

D & L

SPECTRUM

Corporation

**Setup Guide and Instructions** Version 1.10  
July 21, 2019

## Introduction

Each radio unit functions as an access point. You will use your phone's Wi-Fi capability to connect to the radio. The units are accessible on your browser at location <http://192.168.4.1>. There is no need to download a special Bluetooth application. The steps below will allow you to setup both radio units.

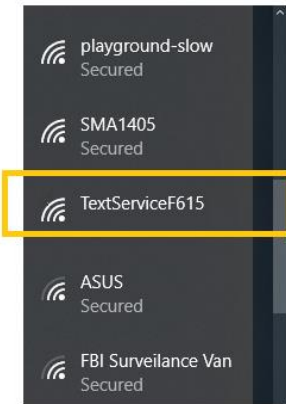
Prior to starting the set-up procedure make sure both radio units are fully charged. Plug the USB charging cable into each unit. The red charging light should appear on the front panels when the unit is being charged.



## A Quick Start for Using the Radio Units

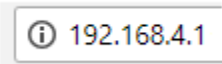
You will need two Wi-Fi enabled devices to connect to the black radio (two smartphones, or a phone and a PC or tablet).

1. Select one of the radio units and use the small slide switch to turn the unit **on**. The green LED should appear after a few seconds. Make sure the other unit is **off**.
2. Place the phone in **Airplane Mode** and then access the phone's Wi-Fi options in the phone's Settings panel. Make sure Wi-Fi is enabled on the phone and then view the list of available networks. Look for the name **TextService** followed by a unique number. Connect to this network. You may receive the message that there is no internet connection.



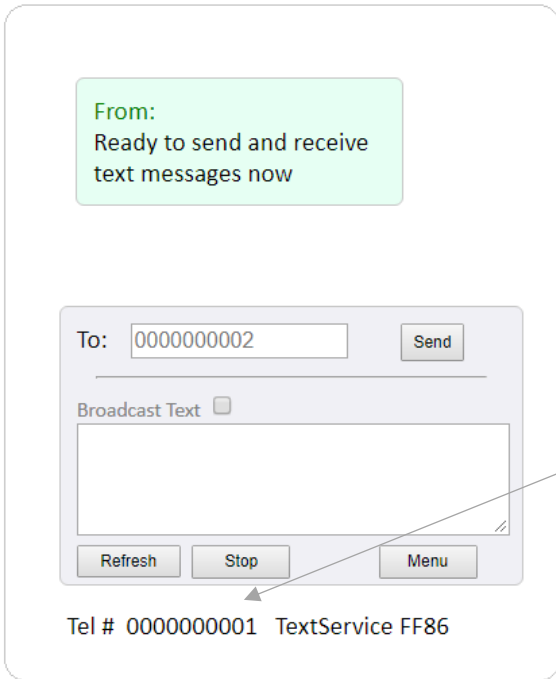
The Network name for the radio unit will start with the label "TextService" followed by a unique 3 or 4-digit number

3. After you have connected to the device, open your phone's web browser and enter the address



into the address bar. We recommend that you create a short-cut to this page as a quick selection icon for future use. If the dialog does not appear, make sure you are in Airplane Mode and that you are connected to the TextService network.

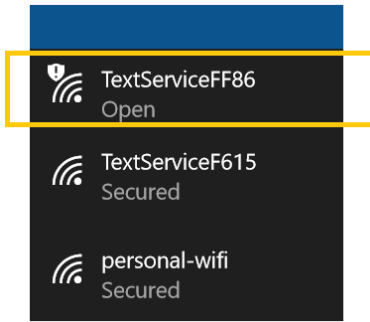
4. Your browser should display the dialog box like the one shown below.



Telephone number and Network name are displayed at the bottom of the web page. You can change the telephone number by pressing the Menu button and then Setup.

Each radio is assigned a telephone number. The radios are shipped with the pre-assigned telephone numbers (000) 000-0001 and (000) 000-0002 to make it easy to start using them immediately, however you should change these numbers by following this guide after determining that the units are working. The bottom row on the screen always displays the radio's current assigned telephone number and network name as it appears on the list of available Wi-Fi networks.

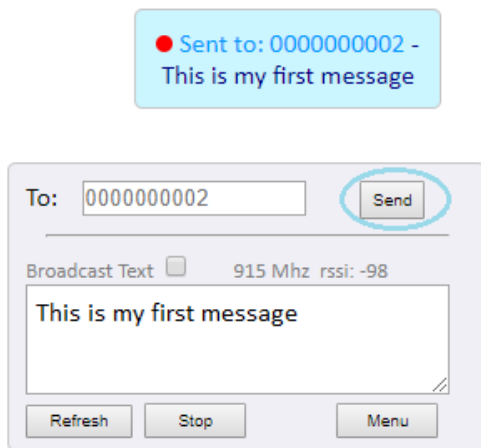
5. The next step is to pick up the second radio unit and turn it **on**. Use another device (second phone or tablet) to connect to this radio using the same previously described Wi-Fi network connection process. Place this phone in **Airplane Mode** and then access the phone's Wi-Fi options in the phone's Settings panel. Look for the name of the other unit (TextService) followed by a different unique number. Connect to this network.



You will see two radio units as networks when both units are turned on. Make sure you select the correct unit. Turn the unit off, and then back on, if it does not appear in the list of networks.

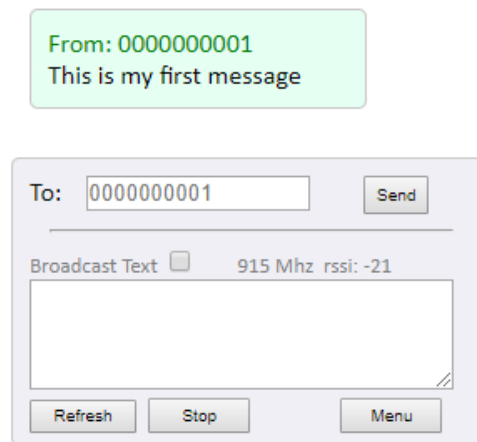
- After you have connected to the second device, open the second phone (or tablet's) web browser and enter the same address 192.168.4.1 as you did before. The second phone will then display the texting app with a different number and network TextServicexxx.
- On either phone, enter a test message and click the Send button.

### Sender Unit



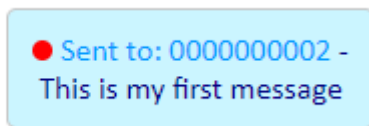
Tel # 0000000001 TextService F615

### Receiving Unit



Tel # 0000000002 TextService FF86

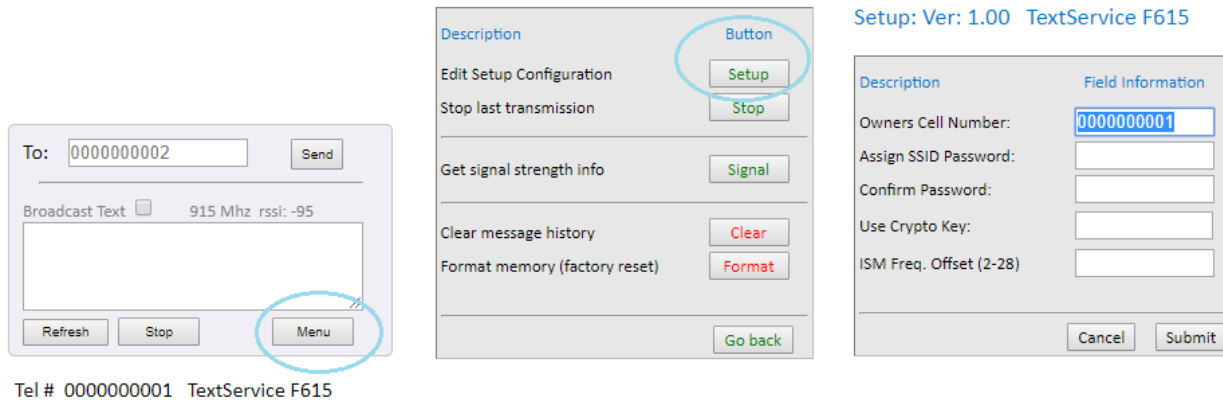
A red dot will appear and remain on the screen until the message has been acknowledged by the receiver. The ● LED on the receiving unit will flash when an incoming message has been received. The LED will stop flashing when the message has been viewed.



Now verify that you can exchange messages between the two connected phones. You can experiment with various distances between the phones before moving to the next steps.

## How to Change the Telephone Number from 000 000 000x.

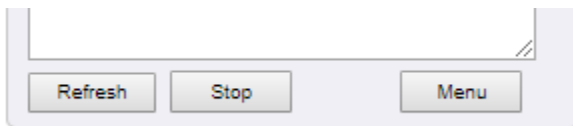
- Press the **Menu** button and then the **Setup** button. Enter the telephone number you want to associate with this radio. You can use the format **(xxx) xxx-xxxx**. The formatting will be removed, and the number will be stored as a continuous 10-digit number. Skip the other fields for now and press the **Submit** button.



- You are done with the initial setup. Write down the SSID of the radio along with the telephone number you entered in the dialog box on a notepad. It is also recommended that you place a paper label or sticker on the unit that shows the TextServicexxx ID and the telephone number you picked.

### Other Features on the Main Texting Dialog

The **Stop** button is used to end the message retry loop and remove the red dot.



The radio unit will attempt to deliver the message until it is either received or you press the **Stop** button. The green LED on the front panel will also blink during a message transmission attempt. The Refresh button updates the log of messages. You can use the Refresh button immediately after pressing the Send button to see if your message was received.

You can also **Stop** retries by holding down the **Wake** button.



You can clear the message journal by pressing the **Menu** button and pressing the **Clear** button.

Description	Button
Edit Setup Configuration	<input type="button" value="Setup"/>
Stop last transmission	<input type="button" value="Stop"/>
<hr/>	
Extended Range ON	<input type="button" value="On"/>
Extended Range OFF	<input type="button" value="Off"/>
<hr/>	
Get firmware update	<input type="button" value="Update"/>
<hr/>	
Clear message history	<input type="button" value="Clear"/>
Format memory (factory reset)	<input type="button" value="Format"/>
<hr/>	
<input type="button" value="Go back"/>	

The **Format** button should be used only when you want to start over and restore the factory settings.

### Other Setup Settings

(Press Menu and then Setup)

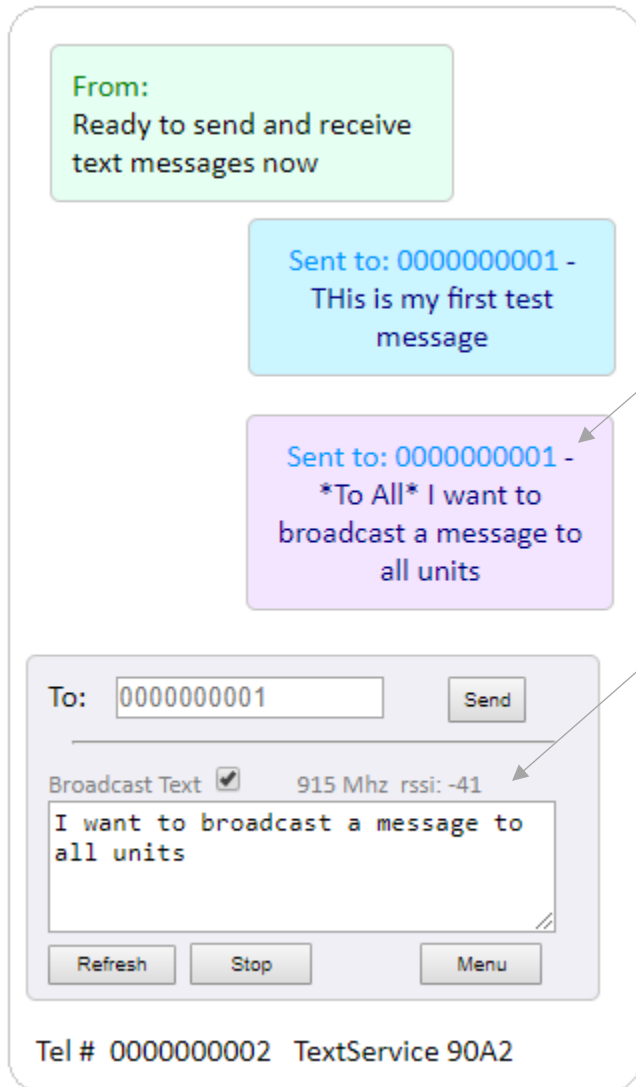
Setup: Ver: 1.00 TextService F615

Description	Field Information
Owners Cell Number:	<input type="text" value="2125551234"/>
Assign SSID Password:	<input type="text"/>
Confirm Password:	<input type="text"/>
Use Crypto Key:	<input type="text"/>
ISM Freq. Offset (2-28)	<input type="text"/>
<input type="button" value="Cancel"/> <input type="button" value="Submit"/>	

- A.
- B.
- C.
- D.

- A. This is the **password** that will be needed to connect to the radio unit. Write it down in a safe place. You will need to turn the unit off and back on and re-connect to the network after making this change.
- B. **Confirm** the password if you change it
- C. **Crypto Key** – create a crypto key that must be used by other radios to exchange messages with this unit. It is best to use a word+number combination such as "Passion889".
- D. **ISM Freq. Offset** – Your radio is capable of using frequencies between 902 MHz and 928 MHz. Use this feature if the frequency setting contains excessive noise or you want additional privacy.

## Additional Radio Features



### Broadcast a Text Message

Text message can be sent to all nearby radios by using the Broadcast Text **checkbox**. Broadcast messages (received and sent) are displayed in the message area with a different color.

#### Note:

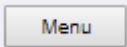
You can limit the message to certain radios by using a Crypto Key that is shared by the group of radios.

### Frequency and Signal Strength

After a message exchange has taken place, the texting screen will display the frequency and RSSI.

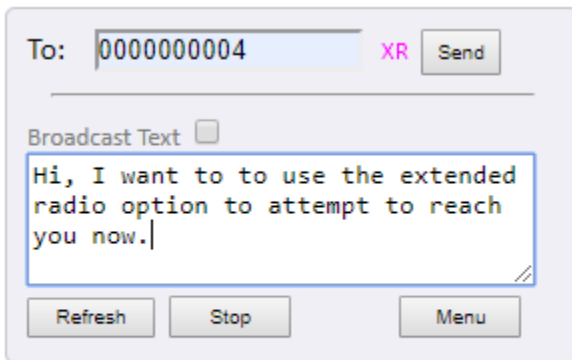
RSSI signal strength is expressed in units of decibels (dB). Due to the low power levels and the attenuation of free space, an RSSI value is expressed as a negative number. The more negative the number, the weaker the signal strength; conversely the closer the number is to zero, the stronger the signal.

## Extending the Radio Range

The range of the radio can be extended by 20% to 30% by using alternate settings. The range is increased by using a narrower bandwidth and altering the spreading factor. These changes will slow down your message exchanges by 8 to 15 seconds. Use the  button and select Extended Range ON.

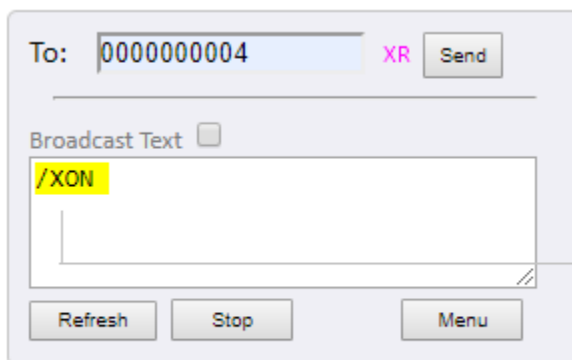


The letters XR will appear on the message input to let you know that the radio is using the extended radio option.



Tel # 5556667777 TextService 9E7

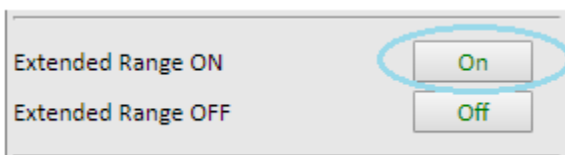
Both the Sender and the Receiver must be in the Extended Range (XR) mode for the message to be exchanged. You can cause the receiving radio to switch to the Extended Radio mode by sending the text message '/XON'.



The command /XOFF will reverse the change so the radio returns to the default mode.

Tel # 5556667777 TextService 9E7

After the receiver has acknowledged your XOR command, immediately set your extended range on.





## How to Perform a Factory Reset

You may need to perform a factory reset because the unit is unresponsive or you have lost your password. This procedure will erase all previously established settings.

Use the following sequence:

1. Turn the unit off
2. Turn the unit on and immediately press and hold the Wake button for 3 full seconds.

