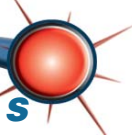


# Rath

EMERGENCY  
COMMUNICATIONS



## Installation & Operations Manual

*Emergency  
Solar/Cellular  
Call Station*

*Model: 2100-854/DE*



Made in the USA  
2 Year Warranty

N56 W24720 N. Corporate Circle • Sussex, WI 53089  
866-850-8854 • 262-246-4828 (fax) • [www.rathsecurity.com](http://www.rathsecurity.com)

03/09



Welcome to Rath.

Thank you for purchasing the Rath Emergency Phone Towers. We have designed these towers to provide an "all in one" solution to your exterior emergency phone needs. Our new Wide Area Broadcast speakers can provide campus wide notification not only of emergency situations, but also for general campus announcements. This feature is accessed remotely both by calling into the phone or through your normal "PA" system and can be part of your overall Campus Security communication network. If you decide you want wide area lighting or to add a camera to the tower, give us a call and we can take care of you.

We take great pride in not only our products, but also our service and support. Our #1 mission is customer satisfaction, and if at any time you feel we are not living up to your definition, do not hesitate to give us a call.

When evaluating emergency communication systems, you can rely on Rath to continually provide Innovative Thinking, Design and Value. If you have a new product idea to share, feel we are missing out on a new technology or for any reason, just give us a call.

Thank you for your business.

Tom Touchett, President  
866-850-8854

# Model: 2100-854 Emergency Solar/Cellular Call Station

## Parts Listing Provided by Rath:

1. Strobe
2. Solar Panel
3. Battery
4. Rath SmartPhone Emergency Phone
5. Nema electrical box mounted inside tower
6. Voltage regulator
7. Cellular transceiver
8. #10 Spanner bit (to loosen security screws)

## Call Station Installation:

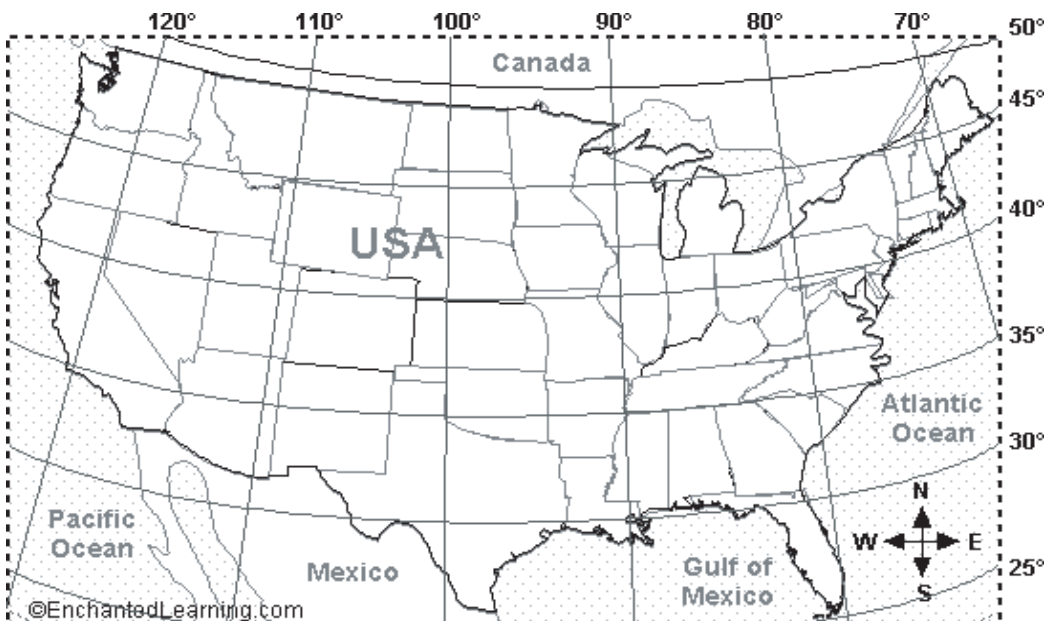
1. Remove 12 security screws from side of unit.
2. Remove top cap from unit.
3. Pull front assembly away from back unit.
4. If wall mount, mount to wall.
5. If pole mount, attach pole mount bracket to back of unit with the screws provided.
  - a. Attach pole mount bracket and back unit to pole using a secure mounting fastener.

## Battery Installation:

1. Install battery in bottom of mini-tower.
2. Connect the power cables to the battery. Red to positive and black to negative of the battery and secure with nut/bolt/washer which is supplied with your battery.

## Solar Panel Installation:

1. Identify a location that will allow solar panel to collect maximum of light with minimal amount of shade.
2. Mount the solar panel bracket to the wall or pole with two supplied hose clamps or screws (not provided). Open up electrical box on back of solar panel by removing the two screws. Connect red to positive and black to negative. Secure weather tight connection to box and reattach box cover by installing the two screws.
3. Use the chart below to determine your approximate longitude. Take your estimated latitude multiply by .9 and add 29 to arrive at the angle you need to set solar panel to.



## Programming the phone:

You can program the phone on-site or program remotely. If you change the emergency number being called, you can do it remotely without going to the tower.

### On-Site:

Step 1. Open up Nema enclosure to expose keypad

Step 2. Begin Program mode

A. Press **Enter**

Step 3. Program Emergency Numbers

A. Press **1, Enter**, (phone number), **Stop**

Note: Press **2-5** in step 2A for Emergency numbers 2-5 as needed

Step 4. If Ring Down

(No dial tone) (Skip Step 2 above)

A. Press **1, Enter, Pause, Stop**

B. Press **9, Enter, 0**

Step 5. Program Location Message

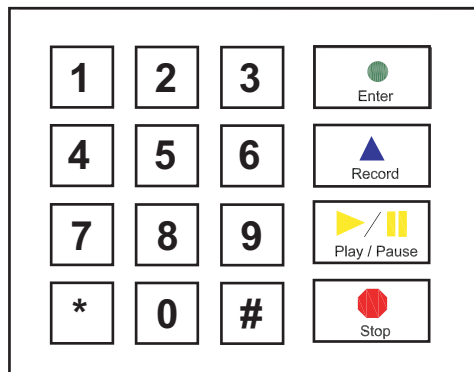
A. To turn on message Press **1, 3, Enter, 2**

B. Press **6, Record** (speak message) **Stop** (to replay message press **6, Play**)

C. For no message Press **1, 3, Enter, 0**

Step 6. To exit program mode

A. Press **Stop** for 3 seconds



Rehook the Wago connectors that connect the front phone plate with the Nema box and secure front assembly onto back panel.

## Programming the Phone (continued):

### Remote:

#### Step 1. Begin Program mode

- A. Call into phone by dialing the number the line is on.
- B. After 1st simulated ring Press **#, #** (Wait for 4 tones)
- C. Key in security code (default is **1111**) (Wait for confirmation tones)

#### Step 2. Program Emergency Numbers

- A. Press **1, \*, (Phone number), \*, #** (Wait for confirmation tones)
- Note: Emergency numbers (**2-5**) Repeat Step 2A; pressing (2-5) as needed.

#### Step 3. If Ring Down

- (No dial tone) (Skip Step 2)
- A. Press **1, \*, #, \*, \*, #** (Wait for confirmation tones)
  - B. Press **9, \*, 0** (Wait for confirmation notes)

#### Step 4. Program Location Message

- A. To turn on message Press **1, 3, \*, 2** (Wait for confirmation tones)
- B. Press **6, \*, (speak message) #, \*, #** (Wait for confirmation tones)
  - a. (to replay message press **6, #**) (Wait for confirmation tones)
- C. For NO message Press **1, 3, \*, 0** (Wait for confirmation tones)

#### Step 5. To Exit Program Mode

- A. Press **\*, #, 0** (you will hear beep, beep) **\*, #** (You will hear a buzz)

## Testing of the Phone (push the silver emergency button on front of the Tower):

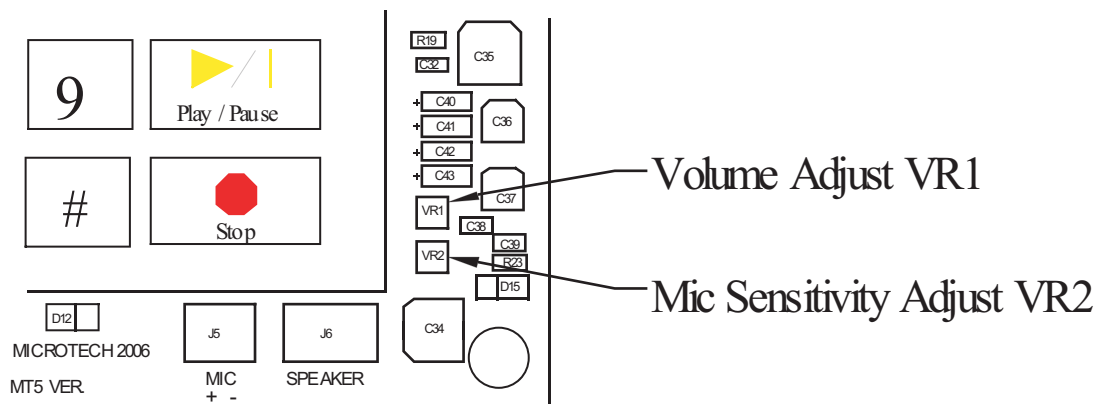
All answers below should be YES - if you answered YES to all, you have successfully installed and tested your new Emergency phone. If you answer NO to any question, recheck that areas connection or call Rath Technical Support at 866-850-8854

- \_\_\_\_\_ Did you hear a dial tone?
- \_\_\_\_\_ Did the Strobe start flashing immediately when button was pushed?
- \_\_\_\_\_ Did red LED become a solid light when you pushed the button?
- \_\_\_\_\_ Did red LED flash and a short time later (15-20 seconds) someone starting talking to you? (Delay is due to phone telling other party your location "Call tracker")
- \_\_\_\_\_ Could you hear the other party clearly? (if no, see "Adjust Speaker" on the next page)
- \_\_\_\_\_ Could the other party hear you clearly? (If no, see "Adjust Microphone on the next page)
- \_\_\_\_\_ When the party you called hangs up, does the strobe stop?

## Testing of the Phone (continued):

### Adjusting the Volume:

If the volume is too low or high, adjust it by using the Diagram below



### Adjusting the Microphone:

If the person you are calling can't hear well you can increase the Mic sensitivity, by adjusting VR2 ¼ turn clockwise.

### Adjusting the Speaker:

If you can't hear the person you call well you can increase the volume, by adjusting VR1 ¼ turn clockwise.

Note: VR1 & VR2 are 7/8th turn control and come set mid range.

### Suggested Ongoing Testing of the Phone:

We recommend you put your Emergency phone towers on a monthly maintenance schedule. Just push the button and follow the above procedure to ensure all components are working properly and that no one has tampered with your phone line.

### Final Install:

1. Secure front cover assembly to mounted back plate with the 8 provided security screws.
2. Secure cap to front assembly with the 4 provided security screws.

# Model: 2100-854/DE

## Emergency Call Station Dimensional Specifications:

Call Station	
Body of Tower:	2100-854/DE
Height	39 in.
Width	10 in.
Depth	8 in.
Thickness of Steel	18 gauge
Weight	51 lbs.

Strobe	
Operating Voltage:	Solar Unit 12 V
Current:	.3 Amps
Flashes/Minute:	65 SF
Light Output:	250 candelas/second
Joule Rated Output:	2.75 Joules
Mount:	1/2" pipe mount
Height:	4.5 inches
Diameter:	5.75 inches
Shipping Weight:	2.5 pounds

SmartPhone		
Length:	3.7 inches	
Width:	4 inches	
Depth:	1.1 inches	
Current Draw Power:	110 mAmp	
Controlled Dry Contacts:	3	3.55V
Off Hook Voltage:	-50V LINE -24V LINE	3.59V
Loop Current:	-50V LINE -24V LINE	23.89MA 24.32MA
NEMA Box		
Length:	10.04 inches	
Width:	7.09 inches	
Depth:	2.49 inches	
Other Components Inside NEMA Box:	Output Board Regulator	

### Tellular Fixed Wireless Terminals

Unit Type	Nominal voltage	Operating voltage range	Pulse input power	Idle current	In call	L	W	D	Wt.
SX4E-C80D-01-US	12 vdc	9.6 to 15 vdc	10w (0.9A)	2.8w (.25A)	5.0w (.42A)				
SX4ETRI-US	12 vdc	11.5 to 26 vdc	10w (0.9A)	2.8w (.25A)	5.0w (.42A)				
SX2o GSM	12 vdc	12 to 15 vdc	25w (2A)	5w (.5A)	20w (1.7A)				
SX4e GSM 900	12 vdc	12 to 26 vdc	15w (1.2 A)	2.8w (.25A)	12w (1A)				
SX4ETDMA-V-US	12 vdc	11.5 to 26 vdc	10w (0.9A)	2.8w (.25A)	5.0w (.42A)	12	5.6	1.5	2 lbs.
SX3E/I-AMP-XX	12 vdc	11.5 to 15 vdc	30w (1.7A)	2.8w (.25A)	18w (1.5A)				
SX5E-G98D-00-XX	7.1 vdc	6.5 to 11.0 vdc	14w (1.7A)	0.9w (0.13A)	2.9w (0.42A)	7.2	8.3	2	1.6 lbs.
	7.1 vdc	6.5 to 11.0 vdc		1.6w (0.23A)	5.5w (0.77A)	7.2	8.3	2	1.6 lbs.