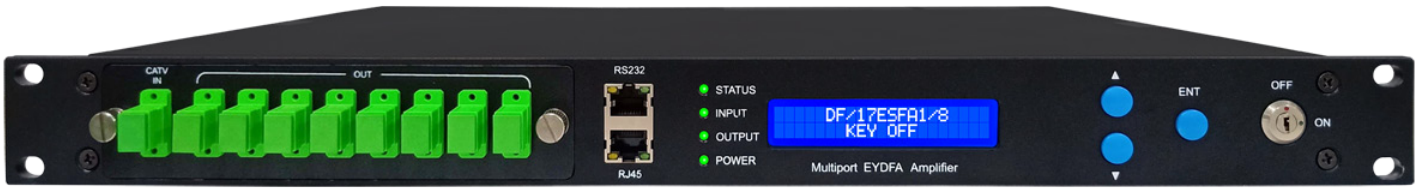
1550 nm EYDFA INSTRUCTION MANUAL

PRODUCT CODE: DF/17ESFA1/8



JONSA AUSTRALIA

SAFETY PRECAUTIONS

WARNING: Avoid personal injury and product damage by complying with the following important operating and maintenance instructions.

Avoid Electric Shock

WARNING: To reduce the risk of an electric shock, perform only the instructions that are included in this instruction manual. Refer all servicing to a qualified service technician.

Do not apply power to the EYDFA until all components have been installed and all of the wiring has been properly terminated. Failure to do so may result in damage to the product and this will void the manufacturer's warranty.

Do not attempt to terminate, change or un-install any of the wiring without first switching off the unit and unplugging the power cord/s from the EYDFA. Be sure to follow the correct shutdown procedure.

The power supply voltage must not exceed the supplier recommended VDC, otherwise the EYDFA could suffer irreparable damage and subsequent invalidation of the warranty.

Note:

- Do not connect the EYDFA to the power if the power cord/s are damaged
- Do not plug the EYDFA into the mains supply until all cables have been connected correctly
- Do not cut the power cord

Servicing

WARNING: Avoid electric shock! Opening or removing the cover may expose you to dangerous voltages. Do not open the cover of this product and attempt service unless instructed to do so in the operating instructions. Refer all servicing to qualified personnel only.

Cleaning, Water, Moisture, Open Flame

WARNING: Do not expose any component to moisture. Doing so can create electrical hazards or render the component unusable. Exposure to moisture will also void the warranty on the system. To protect this product against damage from moisture and open flames, do the following:

- Before cleaning, unplug this product from the AC outlet. Do not use liquid or aerosol cleaners. Use a dry cloth for cleaning
- Avoid placing the modulator next to central heating components and in areas of high humidity
- Do not expose this product to moisture
- Do not place this product on a wet surface or spill liquids on or near this product
- Do not place or use candles or other open flames near or on this product

Ventilation

WARNING: To protect this product against damage from overheating, do the following:

- This product has openings for ventilation to protect it from overheating. To ensure product reliability, do not block or cover these openings
- Do not open this product
- Do not push objects through openings in the product or enclosure
- If the EYDFA has been kept in cold conditions for a long time, keep it in a warm room no less than 2 hours before plugging it into the mains.
- Do not place the EYDFA on top or underneath another device, as this could cause overheating

Placement

WARNING: Avoid personal injury and damage to this product! An unstable surface may cause this product to fall. To protect this product against damage from breakage, do the following:

- Place this product close enough to a mains AC outlet to accommodate the length of the product power cord
- Route all power supply cords so that people cannot walk on, or place objects on, or lean objects against them. This can pinch or damage the cords. Pay particular attention to cords at plugs, outlets and the points where the cords exit the product
- Make sure the mounting surface or rack is stable and can support the size and weight of this product

- Move any appliance and cart combination with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart to overturn

Grounding Terminal

WARNING: If this product is equipped with an external grounding terminal, attach one end of a 2.5mm to the grounding terminal; then, attach the other end of the wire to an earth ground, such as an equipment rack that is grounded or CET.

INTRODUCTION

1.1 Product Overview

This is an all-in-one EYDFA for the use in large fibre distribution networks. Combined with our internal or external modulation transmitters, this unit provides long life stability and reliability in commercial environments.

1.2 Features

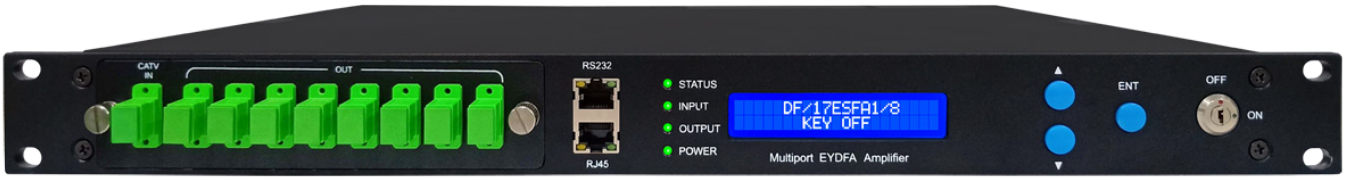
- Module design, simple installation
- Single pump laser
- Network Management System
- 19" rack mounting in a 1RU space

1550 nm ERBIUM-YTERBIUM-DOPED FIBRE AMPLIFIER

CONTENTS

FRONT PANEL

1.3 Front Panel



1.4 Front Panel Instruction

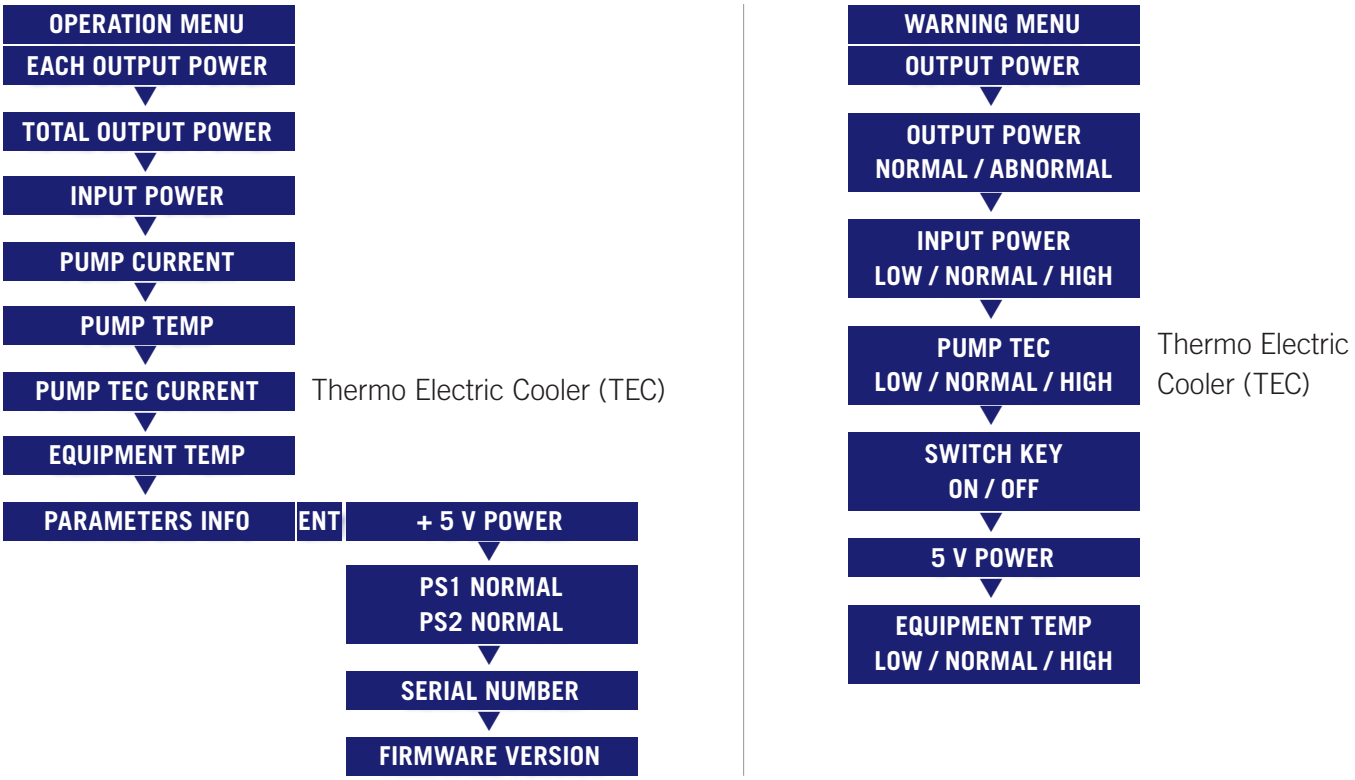
Name	Description	Colour	Colour Status	Instruction
STATUS	EYDFA Status	Red & Green	Green	Working
			Red	Abnormal
INPUT	Optical Signal Input Status	Red & Green	Green	Working
			Red	Abnormal
OUTPUT	Optical Signal Output Status	Red & Green	Green	Working
			Red	Abnormal
POWER	Power Status	Red & Green	Green	Working
			Red	Abnormal
KEY	Laser ON / OFF Status	N/A	N/A	ON - Turns Laser ON
			N/A	OFF - Turns Laser OFF
RS232	NMS for Local Computers	N/A	N/A	N/A
RJ45	SNMP for Remote Computers	N/A	N/A	N/A

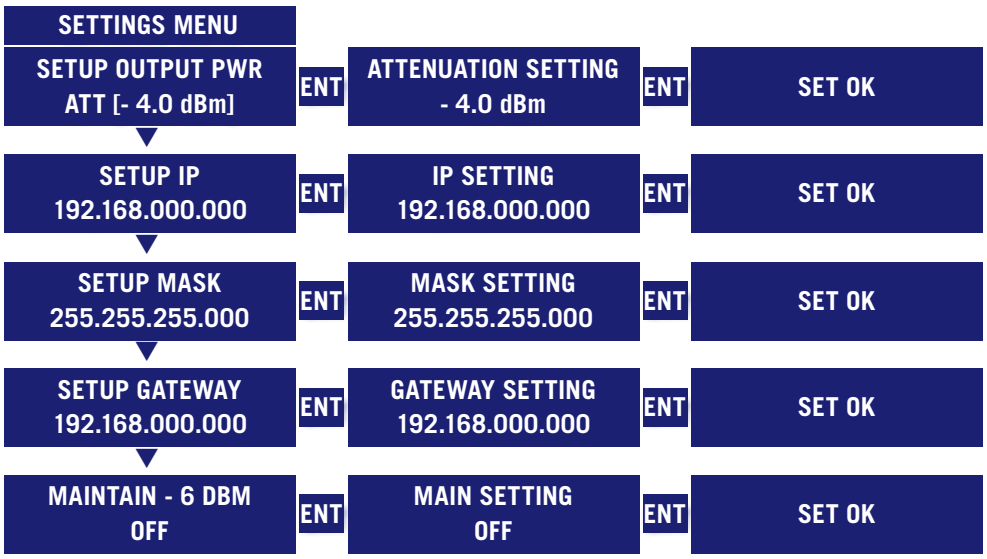
1.5 Front Panel Button Instruction

Button Name	Function
Switch	Controlled by Key: Turn ON or OFF
▼	Page Down
▲	Page Up
ENT	Select and Setup Data

1.6 Front Panel LCD Menu

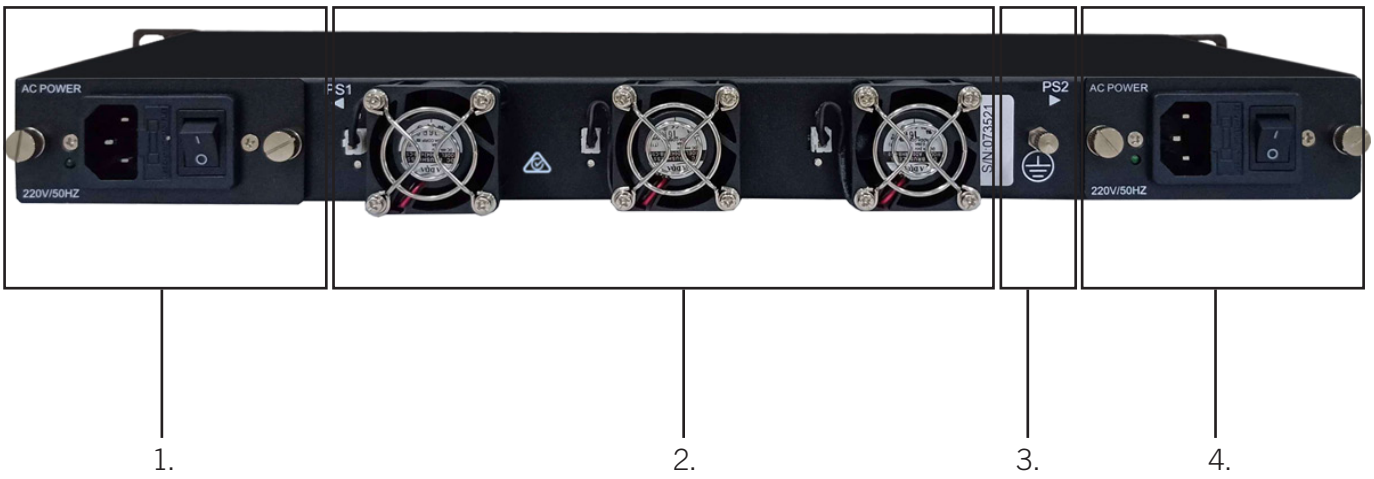
Use the page up ▲ or the page down ▲ keys to scroll through the menu. Press the "ENT" key to enter or confirm a setting.





REAR PANEL

1.7 Rear Panel



1.8 Rear Panel Instruction

No.	Function
1.	Power Supply 1
2.	Fan Modules
3.	Earth Terminal
4.	Power Supply 2 (Backup)

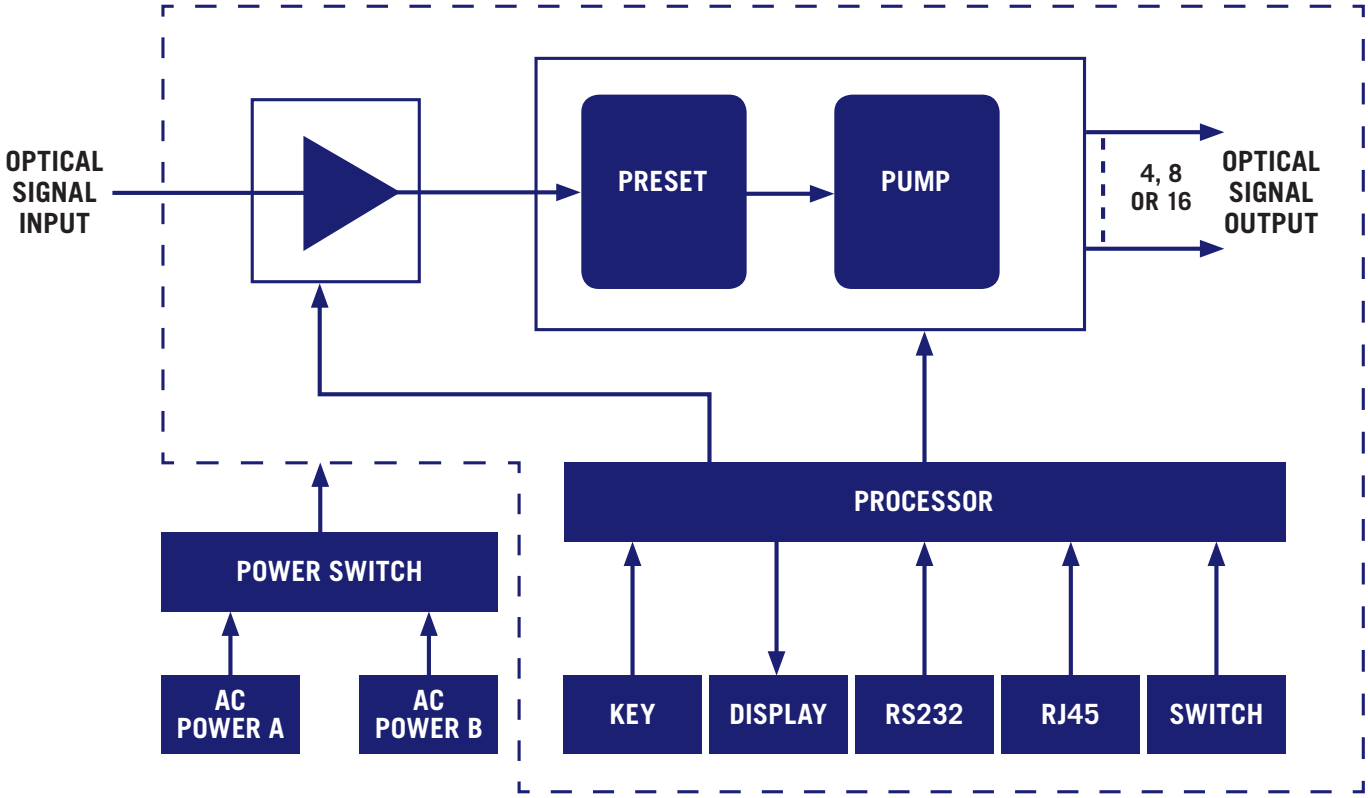
SPECIFICATIONS

1.9 Specifications

Specifications			
Optical Parameters	Input Level	- 3 ... + 10	dBm
	Wavelength	1550 (1540 ... 1565)	nm
	Output	+ 17 (Per Output Port)	dBm
	Output Stability	± 0.3	dB
	Return Loss	≥ 45	dB
	Noise Figure	< 6 (Optical Input 0 dBm)	dBm
	Interface Connectors	SC/APC	
Other	NMS Port	RJ45 (SNMP), RS232	
	Power Supply	AC 90 V … 265 V	VAC
	Consumption	≤ 80	W
	Operating Temperature	0 ... + 50	°C
	Storage Temperature	- 10 + 60	°C
	Humidity	20 ... 85	%
	Weight	7	Kg's
	Dimensions (H x W x D)	370 x 486 x 88	mm

DIAGRAM

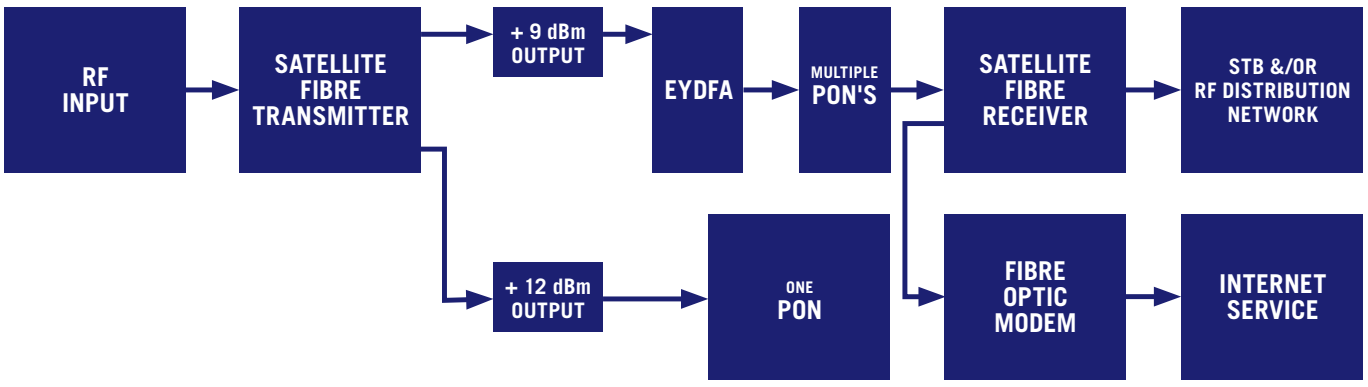
1.10 Diagram



INSTALLATION DIAGRAMS

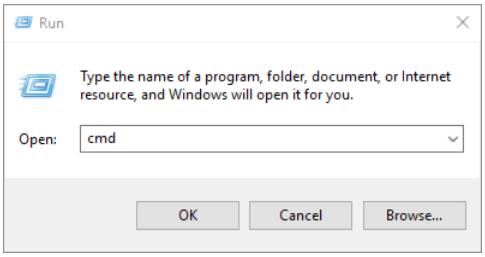
1.11 Device Installation Diagram

1.12 System Installation Diagram

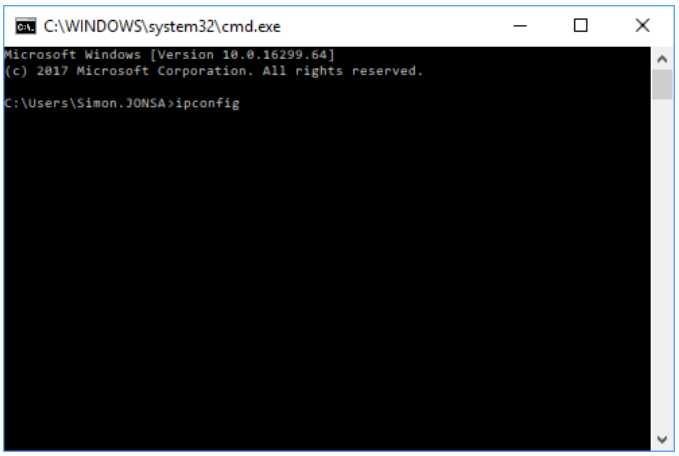


2.1 NMS IP Setup and Configuration

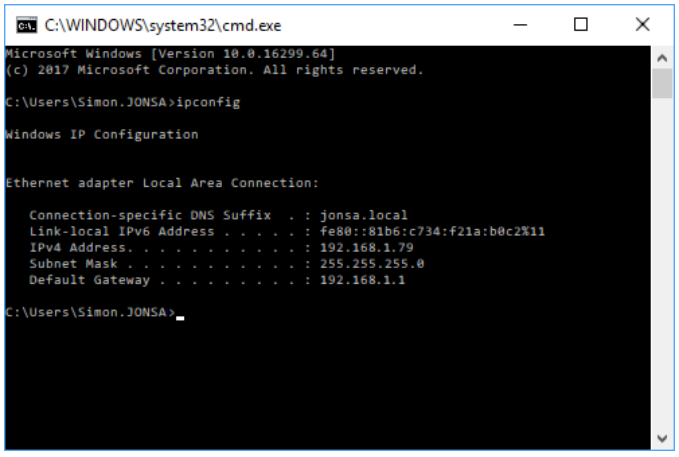
You need to ensure your PC is on the same network IP range as the EYDFA. To check this please follow these procedures: Hold down the Windows Key the press R [Windows Key +R], this will bring up the RUN window Then type in “cmd”, then click OK



- Once Command Prompt opens, type in: ipconfig then hit ENTER, this will show your PC's IP range:

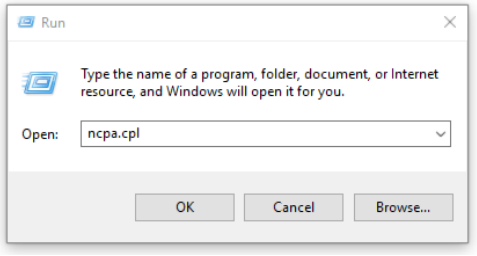


- This example shows that this PC is already in the IP range to see the EYDFA, but if it was different, then please follow the procedures on the following page "To change the IP address of the PC".

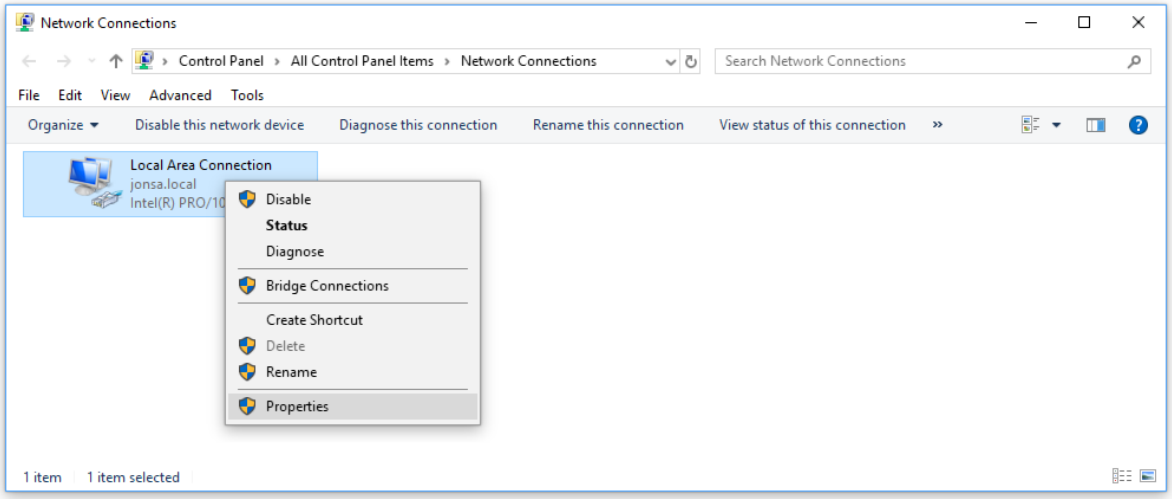


CHANGING IP SETTINGS

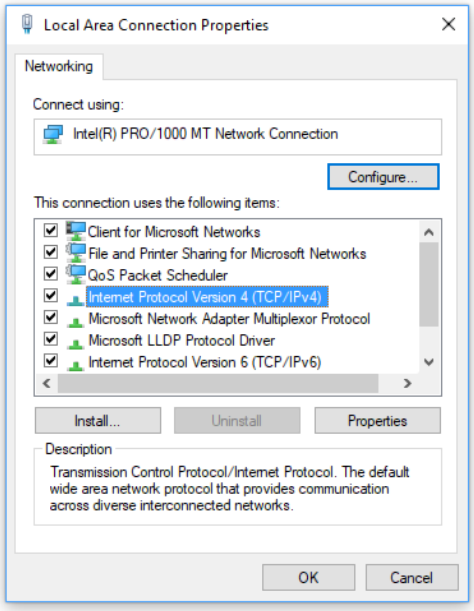
- To change the IP address of the PC, settings would have to be changed in “Network Connections”, Press the Windows Key + R, then type “ncpa.cpl” as shown below, click OK



- This command will open up your network connections, locate your Ethernet card, should be “Local Area Network”, it should say that it’s connected or unidentified network.
- Right click on the Ethernet icon, select “Properties” with a left click. This will now provide you with network protocol connections the PC uses.

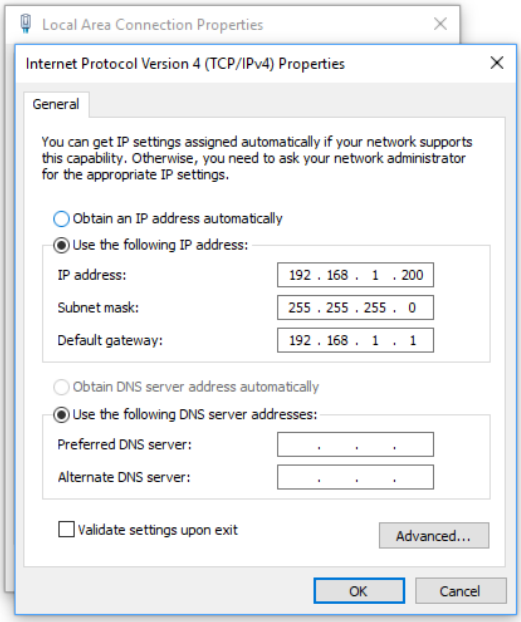


- Select “Internet Protocol Version 4 (TCP/IPv4)”, then click “Properties”



CHANGING IP SETTINGS

- As default the settings should be set to “Obtain an IP Address automatically”
- Assigning an IP to the PC, ensure that this IP is not the same as the one you used on the EYDFA or any other PC’s you have connected to the local area network. On the example used below 192.168.1.200, you can assign any IP address of the same network range. If you assign a different IP range (e.g. 192.168.5.xx). The PC will not locate the EYDFA on the network.
- Click “OK” to finish your PC settings



IP ADDRESS 192.168.1.200

SUBNET MASK 255.255.255.0

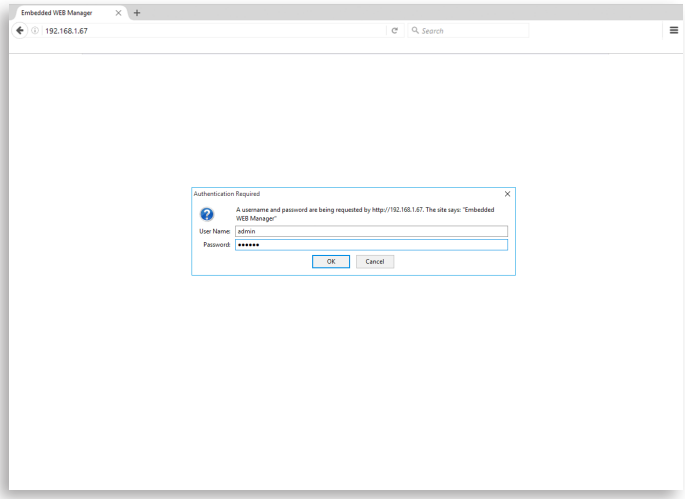
GATEWAY 192.168.1.1

2.2 Default Configuration

IP Network Configuration	Description	
Name	admin	
Password	123456	
IP Address	192.168.1.150 [DEFAULT]	Examples in this Manual refer to: 192.168.1.67, this is Not the Default IP Address
Subnet Mask	255.255.255.0	
Gateway	192.168.1.1	

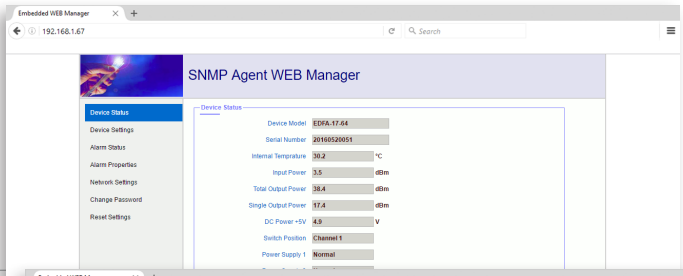
2.3 Browser Interface

- Open an internet browser and type in the IP Address: 192.168.1.67 [Example Only]
  Default IP Address: 192.168.1.150
  Then enter the Username: admin
  Then enter the Password: 123456

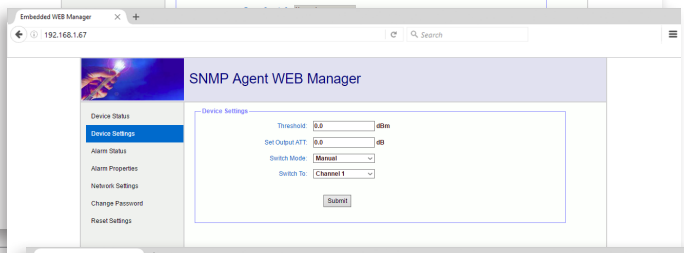


WEB NMS OPERATION - BROWSER INTERFACE

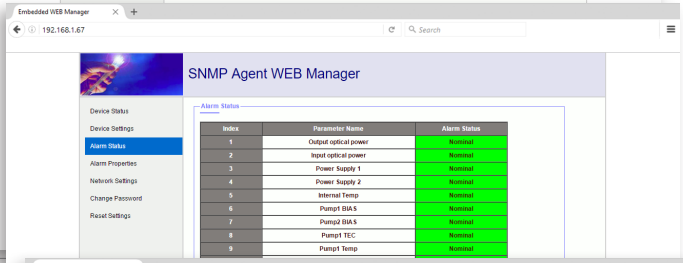
- Upon login, the Device Status menu is first to be shown. The EYDFA parameters are shown in the Device Status.



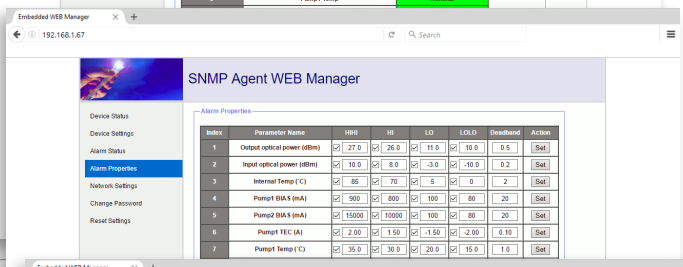
- In the Device Settings menu. You can change the mode, output attenuation and the threshold for each of the output channels.



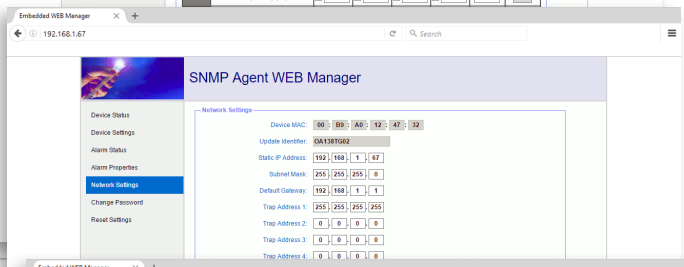
- In the Alarm Status menu. Should there be an issue with the EYDFA, the Alarm Status will display the error/s. Refer to the example above.



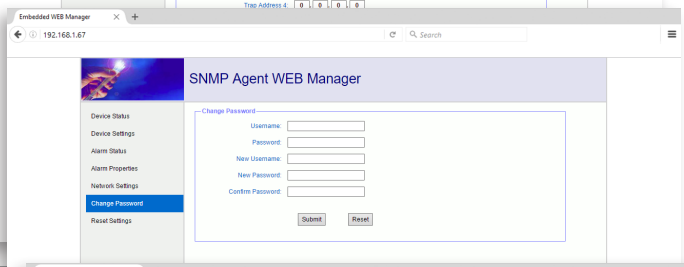
- In the Alarm Properties menu, this allows the user to control the alarm notification parameters and set them accordingly.



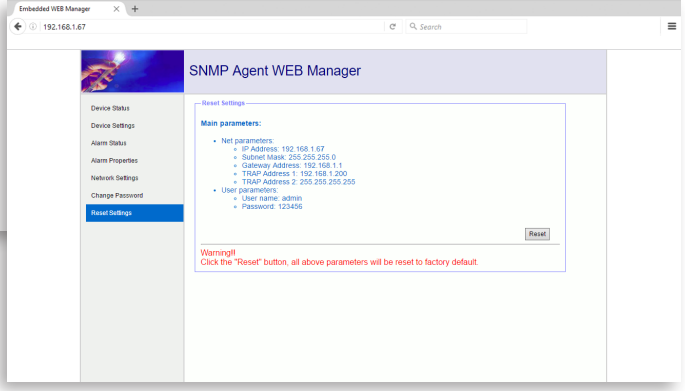
- In the Network Settings menu, the user can manually configure the IP settings according to the users network environment and settings.



- In the Change Password menu, the user can change the username and password to their own preference.



- In the Reset Settings menu, the user can restore the parameters back to the factory default settings.



3.1 Troubleshooting

Q. The status light on the EYDFA is RED?
A. Check and make sure the other LED indicators are GREEN, if not and for example, the Input Status is RED, then the Optical Input Level is not within specification of: - 3 dBm to + 10 dBm. Measure and adjust or attenuate this input level which will turn the Optical Input Level Status to GREEN, this in turn will also turn the EYDFA Status to GREEN.

Q. There is no Optical Output?
A. Check the KEY position, it is likely it is in the OFF position, turn the key into the ON position, this will ensure the laser is turned ON. The Optical Output should now be working, you can also check the Optical Output Status which will be GREEN.

Q. I cannot access the EYDFA on my local area network.
A. Follow the instructions in this manual and ensure your computer is on the same IP range as the EYDFA. Once you have checked and ensured the computer is on the same LAN, then you can open the browser and type in the default IP address, you should now have access to the EYDFA user interface.

3.2 Testing, Cleaning and Handling

Ensure you do not test the unit without using a Fibre connector cleaner. It is important to always clean the connector and the SC/APC socket on the EYDFA prior to connecting the patch leads.

HANDLING CAUTION: It is imperative that you NEVER LOOK at the end of the FIBRE CONNECTOR when plugged into the EYDFA, this will cause serious eye damage and the possibility of BLINDNESS can happen! Always turn off the EYDFA when connecting the patch leads to avoid serious injury. Safe work practices must be adhered to when using this equipment.

1550 nm ERBIUM-YTERBIUM-DOPED FIBRE AMPLIFIER

WARRANTY

ATTACH YOUR PROOF OF PURCHASE HERE...

Please keep a copy of your proof of purchase with this Instruction Manual / Warranty.

DO NOT SEND BACK TO JONSA AUSTRALIA
PLEASE READ THIS WARRANTY AND KEEP IT WITH YOUR PURCHASE RECEIPT

Please complete these details and retain your original proof of purchase as you will require both documents to claim this as a warranty repair. Keep the documents in a safe place for future reference should you need to return this product to your place of purchase, during the warranty period of up to 12 months from the date of purchase.

Customer Details			
Name	First Name		Serial Number
	Surname		
Address	Name [St, Ave, Drv etc]		State
	Suburb		Post Code

Dealer or Installer Details			
Name	First Name		Serial Number
	Surname		
Address	Name [St, Ave, Drv etc]		State
	Suburb		Post Code

Please Note:

- Before making a claim on this product, please check your Instruction Manual. You will have to pay attention to non-product problems and operator errors.
- This warranty does not cover faults by the owners misuse, including but not limited to damage from shock, or from foreign substances such as dirt or liquid entering the product.

Specifications within this instruction manual are subject to change without notice. V1.2

Head Office

Lidcombe Business Park,
Unit D2,
3 - 29 Birnie Avenue,
Lidcombe
NSW 2141
Australia

PO Box 6147,
Silverwater
NSW 1811
Australia

WA branch

Unit 1,
7 Mallaig Way,
Canning Vale
WA 6155
Australia
saleswa@jonsa.com.au

Copyright © Jonsa Australia Pty Ltd. All Rights Reserved.

+61 1300 660 155 +61 1300 250 407 www.jonsa.com.au sales@jonsa.com.au