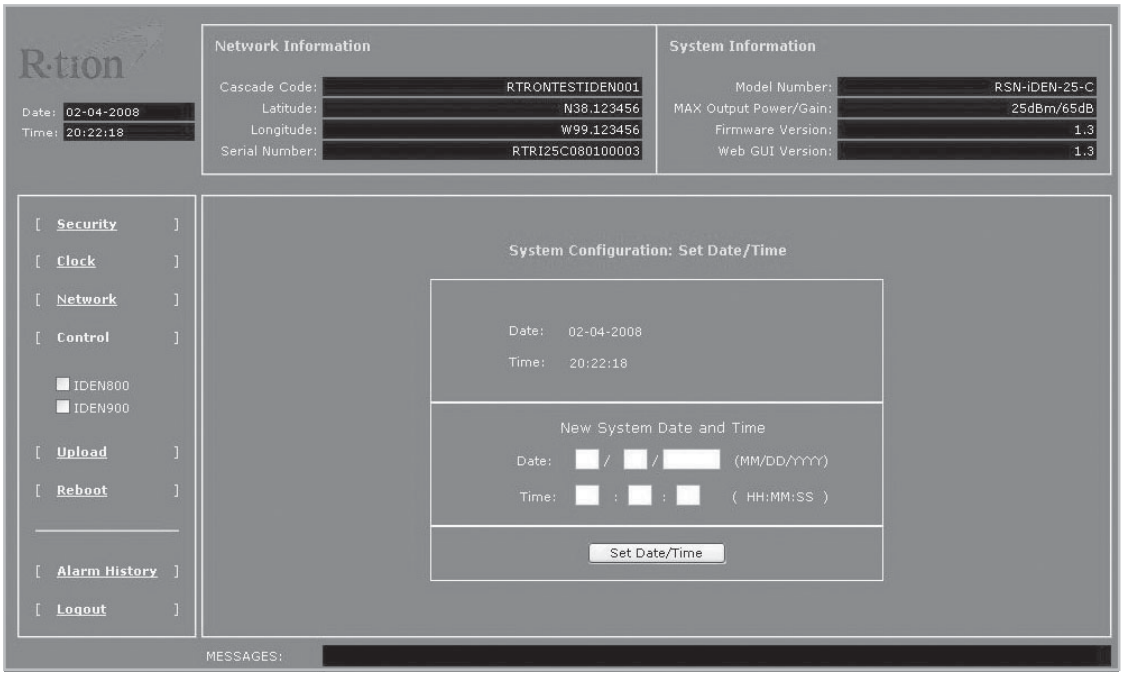
Step 4 The login process is complete. The Initial screen will appear.



Step 5 In case of the initial login, you should input Cascade Code and Location Information of Network Setup. Otherwise a warning pop-up window will appear and you cannot access any of the menus.

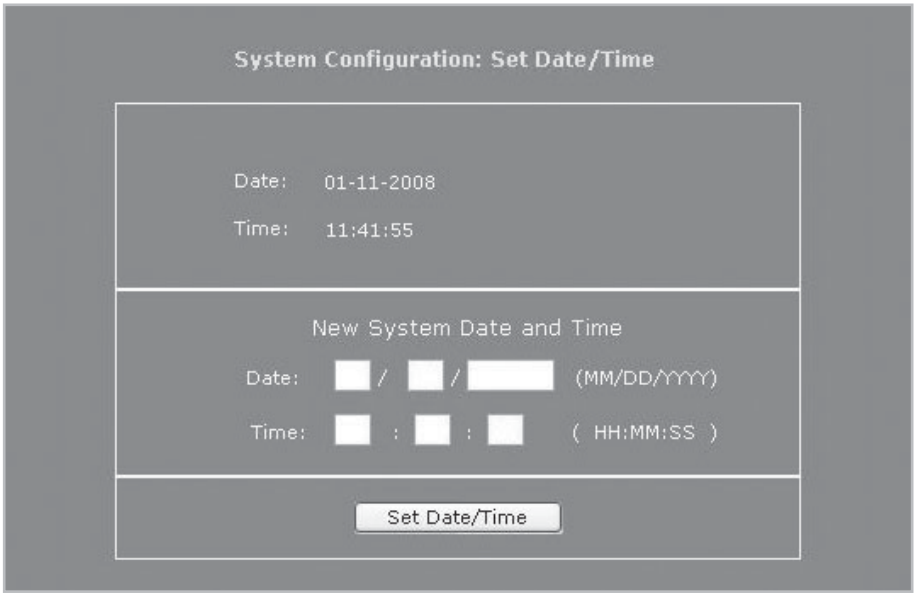
4.5 System Setup

4.5.1 Security

Operator has no authorization to access this menu.

4.5.2 Clock

Click **Clock** in the left menu.
In this menu, you can set the date and the time.
Click **Set Date/Time**.

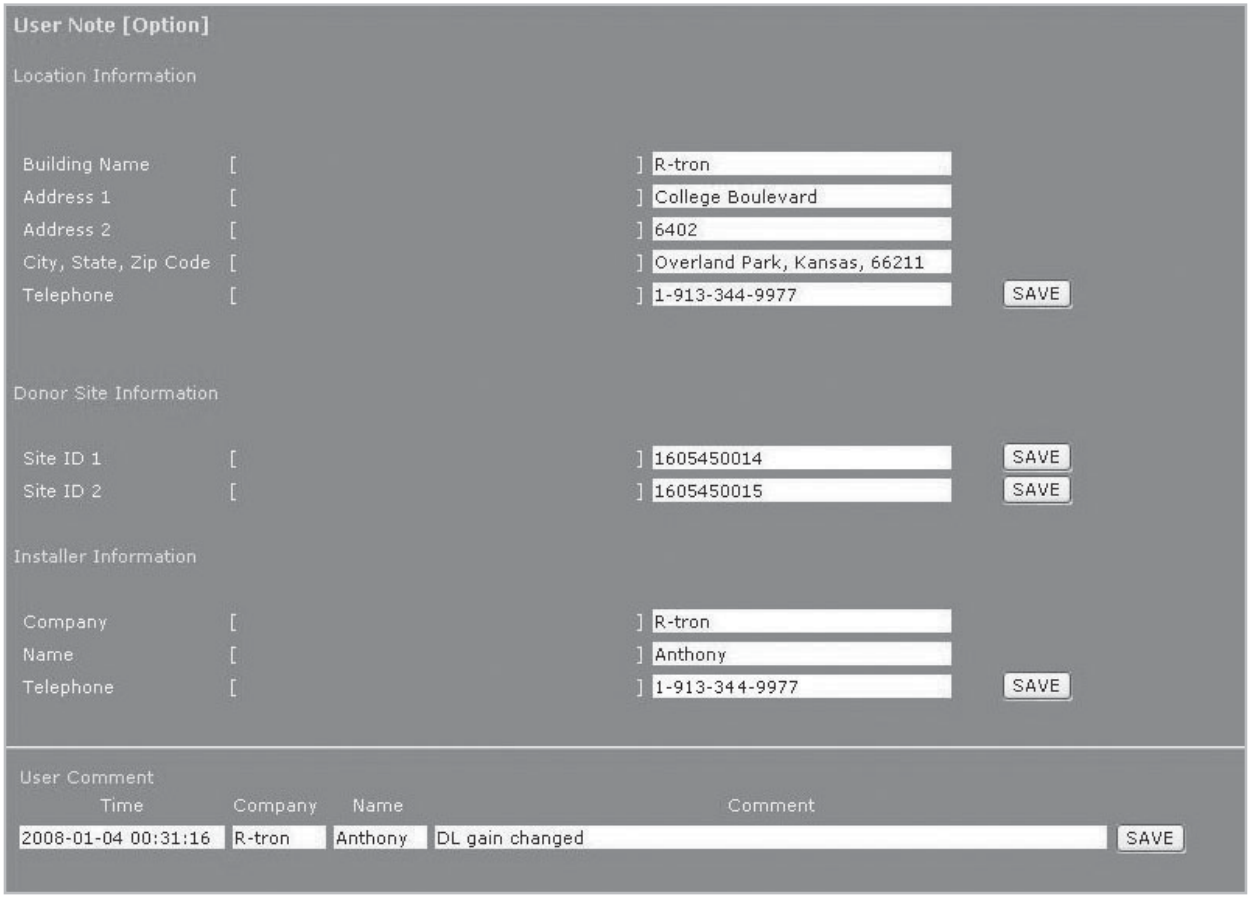


4.5.3 Network

Click **Network** in the left menu.

Network Setup

- **Cascade Code**: Type in the pre-assigned code. **Otherwise, you cannot access system setup.**
- **Location Information**: Enter the latitude and longitude of a location, otherwise you cannot access the system setup. You can input either Decimal Degrees or Degrees-Minutes-Seconds.
  [Example.]
  (‘N/S ‘ | ‘E/W ‘) ddd.dddddd: (Latitude: N 39.006957 Longitude: W 94.532306)
- **Heartbeat Interval**: Sets the time to transmit the Heartbeat to NMC Server. (Default value is 20 minutes. At the setup, temporarily reduce the value to 1 minute. After conforming heartbeat report, set the value back to 20 minutes.)
- **Product Information**: This is for manufacturer used only. DO NOT change this value.
- **Static IP for Remote Control**: Connect to the External Monitoring Device for Remote Access. Do not enter any value unless a static IP is assigned. DHCP client.
- **NMC Server IP**: **Do not change this value;** otherwise, the Heartbeat transmission or Remote Access may not work.

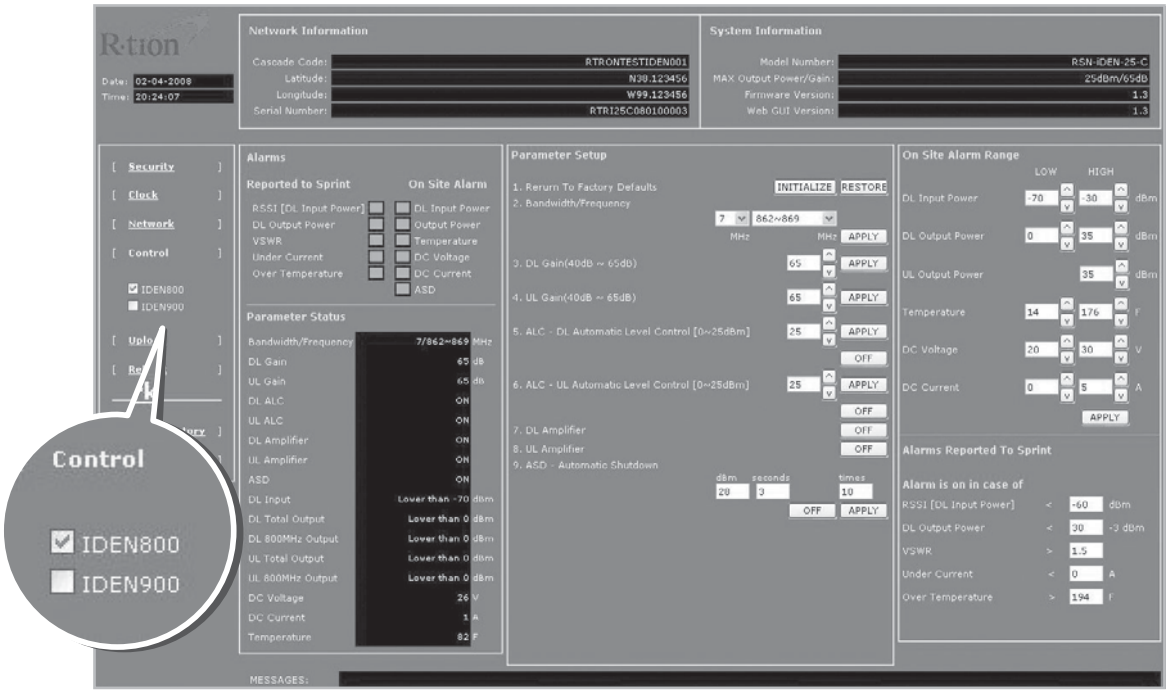


User Note

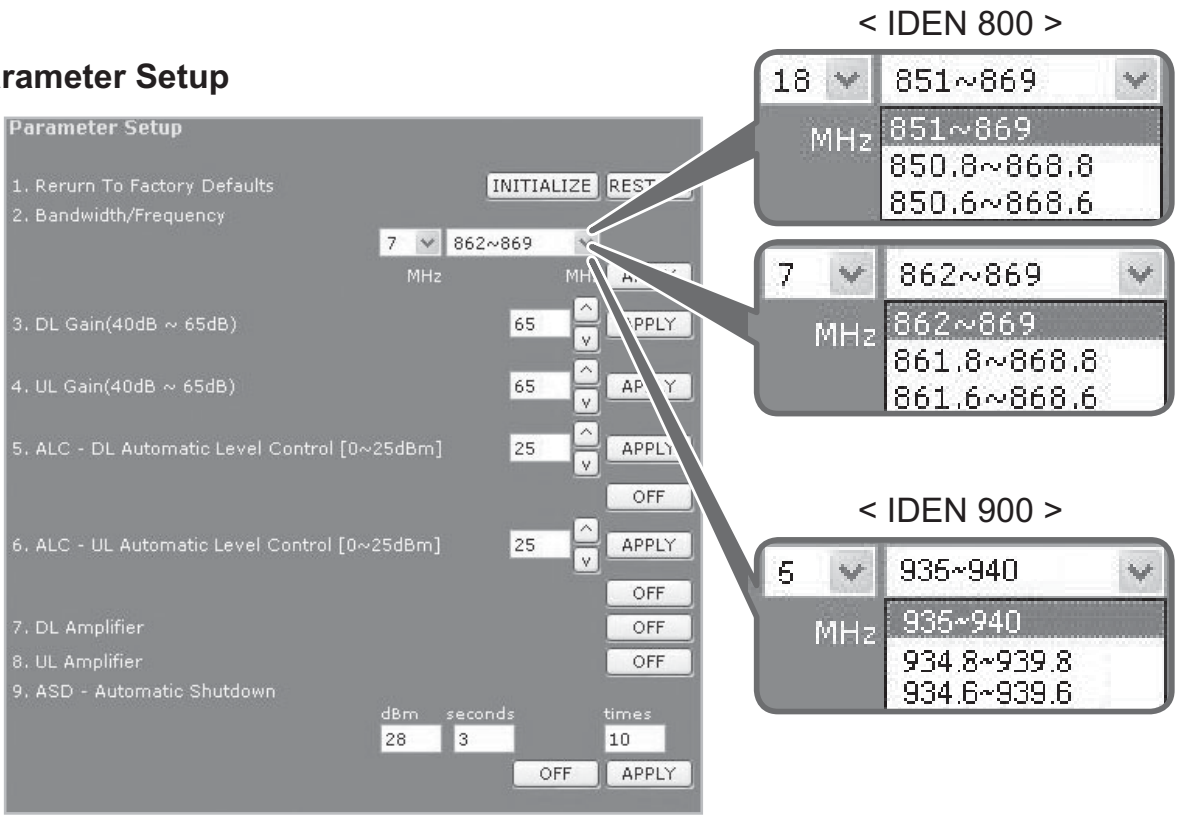
- **Location Information**: Type the location information such as the building name, address, city, state, zip code and telephone, and then click **SAVE** to save the information you provide.
- **Donor Site Information**: Type the base station's ID, and then click **SAVE** to save the information you provide.
- **Installer Information**: Type the installer information such as the company, name and telephone, and then click **SAVE** to save the information you provide.
- **User Comment**: You can add comments. Up to 50 comments can be stored in the memory. The length of characters for each comment is limited to 60 characters.

4.5.4 Control

Check **IDEN 800** or **IDEN 900** in the left menu.

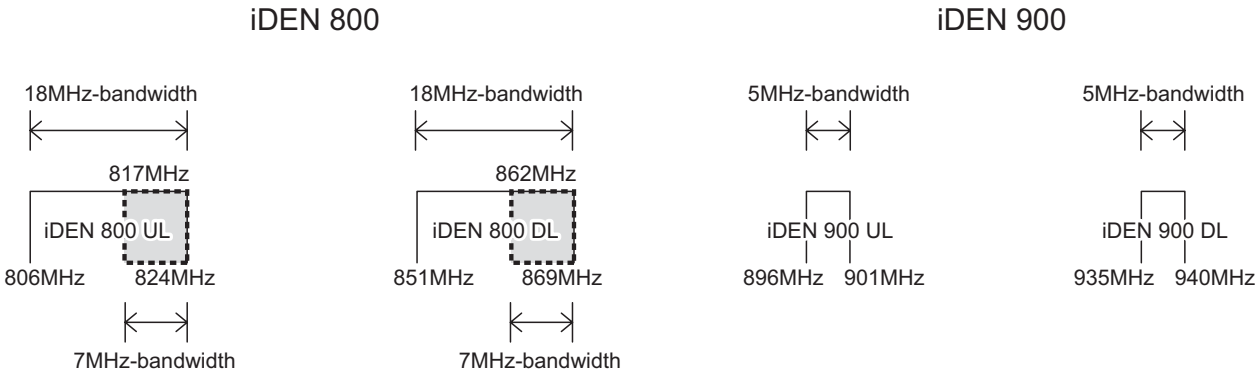


Parameter Setup



• **Reset To Factory Defaults**
- To reset the factory default, click **INITIALIZE**.
- To restore the previous settings, click **RESTORE**.

• **Bandwidth/Frequency:**
- For **IDEN 800**
  If you select 18 MHz for bandwidth, the values of the frequency range are 851~869, 850.8~868.8, 850.6~868.6.
  If you select 7 MHz for bandwidth, the values of the frequency range is 862~869, 861.8~868.8, 861.6~868.6.
- For **IDEN 900**
  The values of the frequency range is 935~940, 934.8~939.8, 934.6~939.6.



The Operating Bandwidth and Frequencies of iDEN

Mode	Bandwidth	Operating Frequency	
iDEN 800	18MHz-bandwidth	Downlink	851~ 869MHz 850.8 ~ 868.8MHz 850.6 ~ 868.6MHz
		Uplink	806 ~ 824MHz 805.8 ~ 823.8MHz 805.6 ~ 823.6MHz
	7MHz-bandwidth	Downlink	862 ~ 869MHz 861.8 ~ 868.8MHz 861.6 ~ 868.6MHz
		Uplink	817 ~ 824MHz 816.8 ~ 823.8MHz 816.6 ~ 823.6MHz
iDEN 900	5MHz-bandwidth	Downlink	935 ~ 940MHz 934.8 ~ 939.8MHz 934.6 ~ 939.6MHz
		Uplink	896 ~ 901MHz 895.8 ~ 900.8MHz 895.6 ~ 900.6MHz

• **DL Gain**: Type values between 40 and 65 and then click **APPLY**.

• **UL Gain**: Type values between 40 and 65 and then click **APPLY**.

Note

Please make sure **DL Automatic Level Control**, **UL Automatic Level Control** are turned off before the gain setup. Otherwise, it may cause an error.

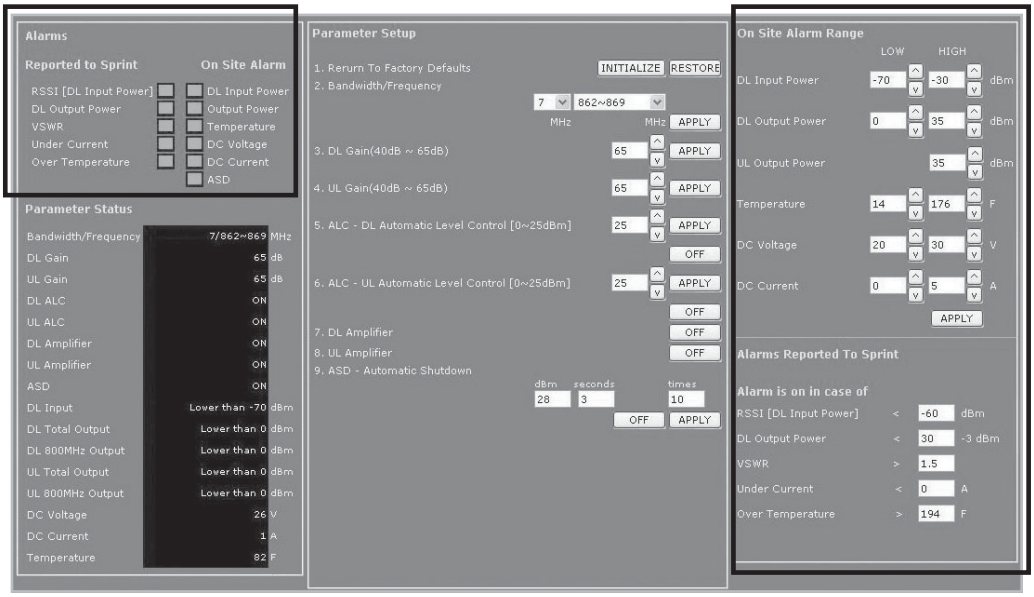
• **DL Automatic Level Control**: Type under 25 and then click **APPLY** and **ON**.
• **UL Automatic Level Control**: Type under 25 and then click **APPLY** and **ON**.
[Example]
For the repeater with 25dBm Maximum Output power, 65dB Maximum Gain / 20dB Gain control range, → If input signal is -35dBm and ALC is set as 25dBm, the gain will be 60dB to adjust to the level.

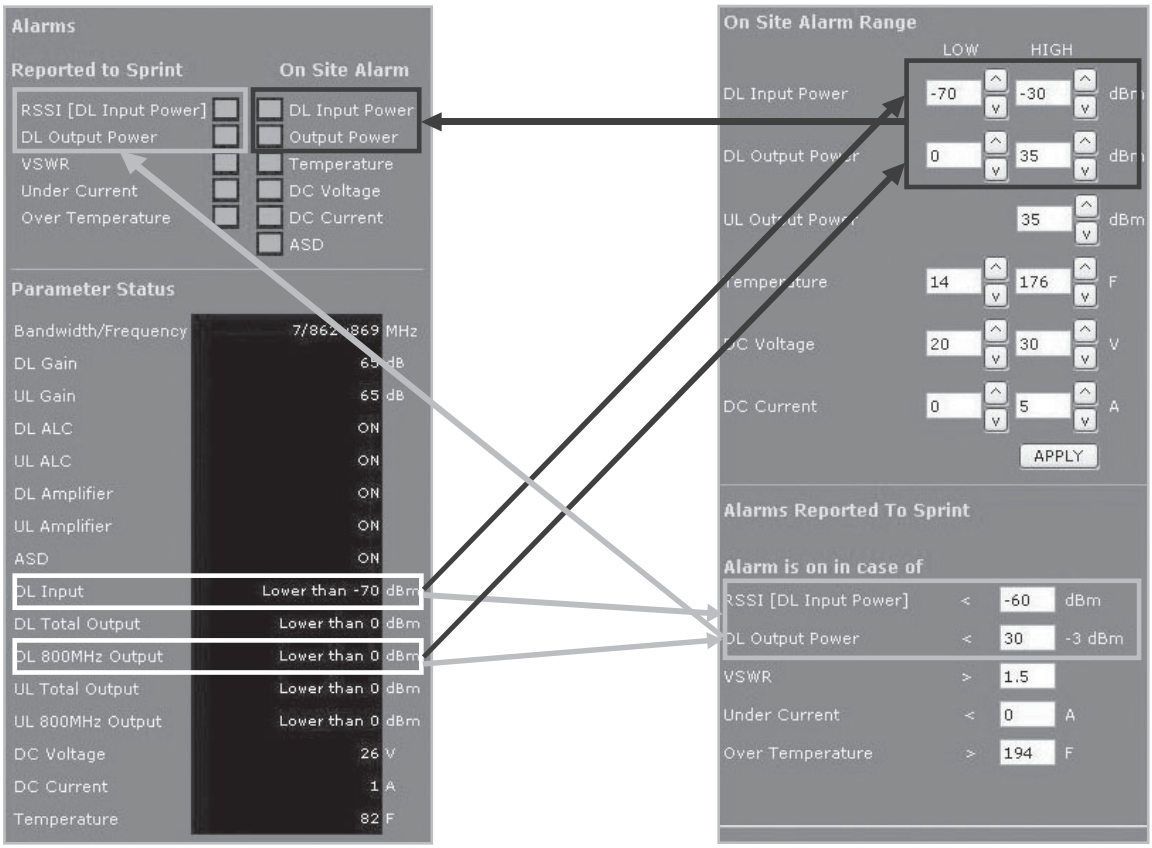
If input signal is -45dBm, the output power will be 20dBm by the limitation of the maximum gain even though the ALC is set as 25dBm.

• **Automatic Shutdown**: Type the desired values for **dBm**, **seconds** and **times** and then click **APPLY** and **ON**. (e.g. 28 dBm, 3 seconds, 10 times)
[Example]
For the repeater with 25dBm Maximum Output power, 65dB Maximum Gain / 20dB Gain control range, Assuming **ASD Level: 28dBm, ASD Time: 3seconds, ASD Count: 10**.
If the output power is 28dBm (ASD LEVEL) and higher, the repeater will shutdown for 3 seconds (ASD TIME). If the shutdown occurs 10 times (ASD COUNT), the 10th shutdown will be permanent.

Alarms

< Alarm Status > < Alarm Range >





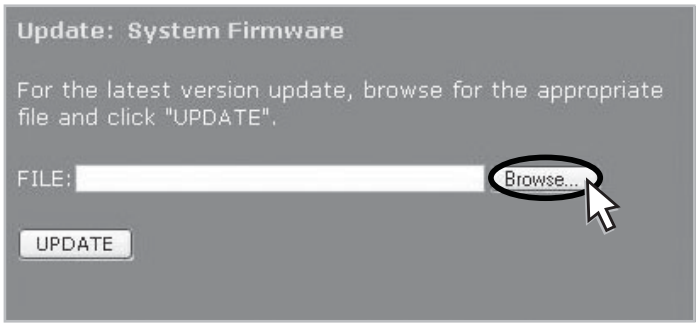
- **Reported to Sprint** : If an alarm occurs, the repeater will report directly to Sprint as a SNMP Trap so the LED of ALARM on the repeater does not blink.
- **On Site Alarm** : If an alarm occurs, the alarm LED on the repeater will turn on. Please refer to the troubleshooting section of this manual.
- No change of the values in the alarm range is recommended.

4.5.5 Upload

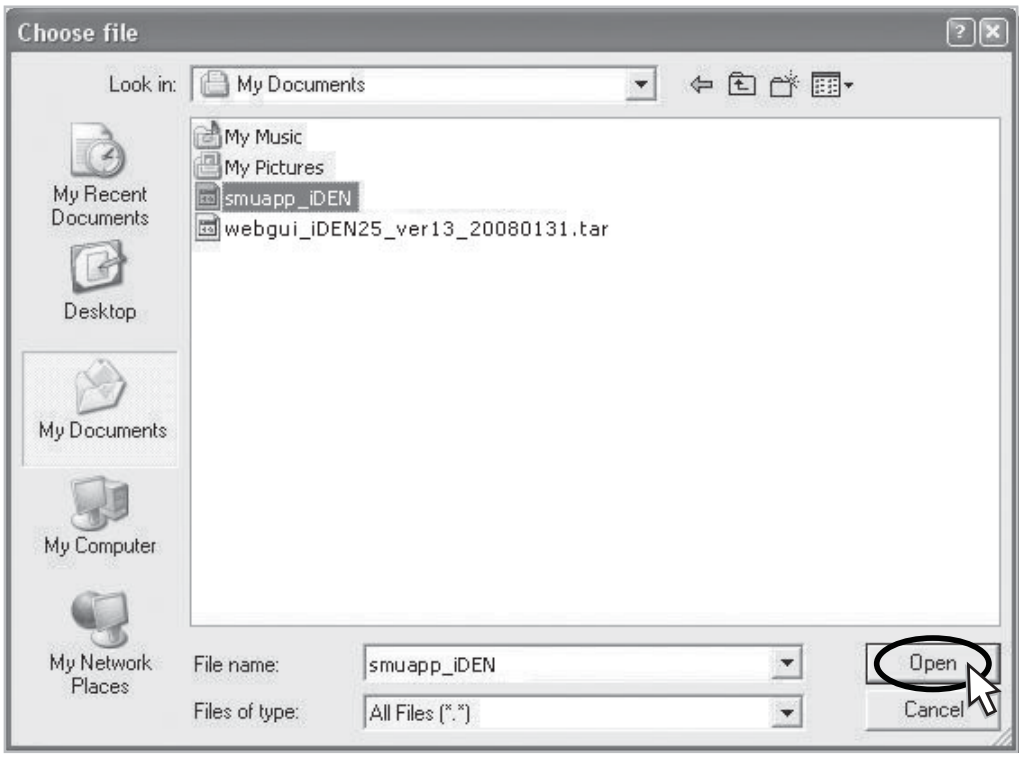
Click **Upload** in the left menu.

4.5.5.1 Update: System Firmware

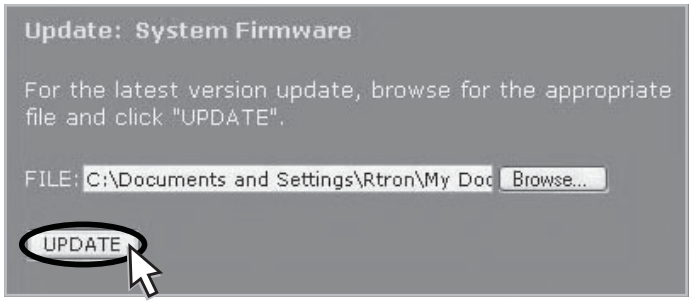
Step 1 Click **Browse**.



Step 2 A pop-up window will appear. Select the **firmware file** and click **Open**.

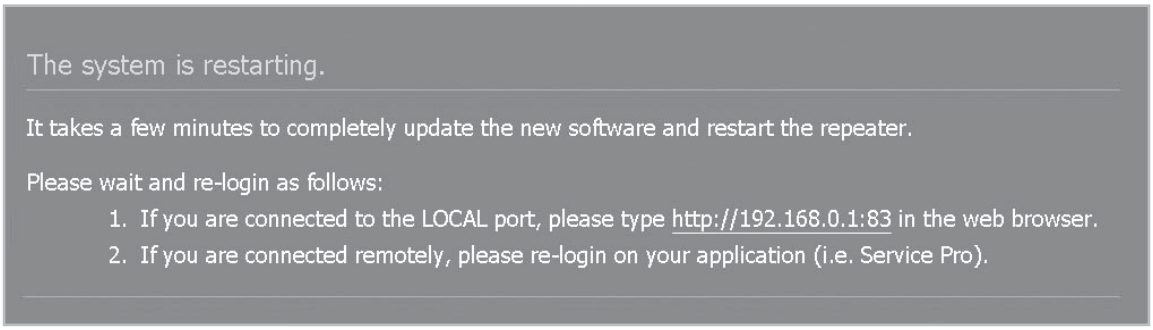


Step 3 Click **UPDATE**.



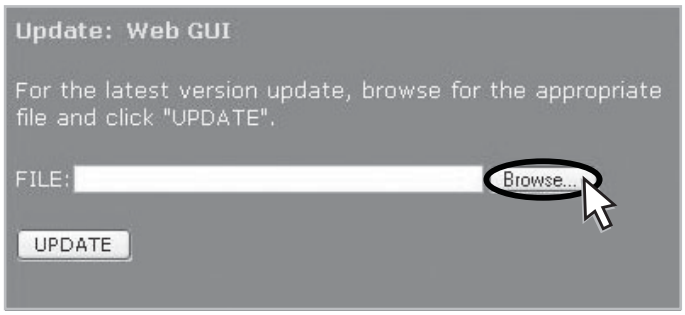
Step 4 A pop-up window will appear after completing all the update processes. Click **OK** to reboot the system.

Step 5 It will take a few minutes to update the new firmware.
If the system reboots, go to the login page and login again.
* Login page: http://192.168.0.1:83 (Local access)
A specified IP address on DHCP(Remote access).

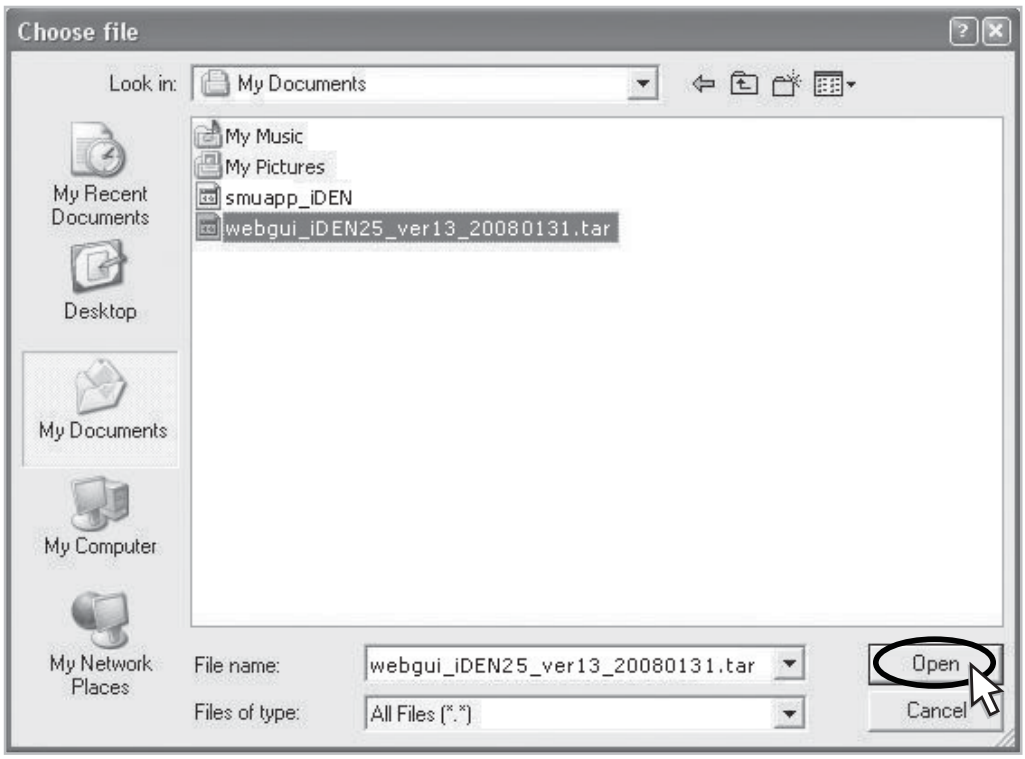


4.5.5.2 Update: Web GUI

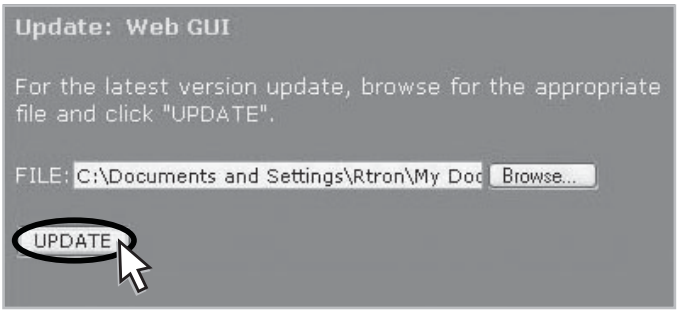
Step 1 Click **Browse**.



Step 2 A pop-up window will appear. Select the **GUI file** and click **Open**.

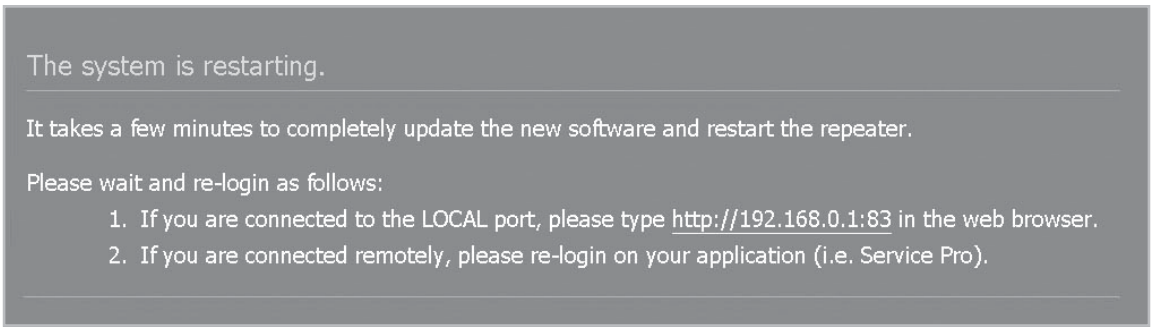


Step 3 Click **UPDATE**.



Step 4 A pop-up window will appear after completing all the update processes. Click **OK** to reboot the system.

Step 5 It will take a few minutes to update the new Web GUI.
If the system reboots, go to the login page and login again.
* Login page: http://192.168.0.1:83 (Local access)
A specified IP address on DHCP(Remote access).



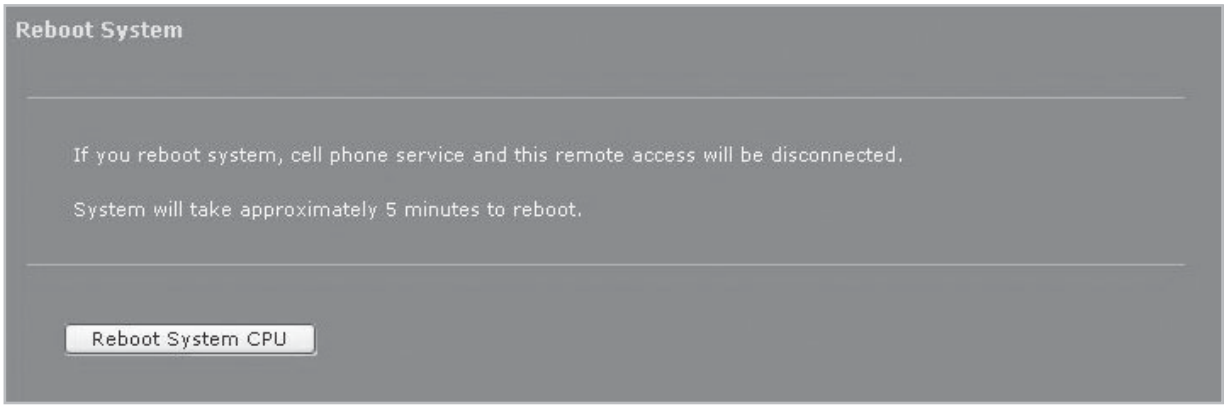
4.5.5.3 Restore

To restore the previous version, click **RESTORE**.

4.5.6 Reboot

Click **Reboot** in the left menu.

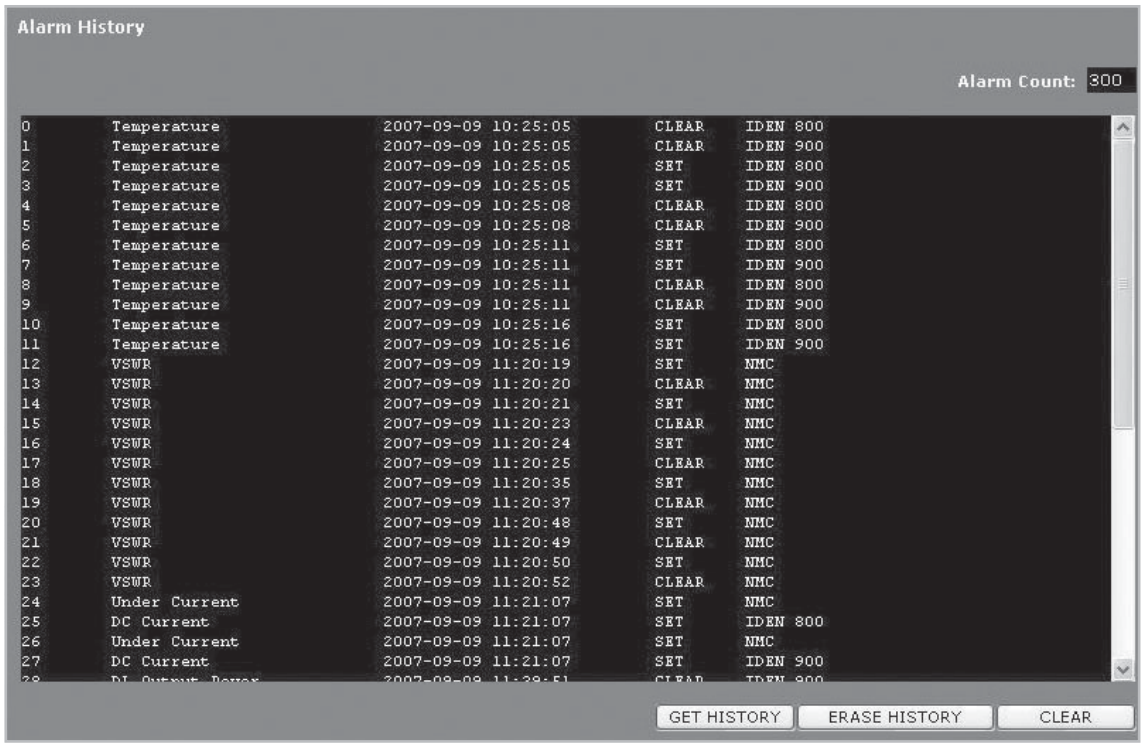
In this menu, you can reboot the system.



4.5.7 Alarm History

Click **Alarm History** in the left menu.

Click **GET HISTORY**, the history list of alarm issued will be displayed.



To erase the alarm history on the memory, click **ERASE HISTORY**.
A confirmation pop-up window will appear and click **OK**.

To clear the alarm history on the screen, click **CLEAR**.

Note

Up to 300 alarm lists can be stored in the memory.

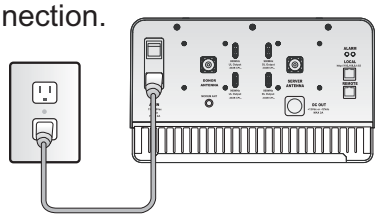
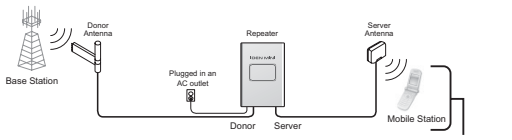
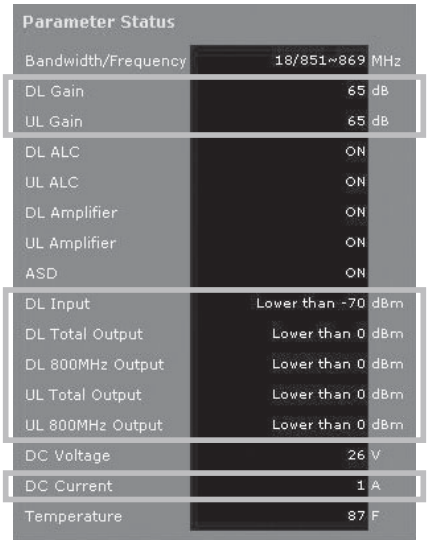
4.5.8 Logout

If you want to logout, click **Logout** in the left menu.

A warning pop-up window will appear and then click **OK** to logout.

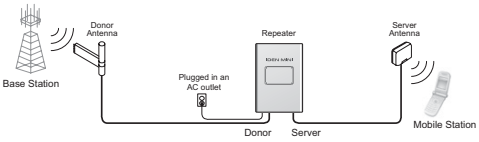
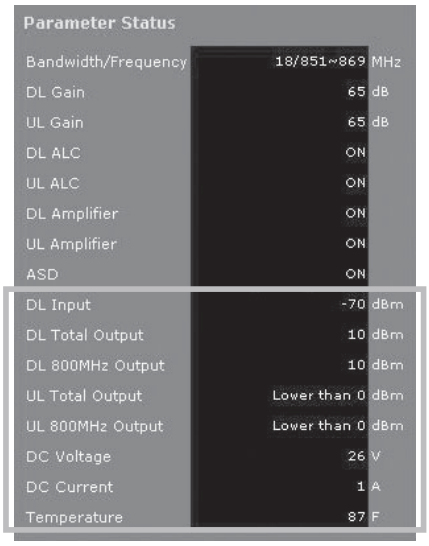
5. Troubleshooting

Before contacting your service dealer, please make sure you refer to the following guide. If the IDEN MINI does not work normally after completing the following troubleshooting, please contact your local dealer or service center.

Problem	Cause	Solution
No LED On		Check the power cord for secure connection. 
Cannot communicate with the repeater.		Check if the LAN cable is connected to the repeater and your computer, or your computer to set IP address. Or please disable and enable the Local Area Connection.
The mobile phone is not working well.		Turn on the power.  or  Check if the DL Amplifier and the UL Amplifier of Parameter Status are displayed ON.
Oscillation	 1. The values above are changed randomly under operating of DL ALC, UL ALC, and ASD. 2. DL Amplifier and UL Amplifier are on and off iteratively.	Turn off the repeater. Measure the isolation and verify if the isolation between the donor antenna and the server antenna is enough for the repeater. Refer to the note on page 15.

<table>
<tr><th>Problem</th><th>Cause</th><th>Solution</th></tr>
<tr><td>Green LED
→ steady

Red LED
→ flashing</td><td>Donor antenna connection
→ Good

Server antenna connection
→ Bad
 
</td><td>Check the cable connection to the server antenna and its VSWR.</td></tr>
<tr><td>The red light turns on.</td><td></td><td> 

Check if the value above is out of range.
<table>
<tr><th></th><th>Lower</th><th>Upper</th></tr>
<tr><td>DL Input Power</td><td>-</td><td>-30dBm</td></tr>
<tr><td>DL Output Power</td><td>-</td><td>30dBm</td></tr>
<tr><td>UL Output Power</td><td>-</td><td>30dBm</td></tr>
<tr><td>Temperature</td><td>14°F</td><td>176°F</td></tr>
<tr><td>DC Voltage</td><td>20V</td><td>30V</td></tr>
<tr><td>DC Current</td><td>0A</td><td>5A</td></tr>
</table>
If the Input Power or Output Power is out of range, please contact Technical Support.
Download site: www.r-tron.com
Toll Free: 888-31R-TRON</td></tr>
<tr><td>Red & green LEDs are flashing irregularly.</td><td>Malfunction of PSU.</td><td>Please contact Technical Support.
Download site: www.r-tron.com
Toll Free: 888-31R-TRON</td></tr>
</table>

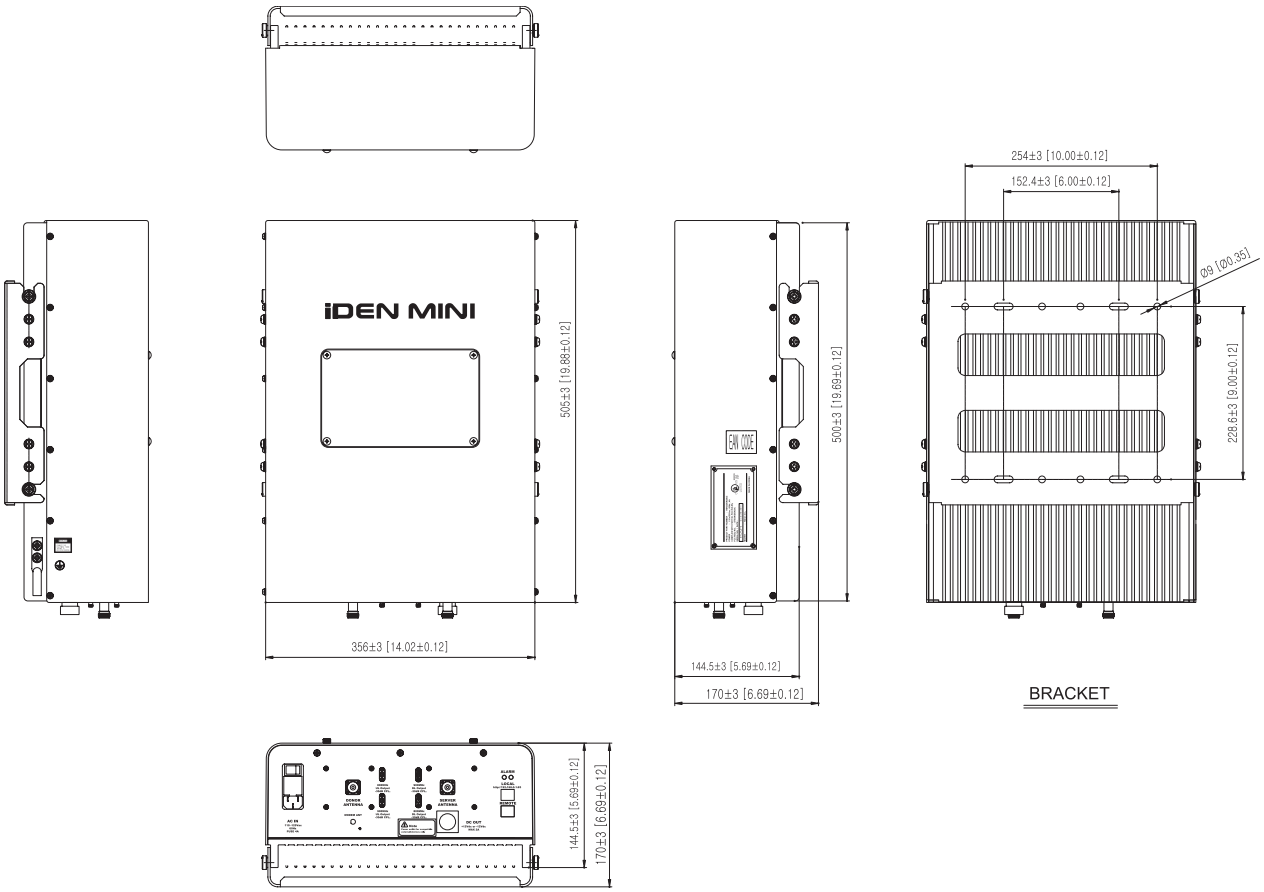
6. Specifications

Electrical Specifications

Parameter			iDEN 800	iDEN 900
Selectable Bandwidth		DL & UL	In-band BW:18M In-band BW:7.0M	In-band BW:5M
Frequency Selection	DL	18MHz-bandwidth	851~869MHz 850.8~868.8MHz 850.6~868.6MHz	
		7MHz-bandwidth	862~869MHz 861.8~868.8MHz 861.6~868.6MHz	
		5MHz-bandwidth		935~940MHz 934.8~939.8MHz 934.6~939.6MHz
	UL	18MHz-bandwidth	806~824MHz 805.8~823.8MHz 805.6~823.6MHz	
		7MHz-bandwidth	817~824MHz 816.8~823.8MHz 816.6~823.6MHz	
		5MHz-bandwidth		896~901MHz 895.8~900.8MHz 895.6~900.6MHz
Roll off		DL & UL	≤65dBc @Fedge+ / -500KHz	≤65dBc @Fedge+ / -500KHz
Ripple			3dB (Typical)	
Gain		DL & UL	40dB to 65dB	
Output Power		DL & UL	25dBm	
Delay		DL & UL	8.0μs Max.	
VSWR		DL & UL	1.5Max.	
UL Noise Figure		80dB Gain	5dB Max.	
		50dB Gain	12dB Max.	
Input Range		DL & UL	-30dBm Max.	
Power supply			110V~125V, 60Hz typical	
Operating temperature			*-10˚C~50˚C (14˚F~122˚F)	
Storage temperature			-20˚C~60˚C (-4˚F~140˚F)	
Consumption power			≤112.2W, (additional 12W)	

Mechanical Specifications

Parameter	Specification
RF connectors	N-female x 2, SMA-female x 5
Size	14.01 X 19.88 X 6.48 (Inch), 356 X 505 X 164.5 (mm)
Weight	22.78kg (50.22lbs)



The specifications are subject to change without any prior notification.

LIMITED WARRANTY

This product, as supplied and distributed by R-tron, in the original carton, is warranted by R-tron against manufacturing defects in materials and workmanship for a limited warranty period of:

Five (5) Year Parts and Labor

This limited warranty begins on the original date of purchase, and is valid only on products purchased and used in the United States. R-tron will repair or replace this product, at our option and at no charge as stipulated herein, with new or reconditioned parts or products if found to be defective during the limited warranty period specified above. All replaced parts and products become the property of R-tron and must be returned to R-tron. Replacement parts and products assume the remaining original warranty.

This limited warranty covers manufacturing defects in materials and workmanship encountered in normal, and except to the extent otherwise expressly provided for in this statement, use of this product, and shall not apply to the following, including, but not limited to: damage which occurs in installation; applications and uses for which this product was not intended; altered product or serial numbers; cosmetic damage or exterior finish; accidents, abuse, neglect, fire, water, lightning or other acts of nature; use of products, equipment, systems, utilities, services, parts, supplies, accessories, applications, installations, repairs, external wiring or connectors not supplied or authorized by R-tron which damage this product or result in service problems; or incorrect electrical line voltage, fluctuations and surges; customer adjustments and failure to follow operating instruction. R-tron does not warrant uninterrupted or error-free operation of the product.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE LISTED AND DESCRIBED ABOVE, AND NO WARRANTIES WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY AFTER THE EXPRESS WARRANTY PERIODS STATED ABOVE, AND NO OTHER EXPRESS WARRANTY OR GUARANTY GIVEN BY ANY PERSON, FIRM OR CORPORATION WITH RESPECT TO THIS PRODUCT SHALL BE BINDING ON R-tron.

Return Material Authorization(RMA) Procedure

The return and exchange of products are not allowed without prior approval from R-tron America, Inc.
Please follow the exchange procedure below.

1. Call Tech Support for troubleshooting.
2. If the device has a hardware problem, R-tron will replace it if it is within warranty.
   A RMA number will be issued for the return.
3. R-tron will ship the replacement and a return label will be provided.
4. The customer must return the product using the original packaging, including accessories.