

# EN-264


## DVB MPEG-4 HDTV ENCODER & TRANSCODER





## **SAFETY NOTES**

*Read the user's manual before using the equipment, mainly " SAFETY RULES " paragraph.*

The symbol  on the equipment means "SEE INSTRUCTION MANUAL". In this manual may also appear as a Caution or Warning symbol.

*Boxes of WARNING AND CAUTION may appear in this manual to avoid hazard or damage to people, to this product or other properties.*



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# *DVB MPEG-4 HDTV ENCODER & TRANSCODER EN-264*



## 1 GENERAL

### 1.1 Description

**EN-264** is a HD Encoder & Transcoder which fully complies with H.264 standard. Integrated with the TSolP board, the accepts **TS** over **IP** or **ASI** input for transcoding, or alternatively accepts HD-SDI, HDMI or YPbPr input for encoding, the final output is available in IP or ASI format. With extraordinary picture quality and significant bandwidth liberation, **EN-264** is the best choice for higher performance encoding and migration from MPEG-2 to H.264.

Functions	EN-264
HD SDI Input	✓
HDMI Input	✓
Y/Pb/Pr Input	✓
CVBS Input	✓
Audio 1 Input	✓
Audio 2 Input	✓
ASI Input	✓
ASI Output (x2)	✓
10/100M TS Over IP (6 Multicasts)	✓
Remote Control	✓
RS-232	✓

## 1.2 Features

- Conforms to **H.264** High Profile 4.0 and Main Profile 4.0.
- **TS to TS** Transcoding **MPEG-2 HD** to **H.264 HD/SD**, or **MPEG-2 SD** to **H.264 SD**.
- Supports **TS** multiplexing, which can re-multiplex encoded programs and **ASI** input programs into one **TS** stream.
- Supports full **full HD** 1080i.
- Multiple inputs **HDMI**, **HD-SDI**, **YPbPr** and **CVBS** for encoding.
- Support **VBR** and **CBR** encoding mode.
- Support Remux, can edit PSI/SI table information.
- 10M/100M Base-T TS over IP output.
- Auto-save when power off.

## 1.3 Especifications

### Video input and compression

Input interface	HD/SD-SDI/HDMI/YPbPr, CVBS video interface.
Compression format	AVC (H.264) encoding.
Compression bit rate	2~20 Mbps.

### Audio input and compression

Compression format	MPEG1 Layer2.
Signal sampling rate	48 KHz.
Compression rate	32~256 Kbps, 64~448 Kbps/AC3.
Input type	Analog balance or unbalance audio interface digital audio HD/SD-SDI HDMI.

### DVB-ASI serial data input

Interface type	75 $\Omega$ , BNC interface.
Data mode	Byte mode
Packet length	188/204 Bytes
Signal level	800 $\pm$ 80 mV.

### DVB-ASI serial data output

Interface type	75 $\Omega$ , BNC interface.
Data mode	Byte mode.
Packet length	188 Bytes.
Signal level	800 $\pm$ 80 mV.
Bit rate	1.5~67 Mbps(adjustable).



**TS over IP output**

100Base-T	RJ-45.
Maximum output bit rate	70 Mbits/s.
Transport protocols	UDP/RTP, Multicast or Unicast.
Multicast control protocol	IGMPV2.

**ALIMENTATION**

Power supply	90~250V-50/60Hz.
Consumption	19 W.

**OPERATING ENVIRONMENTAL CONDITIONS**

Altitude	Up to 2000 m.
Temperature range	From 0 to 45 °C.
Max. relative humidity	80 % (up to 31°C), decreasing lineally up to 50% at 40 °C.

**MECHANICAL FEATURES**

Weight	3 Kg.
Dimensions	44 mm (W) × 240 mm (H) × 430 mm.

**INCLUDED ACCESSORIES**

- 1 x Coaxial cable.
- 1 x Power cable CA-05.
- 4 x RCA-BNC adapters.
- 2 x RCA-Audio adapters.
- 1 x DB9-Audio adapters (Left and right).
- 2 x Rack Handles.
- 1 x Certificate of Guarantee.

**RECOMMENDATIONS ABOUT THE PACKING**

It is recommended to keep all the packing material in order to return the equipment, if necessary, to the Technical Service.



## 2 SAFETY RULES

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



### 2.1 General safety rules

- \* The safety could not be assured if the instructions for use are not closely followed.
- \* Use this equipment connected **only to systems with their negative of measurement connected to ground potential.**
- \* The equipment is a **Class I** equipment, for safety reasons plug it to a supply line with the corresponding **ground terminal.**
- \* This equipment can be used in installations with **Overvoltage Category I** and environments **Pollution Degree 2.**
- \* When using some of the following accessories **use only the specified ones** to ensure safety:

Power cord.

- \* Observe all **specified ratings** both of supply and measurement.
- \* Remember that voltages higher than **70 V DC** or **33 V AC rms** are dangerous.
- \* Use this instrument under the **specified environmental conditions.**
- \* The user is only allowed to:
  - Change fuses. They must be of the type and value specified.
  - At the maintenance paragraph, specific instructions are provided for these interventions.
  - Any other change in the equipment must be exclusively carried out by specialized technician staff.
- \* Negative of the signal is at ground potential.
- \* Do not obstruct the ventilation system of the equipment.
- \* Use for the signal inputs/outputs, specially when working with high levels, appropriate low radiation cables.
- \* Follow the **cleaning instructions** described in the Maintenance paragraph.

- \* Symbols related with safety:

	DIRECT CURRENT		ON (Supply)
	ALTERNATING CURRENT		OFF (Supply)
	DIRECT AND ALTERNATING		DOUBLE INSULATION (Class II protection)
	GROUND TERMINAL		CAUTION (Risk of electric shock)
	PROTECTIVE CONDUCTOR		CAUTION REFER TO MANUAL
	FRAME TERMINAL		FUSE
	EQUIPOTENTIALITY		EQUIPMENT OR COMPONENT TO BE RECYCLED

## 2.2 Descriptive Examples of Over-Voltage Categories

**Cat I** Low voltage installations isolated from the mains.

**Cat II** Portable domestic installations.

**Cat III** Fixed domestic installations.

**Cat IV** Industrial installations.

## 3 INSTALLATION

### 3.1 Front panel and rear panel instructions

#### Front panel

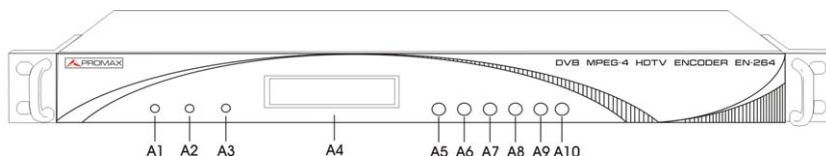


Figure 1.-

<b>A1</b>	<b>POWER</b>	Power indicator, green light means power supply is good.
<b>A2</b>	<b>ASI IN</b>	<b>ASI</b> input signal indicator, green light means <b>ASI</b> signal input is good, when the light is off means there is no <b>ASI</b> signal input.  <b>Note:</b> When IP is set to IP IN mode, this light displays IP IN status.
<b>A3</b>	<b>ENCODER</b>	Encoding signal indicator, green light means encoding is good, when the light is off means there is no encoding going on.
<b>A4</b>	<b>LCD</b>	2 x 20 LCD display.
<b>A5 - A10</b>	<b>BUTTONS</b>	<p><b>▲, ▼</b> Used to navigate within a single menu level, select functions, and change values.</p> <p><b>◀, ▶</b> Used to move the cursor.</p> <p><b>ENTER</b> Used to enter lower menu or to confirm the choices.</p> <p><b>EXIT</b> Used to pass to an upper menu level or to cancel the choices.</p>

### Rear panel

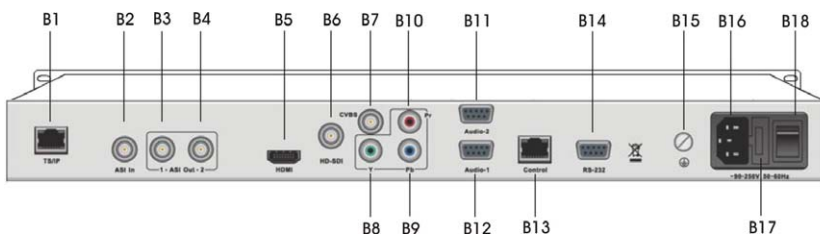
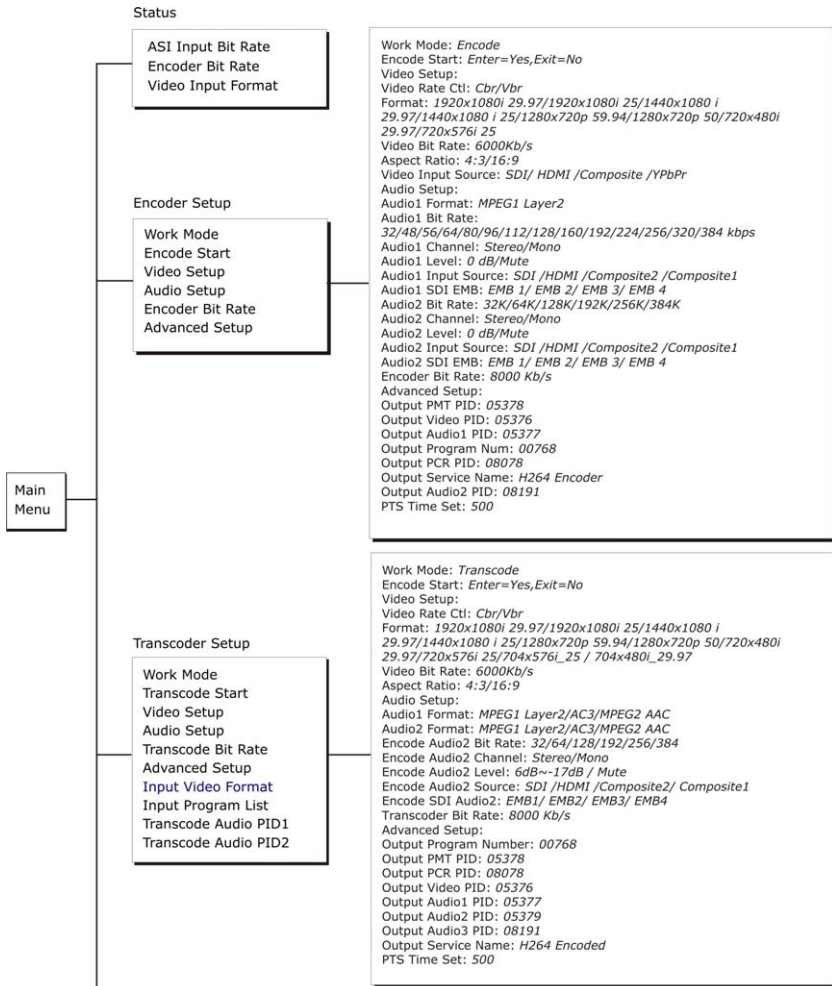


Figure 2.-

<b>B1</b>	TS/IP	TS over IP output.
<b>B2</b>	ASI IN	ASI input interface.
<b>B3-B4</b>	ASI OUT	ASI output interface B3 and B4 have same contents.
<b>B5</b>	HDMI	HDMI input interface.
<b>B6</b>	HD/SD SDI IN	HD/SD SDI input interface.
<b>B7</b>	CVBS	Composite video input interface.
<b>B8,B9,B10</b>	Y,Pb,Pr	Analog component input interface.
<b>B11</b>	AUDIO2 IN	Audio input interface AUDIO2.
<b>B12</b>	AUDIO1 IN	Audio input interface AUDIO1.
<b>B13</b>	Control	Network management interface, for remote control.
<b>B14</b>	RS-232	Serial printer.
<b>B15</b>	GND	Grounding.
<b>B16</b>	Fusible	Fuse power supply.
<b>B17</b>	Alimentation	AC 90~250V input.
<b>B18</b>	I/O	On / Off switch.

## 4 MENU STRUCTURE AND OPERATION INSTRUCTIONS.



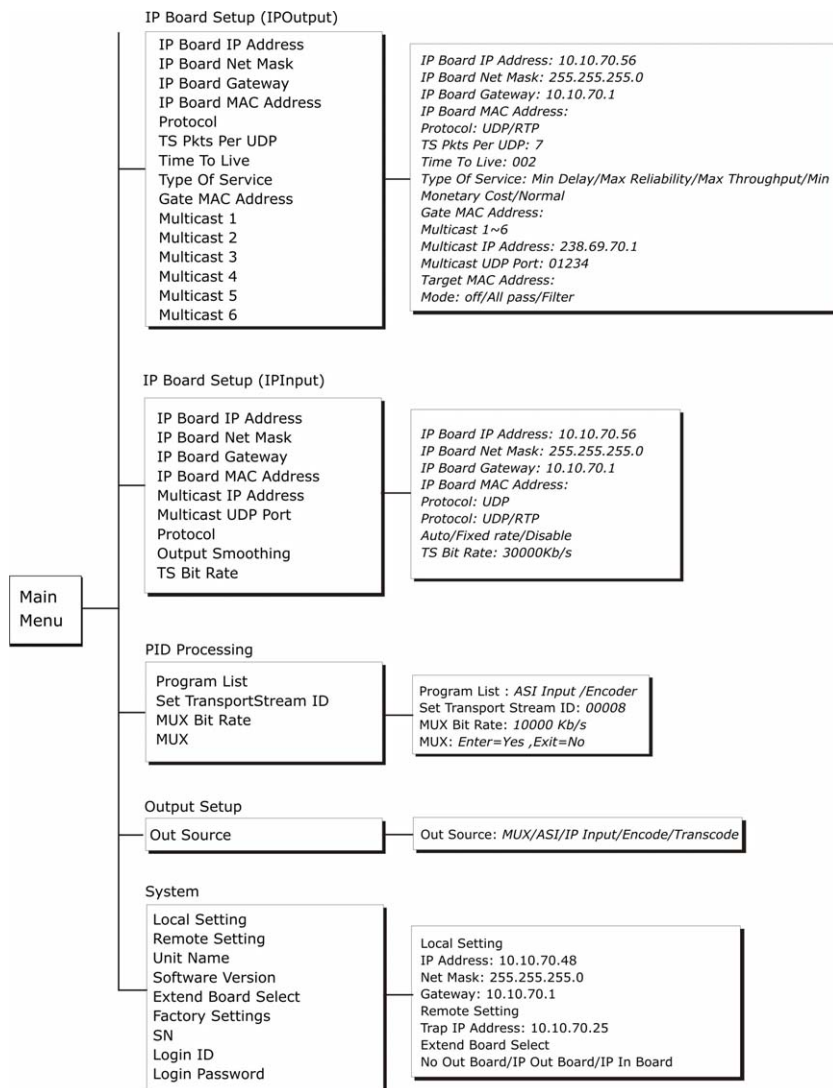


Figure 3.-



## 4.1 Menu operating instructions

2 row x 20 symbol LCD displays below information after being turned on.

First row displays the name of the product; second row displays local IP address. Press **ENTER** to get in the main menu:

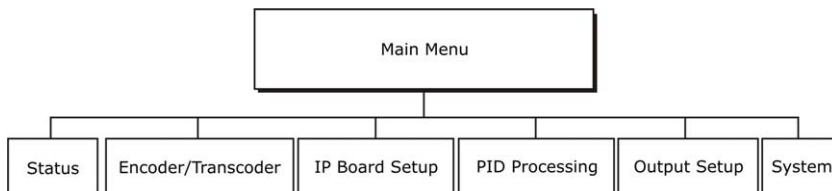


Figure 4.-

### 4.1.1 Status menu

Includes three options, displays input interface parameters. Menu format as shown below:

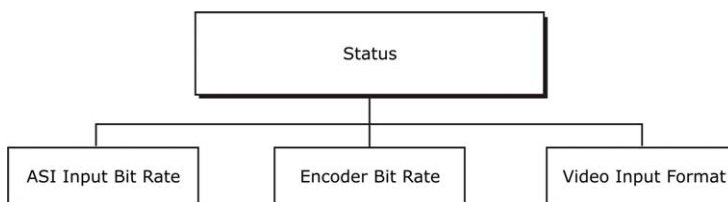


Figure 5.-

#### ASI Input Bit Rate menu

Displays the TS total bit rate and effective bit rate of the ASI input.

**Note:** When IP is set to input mode, here displays TS total bit rate and effective bit rate of the IP input.

#### Encoder Bit Rate menu

Displays the TS total bit rate and effective bit rate encoder output.

#### Video Input Format Menu

Displays the input video format (but can not confirm all video format).

## 4.1.2 Encoder Setup menu

It includes 6 options which configure the encoder parameters. Menu format is shown as below:

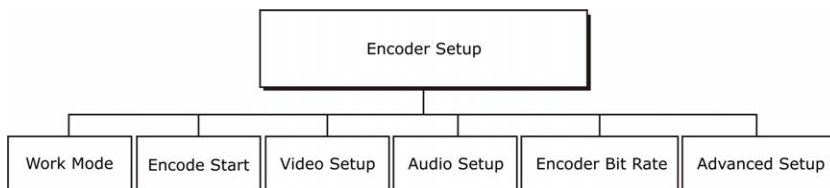


Figure 6.-

### Work Mode Menu

It includes encode and transcode mode options.

If you want to encode programs, please set it as *Encode* mode.

If want to transcode programs, set it as *Transcode* mode. The menu will be changed basing on different modes.

### Encoder Start Menu

Encode Start: press the button **ENTER** to enter, press **ENTER** to apply parameters for encoding, press **EXIT** to continue modify the encoding parameters.

**Note:** After setting all parameters please press **ENTER** to save all parameters and start work.

### Video Setup Menu

It includes *Video Rate Ctl*, *Format*, *Video Bit Rate*, *Aspect Ratio* and *Video Input Source*.

#### *Video Rate Ctl:*

Enter the menu to select **CBR** or **VBR**, press **ENTER** to confirm the setting.

#### *Format:*

Enter the menu to select the input video format, here are the options:

1920x1080i 29.97, 1920x1080i 25,  
1440x1080i 29.97, 1440x1080i 25,  
1280x720p 59.94, 1280x720p 50,  
720x480i 29.97, 720x576i 25

Then press **ENTER** to confirm the setting.

**Note:** Please make sure the video source resolution you select is the same as the actual imported video source resolution.

**Video Bit Rate:** Enter the menu to set the bitrate of the encoded video, then press **ENTER** to confirm the setting.

**Aspect Ratio:** Enter the menu to set the video proportion 4:3 or 16:9.  
Press **ENTER** to confirm the setting.

**Video Input Source:** Enter the menu to select the source of video input, you can select the video from:

**SDI Video; HDMI Video; Composite Video** (only support Standard Definition); **YPbPr Video** (only support High Definition).

Press **ENTER** to confirm the setting.

#### **Audio Setup Menu**

It includes *Audio1 Format, Audio1 Bit Rate, Audio1 Channel, Audio1 Level, Audio1 Input Source, Audio1 SDI EMB, Audio2 Format, Audio2 Bit Rate, Audio2 Channel, Audio2 Level, Audio2 Input Source, Audio2 SDI EMB.*

**Audio1 Format:** Enter the menu to select the audio format:

**MPEG1 Layer2.**

Press **ENTER** to confirm the setting.

**Audio1 Bit Rate:** Enter the menu to set the audio bitrate, you can select from the following options:

**32kbps; 48kbps; 56kbps; 64kbps; 80kbps; 96kbps; 112kbps; 128kbps; 160kbps; 192kbps; 224kbps; 256kbps; 320kbps; 384kbps.**

Press **ENTER** to confirm the setting.

**Audio1 Channel:** Enter the menu to set the audio channel, you can select Stereo / Mono.

Press **ENTER** to confirm the setting.

**Audio1 Level:** Enter the menu to set the volume of output voice.

Press **ENTER** to confirm the setting.

Regulating range of volume: +6 dB ~ -17 dB.

**Audio1 Input Source:** Enter the menu to select the source of audio, you can select from the following options:

**SDI; HDMI; Composite2; Composite1.**

Press **ENTER** to confirm the setting.

- Audio1 SDI EMS:** Enter the menu to select:  
**EMS1; EMS2; EMS3; EMS4.**  
Press **ENTER** to confirm the setting.  
**Note:** this option is active only the audio1 Input Source is SDI audio.
- Audio2 Format:** Enter the menu to select the audio format:  
**MPEG1 Layer2.**  
Press **ENTER** to confirm the setting.
- Audio2 Bit Rate:** Enter the menu to set the audio bitrate, you can select from the following options:  
**32kbps; 48kbps; 56kbps; 64kbps; 80kbps; 96kbps; 112kbps; 128kbps; 160kbps; 192kbps; 224kbps; 256kbps; 320kbps; 384kbps.**  
Press **ENTER** to confirm the setting.
- Audio2 Channel:** Enter the menu to set the audio channel, you can select Stereo / Mono.  
Press **ENTER** to confirm the setting.
- Audio2 Level:** Enter the menu to set the volume of output voice.  
Press **ENTER** to confirm the setting.  
Regulating range of volume: +6 dB ~ -17 dB.
- Audio2 Input Source:** Enter the menu to select the source of audio, you can select from the following options:  
**SDI; HDMI; Composite2; Composite1.**  
Press **ENTER** to confirm the setting.
- Audio2 SDI EMS:** Enter the menu to select:  
**EMS1; EMS2; EMS3; EMS4.**  
Press **ENTER** to confirm the setting.  
**Note:** this option is active only the audio2 Input Source is SDI audio.

### Encoder Bit Rate Menu

***TS Bit Rate:***

Enter the menu to set the TS Bit Rate.

Press **ENTER** to confirm the setting.

Please be noted that the value of the TS Bit Rate should be larger than the sum of video bitrate and audio bitrate.

### Advanced Setup Menu

Includes *Output PMT PID, Output Video PID, Output Audio1 PID, Output Program Num, Output PCR PID, Output Service Name, Output Audio2 PID* and *PTS Time Set*.

***Output PMT PID:***

Enter the menu to set the output **PMT PID**.

Press **ENTER** to confirm the setting.

**Note:** PID must be less than 8191 more than 31 and each PID are difference.

***Output Video PID:***

Enter the menu to set the output **Video PID**.

Press **ENTER** to confirm the setting.

**Note:** PID must be less than 8191 more than 31 and each PID are difference.

***Output Audio1 PID:***

Enter the menu to set the output **Audio1 PID**.

Press **ENTER** to confirm the setting.

**Note:** PID must be less than 8191 more than 31 and each PID are difference.

***Output Program Num:*** Enter the menu to set the output **Program Num**.

Press **ENTER** to confirm the setting.

***Output PCR PID:***

Enter the menu to set the output **PCR PID**.

Press **ENTER** to confirm the setting.

**Note:** PID must be less than 8191 more than 31 and each PID are difference.

***Output Service Name:*** Enter the menu to set the output Service Name.

Press **ENTER** to confirm the setting.

**Output Audio2 PID:** Enter the menu to set the output **Audio2 PID**.

Press **ENTER** to confirm the setting.

The default is 8191, when set Audio2, please change the PID as required.

**Note:** PID must be less than 8191 more than 31 and each PID are difference.

**PTS Time Set:** Enter the menu to set the audio and video synchronization.

Press **ENTER** to confirm the setting.

### 4.1.3 Transcoder Setup Menu

It includes 10 options which configure the encoder parameters. Menu format is shown as below:

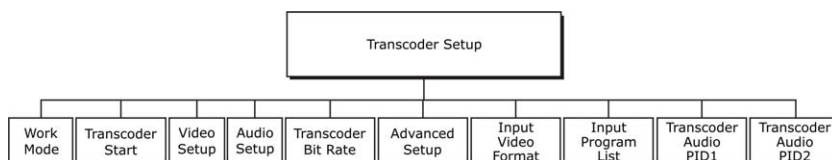


Figure 7.-

#### Work Mode Menu

It includes encode and transcode mode options.

If you want to encode programs, please set it as Encode mode.

If want to transcode programs, set it as Transcode mode.

The menu will be changed basing on different modes.

#### Transcoder Start Menu

**Transcoder Start:** Enter the menu to apply the parameters.

Press **EXIT** to continue modify the parameters.

**Note:** Please save all setting parameters for transcoding, press **ENTER** to work.

## Video Setup Menu

It includes: *Video Rate Ctl*, *Format*, *Video Bit Rate*, *Aspect Ratio* you can control *Video bitrate*, *mode selection* and *Video bitrate setting*.

### *Video Rate Ctl:*

Enter the menu to select **CBR** or **VBR**.

Press **ENTER** to confirm the setting.

### *Format:*

Enter the menu to select the input video format, here are the options:

**1920x1080i 29.97; 1920x1080i\_25; 1440x1080i\_29.97;  
1440x1080i 25; 1280x720p 59.94, 1280x720p 50;  
720x480i 29.97; 720x576i 25; 704x480i 29.97;  
704x576i 25.**

Then press **ENTER** to confirm the setting.

### *Video Bit Rate:*

Enter the menu to set the bitrate of the output video.

Then press **ENTER** to confirm the setting.

### *Aspect Ratio:*

Enter the menu to set the video proportion: 4:3 or 16:9.

Then press **ENTER** to confirm the setting.

## Audio Setup Menu

It includes *Audio1 Format*, *Audio2 Format*, *Encode Audio2 BitRate*, *Encode Audio2 channel*, *Encode Audio2 Level*, *Encode Audio2 Source*, *Encode SDI Audio2*.

### *Audio1 Format:*

Enter the menu to select the audio format:

**MPEG1 Layer2, AC3, MPEG2 AAC.**

Press **ENTER** to confirm the setting.

### *Audio2 Format:*

Enter the menu to select the audio format:

**MPEG1 Layer2, AC3, MPEG2 AAC.**

Press **ENTER** to confirm the setting.

### *Encode Audio2 BitRate:*

Enter the menu to select audio bitrate 32k, 64k, 128k, 192k, 256k, 384k.

Press **ENTER** to confirm the setting.

### *Encode Audio2 Channel:*

Enter the menu to select Stereo/Mono.

Press **ENTER** to confirm the setting.

**Encode Audio2 Level:** Enter the menu to set the volume of audio.

Press **ENTER** to confirm the setting.

Regulating range of volume: +6 dB ~ -17 dB or mute.

**Encode Audio2 Source:**

Enter the menu to set the audio source , you can select SDI, HDMI, Composite2, Composite1.

Press **ENTER** to confirm the setting.

**Encode SDI Audio2:** Enter the menu to select EMS1, EMS2, EMS3, EMS4.

Press **ENTER** to confirm the setting.

**Note:** This option is active only the audio2 Input Source is SDI audio.

**Transcode Bit Rate Menu:** Enter the menu to set the TS Bit Rate.

Press **ENTER** to confirm the setting.

Please be noted that the value of the TS Bit Rate should be larger than the sum of video bitrate and audio bitrate.

## Advanced Setup Menu

**Output PMT PID:** Enter the menu to set the output **PMT PID**.

Press **ENTER** to confirm the setting.

**Note:** PID must be less than 8191 more than 31 and each PID are different.

**Output Video PID:** Enter the menu to set the output **Video PID**.

Press **ENTER** to confirm the setting.

**Note:** PID must be less than 8191 more than 31 and each PID are different.

**Output Audio1 PID:** Enter the menu to set the output **Audio1 PID**.

Press **ENTER** to confirm the setting.

**Note:** PID must be less than 8191 more than 31 and each PID are different.

**Output Program Num:** Enter the menu to set the **Program Number**.

Press **ENTER** to confirm the setting.



- Output PCR PID:*** Enter the menu to set the output **PCR PID**.  
Press **ENTER** to confirm the setting.  
**Note:** PID must be less than 8191 more than 31 and each PID are different.
- Output Service Name:*** Enter the menu to set the output **Service Name**.  
Press **ENTER** to confirm the setting.
- Output Audio2 PID:*** Enter the menu to set the output **Audio2 PID**.  
Press **ENTER** to confirm the setting.  
**Note:** PID must be less than 8191 more than 31 and each PID are different.
- Output Audio3 PID:*** Enter the menu to set the output **Audio3 PID**.  
Press **ENTER** to confirm the setting.  
**Note:** PID must be less than 8191 more than 31 and each PID are different.
- PTS Time Set:*** Enter the menu to set the audio and video synchronization.  
Press **ENTER** to confirm the setting.  
**Note:** range from 0 ~ 800.
- Input Video Format Menu** Enter the menu to select the input video format, here are the options:  
**1920x1080i 29.97; 1920x1080i\_25; 1440x1080i\_29.97; 1440x1080i 25; 1280x720p 59.94, 1280x720p 50; 720x480i 29.97; 720x576i 25; 704x480i 29.97.**  
Press **ENTER** to confirm the setting.
- Input Program List Menu** Enter the Input ASI menu to look up the input program need to be transcoded, the chosen program will shown with a "★", press **EXIT** to quit.  
**Note:** When IP board is set to **IP IN** mode, here shows the program list of IP input.

### Transcoder Audio PID1 Menu

Enter the menu to set the transcoding **Audio1 PID**.

Press **ENTER** to confirm the setting.

**Note:** PID must be less than 8191 more than 31 and each PID are different.

**Note:** When choosing program to be transcoded in the Input Program List, here shows the corresponding **Audio PID**. When the program to be transcoded has several **Audio PID**, you can set **Audio PID** you want in this menu.

### Transcoder Audio PID2 menu

Enter the menu to set the transcoding **Audio2 PID**.

Press **ENTER** to confirm the setting.

## 4.1.4 IP Board Setup Menu

It includes 15 options which configure the encoder parameters. Menu format is shown as below:

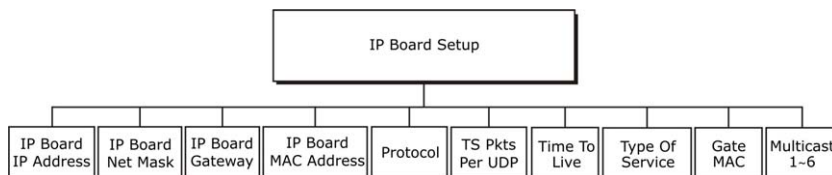


Figure 8.-

**IP Board IP Address Menu** TS/IP output interface **IP Address**. Enter the menu to set the **IP Address**.

Press **ENTER** to confirm the setting.

**IP Board Net Mask Menu** TS/IP output interface **Net Mask**. Enter the menu to set the **Net Mask**.

Press **ENTER** to confirm the setting.

**IP Board Gateway Menu** TS/IP output interface **Gateway**. Enter the menu to set the **Gateway**.

Press **ENTER** to confirm the setting.

<b>IP Board MAC Address Menu</b>	Enter the menu to examine the <b>IP Board MAC Address</b> .
<b>Protocol Menu</b>	Enter the menu to choose from <b>UDP</b> or <b>RTP</b> protocol. Press <b>ENTER</b> to confirm the setting.
<b>TS Pkts Per UDP Menu</b>	Enter the menu to set the number of <b>TS</b> packets per <b>UDP</b> , the number can be chosen from 1~7. Press <b>ENTER</b> to confirm the setting.
<b>Time To Live Menu</b>	Enter the menu to set the <b>Time To Live</b> . Press <b>ENTER</b> to confirm the setting.
<b>Type Of Service Menu</b>	Enter the menu to set the Type Of Service, here are the options: <i>Min Delay, Max Reliability, Max Throughput, Min Monetary, Normal</i> . Press <b>ENTER</b> to confirm the setting.
<b>Gate MAC Address Menu</b>	Enter the menu to set the <b>Gate MAC Address</b> . Press <b>ENTER</b> to confirm the setting.
<b>Multicast1 Menu</b>	It includes <i>Multicast IP Address, Multicast UDP Port, Target MAC Address, Mode and Program List options</i> .
<b>Multicast IP Address:</b>	Enter the menu to set the <b>address range</b> from 224.0.0.0 to 239.255.255.255. Press <b>ENTER</b> to confirm the setting.
<b>Multicast UDP Port:</b>	Enter the menu to set the <b>Multicast UDP Port</b> . Press <b>ENTER</b> to confirm the setting.
<b>Target MAC Address:</b>	Enter the menu to set the <b>Target MAC Address</b> . Press <b>ENTER</b> to confirm the setting.
<b>Mode:</b>	Enter the menu to set the mode, here are the options: <i>Filter; Off; All Pass</i> . Press <b>ENTER</b> to confirm the setting.
<b>Program List:</b>	Enter the Program List menu to look up the output program, press <b>ENTER</b> to choose or cancel, the chosen program will shown with a <b>"★"</b> , press <b>EXIT</b> to quit.

**Note:** This only works when Mode is set to Filter.

Multicast 2~6 menu is as same as Multicast1 menu.

### 4.1.5 IP Board Setup Menu

It includes 9 options which configure the encoder parameters. Menu format is shown as below:

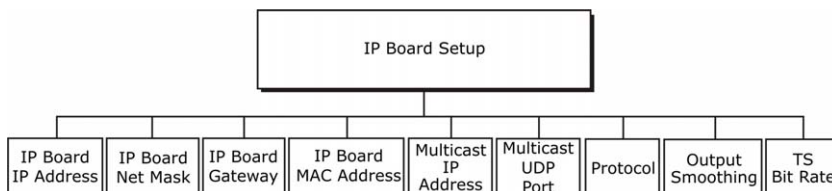


Figure 9.-

#### IP Board IP Address Menu

Enter the menu to set the **TS/IP interface IP Address**.  
Press **ENTER** to confirm the setting.

#### IP Board Net Mask Menu

Enter the menu to set the **TS/IP interface Net Mask**.  
Press **ENTER** to confirm the setting.

#### IP Board Gateway Menu

Enter the menu to set the **TS/IP interface Gateway**.  
Press **ENTER** to confirm the setting.

#### IP Board MAC Address Menu

Enter the menu to examine the **IP Board MAC Address**.

#### Multicast IP Address Menu

Enter the menu to set the **Multicast IP Address** ranging from 224.0.0.0 ~ 239.255.255.255.  
Press **ENTER** to confirm the setting.

#### Multicast UDP Port Menu

Enter the menu to set the **Multicast UDP Port**.  
Press **ENTER** to confirm the setting.

#### Protocol Menu

Enter the menu to choose from **UDP** or **RTP** protocol.  
Press **ENTER** to confirm the setting.

#### Output Smoothing Menu

Enter the menu to choose from:  
**Auto; Fixed Rate; Disable**.  
Press **ENTER** to confirm the setting.

#### TS Bit Rate Menu

Enter the menu to set the **TS Bit Rate**.  
Press **ENTER** to confirm the setting.

#### 4.1.6 PID Processing Menu

It includes 4 options, menu format is shown as below:

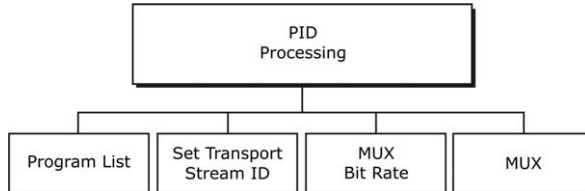


Figure 10.-

##### Program List Menu

It includes *ASI Input* and *Encoder* options.

##### *ASI Input:*

Enter the *ASI Input* menu to look up the input program, the chosen program will shown with a "★", press **EXIT** to quit.

**Note:** When IP board is set to IP IN mode, it will show the program list of IP input here.

##### *Encoder:*

Encode program list, remux the encode programs and ASI IN programs. Enter the menu to choose or cancel the program using the **ENTER** button, the chosen program will shown with a "★" , press **EXIT** to quit.

##### Set Transport Stream ID Menu

Enter the menu to set the **Transport Stream ID**.

Press **ENTER** to confirm the setting.

##### MUX Bit Rate Menu

Enter the menu to set the total TS output bitrate after multiplexing.

Press **ENTER** to confirm the setting.

##### MUX Menu

Press **ENTER** to to confirm the **MUX** output, press **EXIT** to quit the modification.

### 4.1.7 Output Setup Menu

It includes 1 option, menu format is shown as below:

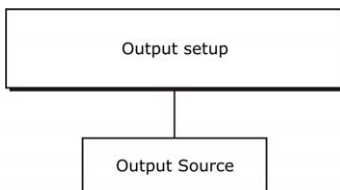


Figure 11.-

#### Out Source Menu

Enter the menu to choose output mode, you can select *Encode/Transcode*, *MUX*, *ASI/IP*.

Press **ENTER** to confirm the setting.

### 4.1.8 System Menu

It includes 9 options which configure the encoder parameters. Menu format is shown as below:

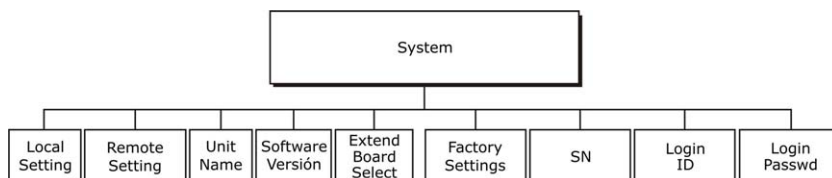


Figure 12.-

#### Local Setting Menu

It includes: *IP Address*, *Net Mask*, *Gateway* and *MAC Address*.

##### *IP Address:*

Enter the menu to set **IP Address**.

Press **ENTER** to confirm the setting.

##### *Net Mask:*

Enter the menu to set **Net Mask**.

Press **ENTER** to confirm the setting.

##### *Gateway:*

Enter the menu to set **Gateway**.

Press **ENTER** to confirm the setting.

<b>MAC Address:</b>	Enter the menu to set <b>MAC Address</b> . Press <b>ENTER</b> to confirm the setting.
<b>Remote Setting Menu</b>	Enter the menu to set the <b>Trap IP Address</b> . Press <b>ENTER</b> to confirm the setting.
<b>Unit Name Menu</b>	Enter the menu to set the <b>Unit Name</b> . Press <b>ENTER</b> to confirm the setting.
<b>Software Version Menu</b>	Enter the menu to examine the <b>Software Version</b> . Press <b>EXIT</b> to quit the menu.
<b>Extend Board Select Menu</b>	Enter the menu to set the IP board mode here are the options: <i>IP Out Board; IP IN Board; No Out Board</i> . Press <b>ENTER</b> to confirm the setting.
<b>Factory Settings Menu</b>	Show the Serial number.
<b>Login ID Menu</b>	User name of Web is <b>root</b> or you can modify as required.
<b>Login Password Menu</b>	Password is 12345 or you can modify as required.

## 4.2 Installation

- Fix the device in the standard 19" rack.
- Connect the power cable. Turn on the device and wait for 8 to 10 seconds, while the device will complete self inspection and configuration. The **POWER** Indicator **LED** will always light on during working. If not use the device, please pull out the **AC** plug. If you want to reboot device, please leave it for at least 5 seconds after shutting it down.





## 5 MAINTENANCE

### 5.1 Replacing the fuse

The fuse holder is located on the rear panel of the equipment.

**NOTE:** Disconnect the power cord before replacing the fuse.

Remove the fuse using a screwdriver. Replace the damaged fuse with a proper new one and put again the fuse holder in its place.

The fuse must be: 5 x 20 2A F 250V.

**FAILURE TO COMPLY THESE INSTRUCTIONS COULD DAMAGE THE EQUIPMENT.**

### 5.2 Cleaning Recommendations

#### **CAUTION**

*To clean the cover, take care the instrument is disconnected.*

#### **CAUTION**

*Do not use scented hydrocarbons or chlorized solvents. Such products may attack the plastics used in the construction of the cover.*

The cover should be cleaned by means of a light solution of detergent and water applied with a soft cloth.

Dry thoroughly before using the system again.

#### **CAUTION**

*Do not use for the cleaning of the front panel and particularly the viewfinders, alcohol or its derivatives, these products can attack the mechanical properties of the materials and diminish their useful time of life.*

