

## RMOR1220-40 Rackmount Fiber Optic Receiver

Model	Bandwidth
RMOR1220-40	45-1220 MHz



The RMOR1220-40 is an indoor rackmount fiber optic receiver for HFC cable networks or other optical fiber distribution systems. It features 1220 MHz bandwidth high performance photodiode receiver with GaAs HEMT amplifier for superior performance with low distortion characteristics.

Optical input window of -8 to +2 dBm and with an AGC function to maintain a specific output level when the input level is between -6 and +2 dBm.

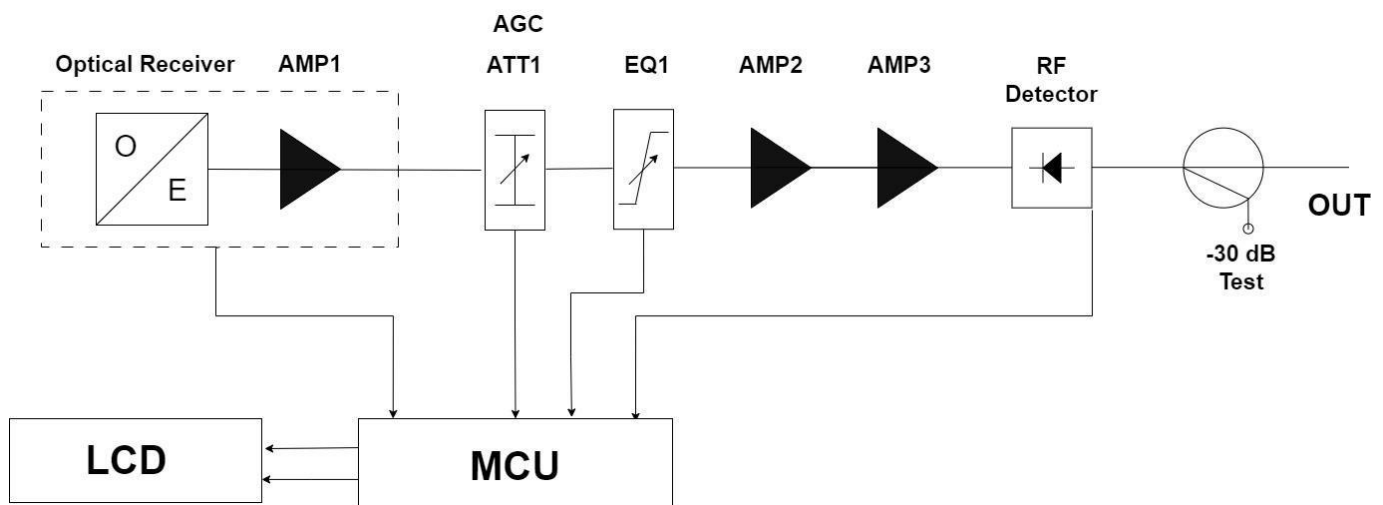
Maximum RF output level is 40 dBmV to maintain low distortions. Output can be adjusted from 20 to 40 dBmV along with 0 to 20 dB of slope.

Setup and control are accomplished through the front LCD screen.

### Features

- 1290nm - 1600nm optical input window.
- Front panel LCD screen can display the current settings and adjustments.
- Optical AGC operation from -6 to +2 dBm.
- 1RU rackmount aluminum housing with a field-replaceable cooling fan.

### Block Diagram



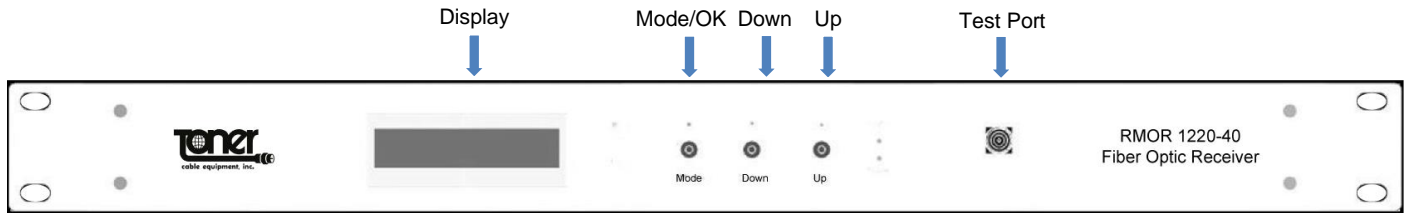
**SPECIFICATIONS**

Typical, for T = 20 °C, Z<sub>in</sub> = Z<sub>out</sub> = 75

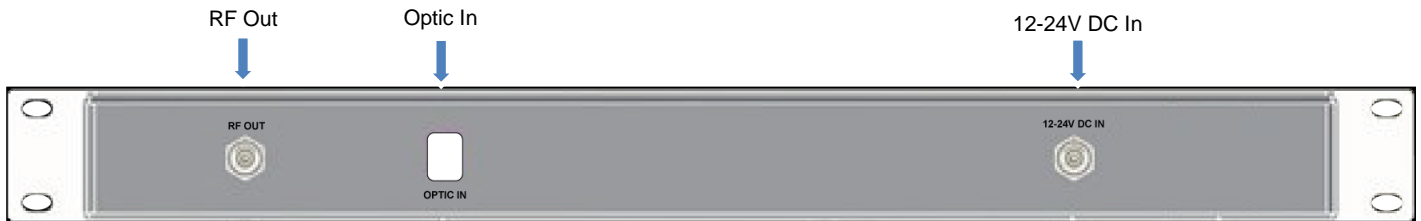
Parameter	Notes	Fiber Optic Receiver	Units
<b>Optical Performance</b>			
Wavelength		1290-1600	nm
Input range		-8 to +2	dBm
Input AGC range		-6 to +2	dBm
<b>RF Performance</b>			
Bandwidth		45-1220	MHz
Gain Flatness		± 1,5	dB
Gain Control	Display	0 to 20 dB in 1 dB steps	dB
Slope Control	Display	0 to 20 dB in 1 dB steps	dB
Output Return Loss		Typ. ≤ -14	dB
Test Points		-30 ± 1,5	dB
<b>Link Performance</b>			
0 dBm optical input power, NTSC 74 analog channels, 109.25 to 547.25 MHz, +75 SC-QAM-256 digital channels, 555 to 999 MHz -6 dB offset relative to the analog carrier.			
Output Level		min. 40 dBmV (stable from -6 to +2 dBm optical level due to AGC)	dBmV
CTB		-60	dBc
CSO		-60	dBc
C/N		52	dB
Xmod		57	dBc
MER	0dBm optical input power, Full digital 120 channels, (257 MHz -1209 MHz SC-256-QAM)	38 (min 35 at optical input power -6 dBm)	dB
<b>Electrical &amp; Physical Performance</b>			
Surge Withstand		IEEEEC62.41-Cat.A3 (6kV, 200A)	
Power Consumption		4,5	Watts
Input/Output Connections		SC-APC / F Type	
Operating Temperature Range		20° to 114° F (-7° to 45° C)	° F (° C)
Enclosure		RACK TYPE	
Power Requirement		Input 90-240VAC, 50-60Hz, 1A	
Powering		12-24 VDC external via F type connector	VDC
Weight		4.2 lbs (1.9 kgs)	lbs (kgs)
Dimensions		19"x8.5"x1.75" (484x214x45)	in (mm)

**INTERFACE DIAGRAM**

**1. Front Panel**



**2. Rear Panel**

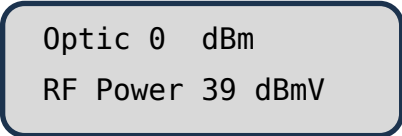


**NOTE TO CATV SYSTEM INSTALLER**

1. This reminder is provided to call the CATV System Installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and in particular specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.
2. Make sure the receiver is turned off.
3. Using a proper fiber connector cleaner, clean the SC/APC connection on the rear of the receiver.
4. Also use a fiber connector cleaner to clean the SC/APC cable connection before it is plugged in to the receiver.

## SETTING - CONTROL

1. When DC power is supplied to the receiver, the LCD Display shows (1) Optical Input Power Level and (2) RF Output Level.

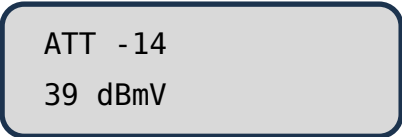


Optic 0 dBm  
RF Power 39 dBmV

2. You can set the various parameters from the front panel. Press [MODE/OK] button to enter the set-up menu. [ATT] will appear on the LCD Display.
3. At set-up menu, use the [Up] and [Down] buttons to see the different parameters.
4. To exit the set-up menu, use the [Up] and [Down] buttons to see [EXIT] on the LCD Display and then, press [MODE/OK] button. LCD Display shall show (1) Optical Input Power Level and (2) RF Output Level.

### RF Output Level Setting

5. At set-up menu, use the [Up] and [Down] buttons to see [ATT] on the LCD Display. Then, press [MODE/OK] button one more time to activate [ATT] value setting mode.
6. Adjust the [ATT] value by pressing [Up] and [Down] buttons. When desired value is seen on the LCD Display, press [MODE/OK] button to set the new [ATT] value.



ATT -14  
39 dBmV

### Output Equalization Value Adjustment

7. At set-up menu, use the [Up] and [Down] buttons to see [EQ] on the LCD Display. Then, press [MODE/OK] button to activate [EQ] value setting mode.

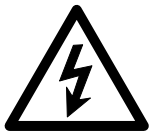
- Adjust the [EQ] value by pressing [Up] and [Down] buttons. When desired value is seen on the LCD Display, press [MODE/OK] button to set the new [EQ] value.

EQ -0  
39 dBmV

### **AGC Status (On/Off) Setting**

- AGC status is "ON" as factory setting.
- To check and change AGC status, at set-up menu, use the [Up] and [Down] buttons to see [AGC] on the LCD Display. Then, press [MODE/OK] button to activate [AGC] status setting mode.
- Adjust the [AGC] status by pressing [Up] and [Down] buttons. When desired status is seen on the LCD Display, press [MODE/OK] button to set the new [AGC] status.

AGC  
ON

<p>The Lightning flash with arrowhead symbol within an equilateral triangle is intended to alert you to the presence of uninsulated " dangerous voltage " within the products supplementary external power supply enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.</p>	  <h2 style="margin: 0;">CAUTION</h2> <p style="margin: 0;">Risk of Electric Shock Do Not Open</p>	<p>The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product</p>
<p><b>NO SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</b></p>		
<p><b><u>WARNING:</u> TO PREVENT SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. THIS APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING WATER AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.</b></p>		

**INSTALLATION PRECAUTIONS TABLE**

PRECAUTIONS	REQUIREMENT
Ensure easy access to rack wiring	Allow a minimum of 20 in. (50 cm) clearance behind the equipment rack(s).
Facilitate service and maintenance	Allow a minimum of 35 in. (90 cm) clearance in front of the equipment rack(s).
Avoid direct heating or air conditioning	If unavoidable, use deflector plates.
Rack support	Make certain rack supports are sufficiently rigid to support rack(s).
Building leakage	Beware of dripping water onto equipment from leaky roofs, waveguide roof entries, and cold-water pipe condensations.

**LASER RADIATION**



The laser transmitters emit invisible radiation that can cause permanent eye damage. **AVOID DIRECT EXPOSURE TO BEAM.** Operate only with the proper optical fiber installed in the transmitter optical connector. The laser transmitter should be disabled with the front panel switch whenever the optical connector is empty.

