RD-71 10-bit / 1080P Integrated Receiver Decoder

Quick Start Guide

Thank you for your purchase of the Adtec RD-71 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 disregard 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

IP Rx Mode | FEC and L/D Detection | DVB per IP Packet

```
IP Rx: RTP   FEC: NO   L/D: N/A   DVBperIP: 7
Buffer: 10%   Level: 1000ms   226.0.1.58:2000
```

Buffer Level (%) | Buffer Level (ms) | IP Rx Address

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.

Services

- ASI | RF1 | RF2 | IP
- Select Service
- Select First

RF Rx* LB

- << RF1 - RF2 >>
- Tuner State
- Downlink
- Local Oscillator
- Manual LO
- L-Band
- Acquisition Range
- S2X Rolloff
- LNB Polarity
- LNB Tone
- Modulation Type
- Symbol Rate
- ISI
- RF Stats
- Profile Menu

RF Rx* PRX

- Tuner Input
- Local Oscillator
- Manual LO
- Downlink
- L-Band
- Modulation Type
- Modulation Mode
- Symbol Rate
- Acquisition Range
- Roll-off
- ISI Control
- ISI
- LNB State
- LNB Polarity
- LNB Tone
- RF Stats Menu
- Profile Menu

IP Rx

- Rx IP
- Rx Port
- SSM Address
- Connector
- Latency
- Time Out
- Error Recovery

Video

- Output Menu
- Genlock Menu

Audio

- << AUDIO 1-8 >>
- Audio PID
- Offset
- Dolby D Mode
- Dolby E Line
- SDI Matrix
- ANALOG VOL. (Audio 1-2 only)
- Audio Sync Mode
- Audio Assign Order

VBI

- ANC Passthrough
- AFD Menu
- CC Menu
- Teletext Menu

CAS

- Mode
- Clear SW
- Encrypt. SW
- User ID 1
- User ID 2
- TS Out Decrypt

IP Tx

- << 1 - 4 >>
- Mode
- IP Tx Mode
- Tx IP Address
- Tx Port
- TX GW Address
- DVB Per IP
- RTP
- FEC Mode
- FEC L
- FEC D
- Type of Service
- TTL
- Tx Connector

System

- Login
- Duration
- Network Menu
- Time Menu
- NTP Menu
- Alarm Menu
- SNMP Menu
- COM2
- Feature Menu
- Name
- Firmware
- Backlight

Profiles

- Last Loaded
- Select
- Save
- Delete

Model Indicators:

- DVB-S/S2/S2X demodulator (PRX)
- DVB-S/S2 demodulator (LB)
- No demodulator

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 (LB)*
- ○ Off - Tuner is not locked
- ● On - Tuner is locked

Lock (1 or 2) / Lock (3 or 4) *PRX
- ○ 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

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>

Front Panel Menus:

Use Mode Button to move through top layer menus.
Use arrows for navigation in submenus.
Use select to enter into edit mode and enter to save selection.

Special Keys:

Use the F2 button as a decimal.

Getting Connected

To begin, you will need to connect to your RD-71 via IP 1 directly, or by adding the RD-71 to your local area network. The network settings can be found via the front panel System > Network Menu. IP addresses are dynamically set via DHCP. If you wish to assign a static address, you will need to turn DHCP off prior to setting a manual address.

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). Using a CAT 5 crossover cable, connect one end to your computer and the other to the IP 1 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 IP 1 port on the back of the device.

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.

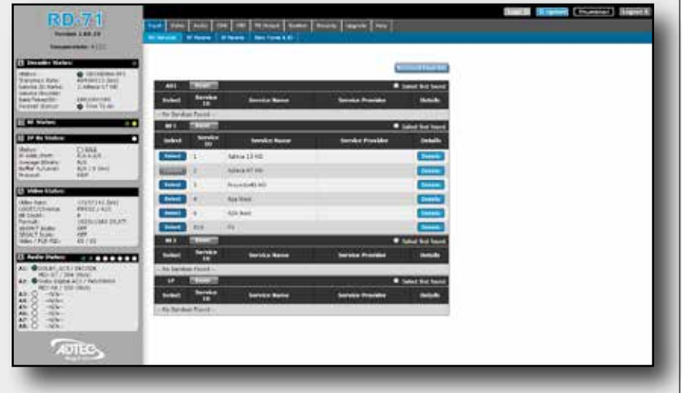
By using the built-in Bonjour© locater in Apple's© Safari© browser or the plug-ins readily available for IE© or Firefox© browsers, users can locate all of the Adtec devices on a network by referencing the serial number on the back of the device. Clicking on the unit in the Bonjour© list will re-route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

COM1	Serial Port Used for Troubleshooting (Terminal)
COM2	API Serial Communication Interface
IP 1	Management/Monitoring default port (10/100/1000BASE-T)
IP 2	Default port for TSoIP I/O (UDP, RTP, SMPTE 2022 and TCP)
Parport	9-pin parallel I/O interface for control systems
GPIO	Tally and Control Port

Decoder

Audio Out 1-2	Analog Stereo Pairs (600 Ohm Balanced)
ASI Out	75 Ohm BNC transport stream output x 3
DVB ASI In	75 Ohm BNC transport stream input
Sync In	BNC. Standard analog separation for NTSC, PAL, 720P, 1080I/P from CVBS. Bi-level and tri-level sync compatible
CVBS Out	75 Ohm BNC standard definition composite video output
Digital Video Out	Digital Video Connector
SDI Out 1-2	75 Ohm BNC output from decoder
SFP Optical	SFP interface for ALT SDI output
ALT SDI Out	75 Ohm BNC alternative SDI output
AES Out 1-8	75 Ohm BNC AES-3 Audio output

* Demodulator (optional)

RF1 - RF4	75 Ohm F-Connector DVB-S/DVB-S2/DVB-S2X RF L-Band input (PRX model)
RF1 - RF2	75 Ohm F-Connector DVB-S/DVB-S2 RF L-Band input (LB model)

* Licenses may be required to unlock full hardware capability