

Thank you for your purchase of the Adtec EN-91 Encoder. This product is sold with optional modulator hardware packages. Configurations and indicators relevant to those add-on packages are noted here. If you purchased this product without a modulator, please ignore settings noted with an asterisks (*).

The most recent firmware releases are available on our support website, www.adtecdigital.com. Advanced users can find direct API command help as part of the on-board web application, Help Tab.

Quick View Status

For information on the core systems, use the down arrow on the front panel to scroll through these quick view menus.

Encoder Activity TMR Fault Mode Status Encryption

ENCODING:20.000M !FAULT MODE! CAS:OFF
SVC: 00001 "Service Name" Service Provider

Service ID Service Name Service Provider

Input: Resolution Frame Rate Source

I/ RES: 1920X1080 59i INP: SDI
O/ RES: 1920X1080 59i B/T/ID:OFF/OFF/OFF/OFF

Output: Resolution Frame Rate Bars Status

Video PID PCR PID Codec Chroma

VID: 481 PCR:481 COD:H.264 CHR:420
VRT:60000000b/s ENT:CABAC A/F:OFF

Video Rate Entropy Mode Auto Fill

Audio Status

1:MU 384k 3:MU 384k 5:MU 384k 7:MU 384k
2:MU 384k 4:MU 384k 6:MU 384k 8:MU 384k

Audio PIDs 1-8

Audio 1:11300 3:11400 5:11500 7:11600
PIDS 2:11300 4:11400 6:11500 8:11600

IP status RTP FEC Connector Transports 1 - 4

1: SEND ON BUR GIGE 3: OFF OFF OFF GIGE
2: OFF OFF OFF GIGE 4: OFF OFF OFF GIGE

Modulator Status Mod FEC Power RollOff

TX:Enabled 32APSK_9/10 Pwr:-30dB RO:25%
Freq:1291MHz DVB-S2 Sym:15.00Ms Pilot:On

Frequency Mode Symbol Rate Pilot

Services	* RF Tx	IPTx	Video	Audio	PIDs	VBI	Profile	CAS	System
TS Mux Rate	Transmit	<< 1 - 4 >>	Input	Sampling Frequency	Transport Stream ID	Source	Select	Mode	Login
Program Number	Type	Mode	SDI Mode	SDI Clock Source	PMT PID	Closed Caption	Save	Clear Session Word	Duration
ABR Mode	Mode	Tx IP Address	Entropy Coding	ECC Words	PCR PID	VITC Menu	Delete	Encrypt Session Word	Backlight Dim Delay
Service Name	Frequency (MHz)	Tx Port	Chroma	Level B * 91P only	Video PID			User ID 1	Network Menu
Service Provider	Power (dBm)	DVB per IP	Video Rate (b/s)	<< 1 - 8 >>	Audio 1 PID			User ID 2	Time Menu
Tables	Spectrum Inversion	RTP	Autofill	Input	Audio 2 PID				NTP Menu
Splice PID Active	Fec Frame	FEC Mode	Latency	Mode	Audio 3 PID				Alarm
ASI Receive Mode	Roll Off	FEC L	Latency Trim	Type	Audio 4 PID				SNMP Menu
ASI Mode	Pilot	FEC D	Fault Mode	Rate	Audio 5 PID				COM 2
Carrier ID Menu	Rate Priority	TOS	Fault Resolution	Level	Audio 6 PID				Feature Menu
Bars, Tones, ID Menu	Symbol Rate	TTL	Aspect Ratio	Analog Aud. Level (1-2 Only)	Audio 7 PID				Name
	Interface Rate	Tx Connector	AFD	Sync	Audio 8 PID				Firmware Version
	Carrier Mode		GOP Type	Musicam Mode	Teletext PID				
	10 MHz Clock		GOP Structure	IFB	VITC PID				
	10 MHz Clock Comb.		GOP Size	SDI Pair	AMOL PID				
			SD Video Mode		Splice PID				
			3D-Sync Mode						

Model Indicators:

- L-Band modulator
- IF modulator
- No modulator

Special Keys:

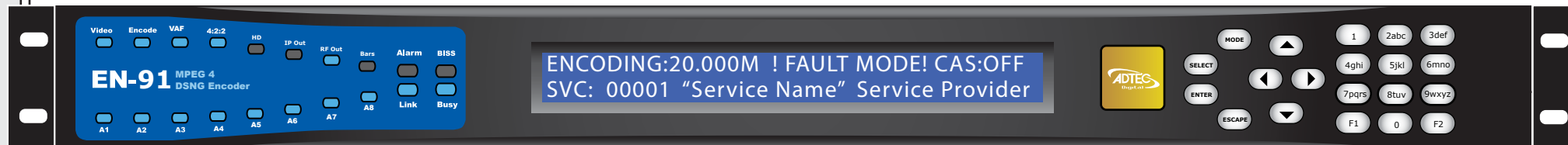
F2
Use the F2 button as a decimal.

F1 F2
Press the F1 and F2 buttons simultaneously to jump to Modulator Line-up Mode.
**Detail on reverse.

Reset:

Should you need to reset your device, you can do so via the front panel by pressing the MODE, ESCAPE and RIGHT ARROW keys simultaneously.

Units ship with the front panel logged in by default. If you become logged out and are prompted for a password, use the following key sequence for access. Press <Select> when panel displays 'User Login -- logged out'
Press <Up arrow>
Press <Select>
Press <Enter>
Press <Right arrow>
Press <Enter>



Encoder LED Status

Video

- Off - If modulator is installed, no video is detected or ASI Receive mode is enabled.
- On - Video is detected.
- Blink - No video is detected and fault mode is active.

Encode

- Off - Device is not encoding. Idle State
- On - Device is encoding.

VAF

- Off - Video autofill is off.
- On - Video autofill is on.

4:2:2

- Off - Encoding chroma type 4:2:0.
- On - Encoding chroma type 4:2:2.

HD

- Off - Encoding standard definition.
- On - Encoding high definition.

IP Out

- Off - Transport of IP via Ethernet or GigE is idle.
- On - Transport of IP via Ethernet or GigE is active.

* RF Out

- Off - Modulator is not transmitting.
- On - Modulator is transmitting.
- Blink - Modulator is in test mode.

Bars

- Off - B/T/ID options are disabled.
- On - B/T/ID are enabled.

A1 - A8

- Off - Audio encoder cfg. is off.
- On - Audio encoder cfg. is set to encode or passthru.

System LED Status

Alarm

- Off - No system alarms
- On - System alarm

BISS

- Off - No encryption set
- On - Encryption active

Busy

- Off - No network activity
- On - Network traffic present

Link

- Off - No network detected
- On - Network communication active

Front Panel Menu:

- MODE** Use Mode Button to move through top layer menus.
- Arrows** Use arrows for navigation in submenus.
- SELECT** Use select to enter into edit mode and **ENTER** enter to save selection.

Getting Connected

To begin, you will need to connect to your EN-91 via ethernet directly, or by adding the EN-91 to your local area network. The default address for all Adtec devices is 192.168.10.48.

To connect directly to the device, make sure that your computer and the device have IP addresses within the same IP class range (ex. 192.168.10.48 for the device and 192.168.10.49 for your computer). If you need to change the IP address of the device, this can be done via the front panel, System > Network menu. Using a CAT 5 crossover cable, connect one end to your computer and the other to the Ethernet port found on the processor section of the back panel. (Some computers can auto negotiate the connection and a crossover may not be necessary.)

To add the device to a LAN, connect a standard CAT 5 Ethernet cable to your network router and then to the Ethernet port on the back of the device. If your network is DHCP enabled and you prefer that over a static IP, you can turn on DHCP for the device via the front panel, System > Network menu.

Web-Based Control Application



Adtec Digital has adopted zero-configuration networking technology, streamlining the setup and configuration processes for our products. The use of this technology enables automatic discovery of Adtec devices and services on an IP network. Used in tandem with the web-based control and configuration applications we can now provide 1-click access to any device.

By using the built-in Bonjour® locator in Apple's® Safari® browser or the plug-ins readily available for IE® or Firefox® browsers, users can locate all of the Adtec devices on a network by referencing the serial number on the back of the device. Clicking on the unit in the Bonjour® list will re-route you to a login page. If you do not wish to use Bonjour, you can reach the device's web application by pointing your browser to the IP Address of the device. Ex. http://192.168.10.48/. You will be prompted for a username and password. The default username is 'adtec'. The default password is 'none'.

Modulator Line-UP * (For access, press the F1 and F2 keys simultaneously.)

This feature enables the operator to quickly view and/or configure select modulator RF output parameters. The parameters available in this menu are;

Carrier Mode: [PURE_CARRIER or ON] **Output Power:** [in 0.5dB increments]
Use SELECT Button to toggle. Press or hold UP or DOWN arrows to adjust.

Transmit: [ENABLED or DISABLED] **Output Frequency:** [in 1.0MHz increments]
Use ENTER Button to toggle. Press or hold LEFT or RIGHT arrows to adjust.

Carrier Mode Output Power
Carrier: PURE_CARRIER Power (dBm): -50.0
Tx: ENABLED Mod. Freq. (MHZ): 950.000
Transmit Output Frequency

Have questions? Each field or group of fields in our web-based application has a hint button associate with it. It contains information on use of the field or acceptable ranges.

Getting Started

Once your encoder is accessible via network, you can set it up for transmission. You will need to adjust the configurations using the front panel or web UI. As you make changes, you will see the status sections on the left hand side of the web UI adjust. These status sections report the majority of the critical information needed for monitoring during a transmission. Each of these status menus can be collapsed by clicking on the icon. This allows you to view only that information which is most critical for you, but keeps a LED indicator visible for all sections at all times for alarms.

EN-91

Version 0.01.01_BETA

Temperature: 32(C)

Encoding Status:

ENCODING: 0 days 17:04:33.44
Bars/Tones/ID: OFF/OFF/OFF
Current Profile: [1]AmyTest

Service Data:

TransMux Rate: 72 (Mb/s)
Service Name: AdtecEN91
Service Provider: Adtec Digital
Encryption: OFF

Modulator Status:

NOT TRANSMITTING
Interface Rate: 7 (Mb/s)
Frequency: 1450 (MHz)
Type/Mode/FEC: DVB-S2/QPSK_3/4
Occ. Bandwidth: 6 (MHz)

IP Status:

NOT TRANSMITTING
 NOT TRANSMITTING
 NOT TRANSMITTING
 NOT TRANSMITTING

Video Status:

Video Detected: SDI
Resolution: 1280x720
CODEC/Chroma: H264 / 420
Frame Rate: 59p
AutoFill/Rate: ON / 67693000

Audio Status:

Frequency: 48000(Hz)
A1 RUNNING SDI/ENCODE
MPEG 1 Layer 2 / STEREO / 192000(cb/s)
A2 RUNNING SDI/ENCODE
MPEG 1 Layer 2 / STEREO / 192000(cb/s)
A3 RUNNING SDI/ENCODE
MPEG 1 Layer 2 / STEREO / 192000(cb/s)
A4 RUNNING SDI/ENCODE
MPEG 1 Layer 2 / STEREO / 192000(cb/s)
A5 RUNNING SDI/ENCODE
MPEG 1 Layer 2 / STEREO / 384000(cb/s)
A6 RUNNING SDI/ENCODE
MPEG 1 Layer 2 / STEREO / 384000(cb/s)
A7 RUNNING SDI/ENCODE
MPEG 1 Layer 2 / STEREO / 384000(cb/s)
A8 RUNNING SDI/ENCODE
MPEG 1 Layer 2 / STEREO / 384000(cb/s)

Encoding Status: These values indicate the encoder's state and displays alarms when a video loss event is detected.

Service Data: These values indicate the service or program data being used in your transmission as well as the total TMR output.

*** Modulator Status:** Devices containing the optional modulator will display this status window indicating activity and critical uplink parameters.

IP Status: These values indicate the status of IP Egress including address, port and FEC parameters.

Video Status: The video status information is auto-detected per the input selected. Information such as resolution, chroma, framerate and video rate are included.

Audio Status: This section will display all audio status including bitrate, format and audio input selected.

Power

Power 1 & 2 Redundant AC Power, Standard 3 pin computer power plug (Auto range 70-240 VAC Input)

Modulator (optional)*

Main RF output, 50 Ohm BNC

L-Band Model: Frequency range 950 MHz to 2.150 GHz, Power Level -35 to +5 dBm
IF Model: Frequency range 50 MHz to 180 MHz, Power Level -30 to +5 dBm

Monitor RF output, 50 Ohm BNC

L-Band Model: Fixed power level at -45 dBm
IF Model: Fixed power level at -45 dBm, fixed frequency at 1.08 GHz
BNC 50 Ohm connector for external 10MHz reference input

10MHz Clock

Processor

GigE MPEG2 UDP/RTP/SMPT2022 multicast or TCP transport egress port

COM2 API Serial Communication Interface

COM1 Serial Port Used for Troubleshooting (Terminal)

Ethernet 10/100 base T ethernet interface (Monitoring/Management)

DVC Parport 9-pin parallel I/O interface for control systems

RS422 Not Currently Supported

GPIO Tally and Control Port

Encoder

ASI OUT 75 Ohm source ASI x3 per EN5000839. Up to 100 Mbps.

CVBS In 75 Ohm terminated Standard Definition Composite Video Input

SDI In 75 Ohm terminated Input, Video & Audio (SMPT259M for SD & SMPT292M for HD) BNC

AES Audio In 1-4 75 Ohm AES-3 per AES3-2003

Analog Audio In Stereo Pairs 1 and 2 (600 Ohm Balanced)

* SFP Module Single channel optical receiver module. SMPT297-2006 - Purchased Option.

