QUICK GUIDE
Twin Tuner PVR Recording HD Set Top Box

A. Tuning
1. Menu, Set Up
2. Tuning
   i. Search Mode : Select Auto
   ii. Press OK to save data after scanning completed

B. SUMMER TIME / DAYLIGHT SAVING TIME Setting
To ensure accurate EPG (Electronic Program Guide) Setting, particularly for areas where Daylight Saving Time is applicable. Using the remote control, please follow these steps:
1. Menu
2. Set Up
3. Time/OSD
4. Region Setting, Select : USER (instead of NSW or Vic)
5. Time Offset, set to : +11:00
6. Press OK to save data
7. Ready to use HD Set Top Box now

C. FOUR (4) RECORDING MODES
1. **Live Recording**: press “Record” button while watching a TV program (Press “Stop” button, to stop recording.)
   Note: Selecting a second channel program can also be recorded by pressing “Record” button simultaneously. And a third program from either of the two TV Stations/carriers can be watched while recording 2 programs at the same time.

   2. **Time Shift Recording**:
      i. Press “Pause” button, then “Play” to playback the program.
      ii. Press >>> Fast Forward to catch on the Live program
      iii. Press STOP to stop recording
   Note: Selecting a second channel program can also be recorded by pressing “Pause” button simultaneously. And a third program from either of the two TV Stations/carriers can be watched while recording 2 programs at the same time.

   3. **EPG (Electronic Program Guide) Recording**: (refer to page 15 of user manual)
      i. Press EPG on the Remote Control
      ii. Select program & preferred time/day schedule.
      iii. Press Red (not record button) to set PVR into recording mode
      iv. PVR will record automatically on selected time schedule
   Note: Selecting a second channel program from the EPG, please follow these steps:
      i. Press EPG, to show other channel listings.
      ii. Select TV program from the list on the left using Remote Up/Down Key
      iii. Press OK, then press “3” to show weekly schedule.
      iv. Select Program and preferred time schedule
      v. Pressing “Record” button to program recording mode.
   Note: During playing back of both programs, a third program from either of the two TV Stations/carriers can be watched while these 2 programs are still being recorded, at the same time.

   4. **Time Set Recording**:
      i. Menu, Select : Time Set Up
      ii. Wake Up Menu:
         1. Timer Mode: Select Off / Once/Daily/Weekly
         2. Service : Select Programs
         3. WakeUp Mode: Select : Service / Record
         4. WakeUp Date : Enter Day/Month/Year
         5. Start Time : Enter Time
         6. Stop Time : Enter Time
   Note: Selecting a second channel program from the EPG can also be recorded by pressing “Record” button simultaneously.
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1. SAFETY REMARK

- Be sure to use the machine correctly, please read and understand this User Manual before starting the operation of the receiver.
- DO NOT open the cover. It is dangerous to touch the inner part of the receiver due to electric shock hazard.
- DO NOT try to service this product by yourself. Refer all serving to qualified service personnel.
- Disconnect the receiver from the wall outlet before cleaning. Use only a soft dry cloth to clean the case of the receiver.
- Please unplug the power adaptor from the wall outlet when the receiver is unused for a long time.
- DO NOT connect or modify cables when the receiver is plugged-in. Unplug the power adaptor of the receiver at the wall outlet before connecting or disconnecting any cables.
- DO NOT use a damaged power cord. Damaged power cords may cause Fire or Electric Shock.
- DO NOT touch a power cord with wet hands. It may cause Electric Shock.
- NEVER cover the receiver with soft furnishing or carpets.
- For indoor Use Only.
- DO NOT use or store the receiver where it is exposed to sunlight or near a heater.
- NEVER put other electronic equipment on top of the receiver.
- DO NOT use any attachments that are not recommended by the manufacturer as this could cause damage to, or impair the operation of the equipment.
- DO NOT expose the receiver to dripping or splashing.
- DO NOT place objects filled with liquids, such as vases, on the receiver.
- The ventilation would be impeded by covering the ventilation openings with items, such as newspapers, tablecloths, curtains etc.
- Ensure a minimum distance of 5 centimeter (5cm) around the receiver for sufficient ventilation.
- No naked flame sources, such as lighted candles, should be placed on the apparatus.
- Dispose of remote control batteries properly in accordance with local, state or federal regulations.

Remark: This manual provides complete instructions for installing and using the receiver. All functions of the receiver can be carried out from the buttons on the remote control.

If you have any problems with the operation of your receiver, please refer to the relevant section of this manual.

As hard disk drive inside might be damaged and/or lost all the video data. In such event, the manufacturer is not liable for such lost of data or pre-recorded video contents. Factors such as shaking or mishandling the receiver with hard disk drive inside will cause lost of all data.
2. Accessories Supplied

- Link to User Manual
- Remote Control Unit
- Batteries: 2xAAA
- A/V Cable
- RF Loop Cable
- 12V 2A AC-DC Adaptor
3. Features of function

Support the decoding system in MPEG-4 AVC H.264, MPEG 2 and fully DVB-T compliant.
Support MPEG-4 AVC H.264, MPEG 2(MP@HL) HD channel format and MPEG1 audio Layer 1,2
Double conversion DVB-T tuner with Loop Throught output
Frequency input from 177.5MHz to 816.5MHz (Centre Frequency)
Automatic parameter discovery & update
User-friendly OSD Menu with full function
256 Colours Graphic User interface
Variable aspect ratio 4:3or 16:9 with Pan, Scan or Letter Box
Advanced 7 days 24 hours EPG (Digital Program Guide)
Current or Next Event Guide
Auto update (PMT/ PAT)
Customized channel data saving
Carriers & Frequency Table Editing with add, delete, rename and modify.
Small Screen Picture on EPG and TV Channel list
Support TELETEXT decoding or Re-insert into VBI
Support Subtitle
Support PAL
Advanced Automation Tuning
9 Favorite Channel Preset
30 Events timer
Channel Editing, Delete, Move, Rename, Lock and Skip
Channel Sorting
Support software upgrade via USB interface and OTA
Program Recording and Play by internal harddisk & USB2.0 external harddisk
Signal LED indicator
SPDIF for digital audio, RCA & Optical Option
2 HDMI channel input and HDMI output
YPbPr Comonent Output
Video, Audio L, Audio R Output (RCA)
S-Video output
Support output formats: 1080i, 720p, 576p and 480p
Support dual tuner
Support 2 channels recording at the same time
Large capability inside, more recording can be saved
MEPS function, power is less than 1 Watt when stand by
Manufactured under license from Dolby Laboratories.

Dolby and the double-D symbol are trademarks of Dolby Laboratories.
4. Front Panel

A. Power Button
B. Channel Up / Channel Down Button
C. Volume Up / Volume Down Button
D. Remote Control IR sensor
E. LED Display
F. Standby LED
G. Hard Disk Drive Swappable Slot

**PROPER INSERT of HARD DISK DRIVE into Opening Slot (SATA Connector)**

Carefully unpack & insert the Hard Disk Drive into the Open Slot (Fig 4.1.1)

Using both your thumbs with equal pressure on both edges, (Fig 4.1.2), push all the way in to connect Hard Disk Drive securely into the SATA connector inside the Open Slot.

IMPORTANT: Make sure that the Hard Disk Drive is properly connected into the SATA connector inside – this can be achieved by applying further push after the Clicking Sound from the Locking Mechanism inside.

TV screen will show “SATA Device Initializing” upon switching-ON the machine (refer to page 8). After initializing, you can start using the recording function.

Fig 4.1.1

Fig 4.1.2
5. Rear Panel

ANT IN 1 & 2
Connect to external and indoor antenna.

ANT OUT 1 & 2
Connect to TV and VCR RF input.
(ANT OUT 1 Loop Through with the use of a RF cable connect to ANT IN 2 to attain Dual Tuner PVR Function)

POWER INLET
Connect this to the an adaptor (12V 2A)

AUDIO OUT (L/R)
Left, Right audio output

S/PDIF Out / OPT OUT
Sony/ Philips Digital interface output for digital audio, optical option out

VOUT VIDEO
Composite video output.

S-VIDEO OUTPUT
S-VIDEO output connector.

YPbPr OUTPUT
Progressive Component output connector.

USB PORT
USB interface output

Ethernet PORT
ETHERNET connector

HDMI INPUT1
HDMI input 1 connector

HDMI INPUT2
HDMI input 2 connector

HDMI OUTPUT
HDMI output connector
6. Remote Control Unit

The following details the remote control buttons and their functions.

1. POWER
2. TV/R
3. MUTE
4. VOL+/VOL-
5. CH+/CH-
6. Numeric Keys (0-9)
7. FAV
8. MENU
9. EPG
10. Capture Still Image
11. HDMI S
12. INFO
13. TIMER
14. EXIT
15. ▲▼ CH UP/DOWN
16. ◄► VOL-/VOL+
17. OK
18. Function key
   (RED), (GREEN), (YELLOW), (BLUE)
19. PAUSE
20. AUDIO
21. FORMAT
22. ARC
23. FILE
24. SUBT
25. LANG
26. TEXT
27. REC
28. STOP
29. PLAY
30. JUMPTO
31. ◄◄ FB (Fast Backward)
32. ►► FF (Fast Forward)
33. ◄◄ / ►► C SKIP
There are few ways to inter-connect your TV, VCR, Blu Ray / DVD Player, Hi Fi System and other devices. Shown above are the most common inter-connections that you can normally apply. If you've experienced difficulties with the connections, please contact your retailer as soon as possible.

**Connecting to the TV via HDMI/ YPbPr for Optimum Quality to enjoy HDTV.**

Note: HDMI & YPbPr cables are not provided. Please purchase your HDMI cable from your local retailers.

1. Connect Aerial / Antenna to ANT IN 1
2. Using the RF cable ( provided ), connect ANT OUT 1 with ANT IN 2 to attain Dual TUNER PVR function.
3. Use a second RF cable ( not provided ), connect ANT OUT 2 to RF IN of TV
4. Use AV cable ( provided with Yellow, White, Red cable also called Composite ) to connect Composite OUT to TV's Composite Input.

**For HDTV Quality Viewing:**

1. Connect HDMI OUT to TV HDMI IN using HDMI cable ( not provided)Optional Connection;
   a. connect Y PR PB ( cable not provided ) OUT to Y PR PB of TV Set.
2. Turn On TV and Select HDMI or Component input mode from TV Select.

**For Additional Devices using the Extra HDMI INPUT:**

1. Using HDMI cable ( not provided ), connect to Blu Ray Player HDMI OUT or
2. Connect to Game Console HDMI OUT

**Use of built-in HDMI switching together with other devices such as BLU-Ray Player & Game Console:**

1. From HDMI S ( S means Select ) button of remote control, press accordingly each time to select either the following:
   a. IN 1 ( for input Device 1 ), b. IN 2 ( for input Device 2 ), c. TV Program
1. Tuning Local Digital TV /Radio Station

Step 1: Power Up
- When Set Top Box starts up, internal Hard Disk Drive (HDD) will be initializing. Refer to: Fig. 8.1.1

Step 2: Auto channel Detect
- Initialization completed, select the appropriate country, Aspect ratio, width height ratio, Region name, or use default. Figure as: Fig. 8.1.2
  - Press [OK] button to confirm and enter the [Auto Detect] window, Carriers will be detected.
  - Carriers scan completed, programs will be detected in the [Auto Detect] window, then, the “Scan Completed!” will be displayed, refer to: Fig. 8.1.3
  - Press [OK] to finish.

Note: The Hard Disk Drive (HDD) will initialize every time the receiver is switched “on”.
2. TV Screen Setup

The default TV resolution is {1080i} and the screen ratio is {Auto}. Change the TV resolution or screen ratio, if your TV does not match.

Step 1: TV Setup

- Press [MENU] button to pop up Main Menu
- Press [CH +/-, △/▽] button to move cursor to {Setup}, press [OK].
- Press [CH +/-, △▽] button to move cursor to {TV Setup} as shown in Figure 8.2.1
- Press [OK] to go to next menu.

Step 2: Choose TV Screen Resolution

- Press [CH +/-, △/▽] button to move cursor to {HD Resolution} as shown in Figure 8.2.2.
- Press [VOL+/−, ◄/►] button to select {1080i} or {720p} or {576p} or {480p} or {Native}.
  (When changing the TV resolution, status will appear on the front panel and TV screen.)

Step 3a: Choose TV Aspect Ratio

- Press [CH +/-, △/▽] button to move cursor to {Aspect Ratio} as shown in Figure 8.2.3.
- Press [VOL+/−, ◄/►] button to select {Auto}, {Horz Stretch}, {Centered}, {Half Zoom}, {Full Zoom}.
  (Width Height Ratio with 16:9)
- Press [OK] button to save setting {Full Screen}, {Letter box3}, {Auto}.
  (Width Height Ratio with 4:3)
Step 3b: Choose TV Width Height Ratio

- Press [CH +/-, ▲/▼] button to move cursor to {Width Height Ratio} as shown in Figure 8.2.4.
- Press [VOL +/-, ◄/►] button to select {4:3} or {16:9}
- Press [OK] button to save setting.

Step 3c: Choose TV Full Screen Ratio, Brightness and Contrast

- Press [CH +/-, ▲/▼] button to move cursor to {Saturation,Brightness,Contrast} as shown in Figure 8.2.5.
- Press [VOL +/-, ◄/►] button to select 1%-100%
- Press [OK] button to save setting
- Refer to above operations to set up brightness and contrast

Step 4: Set the Digital Video Output

- Press [CH +/-, ▲/▼] button to move cursor to {Digital Video} as shown in Figure 8.2.6.
- Press [VOL +/-, ◄/►] button to select between {Auto} or {HDMI Output} or {DVI Output}.
- Press [OK] button to save setting.

(Note: DVI OUTPUT option is not included in this particular model.)

Note: You can select {Auto} to optimize the hand-shaking and compatibility between your TV setting, Display Panel and the Set Top Box digital output (HDMI socket). In the event of incompatibility in Auto mode, or if an adaptor is being used, manually select {HDMI Output} or {DVI Output} in order to view a High Definition picture on your TV Set. If {DVI Output} or your viewing device does not support HDMI digital audio, you may have to make a separate audio connection between the Set Top Box and display / audio amplifier.
3. Location & Time Offset Set Up

There are 30-event timers. To ensure they work properly. The default timer mode is pre-set at “auto”. If your region is different, please select your own region.

Step1: Main Menu

- Press [MENU] button to pop up top menu as shown in Figure 8.3.1.
- Press [CH +/-, ▲/▼] button to move cursor to {Setup}
- Press [OK] button

Step 2: Select Time /OSD

- Press [CH +/-, ▲/▼] button to move cursor to {Time /OSD} as shown in Figure 8.3.2.
- Press [OK] button
Step 3: Choose Auto Timer Mode & Select Region

- Press [CH +/-, ▲/▼] button to move cursor to {Timer Mode} as shown in Figure 8.3.3
- Press [VOL +/-, ◄/►] button to select {Auto} as shown in Figure 8.3.4
- Press [OK] button to save setting.
4. Perform Factory Default

If you experience the setting problem, please perform Factory Default.

- Press [MENU] button to pop up main menu as shown in Figure 8.4.1
- Press [CH +/-, ▲/▼] button to move cursor to {Setup}
- Press [OK] button
- Press [CH +/-, ▲/▼] buttons to move cursor and highlight {Tuning} as shown in Figure 8.4.2
- Press [OK] button
- Press [CH +/-, ▲/▼] button to highlight {Search Mode} shown in Figure 8.4.3
- Press [VOL +/-,◄/►] buttons to select {Factory Default}
- Press [OK] to confirm.
9. Basic Operations

This chapter assumes that the Set Top Box has been installed correctly as detailed in the previous section. If the Set Top Box has not been installed or connected properly, please refer to the chapters installation & Quick Start Guide.

1. Change TV /Radio Channel

- Press [CH +/- ▲/▼] button to change channel up / down,
- or press numeric key [0,1..9] on the remote control directly to input the channel number,
- or press [CH UP, DOWN] buttons on the front panel to change channel up/ down.

2. Change Volume Level

- Press [VOL +/- ◀/▶] button to change volume level up/down.

3. Change TV /Radio Operation Mode

- Press [TV/R] button on the remote control or on the front panel to toggle between TV and Radio operation modes.
- The TV/RADIO LED on the front panel will be lighted up when switch to TV mode.

4. Mute the Sound

- Press [Mute] buttons to mute the sound (the audio bar becomes red color) as shown in Figure 9.4.1.
- Press it again to return normal.

Fig. 9.4.1
5. Audio Selection

- While watching TV or listening to radio, user may change the audio to left/right channels and different language if available.
- Press [Audio] button on the remote control to pop up Audio selection menu as shown in Figure 9.5.1.
- Press [VOL +/-, ◀/▶ & CH +/-, ▲/▼] to cycle mono-left, mono-right and stereo channel and other audio track if available.
- Press [OK] to saving the setting.

6. Electronic Program Guide (EPG)

- User may access the 24 hours / 7 days electronic program guide (EPG) if available.
- Press [EPG] button to pop up the TV Guide or Radio Guide depend on TV or Radio mode as shown in Figure 9.6.1.
- Press [VOL +/-, ◀/▶] button to select particular day of the week within the 7 Days EPG.
- Press [1] to select currently shown program, Refer to Fig 9.6.2.
- From this sub-menu, press [CH +/-, ▲/▼] to select channel / program.
- Press [OK] to confirm selected channel / program.
- Press [EXIT] to exit from Main Menu.

6A. Recording from EPG Time Setting

- Press [EPG] on remote control for TV Program Guide, refer to Fig. 9.6.1.
- Press [VOL +/-, ◀/▶] button to select particular day of the week within the 7 Days EPG.
- Press [CH +/-, ▲/▼] to select the TV program from the selected day.
- PRESS the ‘RED’ button (not the RECORDER red button) to set the selected program to be recorded at the specified EPG schedule.

6B. To edit or delete previously set EPG timer recording:

- Press [EPG] on remote control for TV Program Guide.
- Press ‘GREEN’ button on remote control to initiate list of programs set for recording.
1. **To Delete:**
   - Press ‘RED’ Button on the remote control, refer to Fig 9.6.4.
   - Select [Yes] to confirm or [No] to cancel and exit from main menu.

2. **To Edit**
   - Press ‘GREEN’ button on the remote control, refer to Fig. 9.6.5.
   - Press [CH +/-, / /] to select [Timer Mode], [Start Time] or [End Time].
   - Press [VOL +/-, / /] and [0-9] to edit date and time.
   - Press [OK] to confirm or [EXIT] to exit from main menu.

---

**7. TV/Radio Channel Information**

- Press [INFO] button once, information page will pop up, it includes the channel number and channel name, program information and current system time as shown in Figure 9.7.1
- Press [INFO] button again, information page will pop up, it includes the Carrier, Network, Service, Frequency, Bandwidth, Modulation, Hierarchy, Signal Level, Signal Quality, Software Version and other information as shown in Fig. 9.7.2.
- Press [Exit] button to exit from information page.
8. Subtitle Function

Subtitle

- The HDTV receiver supports subtitles if available.
- Press [SUBT] button to activate the Subtitle as shown in Figure 9.8.1.
- Press [VOL +/-, ◄►] button to choose {Subtitle ON} or {Subtitle OFF}
- Press [EXIT] to exit or wait for time out.
- Press [LANG] to select Subtitle type as shown in Figure 9.8.2
- Press [VOL +/-, ◄►] to select Subtitle language.
9. Wake Up Timer

- The HDTV receiver has 30 wakeup timers for program recording and service wakeup functions.
- Press [MENU] button to pop up Main Menu.
- Press [CH +/-, ▲/▼] button to move cursor to {Wakeup Timer} as shown in Figure 9.9.1.
- Press [OK] button.
- Press [CH +/-, ▲/▼] & [VOL +/-, ◀/▶] buttons to move cursor and select the options
- {Timer No.}: 1-30 Timer
- {Timer Mode}: Cycle OFF, ONCE, DAILY, WEEKLY & MONTHLY.
- {Service}: Select program channel.
- {Wake up Mode} : Select [Recording], [Service]
- {Wakeup Date DD/MM/YYYY}: Press [0..9] numeric keys to input the wakeup date.
- {Start Time}: Press [0..9] numeric keys to input the wakeup time in 24 hours format.
- {Stop Time}: Press [0..9] numeric keys to input the play time duration.
- Press [OK] button to save the input information for each wakeup timer.

10. Power ON /OFF

- Press [✓] button to switch the HDTV box {ON} and {OFF}. 
12. Recording

a. Begin to record
   - Press [REC] button to record. The sign of recording will be shown on the upper left corner of the screen.
   - 2 programs allow to record at the same time.

b. Recording status
   - When recording, press [INFO] button, you can get the record status information.

c. Time Shift
   - Press [PAUSE] button to pause the video and record. Fig 9.12.2
   - Press “play” button to continue the program from pause. In receive mode or record mode, press “FF” button to catch up the live program. Press “FF” button once, the speed of playback become faster, "Fast Forward 5" is the fastest.

d. Stop Recording
   - Press [STOP] to stop recording and save it.
   - If there are 2 program recording, you should select which one you want to stop, and then press [OK] to stop it.

e. Playback Files
   - Press [File] button to [Record Brower], select the file as shown in 9.12.4
   - Press [OK] button to playback.

f. Change speed of Playback
   - Press FB, FF button to change speed of file playing, speed sign will be shown on the upper left corner of the screen

g. Skip play-back location
   - Press [C Skip] to play forward, play back button can widely jump backward or forward

Attention: DO NOT cut off the power when recording, otherwise data in hard disk driver maybe lost.
10. Main Menu

Press the [MENU] button on remote control to enter the Main Menu as shown in the Figure 10.0.1. The following buttons are used in the menus to allow you to access and change the functions available.

- Press the [CH +/-, ▲/▼] buttons to move the cursor
- Press the [VOL +/-, ◀/▶] buttons to select or adjust the current setting.
- Press [OK] button to select the item currently highlighted by the cursor, or to save the current setting.
- Press [EXIT] button to leave the current Menu or Sub Menu.

Sub-menu
{TV} : TV program and related feature
{Radio} : Radio program and related features
{Recorder} : VCR program and related features
{Setup} : HDTV receiver system setup

1. TV Menu

- Press[CH +/-, ▲/▼] buttons to move cursor and highlight selection {TV Select} or {TV Guide} or {Preference} or {Management} as shown in Figure 10.1.1.
- Press [OK] to enter.
1a. TV Select

- Press [CH +/-, ▲/▼] buttons to highlight the desire TV channel as shown in Figure 10.1.2.
- Press [OK] button to select.
- Press [EPG] button to toggle the channel list between {ALL} and {By Alphabet}
- Press [1] button to display ‘Movie’ channel.
- Press [3] button to display ‘Show’ channel.
- Press [6] button to display ‘Education channel
- Press BLUE button to display ‘Favourite’ channel.
- Press RED button to display All channel.

1b. TV Guide

- Press [CH +/-, ▲/▼] buttons to highlight the desire TV channel as shown in Figure 10.1.3.
- Press [OK] button to select.
- The selected channel will be displayed in the right sub-window.
- The EPG (if available) will be shown in low half window.
- Press [EXIT] to exit the menu.
1c. TV Preference

- User can assign the TV channels into different favourite groups.
- Press [CH +/-, ▲/▼] buttons to highlight the desire TV channel as shown in Figure 10.1.4.
- Press [1] button to assign as ‘Movie’ channel.
- Press [3] button to assign as ‘Show’ channel.
- Press BLUE button to assign as ‘Favourite’ channel.
- Press RED button to skip channel.
- Press [OK] to save and exit the menu.

1d. TV Management

- User can delete and rename the TV channels.
- Press [CH +/-, ▲/▼] buttons to highlight the desire TV channel.
- Press [1] button to delete the channel as shown in Figure 10.1.5.
- Press [OK] button to confirm.
- Or press [EXIT] button to exit from menu.
- Press [2] button to rename the channel, keypad menu will be popped up as shown in Figure 10.1.6.
- Press [VOL+] button to clear entire string.
- Press [VOL-] button to delete one character.
- Press [CH +/-, ▲/▼; VOL +/-, ▼/▲] to move cursor.
- Press [OK] to enter one character.
- Press [EXIT] button and choose [Yes] to confirm and save the string.
- Press [EXIT] button and choose [NO] to exit.
- Press [3] button and enter number to change channel No.
- Press [EXIT] again to exit the menu.
2. Radio Menu


2a. Radio Select

- Press [CH +/-, ▲/▼] buttons to highlight the desire radio channel
- Press [OK] button to select
- Press [EPG] to toggle the channel list between {All} and {By Alphabet}
- Press [1] button to display ‘Pop’ channels.
- Press [3] button to display ‘Show’ channel.
- Press BLUE button to display ‘Favourite’ channel.
- Press RED button to display All channel.
  (If Live Signal can support)
2b. Radio Guide

- Press [CH +/-, ▲/▼] buttons to highlight the desire radio channel.
- Press [OK] button to select.
- The EPG will be shown in low half window (if available).

Fig.10.2.2

2c. Radio Preference

- Press [1] button to assign as ‘Movie’ channel.
- Press [3] button to assign as ‘Show’ channel.
- Press BLUE button to assign as ‘Favourite’ channel.
- Press RED button to skip channel.
2d. Radio Management

- User can delete and rename the radio channels.
- Press [CH +/-, ▲/▼] button to highlight the desire radio channel.
- Press [1] button to delete the channel.
- Press [OK] button to confirm.
- Or press [EXIT] to exit from menu.
- Press [2] button to rename the channel, keypad menu will be popped up.
- Press [VOL+] button to clear entire string.
- Press [VOL-] button to delete one character.
- Press [CH +/-, ▲/▼; VOL +/-, ▼/▲] to move cursor.
- Press [OK] to enter one character.
- Press [EXIT] and choose [Yes] to confirm and save the string input.
- Press [EXIT] and choose [NO] to exit.
- Press [3] button and enter number to change channel No.
- Press [EXIT] again to exit the menu.
3. Setup Menu

- Press [CH +/-, ▲/▼] buttons to move cursor and highlight the selection {Tuning} or {Delete Carrier} or {TV Setup} or {Time/OSD} or {Wakeup Timer} or {Password} or {Software Upgrade} or {Receiver Status} as shown in Figure 10.3.1.
- Press [OK] to enter.

3a. Tuning Menu

- Press [CH +/-, ▲/▼] buttons to highlight the items you want to change shown in Figure 10.3.2.

Country


Service Type

- Press [VOL +/-, ◀/▶] buttons to cycle {ALL}, {FTA}, {TV Only} & {FTA TV Only}; where default selection is {ALL}.

Search Mode / Default

- Press [VOL +/-, ◀/▶] buttons to cycle {Quick Search}, {Auto Edit}, {Manual}, {Auto}, {Factory Default}, {Carrier Edit} and {Auto Edit}; where default selection is {Auto Detect}.
- Press [OK] to execute.
- Press [EXIT] to exit.

- {Auto}: Auto scan will be carried out and the associated programs/channels will be detected.
- {Manual}: User may input the channel frequency for channel detection.
- {Auto Detect}: Auto scan and display details of the programs/channels.
- {Auto Edit}: To scan the carrier/channels.
- {Carrier Edit}: To edit the frequency of the carrier.
- {Factory Default}: When the HDTV Set Top Box goes into an unknown state, user may perform the factory default to reset the unit.
3b. Delete Carriers

- Press [CH +/-, ▲/▼] button to highlight the carrier as shown in Figure 10.3.3.
- Press [1] button to delete carrier, multiple carriers can be selected. Press [OK] to save the change.
  Keypad menu will pop up as show in Figure 10.3.4.
- Press [CH +/-, ▲/▼, VOL +/-, ◄/►] to select the correct string.
- Press [VOL+] button to clear entire string.
- Press [VOL-] button to delete one character.
- Press [OK] to enter one character.
- Press [EXIT] and choose [Yes] to confirm and save the string input.
- Press [EXIT] and choose [NO] to exit.
- Press [EXIT] again to exit the menu.

3c. TV Setup Menu

The default TV resolution is {1080i} and the screen ratio is {Auto} and [16:9]. Change the TV resolution or screen ratio, if your TV does not match.

Step 1: TV Setup

- Press [MENU] button to pop up Main Menu
- Press [CH +/-, ▲/▼] button to move cursor to {Setup}
- Press [OK]
- Press [CH +/-, ▲/▼] button to move cursor to {TV Setup} as shown in Figure 10.3.5.
- Press [OK] to go to next Screen.
Step 2: Choose TV Screen Resolution

- Press [CH +/-, ▲/▼] button to move cursor to {HD Resolution} as shown in Figure10.3.6.
- Press [VOL +/-, ◀/▶] button to select {1080i} or {720p} or {576p} or {Native}.

Step 3: Choose TV Screen Ratio

- Press [CH +/-, ▲/▼] button to move cursor to {Aspect Ratio} as shown in Figure10.3.7.
- Press [VOL +/-, ◀/▶] button to select [Auto], [Horz Stretch], [Centered], [Half Zoom], [Full Zoom], (Width Height Ratio with 16:9) {Auto}, {Full Screen}, {Letter box} (Width Height Ratio with 4:3)
- Press [OK] button to save setting.

Step 4: Choose TV Width Height Ratio

- Press [CH +/-, ▲/▼] button to move cursor to [Width Height Ratio] as shown in Fig 10.3.8
- Press [VOL +/-, ◀/▶] button to select [16:9], [4:3]
- Press [OK] button to save setting.
Step 5: Antenna Power

If you need to power up a 5V (50mA Max) active antenna, you may go to the {Antenna Power Supply} in TV setup menu and choose [ON].

- Press [CH +/-, ▲/▼] buttons to move cursor to {Antenna Power} as shown in Figure 10.3.9.
- Press [VOL +/-, ◄/◢] buttons to select {ON} or {OFF} depends if you need to power up 5V antenna output.
- Press [OK] button to save setting

3d. Time/OSD Menu

- Press [CH +/-, ▲/▼] button to move cursor to {Time /OSD} as shown in Figure 10.3.10.
- Press [OK] button

Step 1: Choose Auto Timer Mode

- Press [CH +/-, ▲/▼] buttons to move cursor to {Timer Mode} as shown in Figure 10.3.11.
- Press [VOL +/-, ◄/◢] buttons to select [Auto], [Manual].
- Press [OK] to save setting.
Step2: Choose Manual Timer Mode & Select Region

- Press [CH +/-, ▲/▼] button to move cursor to {Timer Mode} as shown in Figure 10.3.12.
- Press [VOL +/-,◄/►] button to select {Manual}.
- Press [CH +/-, ▲/▼] button to move cursor to {Date and Time} as shown in Figure 10.3.13.
- Press [VOL +/-,◄/►] and [0-9] to set the correct Date and Time.
- Press [OK] button to save setting.
- Press [EXIT] button to exit from Main Menu.
3e: Select Language

- Press [CH +/-, ▲/▼] to [OSD Language]
- Press [VOL +/-, ◄/►] to language.

3f: Select TV output Type

- Press [CH +/-, ▲/▼] to [TV output type]
- Press [VOL +/-, ◄/►] to select [LCD], [CRT] (CRT is used for 4:3 TV)
3g. **Wakeup Timer**

- The HDTV Set Top Box has 30 wakeup timers for program recording, and other service.
- Press [MENU] button to pop up Main Menu.
- Press [CH +/-, ▲/▼] button to move cursor to {Wakeup Timer} as shown in Figure 10.3.16
- Press [OK] button.
- Press [CH +/-, ▲/▼] & [VOL +/-,◄/►] buttons to move cursor and select the options as shown in Figure 10.3.17
- {Timer No.}: 1~30 Timer
- {Timer Mode}: Cycle OFF, ONCE, DAILY, WEEKLY & MONTHLY.
- {Service}: Select program channel.
- {Wakeup Mode}: select {Recording}, {Service}
- {Wakeup Date DD/MM/YYYY}: Press [0..9] numeric keys to input the wakeup date.
- {Start Time}: Press [0..9] numeric keys to input the wakeup time in 24 hours format.
- {Stop Time}: Press [0..9] numeric keys to input the play time duration.
- Press [OK] button to save the input information for each wakeup timer.
4. PVR Function

Press [CH +/-,▲/▼] to move cursor and highlight {Record Browser} or {Digital Photo} (if available) or {Storage Device Info} or {Save Remove} as shown in Figure: 10.4.1

4.1 Record Browser
(Video Program Browser)

- Press [CH +/-,▲/▼] button to highlight desire TV channel as shown in Figure: 10.4.2
- Press [OK] button to select
- Press [Red] button to delete video channel
- Press [Green] button to rename video channel.
Keypad menu will pop up as shown in Figure 10.4.3
- Press [VOL +/-,◄/►] button to delete a string
- Press [CH +/-,▲/▼] to move name cursor
- Press [CH +/-,▲/▼, VOL +/-,◄/►] button to move symbol cursor
- Press [OK] button to input a character
- Press [EXIT] button to choose [YES] to confirm and save string input
- Press [EXIT] button to choose [NO] to cancel saving and exit
- Press [EXIT] button again to leave Main Menu.

NOTE: Hotkey of {Record Browser} is the “FILE” button on remote unit, press this button to quickly open recorded files.
- Press [YELLOW] button to cycle the record of ‘Audio’, ‘Photo’ and ‘Video’.
- Press [RED] button to delete video channel
- Press [OK] to confirm
- Press [Green] button to rename video recording. Keypad menu will pop up as shown in Figure: 10.4.4
- Press [VOL +/-, ▲/▼] button to delete a string
- Press [CH +/-, ▲/▼] to move name cursor
- Press [CH +/-, ▲/▼; VOL +/-, ▲/▼] button to move symbol cursor
- Press [OK] button to input a character
- Press [EXIT] button to choose [YES] to confirm and save string input
- Press [EXIT] button to choose [NO] to cancel saving and exit
- Press [EXIT] button again to leave Main Menu
- Press [YELLOW] button to enter video recording
  (Photo Option is used to capture the MPEG2 video screen.)
- Press [EPG] button to enter EPG event record list
- Press [OK] button to select
- Press [EXIT] button to leave menu

*Special Note:* Playback only of MPEG 4 video programs & captured still pictures that were recorded from this model of PVR device.
4.2 **Storage Device Info**

a. No.: Storage device number

b. Interface: Storage device type, such as ‘SATA’ & ‘USB’

c. Disc Status: such as ‘Active’ & ‘Inactive’.
   When there are two hard disks, press ‘green’ button to switch.

d. Driver: Driver symbol.

e. File System(FAT & Proprietary)
   - The receiver can identify a USB memory stick with FAT32 file system.
   - If USB device is an External Hard Disk Drive, formatting this Hard Disk Drive is necessary. By pressing the "RED" button function (not RED Rec button ) of the remote control, formatting will be achieved. Note that all previously stored data will be erased after formatting is completed. The format uses a Proprietary file format which is NOT compatible to format being used in a Personal Computer (PC), therefore, playback or file transfer of data using a PC is not possible. This can only be playback using this particular SetTop Box.

f. Drive Type: ‘Recorder’, ‘JPEG’ & ‘Unknown’
   - Recorder: hard disk is active formatted with Proprietary
   - JPEG: A USB memory stick with FAT32 is identified
   - Unknown: device is inactive or not be formatted

g. Rec
   - When recording, a recording icon appear

4.3 **Playlist Manager & Digital Photo**

- The receiver supports JPEG photo, when insert a USB memory stick, ‘Digital photo’ is active and ‘Playlist Manager’ appear.

*Special Note: Playback only of MPEG 4 video programs & captured still pictures that were recorded from this model of PVR device.*
4.3.1 **Playlist Manager**

- Move the cursor and make ‘Playlist Manager’ highlight, press ‘OK’ to enter.
- Create new playlist, edit and rename playlist.
  
  a. Press ‘red’ button to create a photo list.
  b. Press [VOL +/-, CH +/-, move cursor to the photo which you want to play, press ‘red’ button to add to playlist.
  c. Repeat the operation to add photos.
  d. Press green button to save the playlist, keypad menu will be popped up.
  e. Return ‘Playlist Manager’ menu, move the cursor to the playlist built.
  f. Press ‘OK’ to play, press ‘STOP’ to exit.

When the cursor stays on a picture, press ‘OK’ button to preview the photo in a window.

- Press [VOL+] button to clear entire string.
- Press [VOL-] button to delete one character.
- Press [CH +/-, VOL +/-, move cursor to the photo which you want to play, press ‘red’ button to add to playlist.
- Press [OK] to enter one character.
- Press [EXIT] button and choose [YES] to confirm and save.

Special Note: File Transfer between HDD and USB connection is not possible for this model.
### 4.3.2 Digital Photo

**a. Play Mode**
- Press [CH +/-, ▲/▼] button to move cursor to [Play Mode] as shown in Figure 10.4.12.
- Press [VOL +/-, ◄/►] button to select [Normal] or [Shuffle]

**b. Repeat Mode**
- Press [CH +/-, ▲/▼] button to move cursor to [Repeat Mode] as shown in Figure 10.4.13.
- Press [VOL +/-, ◄/►] button to select [ON] or [OFF]

**c. Transition**
- Press [CH +/-, ▲/▼] button to move cursor to [Transition] as shown in Figure 10.4.14.
- Press [VOL +/-, ◄/►] button to select {5 second} or {6 second} or {7 second} or {9 second} or {12 second} or {16 second} or {20 second}]

**d. Slide Show**
- Press [CH +/-, ▲/▼] to move cursor to [Slide Show] as shown in Figure 10.4.15
4.4 Safety Removal of Hard Disk Drive
(Please [Safe Remove] before remove the USB device/HDD.)

- Press [CH +/-, ▲/▼] button to move cursor to [Safe Remove]
- Press [OK] and [Confirm safe Remove?] will be shown (Fig. 10.4.16)
- Select ‘YES’ & press [OK] to confirm to remove
- The USB device can be removed safely

Special Note: Recommended brands of hard disk drive to be used with this particular model of PVR: Seagate & HITACHI.

4.5 Password Setup

In main MENU, enter "Recorder", then enter "Storage Device Info", User can press “Yellow” button to enter Password Setup function.

- In "Storage Device Info", press “YELLOW” button to pop up the ‘Password Setup’ window, and enter the new password.
- User may change the password any time.
- Press [0-9] numeric keys to input old password, and the new password twice.
- Press [EXIT] to leave the menu.
- Default Password is “0000”
5 Software upgrade

- 1. Software Upgrade Via OTA
- 2. Software Upgrade Via USB
  a. Insert the USB memory device in PC. (the format must be FAT / FAT32)
  b. Create a folder named ‘PAC7101-DVBT’ in a FAT32 USB memory device
  c. Copy the new software to the folder
  d. Insert the USB memory device into the USB port of the recorder.
  e. Choose ‘Software Upgrade Via USB’ and press ‘OK’ to confirm
  f. The receiver restarts and enters the software upgrade interface. Till the upgrade complete, the receiver will restart again.

Attention: During upgrading, do not cut off the power or power “off” the receiver, otherwise software upgrade will not be completed.
## 12. Trouble Shooting

If you experience difficulty when operating the HDTV set top box, check the following items before calling for service.  
If you can’t solve the problem even after referring this troubleshooting guide, please call the customer support hotline.

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>SOLUTION</th>
</tr>
</thead>
</table>
| The indicators on the front panel do not illuminate | Check that the power cable is plugged into the wall outlet, and the wall outlet is switched on.  
Check that power is available from the wall outlet using a portable desk lamp or other portable appliance. |
| Cannot Tune Channel                               | Check that the antenna is correctly connected to the Set Top Box.  
Reset to factory default then auto tune for channel searching. |
| No Picture                                        | Ensure the HDTV Set Top Box is switched on.  
Check the A/V and /or RF connections between the HDTV box and the TV. |
| No Sound                                          | Check that the TV is switched on and set up properly.  
Check that if you have selected the correct channel or A/V input on your TV.  
Check that the HDTV box is under Mute status. |
| Remote Control Not Operate                        | Point Remote Control directly towards the HDTV box.  
Check and replace batteries if necessary. |
| No or Bad Signal                                  | Check the antenna cable to the HDTV box for damage or loose connections.  
Set the country correctly in the Turing menu.  
Check the position of the antenna-realign antenna if necessary.  
Check for interference from any other devices connected between antenna and the HDTV box.  
Check the “Signal” & “Quality” in the information window. |
| Forget PIN Code                                   | Contact the HDTV box service agent in order to reset the HDTV box.  
Default password “0000” |
13. Technical Specification

- **Tuner & Demodulator**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Frequency</td>
<td>177.5MHz to 816.5MHz</td>
</tr>
<tr>
<td>Input Power Range</td>
<td>-80 to -35 dBm</td>
</tr>
<tr>
<td>Input Connector</td>
<td>IEC Female, 75ohm</td>
</tr>
<tr>
<td>Output Connector</td>
<td>IEC Male, 75ohm</td>
</tr>
<tr>
<td>IF Bandwidth (IF BW)</td>
<td>7/8MHz</td>
</tr>
<tr>
<td>Center Frequency</td>
<td>36MHz</td>
</tr>
<tr>
<td>Demodulation</td>
<td>OFDM</td>
</tr>
<tr>
<td>FEC</td>
<td>AUTO, 1/2, 2/3, 3/4, 5/6, 7/8</td>
</tr>
<tr>
<td>Mode (FFT)</td>
<td>2K, 8K</td>
</tr>
<tr>
<td>Constellations</td>
<td>QPSK, 16QAM, 64QAM</td>
</tr>
<tr>
<td>Hierarchy Mode</td>
<td>No-Hierarchical, Hierarchical</td>
</tr>
<tr>
<td>Guard Intervals</td>
<td>1/4, 1/8, 1/16, 1/32</td>
</tr>
<tr>
<td>Symbol Rate, MS/s</td>
<td>4.354(IF BW=7MHz) to 31.67(IF BW=8MHz)</td>
</tr>
<tr>
<td>Eb/No Performance</td>
<td>Exceeds DVB rec.</td>
</tr>
</tbody>
</table>

- **Video Decode**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decoding</td>
<td>MPEG-4 AVC H.264, MPEG-2 MP@HL, MPEG-2 MP@ML, ISO/IEC 13818-2, 11172-2</td>
</tr>
<tr>
<td>Date Rate</td>
<td>Max 15Mbit/s</td>
</tr>
<tr>
<td>TV Standard</td>
<td>PAL</td>
</tr>
<tr>
<td>Aspect Ratio</td>
<td>4:3, 16:9</td>
</tr>
<tr>
<td>Video Format</td>
<td>1080i, 720p, 576p, 576i</td>
</tr>
<tr>
<td>Output Level</td>
<td>1Vpp +/- 10%</td>
</tr>
</tbody>
</table>

- **Audio Decode**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decoding</td>
<td>ISO/IEC 11172-3 MPEG 1 Layer I &amp; II, ISO/IEC 13818-3 MPEG 2 Layer I &amp; II,</td>
</tr>
<tr>
<td>Sampling Frequency</td>
<td>32, 44.1, 48 KHz</td>
</tr>
<tr>
<td>Peak Output Level</td>
<td>2.0Vrms into 600 ohm</td>
</tr>
<tr>
<td>Audio Mode</td>
<td>Stereo, Dual Channel, Joint Stereo, Audio L/R, Mono-L, Mono-R</td>
</tr>
</tbody>
</table>
- A/V & Data Port

Component output : YPbPr progressive component output
HDMI output      : HDMI video & audio output
Video Output     : CVBS/RCA connector
S-Video Output   : Y/C Mini- DIN Connector
Audio R/L        : RCA Audio L & R
SPDIF            : RCA coaxial and optical SPDIF for Doblly Digital, MPEG Bit Stream

- Front Panel Display

5 Buttons        : Power, Channel Up, Channel Down, Volume Up, Volume Down
Power LED (RED)  : Light up when in Standby mode

- Power Supply

Input Voltage     : 12V dc
Power Consumption : 24W max
Standby          : 1Wmax
Operation Temperature : 0 to 40°C
Storage Temperature : -10 to 60°C

- Weight & Dimension

Weight           : 1.5kg approx
Dimension        : 300(W) x 230(D) x 60(H) mm
14. Glossary

APID
Audio Packet Identifier

BER
Bit Error Rate. Used as a measure of the digital signal quality

DVR
Digital video recorder

Electronic Program Guide (EPG)
An EPG is the electronic version of a printed program guide

Forward Error Correction (FEC)
A system of error control for data transmission

Frequency
The number of cycles or events per one second, which is expressed in the unit of Hertz (Hz)

FTA
Free To Air

kHz
kilohertz - The prefix kilo means thousand, i.e. 1,000 Hz

MHZ
Megahertz - The prefix mega means million, i.e. 1,000,000 Hz

MPEG
Moving Picture Experts Group. Established by the International Standards Organization, which has and continues to develop Standards for digital compressed moving pictures and associated audio.

OSD
On Screen Display

Packet Identifier (PID)
A unique integer value used to identify elementary streams of a program in a single or multi-program MPEG-2 stream
PAL, NTSC and SECAM
Standards for encoding colour in an analogue TV signal

PCR
Program Clock Reference

Symbol Rate
Speed of the digital package transmission

SPDIF
Sony/Philips digital interface format. Digital audio output.

Ultra High Frequency (UHF)
A defined frequency range of Radio frequency for TV broadcasting

Very High Frequency (VHF)
A defined frequency range of Radio frequency for TV broadcasting

VPI
Video Packet Identifier