



## 1550nm Direct Modulation Optical Transmitter · MX-T1500A Series



### USER MANUAL



#### PRODUCT DESCRIPTION

The Maxcom MX-T1500A is a 1550nm direct modulation optical transmitter with high index and AGC function. Maxcom incorporates a high linearity and a low chirp DFB laser, built-in pre-distortion compensation and AGC, APC, ATC closed loop control, which improve the performance index. It may be used in a FTTx application for transmitting Digital QAM CATV and DOCSIS RF signals over fiber. Optimized for networks under 30km using an EDFA. This transmitter may also be ordered with Optional WDM narrow-band laser (standard ITU wavelengths available).

- MX-T1500AC optical transmitter: Standard CATV wavelength
- MX-T1500AU optical transmitter: ITU standard DWDM wavelength

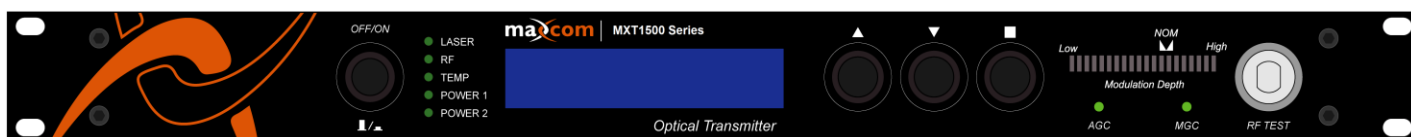


#### PRODUCT FEATURES

- Low chirp, high linearity DFB laser, chirp compensation.
- Dual module RF driver, highly efficient laser pre-distortion adjustment.
- Full-automatic OMI control, AGC & MGC.
- Modulation status display.
- Standard optical output is +10 dBm
- Auto temperature control to ensure long laser life.
- Commonly used in RFoG or RF Overlay networks 30km or less

## Transmitter Controls, Indicators, and Alarms

This section of the manual will provide an overview of the available menus in the MX-T1500A series transmitter. All instructions in this Section refer to the representation of the front panel shown in the diagram below. The user may scroll through the TX menus by using the push buttons that are on the front panel.



### Operation of the front panel



#### Open menu

- A. Plug in power supply
- B. Turn on power switch in the rear panel (AC units)

Front panel display "KEY OFF"

|        |                |       |
|--------|----------------|-------|
| Laser  | Indicator lamp | Red   |
| RF     | Indicator lamp | Red   |
| TEMP   | Indicator lamp | Green |
| POWER1 | Indicator lamp | Green |
| POWER2 | Indicator lamp | Green |

- C. Press laser start-up key switch

The front panel shows "**KEY ON...**". Laser Indicator lamp will turn to green from red when the input optic power is in the normal range and the unit enters self-diagnostics. After performing the check, the unit will begin operating and display: "Descriptor".

#### 1.1.1 Start-up main menu

Press ▲\▼ button and the following menu will be displayed in sequence.

##### **Menu # 1 - Descriptor**

Read-only menu, indicates the model of this equipment

##### **Menu # 2 - LD S/N**

Read-only menu, indicates the serial-number

##### **Menu # 3 - OUTPUT**

Read-only menu, displays the optical output power in dBm



**Menu # 4 - LD CURRENT**

Read-only menu, displays the laser of current in mA

**Menu # 5 - LD TEMP**

Read-only menu, displays the laser temperature in °C

**Menu # 6 - LD COOLING**

Read-only menu, displays the amount of current that the Thermoelectric Cooler requires to maintain the laser temperature at nominal 25 °C

**Menu # 7 - RF MODE**

Current RF mode, display AGC/MGC . If displaying RF Mode = AGC, AGC is selected. If displaying RF Mode = MGC, MGC was selected

**Menu # 8 - RF Level**

Read-only menu, indicates the RF input level

**Menu # 9 - UNIT TEMP**

Read-only menu, indicates the system temperature

**Menu # 10 - +5V Monitor**

Read-only menu, displays the voltage +5V

**Menu # 11 - -5V Monitor**

Read-only menu, displays the voltage -5V

**Menu # 12 - +24V Monitor**

Read-only menu, displays the voltage +24V

**Menu # 13 - IP**

Adjustable feature, displays the IP address of SNMP

**Menu # 14 - Sub**

Adjustable list, display the address of net mask

**Menu # 15 - GW**

Adjustable feature, displays the gateway address of SNMP

**Menu # 16 - TR1**

Adjustable feature, displays the TRAP1 address of SNMP

**Menu # 17 - TR2**

Adjustable feature, displays the TRAP2 address of SNMP

\*Note, some menu functions may differ depending on the options supplied

## Menu assistant manual

### 1. RF Mode Setting

The default control mode is AGC. When the RF mode menu displays RF Mode=AGC, press the "Select" key and the menu will display RF Mode=. Then press "▲" or "▼", the menu will display RF Mode=Manual and the change from AGC to MGC has been completed after pressing " Select " again. If you would like to change the current control mode back into AGC, press the " Select " key when the current menu displays RF Mode=Manual, then the menu will display RF Mode= . Then press "▲" or "▼", the change from Manual to AGC will be completed after pressing " Select " to save and exit. The menu will display RF Mode=AGC.

### 2. IP Address Setting

Press ▲\▼ key to select the menu that you would like to edit.

Press " Select " to enter the modification status, then press ▲\▼ button to increase\decrease the value, and press " Select " to shift. Press the "Select " button to the end of the address to save.

For example, edit IP setup menu, IP: 192.168.000.015; if changing a 5 to 6, Press " Select " to enter the modification status, and then press " Select " again to choose the number 5. Use ▲ key to change 5 to 6, and press " Select " at the end to save edited IP:192.168.000.016.

## Description of alarms

The status indication (LED) is near the power supply switch in the front panel. When it is green, the device is working properly; when it is red, the laser does not operate; when it is blinking red, there is an alarm.

- A. With the power supply on and if the unit is operating properly, the digital panel will display "READY: KEY OFF" and the red light will illuminate.
- B. Turn on using the key, the digital panel will display "KEY OFF". After a few seconds, the laser will turn on automatically and the indication light will turn from Red to Green.
- C. Pressing the ▲\▼ buttons will display parameters.
- D. If a fault listed above has occurred, there will be an alarm (Red light flashing), The Microprocessor will turn off the laser automatically, and digital panel will display the reason for the fault.
- E. To protect the laser, the power supply of the laser has a time-delay function. After turning on with the key, the laser will begin to operate after 10 seconds.