



# **UPSTREAM TRANSMITTER**

**MW-98(OT)-1**

**MW-98(OT)-2**

## **USER'S MANUAL**

*SHEN ZHEN MAI WEI CABLE TV EQUIPMENT CO.,LTD.*

## INTRODUCTION

Having wide experience and advanced technology in designing and manufacturing CATV product, the MAIWEI has successfully developed a low-output-level optical transmitter MW—98(OT)-x , specially designed for MW-982FMO system and return-path optical fiber transmitting system..

## FEATURES

- 45~860 MHz bandwidth
- APC circuit
- Overload protection system
- Switching mode power supply
- Optical output power test point on the front panel

## SPECIFICATION

### 1. Type ( see Table 1 )

Table 1

Model	Output power	Laser Type
MW-98(OT)-1	1mW	FP
MW-98(OT)-2	2mW	DFB

### 2. Optical output

Wave length	1310±40nm
Laser Type	FP, DFB
Optical output power	1mV, 2mW
Connector	SC/APC
Fiber core/cladding	9/125μm

### 3. RF characteristics

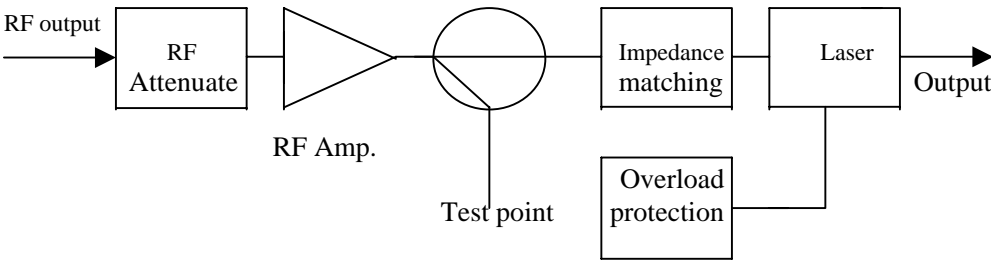
Frequency response	5~200MHz or 45~860MHz
Flatness	±0.55dB

RF Input return loss	≥16dB
Input impedance	75Ω
RF attenuator	16dB
Connector	F type

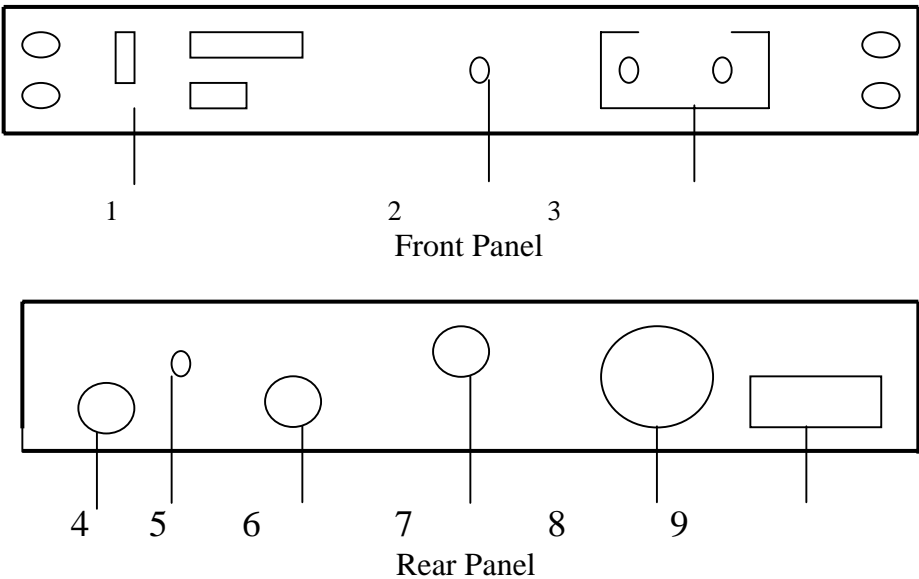
**4.Environment**

Operating temperature	-10--40°C
Storage temperature	-30°C--+80°C

**Block Diagram**



**Board Illustration**



## **A. Front Panel**

1. ON/STANDBY key
2. Power Indicating Lamp
3. Optical Output Power Test Point

## **B. Rear Panel**

4. RF Input
5. Optical Modulation Efficiency Adjustment
6. RF Input Level Test Point
7. Optical Output
8. Fan
9. Power cord for AC power input

## **Installation**

1. Power Connection Put the plug into a power socket, set the ON / STANDBY key on the front panel to “on” side, and the power indicating lamp is lit. Measure the voltage of the Optical Output Power Test Point with a DC voltmeter to see if it coincides with the value on the rear panel.
2. Fiber Connection Clean the APC head of the optical service cable, and connect it to the FC/APC adapter on the rear panel.
3. Standard Optical Modulation Efficiency It is preset 4%. To obtain the parameter, use a Field-strength Meter to test the level of the “RF Input Level Test Point”. Compare the result with the standard value listed on the rear panel. If the result is consistent with the standard value, it shows that the OME value is 4%. Or

else, adjust the “Optical Modulation Efficiency Adjustment” key to make them consistent. It indicates that the RF input level is too powerful or faint if the above- mentioned step proves to be no effect.

4. Optical Modulation Efficiency(OME)Adjustment If you want to set another OME value, please operate as step 3. You can set the OME value By changing the level of “RF Input Level Test Point” . Suppose the level is A ( listed on the rear pane ) when the OME is 4%, and the OME is as follows

Table 2

Tested Level	OME
A	4%
A+6	8%
A+8	10%
A+11.5	15%
A+14	20%
A+16	25%
A+17.5	30%
A+19	35%

Table 3

Channel Number	Recommended Max. OME
1	30%
2	25%
4	15%
8	10%
12	8%
18	7%

**5. Application:** MW-98(OT)-x Optical Transmitter is designed mainly for return-path transmitting system use, it allows to transit 1~ 4 channels. The distortion target will obviously increase if the system contains more channels.