RX-7W22-B System Tune Up Procedure

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1 INTRODUCTION

This document is primarily written for those who are new to RX-7W22-B system and wish to tune up the equipment.
The document is applicable to below products from Comba.
Model number: RX-7W22-B

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 opera-tion.

The personnel preparation list:

a. Only trained or qualified personnel is recommended for performing tuning with equip-ment. 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 packing 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.

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 EQUIPMENT CONNECTION

2.2.1 GROUNDING COMMECTION

Ground Connection

To ensure safe operation of the product, a ground (earth) connection is required. For single phase AC power source, the product must be grounded by connecting the “earth wire” of the power cord to the ground terminal of the AC supply. For operating this product with DC power system (such as rectifiers), the product should not be connected to power systems that switch open the return lead because the return lead could function as the ground (earth) connection for the equipment.

Protective Ground Connection

The enclosure must be grounded securely by connecting a copper wire (CSA 16mm^2) to the grounding terminal on the equipment/rack, and the other end to a protective ground (i.e. building earth point). An internationally acceptable colour code of the ground connection wire is green/yellow.

Such a ground connection implements the “Protective Ground Connection”, and must be connected to the equipment at the designated ground point. In general, do not connect the supply before establishing an adequate ground (earth) connection.

Construct the ground wire, and use appropriate crimp connectors where necessary. Locate and connect the equipment grounding terminal to a protective ground (i.e. building earth point).

2.2.2 RX-7W22-B CONNECTION

Step1: Connect the RF cable to RF module, DT port connects to donor antenna and MT port connects to service antenna.

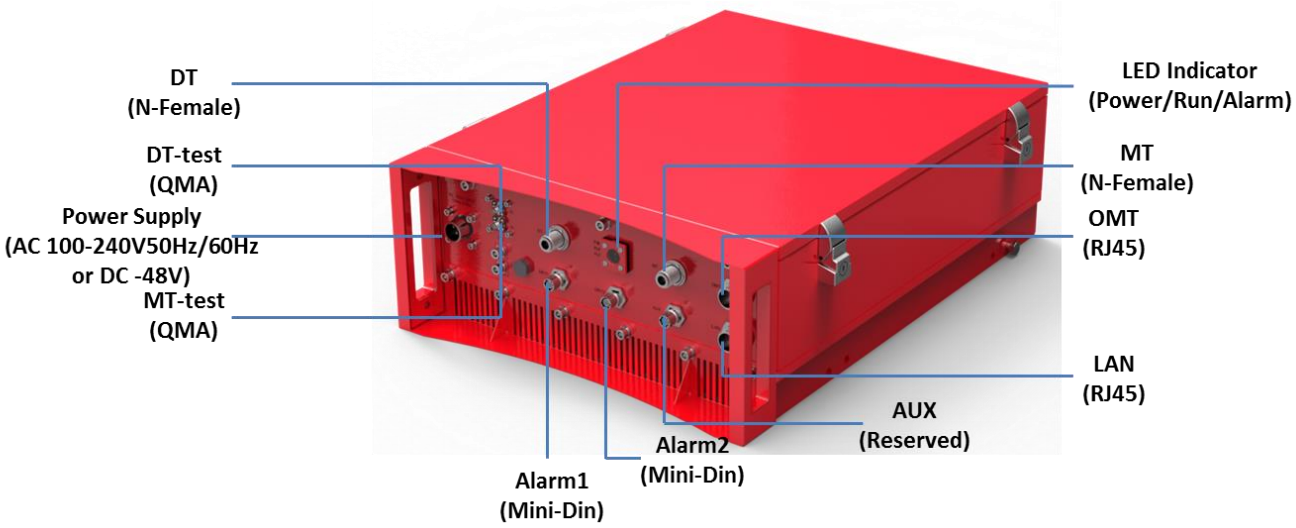

Figure 1: PS BDA Connectors

Step 2: Connect the power cable to the power supply port (100-240VAC/1Amp maximum or -48VDC/2.1Amp maximum).

2.2.3 CHECKLIST BEFORE POWERING

Users ***MUST*** check the following items before powering on the equipment.

Table 1: Check list

Item	Check List
Grounding	Make sure the equipment well grounded.
Power	The utility voltage is within 100~240VAC or-48VDC.
RF connection	RF cables are well connected.
VSWR	The VSWR of antenna port must less than 1.5.

2.2.4 VERIFY NORMAL OPRATION

Verify normal operation upon powering up the equipment.

Table 2: LED Indications

LED Indicator	Normal Status	Indication
PWR	Steady green	Power indicator. If LED is off, it indicates the system has no power.
RUN	Flashing green (1 time/sec)	Operation indicator. After initialization (1~2 mi-nutes), the LED should flash at once per sec. If other flashing rate occurs, operates abnormally.
ALM	off	Alarm indicator. If LED is RED, there is an alarm.

End of Section

3 COMISSIONING

PS BDA can be monitored and controlled by Comba OMT, follow below contents to achieve system parameter setting and commissioning.

Step 1: Connect OMT port to PC RJ45 port with the supplied RJ45 cable to set up a physical connection.

Step 2: Open browser (browser IE7.0, IE8.0, Chrome or Firefox, suggest display resolution is 1024×768), input Web GUI **IP address: 192.168.8.101**, click [Enter].

NOTE: DHCP and DNS are also available to login Web GUI. The domain name is: www.combaomt.com.

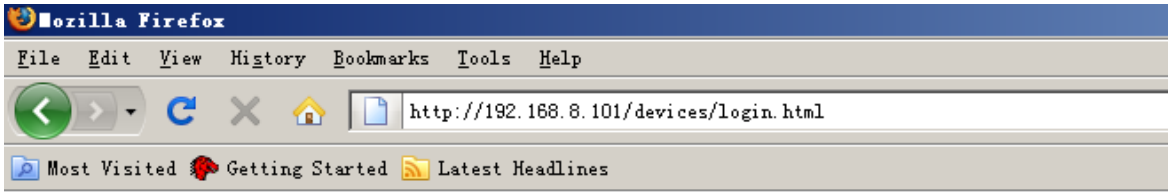

Figure 2: Input IP Address

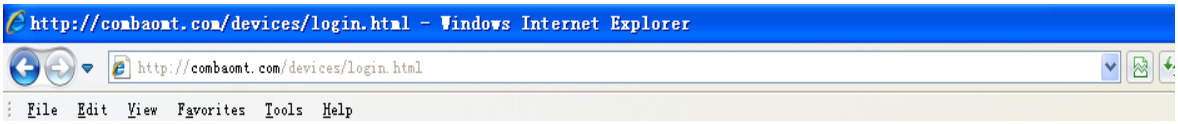

Figure 3: Input Domain Name

Step 3: Input **User Name: admin; Password** (default password: **admin**). Click [Log in].

Figure 4: Input User Name and Password

After log in, the Web GUI main screen will appear.

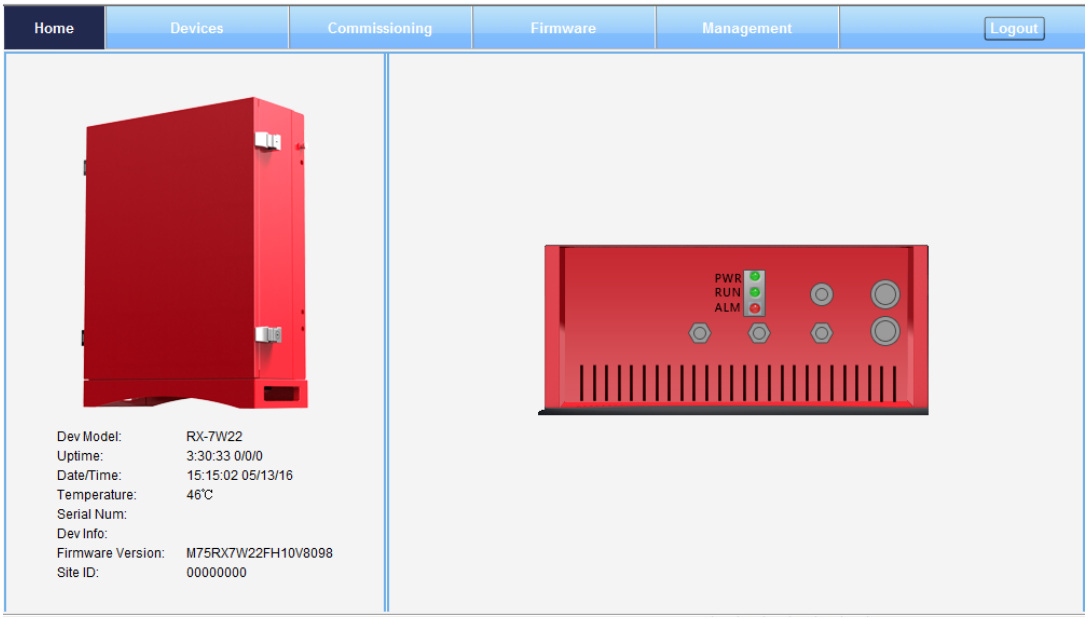

Figure 5: Web GUI Main Screen

On Comba Web GUI Home Screen, there are four Menu bars:
[Devices], [Commissioning], [Firmware] and [Management].

The [Devices] Screen shows the equipment status, such as PA status, alarm information, etc.

Overview Screen

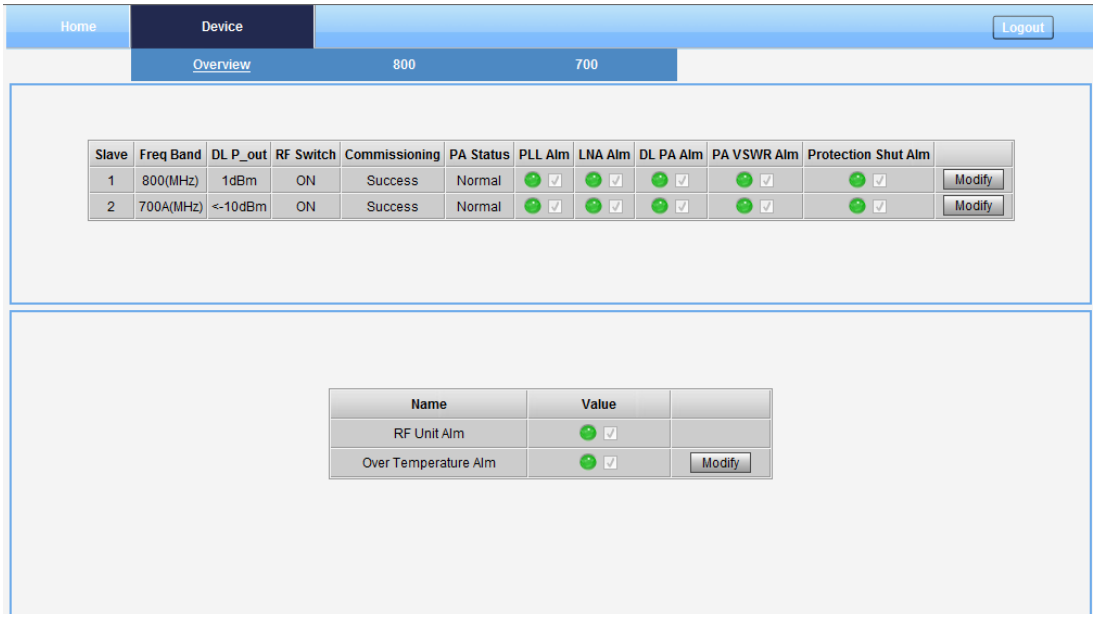

Figure 6: Overview Screen

800 Screen

This screen is only available for the dual band PS BDA or 800MHz PS BDA.

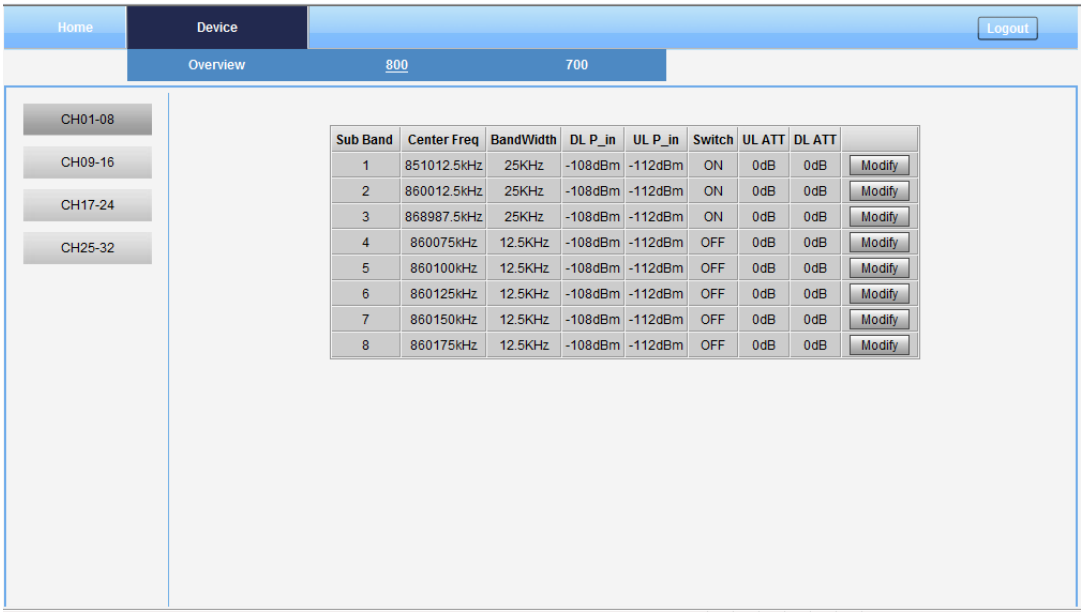

Figure 7: 800 Screen

700 Screen

This screen is only available for the dual band PS BDA or 700MHz PS BDA.

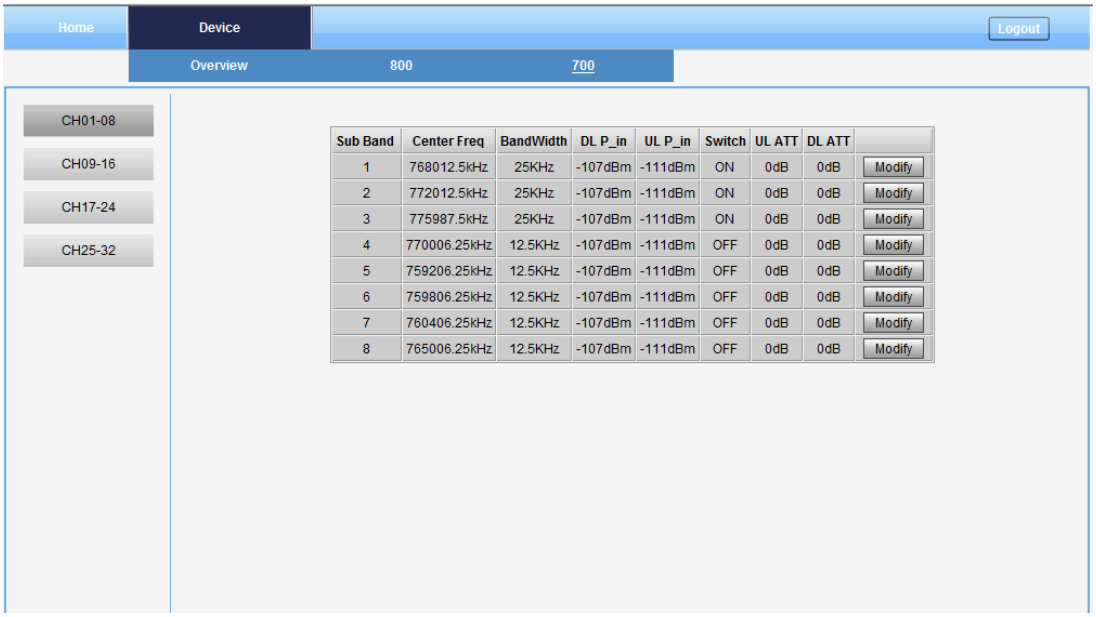

Figure 8: 700 Screen

A work flow of commissioning is shown on [Commissioning] page. Click the [Start] button, the software will guide you through the commissioning step by step.

Step 1: Click Menu bar [Commissioning] on home screen, a work flow will show up.

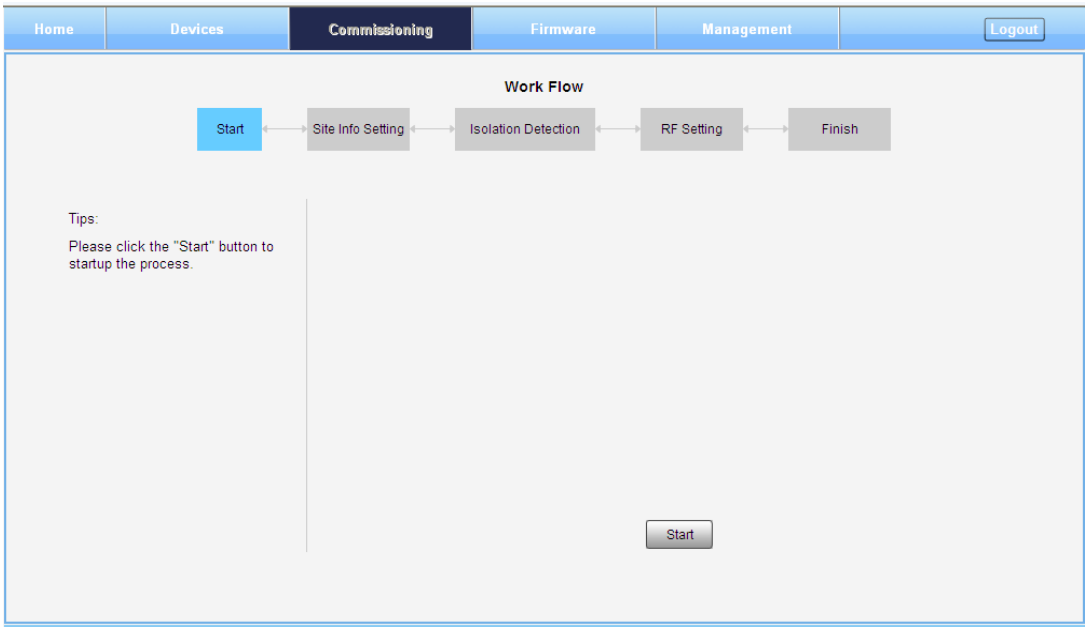

Figure 9: Commissioning Procedure - Start

Step 2: Click  to start the process.

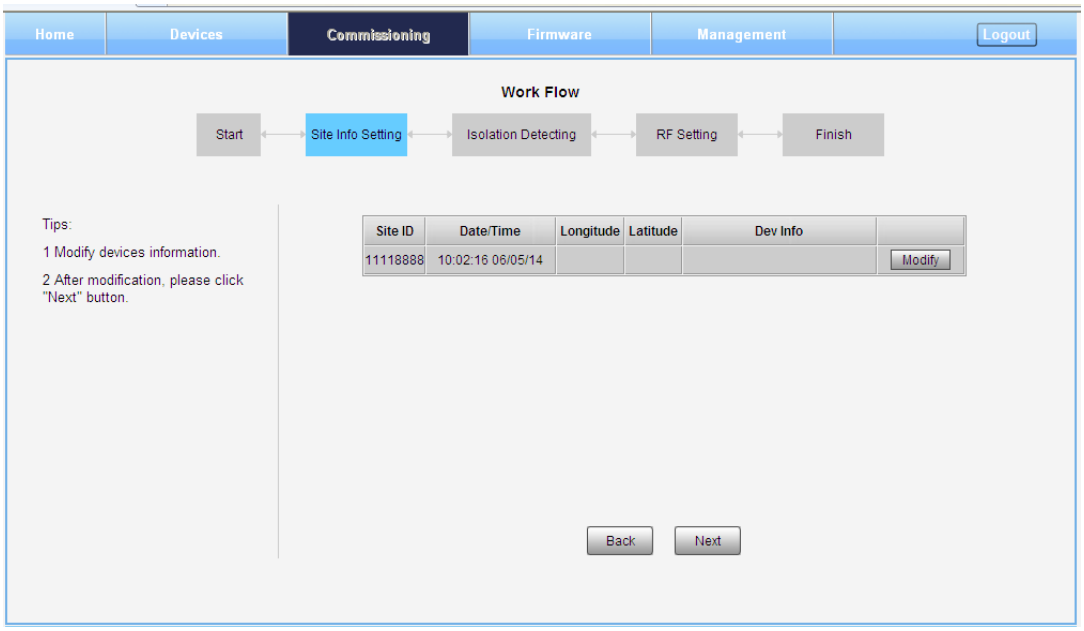

Figure 10: Commissioning Procedure – Site Info. Setting

Step 3: Click Modify, users can set the site information.

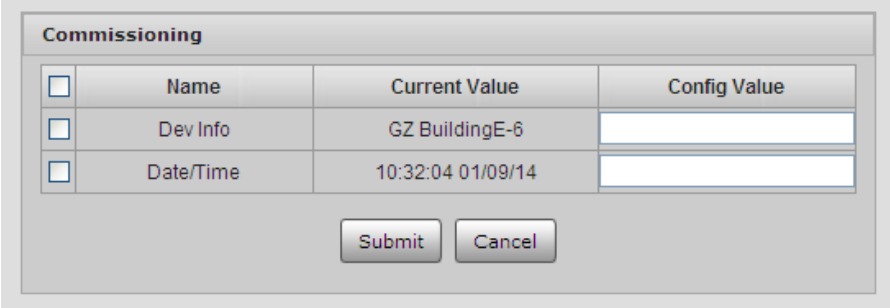

Figure 11: Dev Info & Date/Time

Dev Info mainly used to record device location and Date/Time provides a time reference. Click the Config Value of Date/Time, will update Date/time automatically.

NOTE: Make sure the device is connected with appropriate donor and service antennas before proceeding to step 4.

Step 4: Click Next to enter to Isolation Detection Screen shown as Figure 52.

- ✓ Select a frequency band (RFU) that need to commission.
- ✓ Click Next to start Isolation Detecting, then [Confirm] window will pop-up shown as Figure 53.
- ✓ Click Ok to continue. If isolation detection success, the process will go to RF Settiing Screen shown as Figure 55. If failed, a Tips window will pop-up shown as Figure 54, users need to check whether the system isolation is very weak.

NOTE: At the end of first frequency band commissioning, user can start other frequency band commission.

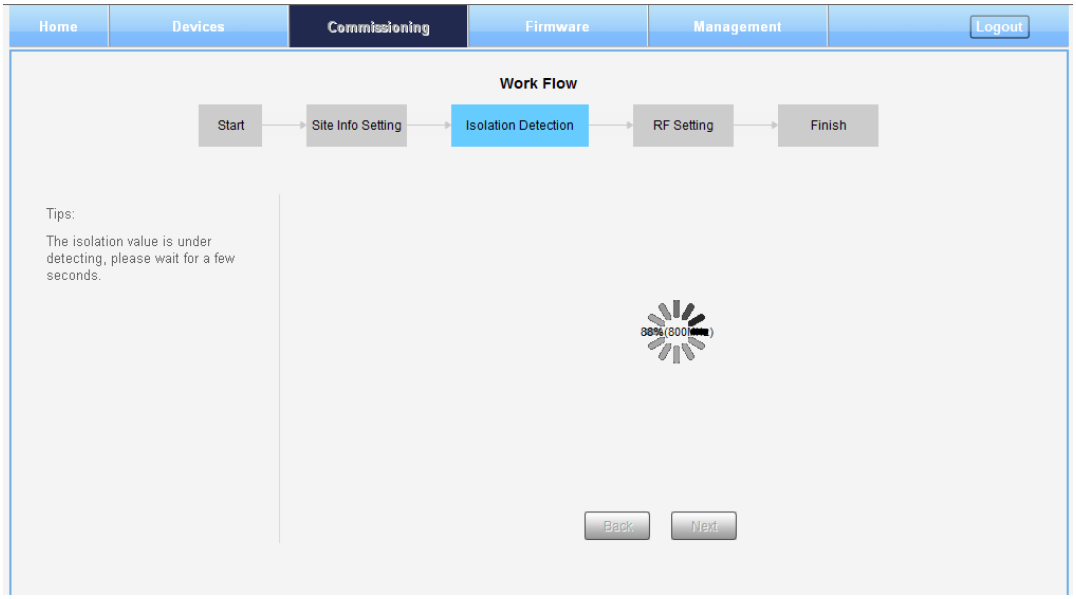

Figure 12: Commissioning Procedure – Isolation Detective

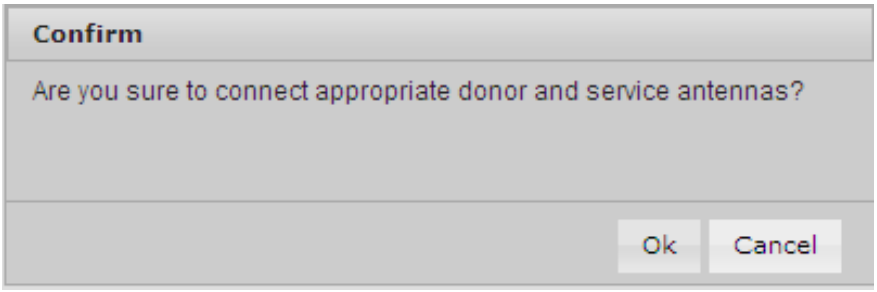

Figure 13: Commissioning Procedure – Isolation Detective Confirm

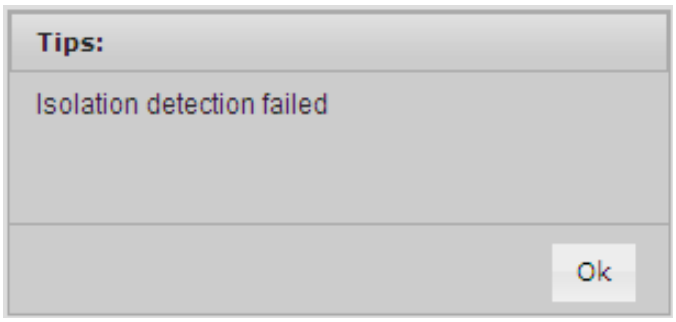

Figure 14: Commissioning Procedure –Isolation Detection Failed

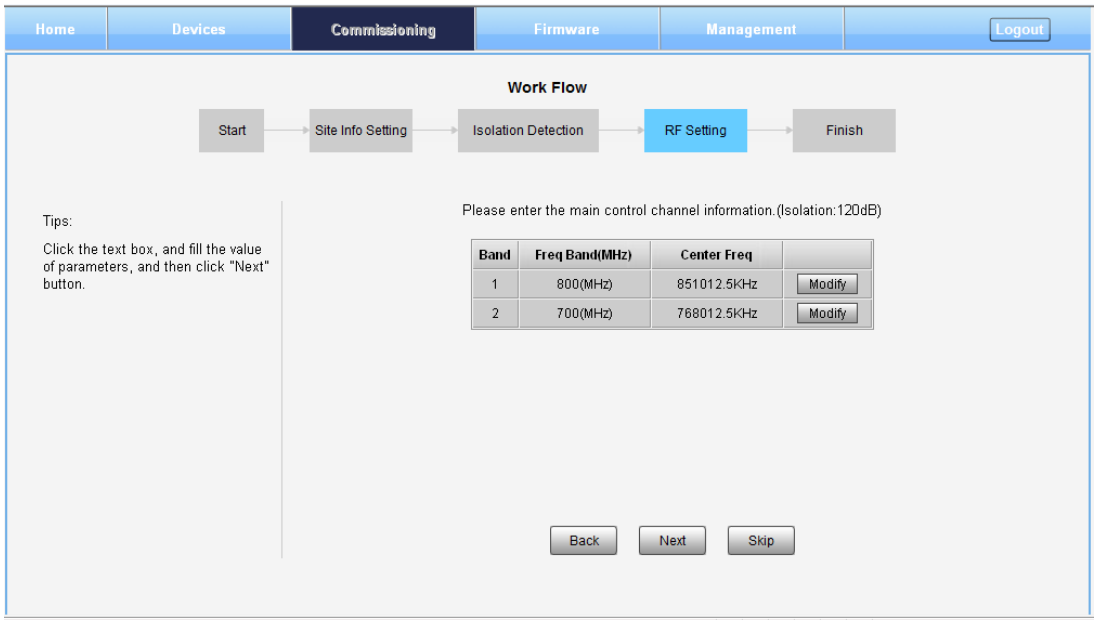

Figure 15: Commissioning Procedure –Isolation Detection Finish

Step 5: RF Setting Screen for setting center frequency.

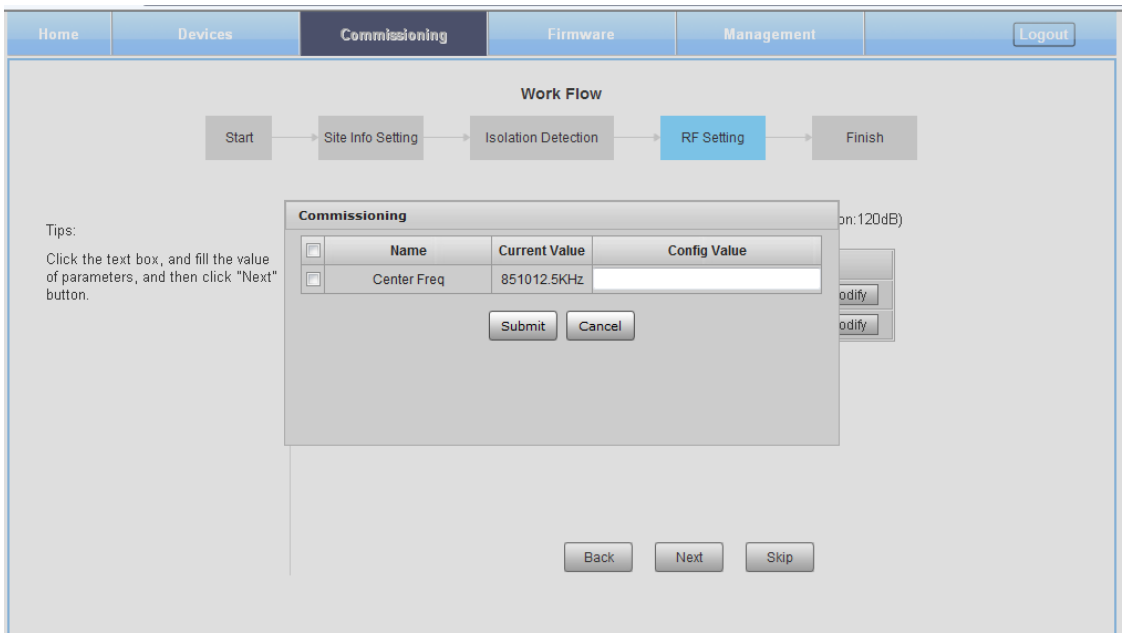

Figure 16: Commissioning Procedure – Center Frequency Setting

Step 7: Click  to finish the commissioning.

Figure 17: Commissioning Procedure – Finish

There are two functions on the [Firmware] bar: [upgrade] and [swap]. [Upgrade] is used to upgrade software, and [Swap] is to replace current firmware version to the previous one.

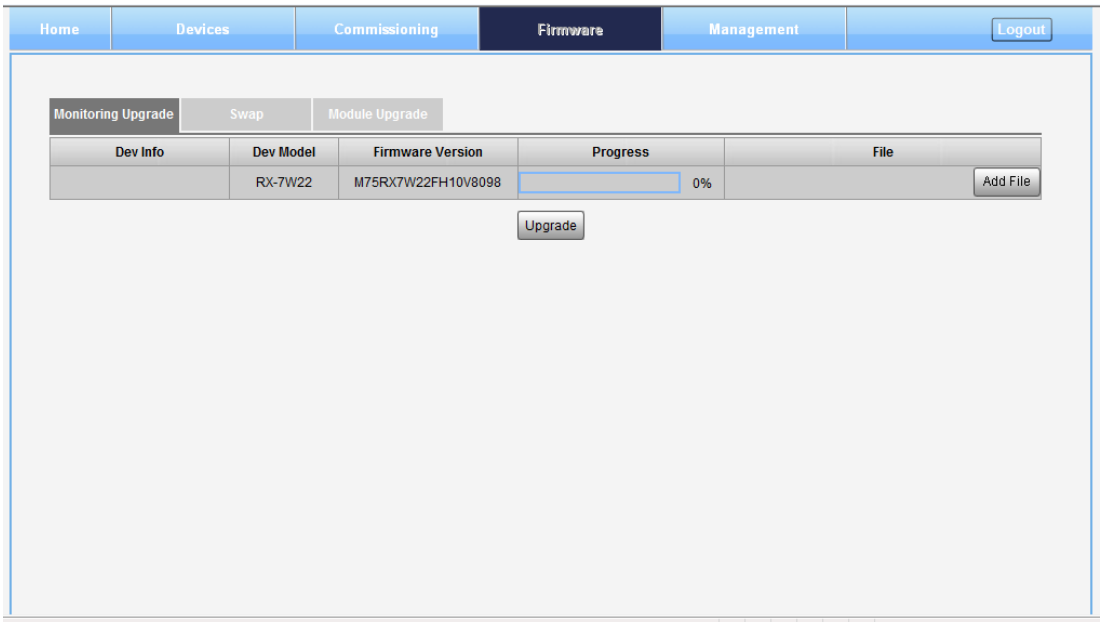

Figure 18: [Firmware] Screen – MCU Firmware Upgrade

Remote communication parameter can be configured on [Management] page.

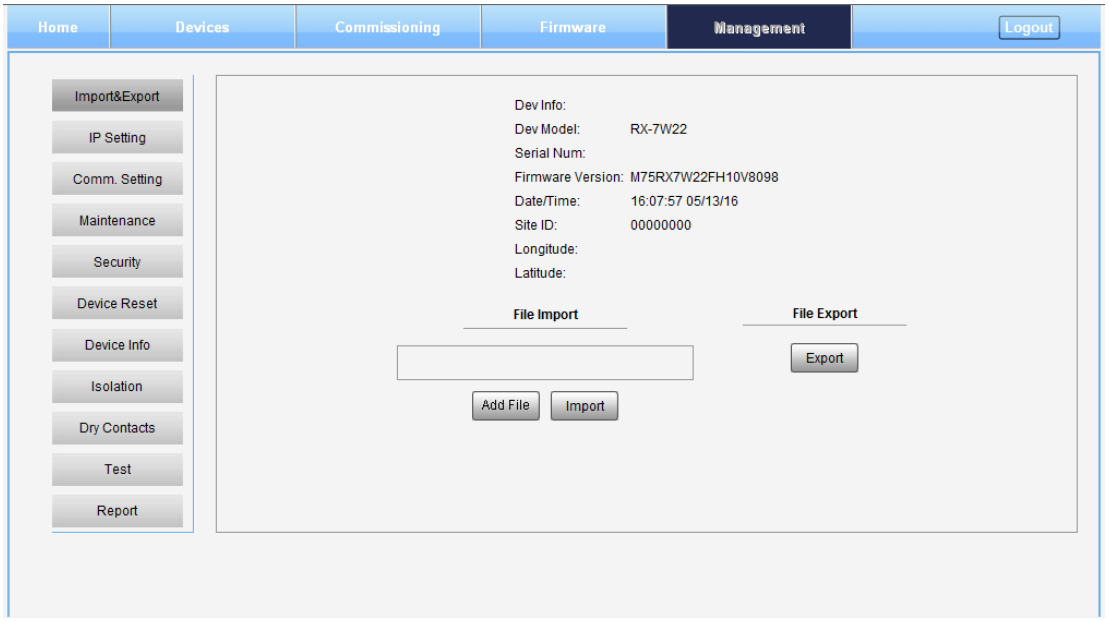

Figure 19: [Management] Screen

End of Section

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