



Model AIHT652



Digital Terrestrial TV
Receiver with USB
Recorder & Media Player

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1. Reference

1.1 General Features

DVB-T, DVB-T2 Compliant MPEG-II, H.264, H.265

PAL & NTSC Conversion

8 favorite channel groups and Parental Lock

Multi-language menus

Multi-language audio support

Multi-language DVB Subtitle output

7 day Electronic Program Guide (EPG)

Teletext output through VBI and OSD where transmitted

USB 2.0 Interface



2. Product Overview

2.1 Front Panel



- 1. STORAGE red LED:** USB Recording or Playback activity indicator.
- 2. SIGNAL green LED:** Transmission Lock Indicator. The green LED also flashes to acknowledge receipt of Remote Control commands.
- 3. LED numbers:** tuned channel number. In standby, local time - dimmed
- 4. POWER:** Switches between operation and standby modes.
- 5. ▲ / ▼:** Change channels while watching programs or menu Up / Down.

2.2 Rear Panel



- 1. ANTENNA:** Coaxial cable TV signal input.
- 2. D.AUDIO:** Digital Audio output to HiFi amplifier etc.
- 3. HDMI:** High Definition Audio Video cable output to TV or display.
- 4. VIDEO / AUDIO L&R:** Composite video & analogue audio RCA cable outputs.
- 5. IR-EXTN:** External IR receiver input (optional) to receive RCU commands.
- 6. 12-15V DC:** Connect to the 12V DC mains power adapter included.
- 7. USB2.0:** Host Port for Flash SSD or HDD storage, compatible WiFi modem or High Speed Hub, <500mA total.
– USB2.0 port is located in the side of the receiver.

2.3 Remote Control Unit

Functions of fixed or standard RCU keys

⏻ : Switches between Operate & Standby modes

⏪ : Previous item in Menu or Media Player

⏩ : Next item in Menu or Media Player

⏮ : Rewind, x 2 to x 64

⏭ : Fast Forward, x 2 to x 64

⏸ : Play / Pause, TimeShift or Media Player

■ **USB**: Stop or USB menu entry shortcut

● **REC**: Record selected program playing live

ZOOM: Picture zoom function

AUDIO: Displays Audio options submenu

SUB: Displays Subtitle selection submenu

TXT: Displays teletext submenu

INFO: Displays program Information panel

MENU: Activate (or Exit) Main Menu

EXIT: Way out of Menu selection step by step

VOL-◀ / VOL+▶ : Adjust audio volume level in viewing mode; move across in Menus

CH+▲ / CH-▼ : Change program in viewing mode; move up and



down in Menus


OK: Display program list in viewing mode, or in a menu confirm a selection

EPG: view Electronic Program Guide, access Timer Record

FAV: Display your favorite channel list

FIND: Quickly find channels you want

RECALL: Select the last viewed channel(s)

: Mute Audio, press again to release

Display: Select the HDMI AV output screen resolution

PAGE+/-: Menu Page Up / Down


NUMBER KEYS 0 to 9: Select a TV or Radio channel

DTV: no function assigned

TV/RADIO: Switch between DVBT / T2 channels, no Web Radio function

Training the 'TV CONTROL' keys



 **AV/TV, VOL- & VOL+:** Learning keys can be used to operate your TV or display.

1. Face the top of the TV or Display's original remote control towards this device's remote control, about 3cm apart.

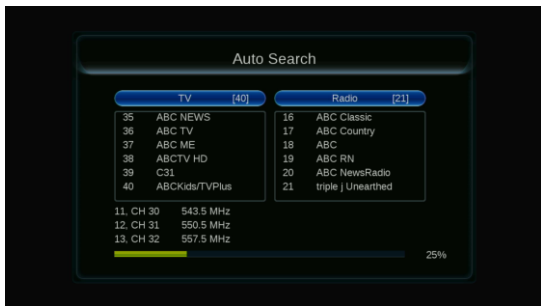
2. Hold the 'SET' key for 3 seconds until the red light glows more brightly.
3. Press the glowing 'Ⓟ' POWER key, it will flash 'available' for 10 seconds.
4. Press the 'POWER' key on the original remote control.
5. The red light will flash 3 times and glow steadily in acknowledgement.
6. Press 'SET' to save your new remote-control command(s).
7. Repeat to clone up to 4 TV or Display remote functions.

Installation

Select a mechanically stable and well ventilated location to place your receiver. Connect Antenna & AV Output cables before powering up your receiver. Connect the power supply and finally the mains power. The receiver will respond showing the word "boot" on the front panel number display. Allow some 5 seconds for it to start. When you see this display:



press the 'OK' key to start Auto Search. Default Output Resolution is set to 720p to maximize display compatibility, but can be changed by the user before or after Auto Search. The receiver lists the channels as they are found. If more than 1 transmitter is being received you can limit the channels found by removing the antenna plug as the channels not required are passed, or allow the receiver to manage repeat channels.



The receiver will automatically save the channels found. You can navigate these channels by 1/ pressing the 'OK' key to reveal the list of channels, 2/ pressing '▲' or '▼' 3/ followed by the 'OK' key to make a new selection. 'RECALL' simplifies quickly changing between several channels of interest.



The **'Info'** panel is a rich source of useful information. Now & Next program names and times, Signal Level & Quality bars, channel Centre Frequency, program broadcast Resolution and Compression standard are included.

USB2.0 Compatibility

The receiver is compatible with most USB storage devices, and has been tested with up to 3TB size storage devices. As there are many thousands of USB storage device types in existence it is not possible to list compatible devices. Should you have compatibility issues we suggest you try a different and known brand USB2 storage device. Brands we found good include Toshiba and San Disk. The red light on the front panel flashing indicates USB record or play activity. For device safety, don't remove USB devices whilst the Red STORAGE light is flashing.

3. Channel List functions

3.1 TV Channel List

Select FAVourites, Lock, Skip, Move and Edit channels from TV channel list.

3.2 Radio Channel List

Similar function to the TV Channel List.

3.3 TV Channel Recycle List

See the channels you delete from the TV channel list.

3.4 Radio Channel Recycle List

See the channels you delete from the Radio channel list.

3.5 LCN

Logical Channel Numbering, change from On (default) to Off.

3.6 Parental Lock

Limits program access by broadcaster ratings, or to change password.

You can also lock the changes you have made using **Rating, Menu Lock & Channel Lock**, also **Change password**.

3.7 Global Volume

Off (default), all channels have the same volume level. Select On to enable different volume levels for each channel.

4. Channel Search

4.1 Auto Search

Receiver searches automatically to find and save available channels (default).

4.2 Manual Search

Select particular channels by Frequency to search for programs.

4.3 Antenna Power

Default: Off. Only select On when a line amplifier is connected between the antenna & receiver input. Select On to power a 5V mast amplifier which consumes less than 300mA.

4.4 FTA

Select "YES" to search for Free To Air channels. Default: Yes.

4.5 Auto Search Action

Reinstall: Auto Search, *deletes* channels already saved.

Update: Auto Search, *keeps* channels already saved.

5. Language

5.1 Language

A different Menu Language can be selected. Default: English.

5.2 First Audio

Select preferred audio language. In Australia only English is available.

5.3 Second Audio

Select the second audio language, where broadcast.

5.4 Subtitle Language

Select subtitle language. In Australia only English is broadcast. Media Center Recordings include Subtitles, & replaying can be switched On or Off.

5.5 Teletext Language

Select the teletext language. Teletext is no longer broadcast in Australia.

6. AV settings

6.1 TV System

Select from Auto, PAL and NTSC. Change with caution!

6.2 Video Out Resolution

Select between 1080p, 1080i, 720p, 576i or 576p. Default is set to 720p.

6.3 Aspect Mode

Match the display shape to the screen ratio, either 4:3 or 16:9.

6.4 Video effects

Select from Default, Standard and Vivid.

6.5 Audio Out

Select between BS Bitstream and LPCM Linear Pulse Code Modulation Outputs.

6.6 Audio Description / AD

In AV Settings / Audio Description, select ON to enable AD (where broadcast). Media Center recordings include AD if it is Menu selected at time of recording. AD remains part of a recording and cannot be switched off in playback. AD presence shows in the 2nd Info panel EPG, activated by pressing 'INFO' twice.

6.7 AD Volume Offset

Adjust Audio Description volume level from main audio volume level.

7. Time

The receiver calculates local time including Summer Time offset

from GMT references broadcast in each multiplex. Time zone can also be selected manually. Eastern Australian Time is +10Hrs, South Australia & Northern Territory are +9.5Hrs and Western Australia is +8Hrs from GMT.

8. System

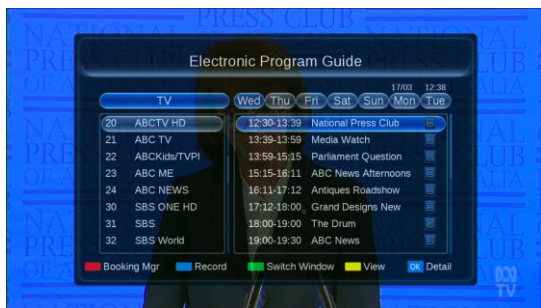
8.1 System Information

Displays basic information about the receiver.

8.2 Factory Default

Reloads factory default parameters. Also deletes channels, rescan required.

8.3 Booking Manager



To view the Electronic Program Guide or to book a Timer Record event, press the 'EPG' key. To select a channel press the 'CH+▲

or **CH-▼** keys. Then press **'VOL+▶'** to move to the program list of the selected TV channel.

Details may take some seconds to load. To view EPG & details, press the **'OK'** key. To reserve a recording press the Blue colored key. A red clock icon will appear next to the selected program, or you will be warned if your new booking clashes with another. The receiver can access more than one program simultaneously, as long as the programs are in the same channel multiplex. To select a different channel move back to the TV window by pressing the Green key. View or edit bookings by pressing the Red key.

8.4 OSD Settings

Manage Subtitle Display, On Screen Display timeout and OSD transparency.

8.5 USB Upgrade

CAUTION! Inappropriate use may render the receiver unserviceable.

8.6 USB Backup

A unique Setup can be saved to an external USB device.

8.7 Other

Auto Standby, auto firmware upgrade, auto channel list update options.

9. Media Center

9.1 Play PVR Recordings



Connect a USB Flash or HDD storage device to the side USB port. Until the receiver has recognized the device, receiver may prompt 'No USB device connected'. The larger the storage capacity the more time recognition may take. To view recordings press the '■ USB' shortcut key, and select 'Play PVR Recording' from Media Center menu. Stepping through recordings is simplified by 'Jump' function which moves instantly through recordings in 30, 60, 90, 120 or 180 second steps, determined by pressing the 'RECALL' key. You can Fast Forward '▶▶' or Rewind '◀◀' from 2 X to 64 X or Skip '▶▶I' to the next recording. The 'Info' panel includes program name, date & time, Duration, Progress, Storage capacity, recording Resolution, Compression standard and more. Subtitles are always recorded but the user can enable or disable when playing back. An Audio Description / AD track remains in a recording If it is selected when recording in the AV Settings Menu.

9.2 Play Music

Plays *.mp3, *.mp2, & *.aac, music & audio files.

9.3 Picture Show

Plays *.jpg, *.png, *.bmp, *.jpeg, & *.gif, format picture files.

9.4 Play Movie

Plays *.mkv, *.avi, *.mp4, *.vob, *.ts, *.mt2s, *.flv, *.mpg, *.3gp & *.mov format movie files. Player enters full screen mode after the "OK" button is pressed.

9.5 HDD information

View USB storage device information, including Total size, Free space etc.

9.6 Storage Format

Erases ALL previous recordings. USB storage devices should be prepared by Formatting on the receiver before use. The larger the drive, the longer it takes to detect & format. FAT32 is an older file system not as efficient as NTFS, which supports more features. FAT32 offers broader compatibility with other operating systems. Individual FAT32 files can't exceed 4 GB in size, a FAT32 partition must be less than 8 TB. Default exFAT or FAT16 USB flash can usually be forced to FAT32 formatting on the receiver.

9.7 DVR Configuration

Select USB storage device partitions for TimeShift and Digital Video Recorder.

9.8 TimeShift Record

A useful way to pause live program and return to it a few minutes later. If not already prepared, connect & format a USB storage device. Press the '▶|▶' key to Freeze or Play program. **Jump** permits stepping through a TimeShift recording instantly - in steps of 30, 60, 90, 120 or 180 seconds, determined by pressing the 'Recall' key. You can also Fast Forward '▶▶' & Rewind '◀◀' from 2 x to 64 x in TimeShift. TimeShift is limited to 2 hours maximum, and creates a Recording that can be accessed later from Play PVR Recordings. Radio channels can be Recorded but do not TimeShift.

10. Network

An optional compatible USB2 WiFi modem is required, obtain from your supplier.

10.1 Network Config

Before Web Radio & Yahoo News can be used. Receiver must connect to a nearby WiFi Network. Plug in the optional modem & enter Network Configuration. When the small red light in the top left of the WiFi panel turns green, you're ready to connect. Click on WiFi Manager to set up. Once 'Connected' press **Exit** to return to

Network menu.

10.2 Yahoo News

A selection of world wide News stories provided by Yahoo. Select Yahoo News & press **OK** to load.

10.3 Web Radio

Press **CH+▲** or **CH-▼** and **OK** keys to load or reload. As broadcaster links may change without notice, service is not guaranteed. Links are delivered by an external server. Whilst some programs load within a few seconds, others can take longer to load.

11. Trouble Shooting

Before contacting your local service center, carefully read the tips below. If a problem persists after following the procedures suggested, please contact your local distributor or service center for further instructions.

1. No light from front panel LED numbers. (product will not switch on.)

- Check the power cable and make sure the device is properly plugged in.
- Check that the mains power supply is connected and switched on.
- Connect the mains power adapter to a different power outlet.

2. No picture

- Ensure the product has power and press the STANDBY key.
- Ensure the HDMI or AV cables are firmly connected to the display.
- Ensure the antenna cable is properly connected to the receiver.
- Reset to Factory Default from the System Menu.
- Activate channel search from the Channel Search Menu.
- Check the brightness level of the display.
- Check if the channel you seek is currently on air on a known receiver.

3. Poor picture quality

- Ensure no mobile phone or microwave oven is operating near the receiver.
- Switch lighting and other electrical devices nearby Off.
- Check the signal on another TV. Repair antenna if the level is unstable.
- A pro installer with proper instrumentation can make it work for you.

4. No or poor sound quality

- Check your HDMI / AV cables are connected correctly.
- Check the audio volume levels of your TV set and the receiver.
- Check if the receiver or TV sound is on Mute.
- Check audio type or soundtrack option. (Where applicable)

5. Remote control does not operate.

- Point the top end of the remote control directly towards the front of the receiver.

- Check RCU's send Red LED and RECEIVER receive Green LED flashes.
- Look on an Andriod phone camera (without IR filter) to see the emitter flashing.
- Remove batteries, check polarity and reinsert in the remote control.
- Replace the batteries in the remote control with a fresh set.

6. Cannot connect to network.

- Ensure you have more than 320 kilobytes per second available.
- Check the Wi-Fi works with other devices.

12. Technical Specifications

Tuner & Channel

Frequency Range	174 MHz to 820MHz
DVB T2 Signal Level	<-82dbm
ANT Power	5V, I max = 300mA

MPEG

Transport Stream	MPEG-2 or H.264 (MPEG4)
Profile Level	Single-chip HEVC, H.264, H.263, MPEG4, MPEG2, AVS, AVS+, VC1
Aspect Ratio	16:9 or 4:3
Video	1080p, 1080i, 720p, 480p, 480i, 575p or 576i

Resolution	
Audio Decoding	MPEG-1/2 layer I/II/III, Dolby AC3 / AC3+(optional), DRA 2 CH/5.1 CH (optional)
Audio Modes	Stereo, Joint Stereo, Dual Channel or Single Channel

Power Supply

Input Voltage	12V 1A
Power Consumption	Max. 7.5W
Protection	Separate internal fuse. Protect input against lightning

Physical Specification

Operating Temperature	0°C to + 40°C
Storage Temperature	-40°C to + 65°C
Inclusions Options	Receiver, Remote Control Unit, AAA batteries x 2, HDMI Cable & User Manual. IR Receiver Extension (IRX652), Web Radio WiFi Modem (WFM652), Additional Remote Control Unit (RCU652)

