High Power Remote Unit 2.3/2.5GHz Tune up procedure

Index

1 INTRODUCTION	2
2 PREPARATION	2
2.1. PERSONAL PREPARATION	2
2.2 POSITION AND CONNECTION	3
2.3 POWER UP AND INDICATORS	4
3. OMT OPERATION	6
3.1 SET IP ADDRESS OF COMPUTER	6
3.2 CONNECT DEVICE VIA OMT	6
3.3 EQUIPMENT PARAMETERS	-

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)

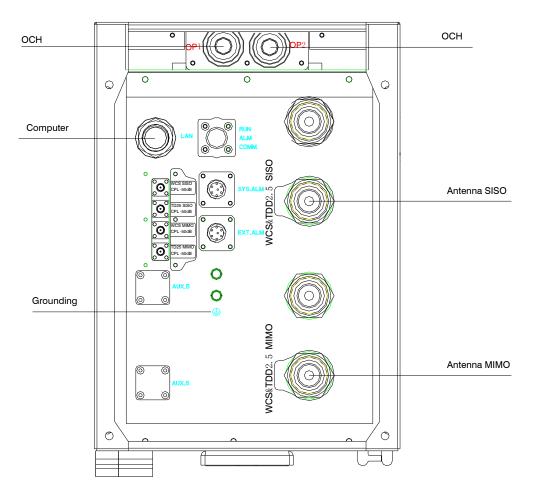
Before removing the antistatic bag from repeater, enough caution shall be taken to avoid ESD. The Anti-static Wrist Strap is recommended.

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.

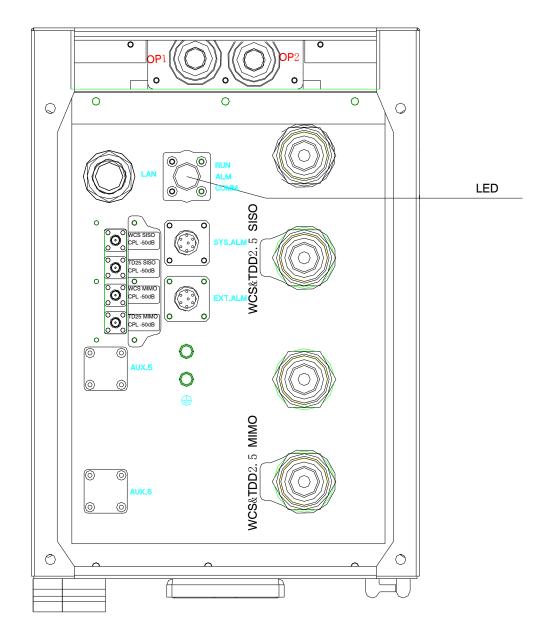
2.3 POWER UP AND INDICATORS

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.





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.

Internet Protocol (TCP/IP) Prope	rties 🛛 💽 🔀
General	
You can get IP settings assigned autom this capability. Dtherwise, you need to a the appropriate IP settings.	
Dtain an IP address automatically	,
 Uge the following IP address: — 	
<u>IP</u> address	192.168.8.10
Sybnet mask:	255.255.255.0
Default gateway.	· · ·
 Diptain DNS server address autom 	aticaly
Use the following DNS zerver add	25122
Breferred DNS server:	
Alternate DNS server:	· · ·
	Advanced
	OK Cancel

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.

Choose Connection Type
Connection Choose type of connection :
Local connection via BS-232 Connection via Ethernet (UDP)
KCancel ? Help

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

System - Communication - Engironment -	Equipment Log = _ Windows = Help =
Connect(F5)	Auto-Read(F4) 📀 Stop Executing(F3) 🕘 Synchronize Alarm(F2) 😽 Online Help(F1)
Equipment Information 🛛 🗊 🗶	Parameter Information
	Connection via Ethernet
	-Config Device IP Site
	IP Address : 192.168.8.101 🗸
	Port No.: 7025
	Password:
	Password.
	-Local IP Site
Current Alarm ப 🏨 க	Machine Cade : 782BCBE1CD93
Parameter Name 🛆 Status	
	Port No. : 12581
	Init IPPort Connect Date 2 Hep
	Lnit. IP Port (Connect) Dose ? Help
	Status Watting

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.

7 Alam miesilou V Power		Item Select Parameter Name 🔺	Status	Setting	Ur
🔰 Gain		Parameter Grouping : Serial No.			
 ▼ Temperature		Serial No.	9500D 7C0		
Freq. Band Config		Parameter Grouping : Site ID			
Miscellaneous		Ste ID	00000000		
Trigger Control		Site Sub ID	FF		
🖃 💜 Alarm Înfa.					
🝸 Master Alarm					
🛛 🍸 Service Alarm					
🛶 🍸 Fon Alorm					
🗄 💜 Properties Info.					
— 🗡 Equipment ID					
🛛 🍸 Firmware Info.					
🗸 🏹 Comm. Config	*				

Firmware version: showing current software version in comba internal format. - Make sure this is the expected firmware version.

Operation And Maintenance 1							
sten " Communication " Maintenance	e - Engironment - <u>l</u> ata We	mager - Iquipment Log -	Linders - About -				
Connect (P5)		🗿 Stop Azecutinz(P3)	😑 Synchronice Alarm(72)				
ment Information 🛛 🛛 🕮 X	Fimware Info.						
Y Gain A -Y Temperature	Parameter Grouping 👌						
¥ Offset ¥ Alerm Config	Item Select Par	ameter Name 🗠	Status	Setting	Unit	Remark	
-V Alarm Control	Fire Parameter Grouping : Fire						
- Y Freq. Band Contig		Loali ary Version	EP63_V1.10_20130311	N/A			
- Viscallanaous	E Firmmane V	Aerisian	M63RA62S146FH10V8001	N/A			
Tigger Control Tigger Control Alerm Into Master Alerm Service Alerm Externel Alarm Fran Alarm Fran Alarm Franklarm Equipment Into Equipment Into Equipment Authorizatio System Clack Comm Contg Update Into Update Into Equipment Equipment Into Equipment Equipment							

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.

System - Communication - Maintenance	Engironnent + Date Manager + Equipment Log + Aindovs + About +
Lonnect (Pb)	👌 Auto-Kend ()(4) 🧿 Stop Executing ().3) 💮 Synchronize Alarm (72)
pipment Information 🛛 🛛 🕮 🗶	
🖅 All Info. 🛛 🔼	Parameter Information
🚊 💙 BF Info. 📃	rameter Grouping &
💙 On/Ott	
💙 DCA	em Select Parameter Name 🛆 Status Setting MinValue MaxValue Unit Remark
🏹 Alarm Threshold	Parameter Grouping: AGC Orv/Dft
Y Power	Optical AGE On/Off ON
💙 Gain	Paramater Grouping: ALC On/Off
🍸 Temperature	ULALC Dn/Off DN
💙 Offset 😑	I Parameter Grouping: Control Switch
	Intelligent Control Switch OFF
💙 Alarm Control	Parameter Grouping: PA. Drv/Dif
💎 Freq. Band Contig	PA On/OH (Service 01) ON
	PA On/OII (Service 02) DN
	PA On/011 (Service 03) DN
🗄 🍸 Alarm Info.	PA 0n/011 (Service 04) 0N
🔻 Master Alarm	Parameter Grouping: Service Dr/Dfi
💎 Service Alarm	Service On/Off (Service 01) ON
	Service On/Dif (Service 02) DN
🌱 Fon Alarm	Service On/Off (Service 03) DN
🗄 💜 Properties Info.	Service On/Off (Service 04) DN
🍸 Equipment ID 👡	Parameter Grouping: Service On/Off (ATE)
	Service Or/Off (ATE) (Service OT) DN
	Service On/OR (ATE) (Service 02) DN
rrent Alarm 🛛 🕮 🛪	
Parameter Name 👌 Status	
)L Output Power Low Alarm Alarm 👘 🧕 📗	Service Or/Dif (ATE) (Service 04) DN

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.

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".

ysten * Communication * Maintenance	· Environment	* Data Manager * Equipment L	ng * Mindews *	About *				
Connect (F5) Linconnect (F6)	👘 Auto-Re	ad (F4) 🙁 Stop Executing (F3) 😑 Synchr	onize Alarn	(F2)			
pment Information	DCA							
🔻 All Into. 🔼	RF Paramet	er Information						
È-Y RFInto.	Parameter Gr	under all						
V On/Off	Parameter Gr	suping a						
V DCA	Item Select	Parameter Name 🗠	Status	Setting	MinValue	MaxValue	Unit	Remark
V Alarm Threshold	Parameter 6	incuping : DL DCA						
V Power		DL Factory DCA (Service 01)	0		0	30	dB	
V Gain		DL Factory DCA (Service 02)	0		0	30	dB	
Temperature		DL Factory DCA (Service 03)	0		0	30	dB	
V Offset		DL Factory DCA (Service 04)	0		0	30	dB	
- V Alarm Config		PL Manual DCA (Service 01)	0		0	30	dB	
- V Alarm Control		DL Manual DCA (Service 02)	0		0	30	dB	
─▼ Freq. Band Config		DL Manual DCA (Service 03)	0		0	30	dB	
▼ Miscellaneous		Dt-Manual DCA (Service 04)	0		0	30	dB	
Trigger Control		DL Operational DCA (Service 01)	0		0	30	dB	
⊒-▼ Alarm Info.		DL Operational DCA (Service 02)	D		0	30	dB	
- V Master Alarm		DL Operational DCA (Service 03)	0		0	30	dB	
Y Service Alarm		DL Operational DCA (Service 04)	D		0	30	dB	
		invuping : UL DCA	-		-			
- ▼ Fan Alarm		UL Factory DCA (Service 01)	D		0	30	dB	
E-Y Properties Info.		UL Factory DCA (Service 02)	0		0	30	dB	
Equipment ID		UL Factory DCA (Service 03)	0		0	30	dB	
>		UL Factory DCA (Service 04)	0		0	30	dB	
ent Alarm 🗆 🗛 🗙		C Manual DCA (Service 01)	D		0	30	dB	
Parameter Name A Status		UL Manual DCA (Service 02)	D		0	30	dB	
Output Power Low Alarm (Alarm)		UL Manual DCA (Service 03)	D		0	30	dB	
Dulput Power Low Alarm (Alarm 🛛 😝		Manual DCA (Service D4)	0		0	30	dB	
Output Power Low Alarm (Alarm)		UL Operational DCA (Service 01)	0		0	30	dB	
Output Power Low Alarm (Alarm 🔒		UL Operational DCA (Service 02)	ñ		ů.	30	dB	
or Open Alam 🔒		UL Operational DCA (Service 03)	0		0	30	dB	
guipment Alarm Alarm		UL Operational DCA (Service 03)	0		0	30	dB	