High Power Remote Unit 2.3/2.5GHz Tune up procedure

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1 INTRODUCTION

This document is primarily written for those who are new to High Power Remote Unit 2.3/2.5GHz and wish to tune up the equipment.

The document is applicable to below products from Comba.

Model number: GX-WCSM2500M-40; GX-WCSS2500S-40

Corning MobileAccess OCH (Optical Central Hub) is needed to be connected to equipment as a system for the entire test.

2 PREPARATION

This section will be discussing on:

1 - Preparation for those who are going to operate the equipment;

2 - How to connect to equipment for setting;

3 - LED Indicator description;

2.1. PERSONAL PREPARATION

1 - The following checklist will help to make sure relevant personnel get ready before operation.

The personnel preparation list:

a. Only trained or qualified personnel is recommended for performing tuning with equipment. Operating person should be with necessary knowledge of electronic, RF, and familiar with local regulation, rules.

b. Personnel shall read through the manual/instructions/guide carefully before operation.

c. Check if there is warning/alert sign on the equipment to avoid possible danger.

d. Wear proper cloth. If necessary, equip with PPE (Personal Protective Equipment).

e. Before operation, procedures and data recording form should be prepared.

2 - Package inspection

Visual inspect the external product package, and check internal items according to pack-ing list. Prepare ample space and easy accessible to socket-outlet. For tools reference please find in manual.

3 - Tools preparation

Please prepare tools/cables and measuring instruments ready before hand-on. For tools recommendation, please refer to product user manual.

4 - OCH preparation

An already tuned OCH is needed to provide an optical signal input for the equipment. For more information about OCH, please refer to OCH user manual / operation guide.

Handling Precautions

This covers a range of activities including lifting, lowering, pushing, pulling, carrying, moving, holding or restraining an object, animal or person. It also covers activities that require the use of force or effort, such as pulling a lever, or operating power tools.

Caution, Electrostatic Discharge (ESD)

Before removing the antistatic bag from repeater, enough caution shall be taken to avoid ESD. The Anti-static Wrist Strap is recommended.

2.2 POSITION AND CONNECTION

1 - Equipment experimental position
Equipment shall be placed in stable position during testing, e.g. place on a table or stand on the floor. Be aware of the table shall be firm enough to support the equipment.

2 - Connections:
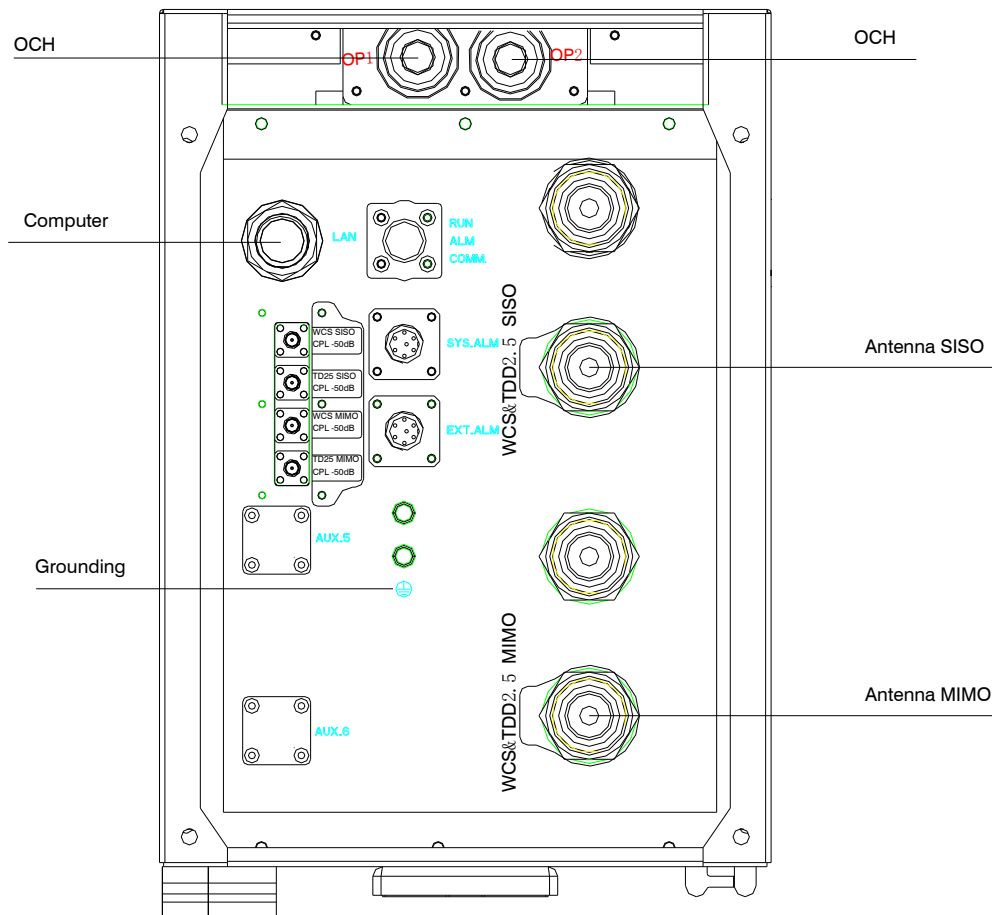
3.Grounding

Before power up:

a. Confirm equipment is well grounded;

b. Confirm equipment is connected to OCH via optical fiber;

c. Confirm equipment antenna ports are either connected to load or measuring instruments.

  - Lan cable to computer can be connected before or after power up.
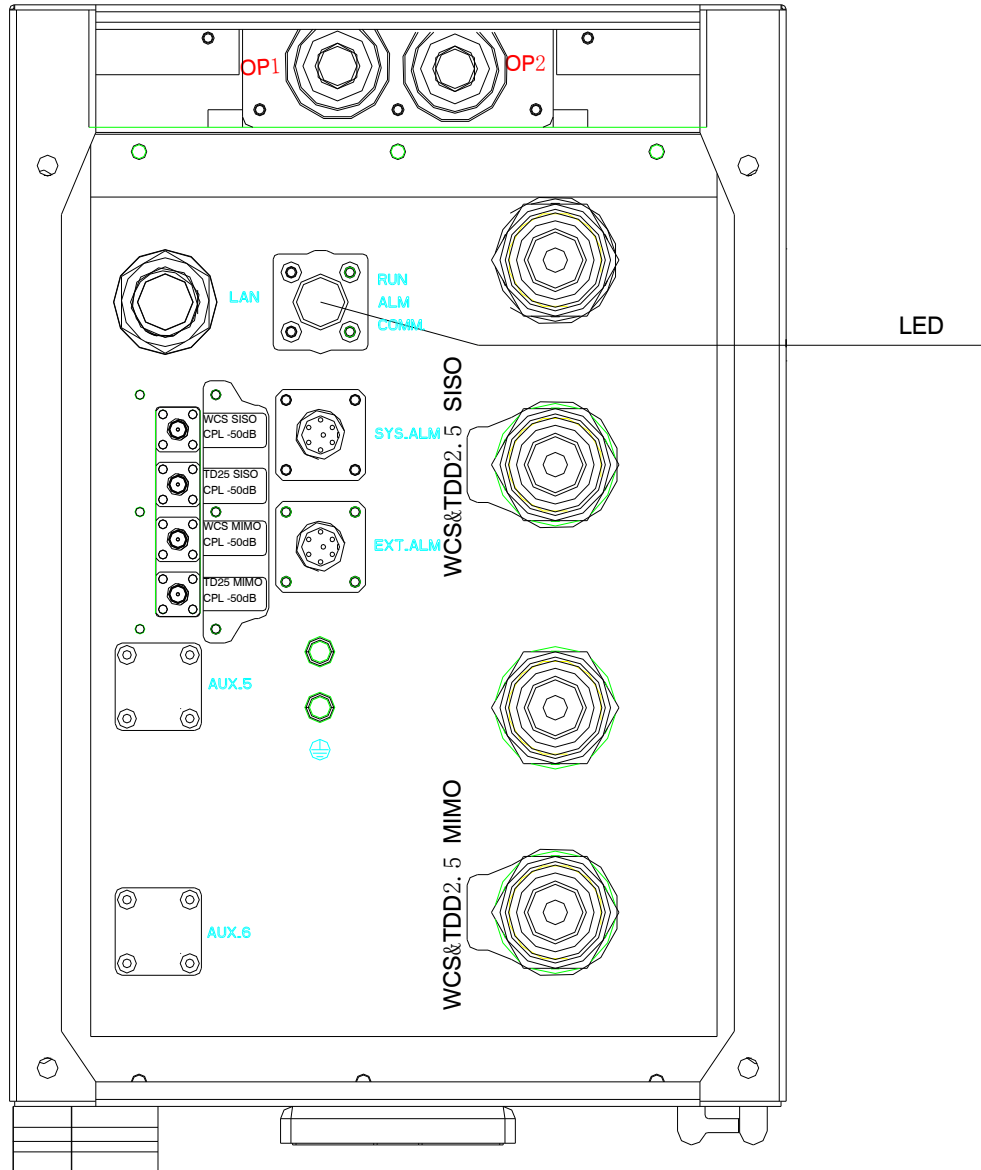

2.3 POWER UP AND INDICATORS

Before power up, please check product voltage requirement, and make sure the equipment is with good grounding protection.

Warning:

Always be caution to voltage safety. Before hands-on operation, check if the equipment is powered off and disconnected from power supply or otherwise will cause personnel injury and equipment damage.

Unscrew side panel to access power connector

OP1 OP2

LAN

RUN
ALM
COMM

LED

WCS SISO
CPL -50dB

TD25 SISO
CPL -50dB

WCS MIMO
CPL -50dB

TD25 MIMO
CPL -50dB

SYS.ALM

EXT.ALM

AUX.5

AUX.6

WCS&TDD2.5 SISO

WCS&TDD2.5 MIMO

Diagnostic LEDs of each unit are located on the bottom of enclosure; each indicates the status of a particular function.

| Identifier	Color	Indication
RUN	Green	On – The system is not ready (system need 2-3min after power up to be ready) Blink – The system is boot up and normal Off – The system is no power supply or MCU is not working
ALM	Red	Off – No Alarm occurring On – Alarm occurring
FSK	Green	Off – No communication between OCH & Equipment Blink – Communication normal between OCH & Equipment

3.   OMT OPERATION
3.1 SET IP ADDRESS OF COMPUTER
The equipment default IP address is "192.168.8.101/255.255.255.0"
The IP address of computer has to be set in the same subnet.
E.g. 192.168.8.10/255.255.255.0
Note: It's strongly recommended to keep the equipment IP address in default value.
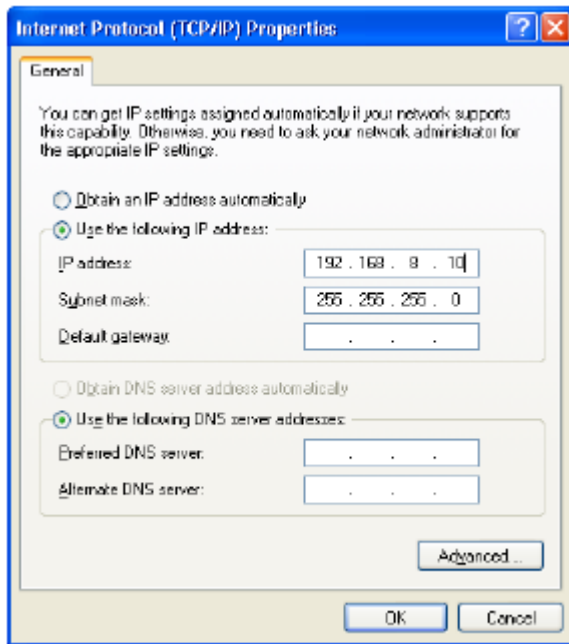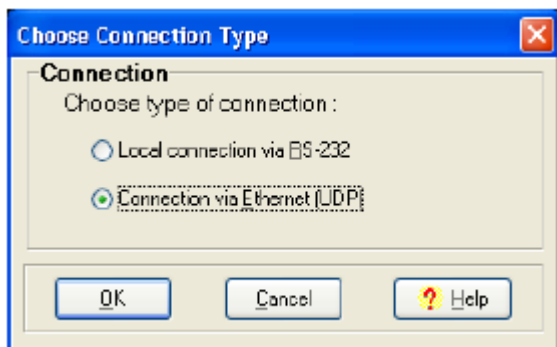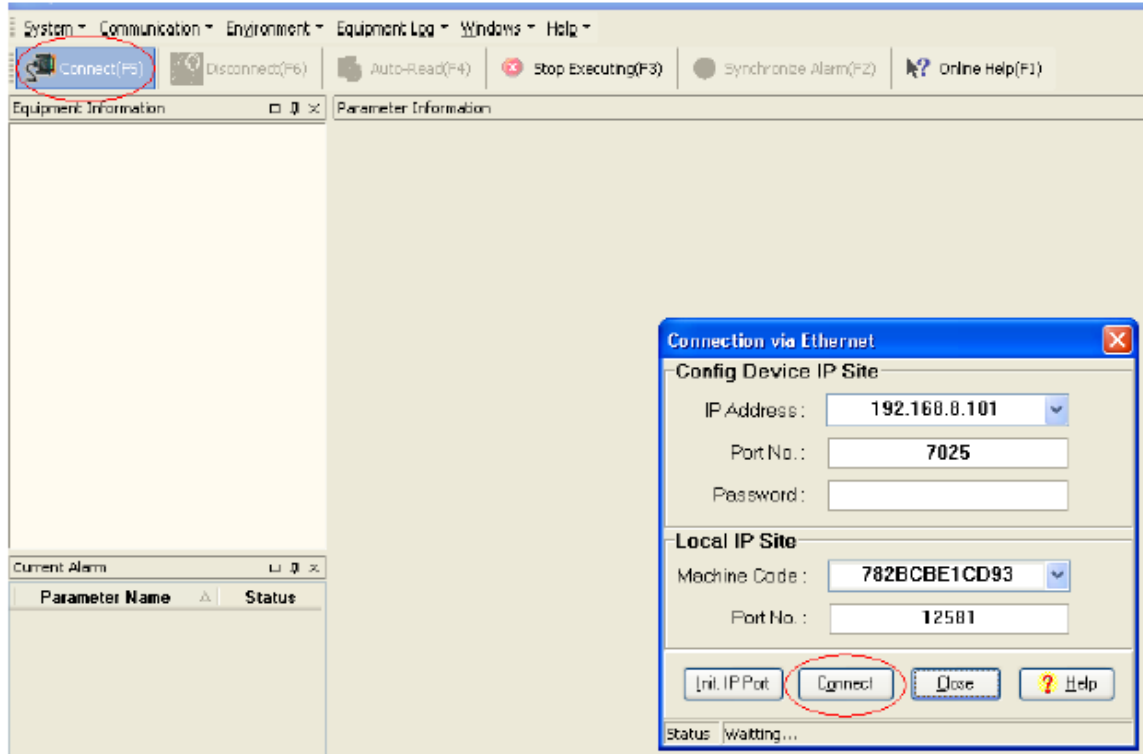

3.2 CONNECT DEVICE VIA OMT
Double click "CMA OMT Software V5.00" on the desktop after OMT installation.
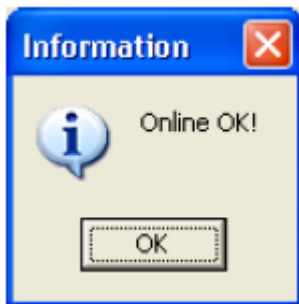Choose "Connection via Ethernet".
Note: this is a special version of OMT. A general version of OMT is not applicable.

Click "Connect (F5)" in the "up-left corner" and click "connect" in the pop-up window, keep every parameter in its default.

After successful connection, click "OK" in the pop up window.

3.3 EQUIPMENT PARAMETERS

Before tuning RF parameter, check equipment property parameters are correctly set.
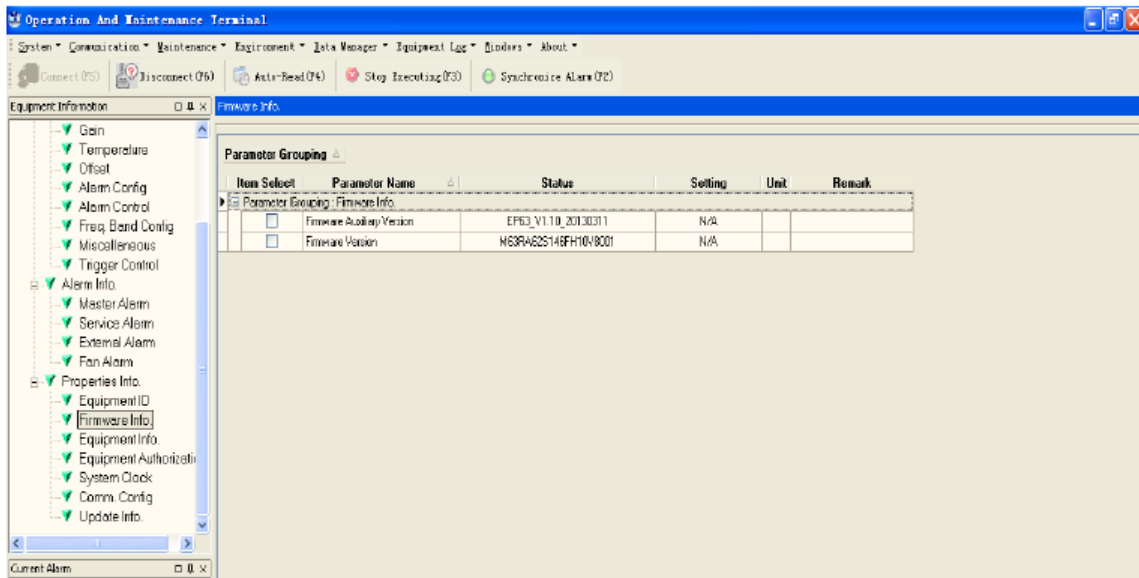
Equipment Property parameters:
Serial No.: Identifier of the equipment. Every piece of equipment has a unique ID.
      - Correct S/N ensures the communication between OCH and CRU.

Site ID & Site Sub ID: This is the indicator for Site information.
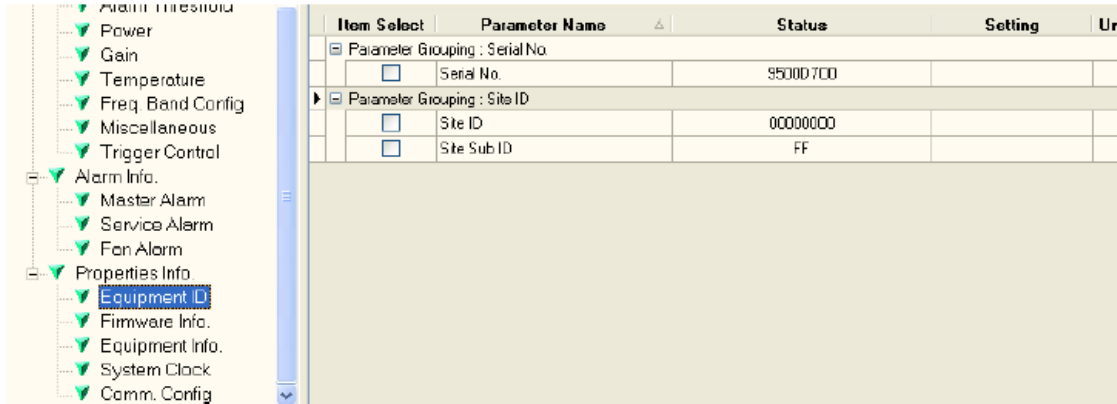
Firmware version: showing current software version in comba internal format.
- Make sure this is the expected firmware version.

Equipment RF Parameters:

Equipment RF Switch:
All switches are off of new equipment from the factory. Particular switch has to be turned on for real application or RF testing.

Service On/Off (ATE) service 1-4:
(Manufacturer level control)
This switch has the highest priority. Turn on for expected service first.

Service On/Off service 1-4:
(User level control)
This switch has the second highest priority. Turn on for expected service.

PA On/Off service 1-4:
(User level control)
Turn on for expected service.

UL ALC:
This function enables ALC protection of UL high input power at -54dBm.
Strongly recommend to turn this switch on for normal application.

Optical AGC On/Off
This function enables the compensation of fiber optical loss.
Strongly recommend to turn this switch on for normal application.
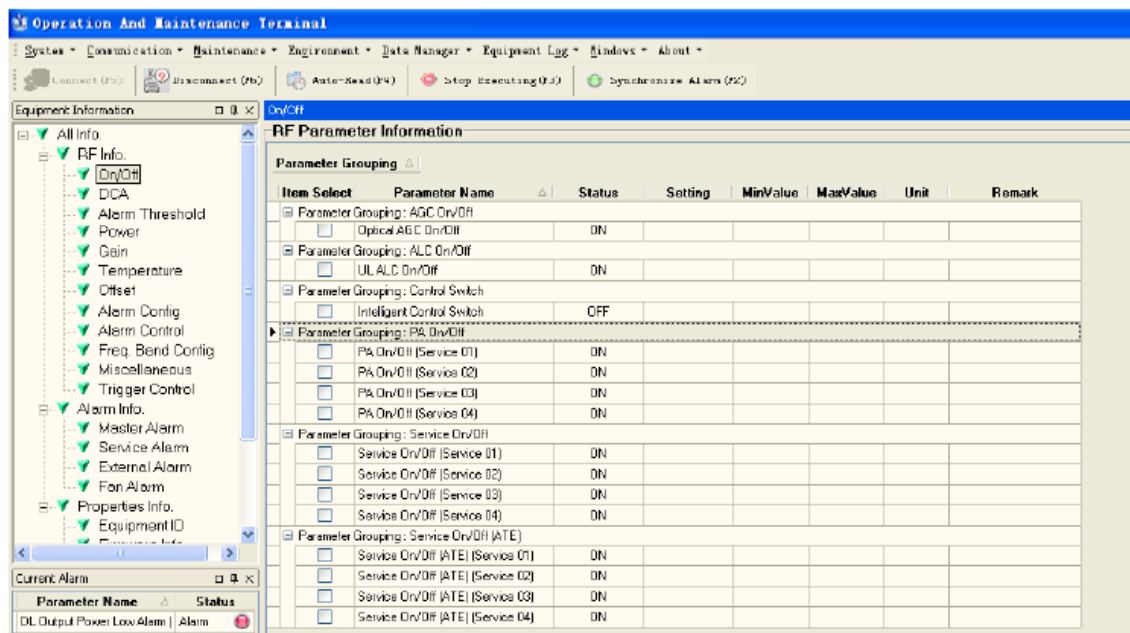
Equipment Power:

DL Output Max Power service 1-4:
This parameter sets the maximum output level of each service. The range is from
16dBm – 47dBm.

DL Output Power service 1-4:
This is the read only value of the DL power of each service.

FSK Rx Power Threshold:
Default is -65dBm, this value can be set smaller value if large optical loss is
occurred.

Attenuators:

The output power can be controlled by setting different DCA (attenuators)
It is recommended to set "DL/UL Manual DCA" to change to attenuators to control the output power.
After setting the "DL/UL Manual DCA", "DL/UL operational DCA" will be refreshed to the same value as "DL/UL Manual DCA".