FUTV4031A 4 to 4 FTA Satellite Receiver

User's manual

Version: 1.0

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DIRECTORY

Chapter 1 Product Outline

1.1 Outline

FUTV4031A 4 to 4 FTA Satellite Receiver is a cost effective integrated design of four DVB-S2/S(optional) IRD in one U rack space, every single set performs and operates like a single FTA ASI Satellite Receiver with separate set of (2 ×CVBS, 1 ×Audio L, 1 ×Audio R) and dual (mirrored) ASI. This modularized design largely saves the cost of the transport freight, the space of frame rack and power consumption. In general, it greatly optimizes the functionality and structure of the normal standard-alone FTA Satellite Receiver, providing users more convenient operating and maintenance experience.

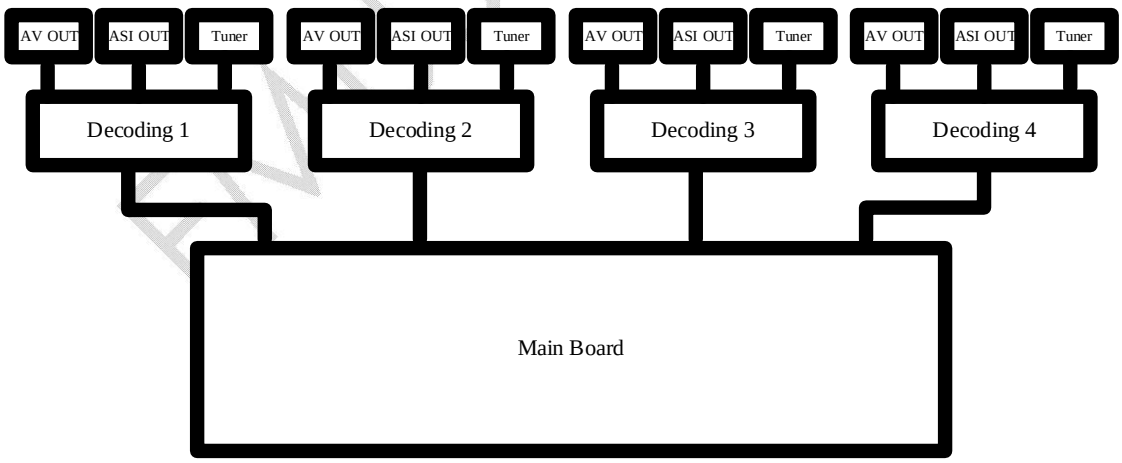
1.2 Features

- MPEG2 and DVB-S standards compatible
- User-friendly and easy operating menu
- Editing all parameters of satellite and transponder
- OSD TV image-test (DVB ETS 300 706) and subtitle supporting
- Auto-switching PAL/NTSC
- Auto-saving the latest channel
- 4 to 4 Satellite Receiver module design, more compact in structure
- Standard 19″1U structure

1.3 Specifications

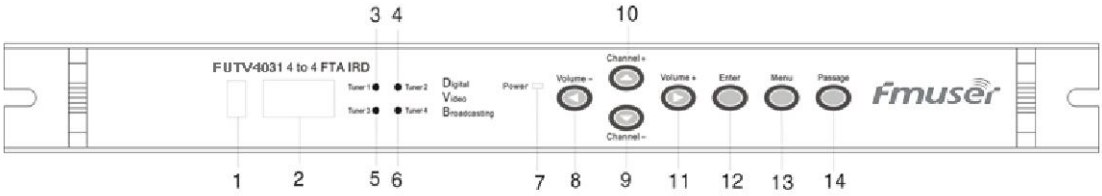
Tuner IN	4×input, 4×loop through output	
Input Level	-65～-25dBm	
Input Frequency	950~2150MHz	
Symbol Rate	2-45Msymbols	
FEC Code Rate	1/2, 2/3, 3/4, 5/6, 7/8QPSK	
Video OUT	4×CVBS (RCA interface)	
Audio OUT	4×Audio (L/R)	
ASI OUT	4×2 BNC interface	
Miscellaneous	Dimension	44mm×482mm×410mm
	Temperature	0~45℃(Operating), -20~80℃(Storage)
	Power	AC 90~220V, 50/60Hz, 25W

1.4 Principle Chart



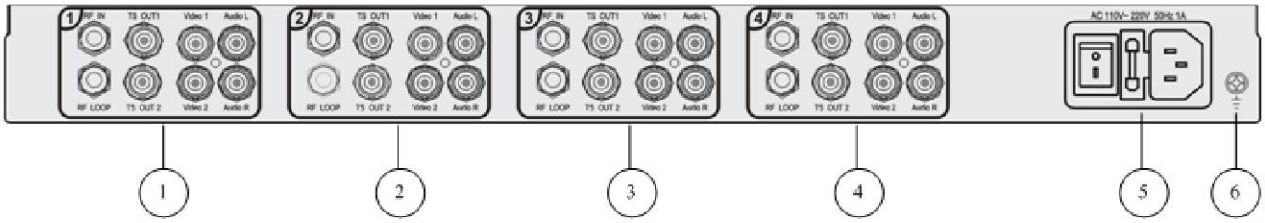
1.5 Appearance and description

Front Panel Illustration



1	Passage display
2	Channel display
3	Signal locked indicator of passage 1
4	Signal locked indicator of passage 2
5	Signal locked indicator of passage 3
6	Signal locked indicator of passage 4
7	Power indicator
8	Volume- / Left
9	Channel-/Down
10	Channel+/Up
11	Volume+/Right
12	Enter key
13	Menu key
14	Passage key

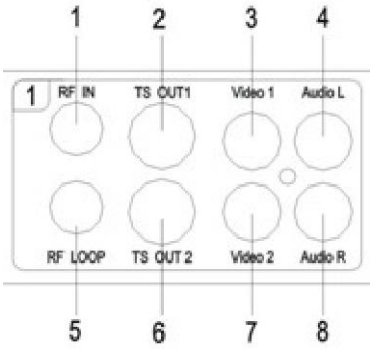
Rear Panel Illustration



1	Passage 1
2	Passage 2
3	Passage 3
4	Passage 4
5	Integrated power socket
6	Grounding pole

Passage interfaces illustration

The rear panel has four passages of the same. The interfaces of each passage are illustrated as follows:



1	RF signal input
2	TS output 1
3	Video output 1
4	Audio left output
5	RF signal loop out
6	TS output 2
7	Video output 2
8	Audio right output

Chapter 2 Installation Guide

2.1 Acquisition Check

When user opens the package of the device, it is necessary to check items according to packing list. Normally it should include the following items:

- FUTV4031A 4 to 4 FTA Satellite Receiver 1pcs
- User's Manual 1pcs
- ASI Cable 4pcs
- Power Cord 1pcs
- A/V Cable 4pcs
- Grounding Cable 1pcs

If any item is missing or mismatching with the list above, please contact our company.

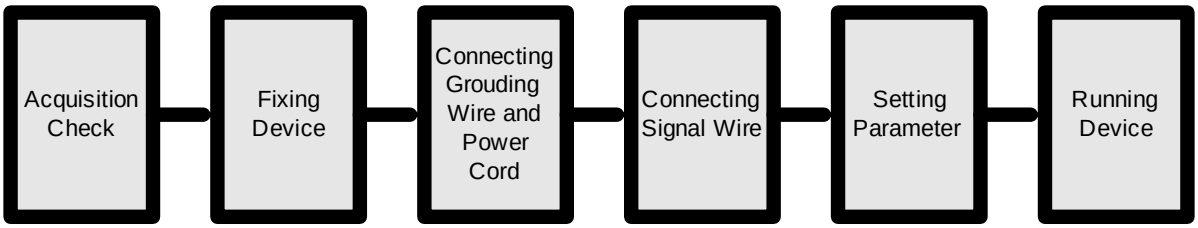
2.2 Installation Preparation

When users install device, please follow the below steps. The details of installation will be described at the rest part of this chapter. Users can also refer rear panel chart during the installation.

The main content of this chapter including:

- Checking the possible device missing or damage during the transportation
- Preparing relevant environment for installation
- Installing modulator
- Connecting signal cables
- Connecting communication port (if it is necessary)

2.2.1 Device's Installation Flow Chart Illustrated as following：



2.2.2 Environment Requirement

Item	Requirement
Machine Hall Space	When user installs machine frame array in one machine hall, the distance between 2 rows of machine frames should be 1.2~1.5m and the distance against wall should be no less than 0.8m.
Machine Hall Floor	Electric Isolation, Dust Free Volume resistivity of ground anti-static material: $1X10^{7}$~$1X10^{10\Omega}$, Grounding current limiting resistance: 1M (Floor bearing should be greater than 450Kg/㎡)
Environment Temperature	5~40℃(sustainable)，0~45℃(short time)， installing air-conditioning is recommended
Relative Temperature	20%~80% sustainable　10%~90% short time
Pressure	86~105KPa
Door & Window	Installing rubber strip for sealing door-gaps and dual level glasses for window
Wall	It can be covered with wallpaper, or brightness less paint.
Fire Protection	Fire alarm system and extinguisher
Power	Requiring device power, air-conditioning power and lighting power are independent to each other. Device power requires AC power 100-240V 50-60Hz. Please carefully check before running.

2.2.3 Grounding Requirement

l　All function modules' good grounding is the basis of reliability and stability of devices. Also, they are the most important guarantee of lightning arresting and interference

rejection. Therefore, the system must follow this rule.

- Coaxial cable's outer conductor and isolation layer should keep proper electric conducting with the metal housing of device.
- Grounding conductor must adopt copper conductor in order to reduce high frequency impedance, and the grounding wire must be as thick and short as possible.
- Users should make sure the 2 ends of grounding wire well electric conducted and be antirust.
- It is prohibited to use any other device as part of grounding electric circuit
- The area of the conduction between grounding wire and device's frame should be no less than 25mm^2.

2.2.4 Frame Grounding

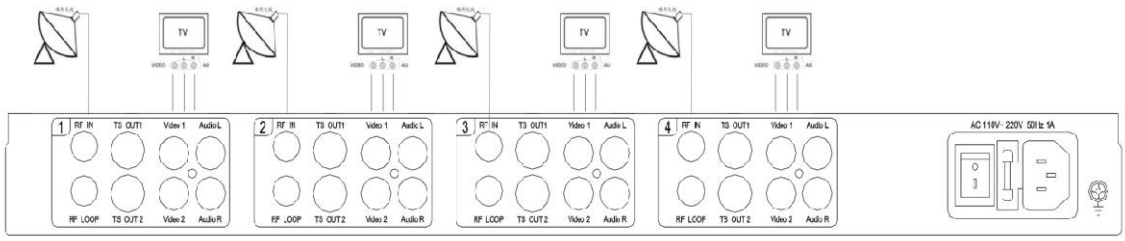
All the machine frames should be connected with protective copper strip. The grounding wire should be as short as possible and avoid circling. The area of the conduction between grounding wire and grounding strip should be no less than 25m^2.

2.2.5 Device Grounding

Connecting the device's grounding rod to frame's grounding pole with copper wire.

2.3 Installation collection illustration

The FUTV4031A 4 to 4 FTA Satellite Receiver installations is illustrated as follows:



1. Firstly, user should check whether the RF IN connector is in good condition, and ensure that the internal cable axis and grounding net couldn't be short. Then, user can connect the cable with F connectors to RF IN interface.
2. Secondly, user should connect the A/V output of this device to A/V input of TV set with A/V cable.
3. Lastly, user should connect the power cord to AC socket.

2.4 Wire's Connection

The grounding wire conductive screw is located at the right end of rear panel, and the power switch, fuse, power supply socket is just beside ,whose order goes like this, power switch is on the left ,power supply socket is on the right and the fuse is just between them.

- Connecting Power Cord

  User can insert one end into power supply socket, while insert the other end to AC power.

- Connecting Grounding Wire

  When the device solely connects to protective ground, it should adopt independent way, say, share the same ground with other devices. When the device adopts united way, the grounding resistance should be smaller than 1Ω.

F Caution:

Before connecting power cord to FUTV4031A 4 to 4 FTA Satellite Receiver, user should set the power switch to "OFF".

2.5 Signal Cable Connection

The signal connections include the connection of input signal cable and the connection of output signal cable. The details are as follows:

2.5.1 FUTV4031A 4 to 4 FTA Satellite Receiver Signal Cables Illustration:

- **Video and audio output cable illustration:**

- **ASI output cable illustration:**

ⅰ RF input and loop out cable illustration

2.5.2 FUTV4031A 4 to 4 FTA Satellite Receiver Signal Cables connection illustration:

ⅰ RF IN and LOOP OUT connection:

Users can find the RF IN and LOOP OUT interface on the device according to the connector mark described on the rear panel illustration, and then connect the cable. One end is connected to the satellite receiver while the other end is connected to the satellite signal source equipment or LOOP OUT interface on the rear panel. As follows:

One end is connected to the satellite signal source equipment, while the other is connected to the RF IN interface:

One end is connected to the RF IN interface while the other end is connected to the RF LOOP interface of the next group interfaces:

ⅰ TS(ASI)OUT cable connection:

Users can find the TS OUT interface on the device according to the connector mark described on the rear panel illustration, and then connect the cable. One end is connected to TS OUT interface on the device rear panel; the other end of the connection cable is connected to device that has ASI input interface, while when connected ASI OUT interface, the other end of the wire is generally connected to multiplexer. As follows:

ⅰ Video and audio output illustration:

Users can find the video and audio output interface on the device according to the connector mark described on the rear panel illustration, and then connect the cable. The other end of the wire is connected to TV set.

Chapter 3 Operation

The front plane of FUTV4031A 4 to 4 FTA Satellite Receiver is the user-operating interface and the equipment can be conveniently operated and used according to the signal information of the TV display; the simple using method for the machine is as follows:

Keyboard Function Description:

MENU: Canceling presently entered value, resuming previous setting; Return to previous menu.

ENTER: Activating the parameters which need modifications, or confirming the change after modification.

LEFT/RIGHT: To choose and set the parameters, it can also be used as Volume+/ Volume-

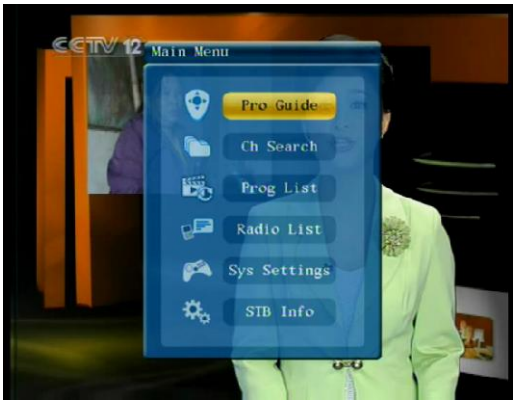
UP/DOWN: Modifying activated parameter or paging up/down when parameter is inactivated, it can also be used as Channel+/Channel-

PASSAGE: To choose one passage from four passages

3.1 Main menu

User can switch on this equipment after finishing installation and cabling. Then, user can choose the wanted passage to operate by pressing Passage key. For instance, when choosing passage 1, user can simply press Passage key to make “passage display” LED show 1, then user can operate the settings of passage 1. When operating other passages, user can follow the above operation.

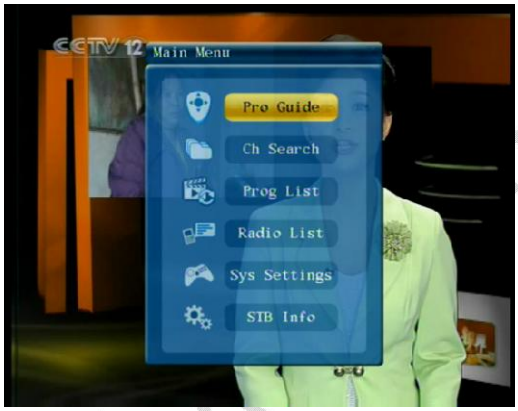
After turning on the device and displayer, user can press MENU key on the front panel to enter the main menu. As follows:



The main menu comprises 6 parts:

l ***Prog Guide***

User choose the “Program guide” by Up/Down key, and then the “channel List “will display after user presses Enter key. User can browse programs by Up/Down key. The menu shows as follows:



l ***Ch Search***

Under the main menu, users can choose the “channel search” by pressing Up/Down, and the page “SystemSet-Search” will be displayed after user presses Enter. The menu shows as follows:

The SystemSet-Search specifications are illustrated as follows:

LNB Frequ: it is the frequency of low noise block down converter. User can press Enter key to enter editing state or “saving and exiting”. In the editing state, user can move cursor to the number to be modified by pressing Left/Right key, and then user can modify the number by Up/Down key.

Polarity: there are vertical and horizontal optional, and user can select vertical (V) or horizontal (H) with Left/Right key.

22KHz: it can be used to choose a satellite signal input under two or more satellites. User can enable or disable this function by pressing Left/Right key.

Frequency: it is the frequency menu of satellite receiver; user can add frequency with Left/Right key.

Symbol: it is the symbol rate menu of satellite receiver, user can press Enter to enter editing or “saving and exiting”, in the editing state, user should firstly move cursor to the number to be modified by Left/Right key, and then modify the number by Up/Down key.

Stre: it shows the strength of the satellite signal.

Qual: it shows the quality of the satellite signal.

l ***Prog List***

Under the main menu, user can choose the “Prog list” by Up/Down key, and the “TV Prog List” will be displayed after user presses Enter. Then user can browse the current programs by up/down key. The menu shows as follows:

l ***Radio List***

Under the main menu, user can choose the “Radio List” by Up/Down key, and the “CH List” and “Prog List” will display after user presses Enter key. When there is a signal source, user is able to scan the “CH List” and “Prog List”. The menu will be displayed as follows:

l ***Sys Settings***

Under the main menu, user can choose the “Sys Settings” by Up/Down key, and the “Audio Settings” will be displayed after user presses Enter key. The menu shows as follows:

l ***STB Info***

Having entered the main menu, user can choose “System Set-System Info” by moving Up/Down key, then the system information will be displayed after user presses Enter key. The menu shows as follows:

3.2 Sys Settings

The ***Sys Settings*** menu comprises 5 parts: ***Audio Settings, Video Settings, ImageSet,***

Menu Language, and ***Default Set.*** As follows:

3.2.1 Audio Settings

The System Set-Tract Set will be displayed after user presses Enter key under the “Audio Settings”. There are Left, Right and Stereo optional in “Audio Set”. And user can choose the track by moving up/down key. The menu shows as follows:

3.2.2 Video Settings

The Video Set will be displayed after user presses Enter under the “Video Settings”. There are auto, PAL and NTSC optional in Video Set. And user can choose the video format by moving the Left/Right key.

Auto: when user chooses “Auto”, the device will auto-choose the corresponding video

format on the basis of the signal source.

3.2.3 ImageSet

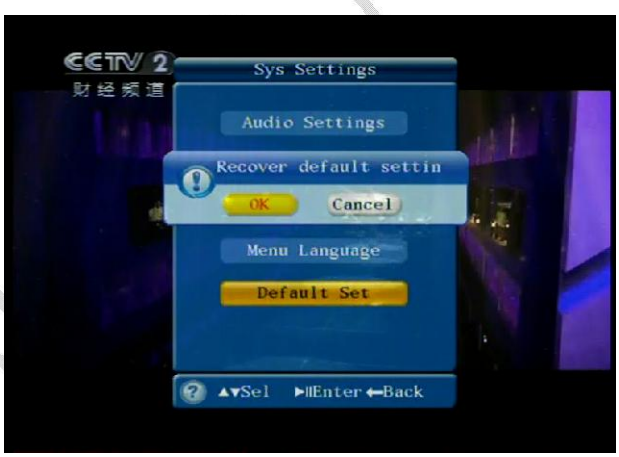
The Image Set will be displayed after user presses Enter under the “Image Set”. User can change the value of Chroma, Brightness and Contrast by moving Left/Right. The menu shows as follows:

3.2.4 Menu Language

The System Set-Language set will be displayed after user presses Enter key under the menu language. There are Chinese and English optional in menu language. The menu shows as follows:

3.2.5 Default Set

The following dialog box will display after user presses Enter key under the Default Set. User can choose either OK or Cancel by moving left/right key. When user choose “OK”, device will recover default setting; when user choose “Cancel”, device will save the setting .The menu is displayed as follows:



Chapter 4 Troubleshooting

For guarantee the products' quality, reliability and stability. All FMUSER products have been passed the testing and inspection before ship out factory. The testing and inspection scheme already covers all the Optical, Electronic and Mechanical criteria which have been published by FMUSER. To prevent potential hazard, please strictly follow the operation conditions.

Prevention Measure

- Installing the device at the place in which environment temperature between 0 to 45 °C
- Making sure good ventilation for the heat-sink on the rear panel and other heat-sink bores if necessary
- Checking the input AC voltage within the power supply working range and the connection is correct before switching on device
- Checking the RF output level varies within tolerant range if it is necessary
- Checking all signal cables have been properly connected
- Frequently switching on/off device is prohibited; the interval between every switching on/off must greater than 10 seconds.

Conditions need to unplug power cord

- Power cord or socket damaged.
- Any liquid flowed into device.
- Any stuff causes circuit short
- Device in damp environment
- Device was suffered from physical damage
- Longtime idle.
- After switching on and restoring to factory setting, device still cannot work properly.
- Maintenance needed

Chapter 5 Packing List

- FUTV4031A 4 to 4 FTA Satellite Receiver 1 piece
- User's Manual 1 piece
- Power cable 1 piece
- ASI Cable 4 pieces
- AV Cable 4 pieces
- Grounding Cable 1 piece