PR8604JL Optical Receiver

PR8604JL is our new high-class 4-way output CATV optical receiver. The pre-amplifier adopts GaAs MMIC meanwhile post-amplifier adopts GaAs module, the optimization circuit design and with 10 years design experience that match to high performance index. The microprocessor control working status meanwhile LED digital display parameter that makes more convenience operation and becoming main products in CATV network.

Ⅰ. Performance Characteristics

- With PIN Photoelectric Converter and High Response.
- Optimization circuit design, SMT process production, optimization signal path, fluency photoelectric signal transmission.
- With specialized RF attenuate IC, Good linear of RF attenuation and equality and high accuracy.
- GaAs amplify, power double output, high gain and low distortion.
- Microprocessor control working status, LED shows all parameters, convenience operation and high stability.
- Optimization AGC performance, when the input power range is - 9 ~ + 2dBm, the output level, CTB and CSO keep constantly.
- Backup data communications interface, it is convenient to connect with network management responder, connecting with network management system.

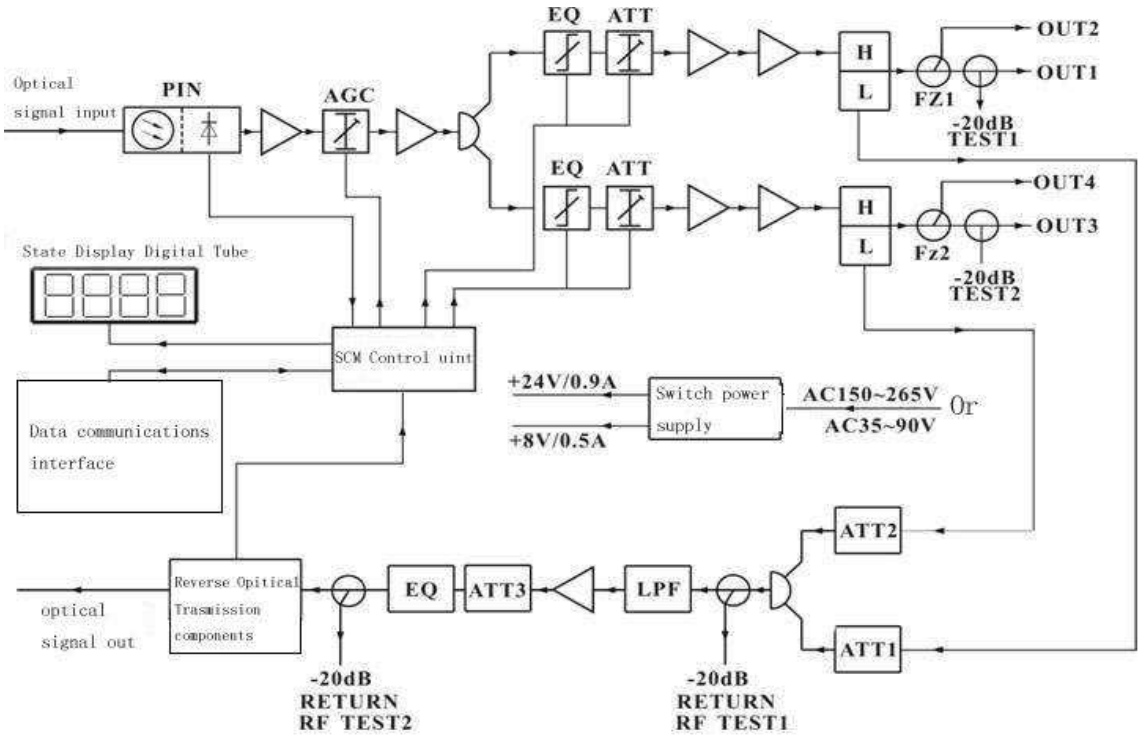
Ⅱ. Technical Parameter

Item	Unit	Technical Parameter	
Optical Parameter			
Receive Optical Power	dBm	-9 ~ +2	
Return Loss	dB	>45	
Optical Wavelength	nm	1100 ~ 1600	
Connector Type		FC/APC or SC/APC	
Fiber Type		Single Mode	
Circuit Performance			
C/N	dB	≥51 (-2dBm Input)	
C/CTB	dB	≥65	Output Level 108 dBμV Balanced 6dB
C/CSO	dB	≥ 60	
RF Performance			
Frequency Range	MHz	45 ~862	
Flatness in Band	dB	±0.75	

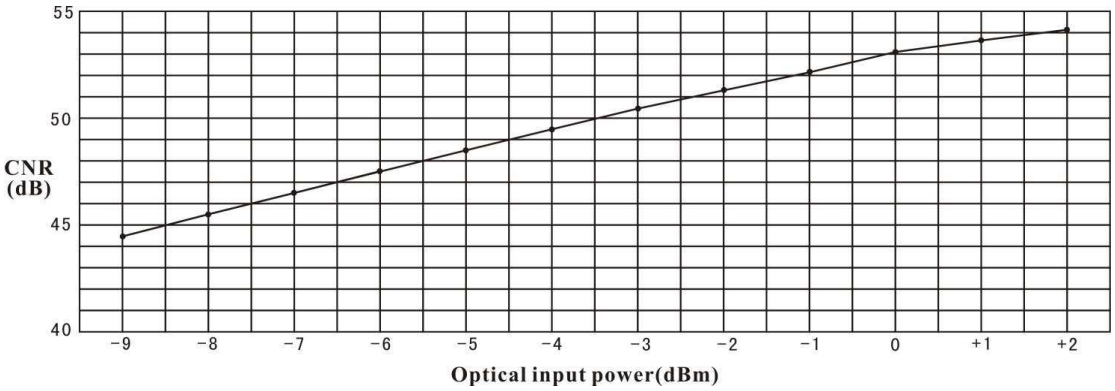
Rated Output Level	dBμV	≥ 108	
Max Output Level	dBμV	≥ 112	
Output Return Loss	dB	≥16(45-550MHz)	≥14(550-862MHz)
Output Impedance	Ω	75	
Electronic Control EQ Range	dB	0 ~ 10	
Electronic Control ATT Range	dBμV	0 ~ 20	
Return Transmit Performance Parameter			
Optical Parameter			
Optical Transmit Wavelength	nm	1310±10	
Output Optical Power	dBm	1 ~ 5	
Connector Type		FC/APC or SC/APC	
RF Parameter			
Frequency Range	MHz	5 ~ 65 or according to the requirement of user	
Flatness in Band	dB	±1	
Input Level	dBμV	85 ~ 90	
Output Impedance	Ω	75	
General Parameter			
Supply Voltage	V	A：AC（150~265）V；B：AC（35~90）V	
Operating Temperature	□	-40~60	
Storage Temperature	□	-40~65	
Relative Humidity	%	Max 95% No Condensation	
Consumption	VA	≤30	
Dimension	mm	240（L）□ 240（W）□ 150（H）	

Note: The parameter of forward RF is tested under the condition of using GaAs 25 dB double power module in the last stage, if you use other module, the parameter will be slightly different.

lll. Block Diagram



lV. Relation Table of Input Optical Power and CNR



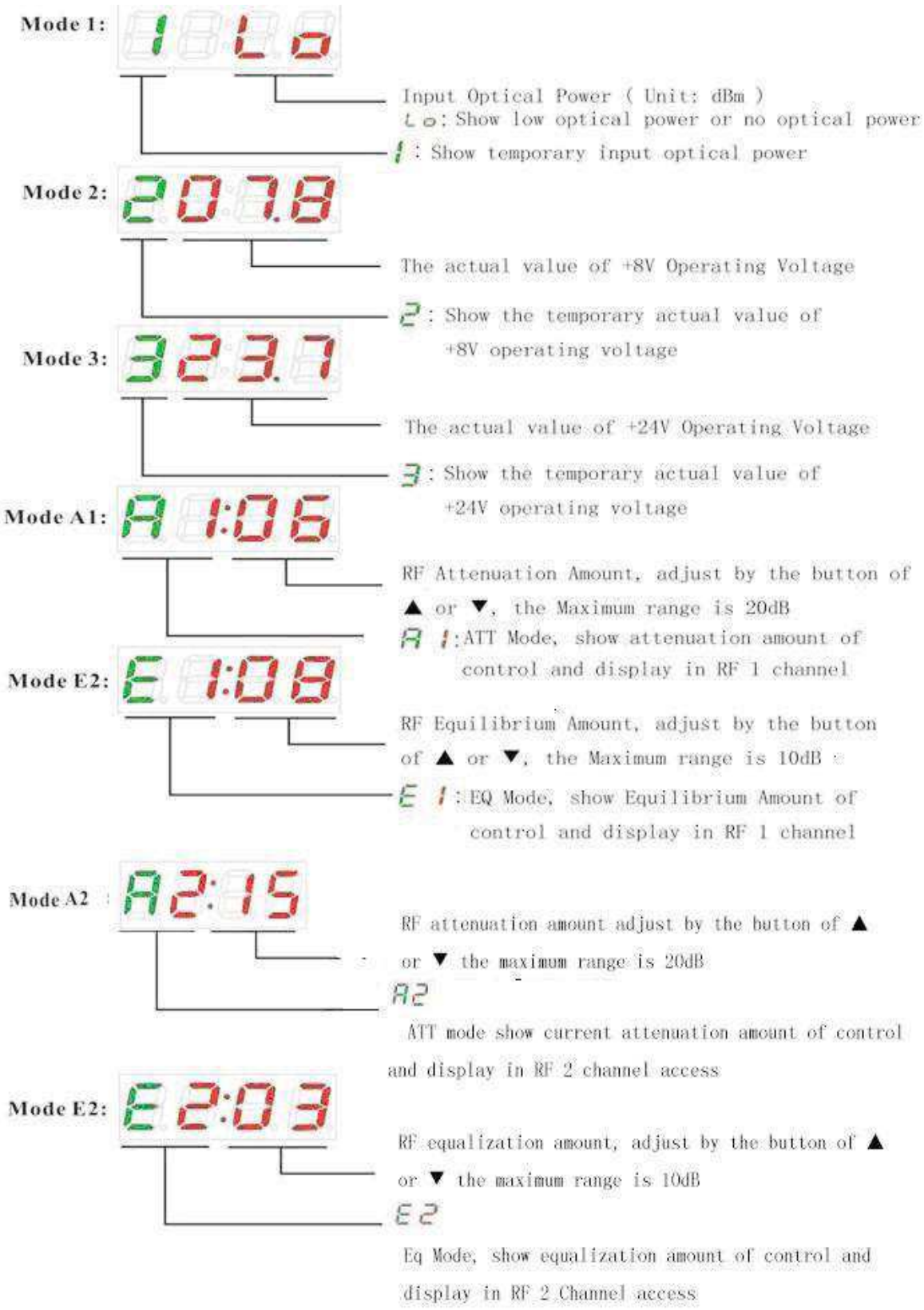
V. Function Display and Instructions

Mode: selection button of control mode, there are seven types of work mode.

▲ : Up button，in the ATT or EQ mode increase ATT or EQ value.

▼ : Down button，in the ATT or EQ mode decrease ATT or EQ value.

Explain by following pictures.


Mode 1:
Input Optical Power (Unit: dBm)
Lo: Show low optical power or no optical power
1 : Show temporary input optical power
Mode 2:
The actual value of +8V Operating Voltage
2 : Show the temporary actual value of
+8V operating voltage
Mode 3:
The actual value of +24V Operating Voltage
3 : Show the temporary actual value of
+24V operating voltage
Mode A1:
RF Attenuation Amount, adjust by the button of
▲ or ▼, the Maximum range is 20dB
A 1:ATT Mode, show attenuation amount of
control and display in RF 1 channel
Mode E2:
RF Equilibrium Amount, adjust by the button
of ▲ or ▼, the Maximum range is 10dB
E 1 : EQ Mode, show Equilibrium Amount of
control and display in RF 1 channel
Mode A2
RF attenuation amount adjust by the button of ▲
or ▼ the maximum range is 20dB
A2
ATT mode show current attenuation amount of control
and display in RF 2 channel access
Mode E2:
RF equalization amount, adjust by the button of ▲
or ▼ the maximum range is 10dB
E2
Eq Mode, show equalization amount of control and
display in RF 2 Channel access

Mode 4: 

Input the current real network system channels, so press "▲" or "▼" to adjust, can input 200 max.

4 : This manual can be showed that the input real channels, so that calculate the RF level output

Mode 5: 

Output level from RF port 1 (dBuV)

5 : Display the output level from RF portl in current systerm.

Mode 5: 

Output level from RF port 2 (dBuV)

6 : Display the output level from RF portl in current systerm

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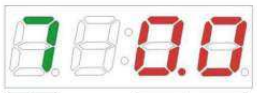
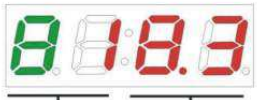
The following menu for two reverse optical components made of the state shows that if the reverse is not configured optical components made when the two were set to hide the menu, insert the optical components made after the two menu will automatically display

Mode 6: 

reverse output optical power(dBm)

0.0 : Current output opticalpower

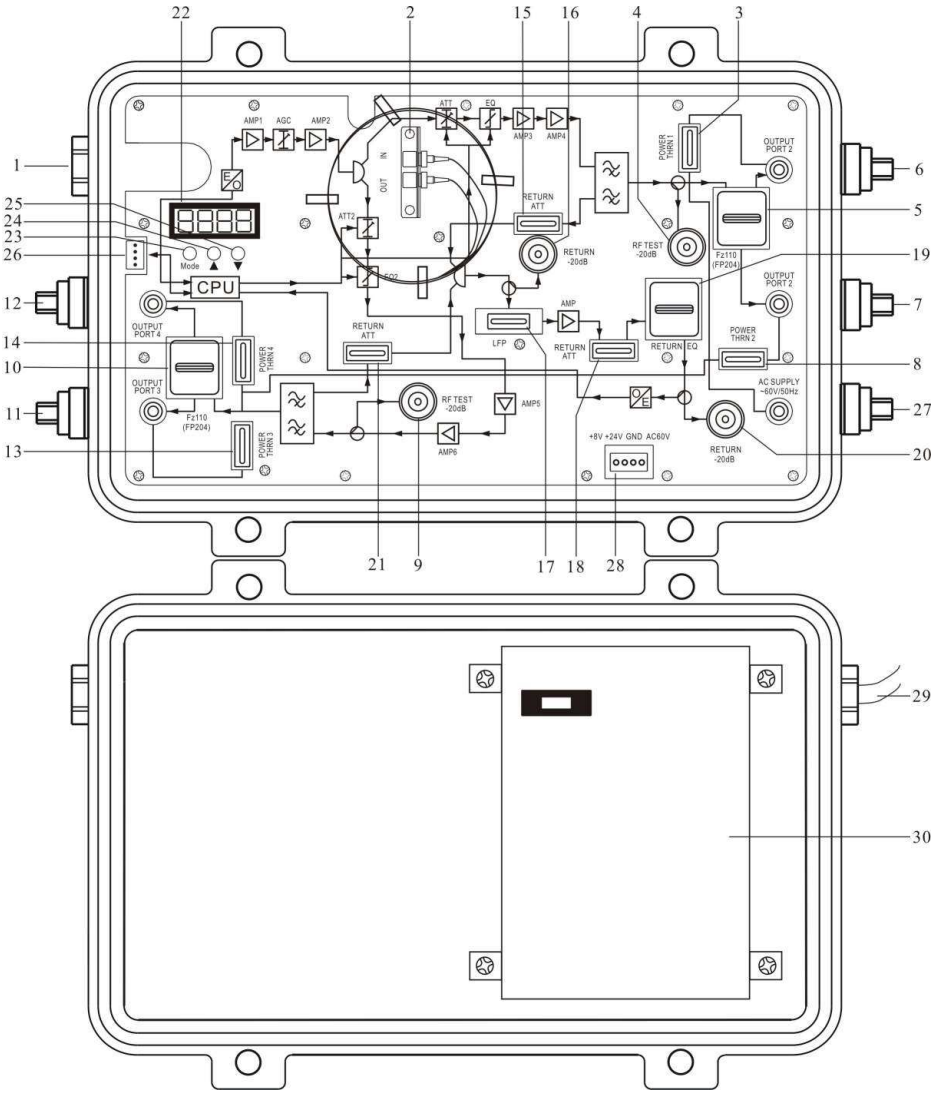
7 : Reverse output optical power

Mode 7: 

Reverse caser bias current(mA)

8 : Reverse laser bias current

VI. Structure Scheme



1.Optical Fiber Input
2.Optical Fiber Adapter
3.Power Pass Inserter 1
4. -20dB Output RF TEST 1
5. Output Tap or Splitter 1
6.RF Output 1
7. RF Output 2
8. Power pass inserter 2
9.-20dB Output RF TEST
10. Output Tap or Splitter 2
11.RF Output 3
12. RF Output 4
13.Power Pass Inserter 3
14.Power Pass Inserter 4
15.Reverse RF ATT 1
16. -20dB Reverse RF TEST 1
17.Low Access Filter
18. Reverse RF ATT 2
19.Reverse RF EQ
20. -20dB Reverse RF TEST 2
21.Reverse RF ATT 3
22.State Display Digital Tube
23.Control Mode Selection Button
24. UP Button
25.Down Button
26. Digital Transmission Surface
27.AC60V Input (B)
28. Main Board Power Input
29.AC220V Input (A)
30. Power Supply