

Digital Terrestrial HD Receiver



User Manual Návod k obsluze Bedienungsanleitung Manual del usuario Manuel d'utilisation Korisnički priručnik Felhasználói kézikönyv Manuale utente Instrukcja obsługi Bruksanvisning Používateľská príručka

www.thomsonstb.net

Fig. 1



Fig. 2







Fig. 4







Fig. 5







Fig. 7









THOMSON

This product has been manufactured and sold under the responsibility of STRONG Group. THOMSON and the THOMSON logo are trademarks of Technicolor (S.A.) or its affiliates and are used under license by STRONG Group.

> Represented by STRONG Ges.m.b.H. Franz-Josefs-Kai 1 1010 Vienna, Austria E-Mail: support_at@thomsonstb.net

Any other product, service, company, trade name and logo referenced herein are neither endorsed nor sponsored by Technicolor (S.A.) or its affiliates.

Licenses

ANY USE OF THIS PRODUCT IN ANY MANNER OTHER THAN PERSONAL USE THAT COMPLIES WITH THE MPEG-2 STANDARD FOR ENCODING VIDEO INFORMATION FOR PACKAGED MEDIA IS EXPRESSLY PROHIBITED WITHOUT A LICENSE UNDER APPLICABLE PATENTS IN THE MPEG-2 PATENT PORTFOLIO, WHICH LICENSE IS AVAILABLE FROM **MPEG LA, LLC**, 6312 S. Fiddlers Green Circle, Suite 400E, Greenwood Village, Colorado 80111 U.S.A.

THIS PRODUCT IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NONCOMMERCIAL USE OF A CONSUMER TO (I) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (II) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM **MPEG LA, L.L.C.** SEE HTTP://WWW.MPEGLA.COM

This product contains one or more programs protected under international and U.S. copyright laws as unpublished works. They are confidential and proprietary to **Dolby Laboratories**. Their reproduction or disclosure, in whole or in part, or the production of derivative works therefrom without the express permission of Dolby Laboratories is prohibited. Copyright 2003-2009 by Dolby Laboratories. All rights reserved.

THIS PRODUCT IS SOLD WITH A LIMITED LICENSE AND IS AUTHORIZED TO BE USED ONLY IN CONNECTION WITH HEVC CONTENT THAT MEETS EACH OF THE THREE FOLLOWING QUALIFICATIONS: (1) HEVC CONTENT THAT MEETS EACH OF THE THREE FOLLOWING THE PRODUCT. THIS PRODUCT MAY NOT BE USED IN CONNECTION WITH HEVC ENCODED CONTENT CREATED BY A THIRD PARTY, WHICH THE USER HAS ORDERED OR PURCHASED FROM A THIRD PARTY, UNLESS THE USER IS SEPARATELY GRANTED RIGHTS TO USE THE PRODUCT WITH SUCH CONTENT BY A LICENSED SELLER OF THE CONTENT. YOUR USE OF THIS PRODUCT IN CONNECTION WITH HEVC ENCODED OF THE LIMITED AUTHORITY TO USE AS NOTED ABOVE.

STRONG declares that this item complies with the basic requirements and other relevant regulations of directives 2004/108/EC and 73/23/EC, ROHS 2002/95/EC

THOMSON and the THOMSON logo are trademarks of Technicolor (S.A.) or its affiliates and are used under license by STRONG Group.

Subject to alterations. In consequence of continuous research and development technical specifications, design and appearance of products may change. HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LIC in the United States and other countries. Manufactured under license from Dolby Laboratories. Dolby Audio, Dolby Digital, Dolby Digital Plus and the double-D symbol are registered trademarks of Dolby Laboratories. All other product names are trademarks or registered trademarks of their respective owners.

© THOMSON 2016. All rights reserved.

TABLE OF CONTENT

1.0 INTRODUCTION	3 3
1.1 Safety Instructions	3
1.2 Storage	3
1.3 Equipment Set-up	4
1.4 Accessories	4
1.5 Usage of external USB devices	4
2.0 YOUR RECEIVER	5
2.1 DEFAULT PIN: 0000	5 5 5 5 5 6
2.2 Front Panel	5
2.3 Rear Panel	5
2.4 Remote control	5
2.5 Installing the batteries	6
2.6 Using the remote control	
3.0 CONNECTION	6 7
3.1 Connecting to a terrestrial antenna	. 7
3.2 Connecting to TV with HDMI cable	. 7
3.3 Connecting to TV with SCART cable	. 7
3.4 Connecting a USB storage device	. 7
3.5 Connecting to Ethernet for RSS feeds and weather forecasts	8
3.6 Connection to main power supply	8
3.7 Extended connections for your home entertainment	8
4.0 STARTING UP FOR THE FIRST TIME	8
5.0 QUICK GUIDE TO USING YOUR RECEIVER	10
6.0 OPERATION	10
6.1 Changing channels	10
6.2 Info Banner	11
6.3 Selection of audio language	11
6.4 Teletext	11
6.5 Subtitles	11
6.6 EPG (Electronic Programme Guide)	11
6.7 Record, Timeshift and Format	12
7.0 MAIN MENU	13
7.1 Installation of channels	13
7.2 Channel Editing and Programme information	14
7.3 Settings	16
7.4 Multimedia	19
7.5 Network	21
7.6 Upgrade by USB	22
8.0 TROUBLESHOOTING	23
9.0 TECHNICAL SPECIFICATIONS	24
	24

1.0 INTRODUCTION

1.1 Safety Instructions

DO NOT INSTALL YOUR RECEIVER:

 In a closed or poorly ventilated cabinet; directly on top of or under any other equipment; on a surface which might obstruct the ventilation slots.

DO NOT EXPOSE THE RECEIVER OR ITS ACCESSORIES:

- To direct sunlight or any other equipment that generates heat; to rain or intense moisture; to
 intense vibration and to any shock which may cause permanent damage to your receiver or
 to any magnetic objects, such as loudspeakers, transformers, etc.
- Do not use a damaged power cord. It may cause a fire or an electric shock. Do not touch a
 power cord with wet hands. It may cause an electric shock.
- When the receiver is not used for a long period of time, you should unplug the power cord from the wall socket.
- Do not use alcohol or ammonia based liquids to clean the receiver. If you wish, you may clean
 your receiver with a soft lint-free cloth slightly made damp with a mild soap solution, and only
 after disconnecting from the mains voltage supply. Make sure no foreign objects fall through
 the ventilation slots because this could cause fire or an electric shock.
- Do not place any objects on top of the receiver because this might prevent proper cooling of the components inside.

Safety Precautions

- Never try to open the receiver. It is dangerous to touch the inside of the receiver due to high
 voltages and possible electrical hazards. Opening the receiver will void the warranty of the
 product. Refer all maintenance or servicing to suitably qualified personnel.
- When you are connecting cables, be sure that the receiver is disconnected from the mains supply voltage. Wait a few seconds after switching off the receiver before you move the receiver or disconnect any equipment.
- It is a necessity that you only use an approved extension and compatible wiring that is suitable for the electrical power consumption of the installed equipment. Please ensure that the electrical power supply corresponds with the voltage on the electrical identification plate at the back of the receiver.

If the receiver does not operate normally even after strictly following the instructions in this user manual, it is recommended to consult your dealer.

1.2 Storage

Your receiver and its accessories are stored and delivered in a packaging designed to protect against mechanical shocks and moisture. When unpacking it, make sure that all the parts are included and keep the packaging away from children. When transporting the receiver from one place to another or if you are returning it under warranty conditions, make sure to repack the receiver in its original packaging with its accessories. Failing to comply with such packaging procedures could damage the product and void your warranty.

1.3 Equipment Set-up

We recommend you to consult a professional installer to set up your equipment. Otherwise, please follow the instructions below:

- . - Refer to the user manual of your TV and, if applicable, your antenna.
- Make sure that the HDMI cable and, if applicable, outdoor components are in a good condition.
- If you use the TV SCART connection, use a well shielded SCART cable.

This manual provides complete instructions for installing and using this receiver. The following symbols will serve as follow.

WARNING:	Indicates warning information.
NOTE:	Indicates any other additional important or helpful information.
MENU (Bold characters)	Represents a button on the remote control or the receiver.
Move to (Italic characters)	Represents a menu item within a window.

1.4 Accessories

- Installation instructions
- 1 remote control unit
- 2x batteries (AAA type)

WARNING:

The batteries should not be recharged, disassembled, electrically short-circuited, be mixed or used with other types of batteries. If rechargeable accumulators instead of batteries are going to be used (e.g. NiMH), we recommend using types with low selfdischarge to ensure long time operation of your remote control.

1.5 Usage of external USB devices

- It is recommended to use USB 2.0 storage devices or higher. If your device is not compatible to USB 2.0 specifications, recording, playback and other multimedia functions of the receiver might not work properly.
- Playback of files cannot be guaranteed although extensions are listed, as it depends on codec, data bit rate and resolution used (all MPEG codec formats are supported).
- It is advised not to store important information on USB storage devices used with the receiver.
- Always make backups of data on your USB storage device before using it with this receiver.
- STRONG will not take responsibility for any loss of information or circumstances caused by loss of information.

2.0 YOUR RECEIVER

2.1 DEFAULT PIN: 0000

2.2 Front Panel

1. 2. 3. 4. 5.	IR Sensor LED Display Mode Indicator LED Standby/ON button USB	Receives commands from the remote control Shows channel number and time in standby RED indicates that the receiver is in STANDBY mode. Switches the receiver ON or into Standby To connect your USB storage device.
2.3 Re	ear Panel	
		Fig. 2
1.	ANT IN	To connect to your antenna for reception of broadcast signals.
2.	ETHERNET	To connect to your Ethernet cable (RJ-45) for RSS feeds and weather forecasts
3.	S/PDIF Coaxial	To connect your receiver to a digital home cinema set, AV receiver or digital audio amplifier
4.	HDMI	To connect your receiver with your TV-set using an HDMI cable.
5.	TV SCART	To connect your receiver with your TV-set using a SCART cable
6.	Power cord	To connect to the main power (100 - 240 V AC ~ 50/60 Hz)
7.	Power switch	To switch the receiver on or off.

2.4 Remote control

1 (¹) Switches the receiver On/Standby. 2. R Mutes all audio outputs of the receiver 3 FAV Opens the favourite group selection. 4. LIST Call the current channel list. 5 AUDIO Opens the audio* language selection One step back in menu or back to previous channel. 6. C COLOUR BUTTONS In different menus for specific functions 7. 8 Opens the current channel information: 2x opens the current event information and 3x the next event information.* 9 FPG Opens the EPG* (Electronic Programme Guide) in TV mode.

Fia. 1

10.	Change channel to next/previous.
10.	Menu: Moves the cursor up/down.
11.	Decreases/increases the volume level.
	Menu: Change settings for specific menus.
12. OK	Opens the current channel list in menu: for confirmation
13. MENU	Opens the main menu, in a menu you will get one step
	back.
14. 🕩	Exits from the menu or sub-menu.
15. VOL+/VOL-	Increases/decreases the volume level.
16. P+/P-	Page up/down in all list modes.
17. CH+/CH-	Channel up/down.
18. 0~9	Enter channel number in TV mode or value input in
	menu
19. TV/R	Toggles between TV or RADIO mode.
20. 🏠	No function
21. 💵	Hold play during playback/starting Timeshift mode
22. ◀♥	Fast rewind/fast forward.
23. •	Starts recording of the currently watched programme
24. ►	Starts/resumes the playback/Timeshift. Shortcut to
	recordings list in viewing mode
25. 🕬	Jump function in multimedia playback
26.	Stop playback.
27. OPT	Opens quick menu to adjust screen settings
28. TEXT	Opens the Teletext if available*
29. SUB	Shows a list of subtitle languages*
30. 🖂	No function

* Subtitles, Videotext, EPG (Electronic Programme Guide), and Audio languages are depending on availability in the specific broadcast.

2.5 Installing the batteries

Fig. 4

Open the cover on the remote control and insert 2x AAA type batteries into the compartment. Observe correct polarity of the batteries when inserting. A terminal diagram is shown inside the compartment.

- 1. Remove the cover.
- 2. Insert the batteries.
- 3. Place the cover.

2.6 Using the remote control

Fig. 5

To use the remote control, point it towards the front of your receiver. The remote control supports a range of up to 5 meters distance to the receiver at an angle of up to approx. 30 degrees.

NOTE:

Managing the receiver will be limited or not possible if there are obstacles between the remote control sensor (at the front panel of the receiver) and the remote control. Direct sunlight or very bright light can reduce or disturb the reception of the remote control signals.

3.0 CONNECTION

3.1 Connecting to a terrestrial antenna

English

To receive broadcast signals, your terrestrial indoor or outdoor antenna must be connected to the ANT IN connector on the back of the receiver. Use a proper shielded antenna cable and suitable connectors.

NOTE:

If the signals at your location are too weak to receive proper signals with an indoor antenna, we recommend using an outdoor antenna which can be pointed towards the transmission tower. Ask your local dealer for more information. If you are using an active antenna with built-in antenna amplifier, switch the antenna power to ON in the menu Manual Search.

3.2 Connecting to TV with HDMI cable

Fig. 6

The TV set shall be connected to the receiver using a good quality HDMI cable. This connection gives the highest possible picture quality.

3.3 Connecting to TV with SCART cable

Fig. 6

Your receiver is also equipped with a SCART connector; alternatively, the TV set can be connected to the receiver using a good quality SCART cable.

3.4 Connecting a USB storage device

Fig. 6

This port can be used for USB storage devices such as USB pen drives or HDD with a maximum peak current of 500 mA. It is recommended to use USB 2.0 storage devices (or higher) for playback of video files or HD movies.

3.5 Connecting to Ethernet for RSS feeds and weather forecasts

Fig. 7

To use this option of your receiver it must be connected to your router. Connect the Ethernet (RJ-45) connector with a class CATSE (or higher) cable to your router.

3.6 Connection to main power supply

Fig. 7

Fia. 8

After all the connections are done you can connect your digital receiver to the mains power. Make sure that the main power switch on the rear panel is set to ON.

3.7 Extended connections for your home entertainment

Connecting to a Digital Audio Amplifier with S/PDIF

By connecting your receiver to a digital amplifier or home cinema set, you can enjoy the best possible sound quality and multi-channel audio (depending on broadcast). Connect your Digital Audio Amplifier or home cinema set with a suitable cinch cable to the S/PDIF connector on the back of the receiver. Alternatively, if you're using an analogue amplifier, then connect the audio output jack for stereo audio.

Connecting to a digital audio amplifier and TV using HDMI

By connecting your receiver to an HDMI equipped digital amplifier or home cinema set you will enjoy the best possible sound quality and multi-channel audio (depending on broadcast). Connect the HDMI output of the unit to an input of your amplifier, and then connect the HDMI output of the amplifier to your TV set. Select the correct input on your amplifier to watch and listen to programmes.

4.0 STARTING UP FOR THE FIRST TIME

When you use your receiver for the first time, the *Welcome* "Preferred Language" menu appears. Use \blacktriangle to move the highlight to the language you wish to use in the menu. Once you have selected your language, press the **GREEN** *Next* button to confirm and go to the next page. The receiver will now show the "First Time Installation" screen where you can adapt important settings.

Use ▲▼ to move the highlight to the setting you wish to adapt and use ◀ ► to change values. Press the **GREEN** Next button to confirm and to go to the next page or press the **RED** Back button to go one menu step back. The following settings are available: Region: Select the region in which the receiver is used. The selection Germany

Select the region in which the receiver is used. The selection Germany will store all German channels below number 200 and others above. After searching, German channels can be sorted in the channel list below 200 in your preferred order. The selection *Italy* and *France* will store channels

	in Logical Channel numbering (LCN). This means that it is operator defined which channel will be stored on position 1 and so on. Sorting of channels afterwards is not possible. If you like to sort the channels
	yourself, set the region to <i>Other</i> . The selection <i>Other</i> will store channels in the found order.
Subtitle:	Select On to display subtitles per default, select Off to hide subtitles per default.*
Aspect Mode:	Use this option to select the aspect ratio of the connected TV. The options are: 4:3 for a 4:3 TV (black bars on top and bottom of picture) and 16:9 for 16:9 TV sets.
Scan mode:	Select <i>All</i> to store scrambled and free-to-air channels or select <i>Free</i> to store only free-to-air channels.
Connection:	Use this option to select the established connection to your TV set. Select <i>HDMI</i> or <i>TV SCART</i> .

* Availability of DVB/HoH subtitles depends on the broadcast. If subtitles are not supported, they can be activated via Teletext if available.

NOTE: Wrong region selection can lead to missing channels or channels being stored at wrong positions in the channel list. Scrambled channels cannot be viewed with this model.

When all settings have been made, press the GREEN Next button to continue.

Aerial Adjustment

This part of the wizard is of great help when setting up your antenna system.

Use $\blacktriangle \forall$ to move the highlight to the setting you wish to change and use $\blacktriangleleft \triangleright$ to change values. The following settings are available:

Antenna Power: Set to On if you use an active antenna (with built-in amplifier). When set to On, 5 V will be present at the ANT IN connector of the receiver. Select Off for passive antennas.

Channel No.: Select a channel that is known to carry a broadcast signal in your region. The Signal Strength and Signal Quality bars give a visual indication of the reception. Adjust your antenna to obtain maximum signal strength and quality.

When all settings have been made, press the **GREEN** *Next* button to start scanning. The receiver will search for all available channels. When the scan is finished, the receiver switches to viewing mode. Now you can enjoy watching your favourite TV channels. If you get the message "No channels found", then check again the antenna, coaxial cable, connector and in menu if you have reception. When this has been checked, reset the unit and follow the installation wizard again as shown below. NOTE:

If the Welcome menu does not appear after switching on the receiver for the first time, reset the receiver to factory settings by pressing the **MENU** button and selecting *Load Factory Setting* in the menu *Installation*. (DEFAULT PIN: 0000).

5.0 QUICK GUIDE TO USING YOUR RECEIVER

We at STRONG understand that you can't wait to enjoy your new high definition digital terrestrial receiver. The following quick guide will make you familiar with the basic operation of this device. We do, however, advice you to read the full manual to get the best performance from your receiver.

To turn your receiver ON or to Standby, press & on the remote control.

Choose the desired channel with $\blacktriangle \nabla$. Alternatively, you can press the channel number with the $0 \sim 9$ buttons on the remote control or press **OK** in viewing mode to display the channel list. The volume can be adjusted with $\blacktriangleleft \triangleright$.

6.0 OPERATION

Your new receiver is equipped with several features to make watching TV a true pleasure. This paragraph describes these features. Please do also read chapter **7.0** to get familiar with the menu of your receiver.

6.1 Changing channels

Following ways are possible for changing channels with your new receiver:

- Via direct access using the 0~9 buttons.
- Via the channel list through OK and the CH+/CH- buttons.
- Via the ▲▼ buttons.

6.1.1 Direct access via 0~9 buttons

To gain direct access to a certain channel, simply enter its number with the **0~9** buttons on the remote control. Channel numbers can be up to four digits long. Entering a number with less than four digits is possible. Just wait a few seconds and your receiver will switch to the selected channel or press **OK** immediately after selecting the channel number.

6.1.2 TV list

Press OK in viewing mode to display the *TV list*. Use ▲▼ in the channel list to highlight your channel of choice and press OK once to select the highlighted channel. Press OK again to leave the channel list mode. Inside the channel list it is possible to use the CH+/CH- buttons as well in order to scroll page-wise through the list to speed up.

NOTE:

Use \blacktriangleleft to toggle between the *All Channel* list and the favourite list(s) or press **FAV** in viewing mode for a list of available favourite lists.

6.1.3 Using **A**

▲ switches to the next channel.

switches to the previous channel.

6.2 Info Banner

While watching TV, you can press **INFO** at any time to access information about the current channel and event*. Press **INFO** twice for extended EPG details about the current channel. Press **INFO** three times for EPG details of the next programme.

* Event information is displayed when available. Availability depends on broadcast.

6.3 Selection of audio language

Some channels support a choice of audio formats and/or languages. To select another audio stream, press **AUDIO** in viewing mode. A list of available audio streams will now be displayed. Use \blacktriangle to select a stream and confirm with **OK**. The audio channel as stereo, mix, left and right can be selected with \blacktriangleleft .

6.4 Teletext

Your receiver includes a fully featured Teletext. To access Teletext, press **TEXT** in viewing mode and use the $0 \sim 9$ buttons to enter the number of the page you wish to see. Use $\blacktriangle \forall$ to select one page up or down, use $\blacklozenge \flat$ to select subpages. Press $\boxdot \diamond$ or **TEXT** to get back to viewing mode.

6.5 Subtitles

Some channels support a choice of subtitle languages. Press **SUB** in viewing mode to display a list of available subtitle languages. Select your subtitle of choice with $\blacktriangle \lor$ and press **OK** to confirm. Press $\textcircled{\bullet}$ to leave without making changes.*

* Availability of DVB/Hard of Hearing subtitles depends on the broadcast. If subtitles are not present, then, they can be activated via Teletext.

6.6 EPG (Electronic Programme Guide)

The Electronic Programme Guide is a very useful function that allows you to view event schedules and programme information and to mark events/movies for wakeup of the receiver. To access the EPG, press EPG in viewing mode. Use \blacktriangle To select a channel and \blacklozenge to select an event. Press OK to display detailed information of the selected event. Use \heartsuit to quit the detailed information screen. Press the RED or GREEN buttons to see and select another day. Press the YELLOW button to set a timer for a selected event. Refer to section 7.3.6 for details of the timer function.

NOTE:

Availability of EPG data depends on broadcast.

6.7 Record, Timeshift and Format

To use these functions you must connect a USB memory device to the USB port at the rear panel. For best performance, especially of HD content, we advice to use Hard Disk drives USB 2.0 or higher. These must be formatted in FAT32 format, otherwise Record and Timeshift function will not work.

6.7.1 Instant recording

To immediately record a programme, press \bullet to start the recording and press \blacksquare to quit. During a recording it is possible to press $\blacklozenge \nabla$, or **OK** and $\blacklozenge \nabla$ to change to another channel on the same transponder (frequency) only. Also it is possible to use the **0-9** buttons.

6.7.2 Timeshift

If you want to use the Timeshift function you only need to press II in viewing mode. To resume timeshifted content, press \triangleright or II again. During the playback you can use the $\langle H \rangle$ or II buttons. To stop the Timeshift mode, press II and it will jump to the actual time of the live signal. The function will still be running in the background and as long you do not switch to another channel it is possible to jump again to the beginning by pressing II again. Also, with $\langle I \rangle$ it is possible to jump in time during Timeshift modes. Default is set to 20 seconds. Press the GREEN Jump Set button to change the jump time.

If the channel is changed timeshifted content will only be accessible from the newly selected channel.

NOTE:

To switch off the Timeshift function completely you need to change the Timeshift status to disable in the *Record setup* menu.

6.7.3 Timer recording

There are 2 ways to set a timer:

Programming a record timer via the EPG

The easiest way to record an event is via the EPG. Press the **EPG** button to open the EPG, then use $\Delta \Psi$ to select a channel. After that, press $\blacktriangleleft \blacktriangleright$ and use $\Delta \Psi$ to select an event. You can book a record timer by pressing \odot . If you press \bullet again on this event, the timer will be disabled. The set time of timer is fixed and cannot be modified.

Programming a record timer via the Timer menu

If you want to programme a record timer via the timer menu, press the **BLUE** button from EPG to open it. Also you can select it via the **MENU** button on the remote control in viewing mode, option *Timer* in the menu *Settings*. This way you are free to programme start and stop time. For further details about this menu, please refer to chapter **7.3.6 Timer** in the user manual.

6.7.4 Playback

After a recording has been made you will find a new folder *Records* created on your external USB storage device. By pressing ▶ in viewing mode you can access this folder directly. Inside the *Records* menu the following functions are supported:

▲ ▼	To select a record event.
ОК	Starts playback in preview and again in full screen mode.
	Stops playback
RED	Opens the option menu to select and deselect for deleting a record file(s). This menu item opens only if you have selected first a file by using $\blacktriangle \Psi$. Marks a recording for deletion. When all recordings you want to delete are marked, select <i>Deleted Selected</i> press OK . A message will appear to confirm deleting. By pressing OK again the recordings will be permanently deleted from your external USB storage device. Select <i>Cancel</i> if you don't want to delete them or select once more OK to definitely delete.

7.0 MAIN MENU

The main menu gives you access to *Installation, Channels, Settings, Multimedia* and *Network* functions. To access the main menu, press **MENU** in viewing mode. Throughout the main menu, **\varphi** can be used to get back to the previous screen and **\Theta** to quit.

7.1 Installation of channels

Use ◀ ► to select the main menu item *Installation*.

Use ▲▼ to highlight the submenu of choice and press OK to select.

7.1.1 Manual Search

This menu allows you to search for channels at a specific Frequency or Channel number. Use ▲▼ to select Scan mode, and select between Free which will only install Free-to-Air channels or All. This means that channels that are Free-to-Air or scrambled will be searched and stored.

Use $\blacktriangle \forall$ to select *Channel No* and select the channel number of the frequency you'd like to search. Press **OK** to open a list to make selection faster.

The next option *Modulation* is to select between *Only DVB-T* or *DVB-T+T2* modulation type. When in doubt, use the *DVB-T+T2* setting.

If you use an active antenna (with built-in amplifier), then switch the Antenna Power to On. If you use a passive antenna (without built-in amplifier), then select Off.

Highlight *Search* and press **OK** to start scanning. New found channels will be added to the channel list.

7.1.2 Auto Search

This menu allows you to search for channels from all available frequencies for your selected region automatically. Be aware that all previous installed channels and favourite list(s) will be deleted. The new found channels will be installed in the channel list and afterwards you can create a new favourite list if you like.

Select *Scan mode*, and select between *Free* which will only install Free-to-Air channels or *All*. Highlight *Search* and press **OK** to start scanning.

7.1.3 Information

This submenu shows receiver specific information such as hardware and software version. It also displays technical information from the currently selected channel and signal strength and quality. Please have the *Information* screen on hand when you call our hotline. The person who answers your call might ask for the information given in this screen.

7.1.4 Factory Reset

This option allows you to reset the receiver back to the factory settings, which also clears all stored channels.

Use $\blacktriangle \forall$ to select *Load Factory Settings* in the *Installation* menu and press OK. You are asked to enter your PIN code. Enter the correct PIN code using the 0–9 buttons. (DEFAULT PIN: 0000). A confirmation window is displayed. Select OK to load factory settings. Select *Cancel* to cancel. Press \blacksquare to leave.

WARNING:

By resetting your receiver to factory default, all your settings and stored channels will be permanently deleted. Please use this option with care.

7.2 Channel Editing and Programme information

Use ◀ ▶ to select *Channels* in the main menu.

Use ▲▼ to highlight the submenu of choice and press OK to select.

7.2.1 TV Manager

This menu allows you to create favourite lists, move channels in order, lock channels with PIN protection and delete channels from the TV list.

7.2.1.1 Adding channels to favourite lists

Channels from the *TV* list can be added to up to 4 different favourite groups. Select *Favourite* and press **OK**, select the wanted favourite group and press **OK**. Use \blacktriangle to select a channel you wish to add to a favourite group. When the highlight is on the channel of your choice, press **OK**. At the right hand side you will see your new created favourite list. If you like to remove a channel from a favourite list, simply press **>** and select that channel and press **OK** to delete.

NOTE: Later sorting of favourite lists is not possible. Always start by selecting the channel you'd like to have at position 1 in the favourite list, then the next one.

Use ▲▼ to select the favourite list you wish to add the channel to and press OK. Press I to finalize the process. Favourite channels will be marked with ♥. When all changes have been made, press IP twice. A confirmation banner will pop up. Select Yes to save the changes or No to discard.

7.2.1.2 Move channels in channel list

The receiver has a function to install found channels in Logical Channel Numbering (LCN) order. This means that the channel numbers are defined by the operator and automatically sorted this way in the main channel list. Sorting in the main list is therefore not possible. The *Move* function is grey and cannot be selected. This function is automatically active if selected in the first installation wizard within the region *Italy or France*. If you would like to sort channels as below, reset the receiver back to factory settings and install the channels again within another region. See chapter **7.1.4** in this manual.

Sort the channel order from the main channel list. Select the option *Move* and press **OK**. Use \blacktriangle v to select the channel you would like to move to the first position. As soon as the selection and highlighting are made, press **OK**. This can be done with even more channels until you are happy with the sorted order. To store the new channel order, press the **RED** button and select *Move*. If you have only sorted a few channels and want to store them between existing channels, select the position in the *TV list* where sorted channels have to get copied to.

7.2.1.3 Lock channels

Protect channels with a PIN code before you can watch them. Select the option *Lock* and press **OK**. Use \blacktriangle to select a channel you wish to protect. When the highlight is on the channel of your choice, press **OK**. At the right hand side you will see your protected channel list. If you like to remove a channel from this list, then simply press **>** and select that channel and press **OK** to unselect.

7.2.1.4 Delete channels

Delete a channel or channels permanently from the main channel list (until you make a new search). Select the option *Delete* and press **OK**. Use $\Delta \nabla$ to select the channel you wish to delete. When the highlight is on that channel, press **OK**. At the right hand side you will find the selection to delete from channel list. When you are ready, press **C** and confirm.

7.2.2 Radio Manager

Create favourite lists, move channels in order, lock channels with PIN protection and delete channels from the radio list. The functions of handling are the same as in the *TV Manager* as described above. The only difference is that in the *Radio manager* there is no video information, so it will always display the radio background on the preview screen.

7.2.3 EPG Information

This menu item opens the Electronic Programme Guide (EPG).

7.3 Settings

Use $\blacktriangleleft \triangleright$ to select *Settings* in the main menu. Use $\blacktriangle \lor$ to highlight the submenu of choice and press OK to select.

7.3.1 Language

This menu allows you to set up your language preferences.

OSD Language:	Use $\blacktriangleleft \triangleright$ to select the language for the On Screen Display.
1st Audio language:	Use \blacktriangleleft to select the audio language you like to hear as first priority, if available.
2nd Audio language:	Use \blacktriangleleft to select a language that will be played when the language selected at <i>1st Audio language</i> isn't available.
Subtitle Type:	Select the preferred subtitle type to be displayed automatically. Select <i>Normal</i> or <i>Hard of Hearing</i> *
Subtitle Display:	Select On to activate displaying of subtitles.
1st Subtitle Language	
	Use ◀ ▶ to select the first preferred subtitle language.
2nd Subtitle Language	

2nd Subtitle Language:

Use ◀ ▶ to select the second preferred subtitle language.

* Availability of DVB/Hard of Hearing subtitles depends on the broadcast. If such subtitles are not supported, then most likely subtitles can be activated via Teletext if available.

7.3.2 Output Settings

Use this menu to match your receiver to your TV set and/or home cinema set. The following settings are available:

HDMI Resolution:	Select the video resolution of your TV screen. The options are: <i>Auto</i> (automatic detection of video resolution offered to the receiver) and manual selections <i>576i up to 1080p</i> Please use a setting that matches the specifications of your TV. Selection above 576i is only applicable to the HDMI output.
Aspect Ratio:	Select the aspect ratio of your TV. The options are: 4:3 for 4:3 screen and 16:9 for 16:9 TV sets.
Aspect conversion:	Select the preferred conversion method. The options are: <i>PanScan</i> : displays 16:9 widescreen broadcasts in full screen on a 4:3 TV. <i>Letterbox</i> : black bars on top and bottom of the picture on a 4:3 TV. <i>Combined</i> : shows a mix in-between. <i>Ignore</i> : shows as it is.
OSD Transparency:	To set the OSD transparency from <i>Opacity</i> ~ 50% with 10% steps.
OSD Timeout:	Sets the time after which on screen banners and messages disappear. The range is $3 \sim 10$ seconds.
HDMI Audio Output:	Toggles between <i>PCM</i> and <i>Bitstream</i> output. When <i>PCM</i> is selected, all digital audio will be converted to stereo audio. <i>Bitstream</i> enables you to

	listen or transfer Dolby® Digital/Dolby® Digital Plus* audio to the TV via HDMI or to a home cinema set.
SPDIF Audio Output:	
	Toggles between <i>PCM</i> and <i>Bitstream</i> output. When <i>PCM</i> is selected, all digital audio will be converted to stereo audio. <i>Bitstream</i> enables you to listen or transfer Dolby® Digital/Dolby® audio to a home cinema set through coaxial S/PDIF (not Dolby® Digital Plus).
Audio Description:	AD. Set this option to On if you like to have support of an audio track that
	describes the content on screen. Useful for the visual impaired.
Audio Description Vo	
	Select the volume from the AD audio track.

* Dolby Digital Plus, Dolby Digital and the double-D symbol are registered trademarks of Dolby Laboratories

7.3.3 General Settings

This menu allows you to manage the basic system settings of your receiver. It consists of the following sub-menus: *Auto Standby* and *Auto Channel Update*.

7.3.3.1 Auto Standby

Auto Standby is a new feature that helps you reducing power consumption.

Press ▲▼ to highlight the menu Auto Standby and press OK advance.

When set to between 1 to 6 Hours, the receiver will switch to standby if it doesn't receive any commands of the remote control during this time. Set Auto Standby to Off to deactivate the automatic standby function. The default setting is 3 hours.

7.3.3.2 Auto Channel Update

When set to *On*, the unit will check automatically at the moment of turning to standby if new channels are available. The next time when switching on, you will be informed if new channels are on air and prompted to start an auto scan. This way you are always up-to-date with the channel list. If you select *Off*, the automatic channel update function is deactivated.

7.3.4 Parental Control

This menu allows you to protect the installation menu and/or channels with a PIN code. You can also create a new PIN code. Use \blacktriangle to select *Parental Control* from the *Settings* menu and press **OK** to proceed You will be asked to enter your PIN code (**DEFAULT PIN**: 0000)

Menu Lock:	Locks the installation menu. You can set the <i>Menu Lock</i> to <i>On</i> or <i>Off</i> .
Program Lock:	Switch all programme/channels lock to On or Off. If the lock is set in the
	TV or Radio Manager menu. You can select the lock separately for every
	channel which you like to protect it with a PIN code.
Program Lock age:	Choose between: Off Lock None, Lock All, 4 years and up to 18 years.
	Channels with a parental rating above the chosen age will be protected
	with a PIN code (if available in your local broadcast.)

PIN Code Change:	Press OK to enter the menu.
Old PIN Code:	Enter your current PIN code (4 digits).
New PIN Code:	Enter your new PIN code (4 digits) you'd like to use.
	(Make a note of it.)
Confirm:	Re-enter your new PIN code to confirm. Press OK to end and save the change.

7.3.5 Time Settings

Here you can set up your time zone for clock/time in your menu and system.

Use $\blacktriangle \forall$ to move the highlight to the setting of choice. Values can be changed with $\blacktriangleleft \triangleright$. Press $\textcircled{\bullet}$ to leave.

GMT Usage:	Set to <i>Auto</i> for broadcaster defined time depending of country selection you made in the <i>First Installation Wizard</i> . Normally, the clock/time will be correct and also follow up the summer time changes automatically. In some regions close to neighbouring countries it can happen that the wrong time zone is followed. In this case select the option <i>User Defined</i>
GMT Offset:	to set up time manually in the next steps below. Allows you to adjust the time zone you live in. This option is only available when <i>GMT Usage</i> is set to <i>User Define</i> . The <i>GMT Offset</i> range is "-11:00 ~ +12:00".
Daylight Saving:	Select Off or On to add one hour extra for summer time.

7.3.6 Timers

This menu allows you to set up to 10 timed events for waking up the receiver.

Use ▲▼ to select *Timer* from the *Settings* menu and press OK to enter.

The receiver will display a list with 10 timers, followed by their respective status. Select the timer you wish to set or change with $\blacktriangle \lor$ and press **OK** to proceed.

The timer setup menu will now be displayed.

The following settings are available:

Timer Status:	Choose between Once, Monday ~ Friday, Daily and Weekly Timer or select Off, then Timer will execute the scheduled event.
Timer Action:	Select <i>Booking</i> to wake-up the receiver and switch to the selected channel. Select <i>Recording</i> to start record from the selected event to an externally connected USB device.
Channel:	Press OK to open the channel list and use $\blacktriangle \lor$ to select the channel where the timer will wake up with.
Start Date:	Use the 0~9 buttons to enter the date for the timed event.
Start Time:	Use the 0~9 buttons to enter the start time.
Duration:	Use the 0~9 buttons to enter the timer duration.
Event Name:	Displays, after you have saved the timer, the event name according to the EPG. This is only possible if EPG is available.

When all settings are according to your wishes, use $\blacktriangle \nabla$ to move the highlight to *Save* and press **OK** to confirm. To quit the timer without saving your settings press **\diamondsuit**.

7.4 Multimedia

The Multimedia menu consists of the following submenus: Records, Movies, Music, Pictures, Record Setup and Storage Device Setup. Please first insert a USB device and use $\blacktriangle \forall$ to highlight the menu of choice and press **OK** to enter. Press **I** to quit or **C** to return to the previous menu.

7.4.1 Multimedia Player

This function allows playback of different kind of files from the connected USB storage device. In the *Multimedia* menu, select *Records* and press **OK** to show the recordings you've made. Select *Movies* and press **OK** to enter this menu to play all kind of video formats. Select *Music* to playback files as MP3, OGG and FLAC formats. Select *Pictures* to playback your favourite pictures in JPG or BMP format.*

When entering the *Multimedia Player*, the highlight is on the root folder of the USB storage device. Press **OK** to open the directory respectively its folders/subfolders. On screen in the right upper corner the root folders are displayed for easier navigation. Press **▲** to select a file or folder and press **OK** to open the folder/subfolder (if applicable) or start playback of the file. Press **●** to exit or press **OK** to open in full screen.

Use the buttons like described below in order to choose functions during the different playback modes.

General: ▶ II ₩ ≫ ₩	Start of playback of multimedia file. To pause the playback of multimedia file. Fast rewind/fast forward. Jump function in playback modes of multimedia files. Stop playback.
Movies:	
RED Subtitle:	During the playback of a movie with external subtitles, press the RED button <i>Subtitle</i> to enter the subtitle menu. In this menu you can select size and colours of your preference.
GREEN Jump:	Press the GREEN button <i>Jump</i> to open the <i>Jump By Time</i> menu. You can select a time where you'd like to jump to.
YELLOW Hide:	Press the YELLOW button <i>Hide</i> to remove or call the timeline information banner.
BLUE Audio:	Toggles between Stereo, Left, Right and Mono audio channel output.
Music: ▲▼	Enter the folder with music files. Use the $\blacktriangle \lor$ to select a file and press \blacktriangleright or OK to start playback. To stop playback press \blacksquare .

Pictures:	
$\blacktriangle \blacksquare$	Enter the folder with picture files. Use $\blacktriangle ar{ u}$ to select a picture. If the
	format is supported it shows the picture in the small picture-in-picture
	screen. Press OK to watch it in full screen mode.
RED Option:	Before the playback of a picture in full screen, you can setup a slideshow/
	diashow. Press the RED button <i>Option</i> to enter the sub option menu
	Slide change Time. Select time of the slide show or switch this function
	off. After you select a time, press OK and show starts to play. Press the 🕩
	button to stop.

7.4.2 Record Setup

This menu is only accessible if you connect a USB storage device. Here you can setup Timeshift and recording.

The following settings are available:

Timeshift Status:	Choose between <i>Enable</i> to activate the Timeshift function or <i>Disable</i> to switch it off. This function will also automatically be set to <i>Enable</i> if you press II on the remote and have USB device connected.
Timeshift Step:	Select the time size step in minutes and seconds which you like to make by using $\blacktriangleleft \triangleright$ during navigation in Timeshift modes. Use the 0~9 buttons to enter the time.
Timeshift Duration:	Select the maximal time (size) which is reserved for the time shift function. Use the 0~9 buttons to enter the duration.
Record Duration:	Select the default maximum time for recordings that can be started with the \bullet button. Use the 0~9 buttons to enter the duration.
Start Record earlier:	If you want to start the recording, set under timer from EPG some minutes earlier than the time obtained from the programme guide.
End Record later:	If you want to stop the recording, set under timer from EPG some minutes later as time obtained from the programme guide.
REC Icon:	If you start a recording, an icon will be shown in the left upper corner of your TV screen with the text "REC". Default is set to On. Select 5 Seconds or 10 Seconds to let the icon disappear after the selected time.

7.4.3 Storage Device Setup

This option shows relevant information about the connected USB device. In this menu you can also format your USB storage device and safely remove.

Select Storage Device Setup in the Multimedia menu and press OK to enter.

Now you will see all details as free and used space sizes and used file system.

Press the **RED** Safely Remove button and press **OK** to safely disconnect the USB device. The receiver will display a message indicating that you can now safely remove your storage device from the receiver. Press the **BLUE** Format USB Device button to format the connected USB device.

Please, enter your PIN code to access this menu and press **OK** to start formatting. Press (to leave this menu.

NOTE:	After performing the <i>Safely Remove</i> function, the USB device is no longer accessible by your receiver. To gain access to you're the storage device again, re-insert it or switch the receiver to standby and on again.
WARNING:	Formatting will permanently delete ALL data stored on the connected device. Please make a backup copy of all data you wish to keep before entering the <i>Format</i> menu. STRONG cannot be held responsible for loss of data from USB devices used with this receiver.
NOTE:	It is possible to use USB storage devices already formatted in NTFS.

* Playback of files cannot be guaranteed although extensions are listed, as it depends on codec, data bit rate and resolution used (all MPEG codec formats are supported).

7.5 Network

The *Network* menu consists of the following submenus: *RSS, Weather* and *IP Settings*. Connect first the CATSE (or better) cable into RJ-45 ETHERNET port of your receiver and the other end into your router.

Before you can use the Internet functions you need to check the setup of the Internet connection in the *IP Settings* menu. Use $\blacktriangle \lor$ to highlight the menu of choice and press **OK** to enter. Press \boxdot to quit.

7.5.1 IP Settings

This menu allows you to setup or check the Internet connection. The default selection is *DHCP* set to *On*. Normally the setup is done automatically by this. To test if the Internet connection works, select the item *SET* and press **OK**. If successful, a pop-up message box will show up and you can start using it. If not successful, then check your cable or router. Alternatively set *DHCP*

to Off. Then manually enter your IP, Gateway and DNS values by using the **0** ~ **9** buttons. Select after entering these values the item SET and press **OK** to store and to check.

7.5.2 RSS Feed (Really Simple Syndication)

This menu allows you to choose an RSS news link to read the latest news from different sources. Use $\blacktriangle \forall$ to highlight a link of your choice and press **OK** to enter. Select an item you want to read. Press **©** to quit. Also you have option to delete, add or edit an RSS feed of your own choice. Press the **GREEN** button *Add RSS Feed* to open the keyboard. Use $\blacklozenge \lor \blacklozenge \lor \blacklozenge$ to enter. If you need to use special symbols press **P+/P-**. To save the created RSS link, select at the end *Save* and press **OK**.

7.5.3 Weather

This menu allows you to watch the weather in your region. Use $\blacktriangle \forall$ to highlight the menu item *Weather* from the *Network* menu. If you have correct Internet connection then the weather page will show up with details on screen. Use the **YELLOW** button *City List* to open a selection list with main cities.

Use $\blacktriangle \forall$ to highlight a major city near you and press OK to select. You can enter a city manually. Press the **GREEN** button *Change City* to open a keyboard. Use $\blacktriangle \forall \blacklozenge \flat$ to enter. If you need to use special symbols, press P+/P-. To save the name, select at the end *Save* and press OK.

7.6 Upgrade by USB

This feature allows you to update the receiver software via the USB port. When a new software is available for your receiver, it can be downloaded from our website www.thomsonstb.net. Place the software file (unzipped) in the root directory of your USB storage device (HDD, memory stick etc.) and connect the device to the USB port of the receiver. First a message box will appear that a USB device is found. After a short time a message will appear on screen again with the message *New software available*. Select **OK** to start download and update immediately. When ready, the unit will reboot automatically.

NOTE:	If, after a software update, the receiver should behave in an unexpected way, please perform a factory reset as well. See chapter 7.1.4.
WARNING:	After an update the receiver restarts automatically. During the upgrade process NEVER disconnect the receiver from the mains or switch off the power! Doing so might damage your receiver and will void warranty!
WARNING:	Old channel list and favourites will be overwritten.

English

8.0 TROUBLESHOOTING

There may be various reasons for abnormal operation of the receiver. Check the receiver according to the procedures shown below. If the receiver does not work properly after checking it, please contact your dealer, the local service hotline or send e-mail to our support via www. thomsonstb.net. Do NOT try to open or disassemble the receiver. It may cause a dangerous situation and warranty will be void.

Problem	Possible cause	What to do
LED indicator and LED display are not switching on.	The mains lead is unplugged. Power switch at rear panel is set to OFF.	Check the mains plug. Switch main power to ON.
No signal found	The antenna is disconnected The antenna is damaged/ misaligned Out of digital signal area Active antenna requires to switch ON the antenna power/ external power	Check the lead of the antenna Check the antenna Check with your dealer Switch the antenna power of the receiver ON/connect external power
No picture or sound on TV or amplifier	HDMI or SCART is not selected on your TV or amplifier or the unit is set to higher resolution as the TV supports. TV/amplifier is not switched on	Switch to correct TV/amplifier input Select lower resolution on receiver Switch TV/amplifier on. Check if S/PDIF connection is used.
Scrambled channel message	Channel is scrambled	Select an alternative channel
No response to the remote control	The receiver is off The remote control is not aimed correctly The front panel is obstructed The batteries of the remote control are exhausted	Plug in and turn on the plug Aim the remote control at the front panel Avoid obstructions Replace the batteries of the remote control
Forgotten PIN code Forgotten channel lock code		Default PIN is 0000 Contact your local Service Hotline or send an email to our Support via www.thomsonstb.net

Problem	Possible cause	What to do
After moving the receiver to another room/area you are no longer able to receive digital reception	The antenna signals are too weak The signal strength/quality might be less than before, if using an indoor antenna	Press INFO on the remote control to keep the signal bars on screen and adjust the antenna for (maximum) reception. Alternatively, do a rescan of the channels. When using an active antenna, check if the antenna power setting is On Try using an outdoor antenna
The receiver switches off automatically	The Auto Standby function is enabled	Disable Auto Standby. See section 7.3.3.1 for details.
Playback of video causes picture freeze/macro blocks or similar distortion, especially on HD content	The read speed of your USB device could be too low	Make sure to use a USB storage device with sufficient speed and space. Pen drives ('USB sticks') may not support sufficient speed.

9.0 TECHNICAL SPECIFICATIONS

Tuner

Input connector: Input frequency range:

Input signal level:

Antenna power:

Demodulator

Transmission mode: Guard intervals:

Video Decoder

Profile level: MPEG-4 H.265/HEVC Video resolution: Decoding & Video Out: Aspect Ratio: IEC60169-2, female, 75 Ohm nominal VHF: 174 – 230 MHz UHF: 474 ~ 786 MHz DVB-T: -75 ~ -25 dBm DVB-T2: -70 dBm ~ -25 dBm 5 V DC, max. 50 mA, short cut protected

QPSK, 16/64/256 QAM DVB-T (EN 300 744), DVB-T2 (EN 302 755) normal and extended DVB-T = 1/32, 1/16, 1/8, 1/4; DVB-T2 = 1/128, 1/32, 1/16, 19/256, 1/8, 19/128, 1/4

MPEG-2 MP@ML, MP@HL, MPEG-4 H.264/AVC,

576i, 576p, 720p, 1080i, 1080p PAL 4:3 and 16:9 Aspect Conversion:

Audio Decoder

Audio support:

Sampling rate: Audio mode: Pan & Scan, Letterbox and Combined

MPEG-4 Profile Level 4 Dolby Digital Plus*/AC3+/PCM MPEG MusiCam Layer II 32, 44.1, 48 KHz Stereo, Mono L/R

* Dolby Digital Plus and the double-D symbol are registered trademarks of Dolby Laboratories

Multimedia

Video playback: MPEG-4, H.265/HEVC* Audio playback: Picture view: MPEG-1 and MPEG-2 encoded (mpg), MKV,

MP3, FLAC, OGG* BMP, JPG*

* Playback of files cannot be guaranteed although extensions are listed, as it depends on codec, data bit rate and resolution used (all MPEG codec formats are supported).

Connectors

ANT IN - IEC Female Ethernet S/PDIF (coax.) HDMI TV SCART (CVBS, Audio L/R) Power switch USB 2.0 port: 5 V/500 mA (max.) supported

General Data

Power supply:	AC 100 – 240 V ~ 50/60 Hz
Power consumption:	7 W (typ.), 12 W (max)
Power consumption in standby:	max. 1.0 W
Operating temperature:	0 °C ~ +40 °C
Storage temperature:	-10 °C ~ +50° C
Operating humidity range:	10~85%, RH, non-condensing
Size (WxDxH) in mm:	169 x 102 x 41
Weight:	0.36 kg