



User's Manual

Brighten Your Digital View!



EM101 Digital TV Encoder Modulator



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For your Safety

This User Manual is written for the users of the EM-101 series to assist in installation and operation. Please read this user manual carefully before installation and use.

Do not apply any power nor input/output cabling connection if this document is not fully read/understood or a visible damage is found on this device, including its accessories.

Do not remove the covers of this device.

Hazardous voltages are present within this equipment and may be exposed if the covers are removed. Only trained and approved service engineers are permitted to do service on this device.

The supplied AC/DC power adapter must be used to power the device. If the power adapter becomes damaged, it must be replaced.

No operator serviceable parts inside for the user.

For the correct and safe use of the device, it is essential that both operating and servicing personnel follow generally accepted safety procedures in addition to the safety precautions specified in this manual. Whenever it is likely that safety protection is impaired, the device must be made in-operative and secured against unintended operation. The appropriate servicing authority must be informed. For example, safety is likely to be impaired if the device fails to perform the intended measurements or shows visible damage.

Warnings & Recommendations

- Ambient temperature between 10C° to 30C°, relative humidity of 20% to 80% (non-condensed) are recommended.
- Avoid direct contact with water and direct sunlight.
- Keep free of dust and excessive vibration.
- The outside of the chassis may be cleaned using a lightly dampened cloth. Do not use any cleaning liquids containing alcohol, methylate nor ammonia etc.
- This product should be placed on a flat surface, leaving 3~5cm free space above it for cooling (ventilation & radiation in nature equilibrium).
- When in operation, the ambient temperature should not exceed the limit of 45C°.

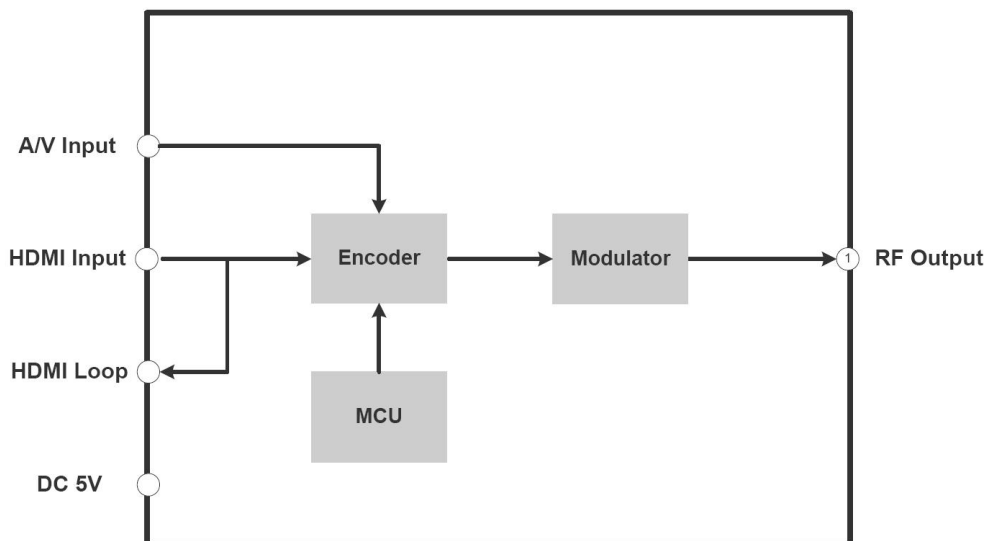
EM-101 Digital TV Standalone Encoder & Modulator

1. General Introduction

EM101x is an integrated base band TV signals to DVB-T/C digital RF TV signal conversion unit (Analog_to_Digital and RF output).

Analog AV or digital HDMI base band signal can be encoded, multiplexed and modulated onto one DVB-T/C RF carrier. The RF output signal could be easily mixed into the exist CATV or HFC network without disturbing the exist signals nor re-build the co-axial cabling network. Multiple STB' s (Set Top Box) or integrated TV' s can receive the clear & clean digitized TV signal simultaneously, and no professional reception equipment is needed. Transmission range over co-axial cable could be longer than 100m without degrade of signal quality. Suitable for private video distribution, community surveillance network, campus conference, factory on-site monitoring, hotel TV digitization, etc.

Block Diagram



2. Features

- Compliant with H.264/AVC BLP, MP, HP @ L4.0 or less, MPEG-2 MP@ML
- DVB-T or DVB-C RF output (factory options)
- HDMI & CVBS inputs
- HDMI Loop out (pass through)
- NTSC, PAL, SECAM & Video resolution auto detect
- NIT, SDT, LCN auto generation
- LCD display and Control with keyboard
- 30sec QuickSet menu for all parameters
- TS ID, PID, Service name & LCN collision prevention mechanism
- Support IR remote return (factory option)
- One service one device, low cost, easy to install, easy to maintain

Table 1

Standard configuration	EM101x			
	EM101-T	EM101-T+	EM101-C	EM101-C+
DVB-T RF output	●	●		
DVB-C RF output			*	*
CVBS input	●	●	●	●
HDMI input	●	●	●	●
HDMI loop output		●		●
LCD&Keyboard	●	●	●	●
H.264 HD/SD	●	●	●	●
MPEG2 SD	●	●	●	●
MPEG1 L2 Stereo	●	●	●	●
IR remote		*		*

* Note: under development, contact our sales/representatives for details.

3. Technical Specifications

Interface

- AV Input: CVBS, Audio_L/Audio_R
- Connector type: phone jack for AV
- HDMI: HDMI in*1 (SD or HD)(HDCP) and HDMI*1 Loop Out
- LCD display: 2*16 characters
- Keyboard: 6 keys
- Reset: push button
- RF monitor: F-type female, 75 Ω
- RF out: F-type female, 75 Ω
- DC Input: 5V/3A, < 15W

Video Compression

- Analog Input: Analog NTSC, PAL and SECAM
- Digital Input: HDMI 1.4 (support HDCP)
- Compression Standard: H.264/AVC BLP, MP, HP @ L4.0 or less, MPEG-2 MP@ML
- Video Resolution & Recommend Compression Bit Rate H.264
1080i(1920×1080)@25Hz,29.97Hz,30Hz: SMPTE274M: 1.5~11Mb/s
720p (1280×720) @25Hz,29.97Hz,30Hz: SMPTE296M: 1.5~11Mb/s
480i (720×480) @29.97Hz: SMPTE656M: 500K~6Mb/s
576i (720×576) @25Hz: SMPTE656M: 500K~6Mb/s
- Video Resolution & Recommend Compression Bit Rate MPEG-2
480i (720×480) @29.97Hz: SMPTE656M: 3.5~6Mb/s
576i (720×576) @25Hz: SMPTE656M: 3.5~6Mb/s
- Aspect Ratio: 4:3/16:9 auto detected
- Video Compression bit rate: 500K~13Mbps

Audio Compression:

- Audio Input Interfaces: HDMI or Analog
- Compression Standard: MPEG-1 Layer II
- Audio Sampling Rate: 48 KHz
- Audio Compression bit rate:
MPEG1 Layer II :32~192Kbps(mono), 64~384Kbps(stereo)

TS Processing

- PSI/SI: PAT, PMT, NIT, SDT and LCN auto generated

DVB-T Modulation (factory option)

- Constellation: QPSK/16QAM/64QAM
- Bandwidth: 6MHz, 7MHz, 8MHz
- FFT Mode: 2K, 8K
- Guard Interval: 1/4, 1/8, 1/16, 1/32
- Code Rate: 1/2, 2/3, 3/4, 5/6, 7/8
- MER: >38dB

RF Output

- Connector Type: 1×F type female, 75 Ω (primary output)
- Output Frequency Range: 100~860MHz agile, step by 10KHz
- Output Level: 83~100dB μV, step by 1dB
- Spurious Rejection: 50dBc (typ.)
- Output Return Loss: 10dB (typ.)

Control & Monitoring

- Monitoring: LCD
- Control : keyboard

Physical

- Dimension : 195mm×145mm×40mm
- Net weight : 0.5kg
- Power Supply: DC 12V/1.5A,
- Power Consumption: Maximum 8W
- Operating Temperature: 0~45°C
- Storage Temperature: -10~60°C
- Operating Humidity: 10~90%, non-condensed

Note: All specifications are subject to change without notice.

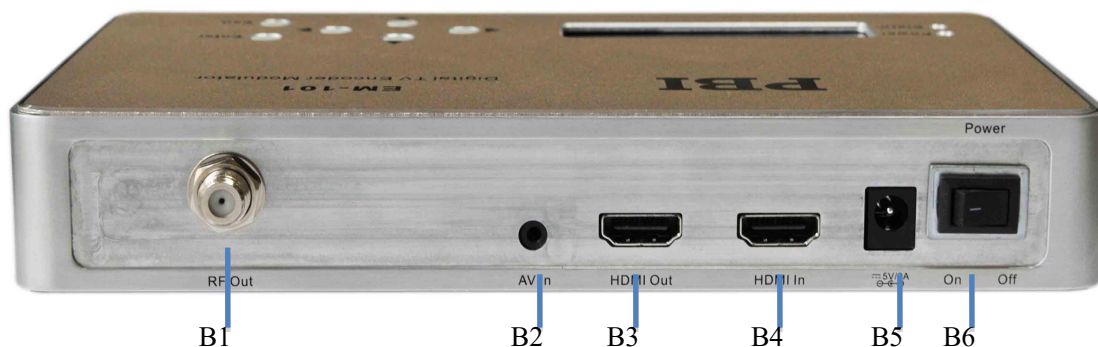
4. Description of Panels

4.1 Front Panel



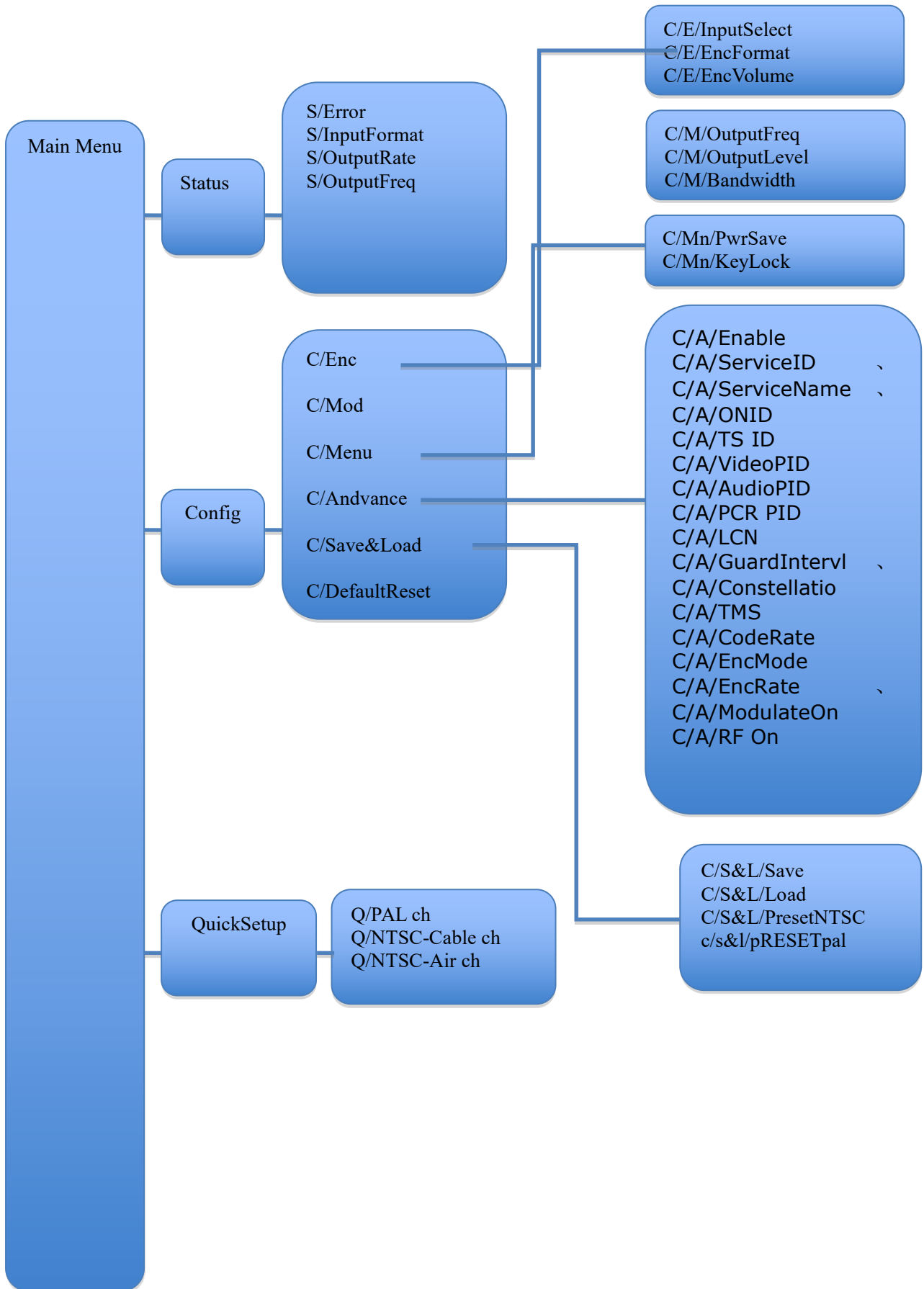
- POWER indicator for power on
- A2 ALARM indicator for Alarms, lighted when Alarm, warning or error occurred
- A3 LCD 2X16 character LCD Display
- A5-A10 keys they are [↑] [↓] [←] [→] [ENTER] & [EXIT]
 [↑] [↓] [←] [→] are used for menu navigation and parameters entry
 [ENTER] key is used for confirmation of operation, sub-menu entrance and settings entry
 [EXIT] key is used for exiting the current layer of menu or discarding the setting just entered

4.2 Rear Panel



- B1 RF OUT RF output
- B2 AV IN Analog A/V input
- B3 HDMI OUT HDMI Loop-out output
- B4 HDMI IN HDMI input
- B5 Power socket 12V/1.5A DC power input
- B6 Power Switch Power on or off

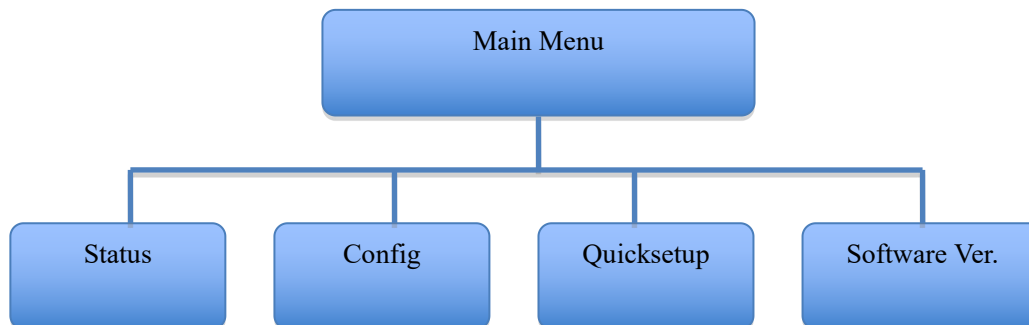
5. Menu Structure & operation





Software Ver

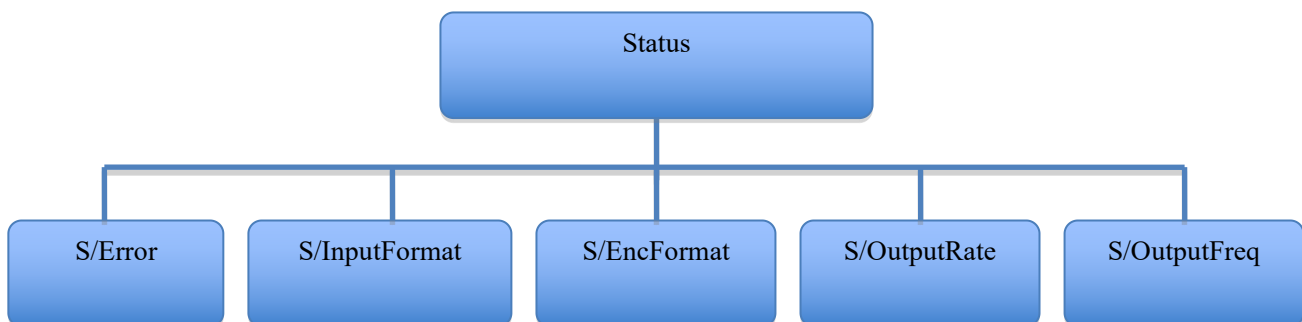
A 16x2 character LCD Display and 6 keys consist of the User Interface of Menu. When power on, string “**Please wait...**” will be shown on the LCD display on the top of the device. The initialization is taken place and no operation on the menu is accepted. After the initialization completed, The string “**MainMenu**”, the top layer menu, is shown on the LCD. Press [ENTER] key to enter next layer of menu or to confirm the current parameter, Using [↑] [↓] [←] [→] keys to navigate the menu and to enter or modify the parameters. Press [EXIT] to go back to the previous menu or to discard the setting just entered. Whenever the settings are more than one item, different sub-menus will be provided for easy operation, just press [ENTER] to access them.



There are four first-layer sub-menus, the structure of the top and the first-layer menu is shown below, Press [ENTER] to get into the next layer menu.

5.1 Status

There are five first-layer sub-menus under Status menu, they are listed below. All are prefixed with **S/** stands for Status, their parental menu.



5.1.1 S/Error

Displays the error messages

5.1.2 S/InputFormat

Indicates the Video format detected, HDMI is prior to CVBS

5.1.3 S/EncFormat

Indicates the encoder format of video used

5.1.4 S/OutputRate

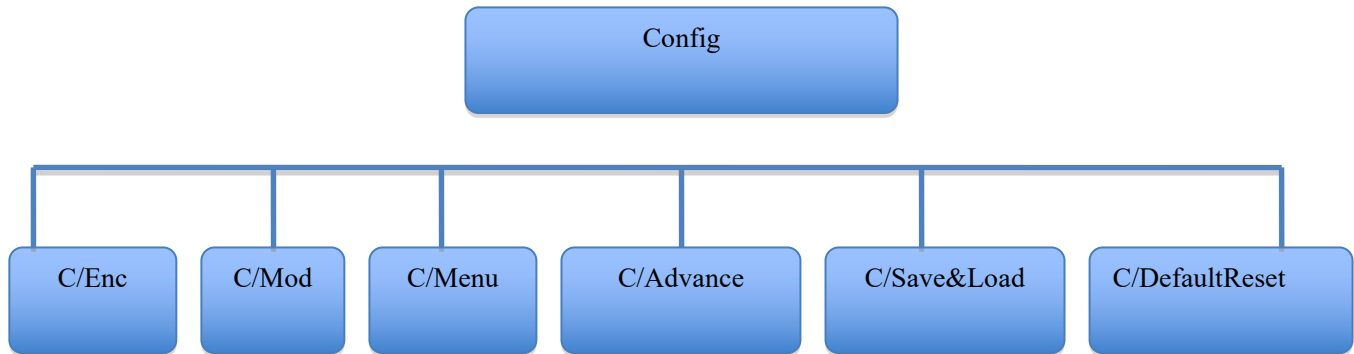
Indicates the data rate capacitance of the output RF, depends on RF parameters

5.1.5 S/OutputFreq

Indicates the central frequency of the RF output carrier

5.2 Config

There are six first-layer sub-menus under Config menu, they are listed below. All are prefixed with **C/** stands for Config, their parental menu.



5.2.1 C/Enc

Second-layer menu for Encoder settings. There are three third-layer sub-menus under Config/Encoder menu, they are listed below. All are prefixed with **C/E/** stands for Config/Encoder/, their parental menu.

These third-layer sub-menus include, **C/E/InputSelect**, **C/E/EncFormat** and **C/E/EncVolume** for Video/Audio source selection, Encoder Video Resolution setting and Encoder volume adjusting, respectively.

Use [↑] [↓] to roll the sub-menu under **C/E/** and press [ENTER] to enter the one selected.

C/E/InputSelect, Use [↑] [↓] to switch the input signal selection among *CVBS*, *HDMI* and *Auto*, The default setting is *Auto*, it will detect and accept HDMI signal first, if not exist, then CVBS. Press [ENTER] to confirm or [EXIT] to discard.

C/E/EncFormat, Use [↑] [↓] to switch the Encoder Video Resolution among *1080i/29.97Hz*, *1080i/25Hz*, *720p/59.94Hz*, *720p/50Hz*, *480i/29.97Hz*, *576i/25Hz* and *Auto*. When *Auto* is set, the encoder format is similar to the video format detected at the input, HDMI is always prior to CVBS. Press [ENTER] to confirm or [EXIT] to discard.

C/E/EncVolume, Use [↑] [↓] to modify the Audio Volume of Encoder. The range of valid value is from *-15dB* to *+15dB*. The default value is *0dB*, that is no amplification nor attenuation of audio volume at all. Press [ENTER] to confirm or [EXIT] to discard.

Note: proper value should be carefully considered to avoid audio distortion and saturation.

5.2.2 C/Mod

Second-layer menu for Modulator settings. There are three third-layer sub-menus under Config/Modulation/ menu, they are listed below. All are prefixed with **C/M/** stands for Config/Modulation/, their parental menu.

These third-layer sub menu are **C/M/OutputFreq**, **C/M/OutputLevel** and **C/M/Bandwidth**, for Output Frequency Setting, Output RF Level Setting and Modulation Bandwidth Setting, respectively.

Use [↑] [↓] to roll the sub-menu under **C/M/** and press [ENTER] to enter the one selected.

C/M/OutputFreq: Use [↑] [↓] to modify the central frequency of Modulator. The range of valid value is from *100MHz* to *862MHz*. The default value is *303MHz*, Press [ENTER] to confirm or [EXIT] to discard.

C/M/OutputLevel: Use [↑] [↓] to modify the RF Output Level of Modulator. The range of valid value is from *82dBuV* to *100dBuV*. The default value is *100dBuV*, Press [ENTER] to confirm or [EXIT] to discard.

C/M/Bandwidth: Use [↑] [↓] to modify the RF Bandwidth of Modulator. The valid value are *6MHz*, *7MHz* and *8MHz* The default value is *6MHz*, Press [ENTER] to confirm or [EXIT] to discard.

5.2.3 C/Menu

Second-layer menu for Menu settings. There are two third-layer sub-menus under Config/Menu/ menu, they are listed below. All are prefixed with **C/Mn/** stands for Config/Menu, their parental menu.

These third-layer sub menu are **C/Mn/PwrSave** and **C/Mn/KeyLock**, for Power Saving Settings and Key Locking Setting, respectively.

Use [↑] [↓] to roll the sub-menu under **C/Mn/** and press [ENTER] to enter the one selected.

C/Mn/PwrSave: Use [↑] [↓] to toggle the Power Saving Mode, *On* or *Off*. Press [ENTER] to confirm or [EXIT] to discard. The default value is *On*, and the LCD will be off automatically if 60 seconds idle of keys, To leave the Power Saving Mode, just press any one of the keys. All internal functions will not be affected whether this mode is enabled or not.

C/Mn/KeyLock: Use [↑] [↓] to toggle the Key Locking function, *On* or *Off*. [ENTER] to confirm or [EXIT] to discard. The default value is *Off*, When set to *On*, a set of 4 digits password is requested to enter. Following a valid password is received, user is prompted to reconfirm the same password. This password will be stored and activated once reconfirmation is correctly done. Otherwise, KeyLock will be set to *Off* automatically, and message “**Invalid Param**” will be shown for few seconds. When KeyLock is enable, the Keys on the top will be locked if 5 seconds idle is detected. To resume the Keys function, simply press any one of them, then follow the password recognition menu prompt.

Importance note: There is no way to retrieve the password except factory work, please keep your password record carefully for retrieving the KeyLock.

5. 2. 4 C/Advance

Second-layer menu for Advance settings. There are 17 third-layer sub-menus under Config/Advance/ menu, they are listed below. All are prefixed with **C/A/** stands for Config/Advance, their parental menu.

C/A/Enable, C/A/ServiceID, C/A/ServiceName, C/A/ProviderID, C/A/ONID, C/A/TS ID, C/A/VideoPID, C/A/AudioPID, C/A/PCR PID, C/A/LCN, C/A/GuardIntervl, C/A/Constellatio, C/A/TMS, C/A/CodeRate, C/A/EncMode, C/A/EncRate and C/A/RF On.

Use [↑] [↓] to roll the sub-menu under **C/A/** and press [ENTER] to enter the one selected.

When **C/A/Enable** is set to Disable, all other 16 third-layer sub-menus under **C/A/** will be hidden for easy operation. Default value is Disable.

The entry method and operation are similar to those of other sub-menu. The following table shows the functions, default values and the valid values of these sub-menus.

Table 2.

3rd Layer menu	Description	Default	Valid values
C/A/Enable	Enable the visibility of the other advance setting sub-menus	<i>no</i>	<i>on, off</i>
C/A/ServiceID	Service ID number	<i>101</i> (decimal, same below)	<i>1 to 65535</i>
C/A/ServiceName	Service Name	<i>Service 101</i>	<i>16 characters Max.</i>
C/A/ProviderID	Provider ID	<i>EM101</i>	<i>16 characters Max.</i>
C/A/ONID	Original Network ID	<i>10</i>	<i>0 to 65535</i>
C/A/TS ID	Transportation Stream ID	<i>101</i>	<i>0 to 65535</i>
C/A/VideoPID	Video Packet ID	<i>1011</i>	<i>32 to 8190</i>
C/A/AudioPID	Audio Packet ID	<i>1013</i>	<i>32 to 8190</i>
C/A/PCR PID	PCR Packet ID	<i>1015</i>	<i>32 to 8190</i>
C/A/LCN	Logical Channel Number	<i>101</i>	<i>1 to 16383</i>
C/A/GuardIntervl	Guard Interval	<i>1/8</i>	<i>1/4, 1/8, 1/16, 1/32</i>
C/A/Constellatio	Constellation	<i>16QAM</i>	<i>QPSK, 16QAM, 64QAM</i>
C/A/TMS		<i>8K FFT</i>	<i>2K FFT, 8K FFT</i>
C/A/CodeRate	FEC Code Rate	<i>5/6</i>	<i>1/2, 2/3, 3/4, 5/6, 7/8</i>
C/A/EncMode	Encoder Mode for Video	<i>H.264</i>	<i>MPEG2 SD, H.264</i>
C/A/EncRate	Encoder Bit Rate for Video	<i>SD=2Mb/s, HD=6Mb/s</i>	<i>SD: 0.5 to 6Mb/s HD: 1.5 to 11 Mb/s</i>
C/A/RF On	RF Output On/Off	<i>on</i>	<i>on, off for standby mode</i>

5.2.5 C/Save&Load

Second-layer menu for Save_&_Load settings. There are 4 third-layer sub-menus under Config/Save&Load/ menu, they are listed below. All are prefixed with **C/S&L/** stands for Config/Save&Load, their parental menu.

These third-layer sub menu are

C/S&L/Save, for Saving all settings to one of 64 internal registers (1 to 64),

C/S&L/Load, for Loading all settings from one of 64 internal registers (1 to 64),

C/S&L/PresetNTSC, for Preset all registers with NTSC-like settings (6MHz channel spacing), and

C/PresetPAL, for Preset all registers with PAL-like settings (8MHz channel spacing).

Use [↑] [↓] to roll the sub-menu under **C/S&L/** and press [ENTER] to enter the one selected.

C/S&L/Save, Use [↑] [↓] to modify the register number . The range of valid value is from 1 to 64. Press [ENTER] to confirm or [EXIT] to discard. All current settings will be saved to the register selected.

Note: The KeyLock setting (*On* or *Off*) will not be stored in the internal registers when apply the Save_&_Load.

C/S&L/Load, Use [↑] [↓] to modify the register number . The range of valid value is from 1 to 64. Press [ENTER] to confirm or [EXIT] to discard. All current settings will be loaded from the register selected.

Note: The KeyLock setting (*On* or *Off*) will not be modified by calling the Save_&_Load function.

C/S&L/PresetNTSC, Press [ENTER] to confirm. All contents in all 64 registers will be cleared and be preset with settings (NTSC-like, 6MHz channel spacing) list below.

Note: The KeyLock setting (*On* or *Off*) will not be modified by this operation.

C/S&L/PresetPAL, Press [ENTER] to confirm. All contents in all 64 registers will be cleared and be preset with settings (PAL-like, 8MHz channel spacing) list below.

Note: The KeyLock setting (*On* or *Off*) will not be modified by this operation.

Table 3.

Contents of <i>i</i> th (<i>i</i> =1 to 64) Registers after C/Save&LoadPreset done	
C/E/InputSelect	<i>Auto</i>
C/E/EncFormat	<i>Auto</i>
C/E/EncVolume	<i>0 dB</i>
C/M/OutputFreq	$467+i*6$ (MHz) (<i>ch 14, PresetNTSC</i>) $466+i*8$ (MHz) (<i>ch 21, PresetPAL</i>)
C/M/OutputLevel	<i>100dBuV</i>
C/M/Bandwidth	<i>6MHz (for both NTSC & PAL systems)</i>
C/Mn/PwrSave	<i>on</i>
C/Mn/KeyLock	<i>off</i>
C/A/Enable	<i>no</i>
C/A/ServiceID	<i>m ; (m=100+i) (decimal, same as below)</i>
C/A/ServiceName	<i>Service n ; (n=100+i)</i>
C/A/ProviderID	<i>EM101</i>
C/A/ONID	<i>10</i>
C/A/TS ID	<i>100+i</i>
C/A/VideoPID	<i>p ; (p=1001+i*10)</i>
C/A/AudioPID	<i>q ; (q=1003+i*10)</i>
C/A/PCR PID	<i>r ; (r=1005+i*10)</i>
C/A/LCN	<i>s ; (s=100+i)</i>
C/A/GuardIntervl	<i>1/8</i>
C/A/Constellatio	<i>16QAM</i>
C/A/TMS	<i>8K FFT</i>
C/A/CodeRate	<i>5/6</i>
C/A/EncMode	<i>H.264</i>
C/A/EncRate	<i>SD=2Mb/s, HD=6Mb/s</i>
C/A/RF On	<i>on</i>

5.2.6 C/DefaultReset

Second-layer menu for factory default settings.

C/DefaultReset: Press [ENTER] to retrieve all settings from the factory default values, or press [EXIT] to discard. All settings after **C/DefaultReset** done, please refer to Table 2 above.

Note: All contents of Save_&_Load registers and the setting of KeyLock (*On* or *Off*) remain unchanged after calling DefaultReset.

5.3 QuickSetup

First-layer menu for Quick Setup. There are three second-layer menus under it. The are,

Q/PAL ch, **Q/NTSC-Cable** and **Q/NTSC-Air** for Quick Setup for PAL-like, NTSC-Cable-like and NTSC-Air-like systems.

These menu allows user to do a very quick operation of all settings of this device except the Power_Saving setting (*On* or *Off*) and KeyLock setting (*On* or *Off*). Only the traditional channel number is requested to enter, then all other settings are generated internally and automatically. Settings collision prevention is taken place with different channel number, that means, user is not requested to set and check the advanced level settings such as Video PID, TS_ID, Service name, LCN, etc. All these settings will be uniquely generated

according to the particular channel number set on the QuickSetup menu. These unique settings are essential for most of STB or DTV, especially many devices are combined to form a multi-service system.

Use [↑] [↓] to roll the sub-menu under **Q/** menu and press [ENTER] to enter the one selected.

Q/PAL ch, Use [↑] [↓] to enter a valid PAL channel number, such as *E21, S12, 47*, etc. Press [Enter] to confirm or [EXIT] to discard.

Q/NTSC-Cable, Use [↑] [↓] to enter a valid NTSC-Cable channel number. Valid channel number range is from *007* to *135*, but do not include *095* nor *096* (<100MHz). Press [ENTER] to confirm or [EXIT] to discard.

Q/NTSC-Air, Use [↑] [↓] to enter a valid NTSC-Air channel number. Valid channel number range is from *007* to *078*. Press [ENTER] to confirm or [EXIT] to discard.

Note: Please enter the most significant digit(s) as “0” if not in use, for examples *034, 008*.

Note: The KeyLock setting (*On* or *Off*) will not be modified by this operation.

5.4 Software Ver

First-layer menu for Software Version indication.

Press [ENTER] to show the Software Version, press [EXIT] to go back to the top menu.

6. Accessories

AC/DC power adapter	1pc
HDMI cable	1pc
Analog A/V cable	1pc
User' s Manual (CD-Rom)	1pc
Quality Assurance & Maintenance card	1pc

PAL-B/G CHANNEL LIST

DISPLAY	CHANNEL	CHWIDTH MHz	VIDEO CARRIER	AUDIO CARRIER	CENTER FREQ	DISPLAY	CHANNEL	CHWIDTH MHz	VIDEO CARRIER	AUDIO CARRIER	CENTER FREQ
01	E2	47-54	48.25	53.75	50.5	54	S38	438-448	439.25	444.75	442
02	E3	54-61	55.25	60.75	57.5	55	S39	448-454	447.25	452.75	450
03	E4	61-68	62.25	67.75	64.5	56	S40	454-462	455.25	460.75	458
04	X	68-75	69.25	74.75	71.5	57	S41	462-470	463.25	468.75	466
05	Y	75-82	76.25	81.75	78.5	58	21	470-478	471.25	476.75	474
06	Z	82-89	83.25	88.75	85.5	59	22	478-486	479.25	484.75	482
07	Z+1	89-96	90.25	95.75	92.5	60	23	486-494	487.25	492.75	490
08	Z+2	96-103	97.25	102.75	99.5	61	24	494-502	495.25	500.75	498
09	S1	104-111	105.25	110.75	107.5	62	25	502-510	503.25	508.75	506
10	S2	111-118	112.25	117.75	114.5	63	26	510-518	511.25	516.75	514
11	S3	118-125	119.25	124.75	121.5	64	27	518-526	519.25	524.75	522
12	S4	125-132	126.25	131.75	128.5	65	28	526-534	527.25	532.75	530
13	S5	132-139	133.25	138.75	135.5	66	29	534-542	535.25	540.75	538
14	S6	139-146	140.25	145.75	142.5	67	30	542-550	543.25	548.75	546
15	S7	146-153	147.25	152.75	149.5	68	31	550-558	551.25	556.75	554
16	S8	153-160	154.25	159.75	156.5	69	32	558-566	559.25	564.75	562
17	S9	160-167	161.25	166.75	163.5	70	33	566-574	567.25	572.75	570
18	S10	167-174	168.25	173.75	170.5	71	34	574-582	575.25	580.75	578
19	E5	174-181	175.25	180.75	177.5	72	35	582-590	583.25	588.75	586
20	E6	181-188	182.25	187.75	184.5	73	36	590-598	591.25	596.75	594
21	E7	188-195	189.25	194.75	191.5	74	37	598-606	599.25	604.75	602
22	E8	195-202	196.25	201.75	198.5	75	38	606-614	607.25	612.75	610
23	E9	202-209	203.25	208.75	205.5	76	39	614-622	615.25	620.75	618
24	E10	209-216	210.25	215.75	212.5	77	40	622-630	623.25	628.75	626
25	E11	216-223	217.25	222.75	219.5	78	41	630-638	631.25	636.75	634
26	E12	223-230	224.25	229.75	226.5	79	42	638-646	639.25	644.75	642
27	S11	230-237	231.25	236.75	233.5	80	43	646-654	647.25	652.75	650
28	S12	237-244	238.25	243.75	240.5	81	44	654-662	655.25	660.75	658
29	S13	244-251	245.25	250.75	247.5	82	45	662-670	663.25	668.75	666
30	S14	251-258	252.25	257.75	254.5	83	46	670-678	671.25	676.75	674
31	S15	258-265	259.25	264.75	261.5	84	47	678-686	679.25	684.75	682
32	S16	265-272	266.25	271.75	268.5	85	48	686-694	687.25	692.75	690
33	S17	272-279	273.25	278.75	275.5	86	49	694-702	695.25	700.75	698
34	S18	279-286	280.25	285.75	282.5	87	50	702-710	703.25	708.75	706
35	S19	286-293	287.25	292.75	289.5	88	51	710-718	711.25	716.75	714
36	S20	293-300	294.25	299.75	296.5	89	52	718-726	719.25	724.75	722
37	S21	300-307	301.25	306.75	303.5	90	53	726-734	727.25	732.75	730
38	S22	310-318	311.25	316.75	314	91	54	734-742	735.25	740.75	738
39	S23	318-326	319.25	324.75	322	92	55	742-750	743.25	748.75	746
40	S24	326-334	327.25	332.75	330	93	56	750-758	751.25	756.75	754
41	S25	334-342	335.25	340.75	338	94	57	758-766	759.25	764.75	762
42	S26	342-350	343.25	348.75	346	95	58	766-774	767.25	772.75	770
43	S27	350-358	351.25	356.75	354	96	59	774-782	775.25	780.75	778
44	S28	358-366	359.25	364.75	362	97	60	782-790	783.25	788.75	786
45	S29	366-374	367.25	372.75	370	98	61	790-798	791.25	796.75	794
46	S30	374-382	375.25	380.75	378	99	62	798-806	799.25	804.75	802
47	S31	382-390	383.25	388.75	386	0.0	63	806-814	807.25	812.75	810
48	S32	390-398	391.25	396.75	394	0.1	64	814-822	815.25	820.75	818
49	S33	398-406	399.25	404.75	402	0.2	65	822-830	823.25	828.75	826
50	S34	406-414	407.25	412.75	410	0.3	66	830-838	831.25	836.75	834
51	S35	414-422	415.25	420.75	418	0.4	67	838-846	839.25	844.75	842
52	S36	422-430	423.25	428.75	426	0.5	68	846-854	847.25	852.75	850
53	S37	430-438	431.25	436.75	434	0.6	69	854-862	855.25	860.75	858

頻道編號		視頻載波頻道(Mhz)			傳統頻道編號
G I	E I A	S T D	H R C	I R C	
54	1	N/A	72.0036	73.2625	4+ , A-8
2	2	55.2500	54.0027	55.2625	
3	3	61.2500	60.0030	61.2625	
4	4	67.2500	66.0033	67.2625	
5	5	77.2500	N/A	N/A	
6	6	83.2500	N/A	N/A	
55	5	N/A	78.0039	79.2625	A-7
56	6	N/A	84.0042	85.2625	A-6
7	7	175.2500	174.0087	175.2625	
8	8	181.2500	180.0090	181.2625	
9	9	187.2500	186.0093	187.2625	
10	10	193.2500	192.0096	193.2625	
11	11	199.2500	198.0099	199.2625	
12	12	205.2500	204.0102	205.2625	
13	13	211.2500	210.0105	211.2625	
14	14	121.2625	120.0060	121.2625	A
15	15	127.2625	126.0063	127.2625	B
16	16	133.2625	132.0066	133.2625	C
17	17	139.2500	138.0069	139.2625	D
18	18	145.2500	144.0072	145.2625	E
19	19	151.2500	150.0075	151.2625	F
20	20	157.2500	156.0078	157.2625	G
21	21	163.2500	162.0081	163.2625	H
22	22	169.2500	168.0084	169.2625	I
23	23	217.2500	216.0108	217.2625	J
24	24	223.2500	222.0111	223.2625	K
25	25	229.2625	228.0114	229.2625	L

頻道編號		視頻載波頻道(Mhz)			傳統頻道
26	26	235.2625	234.011	235.2625	M
27	27	241.2625	240.012	241.2625	N
28	28	247.2625	246.012	247.2625	O
29	29	253.2625	252.012	253.2624	P

頻道編號		視頻載波頻道			傳統頻道 編號
G I	E I A	STD	HRC	IRC	
30	30	259.2625	258.0129	259.2625	Q
31	31	265.2625	264.0135	265.2625	R
32	32	271.2625	270.0135	271.2625	S
33	33	277.2625	276.0138	277.2625	T
34	34	283.2625	282.0141	283.2625	U
35	35	289.2625	288.0144	289.2625	V
36	36	295.2625	294.0147	295.2625	W
37	37	301.2625	300.0150	301.2625	X
38	38	307.2625	306.0153	307.2625	Y
39	39	313.2625	312.0156	313.2625	Z
40	40	319.2625	318.0159	319.2625	DD
41	41	325.2625	324.0162	325.2625	EE
42	42	331.2750*	330.0165	331.2750	FF
43	43	337.2625	336.0168	337.2625	GG
44	44	343.2625	342.0171	343.2625	HH
45	45	349.2625	348.0174	349.2625	II
46	46	355.2625	354.0177	355.2625	JJ
47	47	361.2625	360.0180	361.2625	KK
48	48	367.2625	366.0183	367.2625	LL
49	49	373.2625	372.0186	373.2625	MM
50	50	379.2625	378.0189	379.2625	NN
51	51	385.2625	384.0192	385.2625	OO
52	52	391.2625	390.0195	391.2625	PP
53	53	397.2625	396.0198	397.2625	QQ
62	54	403.2500	402.0201	403.2625	RR
63	55	409.2500	408.0204	409.2625	SS
64	56	415.2500	414.0207	415.2625	TT
65	57	421.2500	420.0210	421.2625	UU
66	58	427.2500	426.0213	427.2625	VV
67	59	433.2500	432.0216	433.2625	WW
68	60	439.2500	438.0219	439.2625	XX
69	61	445.2500	444.0222	445.2625	YY
70	62	451.2500	150.0225	451.2625	ZZ

頻道編號		視頻載波頻道			傳統頻道編號
G I	E I A	S T D	H R C	I R C	
71	63	457.2500	456.0228	457.2625	
72	64	463.2500	462.0231	463.2625	
73	65	469.2500	468.0234	469.2625	
74	66	475.2500	474.0237	475.2625	
75	67	481.2500	480.0240	481.2625	
76	68	487.2500	486.0243	487.2625	
77	69	493.2500	192.0246	493.2625	
78	70	499.2500	498.0249	499.2625	
79	71	505.2500	504.0252	505.2625	
80	72	511.2500	510.0255	511.2625	
81	73	517.2500	516.0258	517.2625	
82	74	523.2500	522.0261	523.2625	
83	75	529.2500	528.0264	529.2625	
84	6	535.2500	534.0267	535.2625	
85	77	541.2500	540.0270	541.2625	
86	78	547.2500	546.0273	547.2625	
87	79	553.2500	552.0276	553.2625	
88	80	559.2500	558.0279	559.2625	
89	81	565.2500	564.0282	565.2625	
90	82	571.2500	570.0285	571.2625	
91	83	577.2500	576.0288	577.2625	
92	84	583.2500	582.0291	583.2625	
93	85	589.2500	588.0294	589.2625	
94	86	595.2500	594.0297	595.2625	
95	87	601.2500	600.0300	601.2625	
96	88	607.2500	606.0303	607.2625	
97	89	613.2500	612.0306	613.2625	
98	90	619.2500	618.0309	619.2625	
99	91	625.2500	624.0312	625.2625	
100	92	631.2500	630.0315	631.2625	
101	93	637.2500	636.0318	637.2625	
102	94	643.2500	642.0321	643.2625	
57	95	91.2500	90.0045	91.2625	A-5

頻道編號		視頻載波頻道			傳統頻
58	96	97.2500	96.0048	97.2625	A-4
59	97	103.2500	102.0051	103.2625	A-3

頻道編號		視頻載波頻道			傳統頻
G I	E I A	S T D	H R C	I R C	道編號
60	98	109.2750*	108.0250	109.2750*	A-2
61	99	115.2750*	114.0250	115.2750*	A-1
103	-	649.2500	648.0324	649.2625	
104	-	655.2500	654.0327	655.2625	
105	-	661.2500	660.0330	661.2625	
106	-	667.2500	666.0333	667.2625	
107	-	673.2500	672.0336	673.2625	
108	-	679.2500	678.0339	679.2625	
109	-	685.2500	684.0342	685.2625	
110	-	691.2500	690.0345	691.2625	
111	-	697.2500	696.0348	697.2625	
112	-	703.2500	702.0351	703.2625	
113	-	709.2500	708.0354	709.2625	
114	-	715.2500	714.0357	715.2625	
115	-	721.2500	720.0360	721.2625	
116	-	727.2500	726.0366	727.2625	
117	-	733.2500	732.0366	733.2625	
118	-	739.2500	738.0369	739.2625	
119	-	745.2500	744.0372	745.2625	
120	-	751.2500	750.0375	751.2625	

台灣無線電視頻道 / 地區分佈表

電視台 號碼	台視	中視	華視	錄放 影機 VTR	華視 教育 台
地區別	/	9	11		UHF35
北部地區				13	

中部地區	12	10	8	13	UHF36
南部地區	7	9	11	13	UHF34
花蓮地區	7	9	11	13	UHF35
蘭陽台東地區	10	12	8	13	UHF33
澎湖地區	UHF39	UHF41	UHF37	13	UHF34
基隆地區	UHF48	UHF44	UHF46	13	UHF35
新竹地區	UHF48	UHF44	UHF46	13	330R35
南投地區	UHF48	UHF44	UHF46	13	UHF36

註 1. 強場區，可以 VHF/Hi 之八木天線接收，並以變頻處理 器，將接收信號改變，如 7，9，11 改為 8，10，12，以避免同頻干擾，原接收頻道應避免播放。

註 2. 接收困難區應以較佳指向性之單頻天線接收，並加前置濾波及放大 處理。

註 3. 接收 UHF 轉播站之信號，應將之變頻至 CATV 頻段。

註 4. 教育台也應變頻至 CATV 頻段。

無線電視頻道頻率表

頻道	頻寬 (MHZ)	視頻	色訊	音頻
VHF 低頻段				
2	54-60	55.25	58.83	59.75

3	60-66	61. 25	64. 83	65. 75
4	66-72	67. 25	70. 83	71. 75
5	76-82	77. 25	80. 83	81. 75
6	82-88	83. 25	86. 83	87. 75
VHF 高頻段				
7	174-180	175. 25	178. 83	179. 75
8	180-186	181. 25	184. 83	185. 75
9	186-192	187. 25	190. 83	191. 75
10	192-198	193. 25	196. 83	197. 75
11	198-204	199. 25	202. 83	203. 75
12	204-210	205. 25	208. 83	209. 75
13	210-216	211. 25	214. 83	215. 75
UHF				
14	470-476	471. 25	474. 83	475. 75
15	476-482	477. 25	480. 83	481. 75
16	482-488	483. 25	486. 83	487. 75
17	488-494	489. 25	492. 83	493. 75
18	494-500	495. 25	498. 83	499. 75
19	500-506	501. 25	504. 83	505. 75

20	506-512	507.25	510.83	511.75
21	512-518	513.25	516.83	517.75
22	518-524	519.25	522.83	523.75
23	524-530	525.25	528.83	529.75
24	530-536	531.25	534.83	535.75
25	536-542	537.25	540.83	541.75
26	542-548	543.25	546.83	547.75
27	548-554	549.25	552.83	553.75
28	554-560	555.25	558.83	559.75
29	560-566	561.25	564.83	565.75

頻道	頻寬 (MHZ)	視頻	色訊	音頻
UHF				
30	566-572	567.25	570.83	571.75
31	572-584	573.25	576.83	577.75
32	584-590	579.25	582.83	583.75
33	590-596	585.25	588.83	589.75
34	596-602	591.25	594.83	595.75
35	596-602	597.25	600.83	601.75

36	602-608	603. 25	606. 83	607. 75
37	608-614	609. 25	612. 83	613. 75
38	614-620	615. 25	618. 83	619. 75
39	620-626	621. 25	624. 83	625. 75
40	626-632	627. 25	630. 83	631. 75
41	632-638	633. 25	636. 83	637. 75
42	638-644	639. 25	642. 83	643. 75
43	644-650	645. 25	648. 83	649. 75
44	650-656	651. 25	654. 83	655. 75
45	656-662	657. 25	660. 83	661. 75
46	662-668	663. 25	666. 83	667. 75
47	668-674	669. 25	672. 83	673. 75
48	674-680	675. 25	678. 83	679. 75
49	680-686	681. 25	684. 83	685. 75
50	686-692	687. 25	690. 83	691. 75
51	692-698	693. 25	696. 83	697. 75
52	698-704	699. 25	702. 83	703. 75
53	704-710	705. 25	708. 83	709. 75
54	710-716	711. 25	714. 83	715. 75

55	716-722	717.25	720.83	721.75
56	722-728	723.25	726.83	727.75
57	728-734	729.25	732.83	733.75
58	734-740	735.25	738.83	739.75

頻道	頻寬 (MHZ)	視頻	色訊	音頻
UHF				
59	740-746	741.25	744.83	745.75
60	746-752	747.25	750.83	751.75
61	752-758	753.25	756.83	757.75
62	758-764	759.25	762.83	763.75
63	764-760	765.25	768.83	769.75
64	760-776	771.25	774.83	775.75
65	776-782	777.25	780.83	781.75
66	782-788	783.25	786.83	787.75
67	788-794	789.25	792.83	793.75
68	794-800	795.25	798.83	799.75
69	800-806	801.25	804.83	805.75
70	806-812	807.25	810.83	811.75

71	812-818	813.25	816.83	817.75
72	818-824	819.25	822.83	823.75
73	824-830	825.25	828.83	829.75
74	830-836	831.25	834.83	835.75
75	836-842	837.25	840.83	841.75
76	842-848	843.25	846.83	847.75
77	848-854	849.25	852.83	853.75
78	854-860	855.25	858.83	859.75
79	860-866	861.25	864.83	865.75
80	866-872	867.25	870.83	871.75
81	872-878	873.25	876.83	877.75
82	878-884	879.25	882.83	883.75
83	884-890	885.25	888.83	889.75