

Welcome

Congratulations on the purchase of your new Hymn Technology HT-400 Hymnal Plus. You now have immediate access to thousands of hymns, worship songs and incidental tunes without the need for any musical or technical knowledge.

Repertoire

- Choose from the onboard **Library** of thousands of tunes (expandable)
- Play user-supplied standard **MIDI** files⁺
- Play user-supplied **mp3** compressed audio files⁺
- Display user-supplied **PDF** files to a compatible projector/monitor screen⁺

Index

- Select tunes directly from the entire onboard **Library** or choose a favourite hymn book from the **Book Index** list (expandable) and enter familiar hymn numbers.

Search

- Look up tunes in the **Library** by first line or tune name using the onboard search function.

Customise to suit your congregation

- Change the tempo (speed)
- Change the key (pitch)
- Change the number of verses
- Change the length of the pause between verses (break)

Orchestrate

- Choose from hundreds of high-quality onboard sounds, or just select one of the many professionally orchestrated preset musical Styles.

Organise

- Select a tune, customise it, orchestrate it and then add it to a Playlist ahead of time, ready for the service.
- Playlists can hold any number of **Library** tunes, MIDI, mp3 and PDF files.^{**}
- Store as many different Playlists as you like⁺ – you can even name them for later identification.

⁺Using the SD memory card

^{**}Limited only by available memory

In some instances, the arrangement of a tune may not exactly match the version contained in your hymn book. The HT-400 uses a core of over 2750 recordings (actual number varies by region) to cover many others. Consequently, tunes whose arrangements differ only slightly may still be referenced to one recording. **Copying or broadcast transmission of music contained in the HT-400 is strictly prohibited.** The illustrations and LCD screenshots shown in this manual are intended as a guide only and may differ from those in your unit.

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1. How to use this guide

Safety Precautions (inside front cover)

Take a moment to read through the safety precautions before you start.

Let's Play a Tune (page 5)

Play a tune immediately – after all, that is what the HT-400 is designed to do!

Setting Up (page 6)

Follow the instructions to set up your HT-400 and connect external equipment.

Basics (page 10)

This section covers the essentials of using the HT-400, from selecting **Library** tunes to changing the sound.

Reference Section (page 14)

Here's where you can find out how to really get the best out of the HT-400. Divided into individual topics, the Reference Section covers all aspects of use. Find out what each function of the HT-400 does and how to use it effectively.

Troubleshooting (page 42)







Answers to commonly asked questions. Please consult this section before calling for technical support.

Glossary of Terms (page 43)

Familiarity with a few basic terms will help as you explore the HT-400.

Icons

Throughout this guide, icons are used to highlight various points of information:

	Tips and hints		This feature is easier with, or requires, the optional qwerty typing keyboard
	Important information		This feature uses the video display output
	This feature is available from the supplied infrared remote-control handset		This feature uses the SD memory card

2. Let's play a tune

Now that you've got your HT-400, you are probably eager to play some music. Here's how to do it in just 5 steps:

1. Plug the AC power adaptor into the HT-400 (and a wall socket!) and turn the unit on. The on/off switch is on the back.
2. Wait until the home menu appears on the LCD screen, and then press the PLAY tab at the left of the screen.
3. Choose a familiar tune from the supplied HT-400 Master Index book, enter its number on the number pad and press the ACCEPT key.
4. The PLAY screen will appear. You are now ready to play the tune. If you want it to start with a musical introduction, press the INTRO key so that it changes to a check mark (✓).
5. Press the START key to play the music.

Press these on-screen keys to:

- VERSES +/- Alter the number of verses
- PITCH +/- Change the pitch (key)
- TEMPO +/- Change the tempo (speed)
- BREAK +/- Adjust the break (the pause between verses)
- RIT Add a *ritardando* (a gradual slowing of the speed) at the end of the last verse
- AMEN Add an Amen after the end of the last verse

To change the sound coming out, after selecting a tune press the STYLE tab at the left of the screen and choose another of the HT-400's many preset musical Styles (see **Section 8: Styles**). Once you have chosen another Style, press the ACCEPT key to apply it and return to the PLAY screen.



If you would like to play some more tunes immediately, skip straight to **Section 4: Getting Started** on page 11.

3. Setting up

LCD touch screen precautions

NEVER place the unit face down, unless on a soft cloth, to prevent scratching of the LCD touch screen.

Connecting the AC power adaptor



It is best to use the AC power adaptor whenever mains power is available. Use only the supplied AC power adaptor.

Connect the AC power adaptor to the DC IN connector on the HT-400.

Connect the mains lead (power cord) to the AC power adaptor.

Plug the mains lead (power cord) into a wall socket.



When connected, the AC power adaptor provides power for the HT-400 even if a battery pack is installed. The HT-400 is only ever powered by an installed battery pack when the AC power adaptor is disconnected.

Handling the SD memory card

The HT-400 is supplied with its SD memory card already inserted. For normal basic operation you will not need to remove it.

Removal

Ensure that the HT-400 is switched off. Push the edge of the card in slightly to release it. It will slide out slightly, allowing you to withdraw it fully.

Insertion

Ensure that the HT-400 is switched off. Check the SD card is oriented correctly and then push it gently all the way into the SD card slot on the left edge of the HT-400, making sure it latches in.

Installing the optional battery pack

An optional rechargeable NiMH (nickel metal hydride) battery pack is available for the HT-400, for use when it is not practical to plug in the AC power adaptor. To install or replace the battery pack, follow this procedure:

Remove the battery cover:

1. Ensure that the HT-400 is turned off and disconnected from the AC power adaptor.
2. Remove the battery cover (located on the bottom of the unit) by undoing its two screws. The screws are attached to the battery cover, so do not pull them out completely.

Connect the battery pack:

Push the battery connector plug onto the connector in the battery compartment. The connectors are designed so that they will only click together when correctly aligned. If they won't click together easily reverse one connector and try again. Excessive force is not required.

Insert the battery pack:

1. Lower the battery pack into the battery compartment.
2. Ensure the battery cables will not obstruct the battery cover.
3. Replace the battery cover and screw in its two screws.

Charging the optional battery pack

To charge an installed battery pack, simply connect the AC power adaptor as above (**Connecting the AC power adaptor**). Then whenever mains power is being supplied to the AC power adaptor the battery is being charged. There is no need to turn on the HT-400 itself. However, whenever the HT-400 is in use (powered by the AC power adaptor) background charging of an installed battery pack takes place.

The yellow charge LED on the front panel will flash slowly during normal use while the battery pack is being charged. The yellow charge LED will go out when the battery pack is fully charged. The HT-400 has built-in safety features to prevent over-charging and/or over-heating. If the battery pack is faulty and cannot be charged the yellow charge LED will flash rapidly.

The level of charge in the battery pack is displayed at the top right of the Status Bar. The battery level cannot be detected when the battery pack is first fitted - the HT-400 will assume it is empty. To calibrate the battery level display on the status bar, charge the battery completely (i.e. until the yellow charge LED stops flashing), leaving the HT-400 powered **on** throughout.

A new battery pack may initially take up to 4 hours to reach full charge and will require cycling (i.e. charging/depleting) several times before it reaches its optimum performance. A fully charged battery pack will provide several hours of music use at a moderate volume level. This will be reduced if higher volumes are used or increased if the internal speakers are turned off (see **Section 11: The options screen**).

Unless battery charging is required, always un-plug the AC power adaptor from both the HT-400 and the wall socket when not in use.



Battery low warning message

When running the HT-400 from the battery pack, inevitably the power in the pack will eventually become depleted. Connect the AC power adaptor as soon as possible to charge the battery pack.

Attaching the optional USB keyboard



Ensure that the HT-400 is turned off.

Locate the connector on the rear of the HT-400 labelled **USB A**.

Gently insert the keyboard's USB plug fully into the USB A connector. The plug will only go in one way up.

Excessive force is not required.

Turn on the HT-400.

Connecting headphones

Ensure that the HT-400 is turned off.

Locate the green headphone socket on the rear of the HT-400 (labelled **PHONES**).

Gently insert the headphone jack plug fully into the headphone socket.

Turn on the HT-400. Turn the volume down to zero.

Put on the headphones and then adjust the volume to a comfortable level.



Inserting the headphone jack plug does not automatically turn off the internal speakers. These are turned on and off in the **OPTIONS** screen (see **Section 11: The options screen**).

Connecting a microphone

Ensure that the HT-400 is turned off. Locate the black microphone socket on the rear of the HT-400 (labelled **MIC**).

Gently insert the microphone jack plug fully into the microphone socket.

Turn on the HT-400.

Open the **OPTIONS** screen and adjust the microphone volume to zero (see **Section 11: The options screen**).

Turn on the microphone input and adjust the microphone volume to a comfortable level.

Connecting external amplification

The HT-400 has small built-in speakers, designed for use when auditioning tunes and for portable use (carol singing etc). However, you will probably want to play the HT-400 through an external sound system.



The audio outputs on the back of the HT-400 are *pre-amp*, so to use these you will need an external amplifier **and** speaker(s). Sometimes these are built into one box, known as a *powered speaker*.

The HT-400 has two **line level** audio outputs on the back marked RIGHT (red) and LEFT/MONO (white). These take ¼" (6.35mm) jack plugs.

To connect the HT-400 to a mono sound system, connect the LEFT/MONO output only.

To connect it to a stereo sound system, connect both the RIGHT and LEFT/Mono outputs.

Make sure the input on the sound system is line level. You cannot connect the HT-400 directly to a microphone input on the sound system.

The HT-400 audio outputs automatically switch between unbalanced and balanced output, depending on whether unbalanced (TS) or balanced (TRS) jacks are plugged into it.



Unbalanced TS jack (**one** black ring below tip)



Balanced TRS jack (**two** black rings below tip)



Unbalanced vs balanced

An **unbalanced** connection is compatible with most sound systems and is usually fine for short cable runs.

If your sound system has dedicated line level **balanced** inputs available, a balanced connection is far less prone to interference and therefore preferable, especially for longer cable runs.

Whichever type of output is used, you **must** connect to the matching type of input on the sound system.

NEVER connect the HT-400 to any multi-purpose balanced input that has a phantom power facility (used for some types of microphone that require power). Applying phantom power to the HT-400 audio outputs could cause damage to the unit. Use dedicated line level balanced inputs ONLY.

1. Ensure that both the HT-400 and the external sound system are switched off.
2. Connect suitable audio cables from the audio output(s) on the back of the HT-400 to the sound system.
3. Make a note of where the volume control on the external sound system is usually set, and then turn it down to zero. Do not turn the external sound system on yet.
4. Turn on the HT-400. Turn its volume down to zero.
5. Turn on the external sound system and gradually increase its volume control until it is back to where it is normally set (in this manner any other items already connected to the external sound system, e.g. microphones, will still appear at their normal volume).
6. Adjust the volume of the HT-400 until a comfortable level is reached.



If you are unable to obtain any undistorted sound from the HT-400 through your external sound system, even at very low volumes, then you may have plugged the HT-400 into an unsuitable input on the sound system. The HT-400 is equipped with **line level** audio outputs which need **line level** inputs on any external sound system (these are the same as those used to connect a CD player). Microphone inputs are generally not suitable for connection of the HT-400, although often a DI (Direct Injection) box can be used to overcome this. Consult your sound equipment installer for further information.

Disconnecting external amplification

Always disconnect an external sound system in this order:

1. Turn the volume of the external sound system down to zero.
2. Turn off the external sound system.
3. Turn off the HT-400.
4. Disconnect the audio cables.

Connecting a projector or monitor screen



Video output on the HT-400 is provided via a DVI-I connector. This connector carries either digital (DVI) or analog (VGA) video, as per the video resolution selected in the Options screen (see **Section 11: The options screen**).

Ensure that the HT-400 is switched off.

Locate the video socket on the rear of the HT-400 (labelled **VIDEO**).

Connect a DVI video cable directly for digital DVI output.

Digital HDMI video output (video only) can be achieved by connecting a simple DVI to HDMI adaptor. Audio is **not** transmitted over this connection. Use the dedicated audio outputs on the back of the HT-400.

Analog VGA video output can be achieved by connecting a simple DVI-I to VGA adaptor.

Once the desired connection has been made, turn on the HT-400.

Open the OPTIONS screen, select the VIDEO section and check that:

- VIDEO ON is checked
- VIDEO RESOLUTION is set to match the resolution of your projector/monitor screen

If you want the HT-400 to attempt to adjust your files (lyrics, images etc) to fit the selected video resolution (or as near as is possible), check the SCALE SLIDES box.



Scaling only works effectively if the file being scaled is of the same aspect (width/height) ratio as the selected video resolution. Otherwise the resulting image cannot fill the screen.

Connecting the optional Psalm Player trigger

Ensure that the HT-400 is turned off.

Locate the blue psalm trigger socket on the rear of the HT-400 (labelled PSALM).

Gently insert the psalm trigger plug fully into the psalm socket.

Turn on the HT-400.

Connecting the HT-400 to a computer

Ensure that the HT-400 is turned off.

Locate the connector on the rear of the HT-400 labelled **USB B**.

Connect a USB A/USB B cable to any available USB A connector on the computer.

Gently insert the cable's USB B plug fully into the HT-400 USB B connector. The plug will only go in one way up.

Excessive force is not required.

Turn on the HT-400.

Mounting the HT-400

A set of four threaded mounting holes are provided on the bottom of the unit. These are compatible with standard 75mm VESA mounts, which are readily available online and from most flat-screen TV suppliers. The HT-400 mounting holes require M4 (4mm) machine screws, with a maximum thread depth of 6mm.



The HT-400 mounting holes are closed at the end, so attempting to insert machine screws longer than 6mm may well damage the plastic casework of the HT-400.

4. Getting started

Use of the touch screen

All features of the HT-400 are controlled from the touch screen, so you will be using it often. Observing the following precautions will help to prolong its life:

- Only ever touch the screen **lightly**, with a single finger (do not use a fingernail or any other hard object that may scratch the surface of the screen).
- Try to press the on-screen keys in the middle of the key. If the touch screen does not respond when a key is pressed, you probably pressed the key too far off-centre.
- If you need to hold a key down (e.g. to adjust the tempo), only hold it lightly. It is human nature to press harder when holding a key – resist the temptation!



If a key appears greyed out then that feature is not currently available, and the key will be inactive.

Turn the unit on

The power switch is located on the back of the unit. On power up, the red POWER LED on the front panel will light and the Hymnal Plus boot screen will appear. This will remain for a short time while the unit prepares itself for use. Then the HOME screen will appear. The unit is now ready for use.



boot screen

Tab Bar

The six tabs down the left side of the screen are permanently visible. They take you directly to each of the main functions of the HT-400. A tab is coloured green when it is active (selected).

Status Bar

The black strip across the top of the screen is called the Status Bar. It permanently displays a key to open the context-sensitive help for the current screen, a shortcut key to return to the Home screen, and the current master volume level. As relevant, it also displays confirmation of the connection of headphones, microphone, cables to an external sound system (including whether it is connected in mono or stereo) and display of the rechargeable battery* level. The battery level is displayed in orange while charging and in grey during battery-powered use (or red when a low battery state is reached).

* Battery pack optional



home screen



status bar

Master Volume

The Vol+ and Vol- keys at the bottom left of the screen are permanently visible. They control the master output volume of the HT-400. The current volume level (0-100) is always shown on the Status Bar at the top of the screen.

Navigating Lists

Whenever you are presented with a list that is too long to fit on the screen (e.g. the list of organ styles), the HT-400 employs scrolling. To scroll through the list, gently swipe your finger up or down the screen, on the area covered by the list. You can also use the up/down keys at the right of the list box to move through a long list in blocks.

Select a Hymn from the Library

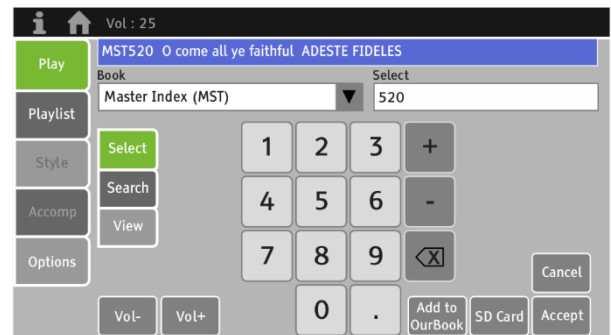
Press the PLAY tab at the left of the screen. The HYMN SELECT screen will appear.

Choose a hymn book

Tunes may be selected either from the Master Index (a list of all available tunes in the unit) or from one of the indexed hymn books. The currently selected index is shown near the top left of the HYMN SELECT screen, in the Book box.

To select a book, press the arrow at the right end of the Book box to open the list. The list of available books will appear.


Scroll through the list and select the desired book by tapping on it. The book will be selected, and the book list will close. Note that the book shown in the Book box is now the one just selected.



hymn select screen

Select a hymn



To select a hymn from the current index, press the relevant number keys. The selected numbers will appear in the Select box above the number pad. If you make a mistake, simply press the  CLEAR key and re-enter the number.



You can scroll through the hymns in the selected book by pressing the +/- keys.

When the desired hymn number has been entered, press the ACCEPT key. The PLAY screen will appear.

Search for a hymn



The HT-400 has a search facility built-in. Press the SEARCH sub-tab. The on-screen keyboard will appear.

Type in any part of either the first line or tune name/title. The HT-400 will find all matching hymns in the currently selected book (or the Master Index, if selected).

Now close the on-screen keyboard by pressing its ENT key. The search results are shown.

Scroll through the list and select the desired hymn by tapping on it, then press the ACCEPT key. The PLAY screen will appear.

If too many possible results are indicated, repeat the process, this time entering some more text to enable the HT-400 to narrow down the results.



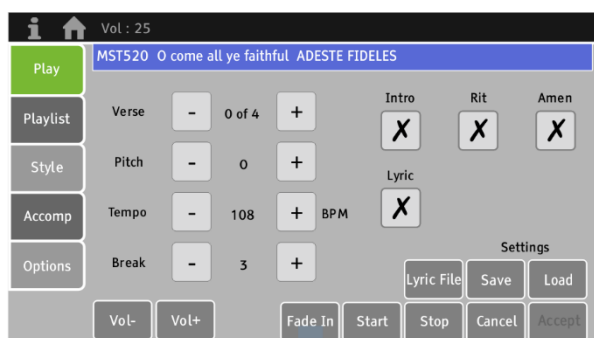
Entering more text helps target the search more accurately. The HT-400 searches for partial words as well as whole words, so just entering “bless” in the SEARCH box would call up all hymns that include “bless”, “blessed”, “blessing” etc. in either the first line or tune name.

Play a hymn

You are now ready to play the hymn. The HT-400 has automatically recalled the default settings for the chosen hymn:

- Pitch
- Tempo (speed)
- Break (the pause between verses)
- Number of verses

Any of these may be altered by simply pressing the relevant +/- keys before commencing playback.



play screen



Alterations may also be made during playback if desired, although changes to the pitch during playback are not recommended as the congregation may not be expecting it! However, if you do change the pitch during playback the HT-400 will attempt to make the change at the earliest musically appropriate moment, to avoid dissonance where possible. This takes a moment to calculate, so there may be a slight delay between pushing the key and the change being heard.

Introduction

To add an introduction for the hymn, press the INTRO key. Its cross (X) will change to a check mark (✓) when selected. The Introduction can be turned off by pressing the INTRO key again. The current verse number will display as 0 (zero) until playback reaches the final notes of the introduction (when it will change to 1). This can be used as a visual prompt for when to start singing.

Ritardando

Ritardando is the musical term for slowing down at the end of the last verse/chorus of the hymn. To add this effect, press the RIT key. Its cross (X) will change to a check mark (✓) when selected. The Ritardando can be turned off by pressing the RIT key again.

Amen

To add a simple Amen at the end of the hymn, press the AMEN key. Its cross (X) will change to a check mark (✓) when selected. The Amen can be turned off by pressing the AMEN key again.



The HT-400 is programmed to play a simple Amen when it is selected. Some plainsong hymns have a specific musical arrangement of their Amen, and that Amen is an integral part of the hymn. Where this can be identified as the case, the HT-400 will play the correct Amen as part of the hymn and there is no need to add the HT-400's normal Amen.

If using plainsong hymns, always check that the music plays as expected prior to using in a service.

Start playback

You can start playback in two ways:

1. The START key Starts playback normally.
2. The FADE IN key Starts playback silently and the volume fades up gently.

Pause playback

The START key becomes the PAUSE key when playback is started. To pause playback, press the PAUSE key. Press the same key again (START) to resume playback.

Stop playback

Playback will automatically stop when all the selected verses (and Amen if selected) have been played. Press the STOP key to halt playback at any other time.

Fade playback in or out

The FADE IN key becomes the FADE OUT key when playback is started. To stop playback by fading the sound out, press the FADE OUT key. The sound will gradually fade away, after which playback is automatically stopped.



The CANCEL and ACCEPT keys are how you move from one screen to another. To select a different hymn simply press the CANCEL key from the PLAY screen. Note that the CANCEL key is not available while a hymn is playing – you must halt playback by pressing the STOP key before you can move back to the HYMN SELECT screen.

Lyrics Check Box

When playing a hymn that has a lyrics PDF file linked to it, this key enables/disables the display of lyrics to an attached projector or monitor. Its cross (X) will change to a check mark (✓) when selected. The lyrics display can be turned off by pressing the LYRICS check box again.

Lyric File Button

Pressing this key will take you to the SD CARD screen, where you can select whichever of your PDF files you want to link to the currently selected hymn for display during playback (see **Section 10: User files**).

Settings Save/Load

Once you have altered the settings for the selected hymn to suit, you can take a snapshot of them for later recall. Simply press the SAVE key. If you then make further alterations to the settings, press the SAVE key again to overwrite your previous snapshot.

The next time you select that hymn, it will automatically come up with its default settings. To recall your personal settings, press the LOAD key. If no personal settings have yet been stored for the selected hymn, the LOAD key will be greyed out.

5. The remote-control handset

What is it for?

The infrared remote-control handset enables the HT-400 user to access many of the unit's features and functions from a distance of up to around 10 metres (30 feet). This can be very handy when the worship leader is also the HT-400 operator.



Like any infrared handset, you will need to be in direct line of sight of the HT-400, and to point the handset in its direction.

Infra-red devices can be adversely affected by bright fluorescent light or bright daylight. If this is a problem, shield the HT-400 from the source of the bright light.

What can I do with it?

The following functions are available from the handset:

Add an Introduction

Press the [INTRO] button to add the normal introduction when playback is started.

Start/Pause/Stop Playback

Press the [START] button to start, pause or resume playback. Press the [STOP] button to stop playback.

When displaying slides (**not** lyrics linked to a tune), [START] and [STOP] show or hide the slide display.

Adjust the Volume

Repeatedly press or hold the [VOLUME+] or [VOLUME-] button to increase or decrease the volume.

Select a Hymn Number

Enter the desired number on the number pad and then press the [OK] button in the middle of the handset.

Select a Style

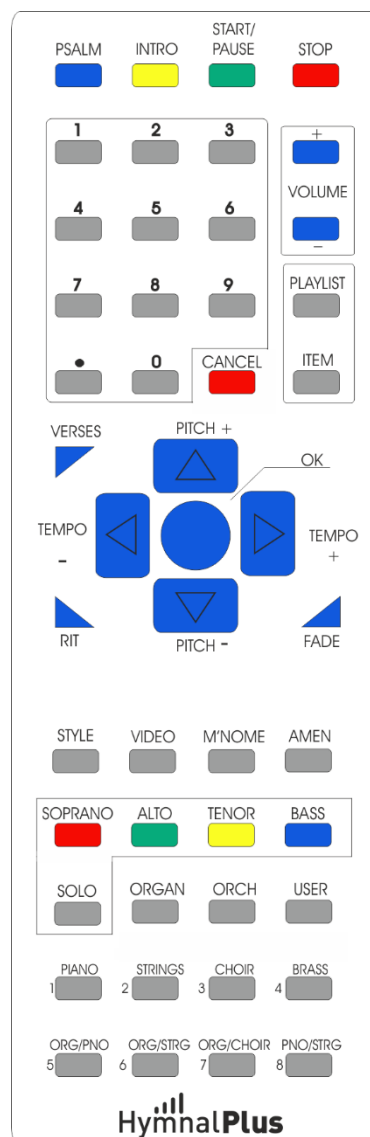
Press the [STYLE] button, enter the desired style number on the number pad and then press the [OK] button.

Select a Playlist

Press the [PLAYLIST] button, enter the desired Playlist number on the number pad and then press the [OK] button.

Select an Item in the Currently Selected Playlist

Press the [ITEM] button, enter the desired item number on the number pad (e.g. 2 for the 2nd item in a playlist, 4 for the 4th item etc) and then press the [OK] button.



Cancel

Cancels the selection just made, if pressed within a couple of seconds of making that selection (but before pressing the [OK] button).

Alter the Number of Verses

Press the [VERSES] button, enter the desired number of verses on the number pad and then press the [OK] button.

Add a Ritardando to the End of a Tune

Press the [RIT] button to turn on the RIT feature (automatically slows down the final few bars/measures of the last verse of a tune). Press again to turn the RIT feature off.

Fade Music In or Out

Press the [FADE] button to start playback of the music with a gentle fade in.

Press the [FADE] button **during** playback to stop the music with a gentle fade out.

Raise or Lower the Pitch

Press the [PITCH+] or [PITCH–] button once to raise or lower playback pitch by one step (semitone). Press repeatedly to move the pitch by more steps.

When displaying slides (**not** lyrics linked to a tune), [PITCH+] and [PITCH–] move the display to the previous/next page of the PDF file.

Alter the Tempo

Press the [TEMPO+] or [TEMPO–] button to increase/decrease playback speed.

Turn Video Output On/Off

Press the [VIDEO] button to enable/disable video output to an external projector/monitor screen.

Add a Metronome Click

Press the [MNAME] button to turn on a metronome click. Press again to turn it off.

Add an Amen

Press the [AMEN] button to turn the Amen feature on (adds a simple Amen at the end of the last verse of a tune). Press again to turn it off.

Psalm Playback Advance

Press the [PSALM] button to advance the playback of a non-metrical psalm chant, or other non-metrical items. This button does the same job as the optional Psalm Trigger and the Play screen orange Psalm key (see **Section 13: The Psalm Player**).

Modify the Soprano, Alto, Tenor and Bass parts

▪ Solo a Part

Press the relevant part button ([SOPRANO] [ALTO] [TENOR] [BASS]) followed by the [SOLO] button, in order to play that part on its own (solo). Any of the other parts may be re-introduced by pressing the relevant buttons. To revert to normal playback of all four parts, press the [SOLO] button on its own to turn off the Solo feature.

▪ Alter the Volume of a Part

Press the relevant part button ([SOPRANO] [ALTO] [TENOR] [BASS]) and then quickly press the [VOLUME+] or [VOLUME–] button to increase or decrease the volume of the selected part.

▪ Alter the Style (Sound) of a Part

Press the relevant part button ([SOPRANO] [ALTO] [TENOR] [BASS]) and then quickly press the [STYLE] button. Enter the desired style number on the number pad and then press the [OK] button.

The Orchestrator

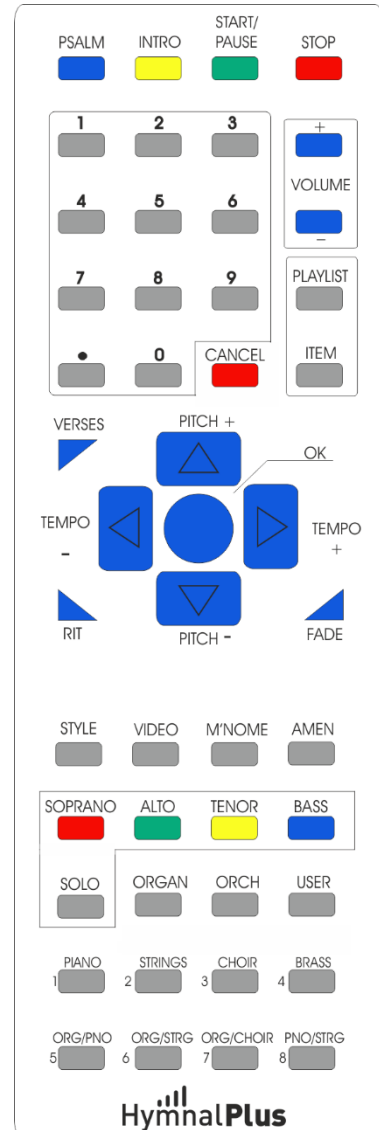
For convenience, 24 Styles can be selected very quickly from the remote control. These are divided into three groups of eight presets – Organ, Orchestral and User.

- Organ**
 To select one of the eight pipe organ presets, press the [ORGAN] button followed by one of the eight numbered buttons below it (**not** the number pad buttons). To change to another organ preset you don't need to press the [ORGAN] button again, just press another of the eight numbered buttons.
- Orchestral**
 To select one of the eight orchestral presets, press the [ORCH] button followed by one of the eight numbered buttons below it (**not** the number pad buttons). To change to another orchestral preset you don't need to press the [ORCH] button again, just press another of the eight numbered buttons.
- User**
 To select one of the eight user presets, press the [USER] button followed by one of the eight numbered buttons below it (**not** the number pad buttons). To change to another user preset you don't need to press the [USER] button again, just press another of the eight numbered buttons. See **Section 11: The options screen** for information on how to store user Styles for selection from the remote control.



The HT-400 has hundreds of Styles that you can use. The *Orchestrator* is purely a shortcut to 24 of them. To access the full range of Styles from the handset, see **Select a Style** above.

Styles may be changed during playback and the HT-400 will attempt to make the change at the earliest musically appropriate moment, to avoid dissonance where possible. This takes a moment to calculate, so there may be a slight delay between pushing the key and the change being heard.



6. The tune library

The HT-400 has thousands of tunes built-in, providing immediate access to a wealth of music. Known as the **Library**, this repertoire comprises three main types of tune:

- Traditional hymns
- Modern worship music
- Incidental music



A fourth category - Psalms and Canticles - is available if the *PSALM PLAYER* option is installed. See **Section 13: The Psalm Player**.

Traditional Hymns

Most hymn books (music edition) have at least two indexes at the back of the book – a **first line** index and a **tune** index. Why? All songs are made up of two components, the music and the lyrics. There is a convention with traditional hymns to give the music its own name in order that it may be used with many sets of lyrics, not just the ones for which it was originally written. For example, the hymn *Love divine all loves excelling* is commonly sung to no less than four different tunes – BLAENWERN, HYFRYDOL, LOVE DIVINE and WESTMINSTER. So, you can see that the well-known title of *Love divine all loves excelling* only accurately identifies the lyrics, not the tune to which it is sung.



For ease of recognition, the HT-400 always shows first lines in normal upper/lower case letters, while tune names always appear in UPPER CASE (capital) letters. All punctuation has been removed where possible to assist in simplifying searches.

Wherever possible the traditional hymns in the **Library** of tunes are cross-referenced by both first line and tune name. Consequently, searching the Master Index for the words *Love divine* will produce several results:

Love divine all loves excelling (BLAENWERN)
Love divine all loves excelling (HYFRYDOL)
Love divine all loves excelling (LOVE DIVINE)
Love divine all loves excelling (WESTMINSTER)



The HT-400 will display all commonly used tunes for any recognized first line. If you want to know which other tunes would fit to a set of lyrics, you will need to refer to the metrical index at the back of your hymn book (music edition) – if it has one. For an explanation of how metrical indexes work, see **Appendix iii: Metrical indexes**.

Modern Worship Music

The conventions of traditional hymn writing outlined above largely do not apply to modern worship music – the combination of music and lyrics is collectively known by one title. However, many modern worship songs consist of verses and a chorus section. In these instances, it is common for the song to be known by both its first line and a common title (usually the first few words of the chorus). For example, *Lord the light of your love* is commonly known as *SHINE JESUS SHINE*, the first few words of the chorus section. For speedy identification, the HT-400 stores both the first line and the common title wherever possible. The common title is shown as though it were a proper tune name:

Lord the light of your love (SHINE JESUS SHINE)

Incidental music

To provide music for a complete service, the HT-400 also plays a range of incidental music (wedding marches, voluntaries etc). For quick recall these are gathered into a “pretend” Book Index, called INCIDENTAL MUSIC, although they can also be selected from the Master Index. See **Section 7: Book indexes** for instructions on selecting a Book Index.



While every effort has been made in cross-referencing the Master Index, it should not be considered the ultimate guide to every hymn ever written. If you cannot find what you want when searching for a first line, find out whether the music has a tune name or common title. Searching for that may yield results.

Different versions of the same tune

(Please first read the note at the foot of page 1)

There are a number of tunes with the same name, where differences in the arrangement from book to book (or sometimes within a book) are so great as to have necessitated an additional recording. This will usually be for one or more of the following reasons:

- Melodic, harmonic, rhythmic or metrical differences
- Contemporary arrangements of traditional tunes
- Through-recorded tunes (see below) with differing numbers of verses

Identifying the tune you want to sing is easy if working in a Book Index, for the HT-400 will automatically call up the correct (or nearest) version for the selected hymn number in that particular book. However, when searching the Master Index (which calls up all different instances of each tune), you may be faced with a list of several from which to choose. Where possible an abbreviated note has been added after the tune name. In other instances where a short description of the differences is not practical, you will need to listen to each version.

Through-Recorded Tunes

Around 95% of the tunes in the HT-400's **Library** repeat the same music for each verse, and so the required number of verses can simply be entered using the relevant +/- keys. However, a small number of tunes have differences or irregularities from verse to verse. Rather than omit these tunes, in these instances the recording stored in the **Library** is of the whole performance (i.e. all the verses recorded as one item) and the default number of verses will be shown as 1. **With this setting all verses of the tune will be played.**

For these tunes (which we identify as *through-recorded*) it is not possible to modify the number of verses to be played. Increasing the number of verses setting will result in the whole recording (i.e. all the verses) being played more than once. Similarly, the break between verses cannot be altered.

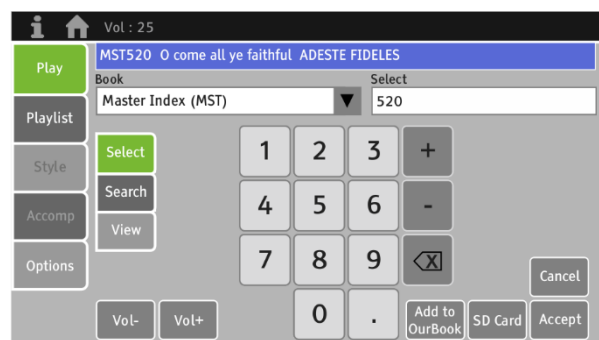
If you select a through-recorded tune, the default number of verses will be shown as 1.

7. Book indexes

The built-in **Library** provides immediate access to thousands of tunes. For ease of use a range of Book Indexes is included.

What is a Book Index?

A Book Index conveniently links relevant tunes from the built-in **Library** to a particular hymn book. After selecting a Book Index, you can call up hymns by their familiar hymn numbers. This will automatically recall the correct hymn, with the same pitch and number of verses as required by that hymn in that book.



hymn select screen

Selecting a Book Index

Tunes may be selected either from the Master Index (a list of all available tunes in the unit) or from one of the indexed hymn books. The currently selected index is shown near the top left of the HYMN SELECT screen, in the Book box.

To select a book, press the arrow at the right end of the Book box to open the list. The list of available books will appear.

Scroll through the list and select the desired book by tapping on it. The book will be selected, and the book list will close. Note that the book shown in the Book box is now the one just selected. This setting will be remembered if the SD card is inserted.

Do I have to use a Book Index?

No. If you use a book not represented in the list of available books, simply select **Master Index (ALL)** from the list of available books (see **Selecting a Book Index** above). This gives you direct access to all the tunes in the complete **Library**. You may then search for first lines or tunes using the search facility, or by referring to the supplied Master Index book.

Alternate tunes

The music edition of a hymn book may well show more than one tune for a particular hymn. These are normally identified by Roman numerals (i, ii, iii etc) to indicate each variation. So, for example, if hymn number 105 in a book were shown with three possible tunes they would be marked as 105(i), 105(ii) and 105(iii).

Book indexes in the HT-400 include these variations wherever possible. Since there are no Roman numerals on the HYMN SELECT screen's number pad, the decimal point key (•) is used instead.

To select our examples, you would simply enter 105 (or 105.1) to get hymn 105(i), enter 105.2 to get hymn 105(ii), or enter 105.3 to get hymn 105(iii).

OurBook

What is OurBook?

OurBook is an empty book index where you can link your own numbering to any tunes in the Library. It is useful if you use a hymn book for which the HT-400 does not have an index, or if you have your own numbered collection of hymns.

Add hymns to OurBook

Press the PLAY tab at the left of the screen. The HYMN SELECT screen will appear.

Select a hymn (see **Section 4: Getting started: Select a Hymn from the Library**).

Press the ADD TO OURBOOK key. The on-screen keyboard will appear, with its number pad displayed.

Enter the hymn number you want to assign to the selected hymn in the *OurBook* index by pressing the relevant number keys.

Press the ENT key to store the number or close the on-screen keyboard by pressing its big round X button (not the X letter key) to cancel the operation.

If the selected OurBook number is already allocated to a hymn, proceeding will over-write the stored hymn with the currently selected one and a warning message will appear.

Repeat this procedure for each hymn you want to add to your *OurBook* index.

Using OurBook

The *OurBook* index is treated just like any other book index in the HT-400. Once you have added one or more hymns to it, you can select it from the Book list and then select hymn numbers as per your own hymn numbering (**See Section 4: Getting Started: Select a Hymn from the Library**).



The OurBook index is stored on the SD memory card. It is encrypted but will work in any HT-400. Hence an OurBook index can be shared with other HT-400 users.

8. Styles

What is a Style?

A Style is a preset sound (instrument), or combination of sounds, used to play any of the Library tunes. The HT-400 offers a range of nearly 200 musical instrument sounds. These include pipe and electronic organs, percussive instruments such as piano, electric piano and vibraphone, and a large selection of brass, woodwind, string, synthesizer and ethnic instrumental sounds. The purpose of offering such a huge range of sounds is to enable the user to “orchestrate” the playback of a chosen **Library** tune in any musical idiom they wish.

A Style may be a simple instrumental sound such as organ or piano, or it may be a combination of instruments each playing a different part such as a string quartet or a brass band.

An appropriate drum rhythm backing can also be added to any Style.

Selecting a Style

Press the STYLES tab and the STYLE SELECT screen will appear.

There are five categories of Style:

- Organ
- Orchestral (Orch)
- Combination (Combi)
- Rhythmic (Rhythm)
- User

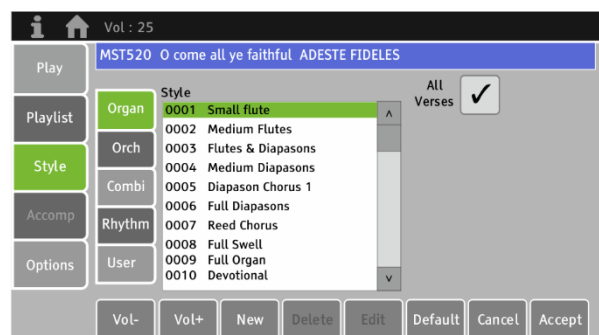
All Styles except those in the User category are factory set and cannot be altered.

Press the sub-tab for the desired category of Style (Organ, Orchestral, Combi etc).

Scroll through the list and select the desired Style by tapping on it.

To apply the Style, press the ACCEPT key.

To leave this screen without making any changes, press the CANCEL key.



style select screen (basic)

Preset Organ Styles

There are many pipe organ Styles from which to choose. They range from simple, quiet, one-stop registrations to full organ registrations with mixtures and reeds. You don't need to know anything about pipe organs to use them – try them out and find your favourites.

The first eight preset organ Styles can also be accessed from the remote-control handset by pressing the [ORGAN] button followed by one of the eight numbered buttons below it (**not** the number pad buttons).

To change to another organ preset you don't need to press the [ORGAN] button again, just press another of the eight numbered buttons.

Use this feature for changing sound manually from verse to verse.

These eight presets increase in complexity and volume as the number increases (1-8).



Preset Orchestral Styles

These are simple single-instrument Styles, covering all non-organ instruments.

Preset Combination Styles

These Styles call up useful combinations of instruments such as Orchestral Strings and Piano, Brass Band, String Quartet, Woodwind Ensemble etc.

Eight popular **Orchestral/Combination Styles** can be accessed from the remote-control handset by pressing the [ORCH] button followed by one of the eight numbered buttons below it (**not** the number pad buttons).



These eight Styles are as follows (as labelled on the handset):

- 1 Piano
- 2 Orchestral Strings
- 3 Choir
- 4 Brass Quartet
- 5 Pipe Organ & Piano
- 6 Pipe Organ & Orchestral Strings
- 7 Pipe Organ & Choir
- 8 Piano & Orchestral Strings

To change to another ORCH preset you don't need to press the [ORCH] button again, just press another of the eight numbered buttons.

Preset Rhythmic Styles

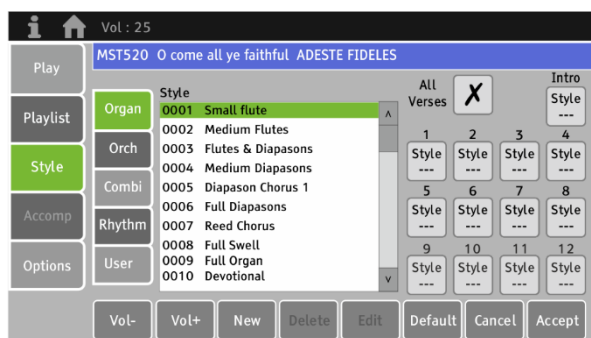
These are either single instrument or instrument combinations that incorporate a rhythmic backing. If you manually change from one Rhythmic Style to another Rhythmic Style during playback the HT-400 will attempt to maintain synchronisation of the music and the rhythmic backing. However, if the new Rhythmic Style utilises a different time signature this may not be possible.

All Verses Check Box

By default, whichever Style you select will play for all verses of the chosen hymn. As described above, you can change the Style from verse to verse manually. Alternatively, you can pre-select the Style for the introduction and each verse of the hymn. To enable this, uncheck the ALL VERSES check box. Its check mark (✓) will change to a cross (X) and a set of boxes will appear. A Style can be pre-selected for the introduction (if selected) and up to 12 verses, so this facility cannot be used for any hymn with more than 12 verses. The number of boxes displayed will reflect the currently selected number of verses (and introduction, if selected for playback).

To apply a Style to a verse (or the introduction), select the desired Style and then tap on the relevant box at the right side of the screen. The selected Style number will appear in that box.

To make whichever Style you select play for all verses of the chosen hymn, re-check the ALL VERSES check box. This feature cannot be applied to through-recorded tunes (see **Section 6: The tune library**).



style select screen (advanced)



When Styles are changed manually during playback the HT-400 will attempt to make the change at a musically appropriate moment, to avoid dissonance where possible. This takes a moment to calculate, so there may be a slight delay between pushing the key and the change being heard.

Setting the Default Style

The default Style is the one that's automatically called up whenever you select a Library tune. You can change this to any Style you choose.

Choose the desired style on the STYLE SELECT screen.

Press the DEFAULT key.

Press the Accept key.

The Accomp Tab

The Acomp (Accompaniment) Tab is where you can temporarily add rhythmic elements to playback, e.g. a simple metronome tick or a drum rhythm.

Press the ACCOMP tab at the left of the screen. The ACCOMP SELECT screen will open.

Metronome

To enable the metronome, check the METRONOME check box. Its cross (X) will change to a check mark (✓). Press it again to disable the metronome.

Use the Volume +/- keys on the ACCOMP SELECT screen to alter the volume of the metronome.

Press the Accept key to apply the metronome, or the Cancel key to cancel the operation.

Drum Rhythm

To add a drum rhythm, swipe up or down on the rhythm list to scroll through the list. Use the up and down arrow keys to the right of the list to move up and down in blocks.

Select the desired rhythm by tapping on it.

Use the Volume +/- keys on the ACCOMP SELECT screen to alter the volume of the drum rhythm.

Press the Accept key to apply the rhythm, or the Cancel key to cancel the operation.

To stop a rhythm playing, select NONE at the top of the rhythm list and then press the Accept key.

User Styles

Although the HT-400 has many preset Styles, you can also put together orchestrations of your own and save them as user Styles for future use. You can approach this in two ways:

- Copy and then modify one of the preset Styles (NEW)
- Modify a user Style you saved previously (EDIT)

From the STYLE SELECT screen select the Style you want to work with. Press either the NEW or EDIT key, depending on whether you have selected a preset or user Style. The STYLE EDIT screen will appear.

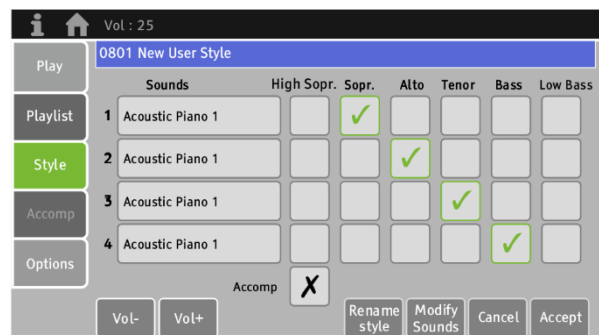
All Library tunes are recorded in four parts (unless originally written in fewer parts):

- Part 1 is the melody (SOPRANO)
- Parts 2 and 3 are the inner “harmony” parts (ALTO and TENOR in a traditional 4-part harmony tune)
- Part 4 is the bass (BASS)

For added flexibility and variety two optional additional parts are provided:

- Part 5 HIGH SOPRANO plays the melody an octave higher than the SOPRANO part
- Part 6 LOW BASS plays the bass notes an octave lower than the BASS part

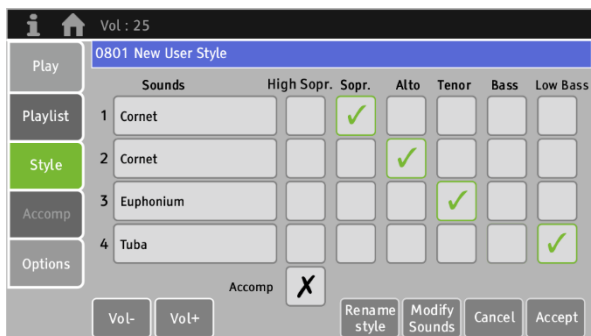
Looking at the STYLE EDIT screen, note that it is possible to use up to four different sound tracks simultaneously (down the left-hand side) and that each of these sound tracks can play one or more of the six different parts.



style edit screen

You will see from this example (the Brass Quartet preset Style) that:

- Sound 1 is set to Cornet, playing the melody (the Soprano part)
- Sound 2 is also set to Cornet, playing the Alto part
- Sound 3 is set to Euphonium, playing the Tenor part
- Sound 4 is set to Tuba, playing the Low Bass part



style edit screen showing brass quartet style

Selecting Parts

Theoretically it is possible to choose 4 different sound tracks and have each of them play all 6 parts. In practice this is unlikely to produce a very musical result. For example, it is probable that a bass guitar chosen for Sound 4 would only be used to play the Bass or Low Bass part. Similarly, a solo clarinet selected in Sound 1 to play the melody would only need the Soprano part selected.

Ensemble sounds (e.g. Orchestral Strings) can be used effectively to play up to all six parts, but it is important to avoid duplication. Multiple sound tracks (with the same sound selected) playing the same parts uses up polyphony (the number of notes that can sound simultaneously) with no musical benefit.

To turn parts on/off, simply check or uncheck the relevant check boxes.

Selecting Sounds (Instruments)

To change the (instrument) of any of the four possible sound tracks in a Style, either press the appropriate SOUND key or the MODIFY SOUNDS key. The STYLE PARAMETERS screen will appear. You can change which sound you are editing by selecting one of the four sub-tabs (Sound1, Sound 2, Sound 3, Sound 4) near the left of the screen.

To select a sound, press the arrow at the right end of the Sound box to open the list. The list of available sounds will appear.

Scroll through the list and select the desired sound by tapping on it. The sound will be selected, and the Sound list will close. Note that the sound shown in the Sound box is now the one just selected.

You can also change several attributes (parameters) of a sound, by simply pressing the relevant +/- keys:

- Volume (relative to the other sounds in that Style)
- Chorus (a gentle thickening of the sound, which also adds slight movement)
- Pan (the sound's position, left to right, in the stereo spectrum)

When you have finished editing the sounds press the ACCEPT key to update the STYLE EDIT screen accordingly or press the CANCEL key to abandon your changes. The STYLE EDIT screen will re-appear.

Adding a Drum Rhythm

A drum rhythm can be stored as part of a User Style.

From the STYLE EDIT screen, make sure the Accomp check box is checked. The Accomp Tab at the left of the screen can now be selected. Now choose a drum rhythm (see **The Accomp Tab** above).

When you have finished selecting a drum rhythm press the ACCEPT key or press the CANCEL key to abandon your changes. The STYLE EDIT screen will re-appear.

Saving a User Style

All new User Styles are automatically assigned a style number in the USER style category (Style numbers 801 – 999). This is shown at the top of the STYLE EDIT screen. Press the ACCEPT key on the STYLE EDIT screen to save the User Style or press the CANCEL key to cancel the operation.

Renaming a User Style



From the STYLE SELECT screen select the User Style you want to rename. Press the EDIT key. The STYLE EDIT screen will appear. Press the RENAME STYLE key. The on-screen keyboard will appear. Delete the current Style name by pressing the backspace (BS) key repeatedly, then type in the new name. Press the ACCEPT key to confirm the new Style name or press the CANCEL key to cancel the operation. Now save the User Style (see above).

Deleting a User Style

From the STYLE SELECT screen press the USER category sub-tab. Select the Style to be deleted and then press the DELETE key. To prevent accidental erasure, a pop-up will ask you to confirm or cancel this action.

9. Playlists

What is a Playlist?

A Playlist is a memory facility that allows a series of items (for example all the music for a complete service) to be stored in advance, and then played back when required. Personal settings such as tempo, pitch, style, and number of verses can be stored for each individual item in a Playlist.

Up to 999 Playlists can be created, stored, copied, edited and played back at any time. This means that a service which may be very similar from year to year (e.g. Christmas Eve, Harvest Festival) can be created and used this year, but then dusted off and brought out again next year - making any changes as desired at the time.

Why use the Playlist feature?

By auditioning, modifying and storing the items beforehand it is possible to minimise the button pressing required during the service – performance is reduced to simply pressing the PLAY key when each consecutive item is required to start. This reduces the possibility of error and enables the HT-400 operator (who may often also be the person leading worship) to concentrate more on the service itself.

Create a new Playlist

Press the PLAYLIST tab at the left of the screen. The PLAYLIST SELECT screen will appear, displaying a numbered list of all currently stored Playlists.



Don't worry if no Playlists are shown. That just means that none have been created yet!

Press the NEW key to create a new Playlist. The PLAYLIST EDIT screen will appear with the Playlist number you have just created shown at the top. Every Playlist you ever create will automatically be allocated a unique number. However, if you delete all Playlists the numbering will start at number 1 again.

Add items to a new Playlist

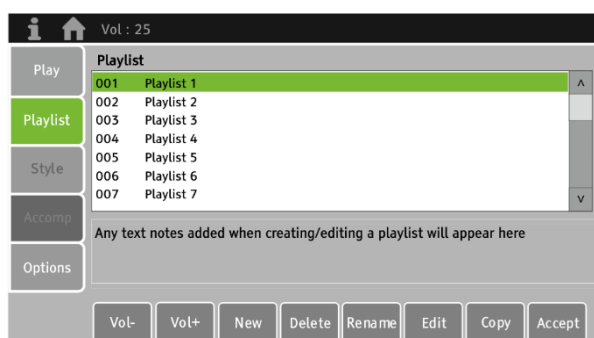
You can now go ahead and start to put tunes into the new Playlist.

Press the ADD key. The HYMN SELECT screen will appear. Choose the desired tune (see **Section 4: Getting started**). Press the ACCEPT key. The PLAYLIST CONTROL screen will appear.

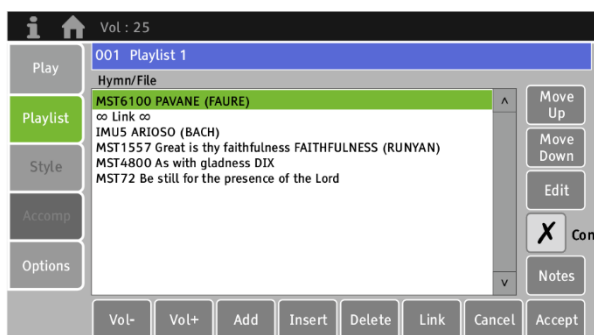
Make any changes to the default settings (number of verses, pitch, tempo etc.) and select any other options you require such as Intro and Style. You can audition (listen to) the hymn at this stage by pressing the PLAY key.

Volume Offset

If you want this tune to play more loudly or quietly relative to other items in this Playlist (e.g. for music before or after a service), adjust the Volume Offset parameter to suit. Negative values will reduce the master volume, while positive values will increase it. Note that the master volume displayed on the status bar does not reflect this temporary alteration.



playlist select screen



playlist edit screen



As well as **Library** tunes you can also select any midi, mp3 or PDF files that are stored on the SD memory card.

When you are satisfied the hymn will play and sound as desired, press the ACCEPT key. This action will add the tune (and all its settings) to the Playlist. The PLAYLIST EDIT screen will re-appear, showing the list of selected tunes.

Repeat the above (Add items to a new Playlist) to add further items to the Playlist.



playlist control screen



If you change your mind at any point before adding the hymn to the Playlist, simply press the CANCEL key instead of ACCEPT.

Don't worry if you store an item by mistake. It's easy to edit or delete an item – see **Edit a Playlist** below.

When all required items have been added to the Playlist, on the PLAYLIST EDIT screen press the ACCEPT key to save the new Playlist and return to the PLAYLIST SELECT screen. To abandon the entire Playlist, press the CANCEL key instead.



There is virtually no limit to the number of items you can store in a Playlist.

Perform a Playlist



Press the PLAYLIST tab at the left of the screen. The PLAYLIST SELECT screen will appear.

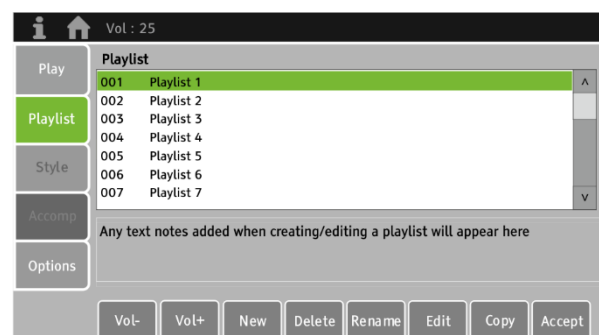
Scroll through the list and select the desired Playlist by tapping on it.

When the desired Playlist has been selected, press the ACCEPT key. The PLAYLIST CONTROL screen will appear, displaying the first item in the Playlist.

Press the START key (or FADE IN key, as required) to start playback. When the currently playing item has finished, the next item in the Playlist will appear in the PLAYLIST CONTROL screen. Press PLAY at the appropriate time.

To skip an item in a Playlist, (with playback stopped) press the NEXT key on the PLAY screen. Press the PREV (previous) key to return to a previous item.

Parameters (tempo, pitch etc) may be changed on this screen for an immediate alteration to playback, **but they will not be saved**. To save alterations to a Playlist open it in Edit mode (see below).



playlist select screen

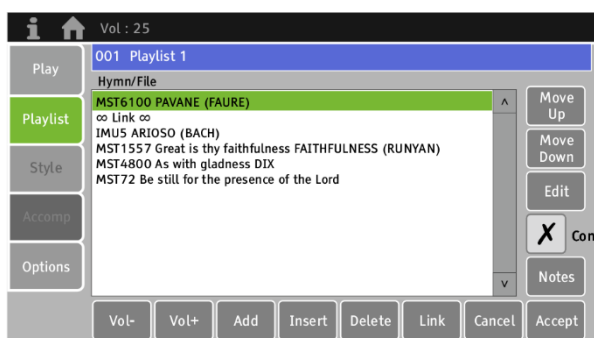


playlist control screen

Edit a Playlist

You can modify an existing Playlist in various ways:

- Add items to the end of a Playlist
- Insert additional items anywhere in a Playlist
- Delete items from a Playlist
- Change the play order of items in a Playlist
- Link items together
- Add text notes for your own reference
- Edit (change playback parameters of) any item in a Playlist



playlist edit screen

Press the PLAYLIST tab at the left of the screen. The PLAYLIST SELECT screen will appear, showing the list of all currently stored Playlists.

Scroll through the list and select the desired Playlist by tapping on it.

When the desired Playlist has been selected, press the EDIT key. The PLAYLIST EDIT screen will appear.

Add items to the end of a Playlist

The procedure is the same as for **Add items to a new Playlist** (see above).

Insert additional items anywhere in a Playlist

Swipe up or down on the list to scroll through the items in it.

INSERT adds a new item immediately **above** the selected item, so select the item just **below** the point where you want to insert an item. Press the INSERT key. The HYMN SELECT screen will appear. Proceed as described in **Add items to a new Playlist** (see above).

Delete items from a Playlist

Swipe up or down on the list to scroll through the items in it.

Select the desired item by tapping on it.

Press the DELETE key. A pop-up will ask you to confirm or cancel this action.

Change the play order of items in a Playlist

Swipe up or down on the list to scroll through the items in it.

Select the item you want to move by tapping on it.

Press either the MOVE UP or MOVE DOWN key (repeatedly if necessary) to move the item's position in the Playlist.

Edit the settings of items in a Playlist

Swipe up or down on the list to scroll through the items in it.

Select the item you want to edit by tapping on it.

Press the EDIT key. The PLAYLIST CONTROL screen will appear. Make the required changes and then press the ACCEPT key to confirm your changes or press the CANCEL key to abandon your changes. The PLAYLIST EDIT screen will re-appear.

Link items in a Playlist

Items that are linked will play one after the other without stopping, creating a medley of tunes.

Swipe up or down on the list to scroll through the items in it.

Select the position where you want to insert a Link and tap on that item. A Link is inserted immediately **above** the selected item, so select the item just **below** the point where you want to insert the Link.

Press the LINK key to insert the Link. A Link is shown in the list as ∞LINK∞.

Continuous Play

When a Playlist with Continuous Play enabled is performed, the entire Playlist will play repeatedly without stopping.

To turn on Continuous Play, tap the CONT check box. Its default cross (X) will change to a check mark (✓).

Playlist Notes

You can add text notes to a Playlist, which are then displayed on-screen when it is selected on the PLAYLIST SELECT screen.

Press the NOTES key. The on-screen keyboard will appear. Type in the required text. When you have finished adding notes press the ACCEPT key to confirm your changes or press the CANCEL key to abandon your changes. The on-screen keyboard will close.

When you have finished editing the Playlist, on the PLAYLIST EDIT screen press the ACCEPT key to save the modified Playlist and return to the PLAYLIST SELECT screen. To abandon all changes, press the CANCEL key instead.

Copy a Playlist

Press the PLAYLIST tab at the left of the screen. The PLAYLIST SELECT screen will appear, showing the list of all currently stored Playlists.

Swipe up or down on the Playlist list to scroll through the list.

Select the desired Playlist by tapping on it.

When the desired Playlist has been selected, press the COPY key.

A copy of the selected Playlist will be created, with a new unique number. The name of the Playlist is retained and appended with "COPY" for easy identification. You can rename the Playlist as required (see **Rename a Playlist** below).



You may well have regular services where the service music is always the same, but the hymns change. If so, you can save some work by copying that Playlist and then editing it to change the hymns.

Delete a Playlist

Press the PLAYLIST tab at the left of the screen. The PLAYLIST SELECT screen will appear, showing the list of all currently stored Playlists.

Swipe up or down on the Playlist list to scroll through the list.

Select the desired Playlist by tapping on it.

When the desired Playlist has been selected, press the DELETE key. To prevent accidental erasure, a pop-up will ask you to confirm or cancel this action.

Rename a Playlist

Whenever you create a new Playlist it will automatically be allocated a unique number and basic name. For convenience, you may want to rename some, or all, of your Playlists to make them more readily identifiable (e.g. Easter Sunday, Harvest Festival).



Whatever name is given to a Playlist, it will always retain its original identity number (shown to the left of its name). This number is used to select a Playlist from the remote-control handset.

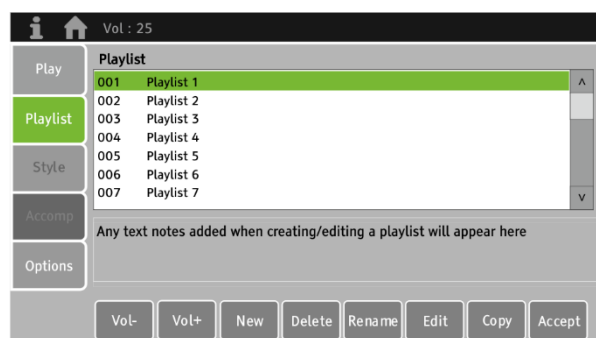
Press the PLAYLIST tab at the left of the screen. The PLAYLIST SELECT screen will appear, showing the list of all currently stored Playlists.

Swipe up or down on the Playlist list to scroll through the list.

Select the desired Playlist by tapping on it.

When the desired Playlist has been selected, press the RENAME key.

The on-screen keyboard will appear. Type in the required text. Press the ACCEPT key to save your changes or press the CANCEL key to abandon your changes.



playlist select screen

10. User files

A User file is any compatible file you store on the SD memory card. They are all selected in exactly the same way.



The SD card only stores your own files and all personal settings (playlists etc). The huge collection of tune files and their database, including any installed repertoire upgrades, are safely locked away inside the unit where they cannot be accidentally erased or altered.

File Types

In case you are unfamiliar with the various file types supported by the HT-400 (.mp3, .mid etc), the category of file is shown at the left of the list (AUDIO, MIDI, PDF or VIDEO) to assist with file identification. A summary of file types supported is shown at the right of this page. The HT-400 supports standard English ASCII characters and will ignore files with any other characters in the file name (e.g. French or German characters with accents).

File Type	Category
.mp3	AUDIO
.mid	MIDI
.pdf	PDF

supported file types

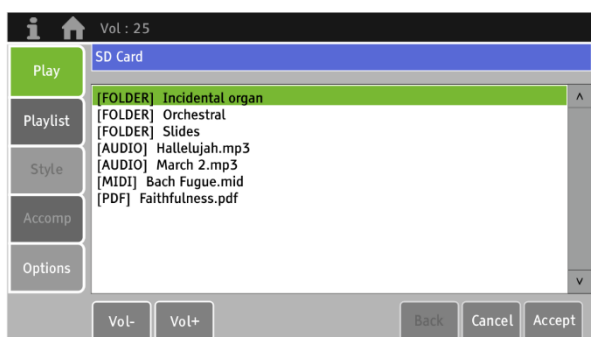
Select a User File

Press the PLAY tab at the left of the screen. The HYMN SELECT screen will appear.

Press the SD CARD key. The SD CARD screen will appear. Scroll through the list and find the folder or file you require.

Tap on a [FOLDER] and press the Accept key to open that folder. Press the Back key to close a folder.

Select the desired file by tapping on it and then pressing the ACCEPT key.



SD card screen

MIDI or AUDIO

A basic PLAY screen will appear (many of the usual functions of the HT-400 are not supported by these file types). Controls for pitch and tempo are available, but the range offered by these controls will be limited when playing an mp3 file. Changing the pitch and/or tempo of an mp3 file may generate unwanted audio artefacts, which can be reduced by minimising the pitch/tempo alterations selected. Tempo is displayed in beats per minute (BPM) for midi files and as a percentage of the original tempo for mp3 files.

Once you have altered the settings for the selected midi or mp3 file to suit, you can take a snapshot of them for later recall. Simply press the SAVE key. If you then make further alterations to the settings, press the SAVE key again to over-write your previous snapshot. The next time you select that midi or mp3 file, it will automatically come up with its default settings. To recall your personal settings, press the LOAD key. If no personal settings have yet been stored for the selected hymn, the LOAD key will be greyed out. In order to store settings correctly, the snapshot includes the midi or mp3 file name and its location on the SD card. Hence it is important not to move midi and mp3 files around on the SD card or the relevant settings cannot be loaded.

The Volume Offset parameter, PREV, NEXT, CANCEL and ACCEPT keys are only visible and available as applicable when creating, editing or performing a Playlist.

PDF

The PDF PLAY screen will appear (see **Section 12: Lyrics and slides**).

Navigating the SD card

To help you keep track of where you are, the HT-400 displays your current folder position in the lilac bar at the top of the screen. For example, if you were in a folder called *Mozart*, which itself is within a folder called *Orchestral*, it would look like this:

SD Card → Orchestral → Mozart

To move back up to a higher-level folder, press the BACK key to close the current folder.

Each folder is limited to a maximum of 100 files. If this maximum is exceeded the first 100 files will be displayed and an error message will appear.

11. The options screen

The OPTIONS screen is where system settings may be altered. The parameters are divided into five sections, accessed using the five sub-tabs near the left of the screen: General, Audio, Effects, Video and Remote.

General

Home Message

To add a personal message to the HOME screen, tap on the Home Message box. The on-screen keyboard will open.

Enter your message (one line only). Press the ACCEPT key to save your changes. To abandon all your changes, press the CANCEL key instead.



options screen - general



The installed Software/Firmware versions and the unique ID code of your HT-400 are shown at the top of the General screen. You will need this information whenever ordering any upgrades for your HT-400.

Audio

Chorus

Controls the depth of the chorus effect (when the effect is applied in the EDIT SOUND screen).

Value: 0 to 100

Default: 50

MIC level

Controls the volume of sound produced by a microphone plugged into the MIC IN socket on the back of the HT-400. Use this control to balance the volume of a microphone against the volume of music played by the HT-400.

Value: 0 to 100

Default: 0

Break Silence

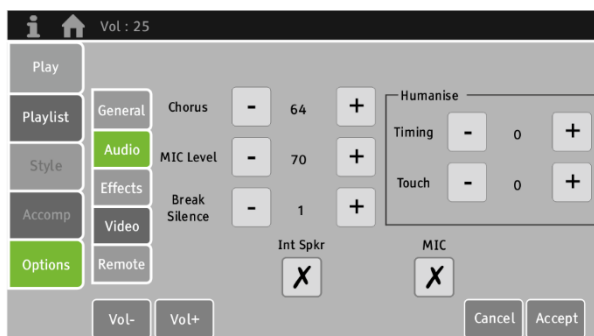
Controls how much of the pause (Break) between verses will be silent, as set on the PLAY screen. By default, the HT-400 includes one beat of silence (when the Break setting on the PLAY screen is set to 1 or greater). If a longer silence is preferred, set this value to more than 1. If this value is greater than the BREAK value selected on the PLAY screen, it is ignored.

Value: 1 to 3

Default: 1

Humanise

The HT-400 plays all tunes with perfect timing and even touch. If a little more character is preferred, altering these settings will add subtle random amounts of performance inaccuracy to the playback, to mimic a real musician more accurately.



options screen - audio

- **Timing**
Alters the timing of each note.
Value: 0 to 5
Default: 0
- **Touch**
Alters how loud each note is played. This parameter will not affect instruments that are not sensitive to individual note volume (e.g. organs) but will affect all other instruments.
Value: 0 to 5
Default: 0

How effective the Humanise effect can be will depend on its settings, the Style being used and the musical arrangement of the tune selected. It will be more obvious when using Styles containing instruments with a fast attack and volume sensitivity (e.g. piano). Settings above 3 may be too much, but 4 and 5 are included to enable you to dial up too much and hear what that sounds like!

Int Spkr

Check or uncheck this box to turn the internal speakers on or off.

MIC

Check or uncheck this box to enable or disable a microphone plugged into the MIC IN socket on the back of the HT-400.

Press the CANCEL key to abandon any changes made on this screen.

Press the ACCEPT key to save any changes made on this screen.

Effects

Equaliser

The digital equaliser is a type of tone control. Use it to increase or decrease the Bass, Middle and/or Treble bands of the sound. **Note that setting high values may cause audio distortion.**

Value: -10 to +10 (each band). 0 (zero) is off.

Reverb

Digital reverb is a subtle type of echo that can greatly improve the sound in an acoustically dead environment (i.e. it can make a small, dead room sound more like a large hall).

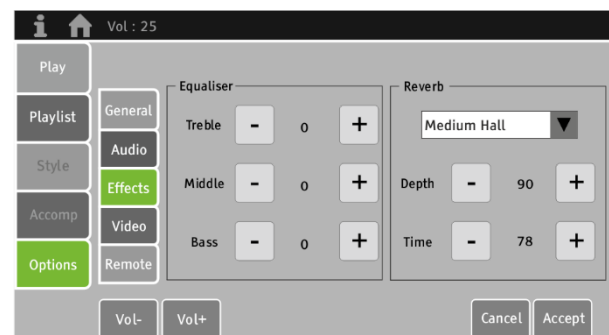
To select a reverb preset, press the arrow at the right end of the Reverb box to open the list. Select the desired preset by tapping on it. The preset will be selected, and the list will close. Note that the preset shown in the Reverb box is now the one just selected. You can override the preset settings using the Depth and Time controls.

- **Depth**
Controls the volume of the reverb echo
Value: 0 to 127
- **Time**
Controls the duration of the reverb echo (how long it takes to die away).
Value: 0 to 127

Reverb is not added to the playback of mp3 files.

Press the CANCEL key to abandon any changes made on this screen.

Press the ACCEPT key to save any changes made on this screen.



options screen - effects

Video

Video Resolution

The HT-400 can produce video in a variety of resolutions. The resolution selected here needs to match the resolution of your projector/monitor screen, so refer to the instructions for that equipment before proceeding. To select a video resolution, swipe up or down on the list to scroll through the available settings. Select the desired resolution by tapping on it. The selected resolution will be highlighted in green.

The full list of supported video resolutions is shown at the right of this page.

The aspect ratio (width:height ratio) is important if using the Scale Slides function (see below). Interlaced types are not supported. The HT-400 video output is progressive only.

Name	Resolution	Freq.	Aspect Ratio
480p	640 x 480	60Hz	4:3
Wide 480p	854 x 480	60Hz	16:9
576p	720 x 576	50Hz	4:3
SVGA	800 x 600	60Hz	4:3
720p	1280 x 720	50Hz	16:9
720p	1280 x 720	60Hz	16:9
XGA	1024 x 768	60Hz	4:3
WXGA	1280 x 800	60Hz	16:10
1080p	1920 x 1080	30Hz	16:9

supported video resolutions

Video ON

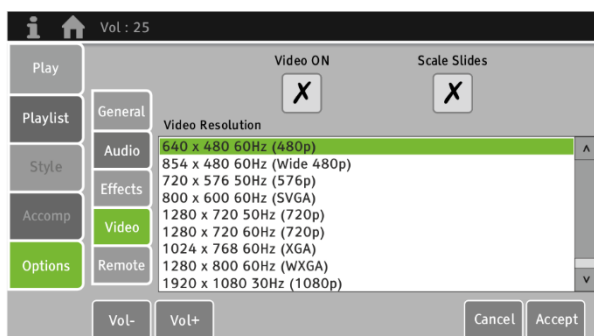
This check box enables/disables all video output from the HT-400.

Scale Slides

This check box enables/disables slide scaling. When enabled, the HT-400 will attempt to adjust the image (PDF page) to fit the selected video resolution. For this to work effectively, the image being displayed needs to be of the same aspect ratio as the selected video resolution, or the resultant image cannot fill the screen.

Press the CANCEL key to abandon any changes made on this screen.

Press the ACCEPT key to save any changes made on this screen.



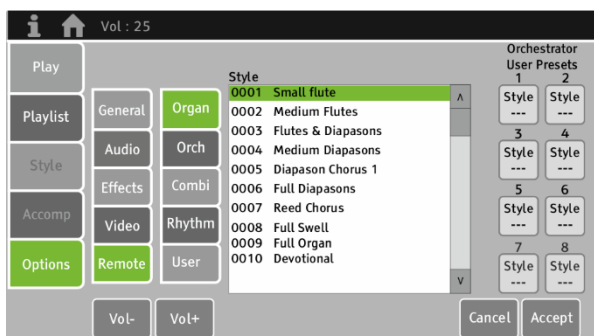
options screen - video

Remote

This screen is used to allocate eight of your favourite Styles to the eight User buttons in the Orchestrator section of the remote-control handset (see **Section 5: The remote-control handset**).

Press the sub-tab for the desired category of Style (Organ, Orchestral, Combi etc).

Scroll through the list and select the desired Style by tapping on it. Then allocate it to one of the eight handset User buttons by tapping on the relevant box at the right side of the screen. The selected Style number will appear in that box.



options screen - remote

Press the CANCEL key to abandon any changes made on this screen.

Press the ACCEPT key to save any changes made on this screen.

12. Lyrics and slides

HT-400 Video Facilities

The HT-400 is equipped with a DVI-I video output connector (see **Section 3: Setting up**). Using this, you can display hymn lyrics and other texts/images via a compatible projector or monitor screen.

The HT-400 does not come supplied with any lyrics files. All lyrics files must be created using a computer, saved in PDF format and then copied onto the SD card (see **Appendix i: Using the SD memory card**).

Hymn Lyrics and Other Texts

PDF files are categorized into two types:

- **Lyrics**
A text that is linked to one of the tunes in the **Library**. Lyrics are formatted and then stored in the HT-400 in a way that permits automatic synchronization of words and music (automatic verse advancement).
- **Slides**
Items of text which are not related to a piece of music (e.g. prayers, readings, church notices and other announcements) and images.



Copyright Notice

- Users have an obligation to report usage of copyright lyrics to Christian Copyright Licensing International (CCLI). More information on licensing may be found at www.ccli.com.
- Display of other copyright texts may require additional licensing.
- The display of copyright lyrics synchronised to music may require additional video synchronisation licensing.

Creating lyrics and slides

For each set of lyrics, or slide, you will need to create a PDF file using a computer and a suitable word processing program. Then copy it onto the SD card.

Create a PDF file using a computer

PDF files for use in the HT-400 must be created and edited on a computer and then copied onto the HT-400 SD memory card. Copying the files onto the SD card can be achieved in two ways:

1. Remove the SD card from the HT-400 and insert it into an SD card reader attached to the computer.
2. Attach a USB cable between the computer and the **USB B** connector on the back of the HT-400. With this connection the HT-400 will effectively act as an SD card reader, so you can use the computer to copy files on/off the SD card without removing it from the HT-400.

See **Appendix i: Using the SD memory card** for further details.

The files must be in the .pdf file format. All PDF files should be saved on the computer with embedded fonts (known as “PDF/A compliant”) to ensure the display matches the source file as closely as possible.

Formatting lyrics



This section applies to lyrics PDF files for use with the **Library** tunes in the HT-400. **Lyrics cannot be linked to the playback of midi or mp3 files.**

When creating a PDF file on a computer, a few basic page formatting rules must be observed for the HT-400 automatic lyrics advancement to work correctly:

- Each section (e.g. verse, chorus) must have its own page in the PDF file. Even if a verse has only two lines of text, do not put any preceding or following lyrics on the same page.
- In the rare event that a verse or chorus contains more than 8 lines of text, the automatic lyrics advance will still occur after a maximum of 8 lines. Put any remaining lines of text for that verse or chorus on the next page, **on their own**.



The print layout of lyrics in a hymn book often reflects the space available on the page, rather than the true order of performance (with repeated lyrics omitted etc). HT-400 lyrics files need to follow the actual order of performance. **ALWAYS TEST THAT THE LYRICS DISPLAY SYNCHRONISES PROPERLY WITH THE MUSIC BEFORE USING IN A SERVICE.**

Play a hymn with displayed lyrics

Before starting, press the OPTIONS tab at the left of the screen to open the OPTIONS screen. Press the VIDEO sub-tab and make sure that VIDEO ON is checked and that the VIDEO RESOLUTION is correctly set to match your projector/monitor settings (see **Section 11: The options screen**).

Select the desired **Library** tune in the normal way from the HYMN SELECT screen (see **Section 4: Getting started**). Press the ACCEPT key to bring up the PLAY screen.

Make any alterations to the settings for the chosen hymn (number of verses, tempo, Style etc).

When you are ready to play the hymn, press the LYRICS FILE key. The SD CARD screen will appear.

Navigate to the PDF file you wish to link to the currently selected tune and press the ACCEPT key.

The tune and PDF file are now linked.

To link the selected tune to a different PDF file, press the LYRICS FILE key again and repeat the process.



You can only link one PDF file to any tune, but you can link the same PDF file to as many different tunes as desired (e.g. if you sometimes sing a hymn to a different tune).

Start playback in the normal way, using the START or FADE IN keys.

The lyrics will be displayed via a connected projector or monitor and will advance automatically as the music plays each verse. If an Intro has been selected, the first page of lyrics will not be displayed until playback reaches the final notes of the introduction, to act as a prompt for the congregation.

Show or hide lyrics



Output to a connected projector or monitor screen can be turned on or off temporarily by checking/unchecking the LYRICS check box on the PLAY screen, or by using the VIDEO button on the remote-control handset. Lyrics are not displayed on the HT-400 touch screen.

Display a slide

Press the PLAY tab at the left of the screen. The HYMN SELECT screen will appear.

Press the SD CARD key. The SD CARD screen will appear.

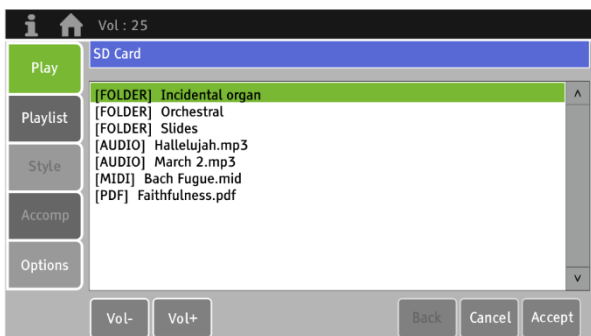
Swipe up or down on the list to scroll through it.

Tapping on a [FOLDER] will open that folder.

Select the desired PDF file by tapping on it.

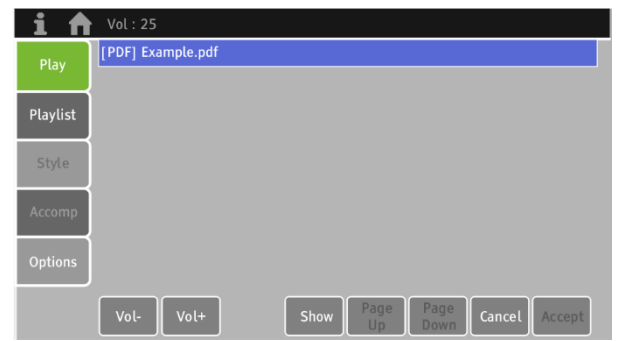
Press the ACCEPT key. The PDF PLAY screen will *appear*.

The PAGE UP, PAGE DOWN and HIDE/SHOW keys will be available. Display to a connected projector or monitor screen can be turned on or off temporarily using the HIDE/SHOW key. By default display is hidden, so press the SHOW key to display your PDF. The PDF is not displayed on the HT-400 touch screen.



SD card screen

The PREV, NEXT, CANCEL and ACCEPT keys are only visible and available as applicable when creating, editing or performing a Playlist.



PDF play screen

13. The Psalm Player (option)

To date it has generally been impractical to record accompaniments for chanted items such as psalms, canticles and many other items of service music.

In a hymn the same line of each verse contains the same number of syllables, so note lengths and timings stay the same from verse to verse. Consequently, the HT-400 knows exactly when to play each note of the music, without any input from the operator.

Verses of psalms and canticles do not scan in the same way and therefore note lengths and timings vary from verse to verse, according to the number of syllables that need to be fitted to each note of the music. Further inconsistency is found since, unlike hymns which can only be sung to tunes that fit the metre* of the words, psalms and canticles can generally be sung to any chant.

* See **Appendix ii. Metrical indexes** for information on metres

The HT-400's Psalm Player feature provides interactive accompaniment for the singing of psalms, canticles and other chanted items. Use of this feature ideally requires an operator who is familiar with the singing of psalms and canticles, but in all other respects it is very simple and straightforward to use.



Psalms come in two basic types – metrical and non-metrical. Metrical psalms behave like normal hymn tunes and are playable by the HT-400 without use of the Psalm Player. The following information refers to the performance of non-metrical psalms, and psalms with both metrical and non-metrical sections.

Psalm structure

Psalms are made up of two components, the music (chant) and the lyrics (text).

There are *single* chants, and there are *double* chants:

- A *single* chant is fitted to one verse of text (so one verse of text fits one verse of music).
- A *double* chant is fitted to two verses of text (so two verses of text fit one verse of music).

Psalms have a section at the end called the *Gloria*. The HT-400 will automatically add this after the final verse.

Selecting a chant

Select a chant (tune) for your chosen psalm

Choose the relevant book, and the desired tune, from the **Library** using the HYMN SELECT screen in the normal way.



Psalm chants (tunes) are not included in the **Library** unless the Psalm Player repertoire upgrade option is purchased.

Press the NEXT key. The PLAY screen will appear.

Playing a chant

Style

Chants are best accompanied by pipe organ Styles. Many of the other preset Styles use instruments whose sound naturally fades away over time (e.g. piano). Consequently, these instruments are not capable of holding one chord for an extended period of time, as is sometimes required for psalm accompaniment.

Select a suitable Style (see **Section 8: Styles**).

Number of verses

Set the number of verses to be played (see **Section 4: Getting started**).

Introduction

Turn on the INTRO key to add a single play-through of the chant in strict tempo at the beginning. This is useful to remind the congregation how it goes, and to give them time to stand up and ready themselves for singing.

Start playback

Press the START key. The introduction will play through and stop at its end.

Accompanying the psalm

There is a choice of three trigger buttons for advancing the psalm accompaniment:

- The orange PSALM key on the Play screen (this key is only displayed when a tune requiring the trigger has been selected)
- The PSALM button on the remote-control handset
- The optional external, wired psalm trigger

Start the psalm accompaniment by pressing the psalm trigger button. The first chord of the chant will sound - and it will continue to sound until you press the button again, whereupon the following chord will sound. Similarly, each subsequent button press will make the next chord sound. There are usually markings in the psalm text to indicate where you should advance the chord (called “pointing”). Once you reach the end of a verse, the next button press will stop the final chord of the verse sounding. Press the button again to start the next verse.



It is much easier to use the Psalm feature if you sing along with the congregation. After a little practice you will find that pressing the button at the appropriate time becomes second nature.

Please note ...

There are many variations in the way psalms and canticles are sung. In respect of pointing, the HT-400 will cater for all requirements. However, simplification in some other areas is necessary and unavoidable. For example:

- For double chants, the HT-400 will automatically play the first part of the chant for odd numbered verses, and the second part of the chant for even numbered verses. The second part of the chant will always play for the final verse when a psalm has an odd number of verses.
- It is common practice to change from one chant to another in longer psalms, to instil some musical variety. This can be achieved with the HT-400 by storing the relevant chants as adjacent items in a Playlist, and then moving swiftly between them.
- Chants with passing notes in the melody have been excluded. In these instances, the note advancement system would require the harmony notes to repeat rapidly, giving rise to a “lumpy” progression. Passing notes in the accompaniment parts have been removed for the same reason.

Using the Psalm Player with the Lyrics feature

Lyrics files for psalms may be created and displayed via an external projector or monitor screen (just as with hymns). To ensure correct lyrics advancement, synchronized to playback of the chant, make sure that:

- Each verse is on its own page in the lyrics PDF file
- The Gloria is also on its own page

See **Section 12: Lyrics and slides** for information on creating and storing correctly formatted lyrics PDF files.

Appendix i. Using the SD memory card

Inserting and removing the SD card

This is covered in **Section 3: Setting Up**.

What is it for?

The SD card provides memory for storage of:

- All user-created files (mp3 files, midi files, PDF files)
- The XML system files. These files store all your personal settings:
 - All your Playlists (playlist.xml)
 - Which hymn book is currently selected (book.xml)
 - The currently stored settings for the parameters on the OPTIONS screen (options.xml)
 - The current default Style (default_style.xml)
- Your OurBook index (encrypted file *OurBook.htc*)

All these settings are automatically stored on the SD card. You don't need to know anything about XML to use the HT-400. However, if you should connect the SD card to a computer, **NEVER DELETE ANY FILES ON THE CARD THAT HAVE THE FILE EXTENSION .xml OR THE *OurBook.htc* FILE.**



All memory cards can become corrupted with extended use, so it is a good idea to make regular copies of the system files stored on the SD card, by backing them up to a computer. See the following section "Connecting the SD card to a computer" for details.

Connecting the SD card to a computer

Connecting the SD card to a computer can be achieved in two ways:

1. Remove the SD card from the HT-400 and insert it into an SD card reader attached to the computer. If your computer does not already have an SD card reader built-in, these are available from most computer equipment suppliers.
2. Attach a USB cable between a Microsoft Windows PC and the **USB B** connector on the back of the HT-400. With this connected the HT-400 will effectively act as an SD card reader, so you can use the computer to copy files on/off the SD card without removing it from the HT-400. **Normal operation of the HT-400 is suspended while this connection is in place. USB connection to a PC running any operating system other than Windows is not recommended and may not function.**

When connected to a Windows PC, the SD card will appear to the computer as though it were an external drive. Folders and files may then be created, copied and deleted using the PC's operating system and software programs. Each folder is limited to a maximum of 100 files when displayed on the HT-400 User File screen. If a folder contains more than 100 files, only the first 100 will be displayed.



NEVER delete any files on the SD card that have the file extension .xml, or the *OurBook.htc* file (if there is one).

Before changing the contents of the SD card in any way, it is advisable to copy* all the system files on it to the computer's hard disk (thereby creating a backup of them). Then, if any accidental deletions are made, you can restore the system files to the SD card.

*COPY them - do not MOVE them off the SD card.

As you create and/or change Playlists etc in the HT-400, the information in the system files is updated. Consequently, it is advisable to make regular backups of the system files as outlined above.

Appendix ii. Metrical indexes - and why you might want to know about them

A metrical index can usually be found amongst the other indexes (tune names, first lines etc.) in the music edition of most hymn books. The metrical index groups together by name those tunes that have the same metre.



What is the *metre*? In this context it relates to the lyrics of a hymn, indicating the number of syllables in each line and the number of lines in a verse. Its purpose is to assist the matching of lyrics to tunes.

Some metres have names, e.g. Common Metre (usually abbreviated to C.M.) but most are described by a series of numbers. Common Metre is defined as “*a quatrain with alternating lines of iambic tetrameter and iambic metre, which rhymes in the second and fourth lines and sometimes in the first and third*”. Luckily it isn’t necessary to understand the arcane language associated with metre in order to make use of a metrical index.

A simple example of C.M. is the tune CRIMOND, normally sung to these words:

The Lord’s my shepherd I’ll not want (8 syllables)
He makes me down to lie (6 syllables)
In pastures green he leadeth me (8 syllables)
The quiet waters by (6 syllables)

So, we have four lines - 8 syllables, 6 syllables, 8 syllables, 6 syllables. That's why the metre of CRIMOND, and any other C.M. tune, is C.M. (8.6.8.6.).

If you take a look at the C.M. section of a typical Metrical index, as well as CRIMOND you will find such tunes as:

- WINCHESTER OLD (While Shepherds watched their flocks by night)
- ST MAGNUS (The head that once was crowned with thorns)
- UNIVERSITY (Oh for a thousand tongues to sing)
- WESTMINSTER (My God how wonderful thou art)

This means that **all** these lyrics could be sung to the tune CRIMOND, even though some combinations might seem a little odd. At the same time, the lyrics *The Lord’s my shepherd I’ll not want* can be sung to the tunes WINCHESTER OLD, ST MAGNUS, UNIVERSITY and WESTMINSTER.

Some lyrics are **irregular** and have tunes especially written for them. In these cases, it is unlikely that you will find another tune to fit the lyrics or vice versa. Such tunes will not usually be listed in the metrical index. For this reason, modern worship tunes are not generally included.

The variety of metres has grown over time and some hymn books will list as many as 120 possibilities. Popular metres such as Common Metre C.M. (8.6.8.6.) and Long Metre L.M. (8.8.8.8.) might apply to 70 or 80 tunes each.

A final poetic note

The metre 88.88.88 differs from 888.888 according to how the lyricist has arranged the lines (as to rhymes) in one way or the other. It follows therefore that despite the similarity in the number of lines and the number of syllables in each line, judgment needs to be exercised when choosing alternative tunes in order to make musical sense of the lyrics.

Appendix iii. Troubleshooting

The following provides troubleshooting hints for some common problems. Many problems may simply be due to incorrect settings. Before calling for service, read through this section to see if you can identify and correct the cause of the problem.

The unit is completely dead

- Make sure the supplied AC mains power adaptor is connected to the HT-400 and plugged into a working wall socket.
- If the HT-400 is being used solely on battery power, the battery may be depleted. Charge the battery (see **Section 3: Setting up**).
- If an incorrect AC mains power adaptor has been connected, the HT-400 will not power up. Contact your Hymnal Plus dealer if a replacement power adaptor is required.

The unit freezes during bootup

- Corrupted files on the SD card can interfere with the boot process. Power the unit off, remove the SD card (see **Section 3: Setting up**) and then power up. If the unit boots successfully to the Home screen, you will see a message warning that the SD card is not inserted, but that's OK – you already know that! The SD card would then need to be examined using a PC and any corrupted files repaired or removed before re-inserting the SD card back into the HT-400.
- If the HT-400 is being used solely on battery power, the battery may be depleted. Charge the battery (see **Section 3: Setting up**).

No sound from the internal speakers

- The volume may be set to zero. Increase the volume.
- The internal speakers may be turned off. Turn on the internal speakers (see **Section 11: The options screen**).

The sound is distorted

- The volume or EQ may be set too high. Reduce the volume or EQ (see **Section 11: The options screen**).

The infrared remote-control handset doesn't work

- Make sure that a clear, direct line of sight exists between the handset and the HT-400.
- Bright daylight or fluorescent light can interfere with the range of any infra-red device. Try shielding the HT-400 from the offending light source or move closer to the HT-400.
- Ensure that each button press is made cleanly and completely, pausing momentarily between each press.
- The batteries in the handset may be depleted. Replace the batteries with new ones.

No video output

- The projector/monitor screen connected to the HT-400 video output needs to be compatible with one of the video resolutions available in the HT-400 for the video connection to function (see **Section 11: The options screen**). Also note that intermediate equipment (e.g. a video switcher) may interfere with the connection.

One or more files are missing from the User File list

- The HT-400 supports standard English ASCII characters and will ignore files with any other characters in the file name (e.g. French or German characters with accents).
- Each folder is limited to a maximum of 100 files. If this maximum is exceeded the first 100 files will be displayed and an error message will appear.

Appendix iv. Glossary

Accompaniment	A drum beat or other additional backing that supplements the standard song playback.
Amen	An optional, two-chord addendum to the end of a hymn, over which the congregation sing “A-men”.
Book Index	A list of all available hymn books to which the <i>Tune Library</i> is indexed. After selecting a book, the user may call up hymns using the familiar numbers in that book.
Break	The pause between verses of a hymn (and between the end of the introduction/start of the first verse).
Chorus effect	A digital effect, used to thicken a sound.
Combi	Abbreviation of <i>Combination</i> . Used to describe Styles that consist of a mixture of instruments.
SD memory card	A small memory card that plugs into the side of the unit. Used to store all user files and settings (e.g. mp3, PDF, Playlists).
Default Style	The Style automatically recalled each time a hymn is selected.
Equaliser	A three-band tone control (bass, middle and treble).
Hymn	Used throughout to mean any song of praise. No distinction is made between traditional hymns and modern worship songs/choruses unless relevant to the operation of the unit.
Intro	A short introductory section of music, normally performed before the congregation start singing a hymn.
Lyrics file	A PDF file used to display the lyrics of a hymn, verse by verse, in sync with music played by the HT-400. Must be in the .pdf file format.
Metronome	A light regular clicking sound, sounded on each beat, used to mark time.
Midi file	A digital sequence data file.
mp3 file	A compressed digital audio file.
Pitch	The key in which a tune is played.
Playlist	A list of items that can be stored in advance, ready for recall during a service.
Psalm	Used throughout to mean a musical chanted item, of non-metrical nature.
Reverb	An advanced digital echo effect used to simulate the acoustics of a large indoor space (e.g. a cathedral).
Rhythm	An automated drum beat.
Rit	Abbreviation of <i>Ritardando</i> . A gradual slowing down of the tempo (speed) during the last line of the final verse of a hymn.
Slide	A PDF file used to display prayers or other non-musically related texts, or images
Sound	An instrument (piano, clarinet etc).
Style	The instrument, or mixture of instruments, used to play tunes from the <i>Tune Library</i> .
Tempo	The speed at which a tune is played.
Tune Library	The core range of tunes stored permanently inside the unit.
User file	Any file or memorized setting created by the user.
Verse	In the HT-400, one play-through of a tune, repeated as many times as there are verses of lyrics.

Appendix v. Preset style list

Organ

1	Small Flute
2	Medium Flutes
3	Flutes & Diapasons
4	Medium Diapasons
5	Diapason Chorus 1
6	Full Diapasons
7	Reed Chorus
8	Full Swell
9	Full Organ
10	Devotional
11	Clarinet Solo
12	Quiet Reed Solo
13	Large Reed Solo
14	Vox Solo 1

15	Vox Solo 2
16	Smooth Flutes
17	Bright Flutes
18	Baroque 1
19	Baroque 2
20	Small Diapason
21	Small Diapason & 8va
22	Full Diapason Chorus
23	Diapason Chorus + Trumpet
24	Diapason Chorus + Reed
25	Strings
26	Edgy Strings
27	Medium Combination
28	Bright Organ Mix

29	General 1
30	General 2
31	General 3
32	General 4
33	General 5
34	Diapason Chorus 2
35	The Big One
36	Gospel 1 Slow Trem
37	Gospel 1 Fast Trem
38	Gospel 2 Slow Trem
39	Gospel 2 Fast Trem
40	Reed Organ (Harmonium)

Orch

101	Acoustic Piano
102	Orchestral Strings
103	Choir Aahs
104	Bright Acoustic Piano
105	Clavinet
106	Elec Grand Piano
107	Elec Piano 1
108	Elec Piano 2
114	Elec Piano 3
115	Elec Piano 4
116	Elec Piano 5
117	Elec Piano 6
118	Elec Piano 7
119	Harpsichord
120	Coupled Harpsichord
121	Honky-Tonk Piano
122	Carillon
123	Celesta
124	Church Bells
125	Dulcimer
126	Glockenspiel
127	Marimba
128	Music Box
129	Tinkle Bell
130	Vibraphone
131	Accordion
132	Tango Accordion
133	Harmonica
134	12 String Guitar

135	Chorus Guitar
136	Clean Guitar
137	Distortion Guitar
138	Funk Guitar
139	Guitar Harmonics
140	Hawaiian Guitar
141	Jazz Guitar
142	Mandolin
143	Muted Guitar
144	Nylon Guitar
145	Nylon Guitar 2
146	Overdrive Guitar
147	Steel Guitar
148	Ukulele
149	Cello
150	Harp
151	Pizzicato Strings
152	Tremolo Strings
153	Viola
154	Violin
155	Orchestra
156	Orchestra Hit
157	Slow Strings
158	Synth Strings 1
159	Synth Strings 2
160	Synth Strings 3
161	Synth Vox
162	Voice Oohs
163	Brass 1
164	Brass 2
165	Cornet

166	Euphonium
167	French Horn
168	Muted Trumpet
169	Synth Brass 1
170	Synth Brass 2
171	Synth Brass 3
172	Synth Brass 4
173	Trombone
174	Trumpet
175	Alto Sax
176	Bassoon
177	Clarinet
178	English Horn
179	Oboe
180	Soprano Sax
181	Tenor Sax
182	Bottle Blow
183	Flute
184	Ocarina
185	Pan Flute
186	Piccolo
187	Recorder
188	Shakuhachi
189	Whistle
190	Bass and Lead
191	Charang
192	Chiffer Lead
193	Saw Synth
194	Saw Wave
195	Sine Wave
196	Solo Vox

197	Square Synth
198	Square Wave
199	Synth Calliope
200	Bowed Glass
201	Fantasia
202	Halo Pad
203	Metal Pad
204	Polysynth
205	Space Voice
206	Sweep Pad
207	Warm Pad
208	Atmosphere
209	Brightness
210	Crystal
211	Echo Drops
212	Echo Pan
213	Goblin
214	Ice Rain
215	Soundtrack
216	Star Theme
217	Bag Pipes
218	Banjo
219	Fiddle
220	Kalimba
221	Koto
222	Shamisen
223	Shanai
224	Sitar
225	Steel Drums
226	Taisho Koto

Combi

401	Brass Quartet
402	Pipe Organ & Piano
403	Pipe Organ & Strings
404	Pipe Organ & Choir
405	Piano & Rich Strings
406	Brass Band
407	Flute & Strings
408	Orchestra 1 (Small)
409	Orchestra 2
410	Orchestra 3
411	Orchestra 4
412	Orchestra 5
413	Big Strings
414	Strings & Choir

415	Harpsichord & Orchestra
416	Harpsichord & Strings
417	Violin & Strings
418	Piano & Slow Strings
419	Piccolo & Strings
420	Organ & Strings 2
421	EP & Synth Strings 2
422	Big Piano
423	Octave Piano
424	Cello & Piano
425	Cornet & Organ
426	Euphoniums & Piano
427	Cornet & Organ 2
428	Piano & Flute

429	Oboe & Strings
430	Organ & Orchestra
431	Woodwind Quartet
432	Woodwind Quartet 2
433	Organ & Piano 2
434	Trumpet & Organ
435	String Quartet
436	String Quintet
437	Clarinet & Strings
438	String Duo
439	Strings & Tinkle Piano
440	Strings & Brass
441	Violin Strings Harpsichord
442	Piano & Cellos

Rhythm

1001	Orchestra 3 March
1002	Orchestral March
1003	Nylon Gtr & EP 8 Bt 7
1004	EP & Polysynth 8 Bt Bld 2
1005	NyGtrEPStr8bt2
1006	EP & Synth Strings 8 Bt 10
1007	NyGtrPnoPad8bt2
1008	Pan Flute & Piano 8 Bt 5
1009	PnoVibDBarF8bt9
1010	Piano & Pad 8 Beat 2
1011	Piano & Strings 8bt4
1012	Piano & Vibes Ctry Rock 2
1013	Piano, Vibes & Gtr 8 Beat 2
1014	Flute & Piano 8 Beat 10
1015	Organ & Piano 2 March
1016	Trumpet & Orchestra March
1017	Trumpet & Piano 8 Beat 1
1018	Trumpet Duo 8 Beat 3

1019	Trumpet Waltz
1020	Accordion Salsa Band
1021	Atmospheric 8 Beat
1022	Ballad 8 Beat
1023	Brass Rock
1024	Caribbean
1025	Piano & Space Voice Latin
1026	Deer Little 8 Beat
1027	Overdrive Gtr 16 Bt 1
1028	Drawbar Slow Trem Waltz
1029	Drawbar Fast & Choir Waltz4
1030	Elec Guitar & Pad 8 Beat
1031	Elec Organ & Oohs Disco
1032	Gospel 8 Beat
1033	Gospel Guitar
1034	Gospel Harmonica 8 Beat
1035	Gospel Organ & Piano Waltz

1036	Hebrew 8 Beat
1037	Latin Pop
1038	Marching Band
1039	SchmaltzWaltz
1040	Soppy 8 Beat
1041	Spacey Guitar 8 Beat
1042	Shine Disco
1043	Country Rock Combo
1044	EPSynthStr8bt8
1045	PnoNyGtr8bt6
1046	NyGtrEPStrDance2
1047	NyGtrChStrWaltz4
1048	NyGtrDbarOrgJazzWlz1
1049	PnoPad8btBallad2
1050	NyGtr2EPStr8bt4
1051	NyGtrEPSynSTR8bt2
1052	Marching Band&Str
1053	Synth&8btBallad2
1054	Pno&Strings8bt10

Appendix vi. Specifications

Tune Library		Around 2750 - 3000 tune recordings (varies by region) in core repertoire (expandable)
Sounds		Over 200, plus 8 drum kits
Touch-screen Display		7" TFT, projected capacitive touch panel, colour depth 16.7M
Preset Styles		247, in four categories: Organ, Orchestral, Combination and Rhythmic
Playlist Memories		999
Effects		3 band audio equaliser (Bass, Middle, Treble), digital reverb
File compatibility		midi (format 0 and 1), mp3, pdf
Memory Card		SD
Connectors & Terminals	Rear	DC Power In, Psalm Trigger, USB A, USB B, Microphone In, Audio Out Right, Audio Out Left/Mono, Headphones, Video Display Out (DVI-I)
	Side	SD socket with integral ejector mechanism
Internal Speakers		2 x 5.8cm (2.3") full-range
Internal Amplifier Output		Stereo, 2 x 10W continuous
Accessories	Included	User manual, A-Z Master Index, AC power adaptor, infrared remote-control handset, USB cable
	Optional	2600mAh NiMH rechargeable battery pack, soft padded carry case, Psalm Player trigger, short qwerty keyboard (fits in carry case)
Dimensions		257(W) x 229 (D) x 54 (H) mm 10.1 (W) x 9 (D) x 2.1 (H) inches
Weight		1.54kg (3.4lb)

Specifications and descriptions in this manual are intended for information only. Hymn Technology Ltd reserves the right to change or modify products or specifications at any time without prior notice.

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