
4. Polarity

- Select Horizontal/Vertical with **◀▶** keys.
- All: Scan Horizontal and Vertical.
- Horizontal: Scan Horizontal TP only.
- Vertical: Scan Vertical TP only.

5. Scan

- Select Scan type with **◀▶** keys.
- When you select the OK key, the scanning will start.

Edit TP/Satellite

In this mode, you can add the New-Satellite and the new transponder information. Also you can update or delete the transponder information.

1. To add a new satellite

- Select **■NEW** in the satellite name the using the numeric key or CH **▲▼** key.
- Press VOL **◀▶** keys to move digit.
- Maximum number of characters is 12-digit.
- Press OK key.
- Enter the Down frequency, Symbol Rate and LNB Polarity.
- Press EXIT or OK key, the new transponder information is stored.

2. To rename the satellite

- Press OK after selecting a satellite of which you want to change name.
- Select **■Rename** in the menu.
- Enter new name by using numeric key or CH **▲▼** keys and press OK key.

3. To Delete/Restore a satellite

- Press OK after selecting a satellite you want to delete.
- Press OK to confirm, otherwise press EXIT to Cancel. The color of the deleted satellite name in the list is changed.
- The satellite which has had already searched channels cannot be deleted.
- To restore the deleted satellite, move the cursor to the deleted satellite and press OK key. Then select **■Restore** in the screen and press OK key.

4. To add a new transponder

- Press OK after selecting a satellite
- Select EDIT TP and then Transponder list is shown
- Press OK key select **■NEW** in the Transponder list
- Enter the Down frequency, Symbol Rate and LNB Polarity
- Press EXIT or OK, the new transponder information is stored.

5. To delete or update a transponder added

Press OK key after selecting a satellite

Select EDIT TP, then Transponder list is shown

Select a transponder you want to delete or update

Press OK on the TP you want to Edit or Delete

You can see the Edit or Delete in the small-menu

In case you want to edit a list TP

Select EDIT and press OK key

Enter Down frequency, LNB Polarity and Symbol Rate and Press EXIT or OK

Then New TP date is automatically updated

In case you want to delete a TP

Parental Control

After selecting parental control and entering the correct password, the screen as shown in the right appears. The default password at the factory is 0-0-0-0

You may change the PIN code, which is your password in other words, and lock the receiver to prevent children from watching selected programs.



Change PIN Code

You can change the PIN Code (Password) if you want.

- (1) Enter the Old password. If you enter this mode for the first time after purchasing the receiver, the old PIN code is the default password.
- (2) Enter the new password.
- (3) Reenter the new password to confirm.

Warning! You must remember the new password because it is used in several function as follows.

Password is required

- (1) To show parental locked channels
- (2) To enter Parental Control menu
- (3) To enter channel edit menu
- (4) To execute factory setting

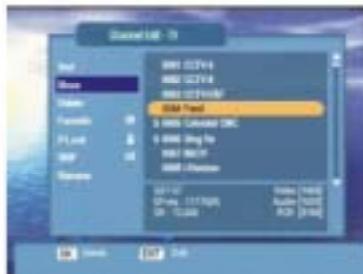
Channel Edit

In this mode

- (1) You can sort the channels out upon your preference.
- (2) You can rearrange the channel list.
- (3) You can delete channel.
- (4) You can adjust the favorite channel list, as required.
- (5) You can skip channels.
- (6) You can change the channel name, as you want.
- (7) To enter channel edit mode, you need to press 4 digit password (factory setting is 0-0-0-0)

To sort the channel

- (1) Press OK after selecting Sort.
- (2) Sub mode will be appeared as follows
 - Alphabetic
 - Satellite
 - FTA/Scramble
 - PIP-Lock
- (3) Select the mode among the 4 kinds of mode that you want to sort and press OK
- (4) Press EXIT to exit from this mode.



Notes

The Format of Sorted List

Alphabetic & Satellite: In Alphabetic order

IFTA/ Scramble: The Free channels first & the Scrambled channels later and vice-versa

P-Lock: The channels of P-Lock first

To move the channel

- (1) Press the OK key after Selecting Move key
- (2) Press OK to select a channel to move and then move the selected channel to the new position by using CH \blacktriangle \triangledown keys
- (3) Repress OK key

3. To delete the channel

- (1) Select Delete and press OK
- (2) Select a channel you want to delete by using the **◀▶** key.
- (3) Press OK key.
- (4) All channels that you selected are deleted.

4. To store/release the favorite channel

- (1) Select Favorite and press OK
- (2) Press OK, then this channel is included to the favorite channel list.
- (3) The mark stands for the favorite channel
- (4) To delete a channel from the favorite channel list, go to the marked channel and Press OK

5. To lock/unlock the channel

- (1) Select P-LOCK in the screen as shown and press OK.
- (2) Select the channel that you want to lock and press OK.
- (3) This channel is now locked and the symbol of lock will be shown as a locked channel
- (4) You can release the locked channel if you press OK after selecting the locked channel.
- (5) Once locked channel is selected while watching television, password is requested.
- (6) Picture and sound is appeared after the correct password is given by pressing the numeric key.

6. To skip the channel

- (1) Select SKIP and then press OK
- (2) Select the channel you want to hide
- (3) Press OK

7. To rename the channel

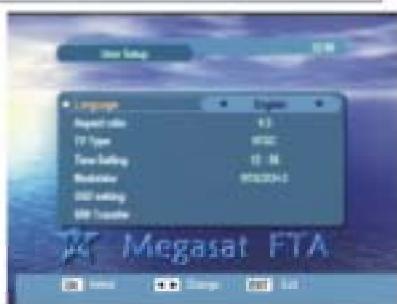
- (1) Press OK after selecting RENAME mode
- (2) Select the channel of which you want to change name.
- (3) Press OK to enter the channel input mode.
- (4) Put new names, as you want using the 4 arrows keys and numeric key. The maximum number of characters is 20.
- (5) After completion of entering new, press OK.

User Setup

In this USER SETUP mode, you can select the sub-mode as shown on the [Fig 6] by pressing the OK key and CH \blacktriangle \blacktriangledown key. The changed set-up is activated and stored by pressing the EXIT key

Language

Press the EXIT key after you select your preferable language by using VOL \blacktriangle \blacktriangledown key.
English, German, French, Portugal, Spanish, Turkish, Arabic, Croatia



Aspect ratio

You can set the TV aspect ratio (4:3 for normal TV & 16:9 for wide TV) by pressing VOL \blacktriangle \blacktriangledown keys.

TV Type (USA Standard is NTSC)

You can set the TV type (PAL, NTSC and AUTO) by pressing VOL \blacktriangle \blacktriangledown keys. If the setting value is AUTO, then TV is set automatically by source program. So, the source program is PAL, TV set PAL source program is NTSC, TV set NTSC.

Time Setting

After selecting the Time Setting, you can adjust the time. Also you can set the wakeup time and sleeping time to turn receiver on and off automatically according to the time programmed.



Modulator

If you want to watch the broadcasting through the modulator output, you could change the modulator channel as follows after pressing the OK key to enter the sub-menu.

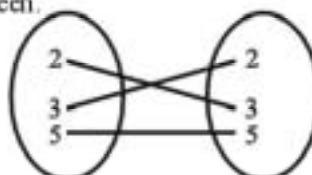
- (1) NTSC is supported.
- (2) You can adjust Modulator type by pressing VOL **◀▶** key.
- (3) You can adjust Modulator type, you can go back the previous mode by pressing EXIT or OK key.
- (4) The adjusted data is programmed automatically when the EXIT key is pressed.
- (5) Modulator channel can be changed from the channel 3 to channel 4.
 - 1) Set TV channel to 3 and find menu screen.
 - 2) Select modulator column and change the channel number by **◀▶** key.
 - 3) Press EXIT key to store and menu screen is appeared.
 - 4) Tune TV channel to the channel newly stored as in the above.

OSD setting

You can adjust the transparency level by using **◀▶** key.

Data Transfer (Receiver to Receiver)

- 1) Connect RS232 DB-9 Null Modem Cable (Pin #2 &3 twisted) between master and slave receiver.
- 2) Leave the slave receiver power on condition all the time until completion of date transfer.
- 3) Hook up the master receiver to the TV and select [SW Transfer] [User Setup] screen.
- 4) Select [Ver Code] or [Ch Data] by using [VOL◀] or [VOL▶] button. Then press [CH] button. Then press [CH] button to start transfer. During data transfer, processing percentage will be displayed on the screen.



Warning!Do not disturb data transfer by touching any remote button,RS232 Cable, IF Cable, RCA Cable etc, during data transfer period until **(Please wait for saving)** message disappeared. Interruption of data transfer could damage the receiver's flash memory chip which makes the receiver dead and void warranty.

Factory Setting

Once the Factory setting is selected and the correct password is given by pressing 4-digit numeric keys followed by OK key, whole parameters are changed to the value written in the factory. That is, factory setting functions your STB(Set Top Box)the first stage. If you do not want to continue this mode, press EXIT key before you enter password.



System Information

Shows the information of model name, data and version of STB.

Channel List

- You can see the channel list as shown in the above figure by pressing OK key
- To watch another channel, move the cursor to the channel you want by using **◀▶** keys **▲▼ PG↑ PG↓** and press OK key
- If favorite channels are saved, the list is changed from list TV to favorite list
- Pressing TV/RADIO key change from channel list to channel list Radio. You can exit from the channel list menu by pressing EXIT key or OK key.



Program Guide

- The title and start time of the program is EPG key.
- Select the particular channel you. The channel will be changed.
- If you want to watch TV with full screen, Press EXIT.



Audio Change

- In multilingual program, favorite language is selected by passing AUDIO key and CH $\Delta\triangledown$ keys
- Audio mode (L-left, R-right, L/R-stereo) can be changed by pressing AUDIO key and VOL $\blacktriangleleft\blacktriangleright$ key.

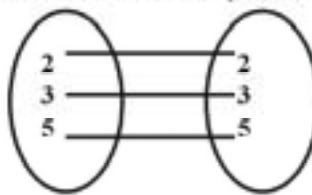


Recall The Favorite Channel

- Press the FAV key to recall a stored favorite channel.
- Favorite channel is programmed and stored in the channel edit menu.

Download Software Via RS-232 Serial Cable

- 1) Connect between Receiver and PC by RS-232 Serial Cable



2) Please find the following files

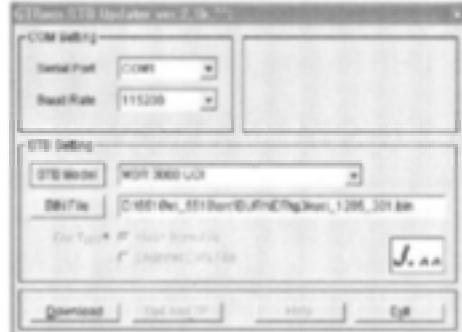
Execution File:GTROM_.exe

Main Source Code:_.BIN

The above files may be variable whenever new software is released.

Please copy these files to your PC directory and execute it.

3) Execute GTROM_.EXE and the screen, which can select COM port, will appear as bellows:



Above program screen will be appeared on your computer monitor.

4) Input STB model exactly on above STB setting. You can refer to STB model on system information.
5) Download code is Main Source Code titled _.bin
6) Press browser to find and execute main source.
7) If you find source program out, press Download
8) If above process be done successfully, downloading processing will be displayed and actual program update will be done after downloading

Caution!

Never turn off receiver during software downloading

Any interruption while downloading will damage the flash ROM which will void the warranty.

#GTROM_.EXE file can be updated continuously.

4 SPECIFICATIONS

Tuner/ Channel

Input connector	F-type, IEC169-24
IF input Frequency	950MHz to 2150MHz
IF Loop through out	950MHz to 2150MHz
IF frequency	Zero-IF
Input Level	-65dBm~-25dBm
LNB power	13/18V DC, 500mA Max.
DiSEqc Control	Version 1.3 Compatible
Band Switching	22KHz Tone
Demodulation	QPSK
Symbol Rate	2~45Msps(SCPC, MCPC)
Viterbi Decoding Rate	1/2, 2/3, 3/4, 5/6, 7/8
Reed Solomon Decoding	FEC: 204, 188, t=8
DiSEqc	1.3 Compatible (STAB USALS)

MPEG Transport Stream & A/V Decoding

Demultiplex	According to ISO/IEC13818-1
Input Stream	Max. 90Mbit/s
Aspect Ratio	4:3, 16:9
Video Resolution	720□576
Audio Decoding	MPEG Layer? and ?
Audio Mode	Single/Dual Channel, Stereo, joint Stereo
Sampling Frequency	16, 22, 24, 32, 44, 48KHz

Microprocessor & Memories

Main processor	STi5518BQC, ST20 32bit
CPU Clock	81MHz
Flash Memory	1Mbyte
SDRAM	8Mbyte
EEPROM	32Kbit

Data Port

Connector	9Pin D-sub Type
Protocol	RS232Asynchronous
Data Rate	Max. 19.2kbps

RF Modulator	
Connector	IEC169-2, Male/Female
Frequency	470MHz to 860MHz
Output channel	CH3-4
TV Standard	NTSC
Preset channel	Changeable by Menu Screen
Front panel	
4 Digits LED Display	Channel Number Display
3 Keys	Power, Channel Down and channel UP,
Rear panel	
IF input	F-type Connector
IF loop through output	F-type Connector
4 Phonon/Cinch	Video, Audio L, audio R, S/PDIF
Modulator	
RS232 Serial Port	9 Pin D-sub Type
Remote Control	
Type	Infra-Red (Carrier Freq:38KHz)
Battery	2 x 1.5V AAA Type
Other	
Power Consumption	Max. 25 Watts
Standby Power	Less than 5 Watts
Dimension	290 x 200 x 65mm 2.3Kg

5 TROUBLE SHOOTING

There may be various reasons for the abnormal of the unit. Therefore, if the unit does not work properly.

Check the unit according to the procedures shown in the table below.

Problem	Possible causes	Remedy
LED on front panel does not light	AC power cord disconnected	Connect power cord properly into the power
No Picture or sound	Wrong connection of the video/audio output to TV input terminal Wrong connection of satellite antenna cable Wrong direction of satellite antenna No signal or weak signal Wrong setting of channel information in menu screen	Connect two terminals correctly with scart cable or RCA or RF cable Connect the antenna cable correctly Adjust the direction of antenna Check the cable connections, LNB and other equipment connected between the LNB and the receiver or adjust the antenna Type the setting value correctly
Black-and-white screen or V-Hold	Your TV mode is different from satellite broadcasting mode	Use TV of same mode Use the NTSC/PAL converter connected to the receiver and TV
The remote controller is not working	Battery exhausted Fluorescent light interfering with the remote controller Remote controller is incorrectly aimed	Change the batteries Switch off the light Aim the remote control at the receiver
Distorted menu screen	Too high brightness and contrast level of TV set	Adjust brightness and contrast to low level
Not working	Process Down	Remote the power code or AC switch OFF/ON

FCC warning

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications not authorized by the manufacturer may void users authority to operate this device.