



H-HD-IRD-V3-8VSB

User Manual

Version: 3.0



DIRECTORY

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Chapter 1 Product Outline

1.1 Outline

The H-HD-IRD-V3-8VSB is Thor's newly designed IRD with added Program control features, integrated FPGA, and a video monitoring LCD on the front panel. The LCD can display programs from ASI, DVB-S2, or IP sources. Dual slots for industry standard CAM modules can be used to multiplex and de-encrypt complete carrier TS streams. Additional programs can be inserted to the MPTS for ASI and IP outputs, while simultaneously decoding a program to scaled or native outputs on HD-SDI, HDMI, YPbPr, and CVBS. Additionally, digital audio output with Dolby pass-through is provided on optical and XLR connectors, analog balanced and unbalanced is also provided. H-HD-IRD-V3-8VSB supports one channel (Tuner, ASI or IP) de-scrambling and provides transparent signal output. User can operate the device by using front panel LCD or NMS browser login. Additional features include the ability to pass the encrypted TS from the input to a second ASI output in addition to decrypted TS output.

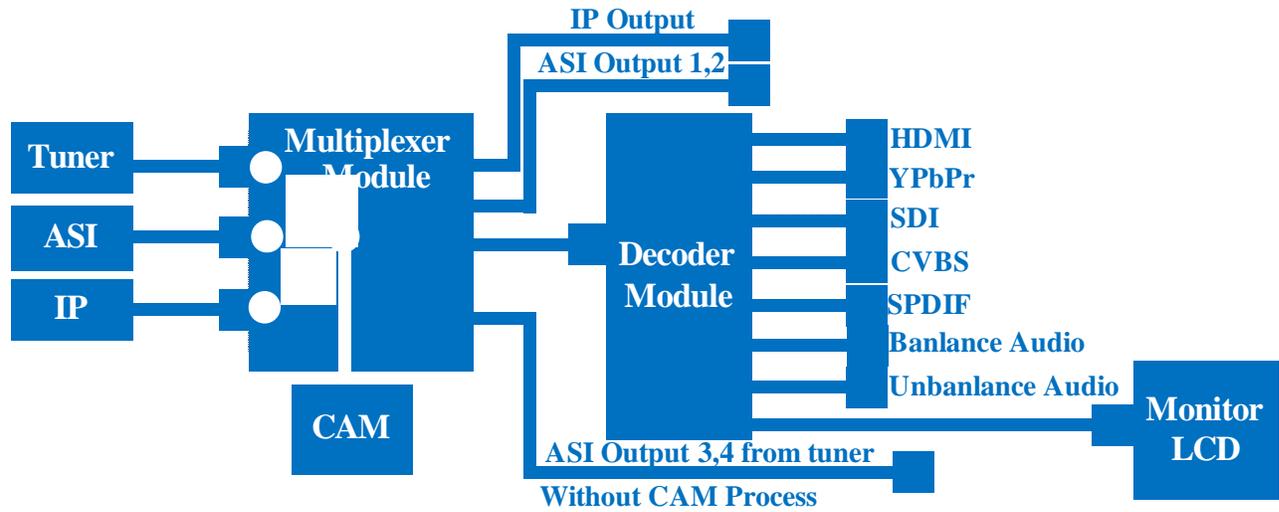
1.2 Features

- Real-time video Monitor LCD in the front panel
- 8VSB– Complies with ATSC standard
- MPEG-2 & MPEG-4 video decoding
- HE-AAC, LC-AAC, AC3, MPEG2 audio decoding
- Support AC3 pass through
- Support automatic FEC
- Re-multiplexer embedded
- Support Tuner, IP, ASI Input at the same time
- Support IP, ASI, Decoding output at the same time
- Support 8 x SPTS output
- Support CAM card insert (CI/CI+)
- Support CC (Closed Caption)
- Support Front Panel and Web-page Operation

1.3 Specifications

Input	Tuner	8VSB	
	ASI	1 ASI IN	
	IP	1 IP	
Output	ASI	2 separate groups of output ports (each group has 2 channels)	
	Video	Decoding	MPEG-2 & MPEG-4
		Interface	1*CVBS, 1*YPbPr, 1*HD/SD-SDI, 1* HDMI
	Audio	Decoding	HE-AAC, LC-AAC, AC3, MPEG2
		Interface	XLR, L/R
SPDIF	1 SPDIF		
Input Level	20-35dBmV		
Input Frequency	45-900MHz		
Closed Caption	EAS 708 & 608		
Constellation	8VSB		
FEC Rate	1/2, 3/5, 2/3, 3/4,4/5, 5/6, 8/9,9/10		
NMS Port	Ethernet Port	10/100M	
	Protocols	TS Over IP : UDP, NMS : UDP	
Miscellaneous	Dimensions (L×W×H)	482mm*360mm*44mm	
	Approx weight	3.2kg	
	Power	<20W(Max)	
	Temperature	0~45°C(Operating),-20~80°C(Storage)	

1.4 Principle Chart



1.5 Appearance and description

Front Panel Illustration:

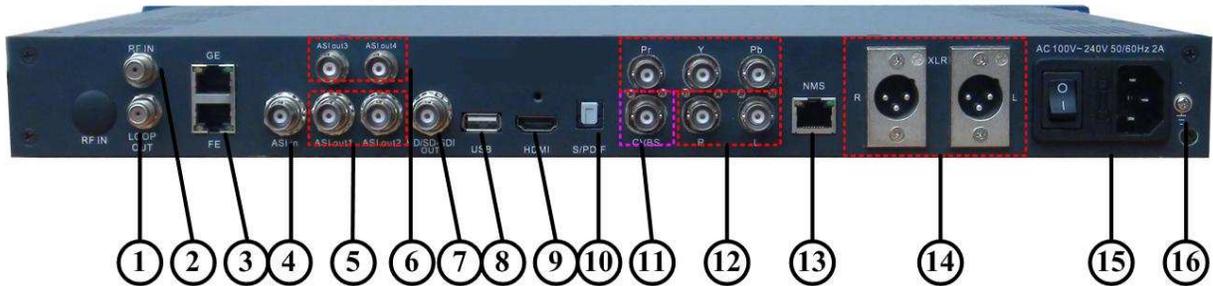


Indicators area: All the indicators will light on when the HD IRD works at its current mode.

1	LCD Display
2	Power & Alarm indicators
3	Program Status and video I/O Indicators
4	4 Key directional Keyboard
5	Enter Key
6	Menu Key
7	Lock Key
8	LCD Confidence Monitor
9	LCD On / Off Toggle Key

10	2 slot Conditional Access Module CAM
----	--------------------------------------

Rear Panel Illustration



1	Loop Out Interface
2	RF IN Interface
3	IP IN/OUT Interface
4	ASI IN Interface
5	ASI Out1 and ASI Out2 Interface: Output multiplexed or separated TS Stream from tuner, ASI and IP.
6	ASI Out3 and ASI Out4 Interface: Output SingleTS Stream from tuner.
7	HDSDI-OUT Interface: HD/SD digital parallel output interface
8	USB interface: Software updating.
9	HDMI Output Interface
10	SPDIF: Digital audio output interface
11	CVBS: Composite video and audio output interface
12	Audio (L/R channel) output interface YPbPr: Audio and Video component output interface
13	NMS Ethernet Port(10-100Mbps)
14	Balance audio output interface
15	Integrated power switch and socket
16	Grounding Wire

Chapter 2 Installation Guide

2.1 Acquisition Check

When you receive the equipment, it is necessary to check items according to the packing list. Normally it should include the following items:

- | | |
|--------------------|------|
| ● H-HD-IRD-V3-8VSB | 1pcs |
| ● User's Manual | 1pcs |
| ● ASI Cable | 1pcs |
| ● CVBS Cable | 1pcs |
| ● HDMI Cable | 1pcs |
| ● SDI Cable | 1pcs |
| ● YPbPr Cable | 1pcs |
| ● Power Cord | 1pcs |

If any item is missing or mismatches with the list above, please contact our company:

Sales@ThorFiber.com 1-800-521-8467

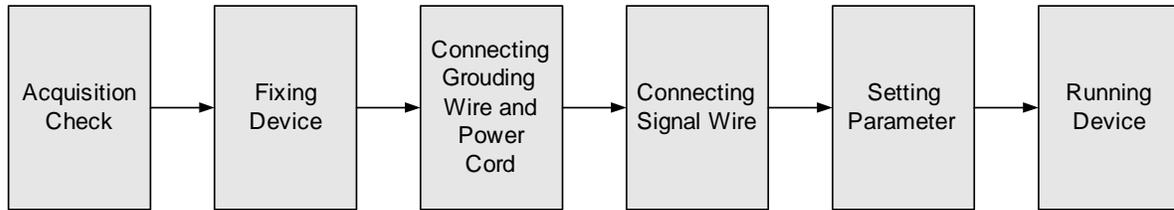
2.2 Installation Preparation

Please refer to the following section for installation procedures. This chapter is intended to be used along with the I/O diagrams from the previous chapter.

The main content of this chapter includes:

- Checking the packing list for missing items
- Preparing relevant environment for installation
- Installing HD IRD
- 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: $1 \times 10^7 \sim 1 \times 10^{10} \Omega$, Grounding current limiting resistance: 1M (Floor bearing should be greater than 450Kg/m ²)
Environment Temperature	5~40°C(sustainable), 0~45°C(short time), installing air-conditioning is recommended
Relative Humidity	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

	<p>lighting power are independent to each other. Device power requires AC power 100-240V 50-60Hz. Please carefully check before running.</p>
--	--

2.2.3 Grounding Requirement

- It is important to keep this device grounded to ensure all of the modules function correctly. Correctly grounding the device will also help prevent and electrical interference, lightning, ETC. Also it helps reject minor interference that may disrupt the devices ability to function smoothly. General rule of thumb, make sure the device is grounded when installing anywhere.
- Always use copper wire. When applied correctly the ground must be wrapped well to ensure maximum conduction so it can reduce any high frequencies. The copper ground wire should also be as short and thick as possible..
- Installer must make sure that the two ends of the ground are well conducted and have appropriate anti-rust properties. .
- 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 25mm².

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 25mm².

2.2.5 Device Grounding

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

2.3 Wire's Connection

The grounding wire conductive screw is located on the right side of the 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 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 this power in an independent way. Especially if you share the same ground with other devices. When the device adopts both currents in a united way, the grounding resistance should be smaller than 1Ω .

⚠ **Caution:**

Before connecting power cord to H-HD-IRD-V3-8VSB, user should set the power switch to "OFF".

2.4 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:

2.4.1 IRD-V3HD-8VSB Cable Guide:

- **IP Input Cable Example: Standard RJ-45 CAT5/6 Ethernet**



- **HDMI Cable Example: HDMI 1.4 rating required for 1080p60**



- **XLR Interface Cable Example: Standard 3 pin balanced or digital**



- **RF In and Loop Out Cable Example: Coaxial Type-F 75 Ohm**



- **Component / Composite: BNC Type to RCA Type or BNC-BNC**



- **ASI Input and Output Cable Example: BNC Type Coaxial 50 Ohm**



2.4.2 IRD-V3HD-8VSB Satellite Receiver Signal Cable

Connection Illustration:

- **RF IN and LOOP OUT Connection Guide:**

Users can find the RF IN and LOOP OUT interface on the device according to the connector mark described on the rear panel illustration, connect the cable as shown below. One end is connected to the RF IN interface of satellite receiver while the other end is connected to the satellite signal source equipment or LOOP OUT interface of the previous satellite receiver when several satellite receivers are series connection. As follows:



- **ASI IN and ASI OUT Connection Illustration:**

Users can find the ASI IN and ASI OUT interface on the device according to the connector mark described on the rear panel illustration, connect the cable as shown. One end is connected to ASI IN interface of the HD IRD, the other end is connected

to any device that has ASI output, while when connected ASI OUT interface, the other end of the wire is generally connected to encoder and multiplexer. As follows:



- **Component Output, CVBS Output and Sound Channel Output Connection**

Illustration:

- Users can find the YPbPr, CVBS and Left/Right sound channel 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 encoders.



- **HDMI Output Connection Illustration:**

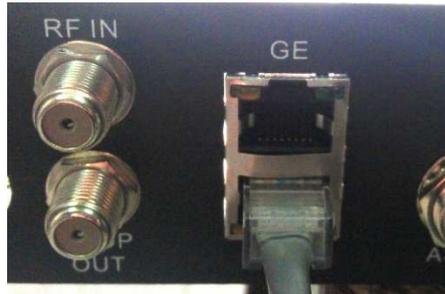
- Users can find the HDMI interface on the device according to the connector mark described on the rear panel illustration, and then connect the wire. One end of the wire is connected to the HDMI output interface of the HD IRD, while the other end of the wire is connected to encoder or other equipment. As follows:



- **IP Output Connection Illustration:**

Users can find the IP IN/OUTPUT interface on the device according to the

connector mark described on the rear panel illustration, and then connect the wire. One end of the wire is connected to the IP input/output interface of the HD IRD, the other end of the wire is connected to devices with IP OUT/INPUT as follows:



- **XLR Output Connection Illustration:**

Users can find the XLR interface on the device according to the connector mark described on the rear panel illustration, and then connect the wire. One end of the wire is connected to the XLR output interface of the HD IRD, the other end of the wire is connected to IP encoder. As follows:



Chapter 3 Operation

The front panel of H-HD-IRD-V3-8VSB is the user-operating interface and the equipment can be conveniently operated entirely from the front panel. All available configuration settings can be accessed through the interface menu tree. Please refer to the following guide for assistance:

Keyboard Function Description:

MENU: Cancel current entered value, resume previous setting; Return to previous menu.

ENTER: Activate the parameters which need modifications, or confirm the change after modification.

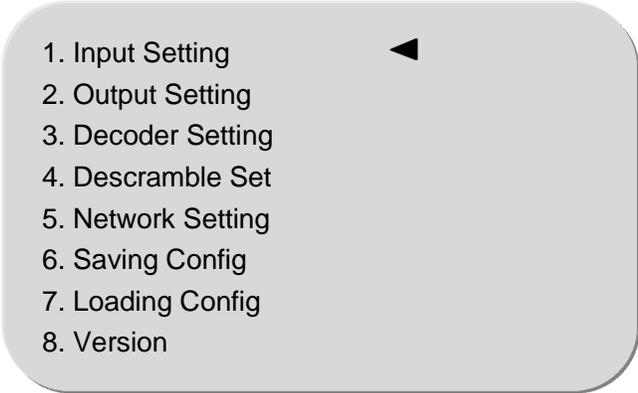
LEFT/RIGHT: Choose and set the parameters.

UP/DOWN: Modify activated parameter or paging up/down when parameter is inactivated.

LOCK: Lock the screen/cancel the lock state. After pressing the lock key, the LCD will display the current configuring state.

3.1 Main Interface

After switching on the IRD and pressing the “LOCK” key on the front panel to enter to the main menu, the LCD will display the following pages:

- 
1. Input Setting
 2. Output Setting
 3. Decoder Setting
 4. Descramble Set
 5. Network Setting
 6. Saving Config
 7. Loading Config
 8. Version

3.2 General Setting

All options are available from these 8 root menu trees from the front LCD display.

3.2.1 Input Setting

User can press “Enter” key to enter into the menu of the input setting.

- 
- 1.1 Tuner(ATSC)
 - 1.2 ASI
 - 1.3 IP

3.2.1.1 8VSB In



The screenshot displays the 'Web Management' interface for the THOR H-HD-IRD-V3-8VSB. On the left is a sidebar menu with options: Welcome, Parameter (Tuner Para, General Para, MPTS Para, Mux, Card, SPTS, BISS, Transmit), and System (Save/Restore, Reboot, Network, Password). The main content area is titled 'Tuner Parameters' and contains a grid of controls:

Lock:	Tuner <input checked="" type="checkbox"/>	ASI <input type="checkbox"/>	IP <input type="checkbox"/>	CI <input type="checkbox"/>
Overflow:	Mux <input type="checkbox"/>	CI <input type="checkbox"/>	IP <input type="checkbox"/>	

Below the grid, the text 'ATSC' is displayed. Underneath, there is a 'Frequency' input field containing the value '647000' followed by 'KHz'. At the bottom of this section are two 'Set' buttons.

Here you can manually enter the frequency needed for additional off air channel

Frequencies for Television

Television Frequencies Channels 2-40

Channel	Band Limits
2	5-60
3	63-66
4	69-72
5	79-82
6	85-88
7	177-180
8	183-186
9	189-192
10	195-198
11	201-204
12	207-120
13	213-216
14	473-476
15	479-482
16	485-488
17	491-494
18	497-500
19	503-506
20	509-512
21	518-518
22	521-524
23	527-530
24	533-536
25	539-542
26	545-548
27	551-554
28	557-560
29	563-566
30	569-572
31	575-578
32	581-584
33	587-590
34	593-596
35	599-602
36	605-608
37	611-614
38	617-620
39	623-626
40	629-632

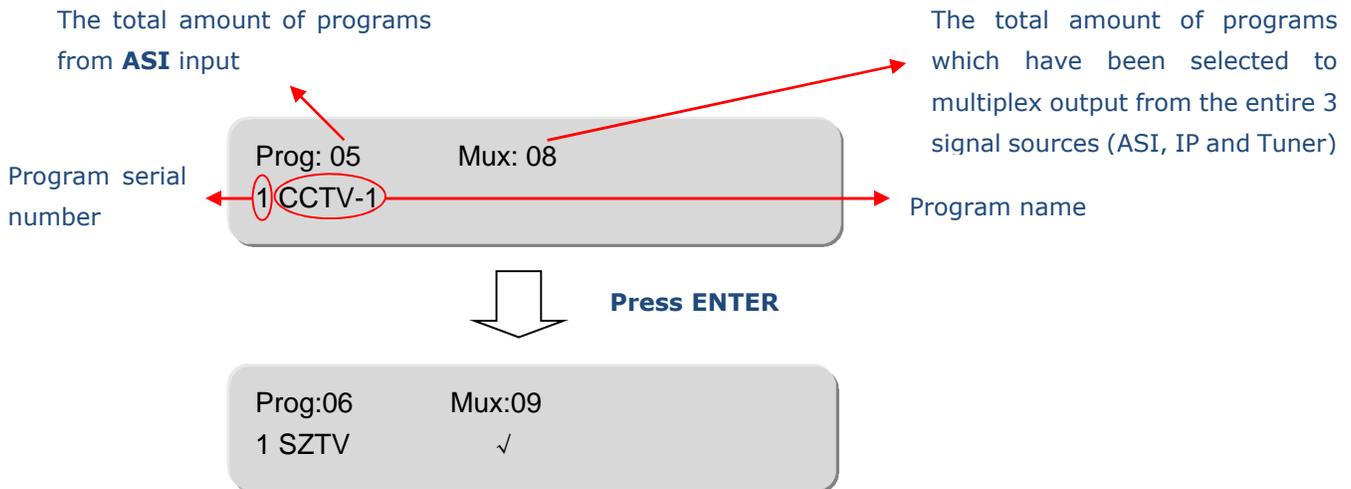
Television Frequencies Channels 41-83

Channel	Band Limits
41	635-638
42	641-644
43	647-650
44	653-656
45	659-662
46	665-668
47	671-674
48	677-680
49	683-686
50	689-692
51	695-698
52	701-704
53	707-710
54	713-716
55	719-722
56	725-728
57	731-734
58	737-740
59	743-746
60	749-752
61	755-758
62	761-764
63	767-770
64	773-776
65	779-782
66	785-788
67	791-794
68	797-800
69	803-806
70	809-812
71	815-818
72	821-824
73	827-830
74	833-836
75	839-842
76	845-848
77	851-854
78	857-860
79	863-866
80	869-872
81	875-878
82	881-884
83	887-890

3.2.1.2 ASI IN

1.2.1 Prog Parse

Press "Enter" key to enter into the submenu of 1.2.1



Press "Up" / "Down" to select program and press "Enter" then to tick the program with symbol "✓", the program will be chosen to be multiplexed and output. Press "Enter" again to cancel the mux option.

Press "Menu" to exit.

NOTE:

Multiplexing operation can only take effect on condition that the "2.1 Multiplex Set" is set to "Multiplexing".

3.2.1.3 IP IN

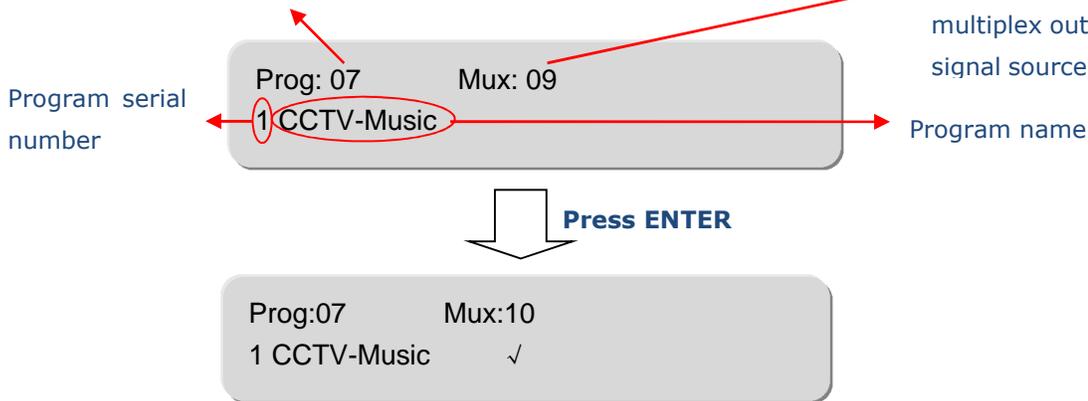
By pressing the "Enter" key, it displays below page:

1.3.1 Prog Parse
1.3.2 Input IpAddr
1.3.3 Input Port

Enter "1.3.1 prog parse" to parse the IP IN programs and select program(s) to mux out.

The total amount of programs from IP input

The total amount of programs which have been selected to multiplex output from the entire 3 signal sources (ASI, IP and Tuner)



Press “Up” / “Down” to select program and press “Enter” then to tick the program with symbol “√”, the program will be chosen to be multiplexed and output. Press “Enter” again to cancel the mux option.

Press “Menu” to exit.

NOTE:

Multiplexing operation can only take effect on condition that the “2.1 Multiplex Set” is set to “Multiplexing”.

Enter the submenu 1.3.2 and 1.3.3 respectively to set the input IP address and port.

1.3.2 Input IpAddr
224.002.002.002

1.3.3 Input Port
1234

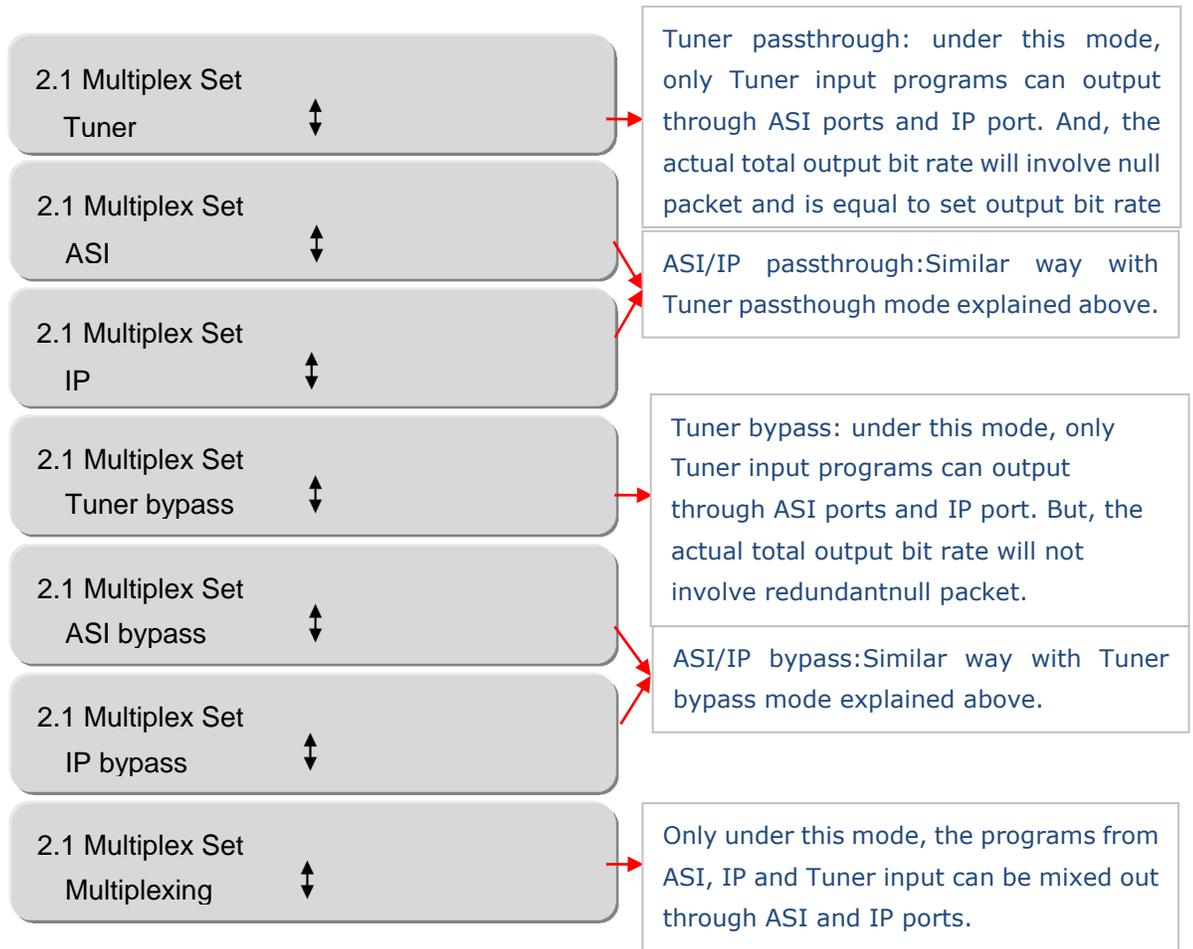
3.2.2 Output Setting

User can press “Enter” key to enter into below menu of the output setting.

2.1 Multiplex Set
2.2 Output Bit rate
2.3 Trans stream ID
2.4 Original Net ID
2.5 IP Output

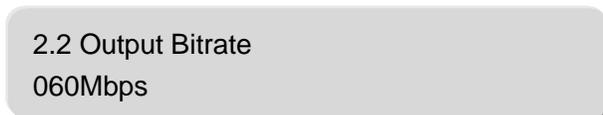
3.2.2.1 Multiplex Setting

User can enter to the menu 2.1 and select your output using UP/DOWN key after pressing Enter key, user can see the four modes of outputting the signals in turn: ASI, IP, Tuner passthrough and Mux.



3.2.2.2 Output Bit rate

User can set the output bitrate under menu 2.2 by press "Enter" to start modifying.



3.2.2.3 Transtream ID

Press "Enter" key to enter into the menu of 2.3



3.2.2.4 Original

Press “Enter” key to enter into the menu of 2.4

2.4 Original NetID
00000

3.2.2.5 IP Output

Press “Enter” key to enter into the submenu of 2.5, it will display below pages. User can set the output IP address, output port and decide whether to output the signals from IP port.

2.5.1 IP Out Enable
2.5.2 Out IP Addr
2.5.3 Out Port



2.5.1 IP Out Enable
▶ ON OFF

2.5.2 Out IP Addr
224.002.002.002

2.5.3 Out Port
1001

3.2.3 Decoder Setting

“Decoder Setting” is a process of selecting a program from Tuner/ASI/IP input to decode and output the decoded program through HDMI/SDI/YPbPr/CVBS port and audio ports.

Below are sub-menus under “Decoder Setting”.

3.1 Video Setting
3.2 Audio Setting
3.3 Program Select
3.4 Search
3.5 Decoder Select

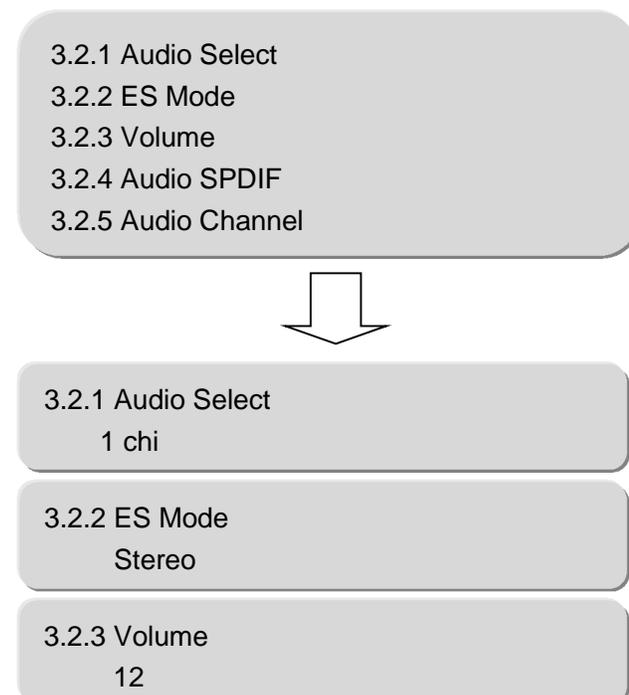
3.2.3.1 Video Setting

After pressing enter key, user can enter into the submenus: 3.1.1~3.1.6.



3.2.3.2 Audio Setting

User can enter into below submenu by pressing the “Enter” key. Then select the audio, choose the ES mode, adjust the volume, select modes of Audio SPDIF and Audio channel.



3.2.4 Audio SPDIF
Auto

3.2.4 Audio Channel
Auto

3.2.3.3 Program Selecting

Before entering into below menu to select the programs, user should enter the menu 3.5 and 3.4 in turn to find the programs.

3.3 Program Select
1 CCTV-1 ◀

By pressing UP/DOWN after entering into above menu, all the searched programs will be displayed individually as below:

3.3 Program Select
2 CCTV-2 ◀

3.2.3.4 Searching

The device will start searching the programs automatically after user select the mode of decoding in the menu 3.5.

3.4 Search
Start Searching

3.2.3.5 Decoder Selecting

There are three ways of decoding: Tuner, ASI and IP. User can press UP/DOWN to see the way individually after entering below menu.

3.5 Decoder Select
1 Tuner ◀

3.2.4 Descramble Setting

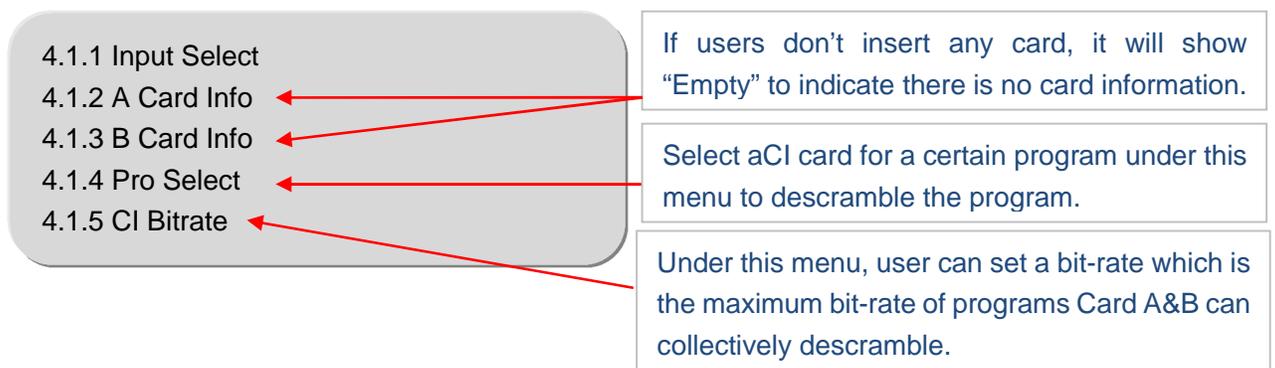
H-HD-IRD-V3-8VSB supports 2 CAMs to insert 2 cards (Card A and Card B) to descramble the encrypted Tuner input signal. This part “4 Descramble Setting” is to select a card or a BISS mode to decrypt tuner programs.

User can press “Enter” key to enter into below menu of the descramble setting. The detailed operations about the descramble functions will be explained on the SNMP operation part (Chapter 4).



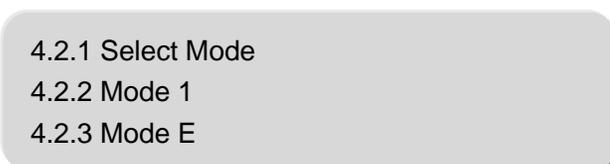
3.2.4.1 Card Setting

After enter into the submenu of 4.1, it will display the following page:



3.2.4.2 BISS

BISS is one of the descrambling functions which support two modes: mode 1 and mode E. And the application needs to be matched with BISS scrambler. User can select the mode based on the kind of BISS scrambler.

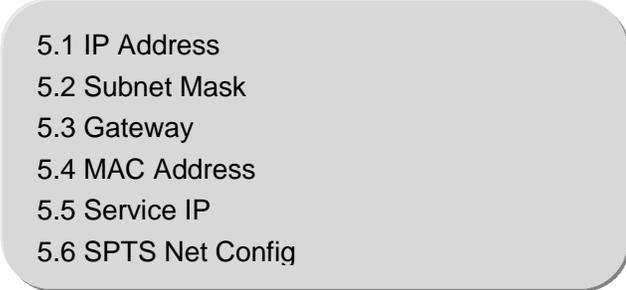


“4.2.2” is operable when the BISS mode is set as “Mode 1” under “4.2.1”.

“4.2.3” is operable when the BISS mode is set as “Mode E” under “4.2.1”.

3.2.5 Network Setting

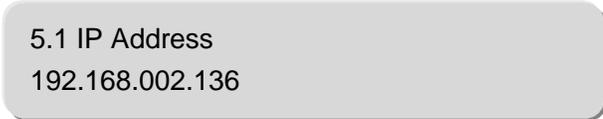
User can press “Enter” key to enter into below menu of the network setting.

A screenshot of a network setting menu displayed in a grey rounded rectangle. The menu items are listed vertically:

- 5.1 IP Address
- 5.2 Subnet Mask
- 5.3 Gateway
- 5.4 MAC Address
- 5.5 Service IP
- 5.6 SPTS Net Config

3.2.5.1 IP Address

After entering into the menu 5.1, it will display the following page:

A screenshot of the IP address setting screen displayed in a grey rounded rectangle. The text shows:

- 5.1 IP Address
- 192.168.002.136

3.2.5.2 Subnet Mask

After entering into the menu 5.2, it will display the following page:

A screenshot of the Subnet Mask setting screen displayed in a grey rounded rectangle. The text shows:

- 5.2 Subnet Mask
- 255.255.255.000

3.2.5.3 Gateway

After entering 5.3, it will display the following page:

A screenshot of the Gateway setting screen displayed in a grey rounded rectangle. The text shows:

- 5.3 Gateway
- 192.168.002.001

3.2.5.4 MAC Address

After entering into the menu 5.4, it will display the following page:



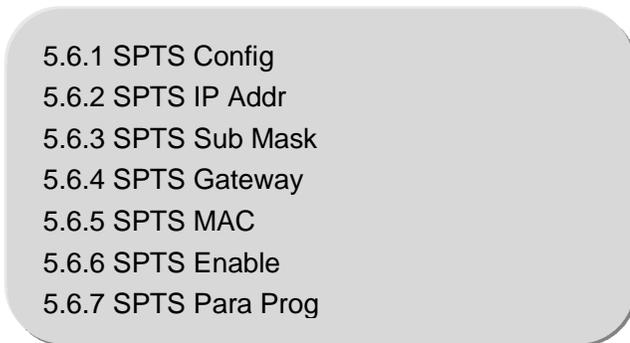
3.2.5.5 Service IP

After entering into the menu 5.5, it will display the following page:



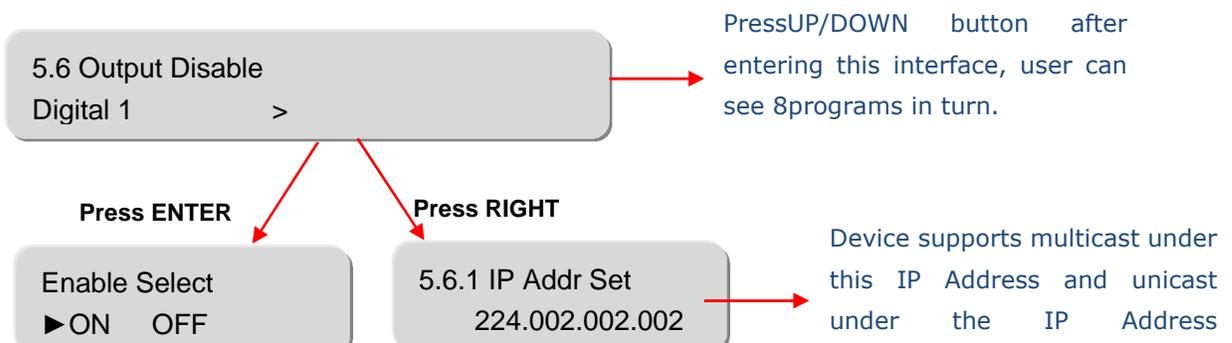
3.2.5.6 SPTS Net Configuration

After entering into the menu 5.6, it will display the following page:

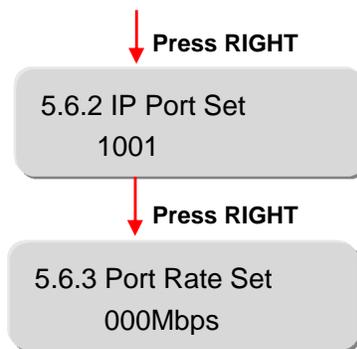


3.2.5.6.1 SPTS Configuration

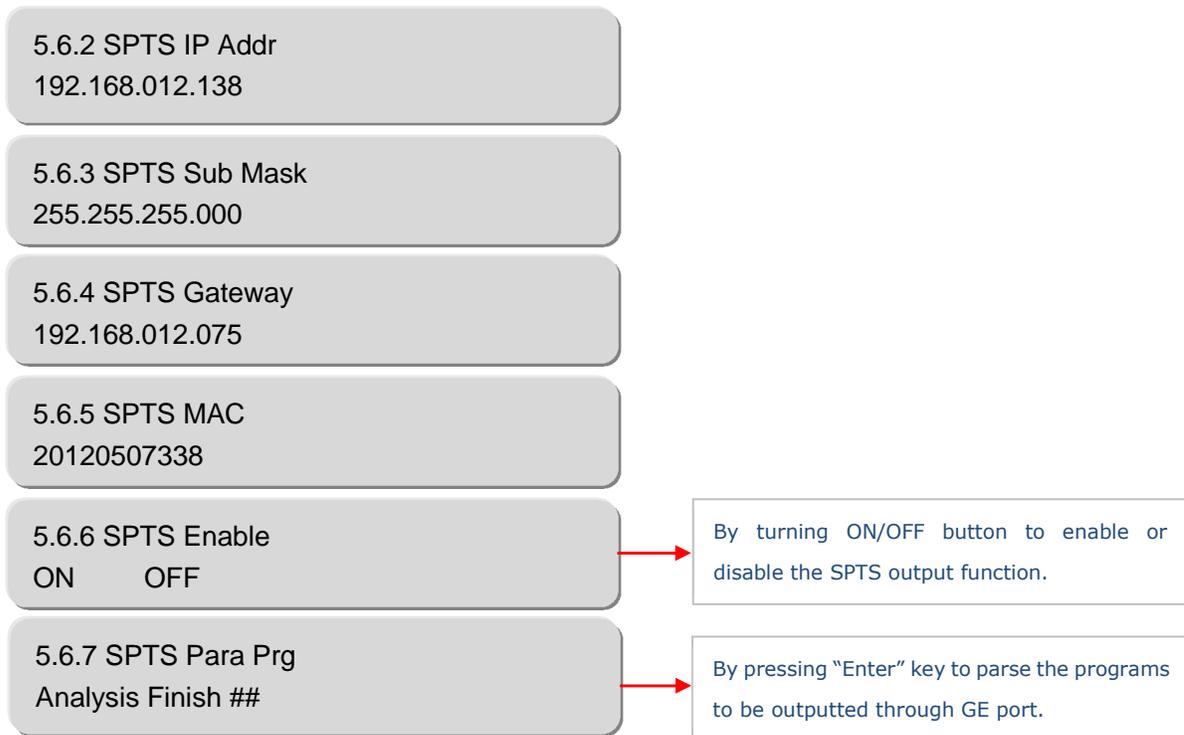
H-HD-IRD-V3-8VSB supports 8 SPTS output. Under menu of 5.6.1, user can separately configure the 8 SPTS.



To decide whether to output the program through GE port

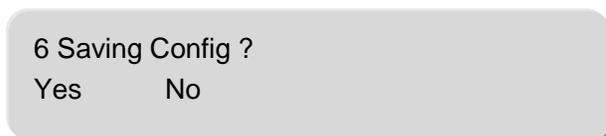


3.2.5.6.2 – 3.2.5.6.7 Other SPTS Settings



3.2.6 Saving Configuration

User can choose "Yes" or "No" to save the current configuration parameters in this menu.



3.2.7 Loading Configuration

User can restore the device into the last saved configuration by choosing the menu 7.1"Saved Config",

and also user can restore the device into factory default configuration by choosing the menu 7.2"Default Config".

7.1 Saved Config
7.2 Default Config

7.1 Saved Config ?
Yes No

7.2 Default Config ?
Yes No

3.2.8 Version

User can check the device's hardware version and software version in this menu.

UC 75 HDIRC
SW 05:2.29 HW 2.00

Chapter 4 Web-page Management

In addition to using front buttons and SNMP software to set configuration, users can also control and set the configuration with the web Browser on your PC. User should ensure that the computer's IP address is different from the IRD's IP address; otherwise, it would cause IP conflict.

4.1 login

The default IP address of this device is 192.168.2.136. (We can modify the IP through the front panel.)

Connect the PC (Personal Computer) and the device with net cable, and use ping command to confirm they are on the same network segment.

I.G. the PC IP address is 192.168.99.252, we then change the device IP to 192.168.99.xxx (xxx can be 0 to 255 except 252 to avoid IP conflict).

Use web browser to connect the device with PC by inputting the Encoder & Modulator's IP address in the browser's address bar and press Enter.

It will display the Login interface as Figure-1. Input the Username and Password (Both the default Username and Password are "admin".) and then click "LOGIN" to start the device setting.

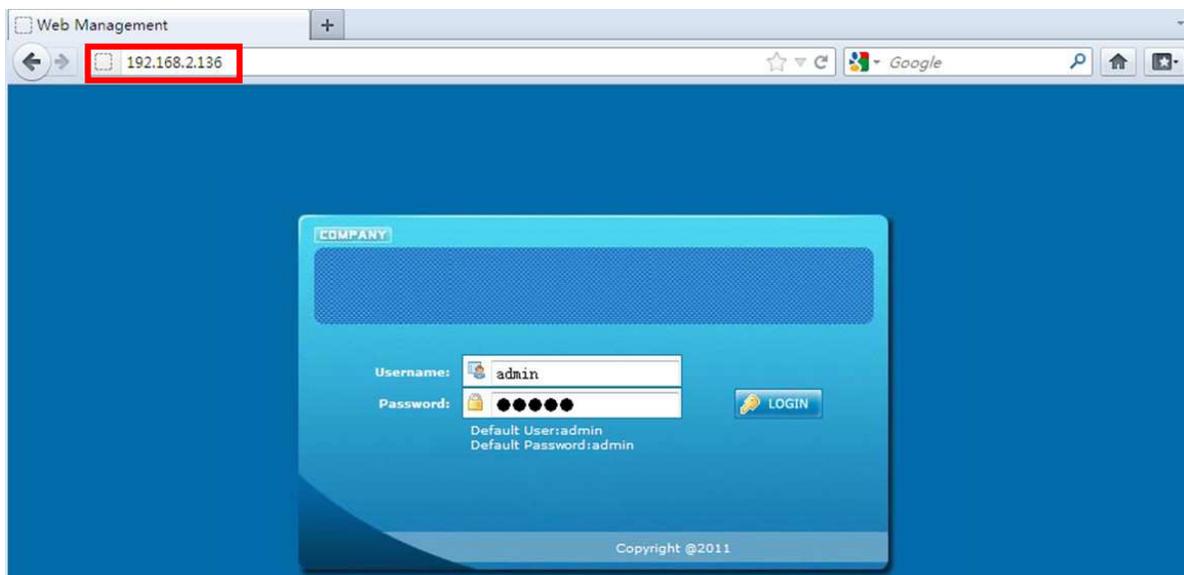
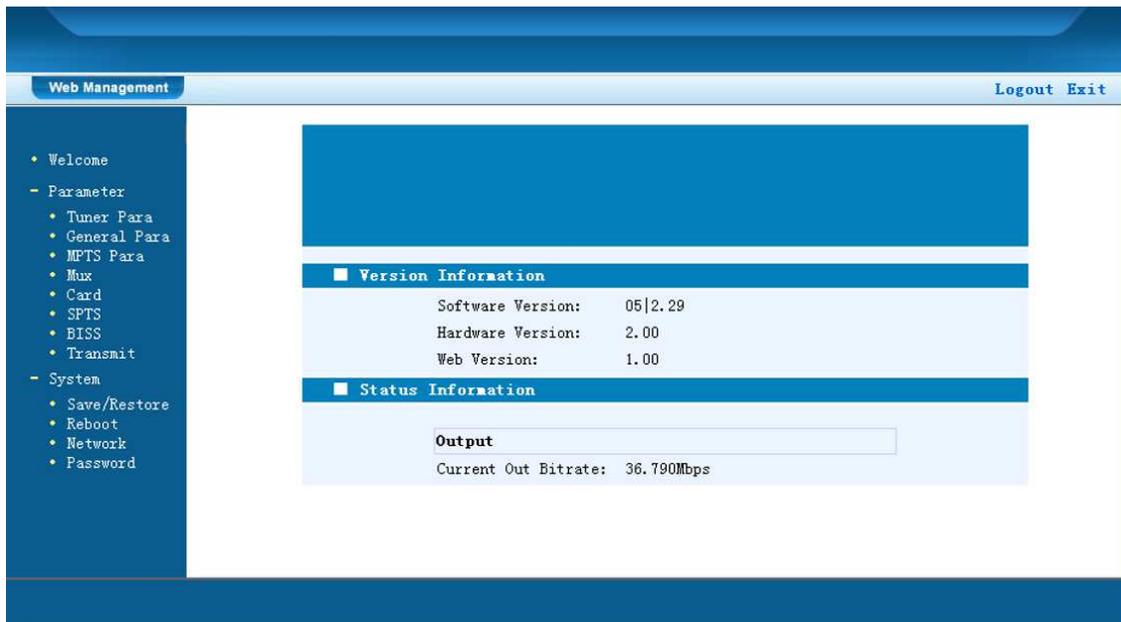


Figure-1

4.2 Operation

NOTE: The operating interfaces in Web Browser are the counterpart of SNMP. User can refer to Chapter 4 to set the parameters as Web management and SNMP management have the same operating principles.

Welcome



Tuner Parameters



General Parameters

The screenshot shows the 'General Parameters' configuration page. The interface includes a top navigation bar with 'Web Management' and 'Logout Exit' links. A left sidebar contains a menu with categories like 'Welcome', 'Parameter', and 'System'. The main content area is titled 'General Parameters' and contains various settings:

- ES Mode: Stereo
- Resolution: 1080I@50
- Input IP: 224.2.2.2
- Output Mode: Tuner-Passthrough
- Decoder: Tuner
- Descramble: ASI
- TV Standard: PAL/SECAM
- Audio Select: eng
- Program Select: CCTV-SD
- Input Port: 1001
- CI Max Bitrate: 48
- Output Bitrate: 40 Mbps
- Card A Info: empty
- Card B Info: empty
- Volume: 18 (range 0-25)
- Subtitle: Finger Switch
- Timer: 000-12
- Hardware Type: 00
- Program Count: 00
- Audio Spdif: Auto
- Audio Channel: Auto
- CC Switch: E1a008
- Aspect Ratio: 16:9 Full

Buttons for 'Get', 'Set', and 'Search' are located at the bottom of the configuration area.

MPTS Parameters

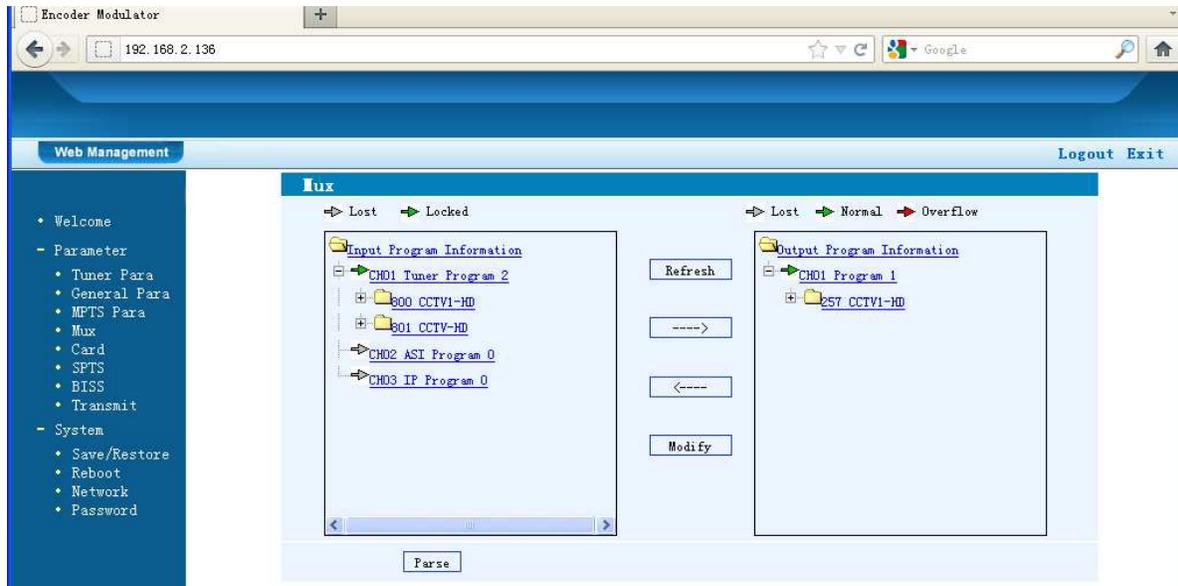
The screenshot shows the 'MPTS Parameters' configuration page. The interface is similar to the previous one, with a top navigation bar and a left sidebar. The main content area is titled 'MPTS Parameters' and contains the following settings:

- Output IP: 224.2.2.2
- Port: 1234
- Source IP: 192.168.4.147
- Source Submark: 0.0.0.0
- Source Gateway: 0.0.0.0
- Source Mac Addr: 00 00 00 00 00 00
- Destination Mac Addr: 00 00 00 00 00 00

'Set' and 'Get' buttons are located at the bottom right of the configuration area.

Mux Setting

NOTE: This interface is applicable when user set "Mux" as the output mode in "General Para" interface.



Refresh

Click "Refresh" to refresh the input/output program list.

---->

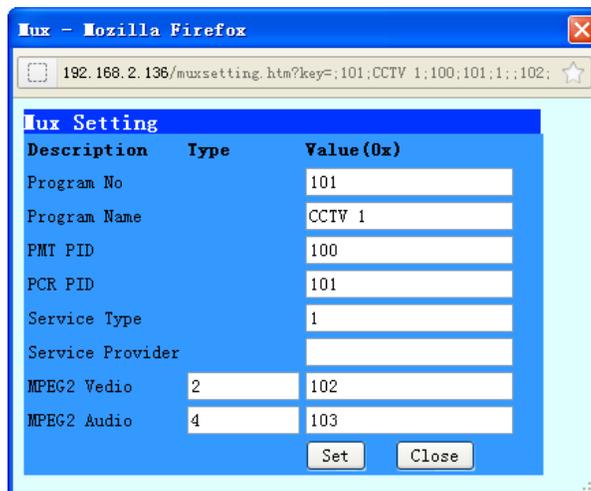
Select one input program first and click this button to transfer the selected program to the right box to output.

<----

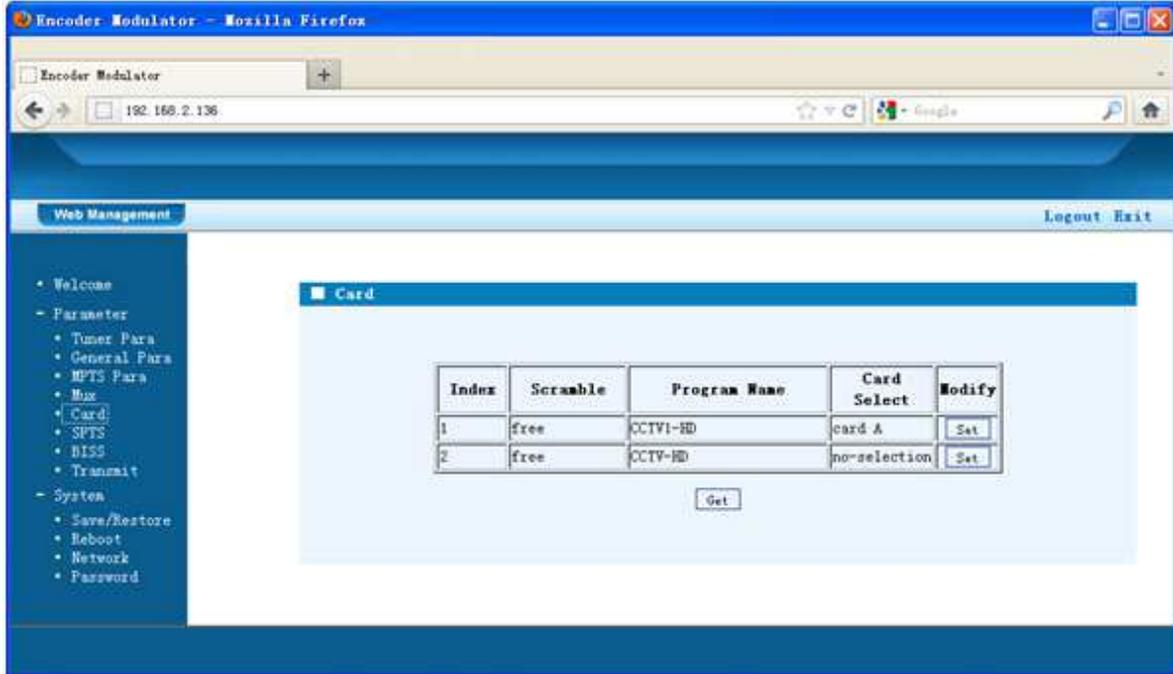
Similarly, user can cancel the multiplexed programs from the right box.

Modify

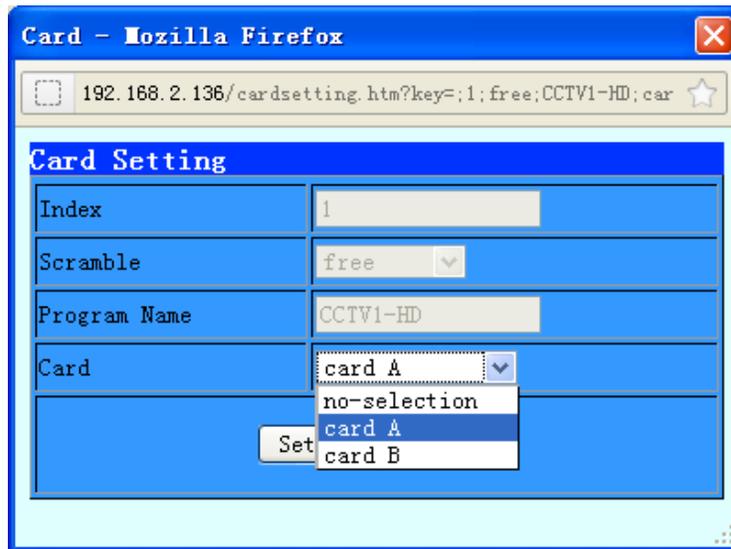
Select one multiplexed program in the right box and click this button, user can modify program information in the triggered dialog box shown as below:



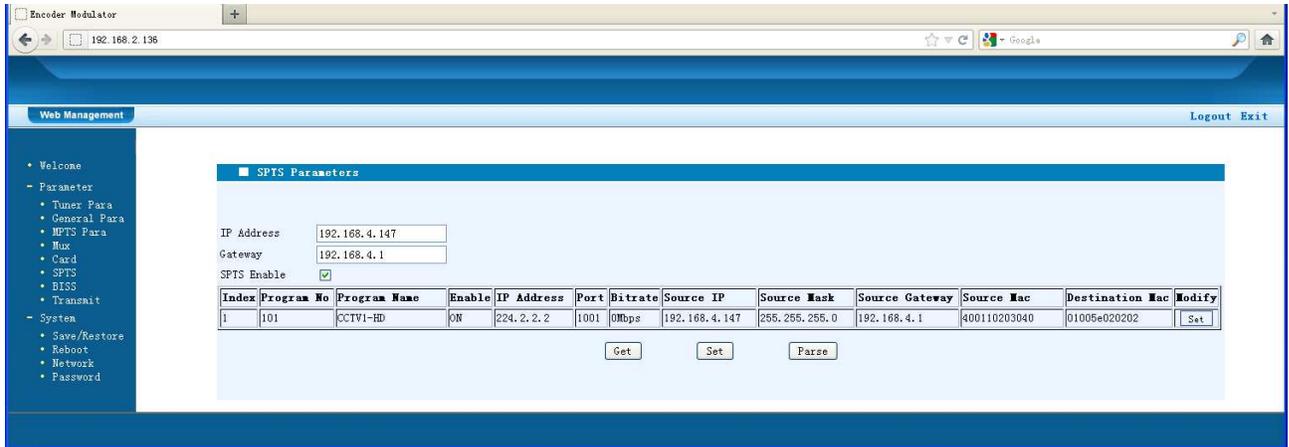
Card Setting



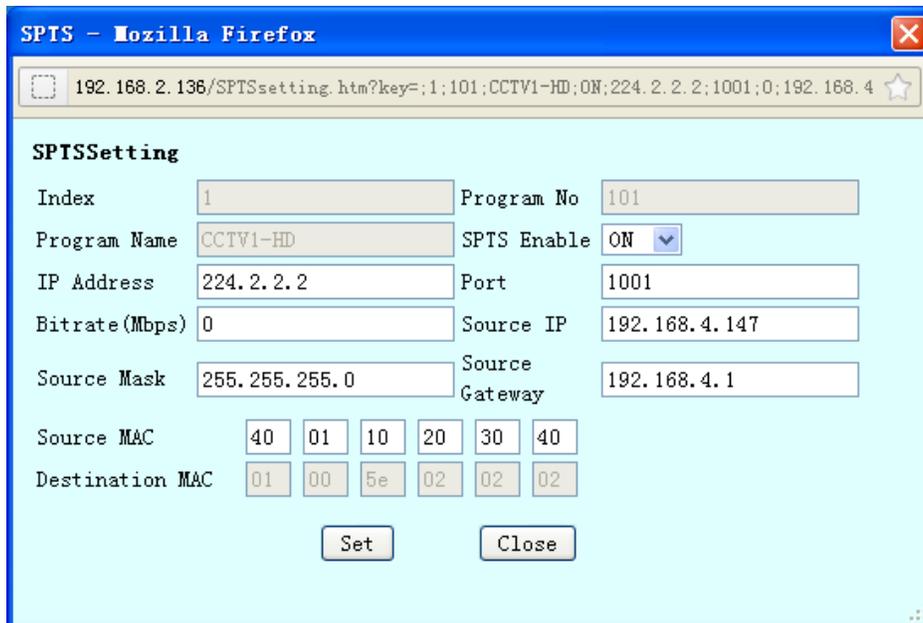
Click "Set" button to select card from the Card A and Card B as the descrambling card. (shown below)



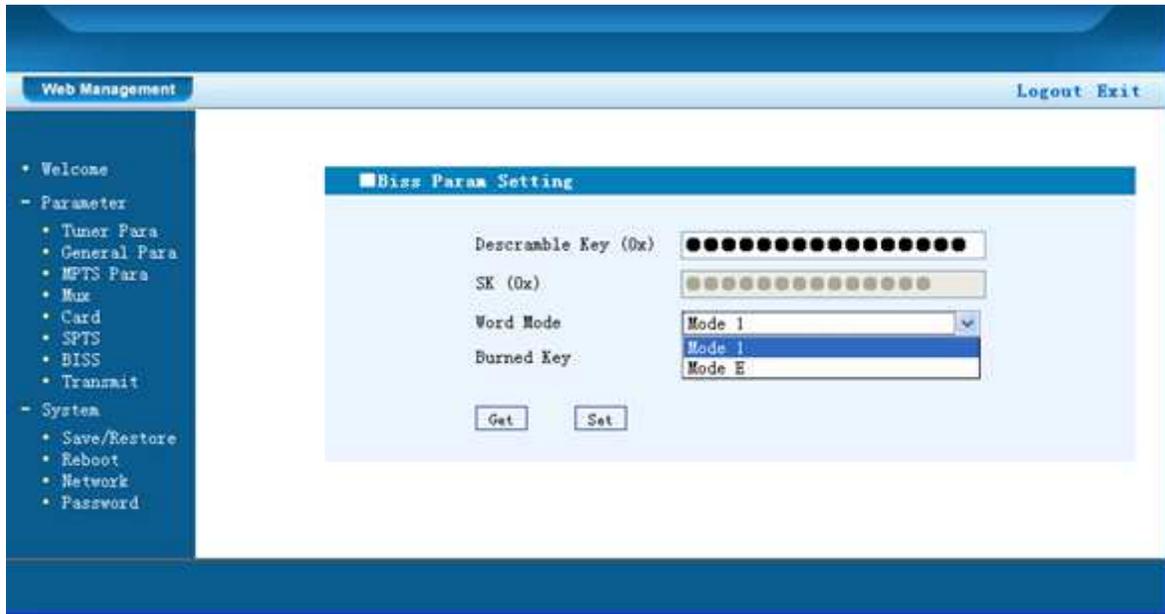
SPTS Setting



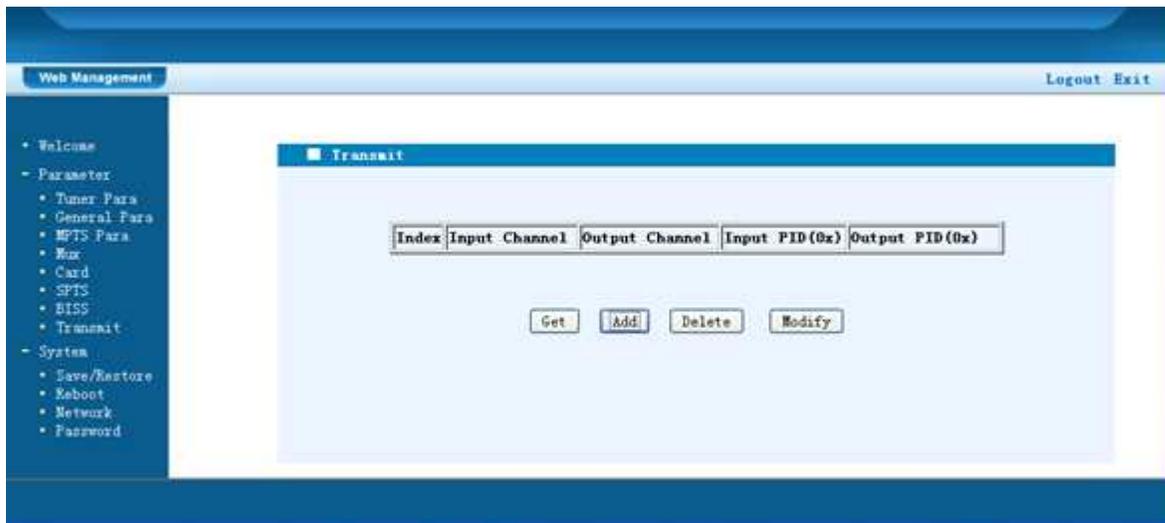
Click here to set the SPTS



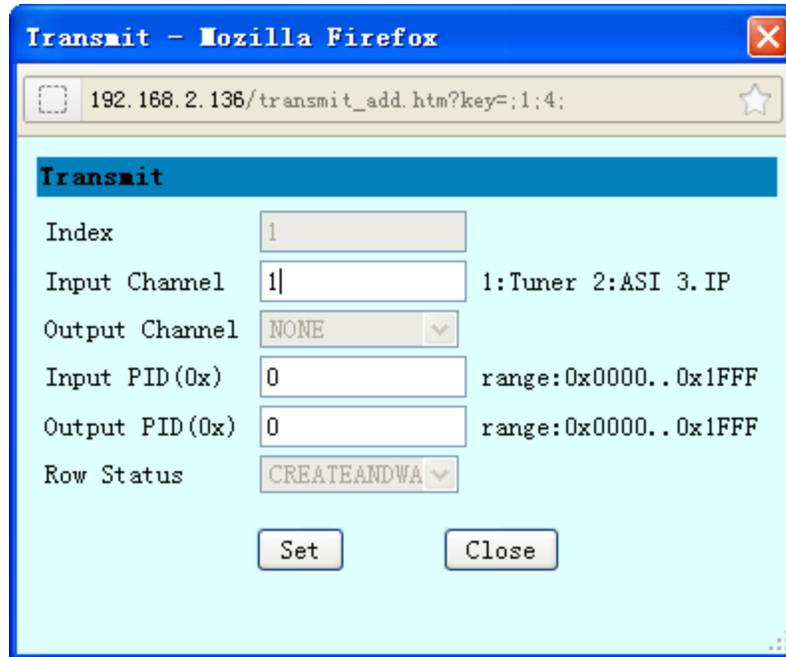
BISS setting



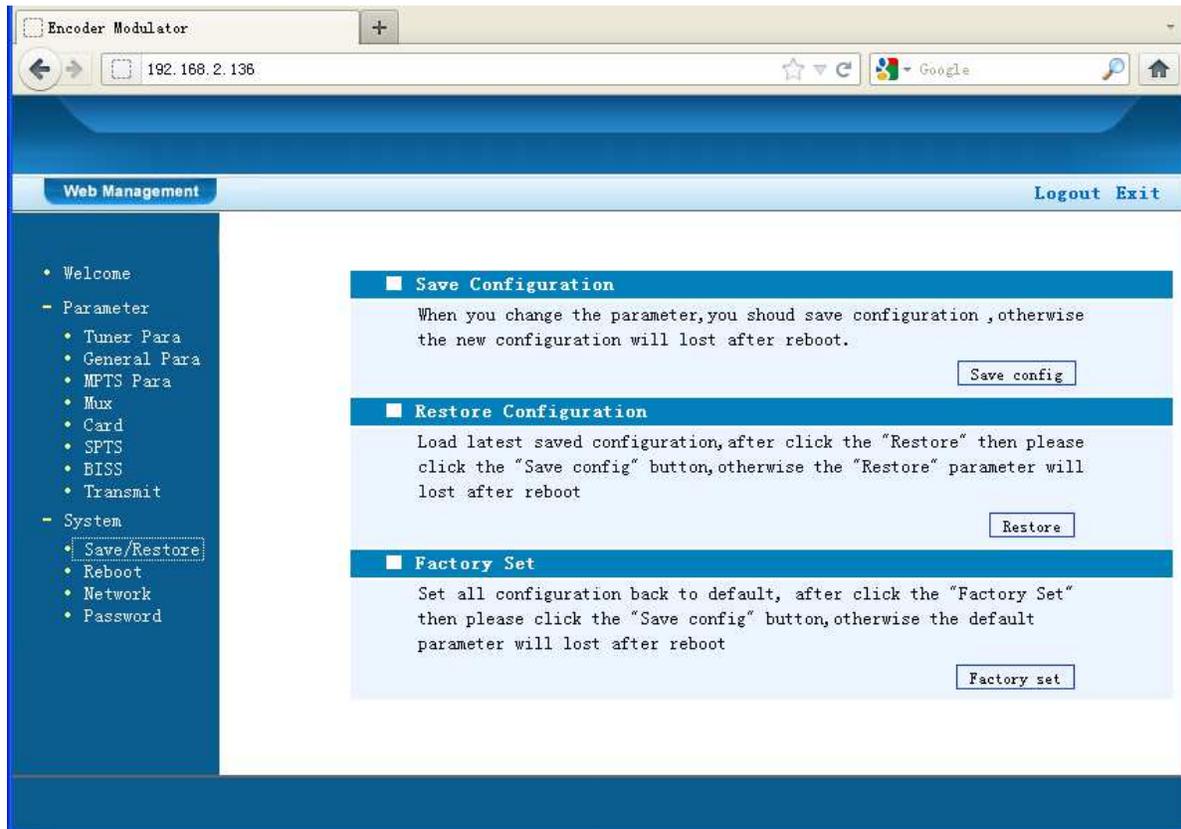
Transmit (PID Pass Setting)



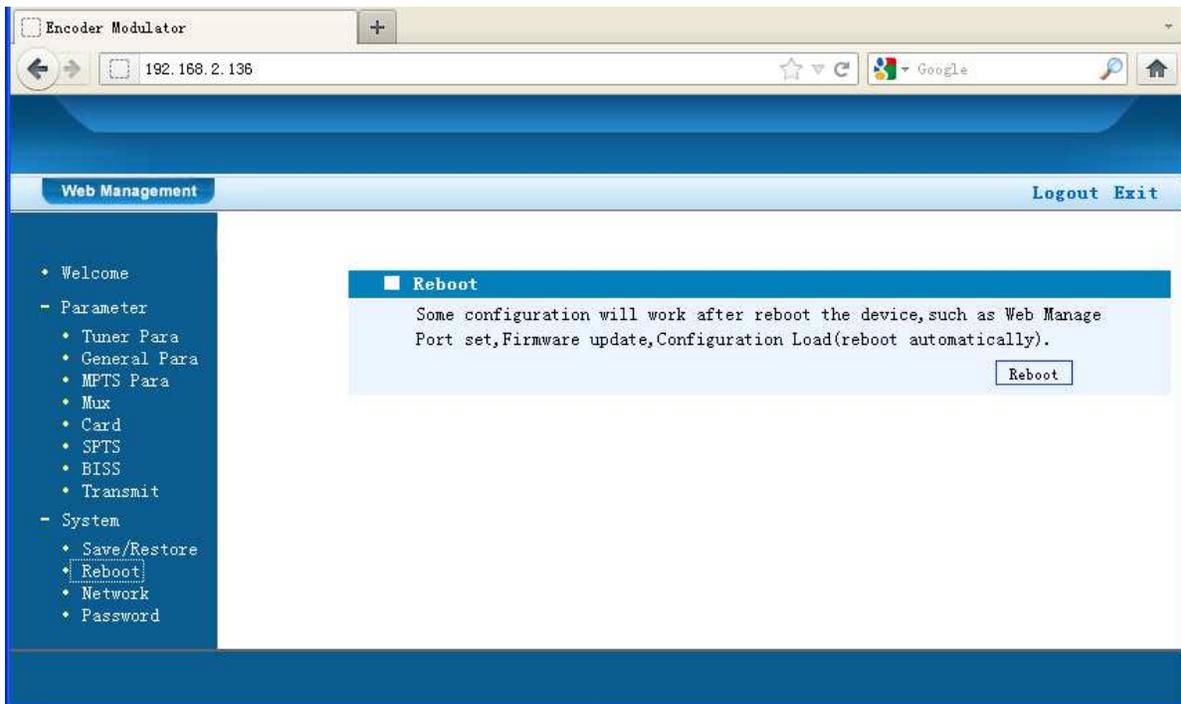
Click "Add" button to trigger out a dialog box (shown below) where to add PID which need pass out.



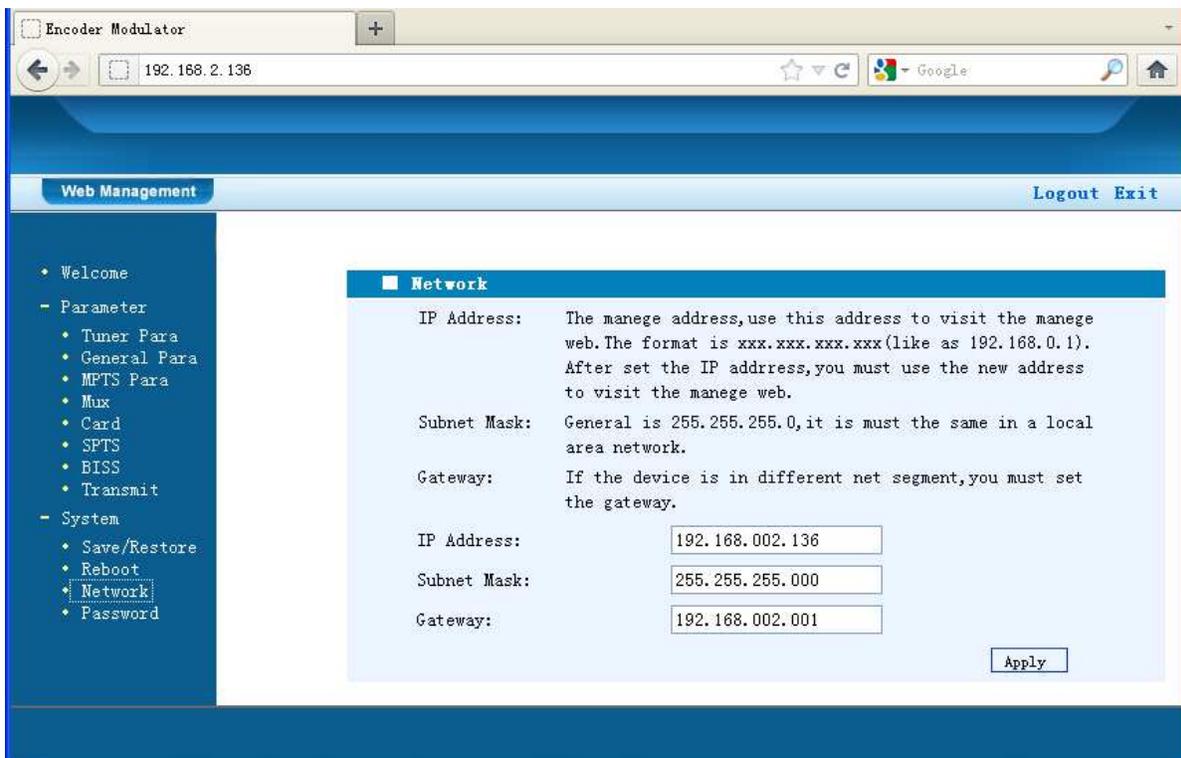
Save/Restore



Reboot Device



Network Setting



Password Setting

The screenshot shows a web browser window titled "Encoder Modulator" with the address bar displaying "192.168.2.136". The browser's search bar contains "Google". The web interface has a blue header with "Web Management" on the left and "Logout Exit" on the right. A left-hand navigation menu lists several categories: "Welcome", "Parameter" (with sub-items: Tuner Para, General Para, MPTS Para, Mux, Card, SPTS, BISS, Transmit), "System" (with sub-items: Save/Restore, Reboot, Network, Password), and "Password" is currently selected. The main content area is titled "Password" and contains the following text: "Modify the login name and password to make the device safely. If forget the name or password, you can reset it by keyboard in menu 5.5. The default login name and password is 'admin'. Also please note the capital character and lowercase character." Below this text are four input fields: "Current UserName:" (containing "admin"), "Current Password:", "New UserName:", and "New Password:". A "Confirm New Password:" label is positioned to the left of a fifth input field. An "Apply" button is located to the right of the "Confirm New Password" field.

Chapter 6 Troubleshooting

The Thor quality assurance system has been approved by multiple globally recognized CQC organizations. To guarantee the products' quality, reliability and stability, all Thor products have passed multiple testing and inspection check points before shipping out. Unlike large volume vendors, Thor fully inspects and tests every single unit shipped for a minimum 24hr prior to shipping unless otherwise instructed by the client. Please follow this guide, and If the product still is not functioning to your satisfaction, 24hr assistance can be reached at 650-479-5485.

Prevention Measures

- Please ensure the environment temperature remains between 0 to 45 °C
- Make sure there is good ventilation for the heat-sink on the rear panel and other heat-sink bores if necessary
- Check the input AC voltage within the power supply so it is in working range and the connection is correct before switching on the device
- Check the RF output level varies within tolerant range if it is necessary
- Check 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 damage
- Any liquid in device.
- Any stuff that causes a circuit short
- Device in damp environment
- Device suffered from physical damage
- Longtime idle
- After switching on and restoring to factory setting, device still cannot work properly.
- Maintenance needed

Chapter 7 Packing List

- H-HD-IRD-V3-8VSB 1pcs
- User's Manual 1pcs
- ASI Cable 1pcs
- CVBS Cable 1pcs
- HDMI Cable 1pcs
- SDI Cable 1pcs
- YPbPr Cable 1pcs
- Power Cord 1pcs