

TU-PD1

DIGITAL TERRESTRIAL RECEIVER



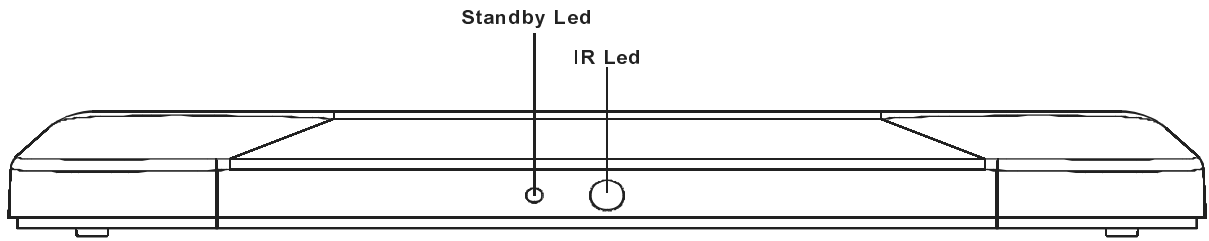
USER MANUAL

CONTENTS

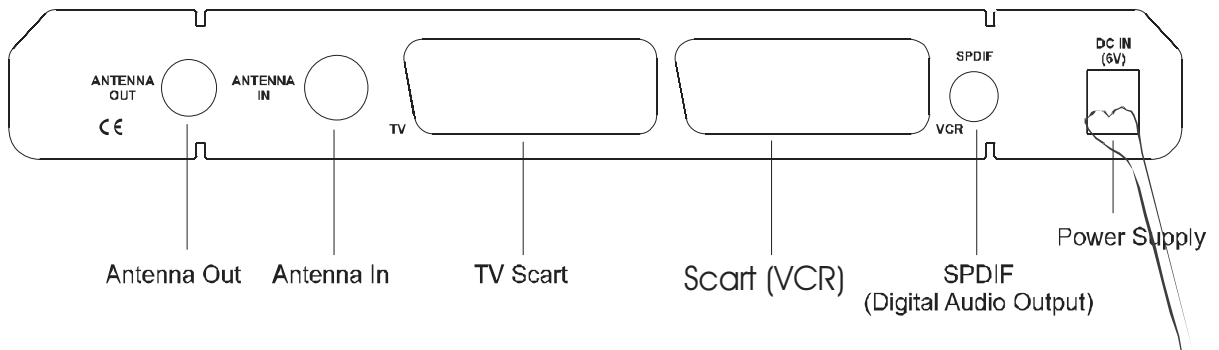
CONTENTS	2
1.GENERAL PROPERTIES.....	3
2. SAFETY PRECAUTIONS	2
4. REMOTE CONTROL FUNCTIONS.....	6
4.1. REMOTE CONTROL LAYOUT	6
4.2 STANDBY ON / OFF	7
4.3. MENU.....	7
4.4. TV / RADIO TOGGLE	7
4.5. PROGRAM UP / DOWN	7
4.6. VOLUME UP / DOWN.....	7
4.7. CURSOR UP / DOWN.....	7
4.8. CURSOR RIGHT / LEFT	7
4.9. PROGRAM LIST / PAGE UP (RED BUTTON).....	7
4.10. AUDIO MODE SELECTIONS (YELLOW BUTTON).....	8
4.11. INFO / HELP (? BUTTON).....	8
4.12. LANGUAGE KEY (MULTI AUDIO SERVICES)	8
4.13. GUIDE KEY (7 – DAY ELECTRONIC PROGRAM GUIDE)	8
4.14. FAVOURITE PROGRAM (BLUE BUTTON)	8
4.15. MUTE.....	9
4.16. SUBTITLE / PAGE DOWN (GREEN BUTTON).....	9
5. MENU INTERFACE	10
5.2. MAIN MENU	10
5.3. CHANNEL LIST :	10
5.3.1. NAVIGATING THE WHOLE LIST OF CHANNELS.....	11
5.3.2. MOVING CHANNELS.....	11
5.3.3. RENAMING CHANNELS	11
5.3.4. ADDING LOCKS TO CHANNELS.....	11
5.3.5. SETTING FAVOURITES	11
5.4. INSTALLATION	12

5.4.1. ADD NEW CHANNELS:	12
5.4.1.I. AUTOMATIC SEARCH:	12
5.4.1.II. MANUAL SEARCH:	12
5.4.2. FIRST TIME INSTALLATION	12
5.5. CONFIGURATION MENU	13
5.5.1. AUDIO SERVICE	13
5.5.2. TV TYPE	13
5.5.4. TV OUT	13
5.5.5. FAVOURITE MODE	13
5.5.6. RECEIVER UPGRADE	14
5.5.7. PARENTAL SETTINGS	14
5.5.8. DATE & TIME SETTINGS	15
5.6. TIMERS MENU :	16
5.7. NO MENU	17
5.7.1. ELECTRONIC PROGRAM GUIDE (EPG)	17
5.7.2. MESSAGES	18
5.7.3. CHANNEL NAVIGATION :	18
5.7.4. VOLUME CONTROL :	19
5.7.5. LIST MENU (RED BUTTON):	20
6. SOFTWARE UPGRADE THROUGH RS232	21
7. TROUBLE SHOOTING GUIDE	22
8. TECHNICAL SPECIFICATIONS	23

FRONT PANEL:



REAR PANEL:



1.GENERAL PROPERTIES

- Teletext onscreen emulation
- 200 Channels
- English OSD
- DVB Now/Next event information (EPG)
- TV scart (with RGB, SVHS, YUV support)
- VCR scart (with only CVBS support)
- Loop through output for analog programs
- Last watched channel saving
- Automatic search for all channels
- 5 timers can be used either for recording or as a sleep timer
 - 3 timer modes: daily, weekly, once
- Reminder function (TV Timer) programmable via EPG
- Parental lock options at different levels
 - Channel lock (password protected)
 - Menu/Installation lock (password protected)
 - Event Lock (Multi level, password protected)

❖ RECEPTION :

- DVB-T Compliant
- Input frequency range: 50 MHz – 858 MHz
- Input signal level: -81. dBm
- Supports 2K and 8K mode
- Signal strength and quality bar for antenna adjustment
- Manual and automatic search options

❖ VIDEO & OSD :

- Video: MP @ ML, PAL, 4:3/16:9
- 8-bit OSD colour, 720x576 pixels
- Decoding & Video Out: PAL

❖ AUDIO:

- Audio: MPEG Layer I & II, 32/44.1/48 KHz sampling frequencies, single/dual channels, stereo & joint stereo, Dolby Digital
- Audio mute and volume control

❖ SERVICE:

- Software update over the RS232 and air

❖ SYSTEM RESOURCES

- 32bit CPU @ 81 MHz
- 16Mbyte RAM memory
- 2Mbyte Flash memory

2. SAFETY PRECAUTIONS

Power Source

The unit should be operated only from a AC 100-240V, 50-60 Hz INPUT and with 6V DC, 1.5A output outlet. Please do not open the cover by yourself. There is high voltage in the set, which will endanger your life. Please contact local service agent for help and advice. Repairs should be carried out by a qualified technician only.

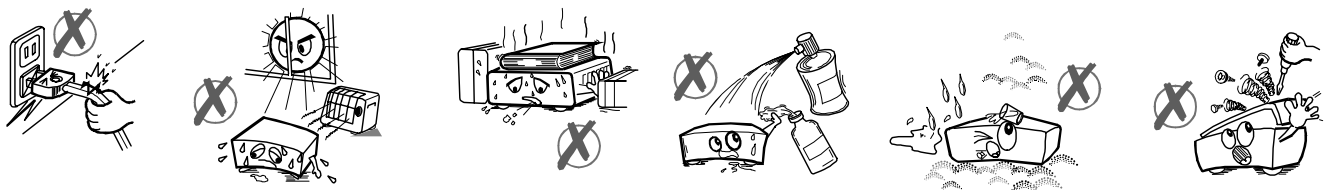
- The apparatus is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the apparatus itself has been turned off.
- If you are not going to use the apparatus for a long time, be sure to disconnect the apparatus from the wall outlet.

Power Cord

Do not place the unit, a piece of furniture, etc., on the power cord (mains lead), or pinch the cord. Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Never make a knot in the cord or tie it with other cords. The power cords should be routed in such a way that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask closest service agent for help. When the AC power cord needs to be changed, it should be done at a qualified service shop only.

Choice of Location

- Please do not place the set in a place subject to direct sun light, excessive dust or mechanical shock or in a location near heat sources.
- The set should be placed on a solid and safe base. Do not place the apparatus on a soft surface such as a rug that might block the ventilation holes on the bottom.
- A location should not be selected such as a room with high humidity, as the condensation, arising in the kitchen for example, may cause malfunction or damage the set.
- Heating or other thermal radiation under the set also may cause malfunction or damage the set.
- The hot air, which arises during the operation, should be ventilated with sufficient air circulation. Please do not put the set into closed areas and do not cover it.
- Please avoid the contact of the set with water or humidity. Do not put into operation near bath, swimming pools.
- Take care to provide a good air circulation. Place the apparatus in a location with adequate ventilation to prevent heat build-up in the apparatus.
- Should any solid object or liquid fall into the cabinet, unplug the apparatus and have it checked by qualified personnel before operating it any further.



Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

The mains plug or the appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.



3. PREPARING

3.1. REMOTE CONTROL

First open the battery cover on the underside of the remote control. Place both batteries 1.5Volt (AAA type) referring to the imprinted symbols (+/-) in the battery case and put on the battery cover again.

Whilst using the remote control, direct it towards the front side of the receiver. If the remote control does not work or the chosen function does not work, the batteries are most probably exhausted and they should be replaced as soon as possible. Please use only the leak proof batteries. It is best to remove the batteries from the remote unit if you will not be using the remote control unit for long time.

3.2. CONNECTIONS

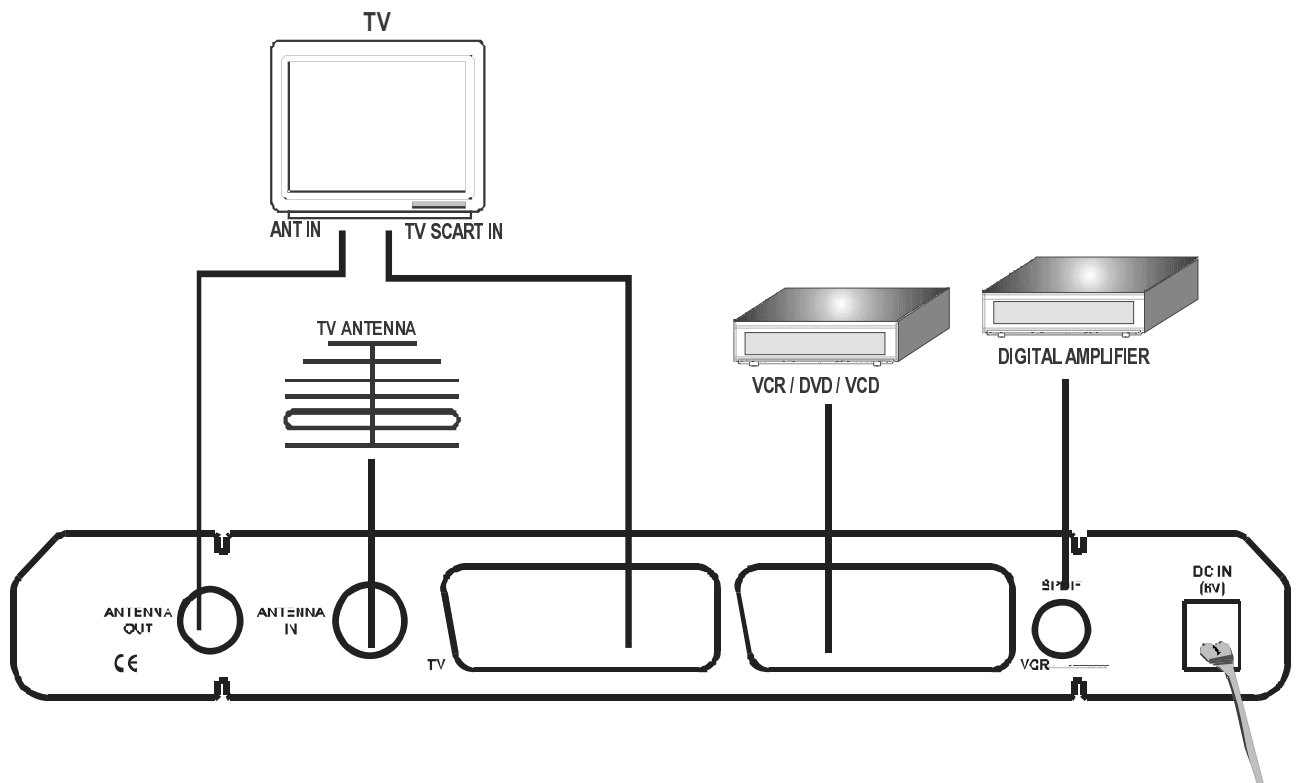
3.2.1. CONNECTION TO THE TV:

Connect your set-top box with the SCART to 3RCA cable provided. Connect the SCART end of the cable to the TV SCART connection on the set-top box. The 3 RCA plugs on the other side of the cable connect to your television's RCA A/V input connectors (sometimes called AV1, AV2, EXT1, etc...) Be sure to select AV or EXT mode on your TV's remote controller to see the picture from the set-top box.

The set-top box is capable of giving RGB (higher quality picture) but can only be used when connected to a TV with SCART connection and supporting RGB mode. Check your TV user manual for more details. Note that you MUST use a SCART to SCART cable for RGB mode to work. This cable is not supplied and should be purchased separately.

3.2.2. CONNECTION TO A VCR:

As shown in the diagram, the set-top box may be connected directly to your VCR also. A second SCART to 3 RCA cable will be required and purchased separately. Make sure you have selected the AV or EXT input on your VCR's remote controller to be able to record the digital picture.



3.2.3. GETTING STARTED:

Once all your cables connections are connected, plug in the mains powers supply of the unit to the mains receptacle. A red light will be seen on the front panel (indicating STANDBY mode). When the unit is first powered up, please wait for about 7 seconds before activating the receiver since the initial start-up of software within the set-top box will take some time.

Then, you can turn on your digital set-top box by pressing the STANDBY button on the remote control. You will see that the red light on the front panel will change to green. This is the "Power on" mode.

3.2.4. REAR SOCKETS:

TV SCART (it has RGB, S-VHS, YUV and Composite Video available ... adaptors may be required)

VCR SCART

AERIAL ANTENNA (connect antenna direct in here)

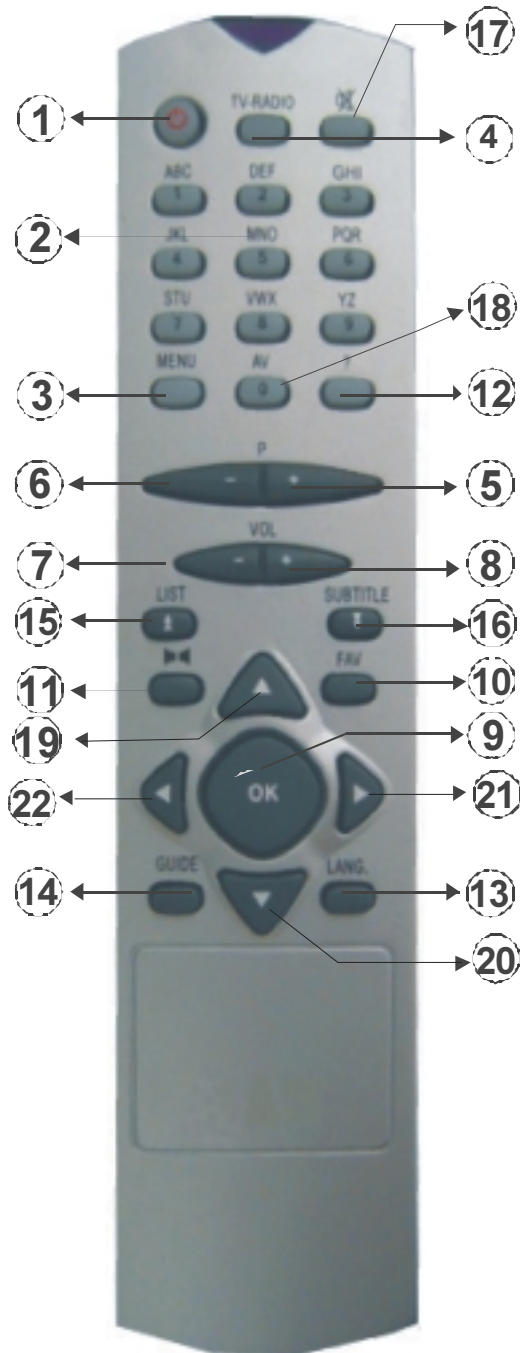
AERIAL LOOP OUT (aerial loop for passing analogue TV signal back to a VCR)

S/PDIF COAXIAL OUPUT (for Dolby Digital selection – amplifier required)

6VDC POWER SUPPLY INPUT

4. REMOTE CONTROL FUNCTIONS

4.1. REMOTE CONTROL LAYOUT



1. STANDBY ON / OFF
2. DIGITS & LETTERS
3. MENU
4. TV / RADIO
5. PROGRAM UP
6. PROGRAM DOWN
7. VOLUME UP
8. VOLUME DOWN
9. OK
10. FAVOURITE PROGRAM (BLUE BUTTON)
11. AUDIO MODE SELECTION (YELLOW BUTTON)
12. INFO / HELP (?)
13. LANGUAGE SELECTION (LANG.)
14. GUIDE (EPG MENU)
15. PROGRAM LIST / PAGE UP (RED BUTTON)
16. SUBTITLE / PAGE DOWN (GREEN BUTTON)
17. MUTE
18. AV
19. CURSOR UP
20. CURSOR DOWN
21. CURSOR R
22. CURSOR LEFT

4.2 STANDBY ON / OFF

After making cable connections, the receiver goes out of stand-by mode. After getting out of stand-by mode, the receiver tunes immediately to the last watched / listened program.

When the "STANDBY ON/OFF" key is pressed, it goes directly to the stand-by mode.

4.3. MENU

By pressing MENU key on the remote control, main menu is accessed; MENU key will be also used to go out of the menus (program table, program list, electronic program guide...). "▲/▼, ◀/▶" are used to move up and down in the menus to access the submenus. OK key on the remote control is used to enter the submenu selected.

4.4. TV / RADIO TOGGLE

When the TV/RADIO key is pressed either on the remote control the receiver changes mode (from TV to Radio or from Radio to TV). When the mode is changed, receiver tunes to the last watched / listened program. In Radio mode, if display is available, radio program number glows in display. There are special TV and Radio icons in the channel banner and program info OSD.

4.5. PROGRAM UP / DOWN

When "P+ / P-" key is pressed either on the remote control or front panel (optional), the receiver tunes to the next (respectively previous) program in selected program mode (in the program table, program list or electronic program guide menus, it tunes the program after OK key is pressed). If a program that will be tuned is locked, the user must enter the password. If a wrong password is entered, (a banner will warn the user) it can not tune the desired program, it can tune to the previous or next program by pressing P- and P+ when no menu is active. In program table with keys (▲/▼) next / previous channel can be selected respectively.

4.6. VOLUME UP / DOWN

When "V+ / V-" pressed on the remote control, a banner is displayed, which shows graphically the present volume. The sound is increased or decreased by moving the cursor on volume scale by pressing V+ (▶) and V- (◀) keys respectively.

4.7. CURSOR UP / DOWN

"▲/▼" keys are used for navigating in the menu options. "▲" Key moves the highlight to the upper menu option, "▼" key moves the highlight to the lower menu option.

4.8. CURSOR RIGHT / LEFT

Cursor "◀/▶" keys are used for navigating in the menu options. "▶" key moves the highlight to the menu option on the right or opens the submenus where available, "◀" key moves the highlight to the menu option on the left or closes the submenus where available.

4.9. PROGRAM LIST / PAGE UP (RED BUTTON)

When the LIST key is pressed one of 5 favourite lists is displayed. If the last watched/listened program is one of the favourite programs then the favourite list in which the last watched/listened program takes place is displayed.

RED key is also used to display programs page by page in program table and program list, also to display the extended event information page by page in electronic program guide. The upper page is accessed with this key.

4.10. AUDIO MODE SELECTIONS (YELLOW BUTTON)

The YELLOW key (LRS) will toggle the sound mode. The mode is stereo as default. If the user wants to listen to only the left or right audio channel, the sound mode can be changed with this key. On single sound channel modes (left or right channel) same sound channel will be switched to both left and right outputs. When the mode is changed an appropriate OSD will be displayed for a while. And this will be stored for this program to be able to switch to requested audio mode next time.

4.11. INFO / HELP (? BUTTON)

When INFO (?) key is pressed an informative menu OSD is displayed. It gives information related to currently watching program. This info includes program number, program name, program mode (TV, Radio, TXT,), transponder name, transponder frequency, favourite list name (if the program is one of the favourite programs), audio mode, whether the program has teletext or not and short event description, additionally audio, video, and PCR PID values of the program.

INFO key is also used to show help window which describe some remote control functions in the menus according to the menu function. This help window must be closed (by pressing INFO key again) to be able to perform the options in the menu.

4.12. LANGUAGE KEY (MULTI AUDIO SERVICES)

The LANG. key allows selecting another sound track of the present program. When the language key is pressed a menu is displayed showing the number of possible audio languages for TV and tracks for Radio program available. The user is allowed to navigate using “▲/▼” keys and select with OK key. If an audio language support Dolby digital output, “AC3” expression is seen at the end of the audio language name. If the program does not have multi audio, a pop-up message will warn the user.

4.13. GUIDE KEY (7 – DAY ELECTRONIC PROGRAM GUIDE)

If the GUIDE key is pressed electronic program guide (EPG) menu is displayed. This menu shows firstly the current and by toggling “◀/▶” all EPG events’ information (start and end time for current and next events, program no, program name, event name of the programs in tuned transponder).

This menu consists of a channel bar which shows time scale from current time to 2 hours + current time. This bar shows current/next event period in current/next event mode weekly as highlighted.

There is also an option for every program to make user aware that the next event starts, which is “reminder”. If the reminder is set (by pressing OK key in next event mode – the selected event will be highlighted) When that event’s start time is reached, a pop up message will appear and if the user accepts to change the program, receiver will switch to that program. (Refer to 5.7.1)

4.14. FAVOURITE PROGRAM (BLUE BUTTON)

Each program can be selected as favourite from the program table menu; the user goes on the program wanted to mark as favourite, then “Favourites” is selected by pressing key. The desired program is added to one or several of 5 independent Favourite lists by pressing OK button on the selected favourite. When Favourites frame is activated, FAV button toggles between the favourites. The limit for the number of favourite programs is 100.

In no menu mode, pressing FAV (blue button) on remote control will cause the receiver to change the current program to the first favourite program. The user can select any program in current favourite list by toggling “◀/▶” and other favourite lists by pressing FAV button again. If there is no program in any favourite list a warning message is displayed on screen.

If a channel has been locked by the lock code, the user must input the password. If a wrong password is entered (a banner will warn the user) the desired program can not be watched and the previous or next favourite program can be watched by pressing P- and P+ (▲/▼) keys and next favourite lists can be selected by pressing FAV button again.

FAV button must be pressed one more time to get out of favourite channels.

4.15. MUTE

When the MUTE key is pressed, mute symbol is displayed on the right side of the screen. The mute symbol will stay until MUTE is pressed again, or “V+ / V-“ keys is pressed. The mute symbol is not displayed on the screen in case of any menu displayed.

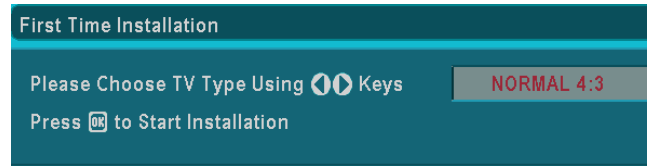
4.16. SUBTITLE / PAGE DOWN (GREEN BUTTON)

This Green key is also used to display programs page by page in program table and program list, and also to display the event information page by page in electronic program guide. The next page is accessed with this key.

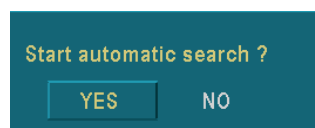
5. MENU INTERFACE

5.1. FIRST TIME INSTALLATION

When the box is opened from stand-by mode and if there is no channel stored in the database, First Time Installation Menu window is displayed on the screen.



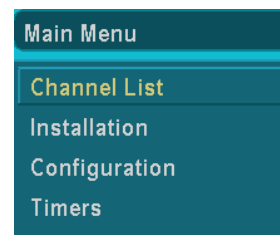
You simply press OK then “Start automatic search?” pop-up menu is displayed. Auto search can be started by selecting “Yes” button (i.e. press OK again). The box will automatically find the channels and store them for you.



5.2. MAIN MENU

The Main Menu is accessed, pressing the MENU key. The items accessed through the Main Menu are:

1. Channel List
2. Installation
3. Configuration
4. Timers



5.3. CHANNEL LIST :

The following operations can be performed in this menu:

1. Navigating the whole list of channels
2. Moving channels up/down
3. Renaming channels
4. Adding locks to channels
5. Favourites

Channel table is the place where the channels are managed.

Press LEFT and RIGHT selects various options for managing the channels lists.



5.3.1. NAVIGATING THE WHOLE LIST OF CHANNELS

In the channel table UP/DOWN serves for moving the focus to the previous or next channel, RED/GREEN for page up and page down.

To watch a specific channel highlight it using UP/DOWN (RED/GREEN) then press OK key while the "SELECT" button is highlighted. Then the name and number of the selected channel will be displayed in the top-right corner of the screen.

If the selected channel is password protected then a pop up menu is displayed. If the correct code is entered then the selected channel can be watched. Also you can select another channel by navigating with UP/DOWN keys.

The scroll Bar in middle of the screen shows relative position of the currently visible channels with respect to the whole list.

5.3.2. MOVING CHANNELS

Reordering the list can be done by moving programs one by one to new positions. In order to do a move, the "MOVE" button is highlighted on the screen using LEFT or RIGHT keys. A program move is then performed by selecting OK, the colour of the program will be changed to red. In this state, press UP and DOWN to move the program to the desired location within the list. Once you are satisfied with the position of the program press OK to finalize moving program.

5.3.3. RENAMING CHANNELS

To rename a specific channel, the name must be highlighted (use UP and DOWN) and then select the "Edit Name" option (use LEFT and RIGHT). Press OK to activate the rename feature. Following the previous procedure, the name appears on the right side of the menu with the first character highlighted.

Now LEFT/RIGHT moves to the previous/next character. UP/DOWN toggles the current character, i.e., 'b' character becomes 'a' on DOWN and 'c' on UP. Pressing the numeric buttons '0...9' replaces the highlighted character with the characters printed above the button one by one as the button is pressed.

Press the EXIT key to cancel the editing and OK saves the new name.

5.3.4. ADDING LOCKS TO CHANNELS

Channel Locking provides a password-protected access to channels selected by parents. In order to lock a channel you should know the Parental Lock password (default value is set to 0000 in the factory and can only be changed from the **Configuration Menu**). Select the channel to be locked by highlighting it and select the "Lock" option. When OK is pressed a password box is displayed.

Enter the parental Lock code you wish to use followed by pressing OK. The Lock icon will now be displayed in front of the selected channel. Repeat the same operation to cancel the Lock.

5.3.5. SETTING FAVOURITES

You can set various channels as favourites so that only the favourite channels are navigated. To set a favourite you should highlight the 'Favourites' option at bottom of the channel table and also you should highlight a channel which you want to add to the favourites list. Then press OK and a smiling face icon will appear on right side of channel name. This means that channel is now one of your favourites. To remove any channel from favourites list just do the same thing. To activate favourites go to configuration menu and turn on the favourite option. To cancel the favourites go to configuration menu and turn off the favourite option.

5.4. INSTALLATION

The Installation menu mainly intends to help you for building a Channel Table into your receiver in



most efficient way.

This menu includes:

1. Add New Channels,
2. First Time Installation

5.4.1. ADD NEW CHANNELS:

This tuning menu consists of two parts;

- Automatic Search
- Manual Search

5.4.1.i. Automatic Search:

Automatic search is started by selecting OK in the auto-search pop up menu. All the services are searched and a channel table is created automatically.

All channels found are stored in a sorted form with respect to their channel numbers. Some services may not appear with the correct channel number. At the time of printing, not all broadcasters are sending their channel number information.

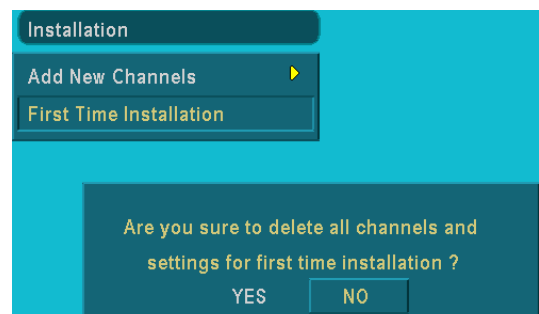
5.4.1.ii. Manual Search:

In manual search the number of the multiplex is entered manually and only that multiplex is searched for the channels. For every valid channel number, signal level, signal quality and network name are shown at the bottom of the screen.

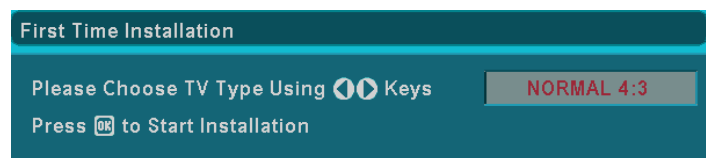
In both manual and auto search any existing channel in the database is not re-stored to avoid redundant duplicates of that channel.

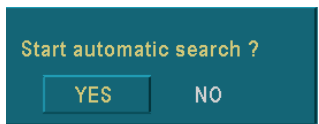
5.4.2. FIRST TIME INSTALLATION

The user can use this item to load default settings, which had been loaded to the receiver at the factory. To install factory settings, highlight 'First Time Installation' menu and press "OK" key, then you will be asked to confirm for deleting all channels and settings. Selecting YES by pressing OK and the existing channel table will be deleted.



After factory settings loaded 'First Time Installation' menu is displayed. In this menu you can set the type of your TV by using LEFT/RIGHT keys.

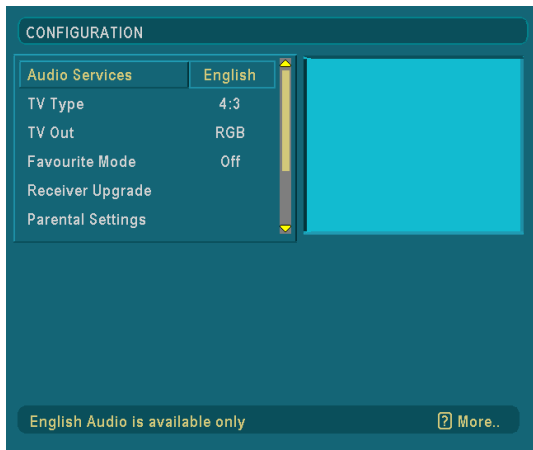




Pressing OK key will display the Automatic Search Menu and you will be asked for starting the automatic search for all available channels. Automatic Search will be started by highlighting YES and pressing OK. When Automatic Search is finished or cancelled receiver returns to viewing window.

5.5. CONFIGURATION MENU

You can configure the settings of your box. Select Configuration from the Main Menu and Press OK to enter this menu. Press MENU/EXIT button to exit.



Configuration Menu includes the following main items:

- Audio Service
- TV Type
- TV Out
- Favourite Mode
- Receiver Upgrade
- Parental Settings
- Date/Time Settings
- Screen Format
- System Info

5.5.1. AUDIO SERVICE

If Use UP / DOWN buttons to go to Audio Service option. This button is used to change audio service. When Dolby Audio is available for the channel, pressing “LEFT / RIGHT” keys will switch the audio service. Otherwise audio service is English as default. Changes will be updated while exiting Configuration Menu. Last Audio Service type will be saved for every channel.



5.5.2. TV TYPE

Use UP / DOWN buttons to go to TV Type option. Use LEFT & RIGHT buttons to toggle TV type. It can be 4:3 or 16:9 (wide screen) according to the TV that set-top-box is connected to. The aspect ratio conversion mode is Pan & Scan (full-screen) as default.

5.5.4. TV OUT

Use UP / DOWN buttons to go to TV Out option. TV Output will be changed just after the mode is switched. Possible modes are RGB, CVBS, SVHS and YUV. Picture quality in RGB mode is better than CVBS mode.

5.5.5. FAVOURITE MODE

Use LEFT/RIGHT keys to turn on/off favourite mode. If the ‘Favourite Mode’ is on, in normal operating mode pressing Channel UP/DOWN keys will only navigate ONLY through the channels that were previously defined as favourites in Channel Table.

Also Electronic Program Guide will ONLY list favourite channels. Favourite mode has no effect on switching to channels by pressing numeric keys.

If you type channel number when channels are in name sorted mode, or if you type LCN number when channels are in LCN sorted mode in normal mode, box directly switches to that channel if only a channel having the number typed exists. If the favourite mode is off then EPG and navigation works for all channels without regarding if they are set as favourite or not.

To turn on favourite mode there must be at least one channel set as favourite in the channel table.

5.5.6. RECEIVER UPGRADE

The STB can be upgraded via the configuration menu, entered from the main menu. In the configuration menu, there is the "Receiver Upgrade" button. Upgrade process can be started by pressing this button.

There are two possibilities for receiver software to be upgraded: automatic and manual.

5.5.6.i Automatic Upgrade

Automatic upgrade can be enabled or disabled by pressing Left/Right buttons.

If it is enabled, every time the set-top box goes to standby mode, it will search for new software in the television broadcast. If new software is found, software is upgraded, and then STB goes to standby mode. If new software is not found, then the set-top box will go directly to standby mode.

If the automatic upgrade is set to disable, then this function will not work.

5.5.6.ii Manual Upgrade

Manual upgrade starts if the 'Search for New Version' button is pressed.

After pressing the 'Search for New Version' button, the STB tunes to each frequency that has been stored in its database and looks for the new software. Since this process takes some time, a warning message is displayed. "Searching for new version, please wait..."

If new software is not found, "No new software found. Press OK to exit." Message is displayed and the set-top box returns to the Configuration Menu.

If new software is found, "New software found! Upgrade?" message is displayed. By pressing NO user can return to the Configuration Menu. By pressing YES upgrading is started. "Loading the new software, please wait... Or press MENU to cancel." is displayed.

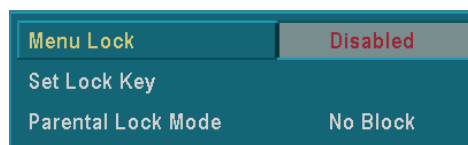
If the upgrade is cancelled or an error is encountered during the loading process, "Upgrade process cannot be completed. Press OK to exit." message is displayed. By pressing OK last watched channel is returned.

After loading the software in to memory of the box, writing to permanent memory will begin with the message appearing "Writing to permanent memory, please wait...". If there is no problem during software download process the message "Receiver upgraded, press OK to go to the Stand-by," will be displayed. By pressing OK, the set-top box goes in to standby mode for the changes to take place.

If the set-top box power is down or any error is encountered during writing to permanent memory. New software will not run and box will continue to run on the previous software.

5.5.7. PARENTAL SETTINGS

Use UP / DOWN buttons to go to Parental Settings option. Press OK button to enter Parental Settings Menu. A box asking for the lock key is displayed. There is only one key which is set to "0000" initially. Enter lock key. If it is incorrect, it is returned back. If it is correct, the Parental Settings Menu including following items is displayed:



There you can set/reset locking for the Main Menu, or the Installation Menu to restrict access. If the menu lock is disabled, there will be free access to the menu system. Also in this menu you can change the lock key and set/change parental lock mode.

5.5.7.i. Menu Lock

Use UP / DOWN buttons to go to Lock Menu option. Use LEFT & RIGHT buttons to toggle Menu Lock Mode.



DISABLED : All menus are unlocked.

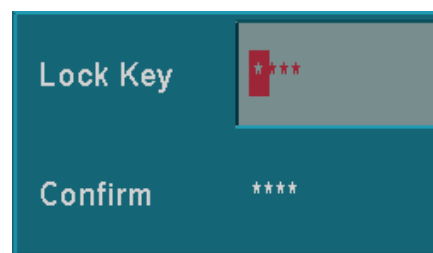
MAIN MENU : Main Menu is accessible only with the correct lock key. So the user can't add, delete, rename, move channels, can't set timers.

INSTALLATION : Installation menu is locked. So the user can't add channels. Changes will be updated after exiting 'Configuration Menu'.

5.5.7.ii. Set Lock Key

Use UP / DOWN buttons to go to Set Lock Key option. Use OK button to enter new password. New Password Menu is displayed. Use NUMERIC buttons to enter new password. New Password is asked twice for confirmation.

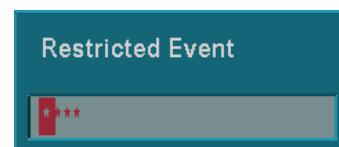
If both passwords are four digits long and the same, the password is changed. It is updated after exiting the Parental Menu.



5.5.7.iii. Parental Lock Mode

Use UP / DOWN buttons to go to Parental Lock Mode option. Use LEFT & RIGHT buttons to toggle Parental Lock Mode.

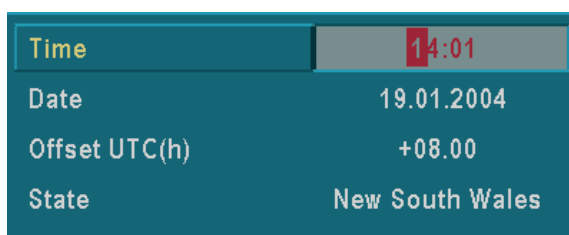
Parental lock mode sets a password-controlled mechanism on every event. If parental level of current event (if available level can be seen on channel information banner) is higher or equal to the level set in this menu, then password is asked at the start time of the event. If parental level is set to "All Blocked" mode, the every event is locked and password is required to watch.



5.5.8. DATE & TIME SETTINGS

Use UP / DOWN buttons to go to Date Time Settings option. Press OK button to enter Date Time Settings Menu. Date Time Settings Menu has the following items:

You can see the actual date as day/month/year; and time as hour/minute in this menu. After first starting your set-top box the values are "00:00/01.01.2001". You can also adjust actual time, date, offset to Universal Time Coordinated (UTC) and set you located state.



5.5.8.i. Time

Use UP / DOWN buttons to go to Time option. Use LEFT / RIGHT / NUMERIC buttons to enter new time. The time you entered must be valid otherwise digits are skipped. Press MENU/EXIT to return Configuration Menu. New Time is updated if it is changed. The time set here is displayed on the menu system and the channel information banner.

5.5.8.ii. Date

Use UP / DOWN buttons to go to Date option. Use LEFT / RIGHT / NUMERIC buttons to enter the new Date. The Date you entered must be valid otherwise digits are skipped. Press MENU/EXIT to return Configuration Menu. New Date is updated if it is changed.

5.5.8.iii. Offset UTC(h)

Use UP / DOWN buttons to go to Offset UTC (h) option. Use LEFT / RIGHT buttons to toggle time offset values. Press MENU/EXIT to return Configuration Menu.

5.5.8.iv. State

Use UP / DOWN buttons to go to your located State. Use LEFT / RIGHT buttons to toggle Australian time zones. For each state in this option, the Offset UTC value changes to a preset value. Press MENU/EXIT to return Configuration Menu.

5.6. TIMERS MENU :

The “Timer Menu” is entered from the Main Menu. There is a five columns summarizing information, such as timer no, channel name, start time, end time, start date and mode, for each of the five timers.

There are two ways to set a timer. If the start/end time and date are valid numbers, the timer can be set directly by changing the mode from “Inactive” to “Active” using LEFT/RIGHT cursors.

If the start/end times and date are invalid or if the set values are to be changed totally, OK must be pressed while the desired timer is highlighted in the summary list. A new window where the timer details are to be entered will be displayed on the lower part of the screen. The timer details are as follows:

No.	Name	Start	End	Date	Mode
1	7 Digital	00:00	00:00	01.01.2001	Inactive
2	7 Program Guide	00:00	00:00	19.01.2004	Inactive
3	7 Digital	00:00	00:00	01.01.2001	Inactive
4	7 Digital	00:00	00:00	01.01.2001	Inactive
5	7 Digital	00:00	00:00	01.01.2001	Inactive

14:49
19/01/2004

Toggle mode Edit settings [Menu] Back More..

Name : “LEFT” / “RIGHT” keys will navigate the user through the TV and Radio programs.

Start : By using “0,1,2, ... 9” keys start time of the timer is selected.

End : By using “0,1,2, ... 9” keys end time of the timer is selected.

Date : By using “0,1,2, ... 9” keys date of the timer is selected.

Mode : LEFT/RIGHT cursors will toggle between “Once”, “Daily” and Weekly” modes.

Name	0007 7 Digital
Start	00:00
End	00:00
Date	19.01.2004
Mode	Once

Start, End and Date field data are entered using number keys. Current time and date are shown on the lower-right part of the screen to help you.

After the desired detail fields are filled, one can turn back to the timer info summary list by pressing "OK" to save the settings, or by pressing "MENU/EXIT" to cancel these new settings. A set timer is cancelled (disabled) by changing the mode to "Inactive" in timer summary list.

TIMER MENU					
No.	Name	Start	End	Date	Mode
1	7 Digital	00:00	00:00	01.01.2001	Inactive
2	7 Program Guide	15:25	15:29	19.01.2004	Active

When a timer start time comes, the Set-Top-Box switches to the set channel, then when the end time is reached, the box goes to stand-by mode. This utility helps the box to be used as a sleep-timer.

5.7. NO MENU

When there is not any menu on the screen (e.g. when a program is being watched or when the screen is blank), this mode of unit is called as No Menu mode.

5.7.1. ELECTRONIC PROGRAM GUIDE (EPG)

In no menu mode, the EPG Menu is called by pressing GUIDE key and quit by pressing MENU/EXIT key.

In the EPG Menu all channels are displayed. Current channel is highlighted. Use UP/DOWN buttons to change channels. Also press RED/GREEN keys to make page up/down scroll for the channels.

NOTE: Some, but not all, channels send information about the current and next events.

Please note that event information is updated automatically and EPG Menu displays the event information that is last updated just before entering the EPG Menu. If there is no event information data available in channels, only channel names are displayed.

If you highlight an event, short event description, extended event description, start and end times of event are displayed at top left side of the screen. If the extended event information does not fit into dark blue rectangle on top left side of the screen, a scroll bar appears and you can scroll extended event information by pressing YELLOW/BLUE keys.

When the current event is highlighted, the box switches to the highlighted channel by pressing OK key. If you press OK when another event is highlighted a reminder is set for the highlighted program and the border color of the box containing that event's name changes. Program reminders

can be set to signal that a program is about to start when you are watching another channel. If you set reminder to a program, then you will be asked for switching to that channel when the reminder time comes.

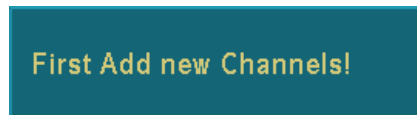
The starting time for EPG is the current time. You can see the event information for the next two hours. By pressing LEFT/RIGHT key, you can go to the next hour, and by pressing GUIDE key, you can reach the event information for the next few days (if information is available!). The EPG Menu is capable of containing information for one week if available from broadcaster.

5.7.2. MESSAGES

When the box receives no signal (e.g. the antenna cable is disconnected) , “NO SIGNAL” message is seen on the screen.



When there is no channel stored in the box, Timer Menu, Channel Table Menus are not accessible. Channel navigation is not allowed. Therefore, trying to enter these menus or do channel navigation will display “First Add new Channels!” message on the screen.



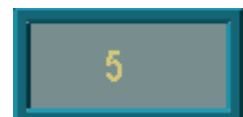
Similarly , when there is no channel , and INFO/HELP key is pressed , below message is displayed.



5.7.3. CHANNEL NAVIGATION :

There are two ways to navigate through the channels:

Channel ↓↑ keys: Pressing Channel ↓↑ keys will help you to go to the next or the previous channel in the list.



Numeric Keys: Pressing a number key will activate a small digit entry window on the left upper corner of the screen. After a digit is entered, the box will wait for 2 seconds till you enter another digit. If no digit is entered during this 2 seconds, then the box will perceive this number as the destination number.

If the channels are sorted according to their names, the entered number is behaved as the index. Or if the channels are LCN sorted, the entered number is behaved as LCN, in this mode when an unused LCN number is entered, box will not action.

If a number that is greater than the maximum number of channels or maximum stored LCN number is entered, the box will switch automatically to the last channel.

Each time the box switches to the desired channel, an information window is displayed on the lower part of the screen. The small bar on top right of the banner indicates the current signal quality.

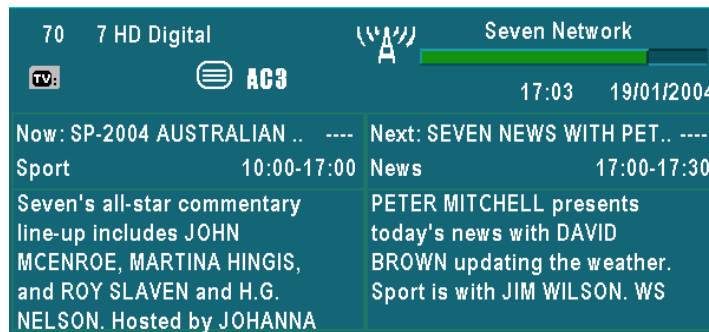


On this channel info window, there are

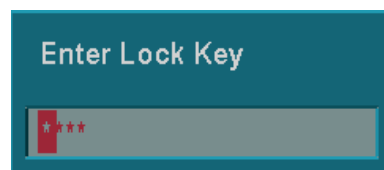
- Channel number or LCN (logical channel number) number according to current sorting mode
- Name of the channel
- Name of the current Network
- Current Time and Date
- A bar indicating current level of signal
- An icon indicating that the channel is set as favourite (if the channel is not set as favourite the field is left empty)
- An icon indicating that the channel has Dolby Sound available
- An icon indicating that the channel has Teletext or not
- Current event name, next event name, their start and end times, their types and parental ratings



In the no menu mode, when info button is pressed a more detailed info banner is displayed. In this banner you can also see extended event information of current and next event.



When switching to a locked channel (channel), lock code is requested via a window as shown in the picture. Only after the correct code is entered, it is allowed to access to this channel. To skip this channel, Channel ↓↑ cursor keys must be used.



5.7.4. VOLUME CONTROL :

When VOLUME ↑↓ keys are pressed, a banner is displayed, which shows the present volume level graphically. By keeping these keys pressed, the sound can be increased (for VOLUME ↑key) or



decreased (VOLUME ↓ key).

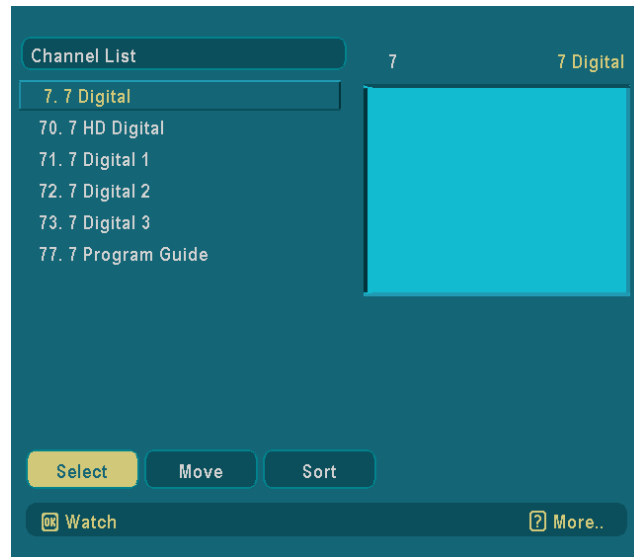
When the MUTE key is pressed, mute symbol is displayed on the upper right side of the screen. The mute symbol will stay until mute is pressed again. Unless there is a menu display, the mute symbol will always be on the screen.



5.7.5. LIST MENU (RED BUTTON):

List Menu is the place where both the whole program list and the favourite lists are managed. The following operations can be performed in this menu:

1. Navigating the current List of programs.
2. Reordering the List (moving channels up/down)
3. Removing unwanted programs (Active only in favourite mode).
4. Renaming the favourite list name (Active only in favourite mode).
5. Sorting channels according to their names or LCN numbers (Active only in normal mode).



When the list menu is displayed by pressing Red key, the programs of the favourite list are displayed if the favourite mode is on. If the favourite mode is off, full list of programs is displayed (Radio programs are displayed with a note icon). The name of the current list can be seen on the left corner of the menu.

Sort option is used to reorder stored channels according to their names or LCN number. LCN (Logical Channel Numbers) is the unique number for each channel in the network which is determined by the broadcaster. It forms a logical connection between network and channel.



6. SOFTWARE UPGRADE THROUGH RS232

The object of this instruction is to give necessary information and details to the user to upgrade the software of the receiver through RS232.

The list of the necessary equipment is as follows:

Receiver and TV

PC with "Hyper Terminal" function

RS232 serial to SCART communication cable

Steps to be followed by the user are given below:

1. Connect the serial communication cable between the TV scart of the receiver and the serial communication port (COM1 or COM2) of the PC.
2. Make sure that the PC is on and the receiver is first reset and then turn to Standby mode.
3. Run "Hyper Terminal " program of the PC from Start /Programs/ Accessories/ Communications/ Hyper Terminal menu.
4. Give a name and choose an icon for the connection. (You do not need to make a new connection every time. You can use this name for the future connections.)
5. Choose communication port in the new coming window (COM1 or COM2) whichever you have used in Step 1.
6. Port settings should be as follows:

Bits per second	:	115200
Data Bits	:	8
Parity	:	None
Stop bits	:	1
Flow control	:	None
7. Now Hyper Terminal connection is established. From "Transfer Menu", choose "Send File".
8. Enter file name to be sent.
9. Choose Xmodem1K as protocol type.
10. Press Send button. To activate the Software Upgrade function of the receiver, power off and then on the receiver.
11. You will see the progress on the PC screen. Wait for the transfer to be completed. Then, disconnect and exit from Hyper Terminal window.
12. Wait until the led on the front panel turns green.
13. Receiver will automatically start to operate.

7. TROUBLE SHOOTING GUIDE

Trouble	Possible reasons	What to do
The standby led is not lit.	Mains cable is not connected.	Check if the mains cable is plugged into the power socket.
No picture or sound.	No signal or weak signal.	Check the antenna and scart connectors
The settings you have done in the menus have not been changed.	The digital set-top box was unplugged without first going to standby.	Before unplugging your digital set-top box, wait for going to standby.
The remote control is not working.	<ul style="list-style-type: none"> • The digital set-top box is in standby. • Remote control is incorrectly aimed. • Battery exhausted. 	<ul style="list-style-type: none"> • Press the standby key • Check whether active led is flashing red or not. • If not change the batteries.
You have forgotten any channel lock code.		From Manual search menu search for that multiplex again and store them then channel lock is cancelled.

8. TECHNICAL SPECIFICATIONS

GENERAL

Input Frequency	:	50MHz - 858 MHz
Power consumption	:	12 W (max)
Operating temperature	:	5°C to +45°C
Storage temperature	:	-20°C to +70°C
Humidity	:	25 to 75 % rel
Physical dimensions	:	240x138x40 mm
Weight	:	0,6 kg

DIGITAL CAPABILITIES

Transmission Standards : DVB-T, MPEG2

i. DEMODULATION:

- COFDM with 2K/8K FFT mode.
- FEC for all DVB Modes.

ii. VIDEO

- All MPEG2 MP@ML formats with up-conversion and filtering to CCIR601 format.
- RGB analogue outputs.
- CVBS analogue output.

. UDI :

- All MPEG1 Layer 1 and 2 modes
- Sampling frequencies supported are 32, 44.1 & 48 kHz
- Oversampled 18 bit DAC

REMOTE CONTROL

Operating Distance	:	12m Max.
Batteries	:	2x1.5V Micro (R-06/AA)

HARDWARE CONFIGURATION

Main Processor	:	Sti5518
Flash Memory	:	1 Mbyte
SDRAM	:	8 Mbyte
EEPROM	:	32 KBit
Demodulator	:	STV0360

Frequently Asked Questions

Q. Can I use the digital receiver on any television?

A. YES. This product has a standard video output (on SCART) which will connect to any television with video input. Also available is RGB (red, green, blue) connection to a television that has a SCART input. You will need to purchase a SCART to SCART cable to use the RGB signal.

A. Connected the box to your TV and your aerial to the digital receiver. Then simply follow the prompts on the screen and begin Automatic tuning. A few minutes later, your product is ready to be used.

Q. Can I watch a multi-view events on my digital receiver?

A. YES. This product is capable however it is subject to broadcast availability. Note that specific interactive features and applications are not supported.

Q. How do I know what is showing in Widescreen 16:9?

A. Check the DBA website (<http://www.dba.org.au>) for widescreen programming and special broadcasts.

Q. Can I use my digital receiver on a Widescreen or Normal sized television?

A. YES. The DVB-350 supports both 16:9 Widescreen and 4:3 Normal formats. Press the button labeled ASPECT on the remote to switch formats.

Q. How do I use the EPG (Electronic Program Guide)?

A. Simply press the button labeled GUIDE on the remote. It will show the programs currently showing NOW and NEXT on that television network. Note that the accuracy of the information comes from the broadcast.

Q. Does the digital receiver support parental control of programs?

A. YES. The parental code can be set to block certain programs.

Q. What is the power-consumption of my DV-B350?

A. When operating, your box will use only around 13w to 15w of power.

Q. What are MPEG Artifacts?

A. Sometimes the picture may appear to be slightly blocky. These are known as MPEG artifacts. They are directly related to video compression at the broadcast side. The extent of this is related to how fast the picture is moving, numbers of colours, quality of the original material, the video encoder used at the time, etc. This is not a problem with your set-top box.