



TRIAX TR 105

Digital Terrestrial set-top box

Part No. 305105



TRIAX - your ultimate connection

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1.Forward

This User Guide is intended to help you operate your Digital Terrestrial receiver, (called 'receiver' for short), as intended, safely and to the best advantage.

We assume that the user of the receiver has a general knowledge of how to handle consumer electronic equipment. Everyone who installs, connects, operates, cleans or disposes of this receiver must take the time to read the complete contents of this User Guide.

Please ensure that the User Guide is kept safe place near the receiver.

2.Copyright

Not to be copied, used or translated in part or whole without prior consent in writing except approval of ownership of copyright and copyright law.

3.Warranty

This warranty does not cover parts which may become defective due to misuse of the information contained in this manual.

4. Intended Use

The receiver is used for receiving free-to air Digital Terrestrial signals. It is exclusively intended for this purpose and may only be used for this. This also includes adherence to all information in this operating manual, in particular the safety instructions.

Any other use is deemed to be not as intended and can lead to damage to property or even personal injury. In addition it means the immediate invalidation of the warranty.

The manufacturer accepts no liability for damage which arises from use which is **not** as intended.

5. Safety Precautions

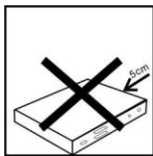
Warning! Important Safety Instruction



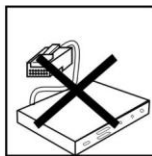
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER(OR BACK).NO USER SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Safety precautions:

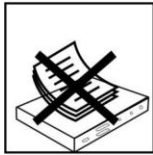
The receiver has been manufactured in accordance with international safety standards .For your own safety you should read the notes on safety precautions carefully, and take note of them ,before operating your new receiver .For your own safety please be sure to follow these safety precautions ;



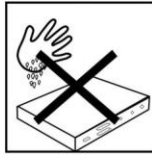
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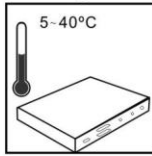
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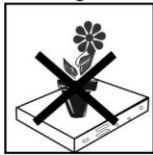
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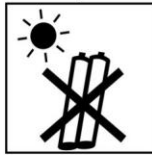
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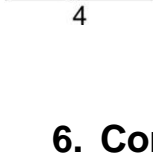
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1. When installing the receiver, ensure there is a gap of approximately 5cm around the receiver to enable air to circulate freely and prevent overheating.
- 2 Do not install this equipment in a confined space such as a book case or similar unit. The ventilation should not be impeded by covering the ventilation openings with items such as newspaper, table-cloths, curtains etc.
- 3, No naked flame sources, such as lighted candles, should be placed on the apparatus;
- 4, The receiver shall not be exposed to dripping or splashing;
No objects filled with liquids, such as vases.
- 5, The mains plug is used as a disconnect device, the disconnect device shall remain readily operable.
- 6, Power cord must be placed correctly. Do not touch the power Cord and switch when your hands are damp or wet.
- 7, The normal operating temperature of the receiver is between 5°C and 40°C. Use the apparatus only in moderate climates (Not in tropical climates).
- 8, The batteries shall not be exposed to excessive heat such as sunshine, etc. Please take note of the battery handling advice below.

6. Correct Handling of Batteries:

- Batteries can contain toxins. Take care that the batteries do not get into children's hands. Children might put batteries in their mouths and swallow them.
- Leaking batteries can cause damage to the remote control. If the receiver is not used for a long time, take the batteries out of the remote control.
- Batteries may contain toxins that damage the environment. For this reason, it is absolutely essential that you dispose of the batteries in accordance with the legal provisions that are in force in your country at the time. Never throw batteries away in your normal household refuse. This is a requirement of the WEEE directive.
- The battery shall not be exposed to excessive heat such as sunshine, fire etc

7. Declaration of Conformity

Company Name: Triax UK Ltd

Company Address: Abergorki Industrial Estate,
Treorchy, Rhondda-Cynon-Taff
CF42 6DL, UK

Object of the Declaration: Triax TR 105 Digital Terrestrial Receiver, 305105.

The object of the declaration described above is in conformity with the requirements of the following documents:

Low voltage directive 2006/95/EC

EMC Directive 2004/108/EC

WEEE Directive 2002/96/EC

RoHS Directive 2002/95/EC

REACH Regulation 1907/2006/EC

CE Marking Directive 93/68/EEC

Packaging Directive 94/62/EC

The product identified above complies with the relevant EC Directives by meeting the following standards:

BS EN55013:2001+A1:2003+A2:2006 Test Limits for STB Receivers Disturbance Characteristics

BS EN55020:2007 Test Limits for STB Receivers Immunity Characteristics

BS EN60065:2002:A1:2006+A11:2008 Audio and Video Equipment Safety Requirements

BS EN 61000-3-2:2006 Test Limits for EMC Harmonic Currents

BS EN61000-3-3:1995+A1:2001+A2:2005 Test Limits for EMC Voltage Changes and fluctuations

The Declaration of Conformity is made in relation to the associated tests carried out and verified by our suppliers and their authorised test facilities.

Signed for and on behalf of:

TRIAX UK LTD

KEVIN EDWARDS.....QUALITY MANAGER.

24th November 2009

8. General Information

The TRIAX TR 105 is a Digital Terrestrial Receiver which allows you to receive Freeview channels. This user's guide covers the installation of the TRIAX TR 105 and the necessary steps to operate various features.

8.1 For Your Safety

- Allow clear space around the TRIAX TR 105 for sufficient ventilation
- Do not cover the TRIAX TR 105 or place it on a unit that emits heat
- Use a soft cloth and a mild solution of washing liquid to clean the casing (with the receiver switched off and disconnected)
- Do not connect or change cables when the TRIAX TR 105 is plugged in
- Do not remove the cover

8.2 Specification

Terrestrial	Tuner	STV4100B Tuner on board	
Tuner	Input frequency	VHF 177.5 MHz~235.5 MHz; UHF 474 MHz ~858 MHz	
	Standard	DVB-T (ETS 300 744)	
	Channel Bandwidth	7/8MHz	
	COFDM System	FFT 2K, 4k ,8K Hierarchical supported	
	Demodulation type	QPSK, 16QAM, 64QAM	
	Guard Interval	1/32, 1/16, 1/8, 1/4 active symbol duration	
	FEC	1/2, 2/3, 3/4, 5/6, 7/8	
	System	CPU	STi5162GBB
		Transport	DVB De-multiplexer
		Serial Flash memory	2MBytes
	System memory	16MBytes	

Video Decoder	CPU Core	STi5162GBB
	Video Standards	MPEG-1 ISO/IEC 11172-2 MPEG-2 MP@ML and MP@LL, ISO/IEC 13818-2
	Field / Frame rate	50/25 Hz, 60/30 Hz
	SD decoding capability interlaced/progressive mode	576i and,480i
	Aspect ratio	4:3, 16:9, Letter Box, auto
	Video Output	TV Scart (CVBS/RGB),
	Output modes	480i,576i
Audio Decoder	CPU Core	ST20
	Audio Standards	ISO/IEC 11172-3 Layers I/II; Single/Dual/Joint mode
	Audio output	TV/(AL/AR)
	USB2.0 HOST	None
Rear panel interface	RF Input connector	IEC type, Female, 75 ohm
	RF Output connector	IEC type, male, 75 ohm
	RCA	AL/AR
	TV/Scart(CVBS/RGB output)	TV/Scart(CVBS/RGB/ AL/AR output)
	RS 232	Data
Front Panel		LED =Power on / standby ; key =Standby CH+ CH- ; IR
Power requirements	Mains input voltage	200-240VAC~
	Mains input frequency	50/60 Hz
	Rated Output Power	6W

8.3 Packaging.

When unpacking the TRIAX TR 105 make sure that all of the following items are included in the packaging.

- 1 x TR 105 Receiver
- 1 x Remote Control Unit (RCU)
- 1 x Battery pack for RCU
- 1 x Scart Lead
- 1 x User's Guide
- 1 x Retune Instructions.

8.4 General Operation of the TRIAX TR 105.

The operation of your TRIAX TR 105 is based on a series of user friendly on screen displays and menus. These menus will help you get the most from your TRIAX TR 105, guiding you through installation, channel organising, viewing and many other functions.

All functions can be carried out using the buttons on the RCU, while the Standby, Ch+ and Ch- functions can also be carried out using the buttons on the front panel.

Please be aware that new software may change the functionality of the TRIAX TR 105.

Should you experience any difficulties with the operation of your TRIAX TR 105, please consult the relevant section of this manual, including Troubleshooting, or alternatively call your dealer.

8.5 Remote Control Unit, (RCU):

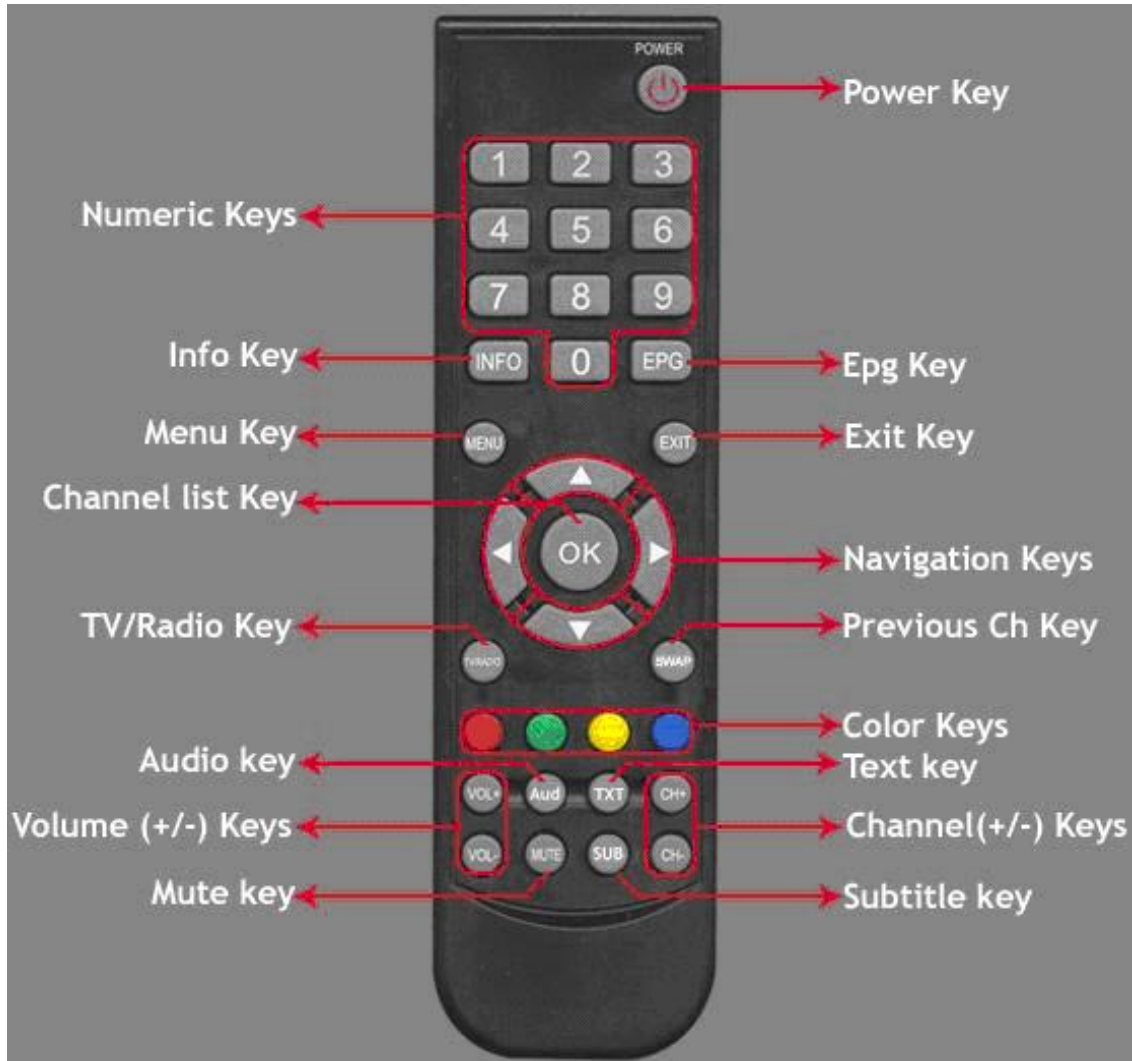


Figure 1: Remote Control Unit

8.6 Front Panel

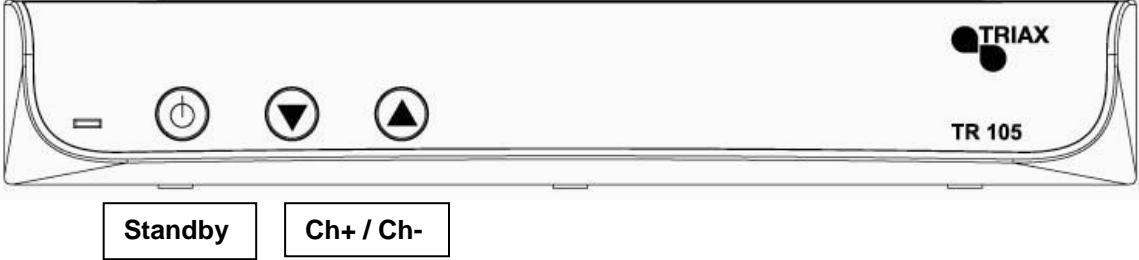


Figure 2: Front Panel

8.7 Rear Panel:

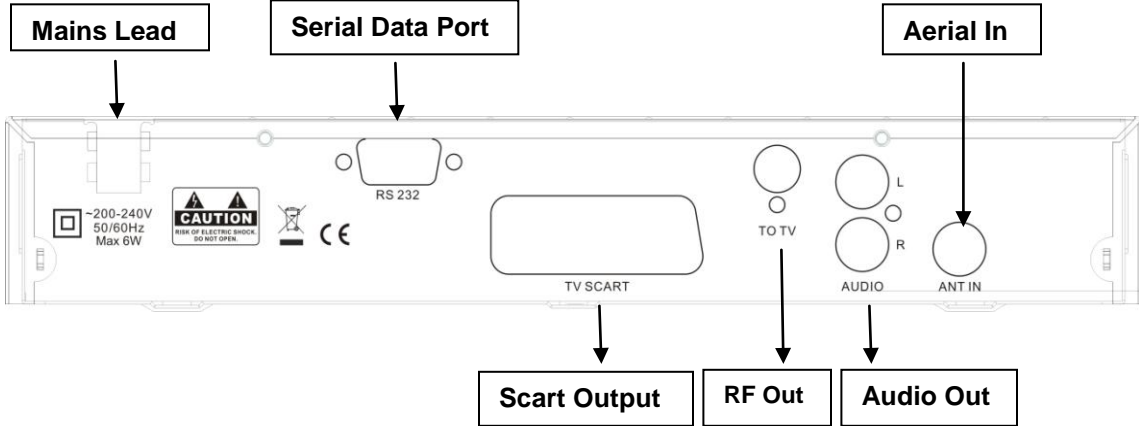


Figure 3: Rear Panel

8.8 Main Features:

- Easy to use graphic interface
- MPEG-2 Digital Compliant
- MHEG-5 Interactive services via the 'Red' button.
- 7 Day Electronic Program Guide (EPG)
- DVB Subtitle supported
- Fully agile modulated RF output
- Channel editing functions
- Favourite Lists
- Wakeup Timer
- CVBS, RGB Video Output
- Automatic 'Logical Channel Numbering', (LCN).

9. First Time Installation:

9.1 Switching On:

- a) Connect the TR 105 to the mains supply
- b) The front panel LED illuminates.

9.2 Language List

When the TR 105 is switched on for the first time, or there is no channel information stored in the receiver, the Triax logo will be displayed plus a list of languages.

Using the ▲▼ buttons, select the language corresponding to the country where you are residing, (The default language is English).

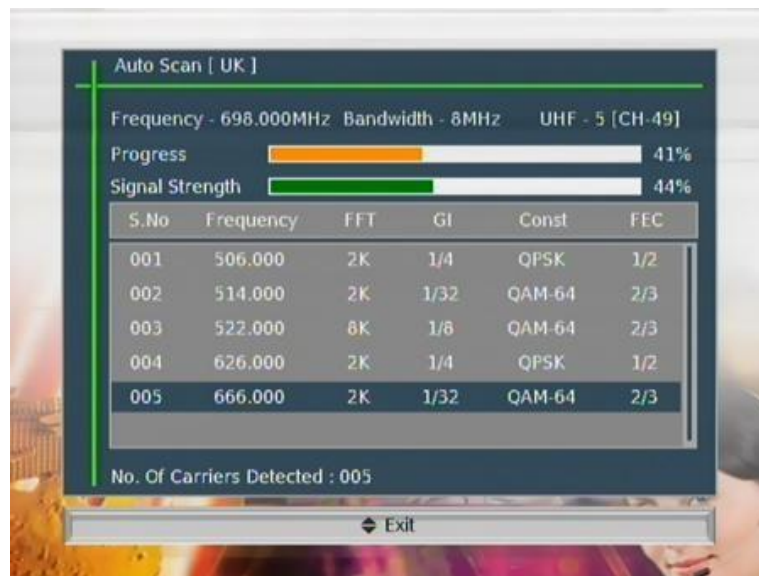
Press 'OK' to select.



9.3 Channel Search.

When the language is selected, the Receiver will automatically search for services being transmitted in the corresponding country's frequency range.

The auto scan is carried out in two stages. Initially the Digital Multiplex details will be listed, after which TV and Radio channels within each Multiplex will be listed. The auto scan will take a couple of minutes to complete.

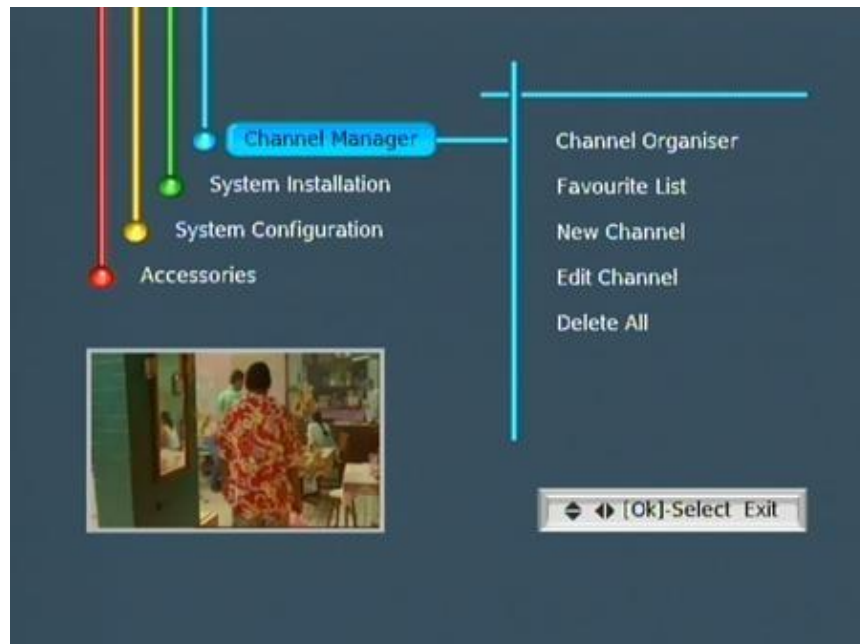


10. Navigating the Menu Screens:

10.1 Main Menu:

The Main Menu screen consists of 4 main categories:

- Channel Manager
- System Installation
- System Configuration
- Accessories



- Use the Up/Down or Left/ Right buttons to toggle between options.
- There follows a summary of the functions within each category:

10.2 Channel Manager:

a) Channel Organiser:

Press the following buttons on the RCU to carry out the following functions:

- 1 – To 'Lock' a channel in the channel list.
- 2 – To 'Skip' a channel in the channel list.
- 3 – To 'Delete' a channel from the channel list.
- 4 – To 'Move' a channel in the channel list
- 5 – To 'Rename' a channel in the channel list.

Press 'OK' and 'Exit' to Select.

b) Favourite List:

This allows the user to compile a series of personal favourite channel lists. There are 8 categories to choose from, numbered 1 to 8. Use the ▲▼ buttons to select a channel and then enter the number to place the channel in the required favourite group, e.g. number '1' for News, '8' for family etc. A symbol will be placed alongside the selected channel.

To remove a Favourite channel from an existing list, press '0', (None).

Pressing 'OK' will save the data.

To access the favourite lists:

Press 'OK' to display the channel list

Press the RED button on the RCU.

Use the '<' and '>' buttons to toggle between Favourite group and Channels.

Press 'OK' to select the channel.

To exit Favourite mode, select 'All' (Note: When in Favourite mode, certain functions may not be accessible)

c) New Channel:

This allows the user to enter a new channel, (PID information is required).*

Press 'Exit' to return to Main Menu.

d) Edit Channel:

This allows the User to manually edit channel parameters such as PID settings.*

Press 'Exit' to return to Main Menu.

e) Delete All:

This gives the user an option of deleting:

- All TV services
- All Radio Services
- All Carriers

* **Warning:** Changing PID information will result in you losing the channel. Only change the PID settings if you know the correct PID settings for the new channel.

10.3 System Installation:

a) Auto Scan:

This allows the user to rescan the receiver for new or changed channels. The user is prompted as to whether existing stored channel information is deleted or not.

b) Manual Scan:

This allows the user to scan a specific UHF channel. The user is prompted to enter the UHF channel to be scanned. The required channel is selected using the '<' and '>' buttons. Press 'OK' to start the scan, 'EXIT' to return to the Main Menu.

c) Delete Multiplexes:

This allows the user to delete unwanted Multiplexes. Use the ▲▼ buttons to select a Multiplex and the '<' and '>' buttons to select the multiplex to be deleted. When selected a tick appears alongside the selected Multiplex.

The user is asked to confirm the delete, if YES is selected, the Multiplex is deleted. Press 'EXIT' to return to the Main Menu.

10.4 System Configuration:

a) System Set Up:

i) **'Language'**: This allows the user to set up the preferred language settings, where applicable. The user can also activate the 'Hearing Impaired' feature.

ii) On Screen Display, (OSD):

This allows the user to adjust the appearance of the OSD.

'Theme' changes the background colour,

'OSD Timeout': This allows the user to set the time, in seconds, that an information banner is displayed

'Banner Position': This allows the user to alter the position of the information banner on the screen, (top or bottom).

'Logical Channel Number, (LCN)': This lists channels in a logical order within the channel list. The default setting is for this to be ON.

Press 'EXIT' to return to the Main Menu.

iii) TV:

This allows the user to adjust the TV and Receiver settings:

'Aspect Ratio': Allows the user to adjust the Aspect Ratio output to suit the TV being used. 'Auto' (default), 4:3 Panscan, 4:3 Letterbox and 16:9 are available.

'Analogue Output': Allows the user to toggle between 'CVBS' (default) and 'RGB' Outputs.

'Auto Standby': The TR 105 will automatically enter Standby, in order to save power, if the receiver is switched on and un-activated for a period of 3 hours. The user can disable this feature if required.

'Sleep Timer': This allows the user to select a period of time after which the TR 105 automatically enters standby. It is user selectable between 0 to 120 Minutes.

iv) Time:

This allows the user to adjust time and date information. 'Auto' and 'Manual' modes are selectable. Pressing 'OK' or 'EXIT' saves settings and returns to the Main Menu.

v) Wakeup Timer:

This allows the user to set up a 'Timer Event'. Up to 8 timers can be set, either manually or via the EPG, (Electronic Program Guide). A timer can be set so that the TR 105 automatically switches on, (from Standby mode), to a pre-set channel or welcome message, at a set time and for a set duration. Repetitive 'Timer Events' can also be set for 'Once', 'Daily' or 'Weekly' periods. Toggle through the options using the ▲▼ and '<' and '>' RCU buttons. Pressing 'OK' or 'EXIT' saves settings and returns to the Main Menu

vi) Parental Lock

This allows the user to enter a 'Parental Rating' and a four digit Password to prevent unauthorised viewing of programs. The default password is '0000'.

Warning: Once you change the password, please keep it safe.

b) Start-up Channel:

This allows the user to set up the TR 105 so that it will power up to a pre-set channel. Use the '<' or '>' buttons to activate or deactivate and the ▲▼ buttons to select the required Startup channel.

Pressing 'OK' or 'EXIT' saves settings and returns to the Main Menu.

c) R.F. Setup:

This allows the User to set up the R.F. Output Mode and Modulated R.F. Channel. Toggle through the options using the '<' and '>' RCU buttons. The R.F. Mode can be set to PAL I or PAL BG, (PAL I default), and the Modulated UHF R.F. Output Channel can be set to channel 21 to 68, (default 36).

Pressing 'OK' and 'EXIT' saves settings and returns to the Main Menu.

d) Audio Description:

This allows the user to activate or deactivate the 'Audio Description' function. This is an audio sub-carrier which provides additional audio to assist users with impaired eyesight.

10.5 Accessories:

a) Factory Default:

This allows the user to reset the TR 105 back to the condition that it left the factory. All user settings and previously stored channels will be lost. The user is prompted to confirm if a factory reset is to be carried out to prevent accidentally erasing information.

b) S/W Upgrade via OTA:

If this option is selected, the TR 105 will search for software upgrades being transmitted over the air. A banner is displayed during the search and the user is prompted if no software is detected. Press 'EXIT' to cancel the search.

c) Version:

This gives the current Hardware and Software information for the TR 105. Press 'OK' or 'EXIT' to return to the Main Menu.

11. Channel List:

When viewing a channel, the user can call up the channel list by pressing 'OK'. The current channel list is displayed together with a preview screen and channel details. The user can now press the RED RCU button to access any Favourite lists which have been set up.

12. Favourite List:

To access the favourite lists:

- i) Press 'OK' to display the channel list
- ii) Press the RED button on the RCU – the Favourite menu is displayed.



- iii) Use the '<' and '>' buttons to toggle between Favourite group and Channels.
- iv) Select the required Favourite group. Channels within that group will be displayed.



- v) Use the '<' and '>' buttons to access the channel list and press 'OK' to select the channel.

To exit Favourite mode, select 'All' (Note: When in Favourite mode, certain functions may not be accessible)

13. Electronic program Guide (EPG):

Press the 'EPG' button on the RCU to enter the Electronic Program Guide.



The EPG lists the channels vertically and the programs and time information horizontally.

The TR 105 supports a 7 day EPG..

Navigate around the EPG screen using the ▲ ▼ RCU buttons to select the channel and the '<' and '>' RCU buttons to select the program.

The coloured RCU keys can be used to select the following:

Press **Green** – Jumps forward to the next day's programs.

Press **RED** – Jumps back to the previous day's programs.

Press **Yellow** - Automatically sets a timer for the selected program. When a timer has been set, the selected program will be highlighted in yellow on the EPG screen.

Pressing 'OK' on a selected program will refresh the program being previewed. Pressing 'OK' will also display a short but extended description of the selected channel.

14. Using the Interactive Service:

Certain channels will offer an Interactive service. The Interactive pages will contain user information such as News, Weather, Sport and much more. This service is accessed by using the RED or Text button on the RCU.

To operate the Interactive services, (on the participating channels):

Press the RED button on the RCU to open the Interactive services.

Press the EXIT button on the RCU to exit the Interactive services.

Alternatively, press the TEXT button on the RCU to open the Interactive services.

Pressing the TEXT button again exits the Interactive service.

Pressing the EXIT button also exits the Interactive services.

Use the ▲▼ and '<' and '>' RCU buttons to navigate within the Interactive pages.

Press 'OK' to select a page.

Use the RCU's coloured keys to select options within the displayed page.

If Subtitles are set to ON and the user presses the TEXT button, then the subtitles will be switched off and the Interactive service will open. When the Interactive service is closed, Subtitles will resume.

Switch Subtitles off before using the RED button to enter Interactive services.

15. Channel Banner:

When switching between channels the 'Channel Banner' is displayed. This shows information such as;

- i) Date / time / Channel Name
- ii) Special features such as subtitles and audio modes, (if broadcast on the channel)
- iii) Signal quality - indicated by a horizontal bar.
- iv) 'Now' and 'Next' information with time elapsed - indicated on a horizontal bar.

16. Volume and Mute Controls:

- i) Adjusting the Volume:

The User can adjust the volume of the TR 105 using the VOL+ and VOL- buttons on the RCU. The volume level can be increased or decreased in 32 increments.

- ii) Mute Control:

The User can temporarily switch off the TR 105 audio output by pressing the 'MUTE' key on the RCU. To cancel the 'Mute' control, press the 'MUTE' button again or press the VOL+ or VOL- buttons.

17. Channel UP / Channel DOWN:

The User can navigate up or down the Channel List using the Ch+ and Ch- buttons on the RCU.

18. Quick Channel Listing:

While viewing a channel, if the User presses 'OK' on the RCU, the Channel List will be displayed. Using the ▲▼ buttons on the RCU, the User can navigate between channels. When 'OK' is pressed, a preview of the channel is shown on the graphic together with channel information. By pressing 'OK' again, the User can select the channel from the list.

19. Swap:

The 'SWAP' button on the RCU allows the User to switch between the current and previously viewed channels.

20. Subtitles:

The User can switch on Subtitles, (when broadcast), by pressing the 'SUBT' button on the RCU.

21. TV / Radio:

The user can use the 'TV/Radio' button on the RCU to toggle between TV and Radio channels and to view the TV or Radio Channel Lists.

22. Exit:

If the User wishes to exit a menu screen, press the 'EXIT' button on the RCU.

Triax reserves the right to change the specification at any time without prior notice.

Issue 3: December 2009