwoofer is less critical but should follow the manufacturer's recommendations.

### LOUDSPEAKER CONNECTIONS (See figure 4)

The Xeta 2 only contains surround and centre amplifiers. Your front left and right speakers should be connected to your stereo integrated or power amplifier.

- Connect the red (positive) cable terminations of your speaker leads to the red terminals on the Xeta 2 and the other cable terminations to the black terminals. If your speaker cables have appropriate bare ends, the positive conductors can usually be identified by a ridge or coloured marking. **Ensure that no stray strands are allowed to touch another cable or the amplifier's casing.** This can cause a short circuit and damage your amplifier! The loudspeaker terminals are marked as follows:

- ④,⑥ SURROUND - Connect your two rear surround speakers here. As the surround channel is mono it does not matter which one is connected to left or to right.

- ③,⑤ CENTRE - Connect your centre speaker(s) here. In some systems, particularly where a large screen TV is used (around 37" or larger), you may wish to use two centre speakers - one above and one below the TV. Ensure the centre speaker(s) are magnetically shielded, or the pictures on the TV tube could become permanently discoloured. Alternatively the two pairs of sockets can be used to bi-wire one centre speaker if it has separate terminals for the bass and treble drivers.

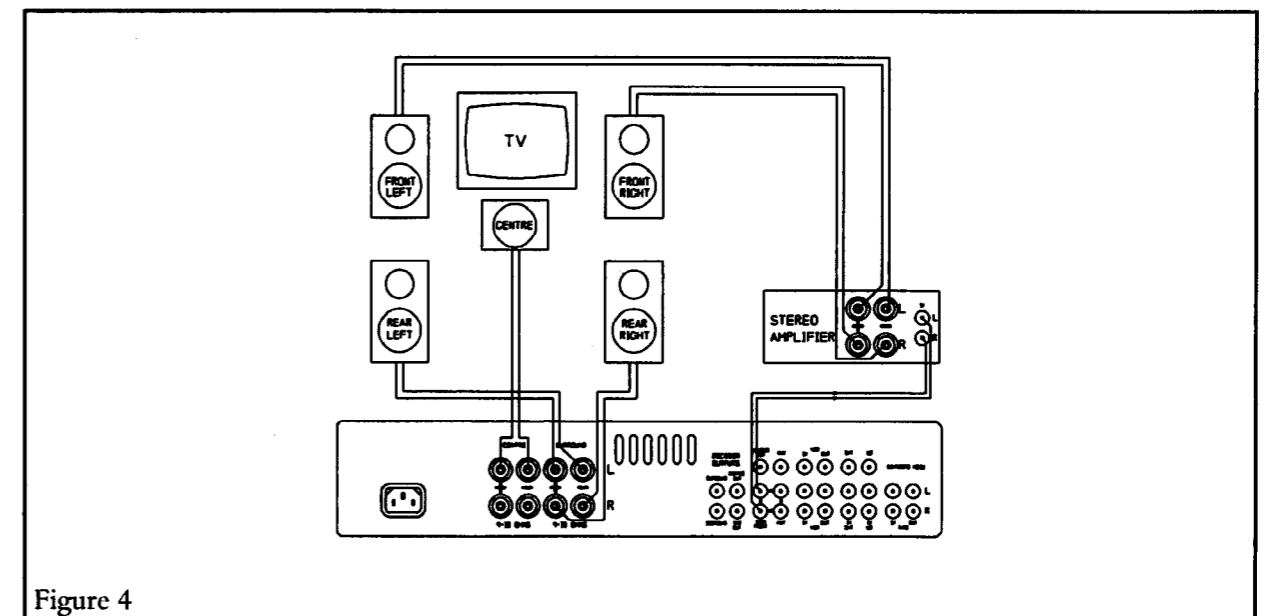


Figure 4

## CONNECTING YOUR SOURCE COMPONENTS

- **Audio inputs:** Up to five different audio sources can be connected to the Xeta 2. Four inputs are available for simultaneous audio and video, and one for audio only. All inputs have the same basic sensitivity and may be used with equipment other than that labelled, if you need to do so.
- **Video inputs:** Up to four different video sources can be connected to the Xeta 2 - VCR, Laser Disc (LD), Satellite (SAT) and Auxiliary (AUX). This allows you to select the TV picture and sound together and is particularly useful if your TV has only one video input.

## LINE LEVEL AUDIO CONNECTIONS

- Using a suitable pair of interconnect cables to connect each component, insert the red phono plugs into the sockets labelled 'R' and the other plugs into the sockets labelled 'L', except for the CENTRE and SUB OUT which require only one lead.
- ⑦ **SURROUND OUT** - Provides two identical mono outputs for an external power amplifier or amplifiers for the rear channel speakers, if required.
  - ⑧ **SUB OUT** - If you have an active (amplified) subwoofer, connect it to this output.
  - ⑨ **MAIN FRONT OUT** - Connect to the left & right line inputs of an integrated amplifier, e.g. 'tape in', or to the inputs of a stereo power-amplifier. You must make a connection from these sockets to another amplifier in order to hear the front left and right signals.
  - ⑩ **AUX** - This is a line level input which can be connected to the audio outputs of an additional A/V source unit. When the Xeta 2 is connected in an amplifier's tape loop then the AUX input should be connected to the TAPE OUT connections of the main amplifier.
  - ⑪ **VCR IN** - Connect this input to your video cassette recorders (VCR's) audio output.
  - ⑫ **VCR OUT** - Connect this output to your video cassette recorder's (VCR's) audio input.
  - ⑬ **SAT** - Connect this input to your Satellite TV decoder's audio output.
  - ⑭ **LD** - This input is compatible with Laser Disc (LD), Compact Disc Interactive (CD-I) or a VIDEO CD player. Connect this input to the player's audio output.
- **TAPE CONNECTIONS** - Use these sockets only if you have connected the Xeta 2 into the tape loop of your main amplifier. If not, you should leave your tape deck connected to your main amplifier.
  - ⑮ **TAPE IN** - Connect this input to your audio cassette deck's output (usually labelled PLAY or OUT). If you are not using the TAPE IN for your cassette deck it may be used for another line level source such as a CD player.
  - ⑯ **TAPE OUT** - Connect this output to your cassette deck's input (usually labelled RECORD or IN).
  - ⑰ **CENTRE OUT** - Provides an output for an external amplifier for the centre speaker, if required.

## COMPOSITE VIDEO CONNECTIONS (See figure 5)

- In order to display the On Screen Graphics menus used in setting up and calibrating the unit you must make a connection from the composite (base band) video MONITOR OUTPUT ⑳ of the Xeta 2 to your TV's composite video input. If your TV does not have a composite video input see page 8 for a **BASIC SET UP** method without the use of On Screen Graphics. Note that a remodulated (R.F.) output is not available on the Xeta 2.

You will need a number of 75 ohm composite video cables terminated with phono plugs to connect your A/V equipment to the composite video inputs and outputs of the Xeta 2.

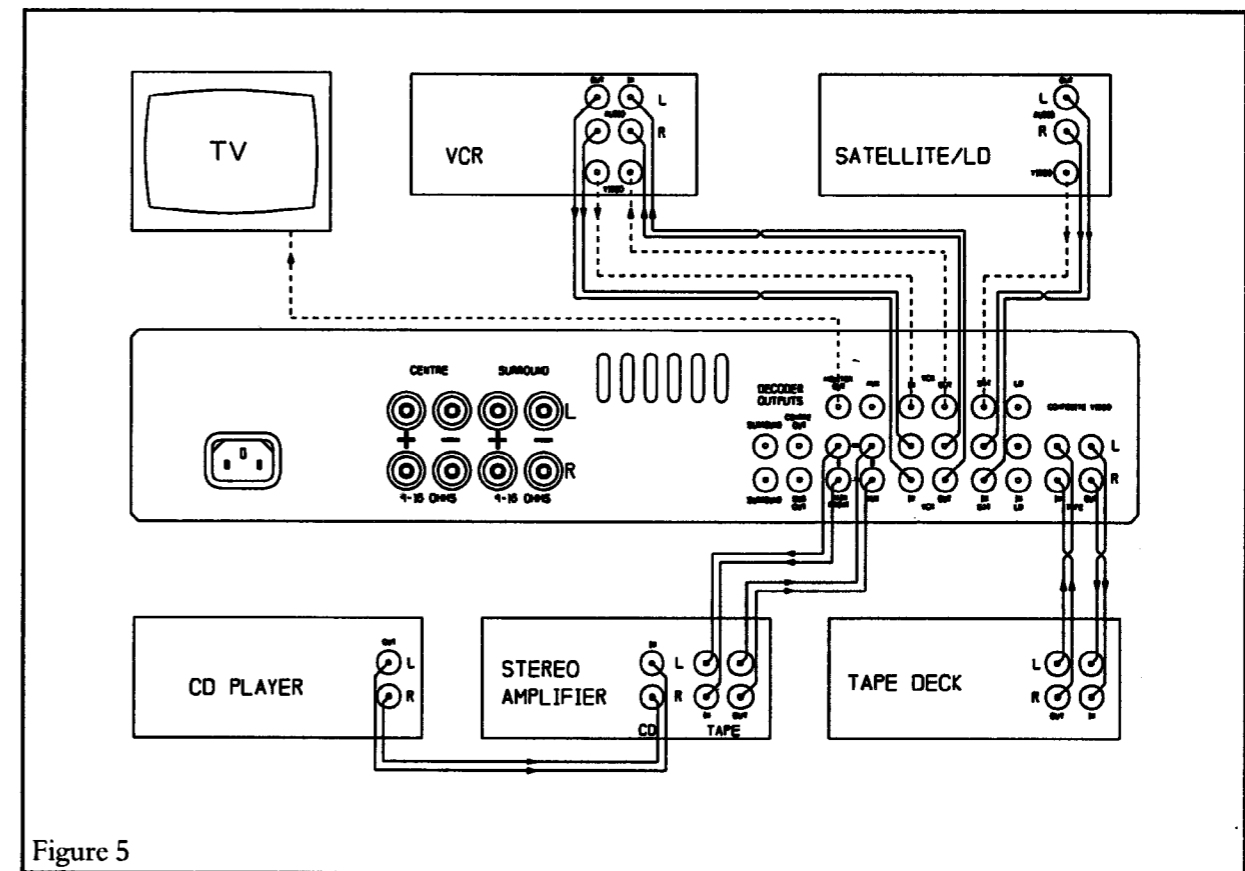


Figure 5

- ⑰ **LD** - Connect this input to your LASERDISC's video output. This input is also compatible with CD-I or a Video CD player.
- ⑱ **SAT** - Connect this input to your satellite TV decoder's composite video output.
- ⑲ **VCR OUT** - Connect this output to your VCR's video input.
- ⑳ **VCR IN** - Connect this input to your VCR's video output.
- ㉑ **AUX** - This input can be used for the video output of a camcorder, or a second VCR. Note : Any of the above inputs can also be used to accept the video output of a TV tuner, such as the Arcam Delta 150.

- ② MONITOR OUTPUT - Connect this output to your TV's composite video input. Most TVs only have SCART sockets; others use a phono socket or BNC connector. You will need a suitable lead or use an adaptor to make this connection. If in doubt consult your dealer. Advice on SCART pin connections is given on page 11 of this handbook.
- Note that the MONITOR OUTPUT and VCR OUT on the Xeta 2 remain active even in standby mode, to enable unattended recordings to be made on your VCR.

## FRONT PANEL FUNCTIONS

### FRONT PANEL CONTROLS

(These functions are also controllable via the remote control handset.)

- ④ TAPE MONITOR - Allows you to hear the input as it is being recorded on your audio tape deck. If you have a 3 head cassette deck, switching the TAPE MONITOR in/out will compare input with recording simultaneously. The indicator ④ above the switch will glow green when the monitor is engaged.
- ⑤ SOURCE SWITCHES - Selects the input you wish to listen to and/or view. The indicator above the selected input switch will glow green.
- ⑥ VOLUME - Adjusts the volume level of all the speakers simultaneously. Press  $\Delta$  to increase volume, press  $\nabla$  to decrease the volume. It is possible to MUTE the Xeta 2 by pressing and holding both front panel volume buttons simultaneously. To unmute simply press either the  $\nabla$  or  $\Delta$  key.
- ⑦ MODE SWITCHES - Enables you to choose between Stereo, Dolby 3 Stereo and Dolby Pro Logic. The indicator above the selected switch will glow green.
- ⑧ POWER SWITCH - Switches the Xeta 2 full on or to standby mode. In standby mode you can make unattended VCR recordings from an AV source onto your VCR.
- The Xeta 2 cannot be switched on via the remote control after being manually turned off.

### FRONT PANEL DISPLAYS

- ⑨ REMOTE - This is the window for the infra-red remote control receiver. It is not a push button! Ensure it is not obscured or commands from the remote control handset will not be received.
- ⑩ FUNCTION INDICATORS - Indicate that the named functions have been selected via the remote control (see page(s) 9, 10 for more details). The CAL (calibration) light flashes in SET UP MODE and lights in normal use when centre speaker is off.
- ⑪ TAPE MONITOR INDICATOR - indicates that the TAPE MONITOR is selected when illuminated.

- ⑫ INPUT INDICATORS - indicate which input is currently selected.
- ⑬ MODE INDICATORS - Indicate the current operating mode of the Xeta 2 as selected by the mode switches.
- ⑭ MUTE - Indicates that the outputs of the Xeta 2 have been muted. This will also light on switch on whilst the POWER LED is amber.
- ⑮ POWER LED - Upon switching on, the POWER LED (light emitting diode) indicator above the POWER switch will initially glow amber. After a few seconds, it will glow green. When the LED glows amber, the speakers are disconnected and an internal protection circuit is activated. When the amplifier is switched into standby via the remote control, this LED will glow amber. Switching into standby via the front panel switch will cause the LED to glow red.

If the POWER LED flashes amber during normal use and the speaker outputs are lost, 'SPEAKER PROTECTION ACTIVE' appears on the TV screen. It may be due to the amplifier overheating. Check that the amplifier is properly ventilated. The unit should reset within 2-3 minutes after it has cooled down.

It may also be caused by an output overload. This may be due to using the Xeta 2 at high volumes into low impedance loudspeakers or if there is a short circuit on the loudspeaker(s) or speaker cables (see FAULT FINDING GUIDE on page(s) 12, 13 for more details).

If the fault is due to an overload of some sort the unit will **not** reset unless you first disconnect the mains supply by removing the mains lead or switching the power off at the wall socket. If the cause of the problem is not removed before restoring the power again the protection circuitry within the Xeta 2 will reactivate on power up. If the POWER LED continues to flash amber after carrying out the checks in the FAULT FINDING GUIDE, switch the unit off and contact your Arcam dealer for help.

## SWITCHING ON AND SET UP

So you've wired everything up, what next?

First check all connections again to make sure there are no loose wires or plugs in wrong sockets, check your speakers for any shorts between terminals and turn the volume control down on your main stereo amplifier. Switch your TV on and select the relevant A/V input on the TV (i.e. the one connected to the Xeta 2). Switch on the amplifier that you are using to drive your front left and right speakers.

Switch the Xeta 2 POWER on via the front panel button. Select the source that you want to listen to via the Xeta 2's input selectors and ensure that the source is playing.

With a video connection from the monitor output of the Xeta 2, your TV should display "Arcam Xeta 2 POWER ON" for about 6 seconds if the correct video input has been selected on your TV. Increase the volume level of the Xeta 2 and you should hear sound from the selected source coming from your loudspeakers. Dependent on the set up you are using you may need manually to adjust the volume control on your main amplifier in order to hear sound from the left and right channels.

If this is not the case, try other inputs and/or recheck your system connections. The **FAULT FINDING GUIDE** on page(s) 12, 13 will also help you.

Once your system is working it is important to balance it for your components and the room environment.

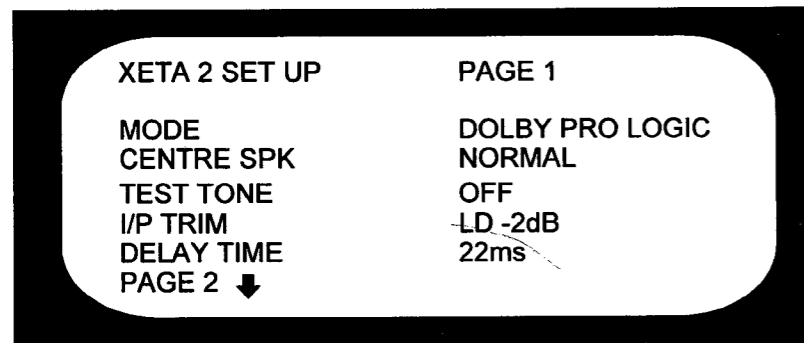
### SET UP MODE : SYSTEM BALANCING

No two A/V systems are alike; levels need to be equalised for the loudspeakers you have, and each source optimised for best performance. **SET UP MODE** allows you to adjust and to store these settings. If the amplifier was installed by your dealer this should have been done as part of the installation process. The stored settings can be recalled by pressing the red **RESTORE** button on the remote control handset.

If you have a TV with a composite video input follow the set up instructions that follow. Otherwise follow the instructions for **BASIC SET UP** on page 8.

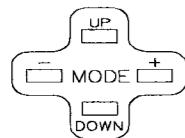
If your dealer has not installed the unit or you wish to modify the stored settings then select the **SET UP MODE** by pressing **RESTORE** followed quickly by **+** in the mode section of the remote control handset (the **+** key also has a small red square printed above it to help you remember the key). This will get you into **SET UP MODE**.

The calibration LED on the front of the Xeta 2 will flash slowly and your TV screen should show a menu screen something like this:



SET UP MODE - Page 1

REMOTE CONTROL



Using the remote control handset push the **UP** or **DOWN** keys repeatedly to select the required line on your TV screen. This will be highlighted on selection. Use the **-** or **+** keys to adjust the option shown on the righthand side of your TV screen.

**MODE:** - Use the **-** or **+** keys to select the sound mode in which you normally wish the unit to operate for the selected source.

Choose between the following options:

**Dolby Pro Logic** - For full surround sound decoding including rear channel loudspeakers.

**Dolby 3 Stereo** - Enhanced stereo mode using centre, left and right loudspeakers and no rear loudspeakers.

**Stereo** - For stereo hi-fi use.

**CENTRE SPEAKER** (not available in **stereo** mode) - Do as above, selecting from the following:

**Normal** - For a standard centre channel loudspeaker.

**Phantom** - For no centre loudspeaker. This mode may be of benefit if your left and right loudspeakers are of very high quality and you prefer a simple system without a centre speaker.

**Wideband** - For larger centre loudspeakers capable of working down to low frequencies (usually 50Hz or below).

**NOTE:** In **DOLBY 3 STEREO** mode you do not get the **Phantom** option.

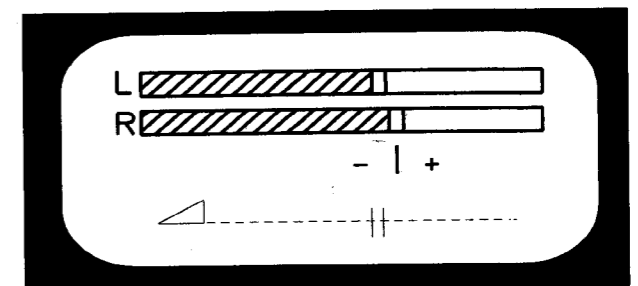
**N.B.** When selecting centre speaker after previously selecting **Stereo** mode, the display will remind you of 'NO CENTRE MODE' at the bottom of your TV screen. This also applies on Test Tone.

**TEST TONE** (not available in **Stereo** mode) - Selecting **TEST TONE** will produce a sequential burst (approx. 2-3 seconds) of noise through your speakers starting with left, centre, right and then rear. You should adjust the **CENTRE** and **REAR** volumes via the remote control until you are happy that all loudspeakers sound equally loud at your listening position. Unless you are using a power amplifier or an A/V Delta 290 in A/V mode to drive the front left and right speakers, you will have to adjust the volume level of the main amplifier in order to hear the test tone through these speakers. This may mean setting the volume to halfway or more on its rotation. This is an ideal test for making sure all your speakers are connected properly. Pressing **+** on the remote advances the sequence immediately. Pressing **-** on the remote will make the sequence go backwards. The noise sequence will stop when you press **DOWN** to move another menu line.

In **Dolby 3 Stereo Mode** - The display reminds you 'NO SURROUND MODE' and you get no test tone in the rear speakers.

**I/P TRIM** - Sets the input sensitivity of the Xeta 2 to optimise the performance of the surround decoding circuits (Not applicable to the **TAPE** input).

The TV screen will look like this:



The picture shows two peak reading bargraph level meters and an adjustable 'trim volume' setting below.

The available range is between -16dB and 0dB in 1dB steps.

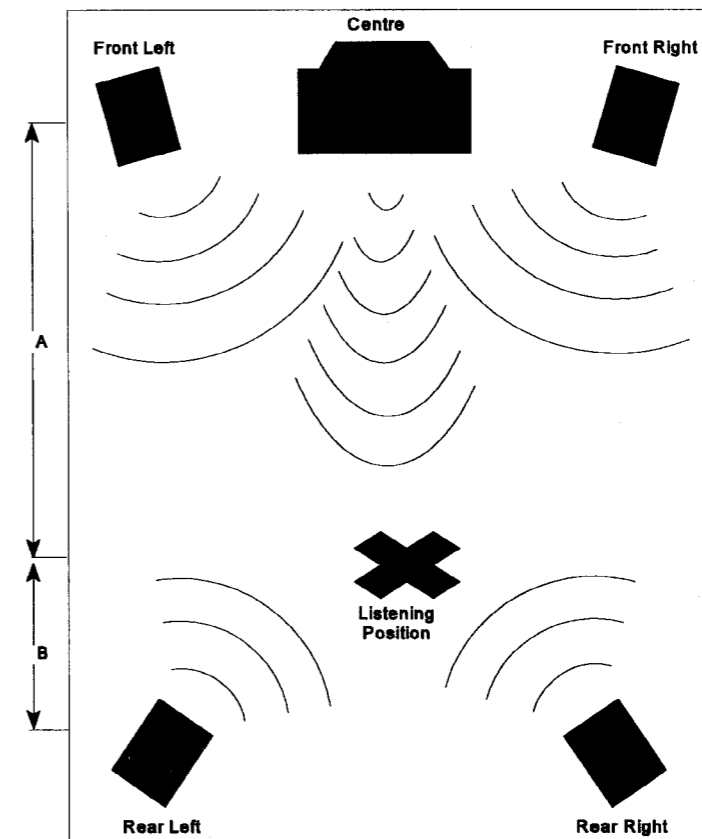
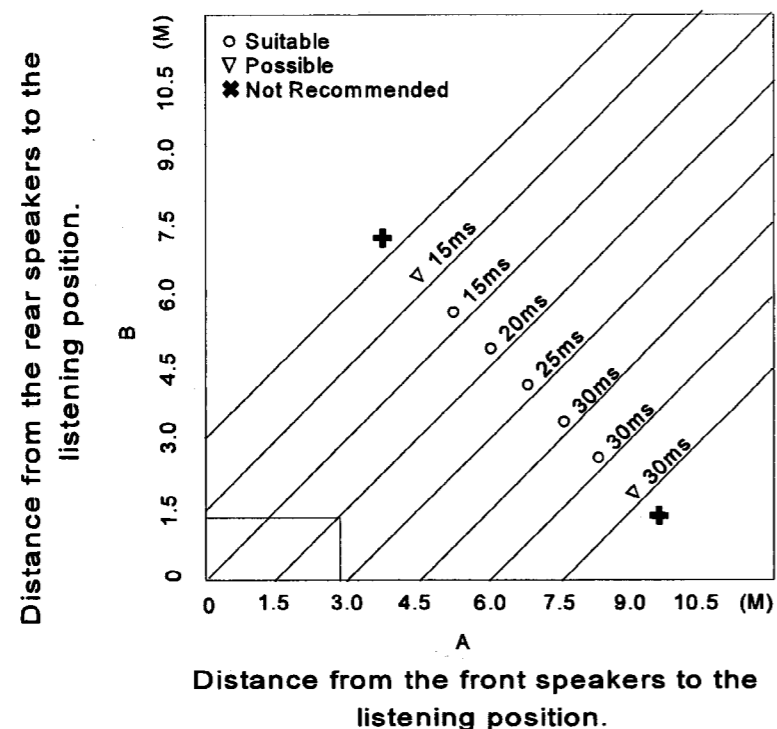


Play back a recording from the source you have selected. Aim to peak just into the white bars above the arrow during the loudest parts of music or film. The exact setting is not critical. You should repeat this process for each source that you have. All input trim settings are remembered by the Xeta 2, so that when switching between different inputs such as SAT, Laser Disc, VCR etc. they all play at the same volume (assuming that's how you've set them, of course). Note that with some low output sources it may not be possible to hit the peak area on the meter; this will not adversely affect the performance. Because the input trim meters are more sensitive to mid or low frequency sound, you should try to set these levels with soundtracks which have good mid and low frequency content. In the unlikely event that you are unable to trim down the input sufficiently from a particular source to avoid the white bars, then you may need to reduce the output level of this source by some external means.

You can set the MODE (i.e. DOLBY PRO LOGIC etc.) for each input of the Xeta 2, except TAPE, at this stage. Select the required input source (e.g. SAT) and then push the remote control's UP button three times. Now set the required MODE for that input. If required, the HALL and CINEMA EQ settings can also be saved for the individual inputs at this stage by selecting them via the remote control.

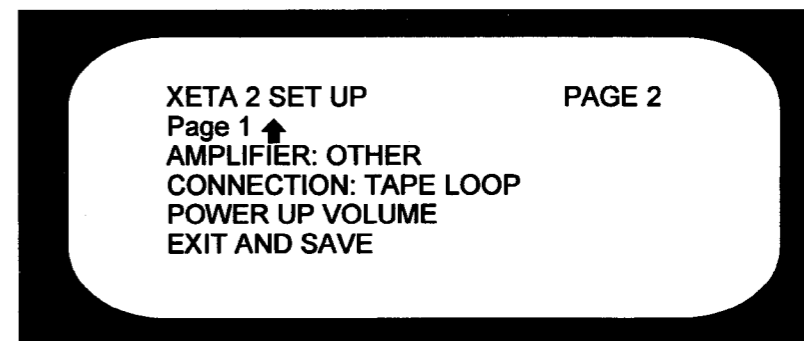
**DELAY TIME** - Surround information is delayed to the rear channels for psychoacoustic reasons. The range is adjustable between 15 and 30 milliseconds (ms), and is commonly set at 20ms for most installations. The optimum delay time does depend on the listening position. Use the charts below and opposite to determine the delay time for your room's size and seating position. For example, when the distance from the front speakers to the listening position is 3 metres and the distance from the rear speakers to the listening position is 1 metre, the optimum delay time will be 20 ms.

Listening position and optimum delay time for playback with Dolby Pro Logic surround



**SET UP MODE - Page 2**

Now press DOWN on the remote control to get to the second page of the SET UP menu.



**AMPLIFIER:**

You are given four choices for the main (front left/right) amplifier:  
**OTHER** - Any integrated amplifier or preamplifier  
**POWER AMP**- Any power amplifier  
**STD D290** - Arcam Delta 290 amplifier, s/no. less than 9935  
**A/V D290** - Arcam Delta 290 amplifier, s/no. 9935 onwards.

If your amplifier is listed above then select that one. If not choose **OTHER** unless your amplifier is remote controllable and uses RC-5 remote control codes. In this case select STD D290.

**CONNECTION:** You may choose between TAPE LOOP or LINE I/P (POWER AMP if AMPLIFIER is set to POWER AMP).

Select the **CONNECTION** that you intend to use in your system.

The choices you make above determine how the Xeta 2 responds to commands from the Xeta 2 remote control handset. For more information see the section marked **Amplifier/Connection Choices** on page 10.

**POWER UP VOLUME** (not available if POWER AMP has been selected) - Use the "+" and "-" buttons, *not* VOLUME UP/DOWN, to set this volume level. Provided you are listening to a source at the time you will be able to hear the level changing as you make adjustments. Note it is not possible to set this level to full volume. The Xeta 2 will reset to this preset level if it is switched off and on again. This is to avoid accidental high volume levels on switch on.

**EXIT AND SAVE** - When everything has been set to your satisfaction press the DOWN key to highlight this line. Press "+" to exit and 'SAVED' will flash up on the display.

The Xeta 2 has now been set to your personal settings. By pressing RESTORE on the remote control you can recall these settings, overriding adjustments made during normal use.

Further system tuning will be required if you have a subwoofer. You will need to adjust its level control and tune the crossover frequency to integrate smoothly with your main loudspeakers. Try a variety of source materials to help you make these adjustments until you are happy with the sound. The subwoofer instructions may also provide advice on system balancing. Do not be concerned if the level adjustment on the sub-woofer needs to be set near maximum to achieve the right balance.

## BASIC SET UP MODE

If your TV does not have a composite video input you can do a basic set up of the Xeta 2 in one of two ways, depending on your other equipment.

To set up the Xeta 2 without being able to view the On Screen Graphics follow the instructions below. For an alternative set up method which enables you to view the On Screen Graphics in set up mode only refer to the next section, **ALTERNATIVE METHOD**, and figure 6.

To enter the **BASIC SET UP** mode press the FUNC button followed quickly by the '+' button on the remote control.

The CAL indicator will flash to indicate you are in **SET UP MODE**.

You will hear a noise through the speakers in sequence as you are in the **TEST TONE** cycle. The noise will sequence in the following order left, centre, right, rear and can be heard for about 2-3 seconds on each one. If you want to step through the sequence quicker than this then use the '+' or '-' buttons.

You should adjust the rear and centre volume via the remote so that all the loudspeakers are equally loud from your listening position.

Pressing the UP and DOWN buttons will change the mode e.g. Dolby Pro Logic etc. and the front panel indicators will change accordingly.

If you now press the FUNC button again the 'CAL' indicator will flicker and you are able to trim the input levels (see INPUT TRIM on page 6).

The MUTE indicator will light if the input level is too high. You should set the INPUT TRIM to cause the MUTE indicator to light occasionally. This is best done on music or a soundtrack with a high bass content.

Pressing FUNC again EXITS AND SAVES the **BASIC SET UP** menu.

## ALTERNATIVE METHOD

It is possible to view the on screen graphics on a TV without a composite video input provided you have a video recorder (VCR) with a composite video input.

Connect the MONITOR OUT of the Xeta 2 to the composite video input of your VCR. Switch your VCR to this input (see your VCR handbook) and your TV to the channel which you use to view your VCR. Now by pressing RESTORE quickly followed by '+' on the Xeta 2 remote control you should be able to view the full SET UP MENU (see page 6).

After completing the set up for all inputs you should disconnect the lead from the MONITOR OUT of the Xeta 2 and connect it to the VCR OUT of the Xeta 2. You should now have a connection between VCR OUT of the Xeta 2 and the 'Video In' input of your video recorder. This will enable you to record other video sources, satellite, laserdisc, etc. The On Screen Graphics will no longer be visible.

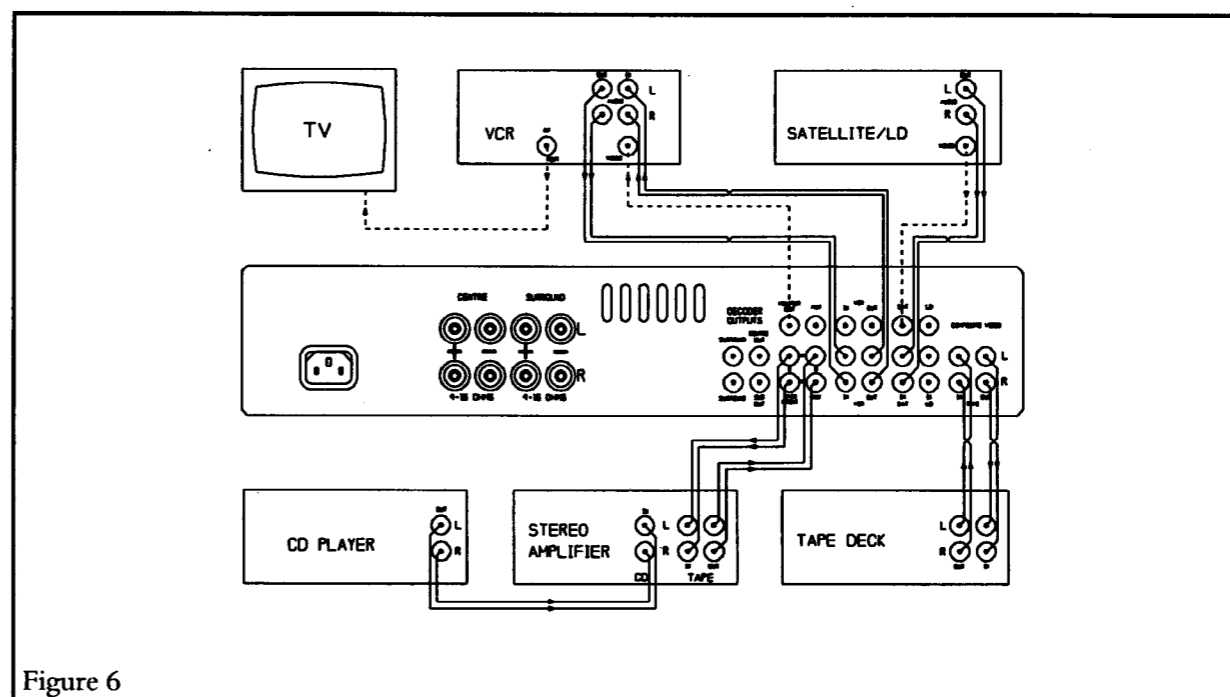


Figure 6

## REMOTE CONTROL COMMANDS

Most functions on the remote control are straightforward and obvious to use. The On Screen Graphics will confirm their actions on your TV screen.

The functions described below will allow you to optimise the way you use your system. Letters in the left hand column refer to the remote control drawing on the inside front cover of this handbook.

- Ⓐ INPUT SELECTORS: These select the required input on the Xeta 2. They may also select inputs on the main amplifier if it uses compatible control codes based on the Philips RC-5 standard.
- Ⓑ POWER: Switches the amplifier on or off from standby. The POWER LED glows amber if the Xeta 2 is put into 'standby' via the remote. If it is switched off manually the LED glows red. When the Xeta 2 is in standby mode " XETA 2" is displayed on the TV screen to remind you that the TV is still on.
  - The Xeta 2 cannot be switched on via the remote if it has been switched off with the POWER button Ⓣ.
- Ⓒ FUNC followed by '+' puts you into **BASIC SET UP** mode (see page 8). This is for use if your TV does not have a composite video input and enables you to set some parameters without On Screen Graphics.
- Ⓓ AUTOBALANCE: With AUTOBALANCE switched on, active circuitry ensures that the surround decoder receives equal levels of left and right signal. This is most important for proper surround decoding. With videotapes the left and right channels may be mismatched, or may vary along the tape, therefore we recommend that AUTOBALANCE be used with video tape sources.

Switching AUTOBALANCE off bypasses the active circuitry for AUTOBALANCE. Signal balancing (if required) must then be done using the BALANCE buttons on the remote control during set up. Note that AUTOBALANCE cannot fully compensate for a maximum left or right balance setting made in normal use.
- Ⓔ CINEMA: Switching on Cinema EQ (Equalisation) reduces the treble output of the centre channel. Cinema EQ can improve films recorded with excessive treble and sibilance. The front panel CINEMA EQ LED will light when this mode is on.
- Ⓕ MODE keys: The UP and DOWN buttons will cycle the Xeta 2 through the three primary operating modes as shown below:
  - DOLBY PRO LOGIC feeds sound information through the rear speakers and the front speakers (L, R & C). Use this mode for surround encoded sources. Video tapes and discs with surround encoding can be identified by looking for the Dolby Surround logo.
  - DOLBY 3 STEREO feeds sound information through the front speakers (L, R & C), but not the rear speakers. You should use either this mode or stereo mode for non surround encoded video sources. Stereo mixes vary so that it is worth trying this and stereo mode to see which one you prefer. If your system has no rear loudspeakers, use this mode for surround encoded material.

- STEREO is real stereo. For optimal hi-fi sound quality the Dolby Surround processing circuits are actually bypassed by relays when the Xeta 2 is switched to stereo. This prevents the stereo signal being affected by unnecessary circuits and retains maximum fidelity. Use STEREO for your regular hi-fi sources or for non surround encoded video material.

The + and - buttons have no function during normal operation and are used only in **SET UP MODE**.

- Ⓖ HALL: Switches in a reverberation or HALL effect. This feature is useful to enhance non surround encoded sources. It can be useful for recordings of live performances where the added ambience from the rear channels can increase your involvement in the performance. The HALL LED on the front panel will indicate when this is on. You can trim the amount of HALL effect by use of the REAR +/- level buttons Ⓢ.
- Ⓢ, Ⓣ BALANCE: In **SET UP MODE** this function is used for manual balancing of the input signal to optimise the surround decoding for some sources. In normal use the BALANCE affects the left/right speaker balance.
  - To set the input balance you must be in **SET UP MODE**. Make sure that you are in Dolby Pro Logic or Dolby 3 Stereo mode and switch AUTOBALANCE off. Find a surround encoded source with plenty of speech present. Switch the centre channel off via the remote (the Calibration LED will light). The speech should almost disappear; if not, alter the balance to the left or right by using <BAL and BAL>. Find the position that gives the minimum speech output or "dialogue null" in the centre channel. The input balance is now optimised and you can switch the centre speaker back on for use.
  - The input balance control operates in 1dB steps which are indicated on the On Screen Graphics. Equal levels are indicated by "L=R".
- Ⓤ CENTRE +/-: Trims the level of the centre speaker.
- Ⓥ CENTRE OFF: Switches the centre channel off or on. Useful for setting the dialogue null during manual input balancing. See BALANCE and AUTOBALANCE above for more details. Switching the centre channel off is also useful for Karaoke and for nulling out unwanted sports commentators.
- Ⓦ DISPLAY: Pressing this switch once switches on the volume level indicator to give you an idea of the current volume setting. This indicator is less bright than other graphics in order to be less intrusive when watching the TV. Pressing DISPLAY a second time switches off the On Screen Graphics. Pressing the button a third time will switch the On Screen Graphics back on and the screen will display status information of all functions for your information. This information is displayed for about 6 seconds, and you can hold the button down to keep the status information displayed for longer. After this the normal On Screen Graphics mode is then active. If you go into **SET UP MODE** with the display off, the display will come back on in order to view the OSG. It remains active when you come out of set up.

- Ⓜ REAR +/-: Trims the level of the rear surround speakers.

Note: Not all films are encoded for surround identically. It is useful to trim the rear or front levels slightly for some recordings.

- Ⓝ REAR OFF: Switches the rear channel off or on. Useful to demonstrate the effectiveness of the surround effect.
- Ⓞ RESTORE: Restores your amplifier to the condition saved in the set up mode. This is very useful if the centre and rear levels have been adjusted after set up, as it restores them to the saved values. The operating mode and any functions such as Cinema EQ that were saved during set up are also restored.

Note: To enter the SET UP MODE press RESTORE quickly followed by '+' (mode), see SET UP MODE selection on page 6 for more details.

- Ⓟ SHIFT: Used simultaneously with TAPE, this enables you to switch the Xeta 2's TAPE MONITOR in and out. Dependent on how you have set up the Xeta 2, you may need to use the SHIFT button simultaneously with the VOLUME, MUTE, POWER or INPUT selector buttons to control functions on the Xeta 2. It can also be used to control these functions on the Arcam Delta Black Box 500 outboard digital to analogue converter unit.
- Ⓠ MUTE: Mutes and un-mutes the sound from all channels. The word 'MUTE' will be displayed in the top left hand corner of the TV screen when MUTE is activated.
- Ⓡ VOLUME: This operates the master volume control for the Xeta 2. It may also control the volume of some amplifiers which use the same remote control codes. Note that a VOLUME command will automatically un-mute the Xeta 2 if MUTE is on.

If you hold either VOLUME button down, the volume will vary in steps of about 3dB. For a finer adjustment press and quickly release the button. The volume scale on the OSG does not have the same resolution as the actual volume control and so the pointer on the OSG may not move every time.

## AMPLIFIER/CONNECTION CHOICES

The Xeta 2 uses the Philips RC-5 remote control protocol. It responds to commands from the remote control handset in different ways depending on the wiring connection (TAPE LOOP or LINE) and the type of amplifier you have chosen from the on screen set up menu. The handset is the same as used in the Arcam Xeta One integrated A/V amplifier. This has 8 inputs so some of the buttons may not function in the way you might at first expect. The anomalies are set out opposite.

## AMPLIFIER MODES (selected on screen in SET UP MODE)

OTHER/  
POWER AMP Only the 4 video input buttons i.e. LD, SAT, VCR and AUX affect the Xeta 2. The other 4 input buttons have no effect. When the L & R outputs of the Xeta 2 are connected to the line input of an integrated amplifier, selecting any non-video input on the remote (e.g. CD) will mute the Xeta 2's outputs. When connected to a power amplifier, all non video input commands cause the Xeta 2 to switch to "AUX".

STD D290,  
LINE To adjust the volume on the Xeta 2 you **must** hold down the SHIFT button and press the appropriate button. Use the input selection buttons on the remote control to select the required Delta 290 input. Pressing an A/V source input button e.g. SAT will also change the Delta 290 input selector as below:

SAT = PHONO/AUX LD = AV VCR = TAPE 1 TAPE = TAPE 2

The AUX button has no effect. The On Screen Graphics (OSG) show which input on the Delta 290 has been selected. Pressing volume up or down without using the SHIFT key affects the Delta 290 volume control. SHIFT AUX switches the Xeta 2 to the AUX input.

STD D290,  
TAPE As above but there are no OSG for Delta 290 input selections.

A/V D290,  
LINE You must use SHIFT simultaneously with the input buttons to change Xeta 2 inputs. Use the input selection buttons without SHIFT to select inputs on the Delta 290. If AUX on the Delta 290 is selected the OSG displays input, i.e. 'AUX' followed by 'D', to show that it is the Delta 290's AUX input you have selected.

If you select AUX on the Xeta 2 the OSG will display AUX followed by 'X' to indicate it is AUX on the Xeta 2 you have selected.

A/V D290,  
TAPE Just press the required input button and the Xeta 2 or Delta 290 will do the rest. Selecting an input on the Delta 290 with the remote control will automatically switch the Xeta 2 to AUX input in order to listen to the selected source and process the signal as required.

The A/V input cannot be selected on the Delta 290 via the remote handset, without also changing the Xeta 2 input setting. This is because the RC-5 code for LD and A/V are the same. The Xeta 2 switches to the LD input when you press LD and the Delta 290 switches to the A/V input. To listen to a source through the Delta 290's A/V input you will then have to select AUX on the Xeta 2, as it will not do this automatically.

## GENERAL ADVICE WHEN USING THE XETA 2

Turn your TV volume down or mute its internal speaker, otherwise it will upset the balance of surround sound created by the Xeta 2.

When positioning your front and centre speakers aim to get them all at the same height. Ensure that the centre loudspeaker is magnetically shielded. Check with your dealer if in doubt.

Don't underestimate the importance of the centre speaker. Much of the soundtrack of a film is dialogue, which is normally routed through the centre channel loudspeaker. A poorly designed centre speaker will result in compressed dynamics, distortion and loss of detail. Speakers used for left, right and centre channels should be of a similar tonal balance or come from the same manufacturer.

For video recording, the signal path is maintained provided the Xeta 2 is connected to a live mains supply. The On Screen Graphics do NOT appear on the VCR video output.

On some pre-recorded video material the On Screen Graphics may appear in a slightly different position from normal. This is due to the non-standard characteristics of the video signals used by certain suppliers of pre-recorded tapes eg. Macrovision™. Changing over from PAL to NTSC video sources will also cause this to occur for a few seconds until the Xeta 2 recognises and adapts to the new signal format.

Clicking noises from inside the unit are quite normal during use. These are caused by muting relays operating momentarily when switching modes or inputs on the amplifier.

## UPGRADE PATHS AVAILABLE WITH THE XETA 2

The Xeta 2 can be used with an Arcam Delta 290P power amplifier to drive the front left and right speakers. For even better results you can bi-amplify the front speakers using 2 x Delta 290Ps, whilst a third Delta 290P could be added to bi-amp the centre speaker. The Xeta 290P, a version of the Delta 290P which is an exact match for the Xeta 2's graphics, is available to order from your dealer.

## CONNECTING THE XETA 2 TO EXTERNAL POWER AMPLIFIERS

The Xeta 2 can be used as the control unit with external power amplifiers being employed for higher output power or for improving the sound quality. Connect your additional power amplifier(s) to the appropriate sockets as described below.

- ⑦ SURROUND OUT - Provides a pair of identical mono outputs for an external power amplifier or amplifiers for the rear channel speakers if required.
- ⑧ SUB OUT - Provides a mono output for an active (powered) sub woofer. If used with a separate power amplifier and subwoofer loudspeaker then a proper bass crossover filter should be used.
- ⑨ MAIN FRONT OUT - connect the power amplifier(s) which will be driving your front pair of speakers to these sockets.
- ⑩ CENTRE OUT - Provides an output for an external amplifier for the centre speaker.

## USING AN OUTBOARD DAC

The digital output from a Laser Disc player (which is normally an optical connection) may be fed into an external digital to analogue (DAC), e.g. an Arcam Black Box 50 or 500, for improved sound quality.

## CABLES

Cables can make or break a system. The quality of interconnects (audio, video and digital) and speaker cables you use will be a limiting factor on the performance of your hi-fi/home cinema system. The better the cable the better the sound. Cables from the AudioQuest range are ideal partners for the Xeta 2. As a rule of thumb plan to invest around 10% -15% of the value of your equipment in cables.

## SOURCES OF SURROUND ENCODED MATERIAL

The majority of films on video, laserdiscs and broadcast TV have surround sound - look for the Dolby Surround logo.

Surround material requires a stereo source which can be any of the following:

- An FM radio tuner - some plays are recorded in Dolby Surround
- A stereo TV or TV tuner (NICAM)
- A hi-fi stereo or NICAM video recorder
- A laserdisc player
- A stereo satellite receiver or cable system
- Dolby Surround encoded video games

The Xeta 2 is compatible with all of these.

## SCART PIN CONNECTIONS

European video equipment frequently features SCART type connectors for audio and video connections. SCART to phono leads are easily obtainable for interconnection. The information below is provided if you need to make up your own connections.

Audio Pin	Composite Video Pin
1 Audio right output	17 Video output screen/ground
2 Audio right input	18 Video input screen/ground
3 Audio left output	19 Video output
4 Audio screen/ground	20 Video input
6 Audio left input	

## FAULT FINDING SECTION

### INITIAL ADVICE

Please ensure that you have read the instructions and are operating the equipment accordingly.

Check all cables to your speakers and other components for any loose or incorrect connections.

Ensure that the rest of the components making up your system are operating correctly. A fault can occur in another component or connecting lead that might appear to be a Xeta 2 problem.

Make use of the status information on the On Screen Graphics by switching the Display on via the remote handset. The information will tell you what modes the Xeta 2 is set to.

If any problems still persist you may find the following suggestions useful.

If you still have problems after carrying out the checks listed then contact your Arcam dealer or use our helpline number shown on the inside front cover between 9am and 5pm BST.

### **SYMPTOM: NO SOUND OR FAINT SOUND**

- THINGS TO CHECK:
- Are the speakers connected correctly?
  - Is the source you wish to listen to connected and operating correctly?
  - Is the correct input selected?
  - Is the unit switched on and the POWER light green?
  - Is the volume turned up?
  - Is the MUTE switched off?
  - Is the TAPE MONITOR switched out?
  - Is the amplifier driving the front speakers turned on and the correct input selected and its volume turned up?

### **SYMPTOM: NO SOUND FROM ONE LOUDSPEAKER**

- THINGS TO CHECK:
- See points listed above.
  - Is the balance control set to centre position?
  - Is the input balance set to L=R (via the remote)?  
For the centre channel: ensure phantom mode has not been selected in **SET UP MODE**.  
For the centre or rear channel: ensure these are not switched off via the remote. Also try adjusting the channel volume.

ADVICE: To check a source component, swap the phono leads over (L with R) at the source equipment only. If the fault changes over to the other channel, then the fault is in the source component.

### **SYMPTOM:**

#### **THINGS TO CHECK:**

### **SOUND FROM CENTRE AND REARS ONLY**

- Is the amplifier driving the front speakers switched on and the correct input selected?
- Is the volume on this amplifier turned up?

### **SYMPTOM:**

#### **THINGS TO CHECK:**

### **SOUND NOT COMING OUT OF REAR SPEAKERS**

- Is Dolby Pro Logic selected? The relevant LED should glow green.
- Are the rear speakers connected properly?
- Have rear speakers been switched on (via the remote)?
- Are you replaying Dolby Surround encoded material?
- Has the rear volume been turned up?
- Is your source operating in stereo mode?

#### **ADVICE:**

Even on Dolby Surround encoded material, sound does not come out of the rear speakers all of the time; the amount of rear level also varies from film to film.

### **SYMPTOM:**

#### **ADVICE:**

### **SOUND COMING OUT OF REAR SPEAKERS WHEN MATERIAL IS NOT DOLBY SURROUND ENCODED**

There is nothing to check here. Sometimes on normal broadcasts phase differences in the recordings can confuse the surround steering circuitry allowing certain signals to be heard from the rear speakers. You can of course switch off the rear speakers using the remote control handset, or switch the Xeta 2 to stereo mode.

### **SYMPTOM:**

#### **THINGS TO CHECK:**

### **UNABLE TO MONITOR VIDEO FROM THE XETA 2 ON YOUR TV**

- Is your TV switched to the correct AV input?
- Have you connected the TV correctly to the video MONITOR OUT socket on the Xeta 2?
- Have you selected the right video input via the source selector?
- Is the Xeta 2 properly switched on?.

#### **NOTE:**

If you can monitor the video signal but cannot display On Screen Graphics then press DISPLAY on the remote to switch them back on.

**SYMPTOM: XETA 2 DOES NOT RESPOND TO REMOTE CONTROL COMMANDS**

- THINGS TO CHECK:**
- The Xeta 2 may be set up to work using the SHIFT button simultaneously with another button to prevent a 'clash' with the remote control codes of other hi-fi units.
- Try holding down SHIFT whilst pressing the remote control buttons.
- Check that the unit is set up correctly (see **AMPLIFIER & CONNECTION** instructions in **SET UP MODE** page(s) 7, 8).
  - Check that the Xeta 2 is switched on and the **POWER LED** is green.
  - Check the remote receiver is not obscured.
  - Check the batteries in the remote control are in the correct way round or try replacing them with new ones.

**SYMPTOM: XETA 2 REMOTE HANDSET OPERATES ANOTHER HI-FI UNIT'S VOLUME, MUTE AND SOURCE SELECTION AS WELL AS THOSE OF THE XETA 2**

- ADVICE:**
- Change **AMPLIFIER** type in the **SET UP** menu to **STD 290** (see page 7).
- You will now have to hold down the **SHIFT** button whilst pressing the **VOLUME**, **MUTE** or **INPUT** selectors to affect the Xeta 2 only.
- The problem is caused by both units responding to the standard **RC-5** remote control signals used. By holding down the **SHIFT** button an alternative code is used for the Xeta 2.

**SYMPTOM: XETA 2 WORKS OKAY BUT NO ON SCREEN GRAPHICS ON TV MONITOR**

- THINGS TO CHECK:**
- Is the **DISPLAY** turned off? Check by pressing the **DISPLAY** button to turn **OSG** on again.
  - Is the TV correctly connected to the Xeta 2 **MONITOR** output?
  - Is the correct input selected on the TV?

**SYMPTOM: HIGH LEVELS OF DISTORTION AND CROSSTALK**

- THINGS TO CHECK:**
- Check that the **INPUT TRIM** has been set correctly (See page 6 for more details).
- It is possible to overload the audio inputs of the Xeta 2 if the input signal is 3 volts rms or greater. As a point of reference CD players have maximum output level of about 2 volts rms so you are unlikely to encounter this problem. However this could happen if you are using a preamplifier to drive the Xeta 2 and have connected the 'Preamp Outputs' to the Xeta 2 instead of the 'Tape Out'.

**SYMPTOM: "SPEAKER PROTECTION ACTIVE" DISPLAYED ON TV & THE POWER LED FLASHING AMBER**

- THINGS TO CHECK:**
- Check that the Xeta 2 is well ventilated as the protection may have been activated due to overheating. The unit will reset after 2-3 minutes when it has cooled down sufficiently.
- The problem may also be caused by an output overload. This may be due to using the Xeta 2 at high volumes into low impedance loudspeakers or if there is a short circuit on the loudspeaker(s) or speaker cables.

If you have been using the Xeta 2 at high volumes then you may have to reduce the volume to prevent reoccurrence of the problem. You should also have your cable and loudspeakers checked out by a competent person before reconnection to the system again.

**NOTE:**

If the fault is due to an overload of any sort the unit will *not* reset unless you first disconnect the mains supply by removing the mains lead or switching the power off at the wall socket. If the cause of the problem is not removed before restoring the power again the protection circuitry within the Xeta 2 will reactivate.

### **WARRANTY INFORMATION**

Full details of the warranty and how to claim during the warranty period can be found in the "Safety Instructions and Hint & Tips" booklet also supplied with this product. If you did not receive this booklet please contact the Arcam Customer Service Department.

## Xeta 2 - Technical Specification

### Continuous power output per channel

Centre	8 $\Omega$ , 20Hz - 20kHz	55W
	4 $\Omega$ , 20Hz - 20kHz	100W
Rear channel,	8 $\Omega$ , 1kHz	100W (2x50W)
	4 $\Omega$ , 1kHz	130W (2x65W)
THD, 1kHz, 80% maximum output		0.05%
Peak current rating, centre amplifier		$\pm$ 18Amps
Peak current rating, rear amplifiers		$\pm$ 10Amps

### Line Inputs

Frequency response	$\pm$ 0.5dB, 20Hz - 20kHz
Signal/noise ratio (CCIR)	94dB
Input sensitivity	390mV nominal
Input impedance	20k $\Omega$
Overload margin	17dB

### Preamp Outputs

Nominal output level	700mV
Maximum output level	8V
Output impedance	50 $\Omega$

### Video Section

Video signal type	PAL and NTSC compatible
Nominal input/output level	1V P-P, 75 $\Omega$
Maximum input level	2V P-P
Frequency response	5Hz - 10MHz, -3dB

### General

Operating voltage	230V $\pm$ 12%, 115V $\pm$ 12%
Maximum power consumption	400VA
Size (overall) W/D/H mm.	430x300x94
Weight (nett)	6.1kg
(packed)	7.4kg

### Supplied Accessories

Mains lead  
CR40 remote control handset  
2 x AA batteries

E & O E



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