RD-70 10-bit / 1080P Multi-CODEC Receiver / Decoder

Quick Start Guide

Thank you for your purchase of the Adtec RD-70 Receiver/Decoder. This product is sold with optional demodulator hardware packages. Configurations and indicators relevant to those add-on package are noted here. If you purchased this product without a demodulator, please disreguard settings noted with an asterisks.

Quick View Status

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

Decoder Status | Input | TMR | Encryption

```
DECODING ASI   TMR:20.000M  CAS:Free to Air
SVC:  00001   "Serv. Name" "Serv. Provider"
```

Service ID | Service Name | Service Provider

CODEC | Chroma | Bit Depth | Delay Mode

```
COD: H.264  CHR: 422  BITD:08  DLYM: NORMAL
VRT: 18.012Mb/s  RES:1920X1080  FR:59p
```

Video Rate | Resolution | Frame Rate

Video PID | PCR PID | PMT PID | Aspect Ratio

```
VID:441   PCR:441  PMT:440  ARA:16X9
```

Audio 1-8 | Type | Bitrate

```
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
```

Input | Mode/FEC | Rcv Level | Link Margin

```
RF1  32APSK9/10   Lvl: -52.0dB   LMar:20.5dB
LOCKED  DVB-S2  Sym:29.970Ms  Es/No:29.8dB
```

Lock Status | Type | Symbol Rate | Eb(s)/No

RTP Detected | RTP Error Count | Buffer

```
RTP: Y  RTP-Err: 1234567  Buffer:1234ms
FEC: Y FecLoss: 1234567 FecCorr: 1234567
```

FEC Detected | FEC Packet Loss | FEC Corrections

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.

LED Status

Decode
- Off - Decoder is idle
- On - Decoder is active

ASI/IP/RF
- Off - No services detected
- On - Services detected

Lock 1 / Lock 2
- Off - Tuner is not locked
- On - Tuner is locked

IP Out
- Off - IP Egress is idle
- On - IP Egress is active

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

A1 - A8
- Off - No Audio Decoding
- On - Audio Decoding
- Blinking - Fail to decode or pass audio

Alarm
- Off - No system alarms
- On - System alarm

BISS
- Off - Decryption config is OFF
- On - Decryption config is ON

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

Link
- Off - No network detected
- On - Connection active

Front Panel Menus:

MODE **Use Mode Button to move through top layer menus.**

▲ **Use arrows for navigation in submenus.**

Use select to enter into edit SELECT **mode and** ENTER **enter to save selection.**

Special Keys:

F2 **Use the F2 button as a decimal.**

Services	RF Rx* PRM & ADV	RF Rx* LB	IP Rx	Video	Audio	VBI	CAS	System
ASI RF1 RF2 IP	Select Tuner	<< RF1 - RF2 >>	Rx IP	Output Menu	Audio Assign Order	TimeCode Menu	Mode	Login
Select Service	Local Oscillator	Tuner State	Rx Port	Genlock Menu	Audio Sync Mode	AFD Menu	Clear SW	Duration
Select First	Manual LO	Downlink	SSM Address		<< AUDIO 1-8 >>	CC Menu	Encrypt. SW	Backlight
	Downlink	Local Oscillator	Connector		Audio PID	Teletext Menu	User ID 1	Network Menu
	L-Band	Manual LO	Latency		Offset		User ID 2	Time Menu
	Modulation Type	L-Band	Time Out		Dolby D Mode		TS Out Decrypt.	NTP Menu
	CCM Mode	Acquisition Range	Error Rec.		SDI Matrix			Alarm Menu
	Mod. Mode	S2X Rolloff			ANALOG VOL. (Audio 1-2 only)			SNMP Menu
	Symbol Rate	LNB Polarity						COM2
	Acquisition Range	LNB Tone						Name
	Roll Off	Modulation Type						Firmware
	Pilot	Symbol Rate						Feature Menu
	Fec Frame Type	ISI						
	LNB Menu	RF Stats						
	Profile Menu							

Model Indicators:

- Premium demodulator
- Advanced demodulator
- LB demodulator
- No demodulator

NEW

Adtec's new LB demod supports automatic modulation, coding, and symbol rate detection. Simply configure the demodulation type and symbol rate to AUTO. A symbol rate of 0 via the front panel is also equal to AUTO.

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>

Getting Connected

To begin, you will need to connect to your RD-70 via ethernet directly, or by adding the RD-70 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 or switch 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.

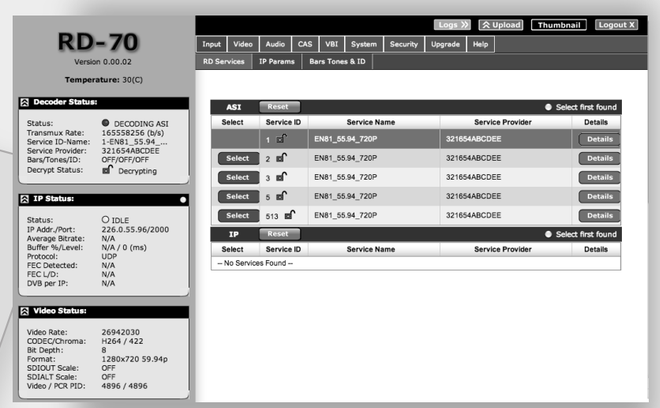
By using the built-in Bonjour© locater in Apple's© Safari© browser or the plug-ins readily available for IE© or Firefox© browsers, users can locate all of the Adtec devices on a network by referencing the serial number on the back of the device. Clicking on the unit in the Bonjour© list will re-route 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'.

The left-hand panel of the application will report current status in real-time while the right panel tabs will allow you to configure your device.

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.

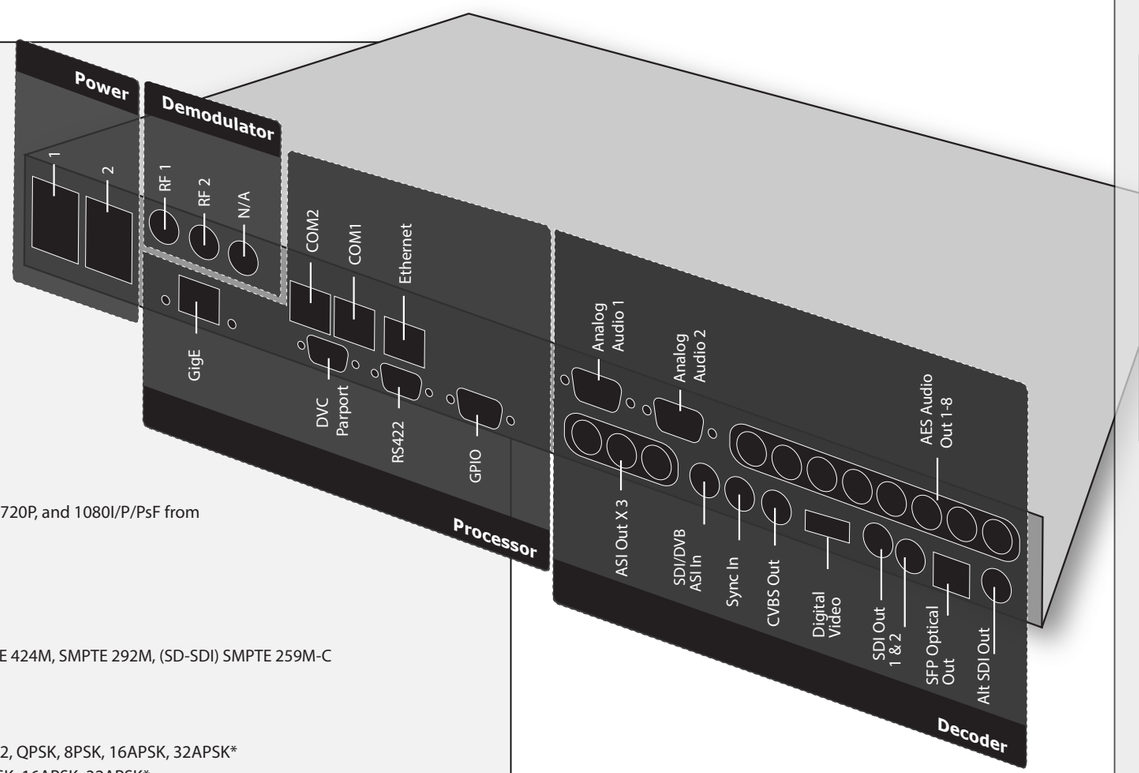
Getting Started

Once your receiver is powered up, configured on your network and you have inputs applied with active services, you can select which services you want to decode via the web-based control application. The below image shows the Input > Services tab. From this tab, you can view all services available on your device, select one of the services for decode or view more details about the service. There is a 'Select First Found' option for each input. When selected, this configuration will detect the first valid service and decode it.



Note: IP service selection is treated differently than ASI or RF inputs. To populate the IP services section, you need to first visit the IP Params tab and set the correct Rx Address, port and handling parameters. Return to the RD Services tab. Click the 'Select First Found' radio button for IP. This will populate the RD Services tab with services found on the IP input.

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.



Power .....

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

Processor .....

GigE: UDP, RTP and SMPTE 2022 (COP3 FEC) transport ingress port
COM2: API Serial Communication Interface
COM1: Serial Port Used for Troubleshooting (Terminal)
Ethernet: 10/100 base T ethernet interface (Monitoring/Management)
Parport: 9-pin parallel I/O interface for control systems
RS422: Not Currently Supported
GPIO: Tally and Control Port

Decoder .....

Analog Audio Out: Balanced analog audio out. Stereo pairs 1 & 2. DB9
AES Audio Out 1-8: 75 Ohm AES-3 BNC
DVB-ASI x3 Out: 75 Ohm BNC
DVB ASI In: 75 Ohm terminated Input BNC
Sync In: Standard analog video sync separation for NTSC, PAL, 480I/P, 576I/P, 720P, and 1080I/P/PsF from Composite Video (CVBS). Bi-level & tri-level sync compatible. BNC
CVBS Out: 75 Ohm Standard Definition Composite Video Output BNC
Digital VIdeo Out: Digital Video
** SDI Out 1 & 2 (2) 75 Ohm Outputs from decoder
** SFP Optical /Alt SDI Out (1) SFP interface, Module purchased separately.(1) 75 Ohm, BNC
** Note: Video/Audio/VBI Supported- (3G/HD-SDI) SMPTE 425M (Level A and DL-Level B), SMPTE 424M, SMPTE 292M, (SD-SDI) SMPTE 259M-C

* Demodulator (optional).....

RF 1 & RF 2: RF input, 75 Ohm F-Connector
L-Band (LB) Model: Dual Tuners capable of simultaneous lock. Supports L-Band, DVB-S/S2, QPSK, 8PSK, 16APSK, 32APSK*
Premium (PRM) Model: Selectable Input, Single Tuner. Supports L-Band, DVB-S/S2, QPSK, 8PSK, 16APSK, 32APSK*
* Software Key field upgradeable to 16APSK and 32APSK.