

# 4K-MOD Quick Guide

## Setting up the 4K Modulator



## STEP 1 - Login

- 1 Assign 172.16.70.2 as the static IP address for your computer. Open a web browser (Internet Explorer 7 or higher is recommended) and enter the following URL address (<http://172.16.70.1>) to access the "Login" Screen for the 4K Modulator.

The screenshot shows the "4K MODULATOR" web interface. At the top, it displays "ESN: 2015101207", "Headend Name:", "Temperature: 68.1°F", "Uptime: 0d 1h 23m 36s", and "Location:". Below this is a "Login" section with "Username:" and "Password:" input fields and a "Submit" button.

- 2 Enter the following factory-default Username and Password, and click the "Submit" button.

NOTE: Username and password are case-sensitive. When logged in as Admin, the user has read and write permission. Only one Admin can be logged in at a time.

Username: Admin  
Password : pass

# STEP 2 - Main > Input

The “Main > Input” screen allows configuration of the following parameters:

- 1 **Source:** allows selection for each input as: IP UDP, IP RTP, Disabled
- 2 **IP Address:** input the IP Address for each transport stream
- 3 **IP Port:** input the IP Port number for each input stream

Click the “**Save**” button whenever any changes are made.

Input Index	Source	IP Address	IP Port
1	IP - UDP	239.10.10.10	50000
2	IP - UDP	239.10.10.10	50001
3	IP - UDP	239.10.10.10	50002
4	IP - UDP	239.10.10.10	50003

# STEP 3 - Main > QAM Config

The “Main > QAM Config” screen allows configuration of the following parameters:

- 1 **Output Channel/Frequency:** user must assign an RF channel number to the first RF QAM output. The remaining three RF QAM channels are auto-assigned.
- 2 **Output Control:** used to turn each of the RF channels On/Off.
- 3 **CW Control:** NOT checked for normal operation. Typically used when only an analog signal level meter is available to measure the modulator’s output during installation and servicing.
- 4 **Final Output Level:** used to select RF output level for the QAM outputs. Output level is 40 dBmV for normal operation.
- 5 **Output QAM Mode:** allows the user to select the desired QAM modulation mode. Most applications in the USA use 256B which allows 4 HD programs, not exceeding 38.8 Mbps, per RF QAM channel.
- 6 **Output QAM Map:** used to select the desired QAM Map. Default setting is STD.

Click the “**Save**” button whenever any changes are made.

Output Channel/Frequency	Output Control	CW Control	Final Output Level	Output QAM Mode	Output QAM Map	Output QAM Data Rate	Output QAM Interleaver	Output QAM Alpha	QAM Lock State
2 / 57 MHz	On	<input checked="" type="checkbox"/>	39 dBmV	256B	STD	5.3605 Mbaud	128-1	18%	Lock
3 / 63 MHz	Off	<input type="checkbox"/>							
4 / 69 MHz	Off	<input type="checkbox"/>							
5 / 79 MHz	Off	<input type="checkbox"/>							

# STEP 4 - Main > TS Config

Main	Network	Time	Event Log	Logout					
Status	Input	QAM Config	TS Config	Output	Refresh				
<b>TS Output Configuration</b>									
	<b>1</b> VCT Generation	<b>2</b> TS Delay	<b>3</b> Modulation Mode	<b>4</b> Out of Band					
TS1	Enabled ▾	5000 mS	QAM256 ▾	Disabled ▾					
TS2	Enabled ▾	5000 mS	QAM256 ▾	Disabled ▾					
TS3	Enabled ▾	5000 mS	QAM256 ▾	Disabled ▾					
TS4	Enabled ▾	5000 mS	QAM256 ▾	Disabled ▾					
<b>Input Programs</b>					<b>Output Mapping</b>				
Input		Input PID	<b>5</b> Short Name	<b>6</b> Major Channel	<b>7</b> Minor Channel				
TS1 - QAM									
P2 -		32	BBY-UHD	62	1				
V: H.265/HEVC		33							
A: AC-3		36							
TS2 - Outputs Disabled									
TS3 - Outputs Disabled									
TS4 - Outputs Disabled									
<input type="button" value="Save"/>									

- 1 VCT Generation:** When enabled, the user is able to generate a Virtual Channel Table (VCT) on the output. Options are enabled and disabled. In order to set parameters on #5-7, settings must be enabled
- 2 TS Delay:** Allows the user to adjust Transport Stream (TS) delay. Range is 900-5000ms. Default is 5000ms.
- 3 Modulation Mode:** Typical setting is QAM256
- 4 Out of Band:** Set to Disabled.
- 5 Short Name:** User must enter the short name of the channel. Up to 7 alphanumeric characters are allowed
- 6 Major Channel:** User must enter the major channel number for the output program. The range is 1 to 99 for Terrestrial and 1 to 999 for Cable.
- 7 Minor Channel:** User may enter minor channel number for the output program. The range is 1 to 99 for Terrestrial and 0 to 999 for Cable. NOTE: When zero (0) is entered as a minor channel, it sets the encoder to provide a one part virtual channel number as entered in the major channel field.

Click the “Save” button whenever any changes are made.

# STEP 5 - Main > Output

The “Main > Output” screen shows status and allows configuration of the following parameters:

TS			Output
TS	TS Mapping/PIDs	Bitrates	QAM
TS1	Not Detected	- / 38.81	Enabled
TS2	Not Detected	- / 38.81	Enabled
TS3	Not Detected	- / 38.81	Enabled
TS4	Not Detected	- / 38.81	Enabled

- 1 TS Mapping/PIDs:** Shows the status of the transport mapping to PIDs.
- 2 Bitrates:** Shows the bit-rate for each output transport stream.
- 3 QAM:** “Enable” each active transport stream for QAM output.

Click the “Save” button whenever any changes are made.

# STEP 6 - Main > Status

This is a “read-only” screen provided to easily view unit settings and status.

4K MODULATOR					
ESN: 2015101207		Temperature: 68.1°F		Uptime: 0d 1h 27m 46s	
Headend Name:				Location:	
Status	Input	QAM Config	Output	Refresh	
Input			Output		
Interface	Input Status	Input Bitrate	TSID	Interface	Status
IP - UDP (239.10.10.10:50000)	Not Detected	-	-	RF (50 - 381 MHz)	Locked
IP - UDP (239.10.10.11:50000)	Not Detected	-	-	RF (51 - 387 MHz)	Locked
IP - UDP (239.10.10.12:50000)	Not Detected	-	-	RF (52 - 393 MHz)	Locked
IP - UDP (239.10.10.13:50000)	Not Detected	-	-	RF (53 - 399 MHz)	Locked