

Quick configuration Guide for **H-4ADHD-QAM-IPLL**

Login instructions:

In order to log in to the Modulator NMS port, please set your PC's NIC Ethernet card to the following IP address: 192.168.0.100.

Access Modulator GUI by typing derail IP address **192.168.0.136** in to the browser

Login /password – admin/admin

192.168.0.136

Encoder - SDI HD

Video

2 Video Format: Mpeg2

3 Video Cache: On

4 Video Bitrate: 14.0 Mbps (1.0 ~ 19.5 Mbps)

H.264 Profile: Main Profile

Out Resolution: 1920x1080_60i Auto

PCR Interval: 20 (1 ~ 500ms)

Field/Picture Encoding: Picture

CC Switch: CC Off

Low Delay: Normal

H.264 Level: Level 4

Share PCR PID: ☐

Audio

7 Group 1

5 Audio Format: Mpeg2

Audio Group: Group 1

Audio Gain: 100 (0 ~ 400%)

Bitrate: 192 Kbps

Audio Pair: Pair 1

Audio Delay: 0 (0 ~ 1000ms)

Status

Encoder Chip Version: 2.7.3.211

Input Information: 1920x1080 59.94i

Encode Status: Completed

Input Lock: [Green LED]

Bitrate: 14.652 Mbps

When SDI video is detected, it will show INPUT LOCK, Green LED, Bit rate and Video detected resolution

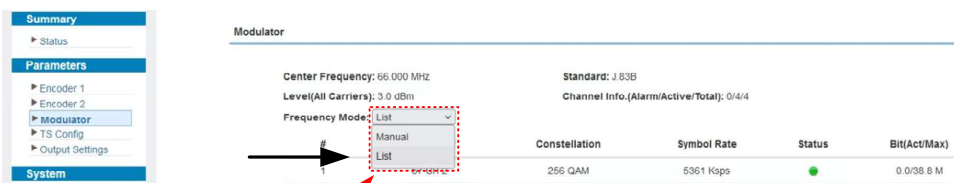
8 Apply

- 1 Select ENCODER1 (H-4ADHD unit has also ENCODER2 for CH # 2)
- 2 Video encoding MPEG2 or H.264 (**MPEG2** is a US, Canada, Mexico standard)
- 3 Video Cache - is a Video buffer ON/OFF, The default is OFF, it need to be set ON if SDI input resolution is fluctuation
- 4 Video Encoding bitrates up to 18Mbps
- 5 Audio encoding format AC3,AC3 Pass,AAC,MPEG2 (The **AC3** is a US, Canada, Mexico standard)
- 6 Closes captioning Setting, (if CC is enabled, the Video Cache need to be OFF)
- 7 The Unit support 2 Audios, The Audio tracks can be selected from SDI group 1-4 each pair 1 or 2
- 6 Once configured click apply

Modulator Setup

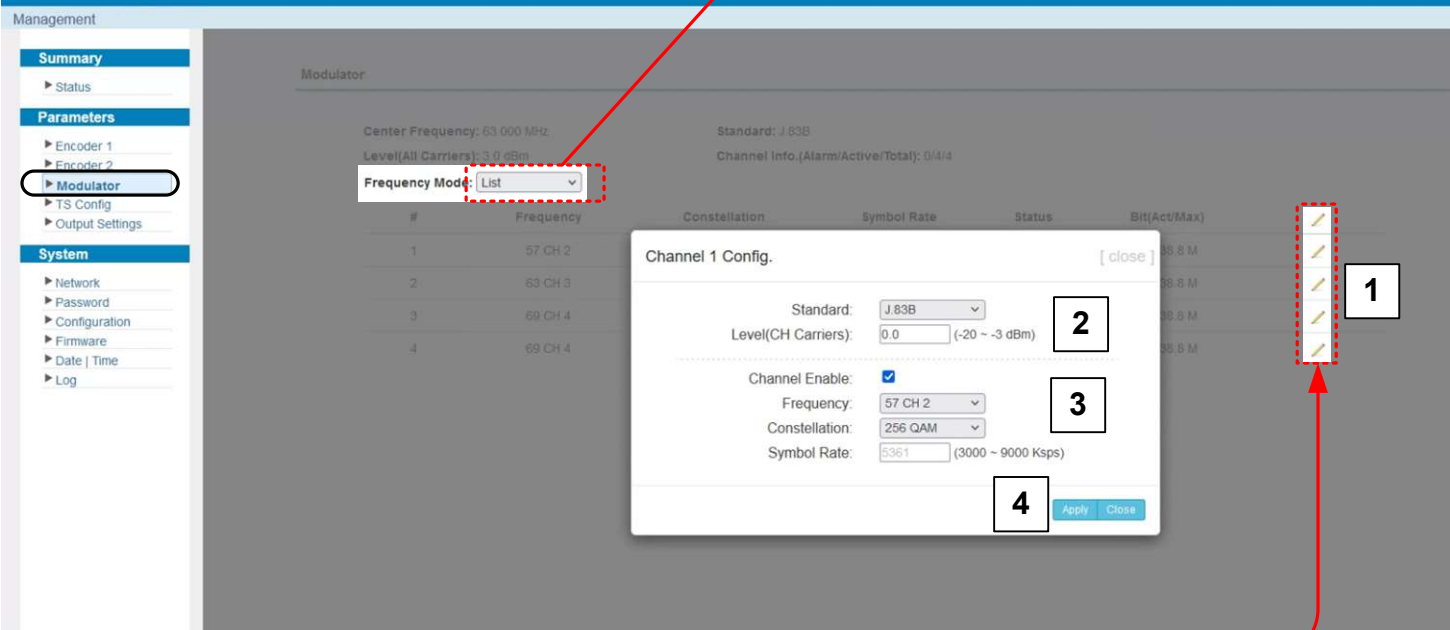
The modulator setup allows you to set the CATV channel constellation and control the RF power.

H-4ADHD-QAM-IPLL – DVB-C annex A/B
QAM 64 /QAM 256
H-4ADHD-ATSC-IPLL – ATSC modulation
H-4ADHD-ISDBT-IPLL – ISDB-T modulation
H-4ADHD-DVBT-IPLL – DVB-T modulation



The screenshot shows the 'Modulator' configuration page. On the left, a sidebar contains 'Summary', 'Parameters', 'System', and 'Status'. Under 'Parameters', 'Modulator' is selected. The main area shows 'Center Frequency: 66.000 MHz', 'Standard: J.83B', and 'Level(All Carriers): 3.0 dBm'. A table lists 'Frequency Mode' with options 'List', 'Manual', and 'List'. A red box highlights the 'List' option. Below the table, 'Constellation' is set to '256 QAM', 'Symbol Rate' is '5361 Kbps', and 'Status' is '0.0/38.8 M'.

Encoder Modulator

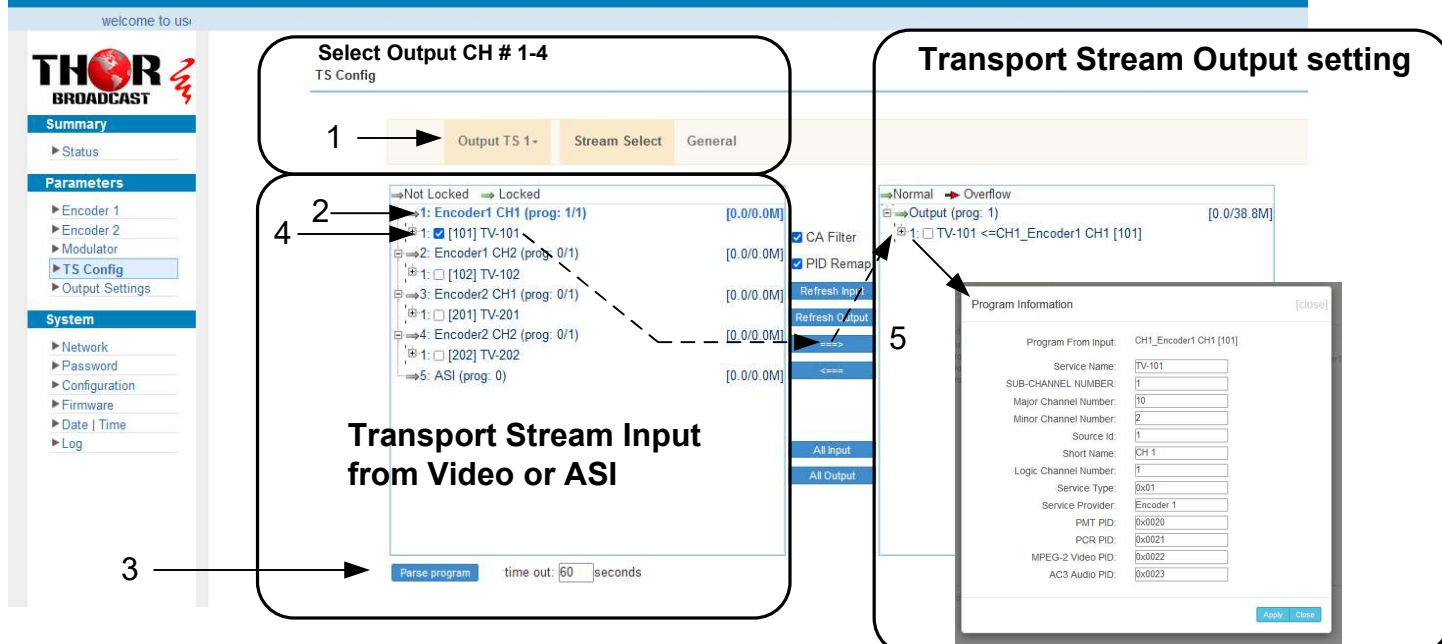


The screenshot shows the 'Encoder Modulator' configuration page. On the left, a sidebar contains 'Summary', 'Parameters', 'System', and 'Status'. Under 'Parameters', 'Modulator' is selected. The main area shows 'Center Frequency: 63.000 MHz', 'Standard: J.83B', and 'Level(All Carriers): 3.0 dBm'. A table lists 'Frequency Mode' with options 'List', 'Manual', and 'List'. A red box highlights the 'List' option. Below the table, 'Constellation' is set to '256 QAM', 'Symbol Rate' is '5361 Kbps', and 'Status' is '0.0/38.8 M'. A red arrow points from the 'List' option in the table to the 'Channel 1 Config.' dialog box. The dialog box has fields for 'Standard' (J.83B), 'Level(CH Carriers)' (0.0), 'Channel Enable' (checked), 'Frequency' (57 CH 2), 'Constellation' (256 QAM), and 'Symbol Rate' (5361). A red box highlights the 'Apply' button.

1. Press the pencil icon to bring up edit window
2. Standard should be J.83B (US Standard) J.83A(Europe Standard) H-1/2HDMI-ATSC-IPLL has ATSC modulation frequency table listed
3. Frequency should be 57 for CH 2
4. Press apply

TS Config (Encoded Transport Stream from the Video Audio Input selection for the CATV RF/ASI/IP Output)

H-4ADHD-QAM-IPLL



The screenshot shows the 'TS Config' page for 'H-4ADHD-QAM-IPLL'. On the left, a sidebar contains 'Summary', 'Parameters', 'System', and 'Status'. Under 'Parameters', 'TS Config' is selected. The main area shows 'Select Output CH # 1-4' with tabs 'Output TS 1-', 'Stream Select', and 'General'. A table lists 'Encoder CH 1' with options 'TV-101', 'TV-102', 'TV-201', 'TV-202', and 'ASI (prog: 0)'. A red box highlights the 'TV-101' option. A red arrow points from the 'TV-101' option to the 'Transport Stream Output setting' dialog box. The dialog box has fields for 'Program From Input' (CH1_Encoder1 CH1 [101]), 'Service Name' (TV-101), 'SUB-CHANNEL NUMBER' (1), 'Major Channel Number' (10), 'Minor Channel Number' (2), 'Source ID' (1), 'Short Name' (CH 1), 'Logic Channel Number' (1), 'Service Type' (0x01), 'Service Provider' (Encoder 1), 'PMT PID' (0x0020), 'PCR PID' (0x0021), 'MPEG-2 Video PID' (0x0022), and 'AC3 Audio PID' (0x0023). A red box highlights the 'Apply' button.

1. Click on 'Output TS 1-4' to select CATV RF output channels 1-4.
2. Highlight 'Encoder CH 1'.
3. Parse the program (scanning function) and click the plus sign to expand encoder channel options.
4. Check the box next to the desired source.
5. Press the '==>' button to move the encoded video to the output channel. Multiple videos can be multiplexed on a single RF channel, up to a total bit rate of 38Mbps, as sub-channels like 2.1, 2.3, 2.4, etc."

TS Config

Virtual Channel Tables Set Up



- Summary
 - Status
- Parameters
 - Encoder 1
 - Modulator
 - TS Config
 - Output Settings
- System
 - Network
 - Password
 - Configuration
 - Firmware
 - Date | Time
 - Log

TS Config

Output TS 1 → Stream Select General

Not Locked → Locked

1: Encoder 1 (prog: 1/1) [14.7/17.1M]

1: [101] TV-101

CA Filter

PID Remap

Refresh Input

Refresh Output

Pause program

time out: 60 seconds

Program Information [close]

Program From Input: CH1_Encoder 1 [101]

Service Name: TV-101

SUB-CHANNEL NUMBER: 1

Major Channel Number: 2

Minor Channel Number: 1

Source Id: 1

Short Name: NBC

Logic Channel Number: 1

Service Type: 0x01

Service Provider: Encoder 1

PMT PID: 0x0020

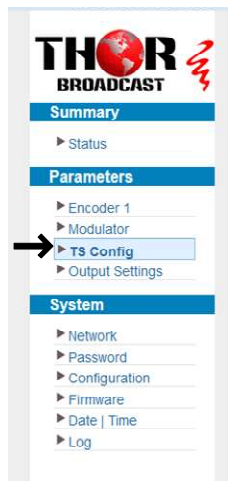
PCR PID: 0x0021

MPEG-2 Video PID: 0x0022

MPEG-2 Audio PID: 0x0023

Apply Close

1. Click Stream Select tab to go back to the previous screen
2. Click the number "1" - Drop box will open – program information
3. Set major channel number to your preference
4. Set minor channel number to your preference
5. Set Short Name (will display on the TV)
6. Click apply



TS Config

Output TS 1 ~ Stream Select General ← 1

Stream

Character Encoding: NORMAL

SDT Insert: ☒

NIT

NIT Insert: Not insert

VCT

VCT Insert: ☒

VCT Mode: CVCT

Modulation Mode: 4

Carrier Frequency: 500.000 (30-1000MHz)

Apply

1. Click the general tab
2. Check the VCT insert check box
3. Press apply

If VCT Insert is not apply the TV will scan and show physical channel number as a Major channel and Service ID (Sub-Channel number) as Minor, for example 2.1

IP Output Settings

IP Stream(GE_DATA)
Channel Info.(Alarm/Active/Total): 0/4/8

#	IP Address	Port	Protocol	Pkt Length	Null PKT Filter	Program	Status	Bit(Act/Max)
MPTS 1	224.2.2.2	2000	UDP	7	<input type="checkbox"/>			14.7/38.8 M
MPTS 2	224.2.2.2	2002	UDP	7	<input type="checkbox"/>			14.7/38.8 M
MPTS 3	224.2.2.2	2004	UDP	7	<input type="checkbox"/>			14.7/38.8 M
MPTS 4	224.2.2.2	2006	UDP	7	<input type="checkbox"/>			14.7/38.8 M
SPTS 1	224.2.2.2	3000	UDP	7	<input checked="" type="checkbox"/>	TV-101(MPTS1)		14.7/20.0 M
SPTS 2	224.2.2.2	3002	UDP	7	<input checked="" type="checkbox"/>	TV-102(MPTS2)		14.7/20.0 M
SPTS 3	224.2.2.2	3004	UDP	7	<input checked="" type="checkbox"/>	TV-201(MPTS3)		14.7/20.0 M
SPTS 4	224.2.2.2	3006	UDP	7	<input checked="" type="checkbox"/>	TV-202(MPTS4)		14.7/20.0 M

ASI Settings
Output Select:

SPTS 1 Config.
 Enable: ☒ **ENABLE ON/OFF**
 Output Bitrate: 20.000 Mbps
 IP Address: 224.2.2.2
 Port: 3000
 Protocol: UDP
 Pkt Length: 7
 Null PKT Filter: ☒
 Program: TV-101(MPTS1)
 NULL
 TV-101(MPTS1)
 TV-102(MPTS2)
 TV-201(MPTS3)
 TV-202(MPTS4)
 Apply

VLC media player
Open Media
File Disc Network
Network Protocol
Please enter a network URL:
udp://@224.2.2.2:3000

IP TV streaming is sent out from the data port and can be tested using VLC player.

UDP syntax example is `udp://@224.2.2.2:3000`

RTP syntax example is `rtp://@224.2.2.2:3000`

RTSP syntax example is `rtsp://(DATA IP ADRESS):5000/1-4`

1. Click the pencil icon for MPTS's or SPTS's section. Drop box will open to configure channel 1
2. Enable and edit your IP preferences
3. Press apply

Configuration Saving / Backup / Restore

H-4ADHD-QAM-IPLL
welcome to use Web A

Configuration
 Save Restore Factory Set Backup Load
 When you change the parameters you should save configuration, otherwise the new c
 Save config

1. Click the configuration tab on the left hand side
2. Click the save tab
3. Press save config –

YOU MUST SAVE OR ALL CHANGES WILL BE LOST AFTER RESTART!