

# ***HTP***

## ***Home Theatre Processor***

### ***INSTRUCTIONS FOR USE***

*Thank you for purchasing the Musical Fidelity  
HTP Home Theatre Processor.*

*The HTP is an audio and video (AV) processor that  
decodes Dolby Digital\*, Dolby Pro Logic\*  
and DTS Digital Surround™.*

*It will accept S-Video and composite video signals.  
It supports PAL and NTSC TV systems.*

*It has been designed to operate with all  
Musical Fidelity Power amplifiers especially  
the HT600, 5 channel power amp.*

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

*Aesthetically, the HTP is a perfect match for the  
HT600 power amplifier, A3 CD player and the A3 Tuner.*

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

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"DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.

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# INTRODUCTION

Thank you for choosing the Musical Fidelity HTP (Home Theatre Processor). The unit is specifically designed to meet all your audio and video signal processing needs.

The HTP can be used as either a high-end stereo preamplifier, a home cinema audio/video processor or a combination of both.

The HTP performs Dolby Digital, Dolby Pro Logic and DTS Digital Surround™ decoding.

The HTP will remain compatible with new multi-channel formats that will appear in the future.

The HTP accepts up to eight digital input sources, eight line level input sources, a tape loop and two additional tape record outputs. It has four S-Video and four composite video inputs, S-Video and composite video outputs with OSD (On Screen Display). It also has, S-Video and composite outputs without OSD.

The HTP has been configured by the factory to automatically sense the type of incoming audio and video signals. It will then select the mode that gives optimal reproduction quality.

Once the user has become more familiar with the setup menus the automatic detection can be disabled if required. The user can also change the name of the inputs so that they match the source device. i.e. Input 1 could be renamed to DVD. Input 2 to CD etc.

When a two channel analogue (or digital) source has been selected you may then select different music modes that reproduce alternative effects. The modes are stereo, Dolby Pro-Logic, mono and four Music Modes: Natural, Concert, Club and Party. The various music modes cannot be used when the HTP detects a Dolby Digital or DTS multi-channel signal. The HTP will automatically disable the music mode functions. if these digital signals are detected.

The HTP is supplied with two independently controlled trigger outputs, allowing the user to control external equipment. Each trigger has two output sockets and can be set to either 5V or 12V DC operation.

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

DTS Digital Surround™ is a discrete 5.1 channel digital audio format available on CD, LD, and DVI) software which consequently cannot be decoded and played back inside most CD, LD, or DVD players. For this reason, when DTS-encoded software is played back through the analogue outputs of the CD, LD, or DVI) player, excessive noise will be exhibited. To avoid possible damage to the audio system, proper precautions should be taken by the consumer if the analog outputs are connected directly to an amplification system. To enjoy DTS Digital Surround™ playback, an external 5.1 channel DTS Digital Surround™ decoder system such as the HTP must be connected to the digital output (S/PDIF, AES/EBU, or TosLink) of the CD, LD, or DVI) player.

# SAFETY INFORMATION

## IMPORTANT!

This unit is supplied in the U.K. with a mains lead fitted with a moulded 13 amp plug. If, for any reason, you need to cut off this plug, please observe the following safety precautions. Please dispose of the cut-off plug safely. It must not be plugged into a mains power supply.

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 10 amp fuse must be used.

### **WARNING - Radio Frequency Interference (RFI)**

This hi-fi product has been tested to ensure that its operation will not be adversely affected by normal background levels of RFI. It is possible that if this product is subjected to abnormally high levels of RFI the unit may be susceptible and not perform as expected. Degradation to the picture quality and/or the audio signal may be experienced. In the unlikely event of this happening on a regular basis, please contact Musical Fidelity's service department.

The unit has also been tested to ensure that it does not radiate excessive levels of RFI that could affect other pieces of electronic or electrical equipment.

The electronics in modern hi-fi equipment is complex and hence may be damaged by lightning. It is possible that during electrical storms the operation of some equipment may be adversely affected. For complete protection of your hi-fi system during such storms, mains plugs and aerial leads should be disconnected.

Always ensure that when disconnecting and re-connecting your hi-fi equipment the mains supply is switched off.

# GENERAL ADVICE

## INSTALLATION PRECAUTIONS and USER INFORMATION

Your new HTP Home Theatre Processor is designed and built to provide trouble-free performance, but as with all electronic devices it is necessary to observe a few precautions.

*ALWAYS disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component.*

*The HTP generates a certain amount of heat and requires ventilation. Do not place it on a soft surface such as a rug into which it could sink. You should also avoid a built-in installation place such as a bookcase or a rack unless you can provide proper ventilation for the unit.*

*This product is equipped with a three-conductor AC mains power cord which includes an earth ground connection. To prevent shock hazard, all three connections must ALWAYS be used. If your electrical outlets will not accept this type of plug an adapter may be purchased. If an adapter is necessary, be sure it is an approved type and is used properly.*

*Heed all warnings on the back of the unit.*

*Only connect the HTP to a mains outlet of the voltage marked on the back of the unit.*

*The HTP will operate in accordance with its specifications as long as the environmental conditions are kept in the following ranges:-*

<i>Temperature</i>	<i>5 to 45 degrees Celsius</i>
<i>Humidity</i>	<i>10 to 90% non condensing</i>

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

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

*Do not place the unit near direct heat sources such as radiators or other equipment that produces heat.*

*Do not place the unit where it can be subjected to direct sun-light.*

*Do not remove any covers or try to gain access to the inside. The warranty is invalid if the unit has been tampered with. There are no user adjustments within. Refer all service work to an authorised Musical Fidelity agent.*

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

*NEVER use flammable or combustible chemicals for cleaning audio components.*

*There are fuses in the unit. In the unlikely event that one blows, take your unit to your audio dealer. Do NOT try to replace the fuse yourself or you will invalidate the warranty.*

*No naked flame sources, such as lighted candles, should be placed on the unit.*

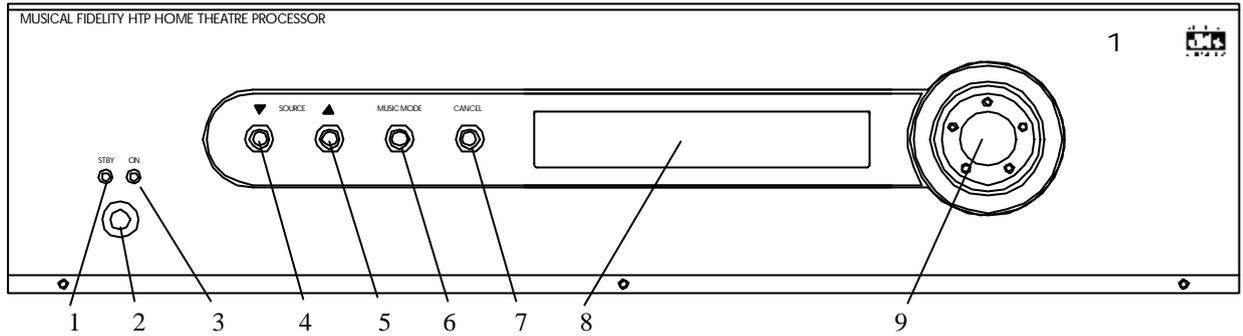
*Keep out of reach of children.*

*For battery disposal, refer to the manufacturers instructions.*

**Important!** Unauthorised opening of the equipment will invalidate any warranty claims.

**Note:** To help your dealer identify your amplifier if after-sales service is required, please quote the serial number located on the rear panel of the unit.

# CONNECTIONS AND FACILITIES

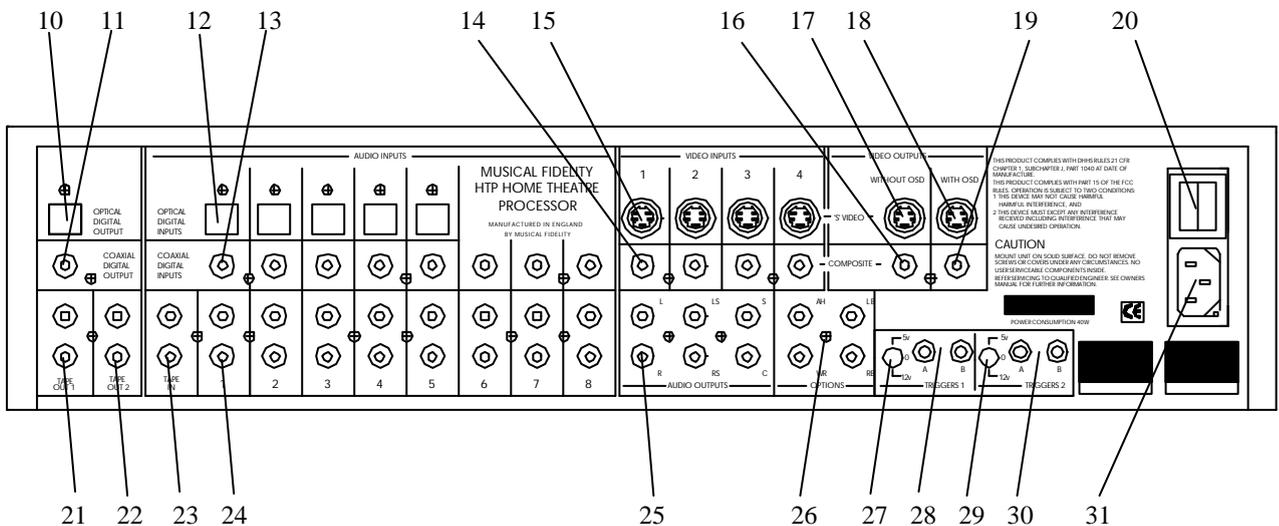


HTP front panel layout

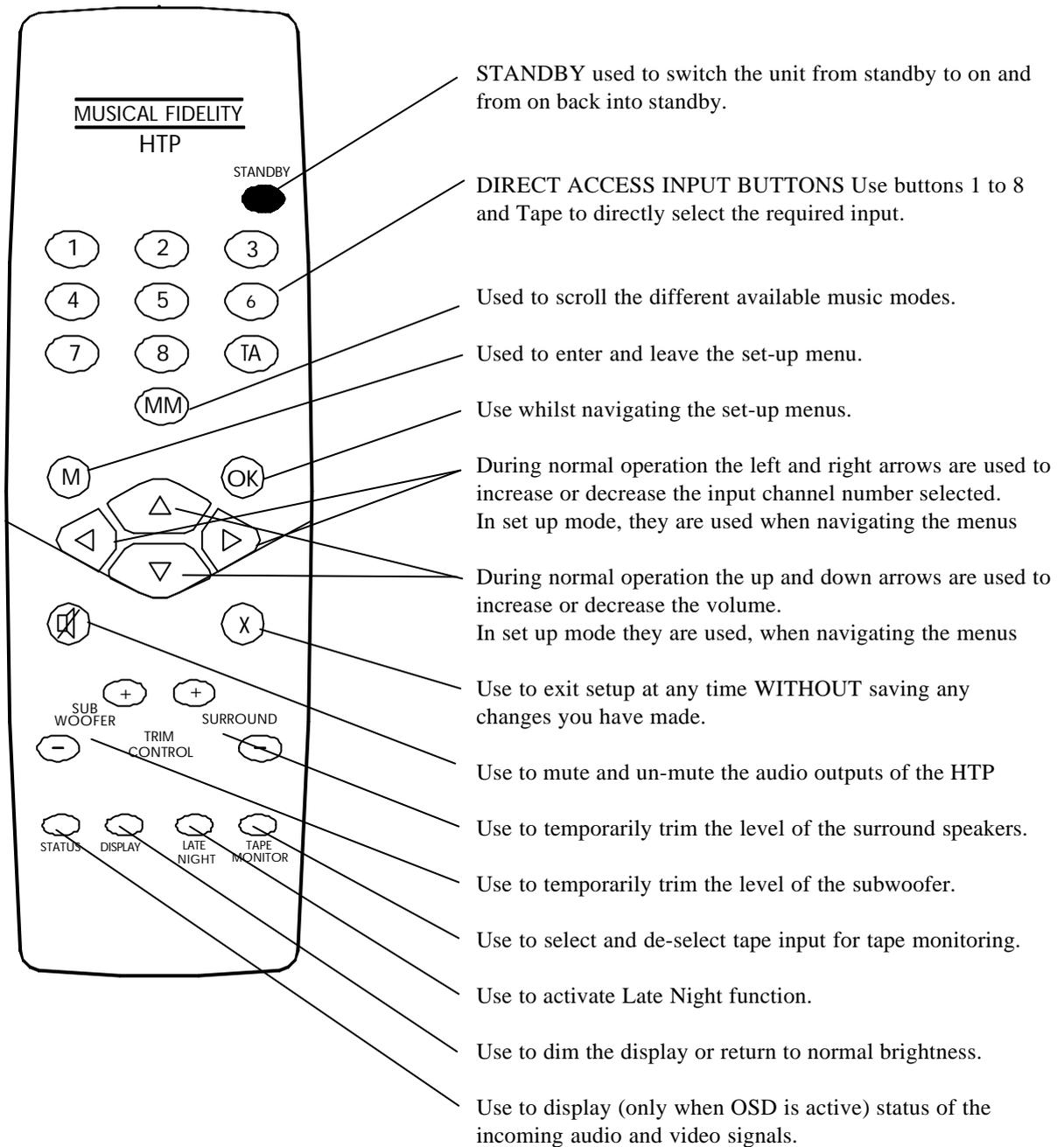
- |                      |                                  |
|----------------------|----------------------------------|
| 1 Standby LED        | 6 Music mode                     |
| 2 Standby/On switch  | 7 Exit setup without saving      |
| 3 On LED             | 8 Display window and IR receiver |
| 4 Source select down | 9 Volume and control knob        |
| 5 Source select up   |                                  |

HTP back panel layout

- |                                       |                                   |
|---------------------------------------|-----------------------------------|
| 10 Optical digital output             | 21 Tape output 1                  |
| 11 Co-axial digital output            | 22 Tape output 2                  |
| 12 5 optical inputs                   | 23 Tape input                     |
| 13 8 co-axial digital inputs          | 24 8 analogue audio inputs        |
| 14 4 composite video inputs           | 25 6 line level audio outputs     |
| 15 4 S video inputs                   | 26 Future update option           |
| 16 Composite video output without OSD | 27 Trigger1 voltage select switch |
| 17 S video output without OSD         | 28 Trigger 1 output jacks         |
| 18 S video output with OSD            | 29 Trigger2 voltage select switch |
| 19 Composite video output with OSD    | 30 Trigger 2 output jacks         |
| 20 Main on/off switch                 | 31 IEC mains inlet                |



# REMOTE CONTROL



## **REMOTE CONTROL**

The following should be noted when operating the HTP using the remote control. The Infra Red receiver is located behind the window for the display on the front panel. It is important to ensure that when operating the remote control, the line-of-sight from the remote to the infra red receiver is not obstructed.

- Point the remote control (transmitter) towards the front panel display window on the HTP.
- Visual contact must exist between the transmitter and receiver.
- If the range of the remote control decreases dramatically, replace the batteries with new ones. (dispose of old batteries as per the manufacturers instructions)
- For your convenience MENU, OK, MUTE, EXIT and the cursor keys are all back lit. If any one of these buttons are pressed, all of these buttons will light up.

# AUDIO CONNECTIONS

## **ANALOGUE INPUTS 1...8**

Connect the L and R audio output cables of any analogue devices to these sockets. Always connect these inputs, even when you are going to listen only via digital inputs (such sources as DVD or CD players). This ensures that there is always a signal at the tape record outputs.

The signal coming from any selected ANALOGUE audio input is fed through an A/D converter that turns the analogue signal into digital form (A/D = Analogue to Digital). The signal is now ready for Dolby Pro Logic decoding or post-processing with Music Modes. Then the signal is fed to D/A converter and to 5.1 Channel outputs

## **TAPE INPUT/OUTPUT**

These inputs are suitable for all types of tape recorders, including three-head types, which allow you to monitor the signal from the tape at the same time it is being recorded. Connect a set of interconnects from the TAPE REC output sockets of the preamp to the LINE IN or RECORD IN sockets of your tape recorder. Connect a second set of cables from the TAPE PLAY input sockets to the LINE OUT or PLAY OUT sockets of your tape recorder.

Using the TAPE loop you can monitor the level and quality of the recording, at the same time as the recording takes place. You can also use it for connecting external devices (such as an equaliser) to the signal path. Note: If you use an equaliser you must bypass it when listening to a Dolby surround source being decoded by Dolby ProLogic.

Any ANALOGUE stereo source you have selected on the HTP will be automatically fed to the TAPE REC output sockets for recording. You cannot make a recording from a source that is connected to the digital inputs.

## **RECORD OUTPUTS 1...2**

The REC outputs carry the signal from the currently selected ANALOGUE stereo source device (except the source connected to the TAPE PLAY input). You can connect these outputs to the inputs of any recording device. The signal can also be used in a multi-room set-up to feed power amplifiers in other rooms.

## **5.1 CHANNEL OUTPUTS (LEFT FRONT, RIGHT FRONT, LEFT SURROUND, RIGHT SURROUND CENTRE AND SUBWOOFER)**

Connect these outputs to the line inputs of your power amplifiers. The SUB output is normally fed to the low-level Line Input of an active subwoofer. Alternatively it may feed a separate power amplifier and a passive subwoofer. The option outputs are reserved for future surround formats.

## **COAXIAL DIGITAL AUDIO INPUTS 1...8**

Connect the coaxial digital output cables from your source devices to these inputs.

## **OPTICAL DIGITAL AUDIO INPUTS 1...5**

Connect the optical digital output cables from your source devices to these inputs.

PLEASE NOTE. It is possible to connect both optical and coaxial digital cables to inputs 1 through to 5. This is not recommended but if you choose to connect both cables, the HTP will use the optical source.

## **OPTICAL DIGITAL OUTPUT**

Connect the optical input of your digital recorder to the DIGITAL output. The selected digital source is fed to this output in digital format.

## **COAXIAL DIGITAL OUTPUT**

Connect the coaxial input of your digital recorder to the DIGITAL output. The selected digital source is fed to this output in digital format.

# VIDEO CONNECTIONS

## **COMPOSITE VIDEO INPUTS 1...4**

Connect the composite video output cables coming from your video sources to these inputs.

The composite video signal is selected from the input signals, and then fed to the composite video outputs.

Note: Take care to use the same number input for both the video and audio connections from the source device. i.e. DVD player:- video to video input 1 and the digital audio of the same DVD player to either the optical or coaxial digital input 1

## **COMPOSITE VIDEO OUTPUTS**

There are two composite video outputs. Both will display the selected source on the display device i.e. TV or projector. Only one will have the On Screen Display information.

Connect either Composite Video output to your display device .

On Screen Display information, is only output to the COMPOSITE VIDEO OUTPUT WITH OSD.

## **S-VIDEO INPUTS 1...4**

Connect the S-Video output cables from your video sources to these inputs.

Note: Take care to use the same number input for both the video and audio connections from the source device.

S-Video signals are of higher quality than Composite Video signals. If you have a source device with S-Video outputs, we recommend you to use them together with the S-Video inputs on your display device. S-Video inputs are automatically down-mixed, to feed the Composite Video outputs for displays that are without S-Video inputs.

## **S-VIDEO OUTPUT**

There are two S-Video outputs. Both will display the selected source on the display device. Only one will have the On Screen Display information.

Connect either S-Video output to your display device.

On Screen Display information is only output to S- VIDEO OUTPUT WITH OSD.

## **PLEASE NOTE:-**

Do not connect a composite video signal input to the HTP (i.e. from a DVD player) and then connect the output of the HTP to the display device using S-Video.

# TRIGGER CONNECTIONS

## REMOTE TRIGGER OUTPUTS 1 and 2

There are two completely separate trigger circuits. Trigger 1 and Trigger 2. They both have two output sockets.

Both trigger 1 and trigger 2 can be selected for either 5VDC or 12VDC operation. Changing the voltage is done by the two switches located on the back panel, one for trigger 1 and one for trigger 2. If the switch is set to the centre position the trigger voltage is disabled.

The maximum current from each trigger socket is limited to 120mA for 12V operation and 50mA for 5V.

Connection to the triggers is made via a 3.5mm mono jack plug.

TRIGGER outputs can be programmed to operate under various user controlled conditions (see trigger menu section page 18).

***CAUTION: ALWAYS DISCONNECT THE UNIT FROM THE MAINS SUPPLY BEFORE CONNECTING OR DISCONNECTING THE TRIGGERS!***

# USEFUL INFORMATION

## **CABLES**

Use 75 ohm cables for all composite video connections and for all coaxial digital audio connections. To comply with EMC regulations all cables must be less than 3M in length. We recommend that all cable lengths are kept to a minimum.

## **MAINS SWITCH**

Ensure that all the HTP is switched to standby before operating the mains switch.

## **FUNCTIONS NOT AVAILABLE VIA FRONT PANEL**

The functions that cannot be accessed from the front panel are:- late night mode, dimming the front panel display, level trimming of the sub-woofer and surround speakers, and tape monitor input.

## **ON SCREEN DISPLAY (OSD)**

### **IMPORTANT NOTE**

The OSD will only work if the TV screen is connected to either the Composite, or S video output with OSD. The OSD output (in the display set-up sub-menu) must also be set to the same output as you are using. i.e. SVideo or Composite. (SEE PAGE 18)

OSD SWITCHED OFF. Please be sure that the TV system is connected to the correct output and that OSD is enabled in the display set-up menu. The unit is configured by the factory so that OSD is enabled on both composite and S video outputs. If the OSD has been switched off by mistake, the display set-up menu can be configured using the HTP front panel display.

## **PAL/NTSC**

The HTP supports PAL and NTSC TV systems. Please ensure that this is set to the correct setting using the Display setup menu.

## **DOLBY DIGITAL / 5.1**

The front panel display and the OSD provides information concerning the type of audio signal that is being received. When the Dolby D is displayed it will be followed by a series of numbers. The Dolby D indicates that a Dolby Digital signal is being received and the numbers indicate which audio channels are being decoded. Please note that various formats are possible, including 2/0, 3/0, 3/2 and 3/2.1. If Dolby D 2/0 is displayed it means that although the incoming signal is a Dolby Digital signal, the format is only front left and right. If Dolby D 3/2.1 is displayed it means that you are receiving a full 5.1 Dolby Digital encoded signal where the '3' represents front left, front right and centre, the '2' represents left surround and right surround and the '1' represents the LFE channel.

## **DTS 5.1**

The same format is used for displaying the incoming DTS signal as is used for the Dolby Digital, except DTS will be displayed instead of Dolby D

## **COMPOSITE VIDEO/S-VIDEO**

The HTP will convert an S-Video input to a composite video output but not vice versa. To avoid any possible confusion we recommend to use the same video standard for both inputs and outputs.

## **LFE (LOW FREQUENCY EFFECT)**

The LFE channel is a separate channel, created by the film sound engineer, with a limited low frequency range and is reproduced via the sub woofer.

## **SUB WOOFER**

The subwoofer signal is created by mixing the LFE channel and the bass signals, from any of the speakers that have been set to small.

If there is no subwoofer connected to the system, the LFE channel and the other channels bass will be directed to speakers that can handle the signals. This is normally the main front speakers.

# BASIC OPERATION

- mains switch* The mains switch is situated in the back of the unit. The unit is designed to be left switched on at all times. We do however recommend switching the unit off, with this switch, if the HTP is not going to be used for a long time i.e. 2/3 weeks. Ensure all the HTP is switched to standby before turning the HTP on or off with the mains switch.
- standby/on* If the orange LED is lit on the front panel the unit is in standby mode. Press either the red standby button on the remote control or the standby/on button on the front panel (located below the LEDs). and the unit will turn on.. The blue LED on the front panel will light and the display will illuminate. If the unit is on, press either the standby button on the remote or the front panel to switch the unit back into standby.
- Please note:-  
When the unit is switched to standby (orange LED lit) video from the last selected source is still passed through the unit.
- input select* On the remote control use buttons 1 to 8 to directly select the desired input, or use the left and right arrow keys to increment or decrement the input channel number. Alternatively you may use the source down and up buttons on the front panel.
- changing the volume* Use either the volume/control knob on the front panel or the up and down buttons on the remote control.
- tape* The tape button is used to select tape input.
- music modes* Each press of the music mode button will scroll the different available music modes. Please note some options in this function will be disabled if a Dolby Digital or DTS multi-channel signal is detected. See page 19 & 20 for more information on the music modes.
- menu button* Pressing the menu button enters the set-up menu. Detailed explanation of the set-up menu starts on page 14
- OK/exit* Both buttons are used whilst navigating the set-up menus
- mute* To MUTE the HTP press mute once, mute will be displayed on the front panel display and also on the TV if OSD is active. To un-mute the unit, press mute again, or increase the volume using either the remote control or the volume control.
- trim controls subwoofer and surround* Use these buttons to trim the level of the subwoofer and or the surround speakers. Please note. These setting will be reset to 0 when the unit is switched into standby. They are only intended for slight changes that may be required when different sound tracks are being played. If permanent setting are required use the level set-up menu.
- status* Press the status button and (provided that OSD is enabled) the TV will display the current input that is selected and the status of the audio/video signals that the HTP is receiving.

# BASIC OPERATION

- display* Press the display button to dim the display. This is especially useful if you are watching the screen in a darkened room. Press the button again to return the display to normal brightness.
- late night* This button activates the Late Night function which reduces the dynamic range for quieter listening. The soundtrack is compressed so that all details are audible even at low listening levels, but loud sounds are reduced in volume. Note: This function works only with Dolby Digital sources.
- tape monitor* This button selects the tape input for tape monitoring. Even if an alternative input is selected (i.e. input 1 to 8) tape monitor remains active. To switch off tape monitor press the button again.
- using the setup menu system* Six buttons on the remote control are used to navigate through the HTP's on screen display (OSD) menu system: menu, OK,EXIT and the 4 compass keys.
- You can also operate the menus from the front panel. The volume/control knob and the Cancel button are all that are required.
- Note that the front panel display of the HTP shows the menu that is ready to be selected, this is the same menu that is high lighted on the OSD. Entering setup provides access to the six different menus listed below:-
- TONE CONTROLS
  - LEVEL SETUP
  - DELAY SETUP
  - SPEAKER SETUP
  - SOURCE SETUP
  - DISPLAY SETUP
  - TRIGGER SETUP
- Caution required* Many of the settings in the above menus can have significant impact on the performance and functionality of the system. Please read this manual fully and ensure you understand the implications of the changes you are about to make, before changing anything.

# SETUP MENU *via* REMOTE CONTROL

*to select a menu item*

To enter the main menu using the remote control, push the MENU button. The setup menu will be displayed on the TV screen (as long as OSD is switched on) The main menu options will also be displayed on the front panel display (only 2 lines of display)

By pressing the up and down arrow keys the different options can be selected.

When the front panel display shows the required option or the OSD cursor indicates the required option press the OK button. You will now be into the selected sub-menu.

*to change a sub menu item*

Press the up and down arrow keys to select the various options in the sub-menu. Once the required sub-menu is found press either the left or right arrow key to adjust the settings.

Now press the up and down arrow keys to select the next option in the same sub-menu or exit. Press Ok to accept the choice.

*to save changes*

At any time during the set-up mode, pressing the MENU button on the remote control will save the changes and exit set-up mode.

*to "escape" or "cancel" or exit*

Once in the menu system you can exit without saving any of the changes you have made at any time by pressing the EXIT button on the remote control.

## SETUP MENU via FRONT PANEL

*to select a menu item*

To enter the main menu using the buttons on the front panel, push the rotary control the setup menu will be displayed on the TV screen (as long as OSD is switched on) The main menu options will also be displayed on the front panel display (only 2 lines of display)

Keep pressing the volume/control knob until the correct menu is displayed. When the display shows the required option, or the OSD cursor indicates the correct option, turn the volume/control knob one position to either the left or the right. You will now be into the selected sub-menu

*to change a menu Item*

Pressing the volume/control button will now scroll the various options in the sub-menu. Once the required sub-menu is found turn the control knob 1 position to either the left or right to change the settings. When the required setting has been selected press the control knob, this will select the next option in the same sub-menu.

*to save changes*

If you want to exit and save the changes, keep pressing the control knob until exit is highlighted then turn the knob 1 position left or right.

*to "escape" or "cancel" or exit*

Once in the menu system, you can at any time, press the CANCEL button on the front panel to exit the set-up menus **without** saving any of the changes you have made.

# TONE CONTROLS, LEVEL & DELAY SETUP

## TONE CONTROLS

BASS

TREBLE

**TONE CONTROLS.** Use the tone controls to adjust the bass and treble to the desired settings. The levels set will be stored until they are changed again.

Use the cursor left and right keys to increase or decrease the level of the bass. Each press of the left or right cursor key will change the level up or down by 1dB.

Use the cursor left and right keys to increase or decrease the level of the treble. Each press of the left or right cursor key will change the level up or down by 1dB.

## LEVEL SETUP

LEFT

CENTRE

RIGHT

RIGHT SURROUND

LEFT SURROUND

SUB WOOFER

LFE CHANNEL

TEST SIGNAL

**LEVEL SETUP.** Used to set the listening level of the individual speakers. Ensure the master volume is set loud enough to listen to the source or to approx. -20dB if you are going to use the test signal before entering the level setup procedure.

Each speaker can be adjusted between -10 and +15dB in steps of 1dB

LFE explanation (see page 11) The LFE channel can be adjusted between -10 and 0dB

This switches on the Noise Test signal. (Ensure that the volume control is set to approx. -20dB before activating the test signal) A broadband noise is sent first to the Left front channel for a few seconds, then to the Centre channel and so on through the other channels. Move the cursor to the speaker that needs adjusting. Increase or decrease the level with the left or right arrow keys and the noise will move to that channel and the change will be implemented. Each press of the left or right cursor key changes the level up or down by 1dB. While the level is being adjusted, the noise signal remains directed to that channel and it will only move to the next channel after the adjustment has been completed.

## DELAY SETUP

CENTRE

RIGHT SURROUND

LEFT SURROUND

**DELAY SETUP.** This is used to set the delay of the centre, right surround and left surround speakers. SEE PAGE 21 for more information about setting the delays.

The centre channel can be adjusted between 0 and 5mS.  
The surround channels can be adjusted between 0 and 15mS.

# SPEAKER & SOURCE SETUP

## SPEAKER SETUP

The HTP needs to know the size of the speakers being used in the system. The size is either large or small. A large speaker is one that can handle the full low scale frequencies. (bass) Any bass signal that has been redirected away from a small speaker will be added to the LFE channel and reproduced in the subwoofer. If there is no sub woofer the LFE and the redirected signals (if there are any) will be added to the main front speakers.

### MAIN SPEAKERS

The main speakers can be set to either small or large.

### CENTRE SPEAKERS

The centre speakers can be set to either small, large or no speaker.

### SURROUND SPEAKERS

The surround speakers can be set to either small, large or no speakers.

### SUB WOOFER

The options available for the subwoofer is yes or no

### SUB WOOFER FREQ.

You can set the subwoofer crossover frequency between 40Hz to 140Hz. The crossover frequency defines the frequency below which the low frequency signal does not go to small speakers, but is redirected to large speakers and/or a subwoofer

### BASS MIX

Bass Mix mode can be set to on or off. When it is on bass signals are sent both to the "Large" loudspeakers and to the subwoofer channel. This allows more bass volume, provided large main loudspeakers are used. If set to off all the bass signals are sent to the subwoofer only.

## SOURCE SETUP

Source setup allows you to configure the 8 inputs for your personal taste.

### SOURCE

Source, is the number of the input i.e. input 3,4 etc

### TITLE

Change the title of the input to meet your own requirements. Once this sub menu has been selected use the left and right arrow keys (or push the volume/control knob) to select the characters to be changed. Then use the up/down keys (or turn the volume/control knob) to change the characters.

### ANALOGUE SENSE

Different analogue sources have large variations in output voltage. The analogue input can be adjusted to help take account of these variations. Select +3dB for sources that are too quiet, and either -3 or -6dB for sources that are too loud.

# DISPLAY and TRIGGER SETUP

DISPLAY SETUP
TV SYSTEM
SUPERIMPOSE
TEMPORARY DISPLAY
VIDEO FORMAT
OSD OUTPUT
OSD STYLE

Display setup allows you to set the parameters for the video section of the HTP

Use this sub-menu to select the TV operating system. This will be either PAL or NTSC. Many modern TVs will accept either format without problems.

When using the OSD, you can choose whether you want to have the OSD information only, on the screen, or have it displayed superimposed on the picture. To have OSD only, set superimpose to off. To have OSD displayed superimposed on the picture, set superimpose to on.

The temporary display is the information that appears on the screen when you first turn on or change input channels. This can be set to full, simple or off. Full will display all the audio and video information, simple will just indicate the selected channel and off disables the function.

Normally set to auto. In this mode the HTP will automatically detect either S-Video or composite video inputs. If preferred this can be set specifically for S-Video or composite video.

Normally set to both. The OSD information can be sent to either, the composite outputs, the SVideo outputs, both, or off. If you accidentally turn off the OSD you can select the display sub-menu using the front panel display to turn it back on.

You can select different colours for the OSD. This only applies if superimpose is turned off. Scroll between numbers 1 to 30 to see the different colours.

TRIGGER SETUP
TRIGGER 1 SENSE
POLARITY
DELAY
DURATION
TRIGGER 2 SENSE

Used to set the operating parameters of the triggers.

Sense sets the condition that will activate the trigger, this can be set to power on (i.e. when the unit is switched on from standby), it can also be set to activate when a particular input is selected or when the front panel display is dimmed.

Polarity sets the polarity of the trigger. When set to posit. the trigger outputs a positive voltage when activated. It then returns to 0V when deactivated. When set to negat. the HTP outputs 0V when the trigger is activated and returns to positive voltage when deactivated.

Delay sets the time delay between the trigger circuit being activated and the voltage actually changing on the output socket. This can be set between no delay up to 3 minutes.

Duration sets how long the trigger stays set. The duration can be set between 10mS up to 3 minutes in various steps or infinity, (i.e. it stays activated until the sense condition changes).

Please Note, All the settings for TRIGGER 2 are the same as for TRIGGER 1.

# MUSIC MODES

SIGNAL TYPE	MODE	PROCESSING	OUTPUT FROM SPEAKER
Analogue signal	Stereo	Stereo	L,R
	Mono	Mono	C
	Pro Logic	Dolby Pro Logic	L, R,C, LS, RS
	Music Modes: (Natural, Concert, Club and Party)	Music Mode	L, R, C, LS, RS
Dolby Digital 2.0	Stereo	Stereo	L,R
	Mono	Not applicable	Not applicable
	Pro Logic	Dolby Pro Logic	L, R,C, LS, RS
	Music Modes: (Natural, Concert, Club and Party)	Not applicable	Not applicable
PCM	Stereo	Stereo	L,R
	Mono	Mono	C
	Pro Logic	Dolby Pro Logic	L, R,C, LS, RS
	Music Modes: (Natural, Concert, Club and Party)	Music Mode	L, R, C, LS, RS

Dolby Digital (excluding 2.0)	Stereo	Not applicable	Not applicable
	Mono	Not applicable	Not applicable
	Pro Logic	Not applicable	Not applicable
	Music Modes: (Natural, Concert, Club and Party)	Not applicable	Not applicable
DTS 3/2	Stereo	Not applicable	Not applicable
	Mono	Not applicable	Not applicable
	Pro Logic	Not applicable	Not applicable
	Music Modes: (Natural, Concert, Club and Party)	Not applicable	Not applicable

The chart above shows the different types of signal processing that is available to the different signal types. As you can see none of the different types of processing are applicable to a Dolby Digital encoded signal (other than Dolby Digital 2.0) or a DTS 3/2 encoded signal.

# DELAY SETUP

## DELAY SETUP

This is used to compensate for differing distances from the listening position of the various speakers. Ideally your centre speaker and your surround speakers will be closer to your listening position than the main left and right speakers. You can now adjust the delay to fine tune the system so that the sound from each speaker is heard at exactly the right time at the listening position.

The delay is calibrated in milli-seconds (mS) and is adjustable in 1mS steps. The centre channel can be adjusted over the range 0 - 5mS and the surround channels over the range 0 - 15mS.

To convert the following distance measurements into mS use this rule:-

1metre= 3mS, or 1foot = 1mS

### CENTRE DELAY:

Measure the distance from the listening position to the main left and right speakers. (eg. 5meters) Now measure the distance from the listening position to the centre speaker (eg. 4 meters). Subtract one from the other (5-4=1) resulting with 1metre difference. The centre delay should therefore be set for 3mS.

Note: If the distance to the centre speaker is greater than the distance to the main left and right speakers then set the delay to zero or move the speakers so that the centre is nearer to the listening position.

### L & R SURROUND DELAY:

Remembering the distance measured previously from the listening position to the main left and right speakers, (5meters), now measure the distance from the listening position to the right surround speaker (eg. 2meters). Subtract one from the other (5-2=3) resulting with 3metre difference. The Right Surround delay should therefore be set to 9mS.

Repeat this procedure for the left surround speaker.

Note: If the distance to either of the surround speakers is greater than the distance to the main left and right speakers then set it's delay to zero or move the surround speakers so that they are nearer to the listening position.

# MENUS AND SETTING OPTIONS

*MAIN MENU*

	<u>OPTIONS</u>	<u>STEPS OF</u>
MAIN MENU		
TONE CONTROLS	Ok	None
LEVEL SETUP	Ok	None
DELAY SETUP	Ok	None
SPEAKER SETUP	Ok	None
SOURCE SETUP	Ok	None
DISPLAY SETUP	Ok	None
TRIGGER SETUP	Ok	None
EXIT	Ok	None

*TONE CONTROLS*

	<u>OPTIONS</u>	<u>STEPS OF</u>
TONE CONTROLS		
BASS -----0-----	-12 - +12 dB	1dB
TREBLE -----0-----	-12 - +12 dB	1dB
EXIT	Ok	

*LEVEL SETUP*

	<u>OPTIONS</u>	<u>STEPS OF</u>
LEVEL SETUP		
LEFT	-10 - +15dB	1dB
CENTRE	-10 - +15dB	1dB
RIGHT	-10 - +15dB	1dB
RIGHT SURROUND	-10 - +15dB	1dB
LEFT SURROUND	-10 - +15dB	1dB
SUB WOOFER	-10 - +15dB	1dB
LFE CHANNEL	-10 - 0dB	1dB
TEST SIGNAL	On, Off	
EXIT	Ok	

*DELAY SETUP*

	<u>OPTIONS</u>	<u>STEPS OF</u>
DELAY SETUP		
CENTRE	0 -5 mS	1mS
RIGHT SURROUND	0 -15 mS	1mS
LEFT SURROUND	0 -15 mS	1mS
EXIT	Ok	

# MENUS AND SETTING OPTIONS

## *SPEAKER SETUP*

<u>SPEAKER SETUP</u>	<u>OPTIONS</u>	<u>STEPS OF</u>
MAIN SPEAKERS CENTRE SPEAKERS SURROUND SPEAKERS SUB WOOFER  SUB WOOFER FREQ. BASS MIX  EXIT	Small, Large, None Small, Large, None Small, Large, None Yes, No  40 - 140Hz Yes, No  Ok	10Hz

## *SOURCE SETUP*

<u>SOURCE SETUP</u>	<u>OPTIONS</u>	<u>STEPS OF</u>
SOURCE TITLE ANALOGUE SENSE  EXIT	1 - 8 7 characters long -6 - +3dB  Ok	3dB

## *DISPLAY SETUP*

<u>DISPLAY SETUP</u>	<u>OPTIONS</u>	<u>STEPS OF</u>
TV SYSTEM SUPERIMPOSE TEMPORARY DISPLAY VIDEO FORMAT OSD OUTPUT OSD STYLE  EXIT	PAL/NTSC Yes, No Off, Simple, Full Auto, SVideo, Compos, Compos, Svideo, Both, Off 1 - 30  Ok	1

## *TRIGGER SETUP*

<u>TRIGGER SETUP</u>	<u>OPTIONS</u>	<u>STEPS OF</u>
TRIGGER 1 SENSE  POLARITY DELAY DURATION  TRIGGER 2 SENSE  POLARITY DELAY DURATION  EXIT	Source 1 to 8, Power on, Display Dim, Posit, Negat No, 1sec to 3 mins 10mS to infin  Source 1 to 8, Power on, Display Dim, Posit, Negat No, 1sec to 3 mins 10mS to infin  Ok	Non Linear Non Linear  Non Linear Non Linear

# TROUBLESHOOTING

Basic troubleshooting of the HTP is similar to troubleshooting of any other electrical or electronic equipment. Always check the most obvious possible causes first. In our experience most problems are caused by incorrect, faulty or not properly connected interconnects. Please check all these first. To give you a few other ideas of what to look for, please check the following:-

## **Orange Standby LED does not light.**

(There is a short delay of a few seconds after the mains switch (on back panel) has been turned on before the orange LED lights)

Power cord disconnected,  
Mains switch switched off,  
HTP requires resetting,

Re-connect  
Switch on  
Switch off the mains, wait 1 minute and then switch back on

## **Blue on LED does not light.**

Unit not turned on  
HTP requires resetting,

Switch on using standby button  
Switch off the mains, wait 1 minute and then switch back on

## **No sound**

HTP is muted  
Wrong input selected  
Input selected has no signal  
Power amps not connected  
Power amps not switched on

Switch off mute  
Select the correct input  
Put a disc in DVD/CD player, turn on source device  
Connect power amps to HTP audio output sockets  
Switch on power amps

## **No Video**

Wrong input selected  
Input selected has no signal  
Display device (TV) not connected  
Display device not switched on

Select the correct input  
Put a disc in DVD player, turn on source device  
Connect TV to the correct HTP video output  
Switch on TV

## **No colour**

Source device is composite video  
Display device is S-Video

Either change display device to composite or change source device to S-Video

## **Poor Picture quality**

Incorrect input type selected on display device.

Select correct input on display device.

## **No OSD**

OSD turned off in set-up menu  
TV connected to wrong socket

Turn on using display setup menu look at front panel display to select the correct menu and sub-menu.  
Ensure the display device is connected to the correct output socket i.e. Composite video with OSD or S-Video with OSD.

## **OSD not steady on screen**

PAL/NTSC not correctly set

Use the setting in the display setup menu and TV system sub-menu to select the correct TV system.

## **No Status information displayed**

Status turned off in set-up menu

Turn on using display setup menu, and temporary display sub-menu.

## **Remote control does not function correctly**

Operating range of remote control has reduced range or does not work

Change batteries, or remote control not pointed at HTP front panel display.

If none of these actions effect a cure, please contact your dealer, or an authorised Musical Fidelity service agent. Remember, never open the case of the HTP Home Theatre Processor yourself, as this will invalidate the guarantee.

# INPUT/OUTPUT CONNECTIONS

## *HTP*

### *Home Theatre Processor*

<u>Audio analog inputs</u>	8 RCA (Line level), 1 tape loop
<u>Audio analog outputs</u>	6 channels (left right, left surround, right surround, centre channel and subwoofer) 2 tape outputs
<u>Audio digital inputs</u>	
Coaxial digital	8
Optical digital	5
<u>Audio digital outputs</u>	
Coaxial digital	1
Optical digital	1
<u>Video inputs</u>	
Composite	4
SVideo	4
<u>Video outputs</u>	
Composite	2 (1 with OSD 1 without OSD)
SVideo	2 (1 with OSD 1 without OSD)
<u>Trigger outputs</u>	4 (2+2)
<u>Mains Inlet</u>	3 pin IEC connector

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

# SPECIFICATIONS

## HTP

### Home Theatre Processor

#### AUDIO SECTION

THD plus noise typically	< 0.008% 20Hz - 20KHz 'A' weighted
Frequency response	20Hz - 20kHz +0dB -0.9dB
Sensitivity (for 1V RMS output)	Line 220mV
Analogue Input impedance	10K
Tape input impedance	50K
Channel separation	100dB 20Hz - 20KHz
Output impedance (all analogue outputs)	50R
S/N ratio (ref 1V RMS)	-85dB 'A' weighted
Maximum output voltage	10V rms 20Hz - 20KHz

#### VIDEO SECTION

Video input impedance (Composite RCA)	75R
Video input impedance (SVideo)	Y = 75R C = 75R
Video output impedance (Composite RCA)	75R
Video output impedance (SVideo)	Y = 75R C = 75R
TV Systems	PAL or NTSC

#### TRIGGER OUTPUTS

Voltage	+5V or +12V (selected by switch on back panel)
Max current	+5V 50mA
	+12V 120mA
Dimensions	440 x 95 x 400mm (W x H x D) Height includes feet, depth includes terminals
Weight	13 kg (un-boxed)
Power requirements	100/115/230V AC 50/60Hz (Factory preset)
Power consumption	40 watts (maximum)
Standard accessories	Remote control handset IEC type mains lead 4 x batteries (AAA, SUM-3, CR6)



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