

Digital
Receiver

CNX-*Mini*

The User's Manual

Please read this User's Manual Carefully
before installing this Receiver



Mini Digital Satellite Receiver



Rev 1.0



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GENERAL SAFETY

WARNING

Please read the following recommended instructions carefully to avoid the risk of your physical injury before the product is operated.

Do not cover the receiver and keep clear space around the receiver for sufficient

Check the receiver's operation voltage 90~250V, 50Hz~60Hz Max, 40W
Keep liquid away from the receiver.

The receiver shall not be exposed to dripping or splashing and no objects that filled with liquid shall not be placed on the receiver.

Unplug the receiver from the wall outlet before cleaning.
Use a soft cloth and a mild solution of washing-up liquid to clean the casing.

Do not block the receiver's ventilation slots which are provided for ventilation and protection from overheating.

Please maintain the receiver in a free airflow.

Do not allow the receiver to be exposed to hot, cold or humid condition.

Do not use any cable and attachment that are not recommended as these may damage your equipment.

Please unplug the receiver from the wall outlet and disconnect the cable between the receiver and the antenna when you will not use it for long time.

Do not remove the cover to reduce the risk of electric shock.

Do not attempt to service the receiver yourself.

Refer all serving to qualified service personnel.

Manual may be updated as new features.

GENERAL INFORMATION

I. UNPACKING

Please ensure that the following items are included with the receiver in your packing.

- 1) Remote Control Unit (RCU)
- 2) Batteries (2EA)
- 3) User's Manual
- 4) A/V Cable

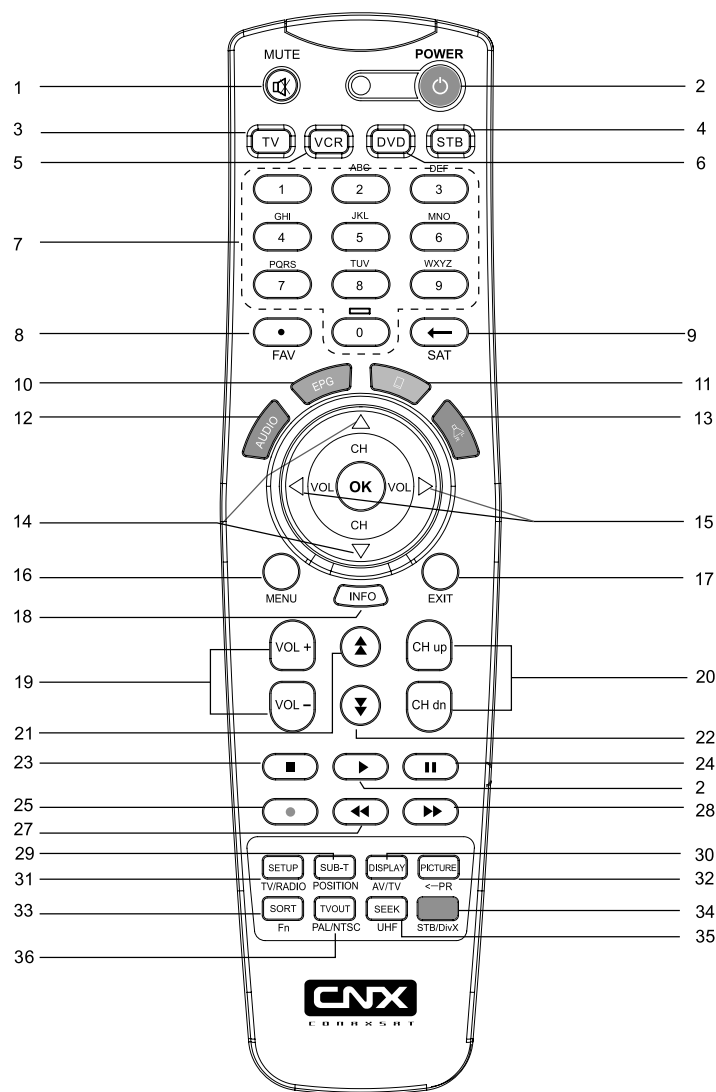
II. FEATURES

- MPEG-2 Digital & Fully DVB-S compatible.
- DiSEqC 1.0, 1.2 and USALS Compatible.
- 5,000 Channels Programmable.
- Blind scan (Power Scan) & Powerful EPG.
- Picture In Graphic (PIG).
- Electronic Program Guide (EPG) for On Screen Channel Information.
- On-Screen Display with 65,536 Color.
- Dolby Digital Bitstream Out through S/PDIF.
- CVBS Video & Audio Output via RCA .
- Component Y/Pb/Pr Output via RCA.
- S-Video Output.
- "Upgrade Software & Update Channel Database through USB and RS232".
- MP3/JPEG File Play via USB.

GENERAL INFORMATION



III. REMOTE CONTROL UNIT (RCU)



GENERAL INFORMATION



III. REMOTE CONTROL UNIT (RCU)

- | | |
|-----------------------------------|--|
| 1. MUTE | Enables or disables the audio. |
| 2. POWER | Switches the receiver between operation and standby mode. |
| 3. TV | Tv mode |
| 4. STB | STB mode |
| 5. VCR | VCR mode |
| 6. DVD | DVD mode |
| 7. Numeric buttons | Selects the TV or Radio service channels and individual menu. |
| 8. FAV | Toggles the selected favorite mode. |
| 9. SAT | Toggles the selected Satellite list. |
| 10. EPG(Electronic Program Guide) | Displays the TV or Radio program guide. |
| 11. | Enables subtitle and teletext mode. |
| 12. Audio | Changes the audio languages. |
| 13. | Selects the sound mode(LEFT/RIGHT/STEREO). |
| 14. | Changes channels or moves to the item in the menu. |
| 15. | Adjusts the volume or moves to left or move item in the menu. |
| 16. MENU | Displays the main menu on screen. |
| 17. EXIT | Returns to the previous menu or normal viewing mode from a menu. |
| 18. INFO | Displays the program information box on the screen and edit the name of favorite channel list. |
| 19. V+/V- | Turns volume up or down. |
| 20. P+/P- | Changes channels up or down on normal mode. |
| 21. | Moves up a page in the channel list. (Selects zoom in/out) |
| 22. | Moves down a page in the channel list. |
| 23. Stop | Stops recording or playing |
| 24. AUSE | Pauses the playing picture or go to normal mode. |
| 25. Record | Record the program |
| 26. | Enables subtitle and teletext mode. |
| 27. Rewind | Starts reverse play back and changes the speed of reverse playback. |
| 28. F/F | Starts fast forward or fast motion playback and changes the speed of forward playback. |
| 29. Position | Displays position bar on the screen to adjust the antenna. |
| 30. AV/TV | Selects the TV or AV mode. |
| 31. TV/RADIO | Switches between TV and Radio. |
| 32. <-PR | Selects the previously viewed channel. |
| 33. Fn | Reserved |
| 34. STB/DivX | Switches STB or DivX |
| 35. UHF | Switches to UHF turning mode. |
| 36. PAL/NTSC | Switches PAL or NTSC mode. |

GENERAL INFORMATION

III. REMOTE CONTROL UNIT(RCU)

Setting Method

1. 3 digits Setting Method

- 1) Turn on the TV.
- 2) Press the "TV" Key and "OK" at the same time for more than 2 seconds. Then, the TV LED will turn on/off 2 times.
- 3) Refer the TV Brand List and press the three numbers.
(TV LED will turn on/off 2 times. If the three numbers is wrong, TV LED turn on/off 1 time)
- 4) If there are a few of fixed numbers in the Brand, repeat the step 3) until the TV turns off.
- 5) If the TV turns off, press the "OK" key.
(If the setting is done properly, the LED of the RCU will turn on/off 2 times)

2. Auto Search Method

- 1) Turn on the TV.
- 2) Press the "TV" Key and "OK" at the same time for more than 2 seconds. Then, the TV LED will turn on/off 2 times.
- 3) Press the "UP" key until the TV turns off
(If you want to search from the reverse, press the "DOWN" key)
- 4) If the TV turns off, press the "OK" key.
(If the setting is done properly, the LED of the RCU will turn on/off 2 times)

3. How to check current setting number

- 1) Press the "TV" Key and "OK" at the same time for more than 2 seconds. Then, the TV LED will turn on/off 2 times.
- 2) Press the "Info" key within 3 seconds

- 6) Check if the POWER and other buttons of the RCU are working properly.
- 7) If the POWER button works but the other buttons does not work, start again from the step 1)
(In some Brands, other buttons except POWER can not work properly)
====> For VCR & DVD, same procedure as above
* If you don't press three numbers within 10 seconds, setting will be failed
* If you can not find the fixed number with the above method,

- 5) Check if the POWER and other buttons of the RCU are working properly.
- 6) If the POWER button works but the other buttons does not work, start again from the procedure 1)
(In some Brands, other buttons except POWER can not work properly)
====> For VCR & DVD, same procedure as above
* If you don't press three numbers within 10 seconds, setting will be failed

- 3) TV LED blinks to show the current setting number in order
(TV LED blinks 10 times to show '0')

Ex) If the current setting number is 350, the TV LED blinks 3 times, 5 times and 10 times
====> For VCR & DVD, same procedure as above

GENERAL INFORMATION

IV. FRONT PANEL

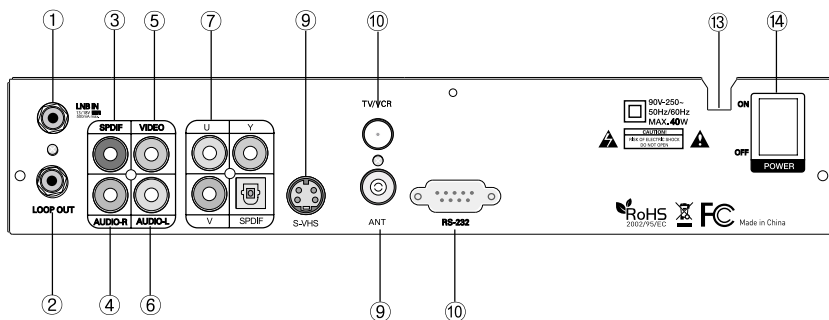


- | | |
|----------------|--|
| 1. POWER | Switches the receiver power On and Standby. |
| 2.CH Up/Down | Channel up / down or selects the item of Menu. |
| 3. VOL Up/Down | Volume up/down or selects the item of Menu. |
| 4. USB PORT | To upgrade firmware |

“ All USB 2.0 flash drive may not be compatible with the product”

GENERAL INFORMATION

V. REAL PANEL



- | | |
|------------------|---|
| 1. LNB IN | Connects to Satellite antenna cable. |
| 2. LNB OUT | Connects to another STB. |
| 3. DIGITAL AUDIO | Output for connecting to a digital amplifier. |
| 4. AUDIO-R | Connects to AUDIO RIGHT to TV or other equipment. |
| 5. VIDEO | Connects VIDEO to the TV or other equipment. |
| 6. AUDIO-L | Connects to AUDIO LEFT to TV or other equipment. |
| 7. YUV | Connects to TV the YUV jack of TV. |
| 8. DIGITAL AUDIO | Output for connecting to a digital amplifier. |
| 9. S-VIDEO | Connects to teh S-VHS jack of TV or VCR |
| 10. TV/VCR | Connects to TV or VCR. |
| 11. ANT | Connects to TV antenna input. |
| 12. RS 232 | Connects to personal computer for software upgrade. |
| 13. POWER SUPPLY | 90~250V AC, 50/60Hz, 40W. |
| 14. POWER BUTTON | Turns On/Off. |

INSTALLING EQUIPMENT

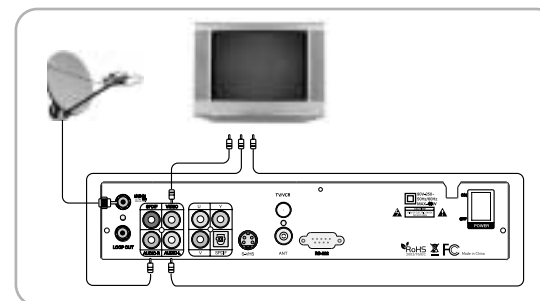
This section explains several ways of connecting the receiver to your existing TV, VCR and Hi-Fi system.

You can choose one of the following setups that we recommend.
If you have any problem or need help, consult your dealer or service provider.
Please ensure that the following items are included with the receiver in your packing.

I. CONNECTING THE RECEIVER TO TV AND VCR WITH CINCH CABLE

I-1. Connecting the receiver to TV with the CINCH cable

Connect one end of the CINCH cable to the Audio-R(Red), the Audio-L(White) and the Video(Yellow) socket on the rear panel of the receiver and the other end to the Audio-R(Red), the Audio-L(White) and the VIDEO (Yellow) socket on the TV.

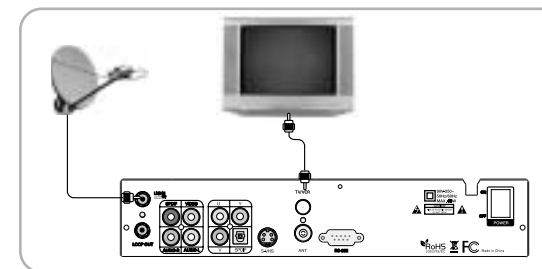


II. CONNECTING THE RECEIVER TO TV AND VCR WITH RF CABLE

II-1. Connecting the receiver to TV and VCR with RF cable

Connect one end of the RF cable TV/VCR socket on the rear panel of the receiver and the other end to the ANT IN on the TV.

Connect one end of the RF cable to the ANT socket on the rear panel of the receiver and the other end to the ANT OUT on the VCR.



CHANNEL LIST GUIDE

1. Normal Live Mode

- When you select one channel, information bar appears automatically on the screen for few seconds. This bar provides you the current channel information.
- Press INFO button to see the information during normal live mode.



2. Simple Channel List

- Press OK on the normal live mode to go to the channel list.
- When detail channel list is displayed on screen press RED button to go to simple channel list.



3. Detail Channel List

- Press OK on the normal live mode to go to the channel list.
- When simple channel list is displayed on screen press RED button to go to detail channel list.
- Press ◀▶ and ▲▼ to sort by Alphabet.
- Press SAT button to sort by Satellite and FAV button for Favorite 1-8.
- Press GREEN button to return to All Channel or EXIT to return to the current live channel.
- Press the SAT key to show Satellite Pop-UP Window then select satellite. Channel list of selected satellite will be displayed.
- Press the FAV key to show Favorite Pop-UP Window then select FAV list. Channel list of selected FAV will be displayed.
- Press the Green key then all searched channel list will be displayed.
- Press MENU key then cursor will move to ALL, placed on the left.
- Sort Key (Yellow Key)-A-Z/Z-A/FAT/CAS.
- Press Yellow key for sorting A-Z/Z-A/FAT/CAS. If you want to go back to unsort from the selected CAS go back to Pop-UP Window then select unsort.



CHANNEL LIST GUIDE

4. EPG (Electronic Program Guide)

- Press EPG button on the live mode.
 - EPG of the current channel appears on the screen.
 - Select the channel that you want to watch program.
 - To reserve program with recording function, press REC(●) button.(PVR model only)
 - It will be appear like rightside picture.f)
- If you reserve program, then it will be record automatically at reserved time.(PVR model only)
- Press Select button twice to return to current live channel.



5. ZOOM IN/OUT

- By selecting page up key (▲) in a normal live mode you can use Zoom In/Out function.
- From the Pop-Up Window of Zoom function you can select(*2*3*4)by page up key(▲), for Zoom out press page down key.
- When you move cursor of Zoom focus by key (◀ ▶ ▲▼) then you can select Zoom In/Out on the focused point by pressing page up/down keys. Press Pause key then live mode will be paused on the mode of Zoom.



MENU GUIDE

Main Page

Press the MENU button on the RCU to open Main Page on the screen. Main Page will be displayed.

1. You can move into the main page using ▲▼◀▶ on the RCU.
2. Press OK to confirm your selection.
3. Press EXIT to return to the previous menu or press MENU to go to the current live channel.

I. Channel Manager

II. Installations

III. Options

IV. Utility

V. Accessory

I. Channel Manager

This section may help you to organize channels according to your preference.

1. Select Channel Manager in the Main Page with ▲▼ and press OK.
2. TV Channel Manager Page displays on the screen.
3. Select the mode that you want using ◀▶.
4. To see the channel that you choose, go to the channel and then press RED button.
5. Press EXIT to return to the previous menu or press MENU to go to the current live channel.

I-1. Favorite

I-2. Rename

I-3. Move

I-4. Lock

I-5. Delete

I-1. Favorite

1. Using ◀▶ go to the Favorite mode then press YELLOW button to choose Favorite 1~8.
2. Press OK on the channel that you want to add or delete.
3. ☆ will be marked at the end of selected channel name bar. To delete press OK again.
4. Selected channels will be automatically saved.
5. If you want to check the saved Favorite Channel List go to other mode(Rename~Delete) except Favorite and then press FAV button to check Favorite 1~8.
6. Press EXIT to return to the previous menu or press MENU to go to the current live channel.



MENU GUIDE

I. Channel Manager

I-2. Rename

1. Using ◀▶ go to the Rename mode.
2. Select the channel that you want to rename using ▲▼ and then press OK.
3. Keypad Dialog displays on the screen.
4. Edit the name entering NUMBERS and / or WORDS in the Keypad Dialog.
5. Press YELLOW button to rename Favorite 1~8 and press BLUE button to rename Satellite.
6. Press EXIT to return to the previous menu or press MENU to go to the current live channel.

I-3. Move

1. Using ◀▶ go to the Move mode.
2. Select channels which you want to move by pressing OK key.
3. Move cursor that you want to place on than press GREEN button.
4. Press EXIT to return to the previous menu or press MENU to go to the current live channel.

I-4. Lock

1. Using ◀▶ go to the Lock mode.
2. Select the channel that you want to lock and then press OK. 🔒 will be marked at the end of the selected channel name bar. To delete press OK again.
3. Press EXIT to go to Main Page or press MENU to go to the current live channel.

I-5. Delete

1. Using ◀▶ go to the Delete mode.
2. Select the channel that you want to delete and then press OK. 🗑️ will be marked on the selected channel number. To delete press Blue button again.
3. Press YELLOW button to delete TP. Select one channel and press Blue button. All channels of that TP will be automatically selected.
4. Press YELLOW button to delete Satellite. Select one channel and press Blue button. All channels of that the Satellite will be automatically selected.
5. Press EXIT to return to the previous menu or press MENU to go to the current live channel.
6. Message Box displays on the screen.
7. Select OK on the Message Box and then press OK to delete the marked channels.



MENU GUIDE

II. Installation (Satellite)

This section may help you to set up antenna and scan satellite or transponder, etc. Select Installations in Main Page using ▲▼ and press OK. Press EXIT to return to the previous menu or press MENU to go to the current live channel.

II-1 Channel Search

II-2. DiSEqC Switch

II-3. Motor Setup

II-1 Channel Search

1. You can move the cursor using ▲▼ and press OK when you select the value that you want.

a) Satellite

- Press OK to display the Satellite List Box.
- Select the proper Satellite and then press OK.

b) DiSEqC

- Press OK to display the DiSEqC Port List.
- Select the proper DiSEqC port and then press OK.

c) Frequency

- Press OK to display the Frequency List.
- Select the proper Frequency and then press OK.

d) LNB

- Press OK to display the LNB Frequency List.
- Select the proper LNB Frequency and then press OK.
- You can also input directly the numbers using NUMBER KEY on the RCU.

e) 22KHz Tone

- Select the one among None, 0 KHz or 22 KHz depending on the user's antenna switch box.

f) Search Option

- Press OK to display the Search Option list.
- Select the Search Option that you want and then press OK.

g) Search

- Press Search to start scan channels.
- Selected Satellite displays on the screen.
- Press ► to select more Satellite or ◀ to cancel the selected Satellites.
- Press OK to start scanning.

※ TP EDIT : To Edit TP, Press the RED button on the RCU.



MENU GUIDE

II. Installation (Satellite)

II-2. DiSEqC Switch

1. Select Channel Search in Installation using ▲▼ and press OK.

- If you select DiSEqC Switch and press OK on the menu will be, DiSEqC Switch Page will be displayed.
- Select the proper Satellite of each DiSEqC port [A~D] using ◀ ▶ and ▲▼ and press SEARCH. Selected Satellites will be searched automatically.

II-3 Motor Setup

1. You can move the cursor using ▲▼ and press OK when you select the value that you want.

a) Motor Type : DiSEqC 1.2, USAL

- Press OK to display Motor Type
- Select the proper Motor Type and then press OK.

b) Satellite

- Press OK to Display the Satellite List Box
- Select the proper Satellite and then press OK.

c) Switch & LNB

- Press OK to Display the LNB frequency list or Switch Setting
- Select proper LNB & proper Switch.

d) Frequency

- Press OK to Display the Frequency List.
- Select the proper Frequency and then press OK.

e) Motor Movement

- Search the appropriate position of the selected Satellite using ◀ ▶.



MENU GUIDE

II. Installation (Satellite)

e) Motor Control

Select the position using ◀ ▶ and then press OK. Message box displays on the screen.

- Store Sat position : Stores the current position of the motor for the selected satellite.
- Goto Sat Position : Moves the motor to the stored position of the selected satellite.
- Goto 0 : Goes to the center of the motor.
- Reset Position : Resets all stored position of the motor.



f) Satellite Position

- Input directly the position using NUMBER KEY on the RCU
- Select the direction using ◀ ▶ (WEST / EAST).

h) Search

- Press Search to start scan channels.
- Press OK to start scanning.

g) Search Option

- Press OK to display the Search Option list.
- Select the Search Option that you want and then press OK.

※ TP EDIT : To Edit TP Press the RED button on the RCU.

2. Edit my local position

- Press Green Button to edit local Position.

a) Longitude

- Input directly the Longitude using NUMBER KEY on the RCU.
- Select the direction using ◀ ▶ (WEST / EAST).

b) Latitude

- Input directly the Latitude using UNMBER KEY on the RCU.
- Select the direction using ◀ ▶ (NORTH/SOUTHd).

3. Press EXIT to return to the previous menu or press MENU to go to the current live channel.

MENU GUIDE

III. Options

This section may help you to set up OSD language, time , etc. Select Options in Main Page using ▲▼ and press OK.

Press EXIT to return to the previous menu or press MENU to go to the current live channel.

III-1. OSD Setup

III-2. Control Panel

III-3. Time Adjust

III-4. Parental Lock

III-1. OSD Setup

1. Select OSD Setup in Options using ▲▼ and press OK.

a) OSD Language

- Press OK to display OSD Language list.
- Select the language that you want and then press OK.

b) Audio Language

- Press OK to display Audio Language list.
- Select the language that you want and then press OK.

c) Display Info Bar

- Press OK to display Display Info Bar time list.
- Select the second that you want to display and then press OK.

d) OSD Position

- Press OK to change Horizontal and Vertical Position of the OSD.
- OSD Position box displays on the screen.
- Select Hor Position / Ver Position using ▲▼.
- Move the OSD Position to right/left or up/down using ◀ ▶.
- Select OK on the OSD Position box and then press OK.

e) Screen format

- Press OK to display screen format list.
- Select the format that you want and then press OK.

2. Press EXIT to return to the previous menu or press MENU to go to the current live channel.



MENU GUIDE

III. Options

III-2. Control Panel

1. Select TV Setup in Options using ▲▼ and press OK.

a) Video Output

- Press OK to display Video Output list.
- Select RGB if your SCART supports RGB control and then press OK.
- Select CVBS if your SCART does not support RGB control and then press OK.

b) TV Type

- Press OK to display TV Type list.
- Select the proper mode according to your TV type and press OK.

c) UHF Channel

- Press OK to display UHF Channel list.
- Select the proper channel and then press OK.

d) UHF Standard

- Press OK to display UHF Standard list.
- Select the proper mode and then press OK.

2. Press EXIT to return to the previous menu or press MENU to go to the current live channel.

III-3. Time Adjust

Set your local time according to your location.

1. Select Time Setup in Options using ◀▶ and press OK.
2. Time Adjust page displays on the screen.
3. Move the cursor using ◀▶, ▲▼ and press OK when you select the value that you want. (Input Hour directly using number keys on the RCU)
4. Press EXIT to return to the previous menu or press MENU to go to the current live channel.

III-4. Parental Lock Setup

1. Select Parental Lock Setup in Options using ◀▶ and press OK.
2. Parental Lock Page displays on the screen.
3. You can lock and unlock Parental Lock selecting ON or OFF using ▲▼ (For Channels).
4. You can lock and unlock Install Lock selecting ON or OFF using ▲▼ (For Installation Settings).
5. Enter new password if you want to change the current password.
6. Confirm your new password entering new password again.
7. Press EXIT to return to the previous menu or press MENU to go to the current live channel.

Note. DEFAULT PASSWORD IS 0000



MENU GUIDE

VI. Utility

This section may help you to use USB, etc.

Select Utility in Main Page using ▲▼ and press OK.

• VI-1. System Information

• VI-2. USB

• VI-3. Factory Default

VI-1. System Information

This option help you to know the current S/W and H/W version. Also provides you the product name.

1. Select System Information in Options using ▲▼ and press OK.
2. Press EXIT to return to the previous menu.

VI-2 USB

The receiver is equipped with host.

1. Select USB in Utility with ▲▼ and press OK.
2. If you want to change mode(S/W Upgrade, BootLoader Upgrade), press RED button on the RCU.
3. Select the file which you want to upgrade using ▲▼ and press OK.
4. After downloading the selected file, the receiver will reboot automatically.

VI-3 Factory Default

Use Factory Default function only when you want to return the receiver to the condition of factory default. All settings and channels will be deleted.

1. Select Factory Default in Installations using ▲▼ and press OK.
2. Message box displays on the screen.
3. Select OK to return the receiver to the condition of factory default and then press OK.
4. Press EXIT to return to the previous menu or press MENU to go to the current live channel.



TROUBLESHOOTING

| Problem | Solution |
|---|---|
| Nothing appears on the Front Panel or No power supply | <ul style="list-style-type: none"> Check that the power cable is plugged into the power socket. |
| No Picture | <ul style="list-style-type: none"> Check the dish and adjust it. Check the cable connection and correct it. Get out of UHF mode. Check channel and video output. |
| No Sound | <ul style="list-style-type: none"> Check the volume level of the TV and receiver. Check the mute status of TV and receiver. Check the cable connection and correct. |
| Remote Control Unit dose not work | <ul style="list-style-type: none"> Replace batteries. Aim the remote control unit directly to the receiver. Checking that nothing blocks the front panel. |
| Service is not running or scrambled | <ul style="list-style-type: none"> Check the Conditional Access Module and smart card are appropriate for the selected service. Check the Conditional Access Module and smart card are correctly inserted or not. |
| "No Signal" on the screen | <ul style="list-style-type: none"> Check the signal strength and the signal quality in the menu. Check the LNB and replace the LNB if necessary. Check the LNB cable. Check the Dish and adjust it. |
| Tuner Defective Check | <ul style="list-style-type: none"> Go to the Option and select System Information. |
| You have forgotten your secret PIN Code | <ul style="list-style-type: none"> Contact your Service Provider. |

SPECIFICATIONS

I. Conditional Access Module Interface

| Item | Specification |
|------------|--|
| SMART CARD | 1 SLOT, ISO 7816, GSM11.11 and EMV (payment systems) compatibility |

II. Tuner & Channel

| Item | Specification |
|-------------------|---|
| Input Connector | F-type (Output loop-through), IEC 169-24, Female |
| Signal Level | -25 to -65 dBm |
| LNB Power & | Vertical: +13.5/18.5Vdc±5%, |
| Polarization | Horizontal : +18.5Vdc±5% Current : Max. 500mA. Overload protected |
| 22KHz Tone | Frequency : 22±2KHz |
| DiSEqC Control | Amplitude : 0.8±0.2V Version 1.2, USALS Compatible |
| Demodulation | QPSK |
| Input Symbol Rate | 2-45 Ms/s Convolution Code Rate 1/2, 2/3, 3/4, 5/6, 7/8 with Constraint Length K=7 |

III. A/V & Data Input/Output

| Item | Specification |
|----------------|---|
| RCA Output | CVBS(Yellow), L, R Output(White,Red) with Volume Control Component Video Output |
| SPDIF | Dolby Digital Bitstream Out (Coaxial, Optical) |
| Data Interface | RS-232, Transfer rate 115Kbps, 9 pin D-Sub Male Type USB : USB 2.0, Type A Connector |

IV. RF-Modulator

| Item | Specification |
|-----------------|-----------------|
| TV Standard | NTSC |
| RF Connector | 75 Ohms, F-type |
| Frequency Range | VHF CH3, CH4 |

SPECIFICATIONS

| V.MPEG Transport Stream & A/V Decoding | |
|--|---|
| Item | Specification |
| Transport Stream | MPEG-2 ISO/IEC 13818 / Transport stream Specification |
| Profile Level | MPEG-2 MP@ML |
| Input Rate | Max. 90 Mbit/ |
| Video Resolution | 720 × 576(PAL) / 720 × 480(NTSC) |
| Audio Decoding | MPEG/Musicam Layer I & II |
| Audio Mode | Single channel/Dual channel Joint Stereo/Stereo |
| Teletext | VBI & OSD |
| Sampling Rate | 32, 44.1 and 48KHz |

VI.System Resources

| Item | Specification |
|------------------|------------------------------------|
| Main Processor | ARM946 RISC Processor |
| Flash Memory | 4 Mbyte |
| Program DRAM | 32 Mbyte |
| Channel Capacity | Digital Channel: 5,000 |
| Front | 7-Segment Display (4-digit) |

VII.Power Supply

| Item | Specification |
|-------------------|--------------------------|
| Input Voltage | AC 90 to 240V, 50 ~ 60Hz |
| Power Consumption | Max. 40W |
| Protection | Separate Internal Fuse |
| Type | SMPS |

VIII. Physical Specification

| Item | Specification |
|-----------------|--------------------|
| Size(W × H × D) | 290 × 50 × 220(mm) |
| Net Weight | 2.0Kg |

BRAND LIST



I. Televisions

| Brand Name | 3 Digits |
|---------------|--|
| ADMIRAL | 072 081 160 161 |
| A MARK | 112 |
| AKAI | 070 146 |
| AMSTRAD | 052 |
| ANAM | 043 054 056 080 112 |
| AOC | 001 058 070 112 |
| AUDIOVOX | 076 120 |
| BLAUPUNKT | 088 |
| CANDLE | 001 003 004 070 |
| CAPEHART | 058 |
| CCE | 001 024 211 |
| CETRONIC | 043 |
| CITIZEN | 001 003 004 043 070 101 103 |
| CLASSIC | 043 |
| CONCERTO | 001 |
| CONTEC | 043 050 051 |
| CRAIG | 043 054 191 |
| CROWN | 043 |
| CURTIS MATHES | 001 070 101 |
| CXC | 043 |
| DAEWOO | 001 004 016 026 043 076 103 114 120 127 128 136 192 |
| DAYTRON | 001 |
| DYNASTY | 043 |
| ELECTROHOME | 024 076 120 |
| EMERSON | 001 005 028 043 047 048 050 051 070 076 096 120 153 154 155 191 |
| FISHER | 007 057 |
| FUJITSU | 198 |
| FUNAL | 028 043 |

BRAND LIST

| | |
|---------------|--|
| FUTURETECH | 043 |
| GE | 001 008 009 034 056 070 073 074 130 145 155 160 161 165 167 |
| GOLDSTAR / LG | 001 017 106 110 112 119 127 193 |
| GRADIENTE | 001 106 |
| HALL MARK | 001 |
| HITACHI | 001 007 009 010 011 012 072 158 |
| HYUNDAI | 002 |
| INFINITY | 164 |
| JBL | 164 |
| JCPENNEY | 001 008 009 024 030 070 101 160 |
| JENSEN | 013 |
| JVC | 034 083 211 |
| KEC | 043 |
| KENWOOD | 070 211 |
| KLOSS | 004 059 |
| KTV | 043 070 154 |
| LODGENET | 072 |
| LOGIK | 072 |
| LAUXMAN | 001 |
| LXI | 007 015 052 081 160 |
| MAGNAVOX | 001 003 022 059 060 061 070 127 160 164 |
| MARANTZ | 070 164 |
| MATSUI | 164 |
| MEMOREX | 001 007 072 |
| METZ | 088 |
| MGA | 001 024 024 028 042 070 |
| MINERVA | 088 |
| MITSUBISHI | 001 024 028 040 042 146 |
| MTC | 001 070 101 |
| NAD | 015 025 |
| NEC | |

BRAND LIST

| | |
|-------------|--|
| NIKEI | 043 |
| ONKING | 043 |
| ONWA | 043 |
| OPTONICA | 019 081 |
| ORION | 201 202 203 204 205 |
| PANASONIC | 034 056 080 164 |
| PHILCO | 001 003 024 056 059 060 070 164 |
| PHILIPS | 001 003 005 059 070 093 127 164 |
| PIONEER | 001 018 025 070 |
| PORTLAND | 001 |
| PROSCAN | 145 160 161 167 |
| PROTON | 001 058 112 171 173 |
| QUASAR | 034 056 080 164 |
| RADIO SHACK | 001 019 043 127 |
| RCA | 001 024 056 070 074 145 152 160 161 165 167 |
| REALISTIC | 007 019 043 047 |
| RUNCO | 072 130 |
| SAMPO | 001 058 070 207 |
| SAMSUNG | 001 006 021 050 089 101 105 127 133 160 |
| SANYO | 007 020 053 057 082 |
| SCOTT | 001 028 043 048 |
| SEARS | 001 007 015 028 030 057 082 160 167 |
| SELECO | 200 |
| SHARP | 001 014 019 022 028 081 |
| SIEMENS | 088 |
| SIGNATURE | 072 |
| SONY | 027 029 079 126 211 |
| SOUNDESIGN | 001 003 028 043 |
| SPECTRICON | 112 |
| SSS | 001 043 |
| SUPRE MACY | 004 |

BRAND LIST

| | |
|----------------|--|
| SYLVANIA | 003 044 059 060 070 127 160 164 |
| SYLVANIA | 194 052 |
| TANDY | 081 |
| TATUNG | 056 |
| TECHNICS | 034 080 |
| TECHWOOD | 001 |
| TEKNIKA | 001 003 004 024 028 043 072 101 |
| TELERENT | 072 |
| TERA | 173 |
| TMK | 001 |
| TOSHIBA | 007 015 030 040 101 |
| UNIVERSAL | 008 009 |
| VIDEO CONCEPTS | 146 |
| VIDTECH | 001 |
| WARDS | 001 008 009 019 028 060 061 072 074 164 165 |
| WESTING HOUSE | 076 120 |
| YAMAHA | 001 070 |
| YORK | 001 |
| YUPITERU | 043 |
| ZENITH | 072 073 095 103 |
| ZONDA | 112 |

BRAND LIST



I. Videos

| Brand Name | 3 Digits |
|----------------|--|
| AIWA | 001 |
| AKAI | 016 043 046 124 125 146 |
| AMPRO | 072 |
| ANAM | 031 |
| AUDIO DYNAMICS | 012 023 039 043 |
| BROOKSONIC | 035 037 044 129 152 |
| CANON | 028 031 |
| CAPEHART | 108 |
| CRAIG | 003 040 |
| CURTIS MATHES | 031 156 |
| DEAWOO | 005 007 010 108 110 112 116 117 119 |
| DAYTRON | 108 |
| DIMENSIA | 156 |
| DBX | 012 023 039 043 |
| DYNATECH | 001 053 |
| ELECTROHOME | 059 |
| EMERSON | 001 006 017 025 027 029 031 035 036 037 044 046 101 129 131 138 152 153 157 |
| FISHER | 003 008 009 010 |
| FUNAI | 001 |
| GE | 031 072 144 147 151 156 |
| GO VIDEO | 040 132 136 |
| GOLDSTAR / LG | 012 101 123 163 114 |
| HARMAN KARDON | 012 045 |
| HITACHI | 001 026 137 150 156 163 |
| HUGHES | 163 |
| INSTANTREPLAY | 031 |
| JCL | 031 |
| JCPENNY | 012 040 066 101 156 163 |
| JENSEN | 043 |

BRAND LIST

| | |
|-------------|--|
| JVC | 012 031 043 130 150 |
| KENWOOD | 001 014 023 047 |
| LLOYD | 001 |
| LXI | 001 003 009 017 |
| MAGIN | 040 |
| MAGNAVOX | 001 031 067 068 154 |
| MARANTZ | 012 023 031 067 067 069 |
| MARTA | 101 |
| MATSUI | 027 030 |
| MEI | 031 |
| MEMOREX | 001 003 010 014 031 053 072 101 102 134 139 |
| MGA | 045 046 059 |
| MINOLTA | 156 163 |
| mitsubishi | 045 046 051 059 061 162 163 |
| MTC | 001 040 |
| MULTITECH | 001 024 |
| NEC | 001 024 |
| NORDMENDE | 043 |
| OPTONICA | 053 054 |
| PANASONIC | 031 066 070 133 161 |
| PENTAX | 031 156 163 |
| PHILCO | 001 031 067 |
| PHILIPS | 001 031 054 067 071 101 |
| PILOT | 101 |
| PIONEER | 021 163 |
| PORTLAND | 108 |
| QUARTZ | 002 014 |
| QUASAR | 031 066 070 133 161 |
| RADIO SHACK | 123 |
| RCA | 001 031 040 140 144 147 151 156 163 |
| REALISTIC | 001 003 008 010 014 031 040 053 054 101 |

BRAND LIST

| | |
|-----------------|---|
| RICO | 058 |
| SALORA | 014 |
| SAMSUNG | 032 034 040 104 112 113 115 120 122 125 |
| SANSUI | 159 022 043 |
| SANYO | 003 007 010 014 102 134 |
| SCOTT | 017 037 044 112 129 131 159 |
| SEARS | 003 008 009 010 014 017 081 101 163 |
| SHARP | 031 053 054 |
| SHINTOM | 024 |
| SIGNATURE | 001 |
| SONY | 003 031 052 056 057 058 155 |
| SOUNDESIGN | 001 |
| STS | 163 |
| SYLVANIA | 001 031 059 067 |
| SYMPHONIC | 001 |
| TANDY | 001 010 |
| TATUNG | 023 039 043 |
| TEAC | 001 023 039 043 |
| TECHNICS | 031 070 |
| TEKNIKA | 001 019 031 101 |
| TMK | 006 |
| TOSHIBA | 008 042 047 059 082 112 131 163 |
| TOTEVISION | 040 101 |
| UNITECH | 040 |
| VECTOR RESEARCH | 012 |
| VIDEO CONCEPTS | 001 012 046 |
| VIDEOSONIC | 040 |
| WARDS | 001 003 017 024 031 040 053 054 131 163 |
| YAMAHA | 001 012 039 043 |
| ZENITH | 001 056 058 072 080 101 |

BRAND LIST



III. DVD

| Brand Name | 3 Digits |
|------------------|---------------------|
| Alpine | 009 |
| Apex Digital | 075 076 061 |
| Brandt | 001 |
| California Audio | 002 |
| Crown | 001 |
| Cytron | 001 |
| Denon | 030 043 044 226 062 |
| Diamond | 001 |
| Dual | 001 |
| DVD-Video | 063 |
| ECA | 084 |
| Ferguson | 001 |
| Fisher | 002 |
| GE | 035 084 |
| GoldStar / LG | 028 041 069 |
| Goodmans | 001 |
| GRADIENTE | 064 065 |
| Grundig | 001 |
| Harman Kardon | 217 066 067 |
| Hitachi | 011 |
| Kenwood | 060 068 |
| Koss | 001 |
| Lenco | 001 |
| Lifetec | 001 |
| Magnavox | 008 038 048 057 |
| MARANZ | 070 |
| Matsui | 001 |
| Medion | 001 |
| Mitsubishi | 032 057 |
| Mx Onda | 001 |

BRAND LIST

| | |
|-----------|-----------------------------|
| NAD | 057 077 |
| Onkyo | 207 071 072 |
| Oritron | 001 |
| Panasonic | 002 003 039 051 054 079 073 |
| Philips | 038 048 074 |
| PROCEED | 083 |
| Proline | 001 |
| Pioneer | 055 057 085 |
| Proscan | 035 |
| QUASAR | 002 |
| RCA | 035 001 |
| Saba | 001 |
| Samsung | 040 047 065 |
| Sanyo | 052 |
| Schneider | 001 |
| Scott | 001 |
| Sharp | 060 078 |
| Standard | 001 |
| Sony | 037 050 053 086 |
| Technics | 002 051 054 079 |
| Tensai | 001 |
| Tevion | 001 |
| THOMSON | 084 |
| Toshiba | 038 060 206 072 080 081 |
| Yamaha | 039 045 059 079 073 082 |
| Zenith | 028 041 069 |

