# **REMOTE FIELD** COMMANDER **OPERATOR'S MANUAL RFC**\* --- (1212)

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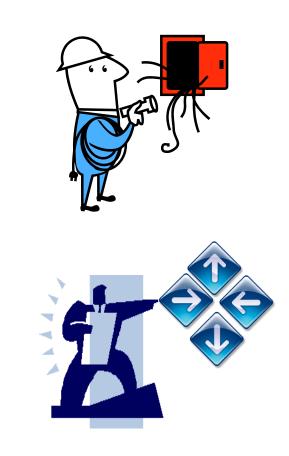
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# **SECTION 3**

<b>Base Station Operation</b>
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Wiring and Parts







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# Introduction

Congratulations on your purchase of the OmniPro Restoration Remote Field Commander. This manual is a guide for safe operation and maintenance of this unit.

# **AWARNING** Read and understand this manual completely before operating this unit.

For proper drying you must have a thorough understanding of how the RFC Base Station, Remote Sensors and Remote Power controllers are set-up to operate drying equipment.

This manual should be maintained in legible condition adjacent to the unit or in a secure location for future reference.

Any questions pertaining to the operating or servicing of this unit should be directed to your nearest OmniPro Restoration distributor.

# **ADANGER** Improper operation, alteration, service or maintenance can cause property damage, personal injury or loss of life.

Service must be performed by a qualified technician.

OmniPro Restoration is in no way responsible and is excluded from liability in respect to any loss or damage which may arise due to improper operation, maintenance or repair.

This manual is written specifically for the Remote Field Commander units manufactured by: **OmniPro** Restoration 4282 S 590 W Salt Lake City, UT 84123 801-261-1282 remotefieldcommander.com

Information in this manual is subject to change without notice and does not represent a commitment on the part of OmniPro Restoration.

# Warranty

Your Remote Field Commander is designed to give you years of reliable service. If a problem should arise use the troubleshooting section in the operation manual to diagnose and correct the problem if possible. If you are unable to determine the cause or solution to the problem contact your distributor or OmniPro Restoration for assistance.

OmniPro Restoration warrants all components of the RFC Base Station, Remote Sensors and Remote Power Controllers to be free of defects in material and workmanship for one year from the date of purchase.

During the warranty period, OmniPro Restoration will, at its option repair or replace components which prove to be defective.

- This warranty does not provide for replacement of complete units due to defective components.
- Service Labor is only covered for the first 90 days after the date of purchase.
- Any costs for transportation are not covered in this warranty.
- Replacement parts are warranted only for the remainder of the original warranty period.

This warranty **shall not** apply to defects resulting from improper operation, lack of maintenance, condensation, chemical corrosion, unauthorized modification, misuse or abuse. This warranty **does not** cover normal wear to items such power cords, plug adapters or other items which require replacement as a result of ordinary usage.

To obtain warranty service for the Remote Field Commander, contact your distributor or OmniPro Restoration. If the unit must be returned to OmniPro Restoration or an authorized service center, the purchaser shall prepay shipping charges for products returned for warranty service.

• No returned items will be accepted by OmniPro Restoration without prior authorization. All returns must have a return authorization number, issued by OmniPro Restoration, clearly marked on the exterior of the package.

OmniPro Restoration makes no other warranty either expressed or implied with respect to this product. The remedies provided herein are the purchaser's sole and exclusive remedies.

In no event shall OmniPro Restoration be liable for any direct, indirect, special, incidental or consequential damages.

This warranty gives you specific legal rights. You may also have other rights which vary from jurisdiction to jurisdiction.

# **General Information**

#### Remote Field Commander - Model MB100

Remote Monitor & Control System Height: 3.00"

 Height:
 3.00"

 Height with Antenna upright:
 9.25"

 Length:
 6.38"

 Width:
 7.25"

 Weight:
 1.07 lbs.



#### Remote Field Commander Standard Equipment

RFC Base Station Unit with Internal Modem & External Antenna

(Requires Paid Remote Monitoring Access Subscription)

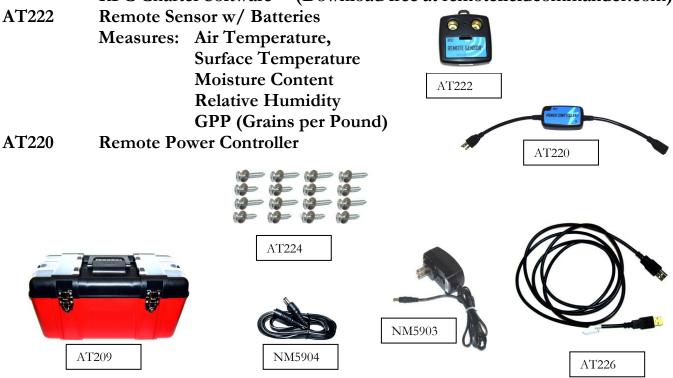
- NM5903 12v Power Supply
- NM5904 Extension Cord for Power Supply 6 ft.

AT226 USB Direct Connect 6' Cable Type A-A

- AT224 Moisture Probe Screw Kit
- AT209 Tool Box Foam padding added for Equipment Storage
- **RFC Wireless Package:**
- 6 AT222 Remote Sensors w/Batteries
- 3 AT220 Remote Power Controller
- 1 AT209 RFC Storage Case
- 12 Colored tags for Sensors & RPC's (2 tags of 6 different colors)

#### Remote Field Commander Optional Sensors & Controls

**RFC** Charter Software (Download free at remotefieldcommander.com)



# **RFC REMOTE SENSORS:**

The RFC Remote Sensors allow you to take multiple sensor readings up to 200 feet away from the RFC Base Station. Electrical interference or barriers blocking the radio signals may reduce the effective range. Each RFC Base Station can communicate with up to 14 Remote Sensors. Signal hopping, where the signal from a sensor is relayed to the RFC unit through one or more Remote Power Controllers can greatly extend the operating range of sensors. While RPC's are always configured to allow hopping through them, sensors by default will not allow



hopping through them, to conserve battery life. Sensor hopping can be activated if needed to increase the sensor range, but it does drain the sensor batteries faster.

Each Remote Sensor can measure **Air Temperature, Surface Temperature, Moisture Content, Humidity** and **GPP**, and transmit its ID number and the data back to the RFC Base Station unit to allow you to control electrical devices, when the devices are connected to Remote Power Controllers. Two screws are placed through the holes in the sensor and screwed into the wet wood to read Moisture Content. Uncoated Pan Head #12 screws with lock washers should be used to make good contact with the moisture content connectors and protect the sensor from damage. When used with a Remote Sensor and a lock washer a 3/4" screw will drive 5/16" deep into the wet material, while the 1" screw will go 9/16" deep. When possible align the screws parallel to the wood grain.

# NOTICE

Do not over tighten. Screws may need to be re-tightened as wood dries to maintain contact with sensor and read accurately.

Screw Kit AT224 contains 16 screws and 16 washers (8 each of 2 different lengths, 3/4" and 1" with 16 – 1/4" Split Lock Washers).



When the RFC unit receives a signal from a Remote Sensor it will display the sensor ID number and sensor readings in the sensor list on its display and the RFC Charter when the RFC unit is connected to a computer via remote or direct connection. While each sensor will always read and record all five drying condition measurements, you can select which measurements will be used to control any Remote Power Controller. With the RFC Charter software you can set the remote sensor list to only display the specific factors you want to see or even hide the entire sensor from the sensor list.

When using multiple Remote Sensors it is a good idea to write down the ID number of each sensor and note the location it has been placed. When using the computer based setup software you can assign aliases to each sensor to make it easier to identify its location. The aliases will not show up on the Base Station display, but will show up in the RFC Charter sensor list and in all reports. Also note the ID number and aliases of any Remote Power Controller you wish to control with each sensor. The RFC unit will automatically list all Remote Sensors from which it receives a signal. (System setup can be set to display Base Station Internal sensors if desired.)

There is no ON/OFF switch on the Remote Sensors. If the batteries are good in the Remote Sensor it will be on, and will be sending a signal. The indicator light on the sensor will blink once every ten to fifteen seconds to let you know it is operating. While the power draw is low and the batteries in the Remote Sensor will generally last a month or more, to assure continual operation during the entire job, two new AAA batteries should be placed in each sensor at the beginning of the job. It is recommended that only alkaline type batteries be used in the Remote Sensors as the Battery life monitoring feature is calibrated ONLY for this type of battery. Other types of batteries may be used, but low battery warnings may not be accurate.



damage sensor.

Make sure battery polarity is aligned correctly. Reversing polarity can

Remove batteries from the sensor at the end of each job.

To remove or replace the batteries simply remove the battery cover and pull the batteries out of the sensor. Be sure the batteries are installed with polarity aligned to match the embossed image of the batteries in the batter holder inside the sensor.









Battery Door Removed

## **RFC REMOTE POWER CONTROLLER:**

The RFC Remote Power Controller, or RPC, will allow you to remotely turn on a remote exhaust fan or other electrical device or monitor and control a device using the environmental readings of Remote Sensors. The Remote Power Controller will apply power



to any electrical device by connecting & disconnecting the 120volt electrical source. Because the Remote Power Controller turns power ON and OFF at the cord, only devices with a mechanical ON/OFF switch or a saved state of the last operating position should be used with the controller. There are many devices that do not automatically restart once power is restored. These devices should not be controlled using the Remote Power Controller. The Remote Power Controller can still be used to monitor the power draw to show if the device is on or alert you if the device is turned off. This will also allow you to turn the equipment off if needed, though you will not be able to restart it remotely.

The Remote Power Controllers can be located up to 200 feet away from the RFC unit and control 120volt AC electrical devices with a total amp load up to 15amps. Electrical interference or barriers blocking the radio signals may reduce the effective range. Remote Power Controllers can be placed to relay the signals from distant Remote Sensors and other RPC's to the RFC unit, to greatly extend the sensor & RPC operating range.

Each Remote Power Controller can be controlled by multiple sensor readings. The RFC Base Station takes each of the readings into account when determining the state of the RPC. If ANY of the readings are telling the attached device to be OFF, the RPC state will be OFF. Only if ALL of the readings are allowing the device to be ON will the RPC state be ON. All sensor readings including the RFC Internal Temperature and Internal rH readings can be used as well as the Air Temperature, Surface Temperature, Moisture Content, RH relative humidity and GPP (grains per pound) readings from the Remote Sensors, to control the RPC's in the system. It should be noted that although a RPC can be controlled by multiple sensor readings, each individual sensor reading can only control one RPC. Simply stated; each sensor reading can only be assigned to one RPC.

When plugged into a live 120volt outlet the RPC will begin to transmit its signal to the RFC Base Station. When activated and transmitting power through to the attached device, the red light on the RPC will light up and stay on to indicate it is live and transmitting power. (On some early production units the as soon a the RPC is plugged in, the light will flash every 3-4 seconds to indicate the outlet is live, but it does not indicate its power transmission state.) When the RFC unit receives a signal from a RPC it will display the RPC ID number and status readings in the charter when the RFC unit is connected to a computer via remote or direct connection. The RFC display will list the available RPC's in the RPC ID column. (See the Menu Navigation section of this manual for instructions on how to scroll through the list to select the desired RPC to be controlled or select PLACE or HEAT for each sensor reading.)

When using multiple Remote Power Controllers it is a good idea to write down the ID number and tag color of each remote and note the location and device to be controlled. When using the computer based setup software you can assign aliases to each controller to make it easier to identify its location. The aliases will not show up on the RFC Base Station display, but will show up in the RFC Charter and reports.

At the start of each job, you can **Force ON** all of the Remote Power Controllers to check equipment operation. After testing is complete the **Clear Force** setting can be used to return the RPC's to the system sensor control settings before leaving the job site. (See the Base Station Control Panel Job Menu instructions on Page 14 or RFC Charter Active RPC instructions for Direct Computer connection Page 26.) During the job you can override the system sensor control settings and force the Remote Power Controllers ON & OFF as needed using the RFC Charter Remote Connection (See instructions on Page 40) or using the Website Remote Control (See instructions on page 52).

## **EXTERNAL ANTENNA:**



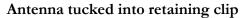
To allow remote communication an external antenna is connected to the RFC Base Station modem. This antenna is connected to a post on the back of the RFC Base Station.

The antennal swivels so it be moved around, or removed as needed. The antenna can be turned down and tucked into the retaining clip when moving the RFC Base Station, to protect it from damage.





ANTENNA CONNECTION POST – NM5944D With cable which connects to Modem on circuit board



#### **POWER SUPPLY:**

To operate the RFC Base Station the 12v power supply must be plugged into the RFC Base Station. Plug the power supply transformer into a 120V wall outlet.

Connect the 12V power plug to the power jack on the right side of the RFC Base Station.



### Additional / Optional Equipment

<u>nuunionai / Opt</u>	ional Equipment
MB120LP	E-TES SD 120 volt Low Profile Electric Thermal Exchanger
MB240LP	E-TES SD 240 volt Low Profile Electric Thermal Exchanger
AX33	50' - 12/3 Extension Cord w/ 5-15P & 5-15R
AC262A	Lay Flat Ducting 14" Dia. (22.5" flat) x 500'
AT56	Duct Ring 14"
AC25A	OmniDry 2.9 Centrifugal Air Mover
AC246	OmniDry Focal Point Axial Air Mover
AC514	Flexi-Dry Wall Drying System
MI22	Injectidry HP60FDP Floor Drying Package
NM5966	Four Pack AAA Alkaline Batteries (For Remote Sensors)
NM5965	3V Lithium Coin Battery
NM5971	9V (8.4V) Re-chargeable NiMH Battery





MI22





# RFC BASE STATION CONTROL PANEL SET-UP & MENU NAVIGATION:

With the 12V Power Supply connected to the RFC Base Station, the display will start up with the Boot-up screens showing the Boot loader version and the RFC logo before pausing at the Configure New Job Screen.

#### **CONFIGURE NEW JOB SCREEN:**

At this point the display will indicate that you have a choice to continue saving the data as part of the previous job or to start a new job file.

The default setting is to continue with the previous job and if no choice is made the unit will continue logging data in the previous job file and after a short time will advance to the Status Screen and then onto to the Sensor List Screen. To start logging data in a new job file, Press the **UP** or **DOWN** button to change from the default setting (Continue current job) to the Start new job choice and press the **SELECT** button to enter your choice, start the new job and move to the Status Screen and on to the Sensor List screen. New jobs will always be started regardless of setting if the end of the last job was more than 7 days in the past. If a mistake is made at the job start time, the Job Splitting or Joining features in RFC Charter can fix the error and achieve the desired start and stop times for a job.

Boot-up screens:

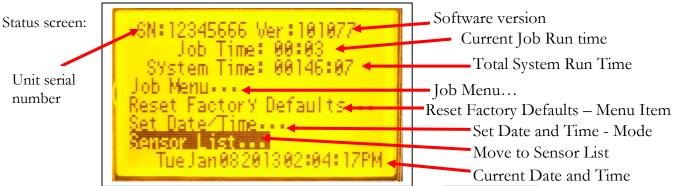


If you want to continue saving data as part of the current job file, Press the **SELECT** button to continue current job and advance to the Status Screen.



To start a new job file, Press the **UP** or **DOWN** button to move from the default setting of "Continue new job" to the "Start new job" setting. Then, Press the **SELECT** button to enter your choice and advance to the Status Screen.





While in the Status Screen you can use the console buttons to move cursor to the different lines and start a new job file, reset the unit to factory default settings, reset the date & time or access the list of the Remote Sensors in contact with the RFC Base Station.

- **UP button:** Moves cursor up or raises selected values.
- **DOWN button:** Moves cursor down or lowers selected values.
- **SELECT button:** Used to select value to adjust and to move to the next setting.
- ENTER / BACK button: Used to enter selected value or go back to previous screen

Use the **UP** & **DOWN** buttons to move the cursor to highlight the desired setting and press the **SELECT** button on the right to select and advance to that screen. Press the **ENTER/BACK** button on the left to return to the previous screen.

At start-up the display will automatically advance from the Status Screen (Screen #1) to the Sensor List screen or you can move there by moving the cursor to the Sensor List... line and pressing the **SELECT** Button. You can now check and adjust the settings of the RFC Remote Sensors in contact with the RFC Base Station. Until the Remote Sensors are in contact, the screen will display the Waiting for Sensors screen. (Screen #2) When the Remote Sensors are being used, the RFC Base Station will receive the signal from



each sensor and display the information for each sensor on the display screen. (Screen #3) The system setup can be changed to display Base Station internal sensors if desired. See page 19 or page 33.

(If Remote Sensors which are in use are not displayed you will need to connect with USB or remotely to change settings on **Active Sensor List** and make sensors visible. See page 22 or page 36)

The Sensor List displays the sensor ID number, each or the five environmental conditions for each sensor, the current sensor value reading for that condition, the relation of the sensor value to the preset limit, the limit setting and the Remote Power Controller or Heater it is set to control. In the example above (Screen #3) the sensor 30011 is shown with its five different environmental condition readings. Each condition shows the current reading, the relation symbol, the limit setting & the device it is to control. You can move the cursor to highlight the desired condition you want to change. In this example shown as Screen #3 the Air Temp setting for sensor 30011 is highlighted. When the **SELECT** button is pushed to select the highlighted condition, the cursor will first highlight the equality symbol (Screen #4). This symbol determines the relation equation of the sensor reading (Left of symbol) and the limit setting (Right of symbol), to turn the Remote Power Controller OFF. The symbol can be changed by using the **UP & DOWN** buttons to scroll through the list of symbols.

# There are three equality symbols used:

**Greater Than** – When the sensor reading is greater than the limit, the selected device will be turned OFF. If the sensor reading is less than or equal to the limit, the device will turn ON.

 $\leq$  Less than or Equal to – When the sensor reading is less than or equal to the limit, the selected device will be turned OFF. If the sensor reading is greater than the limit, the device will turn ON.

**X** Off – This setting turns off the selected action. No action will be initiated by any change in the sensor reading. No devices will be controlled, but the data for that measurement will still be logged.

When you have selected the desired symbol the cursor can moved to set the limit value (Screen #5) by pushing the right button once.

With the limit value highlighted by the cursor you can now use the **UP & DOWN** buttons to change the setting. When you have it set, press the **SELECT** button to move the cursor to the next setting (Screen #6).

Once highlighted, the item to be controlled can be selected. Use the **UP** & **DOWN** button to scroll through the different device control options.

**PLACE** – This is the default setting when a device has been previously selected but is no longer in contact with the RFC Base

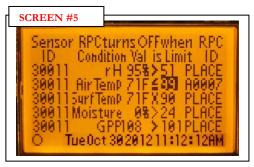
Station or when no device has been selected. No devices will be controlled using this setting.

**RPC ID #** – This means the action initiated when the sensor limit equation is true will turn the selected remote power controller and its connected device OFF. When the sensor limit relation equation is no longer true the device will turn ON. The five digit ID numbers of all power controllers sending a signal to the RFC Base Station will be displayed as you scroll through the list.

If needed, you can return to the symbol selection by pushing the **SELECT** button, or return to the Limit set screen by pushing the **SELECT** button twice. Whenever any changes to the limit or equality are made, the results are immediate.

Once everything is set as you want it, press the **ENTER/BACK** button to exit the set mode and return to the sensor list (Screen #3). Move the cursor to the next sensor on the list and repeat the setup for the RFC Base Station and all sensors.

SCREEN #4
Sensor RPCturns OFFwhen RPC ID Condition Yal is Limit ID 30011 rH 958>51 PLACE 30011 AirTemp 71F 499 A0007 300115urfTemp 71F X90 PLACE 30011Moisture 0%>24 PLACE 30011 GPP108 >101PLACE O TueOct 30201211:12:12AM





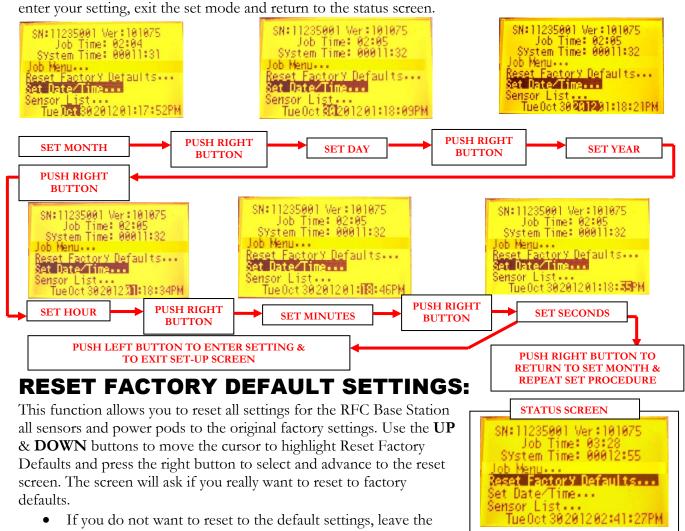
SCREEN #3
Sensor RPCturns OFFwhen RPC ID Condition Val is Limit ID 30011 rH 95%>51 PLACE 30011 Simtemp 71F 499 ACC07 30011SurfTemp 71F X 90 PLACE 30011Moisture 0%>24 PLACE 30011 GPP108 > 101PLACE O TueOct 30201211:12:128M

# SET DATE & TIME:

This function allows you to set the date and time in the RFC Base Station memory. Use the top & bottom buttons to move the cursor to highlight Set Date/Time and press the SELECT button to select and advance to set the date and time. The cursor will first flash on the month. Use the **UP** & **DOWN** buttons to change the month. (The day of the week will automatically change as you change the month, date or year.) When the month is set correctly, push the **SELECT** button to move the cursor to the date. Use the top & bottom button to set the



date. When the date is set correctly, push the SELECT button to move the cursor to the year. Repeat the process to set the year, hour, minute and seconds as needed. (When setting hour make sure AM or PM is set correctly before setting minutes.)When everything is set correctly press the ENTER / BACK button to



- defaults. If you do not want to reset to the default settings, leave the ٠ answer as NO and press the **SELECT** button. The settings
  - will not be changed and display will move back to the Status screen.
  - If you do want to reset to the default settings press the top or bottom button to change the • highlighted answer to YES and then press the **SELECT** button. The settings will instantly be changed to the factory default settings and the display will return to the Status screen.





# Job Menu:

This function allows you to start a new job file or force on all Remote Power Controllers. From the Status Screen, use the **UP** or **DOWN** buttons to move the cursor to highlight Job File and then press the **SELECT** button. The Job File screen will display your two options:

- Start New Job Now...
- Force all RPC's ON...

Use the **UP** or **DOWN** buttons to move the cursor to highlight your choice and press the **SELECT** button.

When you click on **Start New Job Now**, you can then use the **UP** or **DOWN** buttons to change the choice to either: **Start new Job** or **Continue current job.** Press the SELECT button to enter your

selection.

Configure New Job Select Start New Job or Continue current job Rontinue current job Press UP/DOWN to chanse. Press SELECT to continue. Tue Jan 08201301:24:53PM

ConfiSure New Job Select Start New Job or Continue current job Start New Job Press UP/DOWN to change. Press SELECT to continue. Tue Jan08201301:24:13PM

When you click on **Force all RPC's ON**, you can then use the **UP** or **DOWN** buttons to change the choice to either: **Clear Force** or **YES**. Press the SELECT button to enter your selection.

- Choosing **YES** will force all of the Remote Power Controllers in use to turn ON, allowing all connected equipment to operate. This will allow you to check the operation of all equipment before leaving the job site.
- Choosing **Clear Force** will remove any forced ON settings for all of the Remote Power Controllers in use, returning their ON/OFF state to the state determined by system sensor control settings.

# **Checking Modem Connection:**

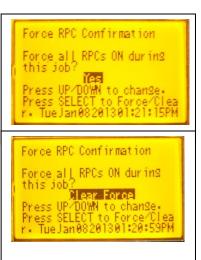
Once the RFC Base Station is set-up and you are planning to monitor the job site remotely, the modem connection to the RFC server, should be verified before leaving the job site. The RFC Base Station display screen has an icon to indicate if the modem has established a connection with the server.

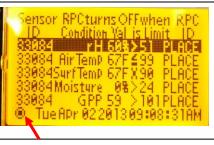
# You cannot connect remotely unless the modem is in contact with the RFC server.

At the bottom left corner of the Sensor List screen there is a small circle that indicates the status of the modem and server connection.

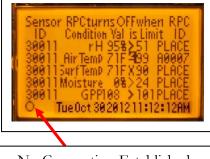
- If there is a dot in the center of the circle the modem has established a connection with the server.
- If the circle is empty, no connection has been established and steps must be taken to obtain cellular coverage if available in the area. For example, just as with a cell phone, moving the RFC Base Station or antenna in different orientation may help acquire service.







Connection Established



No Connection Established

# SYSTEM SET-UP USING RFC CONNECTIONS:

# Section

There are three methods through which the RFC Base Station can be configured using the PC based RFC Charter Software:

**Direct Connect** – Fastest way to configure device and download files. No username or password needed. Some remote settings are unavailable. Cannot set up who can receive alarms. This is the preferred method of downloading files since files are downloaded much faster than when connecting remotely. Files can also be downloaded with a USB Flash Drive or memory stick.

**RFC Charter Remote Connect** – Best way to remotely configure and monitor. Internet access and a paid RFC access subscription with user name and password required. You can register your RFC Base Station and request a username and password at **remotefieldcommander.com**. Click on the **Register** tab at the top of the page. Can be used to download job data files but large files can take a long time to download. Once you are logged with the RFC Charter you can set up who can receive alarms.

**RFC Website Remote Connect** - Can be used to remotely configure and monitor, but no file downloading or alarm setup. Internet access and a paid RFC access subscription with user name and password required. You can register your RFC Base Station and request a username and password at **remotefieldcommander.com**. Click on the **Register** tab at the top of the page.

- RFC Charter Direct Connect PAGE 16
- RFC Charter Remote Connect PAGE 29
- RFC Website Remote Connect PAGE 45

Once you have set-up your system and completed the job, the job data files can be downloaded and the RFC Charter software can be used to view data files and create reports.

# • RFC Charter Data Charting – PAGE 54

# **RFC BASE STATION DIRECT COMPUTER CONNECT:**

To make a direct computer connection the RFC Base Station must be have its 12V power supply plugged in.

With the RFC Charter Software and a USB Type A-A cord connection between the RFC Base Station and your computer, you can set-up the RFC Base Station, Wireless Remote Sensors and Remote Power Controllers.

#### **Direct Connect via RFC Charter Software**

The RFC Charter Software must be used to connect directly with your RFC Base Station. The RFC Charter software can be downloaded from the **remotefieldcommander.c**om website for installation on your computer.

To Install Charter Software on your Computer:

- 1. Go to remotefield commander.com and click on the Downloads tab at the top of the screen.
- 2. Click on the Charter Software label.
- 3. You can save the RFCInstaller to your computer to install the software later or to copy onto other computers. Click on Open, to run the installer now.
- 4. Once the RFCInstaller is Open Follow the pop-up instructions to install the RFC Charter Software.

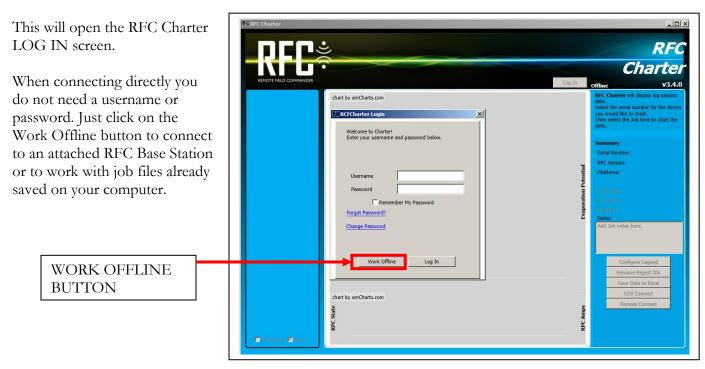


A shortcut icon will now be displayed on your computer desktop. The shortcut to the RFC Charter will also be in the Program Files and can be accessed from the Start menu.

To access the RFC Charter, simply click on the RFC Charter icon. This will open the LOG IN screen.

To directly connect to an attached RFC Base Station:

- Plug in the 12V power supply and connect it to the RFC Base Station.
- Connect the USB cable to the USB port on the front panel of the RFC Base Station.
- Connect the other end of the USB cable to a USB port on your computer.
- To access the RFC Charter, simply click on the RFC Charter icon.



When you click on the **Work Offline** button, the RFC Charter main screen will open. To connect with your attached RFC Base Station, click on the **USB Connect** button on the lower right hand corner of the screen:

RFC Charter			RFC Charter	
REMOTE FIELD COMMANDER	chart by amCharts.com	File Manager Log Off	Connected:kore007 V3.4.0 RFC Charter will display log session data. Select the serial number for the device you would like to chart. Then select the Job time to chart the data. Summary Serial Number: RFC Version: FileName: Start Time End Time Duration Notes: Add Job notes here. Configure Legend Rename Report IDS Save Data to Evrel	USB CONNECT BUTTON
C File Name  C Date	chart by amCharts.com 왕 양 양	RPC Amps	USB Connect Remote Connect	RETRIEVE DATA BUTTON

When you first connect the current data readings are retrieved from the Base Station and displayed.

If there are multiple RFC Base Station units on the jobsite, they will communicate with each other and show up on the Serial Number list. You can click on any listed Serial Number and then the Retrieve Data button to connect with that unit. When the data from the RFC unit is displayed you can see the serial number of the selected RFC unit will be highlighted. The data will display the current status and settings of the RFC unit as well as all Remote Sensors & Remote Power Controllers (RPC) which are in radio contact with the RFC units.

🕅 RFC I	Remote Co	ntrol							-	-	-				2
User Finisł		Remote II	0 RFC Ser 123456 112300 113100	5 <mark>66</mark> 002	mber		etrieve ( end Upd	-	Succe	ssful	ly read	from dev	/ice.		
			Active S	enso	r List			S	start Time	2:22	PM 10/	/9/2013	Jo	b Time 0:02	2
	Sensor ID		Condition			OFF wh		P	PC ID			Start T	ime	Duration	
	School 15	332E8		20	>	<u> </u>		ACE	•			Start	inte	Duration	_
		332E8	Air Temp	75	<=	•	9 PL	ACE	-						
		332E8	Surface Temp	74	x	•	0 PL	ACE	•						
		332E8	Moisture	0	>	• 2	4 PL	ACE	•						
		332E8	GPP	26	>	• 1	.01 PL	ACE	•						
		330CF	rH	29	>	• 5	51 PL	ACE	•						
		330CF	Air Temp	74	<=	• 9		ACE	-			-			1
		330CF	Surface Temp	73	x			ACE	-					ob List	
		330CF	Moisture	0	>	<b>-</b> 2	24 PL	ACE	-	▼		Retriev	/e Se	lected Jobs	
			Active	RPC	List			🗌 Gr	oup by RPC	ID		Show	v Cu	rrent Job	
Current State	Amps	RPC ID	Send A ON		when IFF	Amps Alarm	For ON	ce RPC OFF	Force Time Minutes	er	Misce	llaneous	Alarn	ns:	
ON	NA	BASESTATI				Γ	Γ	Г	-	<b>A</b>	🔽 Se	end Alarm	if Se	ensor or RPC	goes offline.
OFF	1	A0461							0		🔽 Se	end Alarm	if Se	ensor has a lo	w battery.
											Se	tup Alarm		ail Addresses. Setup Syste	
			H	RE	M	ЭТI	E D.	ATA	SCR	ΕI	EN				
lint: Ho	ver over the	column head	ing and by	DА	ΤA	A SF	IOV	WN	FROM	Λ					
inte Ho	ver over tile	corumn neau	-	RF	СE	Base	Sta	tion	12345	560	66				

#### REMOTE DATA SCREEN DATA SHOWN FROM RFC Base Station 1123002

Finish	ID	Remote ID	RFC Se 11230 11310 11231 12345	002 002 001	mber			eve Data Updates		Succes	sfully	y read from device.
	Sensor ID		Active S	RPC t	turns					rt Time 8:	40 A	AM 10/8/2013 Job Time 29:46 Start Time Duration
		Internal	Air Temp	83	<=	-	100	PLACE		•	•	
		330CF	rH	29	>	-	51	PLACE		-		
		330CF	Air Temp	74	<=	-	99	PLACE		•		
		330CF	Surface Temp	73	x	•	90	PLACE		•		
		330CF	Moisture	0	>	•	24	PLACE		•		
		330CF	GPP	36	>	•	101	PLACE		-		
		332E8	rH	20	>	•	51	PLACE		•		
		332E8	Air Temp	75	<=	•	99	PLACE		•		Read Job List
		332E8	Surface Temp	74	x	•	90	PLACE		-	•	Retrieve Selected Jobs
urrent itate	Amps	RPC ID	Active Send A ON		/hen	Amp Aları		Force RP		p by RPC II Force Time Minutes		Show Current Job Miscellaneous Alarms:
ON	NA	BASESTATI	ом 🗖	Γ		Г		Г	Γ	0	4	Send Alarm if Sensor or RPC goes offline
OFF	0	A0007								0		$\fbox$ Send Alarm if Sensor has a low battery.
OFF	1	A0461		Г						0	¥	Setup Alarm Email Addresses           Rename IDs         Setup System

When using multiple RFC Base Station units always check sensors settings in the Active Sensor List and Active RPC list on all units to prevent conflicting control settings. Conflicting settings from settings on two different RFC units could adversely affect device operation.

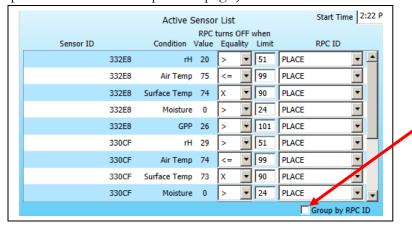
If you hold your cursor over the different column headings and buttons a pop-up will give you detailed information regarding that button or column heading. In the example below the cursor was on the Sensor ID column.

		Active :	Senso	r List		Start Time 2:22 P
Sensor ID	1	Condition		turns OFF Equality		RPC ID
This	column show	vs the ID of the	e Senso	or. Select I	Rename	IDs to create aliases.
	332E8	Air Temp	75	<= •	99	PLACE
	332E8	Surface Temp	74	X 🔹	90	PLACE

You can try this with the different headings and buttons to learn more of what is displayed on this page.

# **SENSOR READINGS & SETTINGS:**

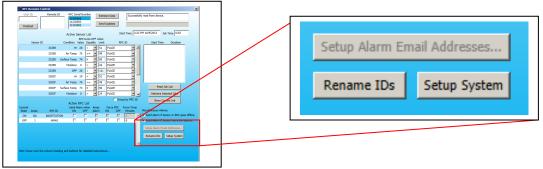
The large box on the left side of the page displays the sensor readings and settings. The Active Sensor list will display the internal sensor readings and settings for temperature and humidity. In the factory default setting, it will also display the ID numbers and readings for all Remote Sensors in contact with the RFC Base Station. In this section we will see how to set-up the sensors and Remote Power Controllers to log conditions and operate equipment. (Any changes made to the system settings will not be activated until you click on the Send Updates button at the top of the page.)



The default method of listing is by sensor ID number. The internal RFC Base Station sensors will be listed first.

You can change the display to sort the Active Sensor List by the RPC ID number by clicking the **Group by RPC ID** under the list. This is helpful when managing which RPCs are controlled by which sensors.

The Active Sensor List is where you can observe sensor readings and RFC system operation. Here you can set up all of your sensors and RPC's. What each column represents and how you can setup your system will be explained in the following sections. To allow you to decide what information is displayed here, the Active Sensor list can be customized to display or hide data to fit your needs. To change the system settings and data display, click on the **Setup System** button on the lower right corner of the screen.



This opens the Setup System screen.

				Ac	tive Se	ensor Li	ist	Group by RPC ID
Master Sensor List				DDC		FF when		
Sensor ID Setup Active Allowed	Sensor ID	Visible	Condition					Setup Condition
51808C	Internal		rH	23	<=	• 10	PLACE	▼ Select desired condition ▼
02040	332E8	V	rH	20	>	• 51	PLACE	▼ Select desired condition ▼
200000	332E8		Air Temp	75	<=	• 99	PLACE	Select desired condition
80000	332E8	V	Surface Temp	74	x	• 90	PLACE	▼ Select desired condition ▼
204000	332E8		Moisture	0	>	• 24	PLACE	▼ Select desired condition ▼
400000 🗖 🗖	332E8		GPP	26	>	• 101	PLACE	Select desired condition
00012	330CF		rH	28	>	• 51	PLACE	Select desired condition
821020	330CF	•	Air Temp	75	<=	• 99	PLACE	Select desired condition
Master RPC List	330CF		Surface Temp	74	x	• 90	PLACE	Select desired condition
RPC ID Setup Active Allowed	330CF	1	Moisture	0	>	• 24	PLACE	Select desired condition
A0461 🔽 🔽	330CF		GPP	36	>	• 101	PLACE	▼ Select desired condition ▼
	33084	4	rH	29	>	• 51	PLACE	Select desired condition
	33084		Air Temp	72	<=	• 99	PLACE	▼ Select desired condition ▼
	33084	V	Surface Temp	71	x	• 90	PLACE	Select desired condition •
Actual Time: 10/9/2013 2:42:18 PM	Reset Clock ote: Resetting the clock wi	ll only affe	Loc	k Curr	ent Job	Now	Firmwa	re Version 101088 Rename I
	b's start time stamp. Sugg ew Job Now".	est selecti			Job No		lates from startup	Cancel Finished

By changing the different settings on this screen you can now customize your settings and readings.

# MASTER SENSOR LIST:

The Master Sensor List is on the left side of the screen. The Sensor ID Setup column will show all sensors that have ever communicated with the RFC Base Station at any time. The sensors with checks in the Active column are currently in range and making contact with the RFC Base Station. Leaving the **Allowed** box checked will keep the sensor active and displayed on the Active Sensor List. You can click on the check mark & remove the check in the Allowed box to make any sensor inactive and remove it from the list of available and active sensors shown in the Active Sensor List.

Se	nsor ID Setup	Active	Allowed
	00020	-	-
	10808		
	00400		
	00400		
	00010		
	332E8	$\checkmark$	L L
	33084	$\checkmark$	V
	330CF	$\checkmark$	V
	330A6		
	3322E		
	330A2		
	3328B		
	33248		

Clicking on and checking the **Lock Current Job Now** box (At the bottom of the screen) will lock your selected Active Sensors as

the only sensors allowed to communicate data to the RFC Base Station prevent any new sensors not currently displayed from becoming active during the job. For example if a truck with more sensors shows up on the job, we don't want those as part of this job. This feature can also be used if different setups are used within range of each other.

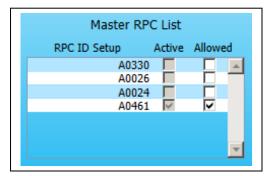
Click the **Finished** button at the bottom of the screen to enter your selections and re-enter the Setup System screen as needed to enter more settings. Click the **Cancel** button to cancel your changes and return to the main screen. Click the Send Updates button on the Remote Data page to activate your changes.



If you are planning to place more sensor that have not yet been turned on, or if you are setting up the system before you take the RFC Base Station to the job site, you can delay the job lock out by 30 minutes to give you time to setup your sensors and also prevent additional sensors that may later come into range from interfering you're your setup. Simply click on to check the **Lock All Jobs after 30 minutes from startup** box. (At the bottom of the screen) this will lock in any Sensors the RFC Base Station finds before the lock out time allowing them to communicate data to the RFC Base Station and prevent any new sensors showing up after the lock out from becoming active during the job. This is the default setting.

# **MASTER RPC LIST:**

The Master RPC List is also on the left side of the screen. The RPC ID Setup column will show all Remote Power Controllers that have ever communicated with the RFC Base Station at any time. The RPC's with checks in the Active are currently in contact with the RFC Base Station. Leaving the Allowed box checked will keep the RPC Active and displayed on the Active RPC List. You can click on the check mark & remove the check to make any RPC Inactive and remove it from the list.

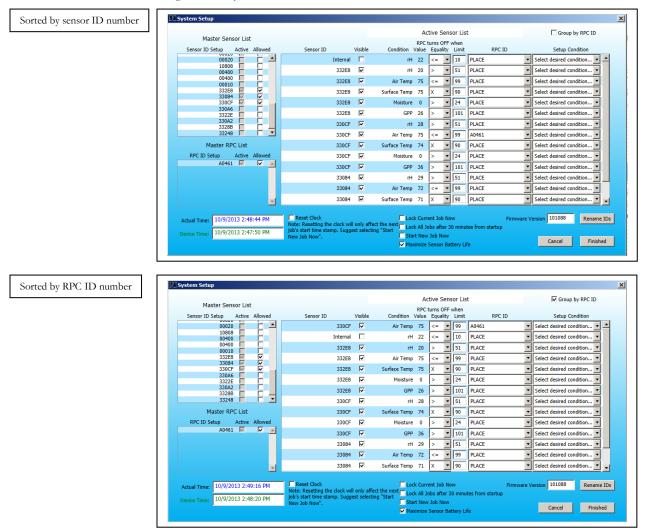


Clicking on and checking the **Lock Current Job Now** box will lock your selected Active RPC's as the only controllers allowed to be controlled by the RFC Base Station and prevent any new controllers not currently displayed from becoming active during the job.

Click the **Finished** button at the bottom of the screen to enter your selections and re-enter the Setup System screen as needed to enter more settings. Click the **Cancel** button to cancel your changes and return to the main screen.

# ACTIVE SENSOR LIST:

The default method of listing is by sensor ID number. You can change the display to sort the Active Sensor List by the RPC ID number by clicking the **Group by RPCID** button on the upper right corner of the screen. This will not change the way the sensors are shown on the main screen.



In the Active Sensor List you can change the settings of the active sensors and remote power controllers and the data which will be displayed.

The Active Sensor List has eight different column headings containing information on the readings and setup conditions of the different sensors in contact with the RFC Base Station. These columns are explained in the following section.

						×
	Group by RPCID					
Sensor ID	Visible	Condition	Value Equality Limit	RPC ID	Setup Condition	

**SENSOR ID:** Shows the RFC Base Station Internal Sensors and the ID of any active Sensors. The internal RFC Base Station sensors are always listed first when sorted by Sensor ID numbers. You can scroll down to see the data of all of the active sensors.

The sensor ID numbers cannot be changed, but sensor nicknames or aliases can be added by clicking the **Re-name ID** button at the bottom right corner of the screen.

**Caution:** If you have made other selections or setting changes, click the **Finished** button and then the Rename IDs button on the Main Screen or your changes may be cancelled when you move to the Rename ID screen.

In the Rename ID screen, type the alias into the box next to the sensor or RPC ID number you wish to rename. You do not have to rename all five conditions for the sensor. You can just rename the specific readings important to you, but for each sensor reading you rename, you must enter a unique alias which includes the environmental condition. **The aliases should be kept short, no more than 18 characters each.** 

In the example to the right, sensor 330CF has been renamed, LIVING ROOM Air, rH, Sur, Mst & GPP. Even if Surface temperature, Moisture and GPP will not be displayed, they must be renamed to be properly logged for future use if needed.

RPC number A0461 was renamed as EXHAUST FAN. Click the Done button to save the changes and return to the Active Sensor List.

**VISIBLE:** By checking or unchecking the boxes in this column you can display (Checked) or hide (Unchecked) the sensor data. You can only hide Sensors set to read only. You cannot hide a Sensor which is set to control an active Remote Power Controller.

**CONDITION:** Shows the environmental condition measured by each of the sensors.

VALUE: Shows the current sensor reading for each of the sensors

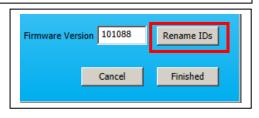
**EQUALITY:** Shows the selected symbol of equality representing the relation between the sensor reading and the limit which will turn the selected device (Heater or Remote Power Controller) OFF. There are three symbols used for the sensor reading limit equations:

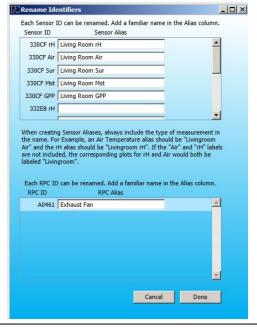
**Greater Than** – When the sensor reading is greater than the limit, the selected device will be turned OFF. If the sensor reading is less than or equal to the limit, the device will turn ON.

**<=** Less than or Equal to – When the sensor reading is less than or equal to the limit, the selected device will be turned OFF. If the sensor reading is greater than the limit, the device will turn ON.

**X** Off – This setting turns off the selected action. No action will be initiated by any change in the sensor reading. No devices will be controlled.

			1
r ID		Visible	Condition
Int	ernal	V	Air Tem
Int	ernal	V	ri
3	0025		ri
3	0025	•	Air Tem
3	0025		Surface Tem
3	0025	~	Moistur





To change the equality symbol, click on the **arrow** to display the drop down list and click on the desired symbol to select it. Select X if you do not want the sensor to control any device. Click the

**Finished** button to activate and save the change. Remember if the equation you select for the relationship between the sensor reading and the limit setting is true, the Heater or Remote Power Controller will turn OFF.

rH	19	> •	51
Air Temp	73	< =	99
Surface Temp	72	x	90

This item can also be changed by entering a selection in the Setup Condition column.

**LIMIT:** Shows the selected limit setting for each sensor. This is the point at which the selected condition initiates the desired RPC action.

To change the limit, use your cursor to highlight and delete the old number and simply type in your new limit number. Click the **Finished** button to activate and save the change.

				Ac	tive Se	ens	or List	t		Group by RPC ID		
Sensor ID		Visible	Condition		turns O Equali		when Limit	RPC ID		Setup Condition		
	Internal		rH	22	<=	•	10	PLACE	•	Select desired condition	•	-
	332E8	V	rH	20	>	Ŧ	51	PLACE	•	Select desired condition	•	
	332E8	-	Air Temp	75	<=	Ŧ	99	PLACE	•	Select desired condition	•	
	332E8	•	Surface Temp	75	x	•	90	PLACE	•	Select desired condition	•	
	332E8	V	Moisture	0	>	•	24	PLACE	•	Select desired condition	•	
	332E8	-	GPP	26	>	•	101	PLACE	•	Select desired condition	•	
	330CF	•	rH	28	>	•	51	PLACE	•	Select desired condition	•	
	330CF	•	Air Temp	75	<=	Ŧ	99	A0461	•	Select desired condition	•	
	330CF	V	Surface Temp	74	x	•	90	PLACE	•	Select desired condition	•	

**RPC ID:** Shows the ID number of the Remote Power Controller being controlled by each sensor. In place of a RPC ID number or alias, this column may list PLACE.

PLACE indicates that no RPC will be controlled by that sensor reading.

To change the RPC to be controlled, click on the **arrow** to display the drop down list and click on the desired ID to select it. Select PLACE if you do not want the sensor to control any device. Click the **Finished** button to activate and save the change.

			Ac	tive S	ens	or List	t				
RPC turns OFF when Visible Condition Value Equality Limit RPC ID											
	VISIDIE	Condition V	alue	Equa	ity	Limit	RPC ID				
Internal		rH	22	<=	•	10	PLACE	•	Sele		
332E8	V	rH	20	>	•	51	PLACE	•	Sele		
332E8	-	Air Temp	75	<=	•	99	A0461 PLACE		Sele		
332E8	V	Surface Temp	75	х	•	90	PLACE	•	Sele		
332E8	V	Moisture	0	>	•	24	PLACE	•	Sele		
332E8		GPP	26	>	•	101	PLACE	•	Sele		

The RPC ID numbers cannot be

changed, but RPC nicknames can be added by clicking the Re-name ID button at the bottom of the screen. (Caution: If you have made other selections or setting changes, click the Finish button and then the Rename IDs button on the Main Screen or your changes may be cancelled when you move to the Rename ID screen.) **SETUP CONDITION:** Allows you to select the conditions under which sensor reading and the limit which will turn the selected device (Remote Power Controller) OFF. The drop down list describes different conditions which you can select. Once you highlight and select a condition, a popup screen will explain your choice in more detail and ask you if you want to continue with the selection.

				tive S		or Lis	t		Group by RPC ID
	Visible	Condition					RPC ID		Setup Condition
Internal		Air Temp	74	<=	•	1	HEATER	•	Select desired condition 💌 🔺
Internal	V	rH	28	x	•	10	PLACE	•	Select desired condition 💌
330CF		rH	27	>	•	51	A0461	•	Select desired condition 🔻
330CF	~	Air Temp	72	<=	•	99	PLACE	•	Select desired condition Turn Dehumidifier OFF below limit
330CF		Surface Temp	71	x	•	90	PLACE	•	Turn Dehumidifier ON above limit
330CF	-	Moisture	0	>	•	24	PLACE	1	RPC OFF below Limit
330CF		GPP	31	>	•	101	PLACE		RPC ON above Limit RPC OFF above Limit
332E8	~	rH	19	>	•	51	PLACE	•	RPC ON below Limit Measure only rH
332E8		Air Temp	73	<=	•	99	PLACE	•	Select desired condition

In this example "**RPC OFF below Limit**" was selected

If the description of the selected condition is what you want, click the **OK** button. The equality sign will be changed as needed to display the selected condition. Click the **Finished** button to activate and save the change.

SetupItem Sensor ID 330CF e device connected to the RPC v	Condition rH will be OFF v	Value 27	<=	Limit 30	RPC ID A0461 . Enter desired Lir	nit.
330CF e device connected to the RPC v	Hı	Value 27	Equality <=	Limit 30	A0461	nit.
e device connected to the RPC v						nit.
	vill be OFF v	when th	e rH is bel	ow the Limit	. Enter desired Lir	nit.
	will be OFF v	when th	e rH is bel	ow the Limit	. Enter desired Lir	nit.
ample use:						
pically used for environmental co	and the	C00 4-		hund differen		
pically used for environmental co	ontrois, Use	GPP to	control de	-numidiners		
					Presel	OK
					Cancel	OK

# **RESET CLOCK:**

Allows you to reset the RFC Base Station internal time and date by clicking on and rechecking the Reset Clock box. This will not affect previous job data stored in the RFC Base Station. Resetting the clock will only affect the next job's start time stamp. It is suggested that if you are resetting the clock you also click the **Start New Job Now** box. Resetting the clock without starting a new job can result in a job file with a negative run time.

Actual Time:	10/8/2013 10:39:12 AM	Note: Resetti	ing the clock in	will only affect the next
Device Time:	10/8/2013 10:42:00 AM		ne stamp. Sug	ggest selecting "Start
Lock Current Job Lock All Jobs aft Start New Job N	er 30 minutes from startup	Firmware Version	101088	Rename IDs

**START NEW JOB FILE:** Clicking the Start New Job Now button, will allow you to end the current job file and start a new job. **Start New Job Now** will send a command to the Base Station to immediately start a new job. This should be done when setting the clock or if starting new job file is desired. New jobs will always be started regardless of setting if the end of the last job was more than 7 days in the past. If a mistake is made at the job start time, the Job Splitting or Joining features in RFC Charter can fix the error and achieve the desired start and stop times for a job. Click the **Finished** button to save the setting.

# **MAXIMIZE SENSOR BATTERY LIFE:**

Checking this box will maximizes Remote Sensor battery life by preventing Sensor Signal hopping. Signal hopping, where the signal from a sensor is relayed to the RFC Base Station through one or more Remote Power Controllers or other sensors can greatly extend the operating range of sensors. While RPC's are always configured to allow hopping through them, sensors by default will not allow hopping through them, to conserve battery life.

By un-checking this box, sensor to sensor hopping can be activated if needed to increase the sensor range, but it does drain the sensor batteries faster.

# **RPC STATE & ALARMS:**

The Active RPC List box at the bottom of the screen displays the Current State of the RFC Base Station and all Remote Power Controllers in radio contact with the RFC Base Station. The Amps reading can let you know if the device connected to a Remote Power Controller is operating when the RPC is ON.

			Active R	PC List					
Current			Send Ala	rm when	Amps	Force	e RPC	Force Timer	
State	Amps	RPC ID	ON	OFF	Alarm	ON	OFF	Minutes	
ON	NA	BASESTATION				Γ		0	-
ON	1	A0461						0	
OFF	0	A0476						0	

In the example above you can see that the current state of the RFC Base Station which is ON. As shown above, RPC labeled as A0461 is ON and drawing 1 amp. RPC labeled A0476 is now OFF.

In the first example shown below:

The Air Temp equation for the 332E8 sensor is false (75 **IS NOT** greater than 99), so the status of RPC A0461 is ON.

	Active Sensor List									
Sensor ID		Condition		turns OFF Equality	when Limit		RPC ID			
	332E8	Air Temp	75	> •	99	A0461	•			
	332E8	Surface Temp	75	x 🔹	90	PLACE	•			

In the next example:

The Air Temp equation for the 330CF sensor is true (75 is less than or equal to 99) so the status of RPC A0476 is OFF.

	Start Time 2							
Sensor ID		Condition \		turns ( Equa	DFF when lity Limit		RPC ID	
	330CF	Air Temp	75	<=	• 99	A0476	•	
	330CF	Surface Temp	74	х	• 90	PLACE	-	

The listed devices can be remotely turned ON or OFF by checking the Force ON or Force OFF boxes and then clicking the **Send Updates** button at the top of the page.

### The RFC Base Station cannot be forced ON or OFF

The Force ON or OFF setting will override the sensor limit equations to allow you to operate equipment as needed to change the environment conditions. Once forced ON or OFF the device will remain ON or OFF until you uncheck the box and click the **Send Updates** button, unless you use the Force Timer to limit the run time.

When you click the **Force RPC ON** or **Force RPC OFF** boxes, also click on the **Force Timer Minutes** box and enter the number of minutes you want the device to remain ON or OFF. When you click the **Send Updates** button the selected device will remain it its forced state (ON or OFF as selected) for the selected time. When you click on the **Retrieve Data** button the screen will update showing the device status and the time remaining in the forced state displayed in the **Force Timer Minutes** box for each device.

Current			Active R Send Ala	PC List	Amps	Force	e RPC	Force Timer	
State	Amps	RPC ID	ON	OFF	Alarm	ON	OFF	Minutes	Miscellaneous Alarms:
ON	NA	BASESTATION			Γ	Γ	Γ	0 4	Send Alarm if Sensor or RPC goes offline.
ON	1	A0461						0	Send Alarm if Sensor has a low battery.
OFF	0	A0476						0	and the second second
									Setup Alarm Email Addresses
									Rename IDs Setup System
									<u>-</u>

You can also check the **Send Alarm When** boxes to alert you when the device status changes. When a selected device turns ON or OFF as selected an alarm will be sent to you via text message or e-mail.

The **Amps Alarm** box when checked will alert you if there is no current flow when a Remote Power Controller is ON. This will let you know if the device connected to the Remote Power Controller has been turned off or is not functioning. The alarm will be sent to your mobile phone as a text message or via e-mail.

The boxes in the **Miscellaneous Alarms** can be checked to send alarms via text message or e-mail any time a Remote Sensor or Remote Power Controller goes offline or if a Remote Sensor has a low battery (NOTE: Use Alkaline batteries to insure proper readings from the Remote Sensor low battery function).

# You cannot add alarm addresses from the direct connect screen, you must Log-In and connect remotely to add alarm addresses.

# **Downloading Job Files:**

The Job Data Files can be downloaded using the box at the right of the main screen.

IF: RFO	C Remote Co	ontrol									×		
	ished	Remote ID	RFC Ser 123456 112300 113100	5 <mark>66</mark> 002	iber		eve Data Updates	Successfu	lly read from device	2.			
			Active S	ensor	List			Start Time 2:22	PM 10/9/2013	Job Time 0:46			
	Sensor ID		Condition \			F when		RPC ID	Start Time	e Duration			
		332E8		19	>	- - 51	PLACE	-				Ι.	
		332E8	Air Temp	75	>	• 99	A0461	-					READ JOB
		332E8 S	urface Temp	75	x	• 90	PLACE	•				Χ	LIST BUTTON
		332E8	Moisture	0	>	• 24	PLACE	•					LIST BUTTON
		332E8	GPP	24	>	• 101	PLACE	•				'	
		330CF	rH	27	>	- 51	PLACE	-					
		330CF	Air Temp	75	<=	• 99	A0476	•					SHOW
		330CF 5	urface Temp	74	x	• 90	PLACE	-	Read	Job List			
		330CF	Moisture	0	>	• 24	PLACE	•	Retrieve S	Selected Jobs		1	CURRENT JOB
Currer	nt		Active Send Al			mps	Force RPC	Group by RPC ID		Current Job			BUTTON
State		RPC ID	ON	OF			ON OF		Miscellaneous Ala	irms: Sensor or RPC goe	(0:		
ON ON		BASESTATIO A0461						0	-	Sensor or KPC goe Sensor has a low b			
OFF		A0401						0	Je Benu Alamin	Selisor has a low b	attery.		
Hint: H	lover over the	e column heading	g and buttons	s for det					Setup Alarm Er	Setup System			

Click on the **Show Current Job** button to see only the current job file or click the **Read Job List** button to see all the job files in the RFC Base Station. Then highlight any job you wish to download and save on your computer. Click on the Download Selected Job button to start the download. Click only once and be patient. Large job files may take a while to download. The progress bar at the top of the screen will indicate the state of the download process.

Reading Block 2 of Job number 1	

While job files can be downloaded remotely, the best way to download jobs is by connecting directly with the RFC Base Station using the direct connect USB cable.

Start Time	Duration
2013-10-08 09:58:39	01:59
2013-09-25 08:30:01	149:05
2013-09-24 17:07:50	) 14:26
2013-09-24 17:04:16	5 00:00
2013-09-24 16:47:33	3 00:00
2013-07-10 14:22:14	ł 00:07
2013-07-02 16:25:56	5 00:00
2013-07-02 16:12:14	+ 00:01
2013-06-06 10:16:10	00:03
Read Job I	ict
Kedu Job L	list
Retrieve Select	ed Jobs
Show Curren	t Job

Job files may also be downloaded using a USB flash drive. Simply insert a flash drive into a USB port on the control panel, then turn the RFC Base Station power switch ON. All of the job files in the RFC Base Station will be downloaded in just a few minutes onto the USB flash drive. Insert the USB flash drive in the USB port on your computer before starting up the RFC Charter, when the RFC Charter is started, it will scan all drives for new files, copy them to the RFC Data folder on the local hard drive and display them in the RFC Charter.

When the download is completed a pop-up message will inform you that you can view the file in the RFC Charter window. You can close the pop-up and the close remote connect screen to return to the RFC Charter window to view the file (Along with any other job files in your RFC data file.).

	Remote Co	ontrol														X
User		Remote II	D RFC Ser	ial Nur	mber	Datrie	eve Data	1	Peadi	a Blo	ck 90	of Joh	number 1.		_	_
			123456			Keur	eve Data			ig bio		01 500	number 1.			
Finish	hed		112300 113100			Send	Updates									
			Active S	ensor	List			Start 1	Time 2	:22 PI	4 10/9	9/2013	Job Ti	me 0:46		
	Sensor ID		Condition		urns OFF			RPC IE				Start	Time	Duration		
	Sensor ID	332E8		19	> •	51	PLACE	KPC IL	•		201		8 09:58:39		_	
		332E8	Air Temp	75	> •	99	A0461		•				5 08:30:01 4 17:07:50			
		332E8			x •	90	PLACE		•		201	3-09-2	4 17:04:16	00:00		
		332E8	Surface Temp	75		24	PLACE		•		201	3-07-1	4 16:47:33 0 14:22:14	00:07		
		332E8 332E8	Moisture	0	-		PLACE						2 16:25:56 2 16:12:14			
		330CF	GPP rH	24 27	> •	101 51	PLACE		<u> </u>		201	3-06-0	6 10:16:10	00:03		
			١٦ ٨:= T	2/			PLACE		<u> </u>							
		330CF 330CF	Information									X	Read Job L	ist		
		330CF	Fi	es hav	e been d	ownload	ded. View	files in th	he Char	ter wir	ndow.		eve Selecte			
													ow Curren	t Job		
Current												_	s Alarms:			
State ON	Amps NA	RPC ID BASESTATI									OK		m if Senso	r or RPC a	oes offli	ine.
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OFF	0	A0476		Γ					D		C al			J.J	1	
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You can click on the selected job file to open the RFC Charter viewer or exit and view the file later.

# **RFC REMOTE CONNECT:**

Your RFC Base Station is equipped with a modem for a remote connection. Internet access and a paid subscription with user name and password are required to access the RFC server. You can register your RFC Base Station and request a username and password at **remotefieldcommander.com**. Click on the **Register** tab at the top of the page.

To make a remote connection the RFC Base Station must be have its 12V Power Supply plugged in.

With your RFC Base Station, you can remotely set-up, monitor and control the Remote Sensors and Remote Power Controllers using the RFC Charter Software or by accessing the RFC website.

#### **Remote Connect via RFC Charter Software**

The RFC Charter Software can be used to connect remotely with your RFC Base Station. The RFC Charter software can be downloaded from the **remotefieldcommander.com** website for installation on your computer. **To Install Charter Software on your Computer:** 

- 1. Go to remotefield commander.com and click on the Downloads tab at the top of the screen.
- 2. Click on the Charter Software label.
- 3. You can save the RFCInstaller to your computer to install the software later or to copy onto other computers. Click on Open, to run the installer now.
- 4. Once the RFCInstaller is Open Follow the pop-up instructions to Install the RFC Charter Software



A shortcut icon will now be displayed on your computer desktop as well as in the

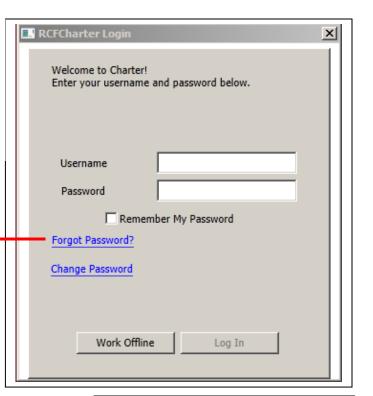
Program Files accessed from the Start menu. To access the RFC Charter, simply click on the **RFC Charter** icon. This will open the LOG IN screen.

Enter your Username and Password to **Log In** and connect remotely to your RFC Base Station or click on the **Work Offline** button to connect to an attached RFC Base Station or to work with job files already saved on your computer.

REMOTE FIELD COMMANDER			Cha	
	chart by amCharts.com	×	Log In Offline RFC Charter will displat data. Select the serial number you would like to chart. Then select the Job time	for the devic
	Welcome to Chartert Enter your username and password below. Username kore007 Password ••••••• Remember My Password Forgot Password? Change Password		data. Summary Serial Number: RFC Version: FileName: dinal imme dinal imme dinal imme Administrate Add Job notes here.	
	Work Offline Log In chart by amCharts.com		Configure Leg Rename Repor Save Data to f USB Conne Remote Conne	t IDs xcel t

When you set-up your account you will get a preassigned password. The first time you sign in to the RFC Website you can change your password and also enter a security question to verify your identity in case you forget your password. If you have forgotten your password, click on the **"Forgot Password?"** link.

# RCFCharter Login If you click "Reset Password", an email will be sent with reset instructions. Or enter your security question answer and change your password here. Username: korec007 Security Question: What is your dogs name? Answer: Reset Password Submit Cancel



If you have a security question on file, it will come up when you click the **Forgot Password** link.

Type the answer to your security question in the Answer box and click the **Submit** button.

If answered correctly you will open a pop-up window where you can create a new password.

Type your new password in the box, re-enter your new password in the Confirm box and click the **Submit** Change button. You will be immediately logged in to the RFC Charter. If you still cannot log in contact Omni Pro customer service for assistance.

If you know your password but wish to change it, simply click the Change Password link. This will open the pop-up window which will allow you to change your password.

- Enter your Username in the **Username** box
- Enter your Current Password in the **Current Password** box.
- Enter your New Password in the **New Password** box.
- Re-enter your New Password in the Confirm box
- Click the Submit Change Button

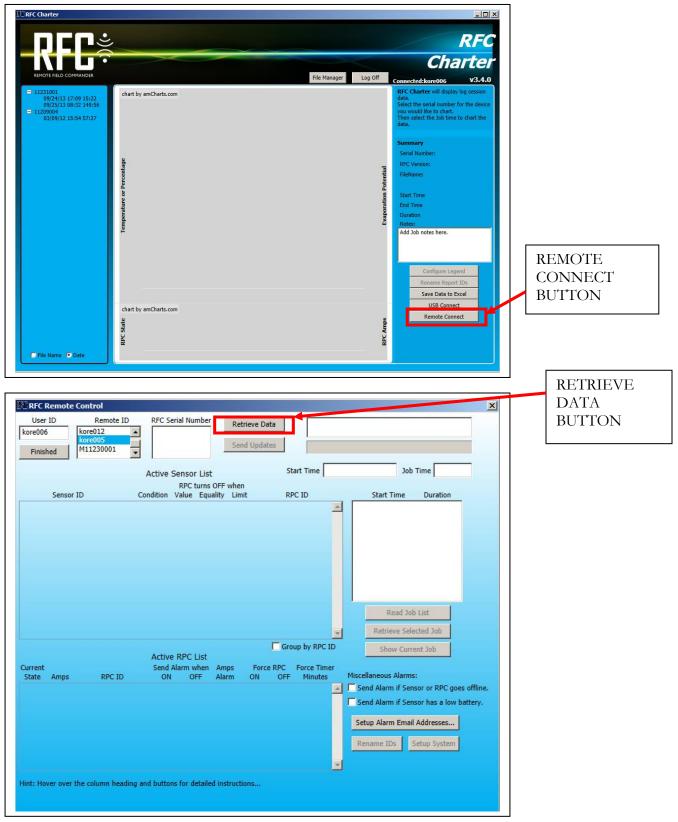
A **Password Changed** pop-up will open. Click the **OK** button to proceed with your Log In and open the RFC Charter



🔜 R	CFCharter Login	X
	Enter a new password below and then re-enter it to confirm.	
	New Password: Confirm:	
	Cancel Submit Change	

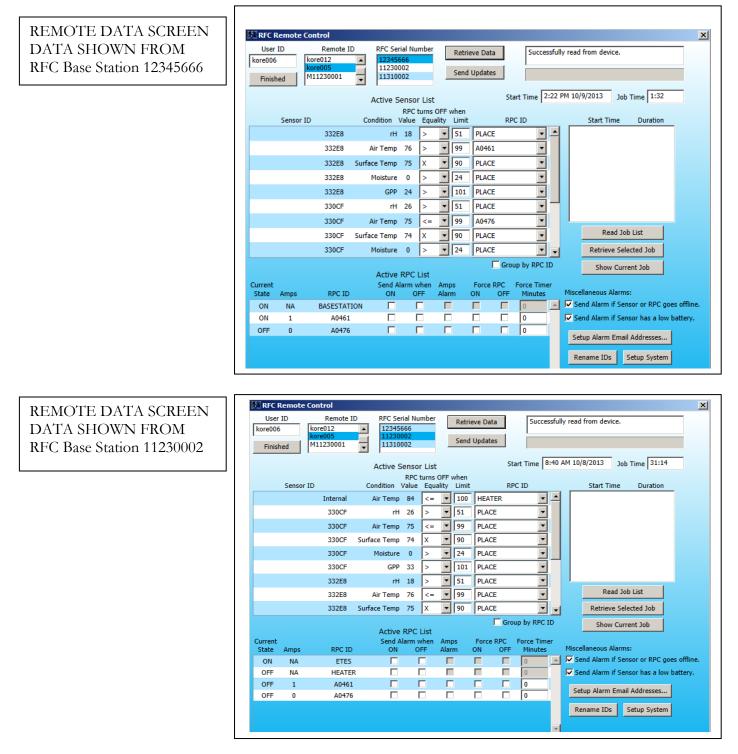
🔜 RCFCharter Login		×
To change your passw current and new passw	vord, enter your username and words below.	
Username Current Password: New Password: Confirm:		
Cancel	Submit Change	

Once you are logged in, you will see the RFC Charter main screen. To connect with your remote RFC Base Station, click on the **Remote Connect** button on the lower right hand corner of the screen:



When you first connect and open the Remote Data screen, there will be no data displayed. If you only have one modem on your account, only the one modem number will be displayed. If you have multiple modems, they will all be displayed. Highlight the modem number you wish to connect with then Click the **Retrieve Data** button at the top of the page to access the RFC Base Station and get the current data readings.

If there are multiple RFC Base Station units on the jobsite, they will communicate with each other and show up on the Serial Number list. You can click on any listed **Serial Number** and then the **Retrieve Data** button to connect with that unit. When the data from the RFC unit is displayed you can see the serial number of the selected RFC unit will be highlighted. The data will display the current status and settings of the RFC unit as well as all Remote Sensors & Remote Power Controllers (RPC) which are in radio contact with the RFC units.



When using multiple RFC Base Station units always check sensors settings in the Active Sensor List and Active RPC list on all units to prevent conflicting control settings. Conflicting settings from settings on two different RFC units could adversely affect device operation.

If you hold your cursor over the different column headings and buttons a pop-up will give you detailed information regarding that button or column heading. In the example below the cursor was on the Sensor ID column.

		Active S	enso	r List			Start Time	2:22 P
Sensor ID		Condition			OFF when lity Limit		RPC ID	
This c	olumn sho	ws the ID of the	Senso	or. Sele	ct Rename	IDs to crea	ate aliases.	<u> </u>
_	332E8	Air Temp	75	<=	▼ 99	PLACE		
	332E8	Surface Temp	74	х	• 90	PLACE		-

You can try this with the different headings and buttons to learn more of what is displayed on this page.

# **SENSOR READINGS & SETTINGS:**

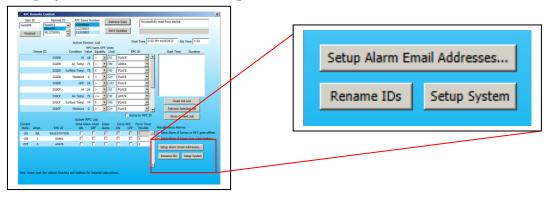
The large box on the left side of the page displays the sensor readings and settings. The Active Sensor list will display the internal sensor readings and settings for temperature and humidity. In the factory default setting, it will also display the ID numbers and readings for all Remote Sensors in contact with the RFC Base Station. In this section we will see how to set-up the sensors and Remote Power Controllers to log conditions and operate equipment. (Any changes made to the system settings will not be activated until you click on the Send Updates button at the top of the page.)

	Active Sensor	List	Start Time 2:22 P
Sensor ID	RPC to Condition Value	urns OFF when Equality Limit	RPC ID
332E8	rH 20	> 🔻 51	PLACE
332E8	Air Temp 75	<= 🔻 99	PLACE 🔻
332E8	Surface Temp 74	X 🔻 90	PLACE 💌
332E8	Moisture 0	> 💌 24	PLACE 💌
332E8	GPP 26	> 🔻 101	PLACE 🔹
330CF	rH 29	> 🔻 51	PLACE
330CF	Air Temp 74	<= 🔻 99	PLACE 🔹
330CF	Surface Temp 73	X 🔻 90	PLACE 🔹
330CF	Moisture 0	> 🔻 24	PLACE
			Group by RPC ID

The default method of listing is by sensor ID number. The internal RFC sensors will be listed first.

You can change the display to sort the Active Sensor List by the RPC ID number by clicking the **Group by RPC ID** under the list. This is helpful when managing which RPCs are controlled by which sensors.

The Active Sensor List is where you can observe sensor readings and RFC system operation. Here you can set up all of your sensors and RPC's. What each column represents and how you can setup your system will be explained in the following sections. To allow you to decide what information is displayed here, the Active Sensor list can be customized to display or hide data to fit your needs. To change the system settings and data display, click on the **Setup System** button on the lower right corner of the screen.



System Setup									
Master Sensor List				Act	tive Se	ens	or List	t	Group by RPC ID
					urns O				
Sensor ID Setup Active Allowed	Sensor ID	Visible	Condition Va	lue	Equali	ty	Limit	RPC ID	Setup Condition
00020 🗖 🗖 📥	Internal		rH 1	19	<=	•	10	PLACE	<ul> <li>Select desired condition</li> </ul>
10808	332E8	V	rH 1	18	>	•	51	PLACE	▼ Select desired condition ▼
00400	332E8	~	Air Temp 7	76	>	•	99	A0461	Select desired condition
332E8	332E8	~	Surface Temp 7	75	x	-	90	PLACE	Select desired condition
00010 332E8 V V 33084 V V 3300F V V	332E8		Moisture		>	=	24	PLACE	✓ Select desired condition ▼
330A6 3322E	332E8	L.	GPP 2	24	>	=	101	PLACE	Select desired condition
330A2	330CF		rH 2		-	=	51	PLACE	Select desired condition
33288 J	330CF	-	Air Temp 7		<		99	A0476	Select desired condition
Master RPC List	330CF	, V	Surface Temp 7		~-	=	90	PLACE	Select desired condition      Select desired condition
				- 1	^	=			=
RPC ID Setup Active Allowed	330CF	~		0	>	=	24	PLACE	Select desired condition
A0476 🔽 🔽	330CF	•		34	>	=	101	PLACE	Select desired condition
	33084	V	rH 2	26	>	•	51	PLACE	▼ Select desired condition ▼
	33084	V	Air Temp 7	73	<=	•	99	PLACE	✓ Select desired condition ▼
-	33084	-	Surface Temp 7	72	x	•	90	PLACE	<ul> <li>Select desired condition</li> </ul>
Actual Time:         10/9/2013 4:06:35 PM           Device Time:         10/9/2013 4:05:39 PM	Reset Clock Note: Resetting the clock wi job's start time stamp. Sugg New Job Now".	ll only affe est selecti	Lock C ct the next Lock A ng "Start Start I Maxim	All Jo New	bs afte Job No	er 30 ow	) minut	es from startup	Cancel Finished

By changing the different settings on this screen you can now customize your settings and readings.

# **MASTER SENSOR LIST:**

The Master Sensor List is on the left side of the screen. The Sensor ID Setup column will show all sensors that have ever communicated with the RFC Base Station at any time. The sensors with checks in the Active column are currently in range and making contact with the RFC Base Station. Leaving the **Allowed** box checked will keep the sensor active and displayed on the Active Sensor List. You can click on the check mark & remove the check in the Allowed box to make any sensor inactive and remove it from the list of available and active sensors shown in the Active Sensor List.

M	aster Sens	sor Lis	t
Sensor ID	Setup	Active	Allowed
	33012	-	
	330CB		
	330CD		
	332F8		
	332F6		
	330CF	$\checkmark$	<b>v</b>
	332E2		
	33084	$\checkmark$	V
	332E8	$\checkmark$	V
	332AA	Γ	
	332FB		
			<b></b>

Clicking on and checking the **Lock Current Job Now** box (At the bottom of the screen) will lock your selected Active Sensors as the only sensors allowed to communicate data to the RFC Base Station prevent any new sensors not currently displayed from

becoming active during the job. For example if a truck with more sensors shows up on the job, we don't want those as part of this job. This feature can also be used if different setups are used within range of each other.

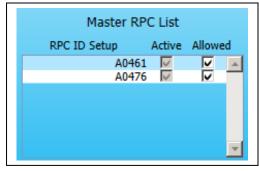
Click the **Finished** button at the bottom of the screen to enter your selections and re-enter the Setup System screen as needed to enter more settings. Click the **Cancel** button to cancel your changes and return to the main screen. Click the Send Updates button on the Remote Data page to activate your changes.

Lock Current Job Now	Firmware Version	101088	Rename IDs
Lock All Jobs after 30 minutes from startup			
Start New Job Now Maximize Sensor Battery Life		Cancel	Finished

If you are planning to place more sensor that have not yet been turned on, or if you are setting up the system before you take the RFC Base Station to the job site, you can delay the job lock out by 30 minutes to give you time to setup your sensors and also prevent additional sensors that may later come into range from interfering you're your setup. Simply click on to check the **Lock All Jobs after 30 minutes from startup** box. (At the bottom of the screen) this will lock in any Sensors the RFC Base Station finds before the lock out time allowing them to communicate data to the RFC Base Station and prevent any new sensors showing up after the lock out from becoming active during the job. This is the default setting.

# **MASTER RPC LIST:**

The Master RPC List is also on the left side of the screen. The RPC ID Setup column will show all Remote Power Controllers that have ever communicated with the RFC Base Station at any time. The RPC's with checks in the Active are currently in contact with the RFC Base Station. Leaving the Allowed box checked will keep the RPC Active and displayed on the Active RPC List. You can click on the check mark & remove the check to make any RPC Inactive and remove it from the list.

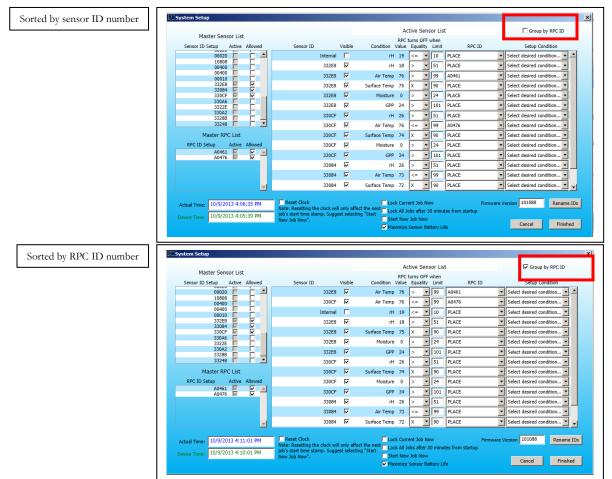


Clicking on and checking the **Lock Current Job Now** box will lock your selected Active RPC's as the only controllers allowed to be controlled by the RFC Base Station and prevent any new controllers not currently displayed from becoming active during the job.

Click the **Finished** button at the bottom of the screen to enter your selections and re-enter the Setup System screen as needed to enter more settings. Click the **Cancel** button to cancel your changes and return to the main screen.

# **ACTIVE SENSOR LIST:**

The default method of listing is by sensor ID number. When listed by the sensor ID number the internal sensors will be listed first. The other sensors will be listed in the order in which they make contact with the RFC Base Station. You can change the display to sort the Active Sensor List by the RPC ID number by clicking the **Group by RPCID** button on the upper right corner of the screen. This is helpful when managing which RPCs are controlled by which sensors. This will not change the way the sensors are shown on the main Remote Data screen.



In the Active Sensor List you can change the settings of the active sensors and remote power controllers and the data which will be displayed.

						<u>2</u>					
			Acti	ive Sensor Lis	t	Group by RPCID					
	RPC turns OFF when										
Sensor ID	Visible	Condition	Value	Equality Limit	RPC ID	Setup Condition					

The Active Sensor List has eight different column headings containing information on the readings and setup conditions of the different sensors in contact with the RFC Base Station. These columns are explained in the following section.

**SENSOR ID:** Shows the RFC Base Station Internal Sensors and the ID of any active Sensors. The internal RFC Base Station sensors are always listed first. You can scroll down to see the data of all of the active sensors.

The sensor ID numbers cannot be changed, but sensor nicknames or aliases can be added by clicking the **Re-name ID** button at the bottom right corner of the screen.

Caution: If you have made other selections or setting changes, click the **Finished** button and then the Rename IDs button on the Main Screen or your changes may be cancelled when you move to the Rename ID screen.

In the Rename ID screen, type the alias into the box next to the

sensor or RPC ID number you wish to rename. You do not have to rename all five conditions for the sensor. You can just rename the specific readings important to you, but for each sensor reading you rename, you must enter a unique alias which includes the environmental condition. **The aliases should be kept short, no more than 18 characters each.** 

In the example to the right, sensor 330CF has been renamed, LIVING ROOM Air, rH, Sur, Mst & GPP. Though Surface temperature, Moisture and GPP will not be displayed, they must be renamed to be properly logged for future use if needed.

RPC number A0461 was renamed as EXHAUST FAN. Click the Done button to save the changes and return to the Active Sensor List.

**VISIBLE:** By checking or unchecking the boxes in this column you can display (Checked) or hide (Unchecked) the sensor data.

**CONDITION:** Shows the environmental condition measured by each of the sensors.

**VALUE:** Shows the current sensor reading for each of the sensors

ensor ID Sensor Alias 330CF rH LIVING ROOM rH 330CF Air LIVING ROOM Air 330CF Air LIVING ROOM Air 330CF Sur LIVING ROOM Mst 30CF GPP LIVING ROOM Mst 30CF GPP LIVING ROOM GPP 33084 rH 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	DCF rH       LIVING ROOM rH         CF Air       LIVING ROOM Air         CF Sur       LIVING ROOM Air         CF Sur       LIVING ROOM Sur         CF Mst       LIVING ROOM Mst         CF Mst       LIVING ROOM Mst         CF GPP       LIVING ROOM GPP         D84 rH	ch Sensor I	D can be renamed. Add a familiar name in th	he Alias column.
330CF Air LIVING ROOM Air 330CF Sur LIVING ROOM Sur 330CF Sur LIVING ROOM Sur 330CF Mst LIVING ROOM Mst 30CF GPP LIVING ROOM GPP 33084 rH enen creating Sensor Aliases, always include the type of measurement eneme. For Example, an Air Temperature alias should be "Livingroon " and the rH alias should be "Livingroom rH". If the "Air" and "rH" lal not included, the corresponding plots for rH and Air would both be	CF Air LIVING ROOM Air CF Sur LIVING ROOM Air CF Sur LIVING ROOM Sur CF Mst LIVING ROOM Mst FGPP LIVING ROOM GPP D84 rH Creating Sensor Aliases, always include the type of measurement i me. For Example, an Air Temperature alias should be "Livingroom id the rH alias should be "Livingroom rH". If the "Air" and "rH" labe t included, the corresponding plots for rH and Air would both be d "Livingroom". RPC ID can be renamed. Add a familiar name in the Alias column. ID RPC Alias A0461 Exhaust Fan	ensor ID	Sensor Alias	
IVING ROOM Sur IVING ROOM Sur IVING ROOM Mst IVING ROOM Mst IVING ROOM GPP IVING ROOM AND	CF Sur LIVING ROOM Sur CF Mst LIVING ROOM Mst CF GPP LIVING ROOM GPP D84 rH creating Sensor Aliases, always include the type of measurement i me. For Example, an Air Temperature alias should be "Livingroom rd the rH alias should be "Livingroom rH". If the "Air" and "rH" labet t included, the corresponding plots for rH and Air would both be d "Livingroom". RPC ID can be renamed. Add a familiar name in the Alias column. ID RPC Alias A0461 Exhaust Fan	330CF rH	LIVING ROOM rH	<u>^</u>
ISOCF Mst LIVING ROOM Mst ISOCF GPP LIVING ROOM GPP ISOBAL AND A	CF Mst       LIVING ROOM Mst         LF GPP       LIVING ROOM GPP         D84 rH	330CF Air	LIVING ROOM Air	
30CF GPP LIVING ROOM GPP 33084 rH en creating Sensor Aliases, always include the type of measurement e name. For Example, an Air Temperature alias should be "Livingroom " and the rH alias should be "Livingroom rH". If the "Air" and "rH" lal not included, the corresponding plots for rH and Air would both be	F GPP LIVING ROOM GPP B84 rH creating Sensor Aliases, always include the type of measurement i me. For Example, an Air Temperature alias should be "Livingroom d the rH alias should be "Livingroom rH". If the "Air" and "rH" labe t included, the corresponding plots for rH and Air would both be d"Livingroom". RPC ID can be renamed. Add a familiar name in the Alias column. ID RPC Alias A0461 Exhaust Fan	330CF Sur	LIVING ROOM Sur	
33084 rH	184 rH	30CF Mst	LIVING ROOM Mst	
en creating Sensor Aliases, always include the type of measurement name. For Example, an Air Temperature alias should be "Livingroon 'and the rH alias should be "Luingroom rH". If the "Air" and "rH" lai not included, the corresponding plots for rH and Air would both be	creating Sensor Aliases, always include the type of measurement i me. For Example, an Air Temperature alias should be "Livingroom d the rH alias should be "Livingroom rH". If the "Air" and "rH" labe t included, the corresponding plots for rH and Air would both be d "Livingroom". RPC ID can be renamed. Add a familiar name in the Alias column. ID RPC Alias A0461 Exhaust Fan	BOCF GPP	LIVING ROOM GPP	
name. For Example, an Air Temperature alias should be "Livingroon and the rH alias should be "Livingroom rH". If the "Air" and "rH" lal not included, the corresponding plots for rH and Air would both be	me. For Example, an Air Temperature alias should be "Livingroom Id the rH alias should be "Livingroom rH". If the "Air" and "rH" labe t included, the corresponding plots for rH and Air would both be d "Livingroom". RPC ID can be renamed. Add a familiar name in the Alias column. ID RPC Alias A0461 Exhaust Fan	33084 rH		_
		name. Fo ' and the r not includ eled "Livin	FExample, an Air Temperature alias should b H alias should be "Livingroom rH". If the "Air ied, the corresponding plots for rH and Air w groom".	r" and "rH" labels ould both be
A0461 Exhaust Fan	A0476	a name. Fo " and the r a not includ eled "Livin ach RPC ID	FExample, an Air Temperature alias should b H alias should be "Livingroom rH". If the "Air led, the corresponding plots for rH and Air w groom". ) can be renamed. Add a familiar name in the <u>RPC Alias</u>	r" and "rH" labels ould both be
A0476		a name. Fo " and the r a not includ eled "Livin ach RPC ID	FExample, an Air Temperature alias should b H alias should be "Livingroom rH". If the "Air led, the corresponding plots for rH and Air w groom". ) can be renamed. Add a familiar name in the <u>RPC Alias</u>	r" and "rH" labels ould both be
		name. Fo and the r not includ eled "Livin ch RPC ID PC ID A0461	FExample, an Air Temperature alias should b H alias should be "Livingroom rH". If the "Air led, the corresponding plots for rH and Air w groom". ) can be renamed. Add a familiar name in the <u>RPC Alias</u>	r" and "rH" labels ould both be
		name. Fo ' and the r not includ eled "Livin ach RPC ID RPC ID A0461	FExample, an Air Temperature alias should b H alias should be "Livingroom rH". If the "Air led, the corresponding plots for rH and Air w groom". ) can be renamed. Add a familiar name in the <u>RPC Alias</u>	r" and "rH" labels ould both be
Cancel Done	Cancel	e name. Fo " and the r e not includ eled "Livin ach RPC ID RPC ID A0461	r Example, an Air Temperature alias should b H alias should be "Livingroom rff". If the "Air led, the corresponding plots for rH and Air w groom". • can be renamed. Add a familiar name in the RPC Alias Exhaust Fan	r" and "rH" labels ould both be e Alias column.

Sensor ID	Visible	Condition	RI Val
Internal		rH	1
332E8	V	rH	1
332E8	~	Air Temp	7
332E8	~	Surface Temp	7
332E8	V	Moisture	(
332E8	-	GPP	2
	_	rH	2
Firmware Version 101088	Re	ename IDs emp	7
		mp	7
Cancel		Finished	

×

**EQUALITY:** Shows the selected symbol of equality representing the relation between the sensor reading and the limit which will turn the selected device (Remote Power Controller) OFF. There are three symbols used for the sensor reading limit equations:

**Greater Than** – When the sensor reading is greater than the limit, the selected device will be turned OFF. If the sensor reading is less than or equal to the limit, the device will turn ON.

**<=** Less than or Equal to – When the sensor reading is less than or equal to the limit, the selected device will be turned OFF. If the sensor reading is greater than the limit, the device will turn ON.

**X** Off – This setting turns off the selected action. No action will be initiated by any change in the sensor reading. No devices will be controlled.

To change the equality symbol, click on the **arrow** to display the drop down list and click on the desired symbol to select it. Select X if you do not want the sensor to control any device. Click the **Finished** button to activate and save the change. Remember if the equation you select for the relationship between the sensor reading and the limit setting is true, the Heater or Remote Power Controller will turn OFF.

rH	19	> •	51
Air Temp	73	< =	99
Surface Temp	72	X	90

This item can also be changed by entering a selection in the Setup Condition column.

**LIMIT:** Shows the selected limit setting for each sensor. This is the point at which the selected condition initiates the desired RPC action.

To change the limit, use your cursor to highlight and delete the old number and simply type in your new limit number. Click the **Finished** button to activate and save the change.

				Ac	tive Se		Group by RPC ID		
Sensor ID		Visible	Condition		turns OF Equalit	F when / Limit	RF	PC ID	Setup Condition
	Internal		rH	19	<=	10	PLACE	•	Select desired condition 💌 🚽
	332E8	V	rH	18	>	51	PLACE	•	Select desired condition 🔻
	332E8	•	Air Temp	76	>	99	A0461	•	Select desired condition 💌
	332E8	•	Surface Temp	75	x	90	PLACE	•	Select desired condition 💌
	332E8		Moisture	0	>	24	PLACE	•	Select desired condition 💌

**RPC ID:** Shows the ID number of the Remote Power Controller being controlled by each sensor. In place of a RPC ID number or alias, this column may list PLACE.

PLACE indicates that no RPC will be controlled by that sensor reading.

To change the RPC to be controlled, click on the **arrow** to display the drop down list and click on the desired ID to select it. Select PLACE if you do not want the sensor to control any device. Click the **Finished** button to activate and save the change.

	Active Sensor List											
	RPC turns OFF when Visible Condition Value Equality Limit RPC ID											
Internal		rH	18	<=	•	10	PLACE		•	Se		
332E8	V	rH	17	>	•	51	PLACE		-	Se		
332E8	•	Air Temp	76	>	•	99	A0461 A0476			Se		
332E8	-	Surface Temp	76	x	•	90	PLACE			Se		
332E8	V	Moisture	0	>	•	24	PLACE		•	Se		

The RPC ID numbers cannot be changed, but RPC nicknames can be added by clicking the Re-name ID button at the bottom of the screen. (Caution: If you have made other selections or setting changes, click the Finish button and then the Rename IDs button on the Main Screen or your changes may be cancelled when you move to the Rename ID screen.)

**SETUP CONDITION:** Allows you to select the conditions under which sensor reading and the limit which will turn the selected device (Remote Power Controller) OFF. The drop down list describes different conditions which you can select. Once you highlight and select a condition, a popup screen will explain your choice in more detail and ask you if you want to continue with the selection.

				Ac	tive Se	nsor Lis	t		Group by RPC ID
Sensor ID		Visible	RPC ID	Setup Condition					
	Internal		rH	18	<=	• 10	PLACE		<ul> <li>Select desired condition</li> </ul>
	332E8	V	rH	17	>	• 30	A0461		▼ Select desired condition ▼
	332E8		Air Temp	76	>	• 99	PLACE		Select desired condition Turn Dehumidifier OFF below limit
	332E8	~	Surface Temp	76	X	• 90	PLACE		Turn Dehumidifier ON above limit
	332E8	V	Moisture	0	>	• 24	PLACE		RPC OFF below Limit
	332E8	-	GPP	22	>	• 101	PLACE		RPC OIV above Limit RPC OFF above Limit
	330CF		rH	26	>	▼ 30	A0461		RPC ON below Limit Measure only rH
	330CE		Air Temp	76	Z- 1	- 00	10470		Celect desired condition

In this example "RPC OFF below Limit" was selected

If the description of the selected condition is what you want, click the **OK** button. The equality sign will be changed as needed to display the selected condition. Enter the limit number you want and Click the **Finished** button to activate and save the change.

			RPC	turns OFF	when		
Sensor ID		Condition	Value	Equality	Limit	RPC ID	
	332E8	rH	17	<=	30	A0461	
xample use: ypically used for e	nvironmental	controls. Use	GPP to	control de	e-humidifiers	•	

**RESET CLOCK:** Allows you to reset the RFC Base Station internal time and date by clicking on and rechecking the Reset Clock box. This will not affect previous job data stored in the RFC Base Station. Resetting the clock will only affect the next job's start time stamp. It is suggested that if you are resetting the clock you also click the **Start New Job Now** box. Resetting the clock without starting a new job can result in a job file with a negative run time.

Actual Time: Device Time:	10/8/2013 10:39:12 AM 10/8/2013 10:42:00 AM	Note: R	rt time stamp. Sug	will only affect the next ggest selecting "Start
└ Lock Current Job └ Lock All Jobs afte └ Start New Job No ✓ Maximize Sensor	er 30 minutes from startup ow	Firmware Ve	rsion 101088 Cancel	Rename IDs Finished

**START NEW JOB FILE:** Clicking the Start New Job Now button, will allow you to end the current job file and start a new job. **Start New Job Now** will send a command to the Base Station to immediately start a new job. This should be done when setting the clock or if a new job is desired. New jobs will always be started regardless of setting if the end of the last job was more than 7 days in the past. If a mistake is made at the job start time, the Job Splitting or Joining features in RFC Charter can fix the error and achieve the desired start and stop times for a job. Click the **Finished** button to save the setting.

## **MAXIMIZE SENSOR BATTERY LIFE:**

Checking this box will maximizes Remote Sensor battery life by preventing Sensor Signal hopping. Signal hopping, where the signal from a sensor is relayed to the RFC Base Station through one or more Remote Power Controllers can greatly extend the operating range of sensors. While RPC's are always configured to allow hopping through them, sensors by default will not allow hopping through them, to conserve battery life.

By un-checking this box, sensor to sensor hopping can be activated if needed to increase the sensor range, but it does drain the sensor batteries faster.

# RPC STATE & ALARMS:

The Active RPC List box at the bottom of the screen displays the Current State of the RFC Base Station and all Remote Power Controllers in radio contact with the RFC Base Station. The Amps reading can let you know if the device connected to a Remote Power Controller is operating when the RPC is ON.

			Active R	PC List				
Current			Send Ala	rm when	Amps	Force	e RPC	Force Timer
State	Amps	RPC ID	ON	OFF	Alarm	ON	OFF	Minutes
ON	NA	BASESTATION				Γ	Γ	0
ON	1	A0461						0
OFF	0	A0476						0

In the example above you can see that the current state of the RFC Base Station which is ON. As shown above, RPC labeled as A0461 is ON and drawing 1 amp. RPC labeled A0476 is now OFF.

In the first example shown below:

The Air Temp equation for the 332E8 sensor is false (75 **IS NOT** greater than 99), so the status of RPC A0461 is ON.

	Active Sensor List									
Sensor ID		RPC turns OFF when Condition Value Equality Limit								
	332E8	Air Temp 7	5 >	• 99	A0461	•				
	332E8	Surface Temp 7	5 X	▼ 90	PLACE	•				

In the next example:

The Air Temp equation for the 330CF sensor is true (75 is less than or equal to 99) so the status of RPC A0476 is OFF.

		Active Sensor List									
	Sensor ID				turns O Equal	)FF whe ity Li	en mit		RPC ID		
		330CF	Air Temp	75	<=	• 9	9	A0476		•	
		330CF	Surface Temp	74	х	▼ 9	0	PLACE		•	

The listed devices can be remotely turned ON or OFF by checking the Force ON or Force OFF boxes and then clicking the **Send Updates** button at the top of the page.

### The RFC Base Station cannot be forced ON or OFF

The Force ON or OFF setting will override the sensor limit equations to allow you to operate equipment as needed to change the environment conditions. Once forced ON or OFF the device will remain ON or OFF until you uncheck the box and click the **Send Updates** button, unless you use the Force Timer to limit the run time.

When you click the **Force RPC ON** or **Force RPC OFF** boxes, also click on the **Force Timer Minutes** box and enter the number of minutes you want the device to remain ON or OFF. When you click the **Send Updates** button the selected device will remain it its forced state (ON or OFF as selected) for the selected time. When you click on the **Retrieve Data** button the screen will update showing the device status and the time remaining in the forced state displayed in the **Force Timer Minutes** box for each device.

Current			Active R Send Ala	PC List	Amps	Force	RPC	Force Timer	r
State	Amps	RPC ID	ON	OFF	Alarm	ON	OFF	Minutes	Miscellaneous Alarms:
ON	NA	BASESTATION				Γ	Γ	0	🗾 🗹 Send Alarm if Sensor or RPC goes offline
ON	1	A0461						0	Send Alarm if Sensor has a low battery.
OFF	0	A0476						0	and the second second
									Setup Alarm Email Addresses
									Rename IDs Setup System
									*

You can also check the **Send Alarm When** boxes to alert you when the device status changes. When a selected device turns ON or OFF as selected an alarm will be sent to you via text message or e-mail.

The **Amps Alarm** box when checked will alert you if there is no current flow when a Remote Power Controller is ON. This will let you know if the device connected to the Remote Power Controller has been turned off or is not functioning. The alarm will be sent to your mobile phone as a text message or via e-mail.

The boxes in the **Miscellaneous Alarms** can be checked to send alarms via text message or e-mail any time a Remote Sensor or Remote Power Controller goes offline or if a Remote Sensor has a low battery.

# You cannot add alarm addresses from the direct connect screen, you must Log-In and connect remotely to add alarm addresses.

To enter alarm phone numbers and e-mail addresses, click on the **Setup Alarm Email Addresses** box. This opens the alarm address screen. When an alarm condition is detected an e-mail alarm message will be sent to all enabled e-mail addresses and a text message to all cell phone numbers.

Carrier	4
	-

To enter text message phone numbers click and check the **Text Cell** box, enter the Phone number and Provider. You can enter a name in the Name Box if desired. Click on the arrow to get the drop down list of carriers. Click you carrier and it will complete the entry.

Delete Enabled	Name	Email Address	Text Cell	Phone Number	Provider	
		Invalid, select carrier			Carrier 🔻	*
					Carrier ATT Verizon T-Mobile Sprint PCS Virgin Mobile US Cellular Nextel Boost Alltel Cricket	

With your first entry complete you can click on the **Finished** button to enter your number and return to the main screen or click on the **Add New Email Address** button to add another text message phone number or e-mail address.

To enter an e-mail address, click and check the **Enabled** box and then enter the e-mail address in the **Email Address** box and a name in the **Name** box if desired.

When entry is completed you can click on the **Finished** button to enter your e-mail address and return to the main screen or click on the **Add New Email Address** button to add another text message phone number or e-mail address and repeat as needed

elete Enabled	Name	Email Address	Text Cell	Phone Number	Provider	
		555555555@vtext.com		555-555-5555	Verizon	*
		john.doe@gmail.com			Carrier	-
						<u>_</u>
						×
						×
ien an alarm condi	tion is detected, ema	il will be sent to the Enabled recipients	in the list. To c	reate a new entry, s	elect "Add Nev	v Email
ien an alarm condi dress". Enter an en	tion is detected, ema nail address or check	ail will be sent to the Enabled recipients ("Text Cell" to enter a phone number a	in the list. To c nd Cell phone p	reate a new entry, s rovider. Check "Del	elect "Add Nev ete" then "Finis	v Email shed" to
ien an alarm condi dress". Enter an en	tion is detected, ema nail address or check	il will be sent to the Enabled recipients "Text Cell" to enter a phone number a	in the list. To ci nd Cell phone p	reate a new entry, s rovider. Check "Del	elect "Add Nev ete" then "Finis	v Email shed" to
nen an alarm condi dress". Enter an en	tion is detected, ema nail address or check	il will be sent to the Enabled recipients "Text Cell" to enter a phone number a	in the list. To ci nd Cell phone p	reate a new entry, s rovider. Check "Del	elect "Add Nev ete" then "Finis	v Email shed" to
nen an alarm condi dress". Enter an en mpletely remove ar	tion is detected, ema nail address or check n email entry.	ail will be sent to the Enabled recipients "Text Cell" to enter a phone number a	in the list. To c nd Cell phone p	reate a new entry, s rovider. Check "Del	elect "Add Nev ete" then "Finis	v Email shed" to
nen an alarm condi dress". Enter an en	tion is detected, ema nail address or check n email entry.	ail will be sent to the Enabled recipients ("Text Cell" to enter a phone number a	in the list. To c nd Cell phone p	reate a new entry, s rovider. Check "Del	select "Add Nev ete" then "Finis	v Email shed" to
dress". Enter an en mpletely remove ar	tion is detected, ema nail address or check n email entry.	ail will be sent to the Enabled recipients ( "Text Cell" to enter a phone number a	in the list. To c nd Cell phone p	reate a new entry, s rovider. Check "Del	elect "Add Nev ete" then "Finis	v Email shed" to

Click on the Send Test Emails box to send a test message to each cell number and e-mail address if desired.

### To deactivate an e-mail address or cell phone number:

- Click on and un-check the **Enabled** button and then click on the **Finished** button to de-activate an e-mail address.
- Click on and un-check the **Text Cell** button and then click on the **Finished** button to de-activate a cell phone number.

Numbers and e-mail addresses remain in the memory and can be re-activated by clicking on and again checking the **Enabled** box or **Text Cell** box.

### To delete an e-mail address or cell phone number:

Click on and check the **Delete** box and then click on the **Finished** button to remove an e-mail address or cell phone numbers.

### **Downloading Job Files:**

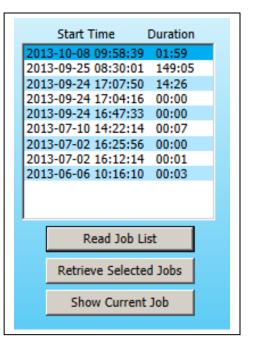
The Job Data Files can be downloaded using the box at the right of the main screen.

🖭 RFC I	Remote Co	ntrol									×		
User Finisl		Remote ID	RFC Ser 123456 112300 113100	66 02	nber			ve Data Updates	Successfu	ly n	read from device.		
			Active S	ensor	List			5	Start Time 2:22	PM	1 10/9/2013 Job Time 0:46		
	Sensor ID		Condition \	RPC ti /alue				F	RPC ID		Start Time Duration		
		332E8	rH	19	>	•	51	PLACE	-				
		332E8	Air Temp	75	>	•	99	A0461	•				READ JOB
		332E8	Surface Temp	75	х	•	90	PLACE	•			Χ	LIST BUTTON
		332E8	Moisture	0	>	•	24	PLACE	•				1.01 001101
		332E8	GPP	24	>	•	101	PLACE	-				
		330CF	rH	27	>	•	51	PLACE	•				
		330CF	Air Temp	75	<=	•	99	A0476	•				
		330CF	Surface Temp	74	х	•	90	PLACE	•		Read Job List		
		330CF	Moisture	0	>	•	24	PLACE	<u> </u>		Retrieve Selected Jobs		
			Active		ict			🗖 Gi	roup by RPC ID		Show Current Job		
Current State	Amps	RPC ID	Send Al ON		hen	Amp Alar		Force RPC DN OFF			liscellaneous Alarms:		
ON	NA	BASESTATIO		Γ		Γ					Send Alarm if Sensor or RPC goes offline.		
ON	1	A0461		Г							Send Alarm if Sensor has a low battery.		
OFF	0	A0476							0		Setup Alarm Email Addresses Rename IDs Setup System		

Click on the **Read Job List** button to see the job files in the RFC Base Station. Then highlight any job you wish to download and save on your computer. Click on the Download Selected Job button to start the download. Click only once and be patient. Large job files may take a while to download. The progress bar at the top of the screen will indicate the state of the download process.

Reading Block 2 of Job number 1	

While job files can be downloaded remotely, the best way to download jobs is by connecting directly with the RFC Base Station using the direct connect USB cable.



(See the instructions in the Direct Connect section of this manual.)

Job files may also be downloaded using a USB flash drive. Simply insert a flash drive into a USB port on the control panel, then turn the RFC Base Station power switch ON. All of the job files in the RFC Base Station will be downloaded in just a few minutes onto the USB flash drive. Insert the USB flash drive in the USB port on your computer before starting up the RFC Charter, when the RFC Charter is started, it will scan all drives for new files, copy them to the RFC Data folder on the local hard drive and display them in the RFC Charter.

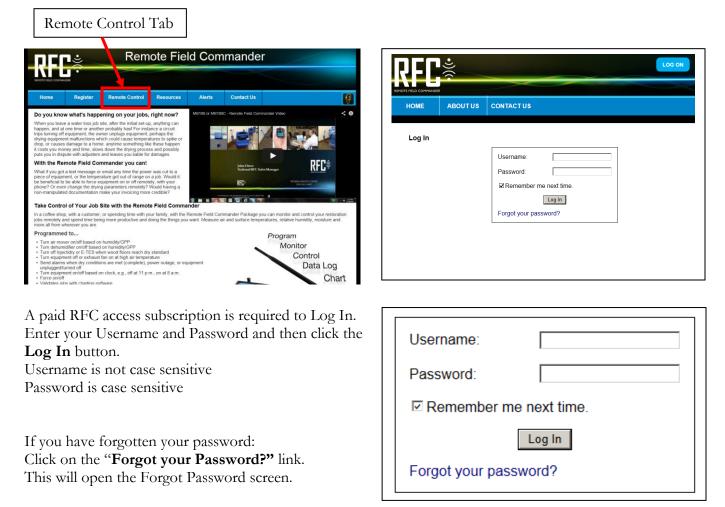
When the download is completed a pop-up message will inform you that you can view the file in the RFC Charter window. You can close the pop-up and the close remote connect screen to return to the RFC Charter window to view the file (Along with any other job files in your RFC data file.).

User	ID	Remote II			nber	Retrie	eve Data	[	Readi	ng Blo	:k 90 of J	lob nu	mber 1		
			12345 11230		L T	_									_
Finish	ned		11310		l	Send	Updates								
	,							Start Ti	ime 2	2:22 PM	1 10/9/20	)13	Job Tim	0:46	_
			Active S		LIST urns OFF	when		June 1					505 1111	-1	
	Sensor I	ID	Condition					RPC ID				art Ti		uration	_
		332E8	rH	19	> •	51	PLACE		•	-				01:59 149:05	
		332E8	Air Temp	75	> •	99	A0461		•		2013-09	9-24 1	7:07:50	14:26	
		332E8	Surface Temp	75	x •	90	PLACE		•		2013-09	9-24 1	6:47:33	00:00 00:00	
		332E8	Moisture	0	> •	24	PLACE		•				4:22:14		
		332E8	GPP	24	> •	101	PLACE		•		2013-07	7-02 1		00:01	
		330CF	rH	27	> •	51	PLACE		•		2013-00	J-00 I	0.10.10	00.05	
		330CF	A:- T	70			10470		-						
		330CF	Information									× Rea	ad Job Lis	:	
		330CF										eve	e Selected	Jobs	
			- 🚺 Fi	les hav	e been d	ownload	led. View f	iles in th	e Char	ter win	dow.		Current J	ab I	
												-	Current	00	
Current State	Amps	RPC ID									OK	1 s A	larms:		
ON	NA	BASESTATI									UK .	J	if Sensor (	or RPC go	es offline.
ON	1	A0461		Γ						I	Send A	Alarm i	if Sensor l	nas a low	battery.
OFF	0	A0476		Ē	] [			0			Cotup /	Marm	Email Add	100000	1
											Secup 7	Aldini		103503	
											Renam	ne IDs	Setu	System	
lint: Hov	ver over ti	he column head	ing and button	s for de	tailed ins	struction	IS			7					,
Hint: Hov		he column head	ing and button:	s for de	tailed ins	struction	IS			Y					_][
		he column head	ing and buttons	s for de	etailed ins	struction	iS			<b>V</b>				Chi	RF
<sup>C Charter</sup>		۱ <u>ن</u>	ing and buttons	s for de	stailed ins	struction	S			×	Log Ir	n	Offline	Cha	RFC arte v3.4
C Charter	ar ELD COMMAN	1 ÷	ing and buttons	s for de	stailed ins	struction					Log Ir	n	RFC Chart data.	er will displa	RFC arte v3.4.
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C Charter Remote File 11231001 09/24 09/25 11209004	и ELD COMMAN 1 1/13 17:09 1 4	DER 5:22 49:56 7:27		s for de	stailed ins	struction	5				Log Ir		RFC Chart data. Select the s you would Then select data. Summary Senal Num RFC Versis FileName: Start Time End Time Duration Notes: Add Job n	er will displa erial numbe ike to chart. the Job tim iber: in: otes here. Configure Le ename Repo	RFI v3.4. ry log session of of the device e to chart the gend rt IDs
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C Charter REMOTE FIE 11231001 09/24 09/25 11209004	и ELD COMMAN 1 1/13 17:09 1 4	DEA 5:22 49:56 7:27		s for de	stailed ins	struction	5				Log Ir	Evaporation Potential	RFC Chart data. Select the s you would Then select data. Summary Serial Nun RFC Versis FileName: Start Time End Time Duration Notes: Add Job n	er will displa erial numbe ike to chart. the Job tim aber: in: otes here. Configure Le ename Repo ave Data to USB Conne	RFI v3.4. vy log session r for the device e to chart the send rt IDs Excel ext
C Charter Remote File 11231001 09/24 09/25 11209004	и ELD COMMAN 1 1/13 17:09 1 4	DEA 5:22 49:56 7:27	by amCharts.com	s for de	stailed ins		S				Log Ir	Evaporation Potential	RFC Chart data. Select the s you would Then select data. Summary Serial Nun RFC Versis FileName: Start Time End Time Duration Notes: Add Job n	er will displa erial numbe ike to chart. the Job tim ober: n: otes here. Configure Le ename Repo ave Data to	RFI v3.4. vy log session r for the device e to chart the send rt IDs Excel ext
C Charter Remote File 11231001 09/24 09/25 11209004	и ELD COMMAN 1 1/13 17:09 1 4	Jean Char 5:22 49:56 7:27	by amCharts.com	s for de	stailed ins		5				Log Ir		RFC Chart data. Select the s you would Then select data. Summary Serial Nun RFC Versis FileName: Start Time End Time Duration Notes: Add Job n	er will displa erial numbe ike to chart. the Job tim aber: in: otes here. Configure Le ename Repo ave Data to USB Conne	RFI v3.4. vy log session r for the device e to chart the send rt IDs Excel ext

You can click on the selected job file to open the RFC Charter viewer or exit and view the file later.

# **Remote Connect via RFC Website:**

With your internet connected computer, access the website **remotefieldcommander.com** to open the RFC Main Screen. Click on the **Remote Control Tab** on the top of the screen to open the RFC Log In screen.



Enter your Username and click the Submit Username button. This will open the Security Question screen.

RE	•))((•	LOG ON
EMOTE FIELD COMMAND	ABOUTUS	CONTACT US
Forgot P	assword	
	Can't re	emember your password?
	Enter y	our username or email account here. Username:
		Submit Username

If you have a security question on file, it will be shown on the left side of the screen. Enter your Answer and click the **Submit** button.

If you do not have a security question on file, click on the Reset Password button and an email message will be sent to you with instructions on resetting your password.

REL	•))((•	LOG ON
REMOTE FIELD COMMANDER		
HOME	ABOUTUS	CONTACT US
Forgot Pa	assword	
	Enter your t	mber your password? username or email account here. Username: Submit Username ther change your password if you remember your reset your password. If you reset your password, an e sent to you with reset instructions. What is your dogs name? Submit

If you entered the correct answer you will now be able to reset your password.

Enter your New Password and re-type it in the appropriate boxes. Then click on the **Reset Password** button.

You will be notified that your password has been reset and that you should Log In with your new Password.

Click the LOG ON button in the upper right corner of the screen.

RFC	LOG ON
REMOTE FIELD COMMANDER	TUS CONTACTUS
Reset Password	
	Enter a new password below. Type it again in the "Re-Type" password field to make sure it's correct, then click "Reset Password". New Password: Re-Type Password: Reset Password
	LOG ON
HOME ABOU	TUS CONTACTUS
Reset Password	
	Enter a new password below. Type it again in the "Re-Type" password field to make sure it's correct, then click "Reset Password". Password reset. Please login with your new password. New Password: Re-Type Password: Reset Password

If you enter the wrong answer to the security question on file, re-enter your Username to return to the Security Question screen and try again or click the Reset Password. Contact Omni Pro customer service for assistance if needed.

	•))((•	LOG ON
HOME	ABOUTUS	CONTACT US
Forgot Pass	Can't remember Enter your user Invalid answer to	r your password? name or email account here. secure question. Jsername: Submit Username

Once you have entered the proper Username & Password and click the Log In button, you will open your account screen.

	•))((•		Welcome, kore0	LOG OFF	
	ABOUTUS	CONTACT US MY	ACCOUNT		
Change Passw	vord Chan	ge Security Question	RFC Command and Control	Downloads	
My Accou Username:ko Company:ko	re006				Downloads Tab

If necessary you can now click on the **Downloads** tab to download the latest copy of the RFC Charter software and to check for any new firmware updates for your RFC Base Station. Downloads are also available on remotefield commander.com website. (See Page 69)

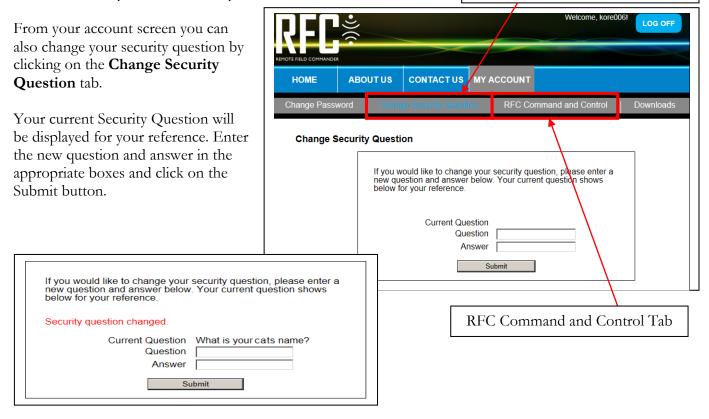
From your account screen you can also change your password by clicking on the Change Password tab.

		•))((•			Welcome, kore0	LOG OFF
	HOME	ABOUTUS	CONTACT US	MY ACCOUNT		
	Change Passw	vord Chan	ge Security Questi	on   RFC Co	mmand and Control	Downloads
Change Password Tab	Change P		our current passwo e the password to r Current Pass New Pass Re-Type Pass	sword	ew password below. u've typed it correctly.	

Enter your Current Password and your New Password in the appropriate boxes. Then re-enter the New Password in the Re-Type Password box and click the **Submit** button.

Once submitted you will return to your account screen.

Change Security Question Tab



You will be notified that your question has been changed and your new question will be displayed. You can now return to the account screen or click on the **RFC Command and Control** tab to remotely connect with your RFC Base Station. To connect to your remote RFC Base Station, click on the **RFC Command and Control** tab. This will open the RFC Remote Control Screen.

RFC Remote Control	
User ID Renote ID RPC Serial Number Kore007 Kore012 Logout N1220001 Send Updates	
Status: Welcome. Select "Retrieve Data" to download data. Click only on	nce.
Active Sensor List RPC turns OFF when Sensor ID Condition Value Equality Limit RPC ID	
Active RPC List	
Current Send Alarm when Amps Force RPC	Force Time
State Amps RPC ID ON OFF Alarm ON OFF	Minutes
Miscelaneous Alarms:	
Start Time: Start Time: Send Alarm if Sensor or RPC go	oes offline.
Job Time: Send Alarm if Sensor has a low	v battery.

When you first log in, no data will be displayed. If you only have one modem on your account, only the one modem number will be displayed. If you have multiple modems, they will all be displayed. Highlight the modem number you wish to connect with then Click the **Retrieve Data** button at the top of the page to access the RFC Base Station and get the current data readings. Click only once and be patient it may take a while to connect and read the data. The screen will now display the current job data of the RFC Base Station and also the serial number of any other RFC units which may be in contact.

If there are multiple RFC Base Station units on the jobsite, they will communicate with each other and show up on the Serial Number list. You can click on any of the listed **Serial Number** and then the **Retrieve Data** button to read the data from that unit. When the data from the any RFC unit is displayed you can see the serial number of the selected RFC unit will be highlighted. The data will display the current status and settings of the RFC unit as well as all Remote Sensors & Remote Power Controllers (RPC) which are in radio contact with the RFC unit.

As you can see in the examples below, we have connected to RFC Base Station #12345666 and we also are receiving a signal from RFC #1123002 & #11310002. We can connect with the other RFC units by highlighting and clicking on the other serial number and clicking **Retrieve Data** the button.

		RFC Re	mote	e Control			
User ID Logout	Remote ID kore007 kore012 kore005 M11230001	RFC Se 12345 11230 11310	6666 0002	Re	trieve Data nd Updates	ℲKℾ⅃℩ົ	
Statu	s: Successfully rea	d from de	evice.				
				Sensor List			
Sensor I	D Cond			ns OFF when Equality Limi	t	RPC ID	
332E	8 rH		29	> 🖌 51	PLACE	v .	
332E	8 Air Ten	np i	72	> 🖌 99	A0461	$\checkmark$	
332E		emp 3	71	X 🖌 90	PLACE	~	
332E			-	> 🖌 24	PLACE	~	
332E				> 🖌 101	PLACE	~	
330C 330C			"	> ¥ 51 <= ¥ 99	A0476	Y	
3300			_	X ¥ 90	PLACE	~	
3300				> 24	PLACE		
Current State A	Amps RPC		Sen	e RPC List id Alarm wher ON OFF	Amps I	Force RPC Force Time ON OFF Minutes	
ON	NA BASEST/						
ON	1 A04						
OFF	0 A04	6	L	JU			
itart Time: ob Time:	2:22 PM 10/9/ 18:39	2013			m if Senso	or or RPC goes offline. or has a low battery.	

66

User ID	Remote ID I	C Remote Contro RFC Serial Number 12345666	Retrieve Data	חכרּ⇒ַ	
Logout		1230002 11310002	Send Updates		
Status:	Successfully read fro				
Sensor ID	Condition	Active Sensor I RPC turns OFF wh Value Equality	en	RPC ID	
Internal 330CF 330CF	rH rH Air Temp	29 <= V 37 > V 71 <= V	51 PLACE		
330CF 330CF	Surface Temp Moisture	0 70 X ♥ 0 > ♥	0 PLACE 24 PLACE	<b>&gt;</b>	
330CF 332E8 332E8	GPP rH Air Temp	42 > 🗸 29 > 🗸 72 <= 🗸	51 PLACE 99 PLACE	>>>	
332E8	Surface Temp	Active RPC Li	st	<u> </u>	
rrent tate Amp ON N/ ON 1 DFF 0	A BASESTATIO A0461		FF Alarm OI	] [] [] [] [] [] [] [] [] [] [] [] [] []	
rt Time: Time:	8:40 AM 10/8/201 48:21	3 Send		or RPC goes offline. has a low battery.	

In this example, since the Remote Sensors are within range of both RFC units, the external sensor data displayed both RFC units are the same. Only the internal sensors and job file information differ on the data displayed by each RFC.

When using multiple RFC Base Station units always check sensors settings in the Active Sensor List and Active RPC list on all units to prevent conflicting control settings. Conflicting settings from settings on two different RFC units could adversely affect device operation.

# **SENSOR READINGS & SETTINGS:**

The Active Sensor List displays the current sensor readings and settings and you can change the settings remotely as the job conditions change. The factory default is for all sensors and conditions to be displayed in the Active Sensor List. The sensors & conditions displayed cannot be changed while connected remotely via the RFC Website. The sensors displayed in the Active Sensor List can only be changed using the RFC Charter software.

Sensor ID	Condition	Active RPC tur Value	ns Of	FF v		RPC ID		
Internal	rH	29	<=	~	51	PLACE	$\checkmark$	
330CF	rH	37	>	~	51	PLACE	$\checkmark$	
330CF	Air Temp	71	<=	~	99	PLACE	$\checkmark$	
330CF	Surface Temp	70	Х	~	90	PLACE	$\checkmark$	
330CF	Moisture	0	>	~	24	PLACE	$\checkmark$	
330CF	GPP	42	>	~	101	PLACE	$\checkmark$	
332E8	rH	29	>	~	51	PLACE	$\checkmark$	
332E8	Air Temp	72	<=	~	99	PLACE	$\checkmark$	
332E8	Surface Temp	71	X	~	90	PLACE	~	~

**SENSOR ID:** Shows the RFC units Internal Sensors and the ID of any active Sensors. The internal RFC Base Station sensors are always listed first. You can scroll down to see the data of all of the active sensors. The sensor ID numbers cannot be changed. Sensor nicknames or aliases cannot be added or changed while connected remotely via the RFC Website. Sensor nicknames or aliases can only be added or changed using the RFC Charter software.

**CONDITION:** Shows the environmental condition measured by each of the sensors.

**VALUE:** Shows the current sensor reading for each of the sensors.

**EQUALITY:** Shows the selected symbol of equality representing the relation between the sensor reading and the limit which will turn the selected device (Heater or Remote Power Pod) OFF. There are three symbols used for the sensor reading limit equations:

**C** Less than or Equal to – When the sensor reading is less than or equal to the limit, the selected device will be turned OFF. If the sensor reading is greater than the limit, the device will turn ON.

**Greater Than** – When the sensor reading is greater than the limit, the selected device will be turned OFF. If the sensor reading is less than or equal to the limit, the device will turn ON.

			Sensor	
Sensor ID	Condition	Value	Equality	Limit
Internal	rH	20	<= 🗸	10
332E8	rH	29	<=	51
332E8	Air Temp	72	>	99
332E8	Surface Temp	71	Х	90
332E8	Moisture	0	Err	24
			J	

**X** Off – This setting turns off the selected action. No action will be initiated by any change in the sensor reading. No devices will be controlled.

To change the equality symbol, click on the **arrow** to display the drop down list and click on the desired symbol to select it. Select X if you do not want the sensor to control any device. Click the **Send Updates** button to activate and save the change. Remember if the equation you select for the relationship between the sensor reading and the limit setting is true, the Remote Power Controller will turn OFF.

**LIMIT:** Shows the selected limit setting for each sensor. This is the point at which the selected condition initiates the desired RPC action.

To change the limit, use your cursor to highlight and delete the old number and simply type in your new limit number. Click the **Finished** button to activate and save the change.

**RPC ID:** Shows the ID number of the Remote Power Controller being controlled by each sensor. In place of a RPC ID number or alias this column may list PLACE.

PLACE indicates that no RPC or heater will be controlled by that sensor reading.

Sensor ID	Condition	Active RPC tur Value	ms O		hen	RPC ID
Internal	rH	20	<=	~	10	PLACE
332E8	rH	29	>	~	51	PLACE
332E8	Air Temp	72	>	~	99	A0461
332E8	Surface Temp	71	Х	~	90	A0476
332E8	Moisture	0	>	~	24	

To change the RPC to be controlled, click on the **arrow** to display the drop down list and click on the desired ID to select it. Select PLACE if you do not want the sensor to control any device. Click the **Finished** button to activate and save the change.

The RPC ID numbers cannot be changed. RPC aliases or nicknames can only be added or changed using the RFC Charter software connection.

# **RPC STATE & ALARMS:**

The Active RPC List box at the bottom of the screen displays the Current State of the RFC Base Station and all Remote Power Controllers in radio contact with the RFC Base Station. The Amps reading can let you know if the device connected to a Remote Power Controller is operating when the RPC is ON.

			Active RP	C List				
Current			Send Ala	arm wher	n Amps	Force	RPC	Force Timer
State	Amps	RPC ID	ON	OFF	Alarm	ON	OFF	Minutes
ON	NA	BASESTATION						0
ON	1	A0461						0
OFF	0	A0476						0

In this example Active RPC List above, you can see that the current state of the RFC Base Station, which is ON. Also shown above, the RPC A0461 is ON and drawing 1 amp and the RPC number A0476 is now OFF. You can see that the equations in the Active Sensor List shown below have turned the RPC's on and off as they should.

- The Air Temp equation for the sensor 332E8 is false so the status of RPC number A0461 is ON. (72 is not greater than 99)
- The Air Temp equation for the sensor 330CF is true so the status of RPC number A0476 is OFF. (72 is less than or equal to 99)

			e Sensor List urns OFF when	
Sensor ID	Condition	Value	Equality Limit RPC ID	
332E8	Air Temp	72	> 99 A0461	
330CF	Air Temp	72	<= ¥ 99 A0476	

The devices listed in the Active RPC List can be remotely turned ON or OFF by checking the Force ON or Force OFF boxes and then clicking the **Send Updates** button at the top of the page.

### The RFC Base Station cannot be forced ON or OFF

				Amps	Force i	KPC F	orce Timer
mps	RPC ID	ON	OFF	Alarm	ON	OFF	Minutes
NA BA	SESTATION						0
1	A0461						0
0	A0476						0
		NA BASESTATION 1 A0461	NA BASESTATION 1 A0461	NA   BASESTATION   I     1   A0461   I	NA         BASESTATION         Image:	NA         BASESTATION         Image: Constraint of the second sec	NA         BASESTATION         Image: Constraint of the second sec

The Force ON or OFF setting will override the sensor limit equations to allow you to operate equipment as needed to change the environment conditions. Once forced ON or OFF the device will remain ON or OFF until you uncheck the box and click the **Send Updates** button, unless you use the Force Timer to limit the run time.

When you click the **Force RPC ON** or **Force RPC OFF** boxes, also click on the **Force Timer Minutes** box and enter the number of minutes you want the device to remain ON or OFF. When you click the **Send Updates** button the selected device will remain it its forced state (ON or OFF as selected) for the selected time. When you click on the **Retrieve Data** button the screen will update showing the device status and the time remaining in the forced state displayed in the **Force Timer Minutes** box for each device.

You can also check the **Send Alarm When** boxes to alert you when the device status changes. When a selected device turns ON or OFF as selected an alarm will be sent to you via text message or e-mail. You cannot add alarm addresses from the RFC Website. You must use the RFC Charter software, Log-In and connect remotely to add alarm addresses.

The **Amps Alarm** box when checked will alert you if there is no current flow when a Remote Power Controller is ON. This will let you know if the device connected to the Remote Power Controller has been turned off or is not functioning. The alarm will be sent to your mobile phone as a text message or via e-mail.

The **Miscellaneous Alarms** boxes can be checked to send alarms via text message or e-mail any time a Remote Sensor or Remote Power Controller goes offline or if a Remote Sensor has a low battery.

			Miscelaneous Alarms:
Start 1	Time:	8:45 AM 10/8/2013	✓ Send Alarm if Sensor or RPC goes offline.
Job Ti	ime:	7:07	✓ Send Alarm if Sensor has a low battery.

# You cannot add alarm addresses from the RFC Website. You must use the RFC Charter software, Log-In and connect remotely to add alarm addresses.

The clock at the bottom of the screen displays the start time and the total elapsed time of the current job. To start a new job or reset the clock you must use the control panel on the RFC Base Station or connect using the RFC Charter software.

# **RFC CHARTER:**

To access the RFC Charter, simply click on the **RFC Charter icon**. This will open the LOG IN screen.

Enter your Username and Password in the appropriate box and click the Log In button. If you have forgotten your password, click the **"Forgot Password?"** link.

Internet connection required to Log In or to receive assistance with a forgotten password.

(For more complete Forgot Password instructions can be found in the RFC Charter Remote Connect section of this manual.)

C Charter			RFC Charter
			line v3.4.0
chart by amCharts.com		da	FC Charter will display log session sta.
K RCFCharter Login Welcome to Charter!	×	yc TJ	elect the serial number for the device ou would like to chart. ten select the Job time to chart the sta.
Enter your username and pas	sword below.	5	ummary
			ierial Number:
		_ *	RFC Version:
Username		Evaporation Potential	FileName:
Password		Pot	
□ Remember My		ation	
Forgot Password?	Password	apor	
		_	lotes:
Change Password			idd Job notes here.
Work Offline	Log In		Configure Legend
			Rename Report IDs
			Save Data to Excel
chart by amCharts.com			USB Connect
		2	Remote Connect
RPC State		RPC Amps	
RPC		RPC	
Deife dame State			

When you Log-In, the Charter View screen is opened the different job files are listed on the left side of the screen. This list includes all job files in the RFC Data folder on your computer and all job files stored on the RFC Server

With every log-in the all files on the RFC Server and on your workstation are synchronized. A copy of every file on the server is sent to your computer and all files in the RFC Data folder on your computer are copied to the server. This provides a back-up of all files as well as an auditing trail for disputed claims. File data cannot be altered in any way and there will be back-ups of all unmodified files if needed in any litigation proceedings.

RCFCharter Login	×
Welcome to Charter! Enter your username and password below.	
Username Password	
Remember My Password	
Forgot Password?	
Change Password	
Work Offline Log In	

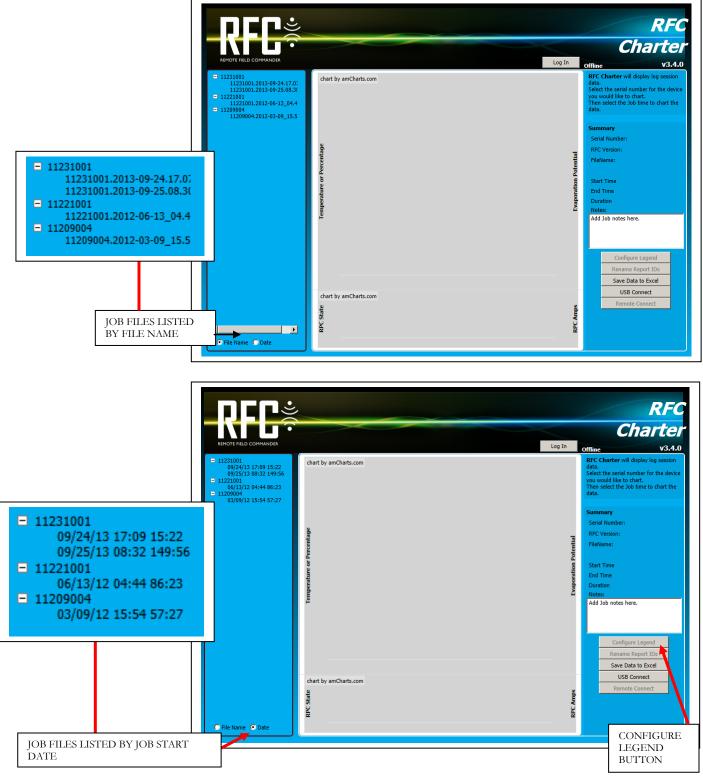
To view job files already saved on your computer, you do not need a Username or password. Just click on the **Work Offline** 

button to work with job files already saved on your computer. (Internet connection not required.) If you are working offline, only the job files in the RFC Data folders will be displayed.

If you need to access jobs on an RFC units which are not already downloaded see the Download Job Files Section of the Direct Connect or RFC Charter Remote Connect directions in this manual.



The job files are grouped by RFC unit serial number and listed either by job File Name when the **File Name** box is checked, as shown below, or you can change the listing to Job Start Date by clicking the **Date** box below the job file list.



When you click on a new job file, the first screen to open will be the Configure Legend screen. If a file has been open before the Configure Legend screen will not open. The Job Preview screen will be the first to open. Once the chart is displayed you can return to the Configure Legend screen by clicking on the **Configure Legend** button. The RFC will log data for all five conditions on every sensor used. A graph with too much data displayed can be messy and hard to read. In the Configure Legend screen you can select the data you want to display in your job graph.

Click on the boxes to check the **Plot Values** boxes for any sensor data item you want to display.

Click on the boxes to check the **Plot Limits** boxes for any sensor limits you set, which you want to display.

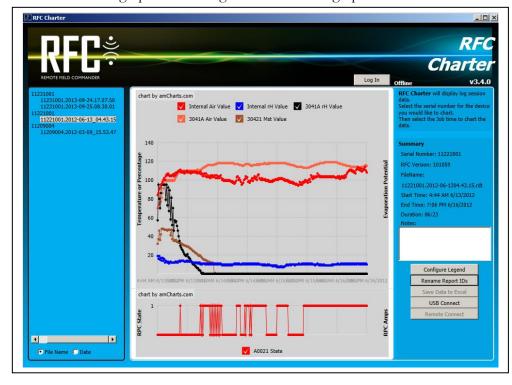
The data or limits corresponding to the unchecked boxes will no longer be displayed in the graph. The data is still saved for viewing if you want to change the graph.

Click on to check the **Plot State** to show if the selected RPC or heater turned on & off during the job. Click on to check the **Plot Amps** box to show the amp draw of the selected RPC during the job.

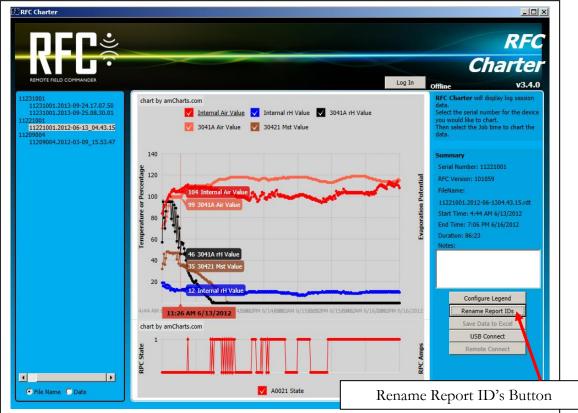
You can remove any item by reclicking on any box to uncheck the box.

	Select wh	ich graphs should be p curve can be plot			eir limits		
Plot	Plot			ns ON whe			
Values	Limits	Sensor ID	Condition	Equality		RPC ID	
		Internal Air	Air Temp	>	100	HEATER	<u> </u>
		Internal rH	rH	-	10	HEATER	
		3041A rH	rH		51	PLACE	
~		3041A Air	Air Temp		99	PLACE	
		3041A Sur	Surface Temp	Х	90	PLACE	
		3041A Mst	Moisture	>	24	PLACE	
		3041A GPP	GPP	>	101	PLACE	
		3041B rH	rH	>	51	PLACE	
		3041B Air	Air Temp	<=	99	PLACE	
		3041B Sur	Surface Temp	Х	90	PLACE	
		3041B Mst	Moisture	>	24	PLACE	-
plotte Plot		te Power Controller gra of the RPC and the cu					
State	Amps	RPC ID					
		HEATER					<b>A</b>
		A0007					
~		Exhaust Fan					
							<b>v</b>

After checking the selected data items, click the **Done** button to proceed to the Charter View screen. In the Charter View screen you can now see the graph of your selected data items. The legend for the sensor graph is shown above the sensor graph and the legend for the RPC graph below.



When you mover your cursor across the graph the different data points for each graph line will be displayed as shown below.



If you want to change the alias of any sensor or RPC, you can click the **Rename Report ID's** button to open the **Rename ID** screen.

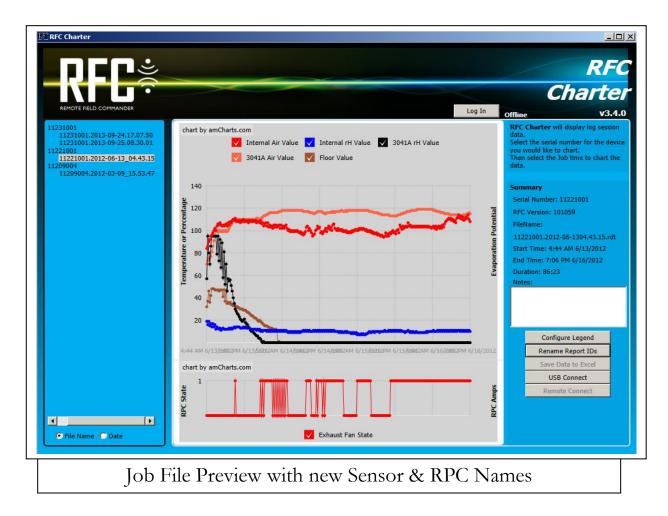
Enter the desired alias into the box next to any sensor condition or RPC. In this case sensor 30421 Moisture value was changed to Floor and sensor RPC number A0021 was changed to EXHAUST FAN.

When re-naming Sensors in the Charting process you do not have to enter unique names for each environmental condition as you do when setting up the system. All data has already been logged and saved. The name change at this time will only affect how the data is displayed.

Click the Done button to enter your changes and return to the Charter View screen.

### RENAME ID's Screen

Sensor ID		Sensor Alias			
30421 rH					-
30421 Air					
30421 Sur					
30421 Mst	Floor				-
0421 GPP					
30012 rH					-1
e name. Fo " and the r e not includ peled "Livin ach RPC ID	r Example, and H alias shoul led, the corre groom".	in Air Tempera Id be "Livingro esponding plot amed. Add a fa	ature alias shor som rH", If the ts for rH and A amiliar name in	"Air" and " ir would bo	rH" labels oth be
e name. Fo " and the r e not includ peled "Livin ach RPC ID	r Example, and H alias shoul led, the corre groom".	n Air Tempera Id be "Livingro esponding plot	ature alias sho oom rH". If the ts for rH and A	"Air" and " ir would bo	rH" labels oth be
e name. Fo r" and the r e not includ beled "Livin Gach RPC ID RPC ID A0007	r Example, and H alias shoul led, the corre groom".	n Air Tempera Id be "Livingro esponding plot amed. Add a fa RPC Alias	ature alias sho oom rH". If the ts for rH and A	"Air" and " ir would bo	rH" labels oth be
ir" and the r re not includ abeled "Livin Each RPC ID RPC ID A0007	r Example, ai H alias shoul led, the corre groom". ) can be rena	n Air Tempera Id be "Livingro esponding plot amed. Add a fa RPC Alias	ature alias sho oom rH". If the ts for rH and A	"Air" and " ir would bo	rH" labels th be



There are also additional tools available to manage your job files. To access these features, click on a job file to highlight and open the job file you wish to work with and then right click on the highlighted job file. A pop up will appear with the following feature list:

Rename File... Delete File... Archive File... Join File with... Split File...

Rename File... Delete File... Archive File... Join File with ... Split File...

11221001 11221001.20 Rename File... 11209004 Delete File... 11209004.201 Archive File... Join File with ... Split File...

**Rename File...** This allows you to change the name of a job file. This will change the job file name on both the RFC Server and your computer.

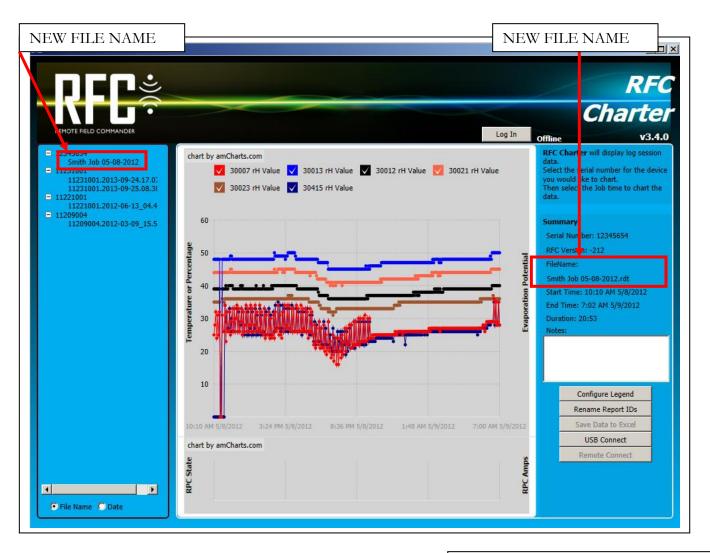
When you highlight and click on Rename File a pop window

will open with a box to enter the new file name.

Enter the new file name in the box, and then click the Rename button.

This will return you to the Job File Preview screen and the new file name will now be displayed in the job file list.

🔜 Rename the File	2	
Enter the New Filen	ame	
Current Filename:	12345654.2012-05-08.10.09.58FirstFile	
New Filename:	Smith Job 05-08-2012	
	Cancel	Rename



**Delete File...** This allows you to remove the job file from the Job File List. The file gets marked as deleted on both the RFC Server and your RFC Data File on your computer. (The file is saved in a Deleted Files folder if needed in the future.) When you highlight and click on Delete File a pop window will open with a box asking if you want to delete the file.

Delete File	×
Are you sure you want to delete the file named 11231001.2013-09-24.17.07.50.rdt	
Yes No Cancel	

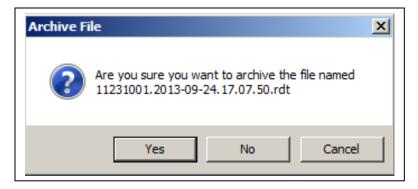


Click the yes button and the file will be removed from the file list and saved in the Deleted Files folder. They can be accessed from the RFC Server by logging in and clicking on the File Manager button at the top of the screen.

**Archive File...** This allows you to remove the job file from the Job File List. The file gets marked as archived on both the RFC Server and your RFC Data File on your computer. (The file is saved in an Archived Files folder and can be restored by using the File Manager if needed in the future.)

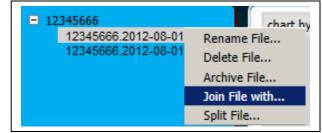


When you highlight and click on **Archive File** a pop window will open with a box asking if you want to archive the file.



Click the **Yes** button and the file will be removed from the file list and saved in the Archived Files folder. They can be accessed from the RFC Server by logging in and clicking on the **File Manager** button at the top of the screen.

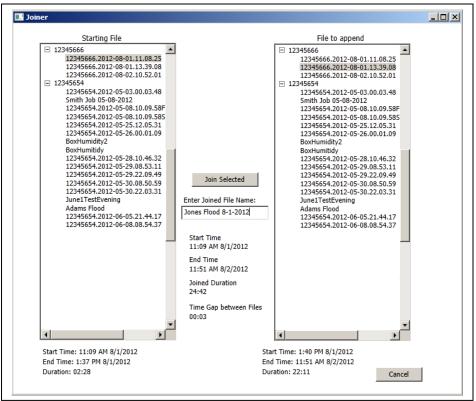
**Join File with...** This allows you to join two job files together to make a new larger single job file. This may be required if a new job file is inadvertently started in the middle of a job. The new job file can be joined with the previous job file to correct the error. The two original files get archived to the RFC Server and no longer show up on the Job File List.

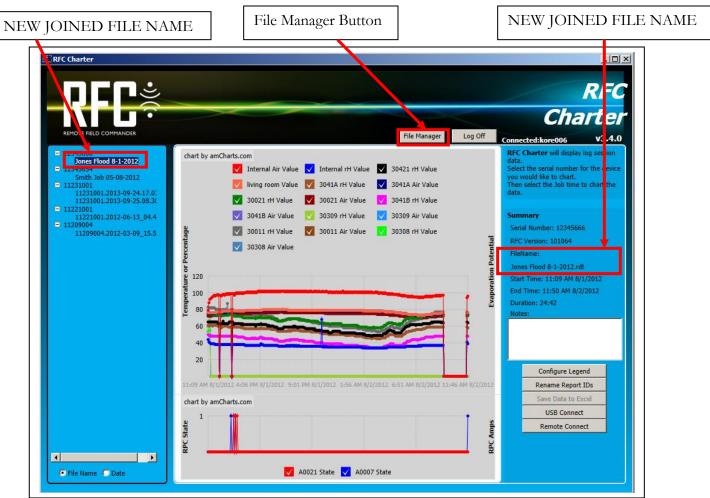


When you highlight and click on **Join File with** a pop window will open with two lists of files. The job selected from list on the left is the Starting File which is the job file with the earlier start time and the job file selected from the left list File to append column would have the later start time.

Highlight one job from each column. Look at the start and finish time of each job at the below each column to be sure the end time of the first file is earlier than the start time of the second file.

Enter a new file name for the joined file in the Enter Joined File Name box and click the Join Selected button.

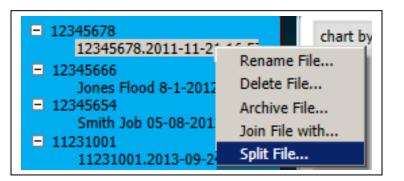




This will return you to the Job File Preview screen and the new file name will now be displayed in the job file list. You can access original files on the RFC Server by logging in and clicking on the **File Manager** button at the top of the screen.

**Split File...** This allows you to split a single job file into two smaller files. This may be required if a new job is started within seven days of a previous job and the operator forgets to select **Start New Job** when setting up and turning the RFC ON.

(After sitting OFF for seven days the RFC will automatically start a new job when it is turned ON.)



The old job and new job file can be split to correct the error.

When you highlight and click on **Split File with** a pop window will open with a list of time break points in the job file.

11/21/2011 4:57:34 PM       11/21/2011 4:59:34 PM       0:02:00         11/23/2011 1:22:16 AM       11/23/2011 1:25:16 AM       0:03:00       1:8:22:42         11/23/2011 1:47:56 AM       11/23/2011 1:49:56 AM       0:02:00       0:22:40         11/23/2011 2:43:38 AM       11/23/2011 2:45:38 AM       0:02:00       0:53:42         11/23/2011 2:51:02 AM       11/23/2011 2:52:02 AM       0:01:00       0:05:24         11/23/2011 3:14:55 AM       11/23/2011 3:10:29 AM       0:01:00       0:17:27         11/23/2011 3:14:55 AM       11/23/2011 4:27:55 AM       1:13:00       0:04:26         11/23/2011 5:27:01 AM       11/23/2011 1:30:48 PM       1:13:00       0:04:26         11/23/2011 1:21:348 PM       11/23/2011 1:50:48 PM       11:37:00       6:42:47         11/24/2011 1:02:32 AM       11/24/2011 1:46:32 AM       0:04:00       1:144         11/24/2011 3:09:25 AM       11/24/2011 1:30:25 AM       0:01:00       1:22:53         11/24/2011 1:2:33:8 AM       11/24/2011 1:2:32:33 PM       0:08:00       0:51:55         11/24/2011 12:39:05 PM       11/24/2011 12:30:25 PM       0:00:00       0:02:20         First Filename:         12345678.2011-11-21.16.57.21FirstFile	11/21/2011 4:57:34 PM			Gap from last
11/23/2011       1:4/23/2011       1:4/23/2011       1:4/23/2010       0:02:00       0:22:40         11/23/2011       2:43:38 AM       11/23/2011       2:45:38 AM       0:02:00       0:53:42         11/23/2011       2:51:02 AM       11/23/2011       2:52:02 AM       0:01:00       0:05:24         11/23/2011       3:09:29 AM       11/23/2011       3:10:29 AM       0:01:00       0:17:27         11/23/2011       3:14:55 AM       11/23/2011       3:10:29 AM       0:04:26         11/23/2011       5:27:01 AM       11/23/2011       5:31:01 AM       0:04:00       0:59:06         11/23/2011       12:32:01       11:02:04       PM       11:37:00       6:42:47         11/23/2011       1:21:23 AM       11/24/2011       1:46:32 AM       0:44:00       1:11:44         11/24/2011       1:02:25 AM       11/24/2011       0:01:00       1:22:53       11/24/2011         11/24/2011       1:3:38 AM       11/24/2011       11:23:23 AM       8:19:00       0:03:13         11/24/2011       12:39:05 PM       11/24/2011       12:48:05 PM       0:09:00       0:06:32         11/24/2011       12:50:25 PM       11/24/2011       0:00:00       0:02:20       0:02:20		11/21/2011 4:59:34 PM	0:02:00	
11/23/2011 2:43:38 AM       11/23/2011 2:45:38 AM       0:02:00       0:53:42         11/23/2011 2:51:02 AM       11/23/2011 2:52:02 AM       0:01:00       0:05:24         11/23/2011 3:09:29 AM       11/23/2011 3:10:29 AM       0:01:00       0:17:27         11/23/2011 3:14:55 AM       11/23/2011 4:27:55 AM       1:13:00       0:04:26         11/23/2011 5:27:01 AM       11/23/2011 5:31:01 AM       0:04:00       0:59:06         11/23/2011 12:13:48 PM       11/23/2011 1:50:48 PM       11:37:00       6:42:47         11/24/2011 1:02:32 AM       11/24/2011 1:46:32 AM       0:04:00       11:144         11/24/2011 3:09:25 AM       11/24/2011 1:32:38 AM       8:19:00       0:03:13         11/24/2011 12:32:33 PM       0:08:00       0:51:55       11/24/2011 12:48:05 PM       0:09:00       0:06:32         11/24/2011 12:50:25 PM       11/24/2011 12:50:25 PM       0:00:00       0:02:20       0:02:20	11/23/2011 1:22:16 AM	11/23/2011 1:25:16 AM	0:03:00	1:8:22:42
11/23/2011 2:51:02 AM       11/23/2011 2:52:02 AM       0:01:00       0:05:24         11/23/2011 3:09:29 AM       11/23/2011 3:10:29 AM       0:01:00       0:17:27         11/23/2011 3:14:55 AM       11/23/2011 4:27:55 AM       1:13:00       0:04:26         11/23/2011 5:27:01 AM       11/23/2011 5:31:01 AM       0:04:00       0:59:06         11/23/2011 12:13:48 PM       11/23/2011 1:50:48 PM       11:37:00       6:42:47         11/24/2011 1:02:32 AM       11/24/2011 1:46:32 AM       0:44:00       1:11:44         11/24/2011 3:09:25 AM       11/24/2011 3:10:25 AM       0:01:00       1:22:53         11/24/2011 3:33:8 AM       11/24/2011 1:3:38 AM       8:19:00       0:03:13         11/24/2011 12:39:05 PM       11/24/2011 12:32:33 PM       0:08:00       0:51:55         11/24/2011 12:39:05 PM       11/24/2011 12:50:25 PM       0:00:00       0:02:20	11/23/2011 1:47:56 AM	11/23/2011 1:49:56 AM	0:02:00	0:22:40
11/23/2011 3:09:29 AM       11/23/2011 3:10:29 AM       0:01:00       0:17:27         11/23/2011 3:14:55 AM       11/23/2011 4:27:55 AM       1:13:00       0:04:26         11/23/2011 5:27:01 AM       11/23/2011 5:31:01 AM       0:04:00       0:59:06         11/23/2011 12:13:48 PM       11/23/2011 1:50:48 PM       11:37:00       6:42:47         11/24/2011 1:02:32 AM       11/24/2011 1:46:32 AM       0:44:00       1:11:44         11/24/2011 3:09:25 AM       11/24/2011 3:10:25 AM       0:01:00       1:22:53         11/24/2011 3:13:38 AM       11/24/2011 11:32:38 AM       8:19:00       0:03:13         11/24/2011 12:39:05 PM       11/24/2011 12:48:05 PM       0:09:00       0:06:32         11/24/2011 12:50:25 PM       11/24/2011 12:50:25 PM       0:00:00       0:02:20	11/23/2011 2:43:38 AM	11/23/2011 2:45:38 AM	0:02:00	0:53:42
11/23/2011 3:14:55 AM       11/23/2011 4:27:55 AM       1:13:00       0:04:26         11/23/2011 5:27:01 AM       11/23/2011 5:31:01 AM       0:04:00       0:59:06         11/23/2011 12:13:48 PM       11/23/2011 11:50:48 PM       11:37:00       6:42:47         11/24/2011 1:02:32 AM       11/24/2011 1:46:32 AM       0:44:00       1:11:44         11/24/2011 3:09:25 AM       11/24/2011 3:10:25 AM       0:01:00       1:22:53         11/24/2011 3:13:38 AM       11/24/2011 11:32:38 AM       8:19:00       0:03:13         11/24/2011 12:39:05 PM       11/24/2011 12:32:33 PM       0:08:00       0:51:55         11/24/2011 12:39:05 PM       11/24/2011 12:50:25 PM       0:00:00       0:02:20	11/23/2011 2:51:02 AM	11/23/2011 2:52:02 AM	0:01:00	0:05:24
11/23/2011 5:27:01 AM       11/23/2011 5:31:01 AM       0:04:00       0:59:06         11/23/2011 12:13:48 PM       11/23/2011 11:50:48 PM       11:37:00       6:42:47         11/24/2011 1:02:32 AM       11/24/2011 1:46:32 AM       0:44:00       1:11:44         11/24/2011 3:09:25 AM       11/24/2011 3:10:25 AM       0:01:00       1:22:53         11/24/2011 3:13:38 AM       11/24/2011 11:32:38 AM       8:19:00       0:03:13         11/24/2011 12:39:05 PM       11/24/2011 12:38 SPM       0:08:00       0:51:55         11/24/2011 12:39:05 PM       11/24/2011 12:50:25 PM       0:00:00       0:06:32         11/24/2011 12:50:25 PM       11/24/2011 12:50:25 PM       0:00:00       0:02:20	11/23/2011 3:09:29 AM	11/23/2011 3:10:29 AM	0:01:00	0:17:27
11/23/2011 12:13:48 PM       11/23/2011 11:50:48 PM       11:37:00       6:42:47         11/24/2011 1:02:32 AM       11/24/2011 1:46:32 AM       0:44:00       1:11:44         11/24/2011 3:09:25 AM       11/24/2011 3:10:25 AM       0:01:00       1:22:53         11/24/2011 3:13:38 AM       11/24/2011 11:32:38 AM       8:19:00       0:03:13         11/24/2011 12:39:05 PM       11/24/2011 12:32:33 PM       0:08:00       0:51:55         11/24/2011 12:39:05 PM       11/24/2011 12:48:05 PM       0:09:00       0:06:32         11/24/2011 12:50:25 PM       11/24/2011 12:50:25 PM       0:00:00       0:02:20	11/23/2011 3:14:55 AM	11/23/2011 4:27:55 AM	1:13:00	0:04:26
11/24/2011 1:02:32 AM       11/24/2011 1:46:32 AM       0:44:00       1:11:44         11/24/2011 3:09:25 AM       11/24/2011 3:10:25 AM       0:01:00       1:22:53         11/24/2011 3:13:38 AM       11/24/2011 11:32:38 AM       8:19:00       0:03:13         11/24/2011 12:24:33 PM       11/24/2011 12:32:33 PM       0:08:00       0:51:55         11/24/2011 12:39:05 PM       11/24/2011 12:48:05 PM       0:09:00       0:06:32         11/24/2011 12:50:25 PM       11/24/2011 12:50:25 PM       0:00:00       0:02:20	11/23/2011 5:27:01 AM	11/23/2011 5:31:01 AM	0:04:00	0:59:06
11/24/2011 3:09:25 AM       11/24/2011 3:10:25 AM       0:01:00       1:22:53         11/24/2011 3:13:38 AM       11/24/2011 1:32:38 AM       8:19:00       0:03:13         11/24/2011 12:24:33 PM       11/24/2011 12:32:33 PM       0:08:00       0:51:55         11/24/2011 12:39:05 PM       11/24/2011 12:48:05 PM       0:09:00       0:06:32         11/24/2011 12:50:25 PM       11/24/2011 12:50:25 PM       0:00:00       0:02:20	11/23/2011 12:13:48 PM	11/23/2011 11:50:48 PM	11:37:00	6:42:47
11/24/2011 3:13:38 AM       11/24/2011 11:32:38 AM       8:19:00       0:03:13         11/24/2011 12:24:33 PM       11/24/2011 12:32:33 PM       0:08:00       0:51:55         11/24/2011 12:39:05 PM       11/24/2011 12:48:05 PM       0:09:00       0:06:32         11/24/2011 12:50:25 PM       11/24/2011 12:50:25 PM       0:00:00       0:02:20	11/24/2011 1:02:32 AM	11/24/2011 1:46:32 AM	0:44:00	1:11:44
11/24/2011 12:24:33 PM         11/24/2011 12:32:33 PM         0:08:00         0:51:55           11/24/2011 12:39:05 PM         11/24/2011 12:48:05 PM         0:09:00         0:06:32           11/24/2011 12:50:25 PM         11/24/2011 12:50:25 PM         0:00:00         0:02:20	11/24/2011 3:09:25 AM	11/24/2011 3:10:25 AM	0:01:00	1:22:53
11/24/2011         12:39:05 PM         11/24/2011         12:48:05 PM         0:09:00         0:06:32           11/24/2011         12:50:25 PM         11/24/2011         12:50:25 PM         0:00:00         0:02:20	11/24/2011 3:13:38 AM	11/24/2011 11:32:38 AM	8:19:00	0:03:13
11/24/2011 12:50:25 PM 11/24/2011 12:50:25 PM 0:00:00 0:02:20	11/24/2011 12:24:33 PM	11/24/2011 12:32:33 PM	0:08:00	0:51:55
	11/24/2011 12:39:05 PM	11/24/2011 12:48:05 PM	0:09:00	
First Filename: 12345678.2011-11-21.16.57.21FirstFile	11/24/2011 12:50:25 PM	11/24/2011 12:50:25 PM	0:00:00	0:02:20
	First Filename: 12345678.2	011-11-21.16.57.21FirstFile	]	

Select the split point from the list and click on the point to highlight it. Once you have selected the split point, click on the **Split** button. You will return to the RFC Job File Preview screen and now the two split files will be displayed in the job file list on the left side of the screen. The files will have the suffix First File & Second File.

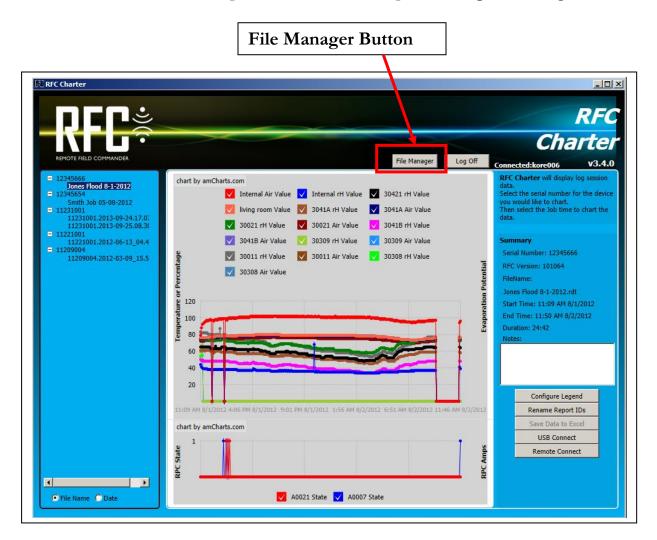
12345678.2011-11-21.16.57.21FirstFile	45678 12345678.2011-11-21.16.57.21First
12345678.2011-11-21.16.57.21SecondFile	► 12345678.2011-11-21.16.57.21Sec 45666
The original un-split file is now archived to the RFC Server and no longer appears on the list. You can access original file on the RFC Server by logging in and clicking on the File Manager	Jones Flood 8-1-2012 45654 Smith Job 05-08-2012
button at the top of the screen.	

# File Manager:

By clicking this button you can access Archived and Deleted job files on the RFC Server as well as copies of the original job files that were split or joined to make new files.

You must Log In with your username and password to access this feature.

An Internet connection and a paid RFC access subscription are required to Log In.

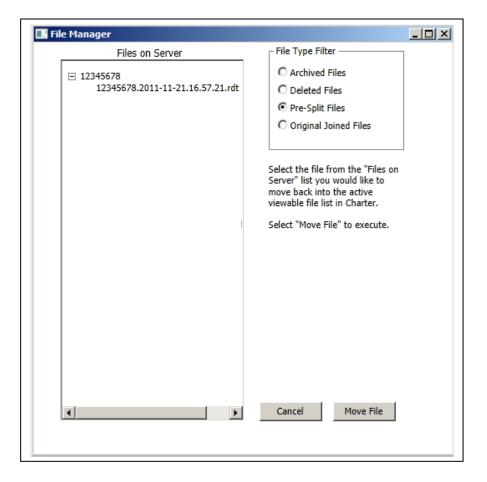


When you click on the File Manager button at the top of the screen, you will open the File Manager screen. This screen will allow you to see and recover Archived Files, Deleted Files, Pre-Split Files and Original Joined Files.

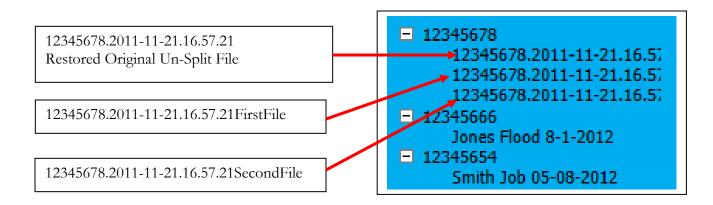
Click on the different buttons in the **File Type Filter** to open the different file lists.

File Type Filter	
C Archived Files	
C Deleted Files	
Pre-Split Files	
C Original Joined Files	
Select the file from the "Files on Server" list you would like to move back into the active viewable file list in Charter.	
Select "Move File" to execute.	

In this example the Pre-Split Files button has been clicked and the Pre-Split File list is displayed.



Click on the file you wish to move back to the Job File List to highlight that file and then click the **Move File** button. This will send you back to the Job File Preview Screen and the selected job file will now be displayed in the Job File list on the left side of the screen. The same procedure is used to restore files from the other file lists.



## **Saving Files to Excel:**

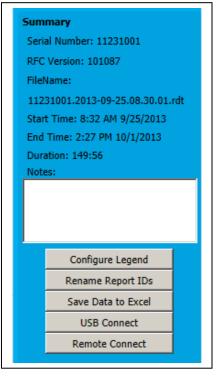
The job file summary, on the right side of the screen, gives you information on the job:

- RFC Serial Number
- RFC Firmware Version installed when the job file was created
- Job File Name
- Job File Start Time and date
- Job File End Time and date
- Job File Duration

You also have an area to add notes related to the job.

By clicking the **Save Data to Excel** button you will open the Excel Startup window which will give you choices on how to export the job data and how it will be displayed in Excel.

Excel Filename:	11231001.2013-09	-25.08.30.01		
	Change Name of Ex	cel Report i <mark>f</mark> de	sired	
Export only it	ems configured in the	e Legend. (Unse	lect to Export Raw data	as well)
Create Quick	Report			
	Quick	Report Setup		
	Start Time	Duration	End Time	
Original: 8:32 AI	M 9/25/2013	149:56	2:27 PM 10/1/2013	
Desired: 8:32 Al	M 9/25/2013	149:56	2:27 PM 10/1/2013	٢
	Plot data eve	ery 1	Minutes	•
			Use Fixed T	
Measurem	ent	Dry Standard	and the second	arget /alue
Select measure	▼ Select m	neasure	• 🗖 🛛	



The first check box allows you to export only the items configured in your RFC Charter legend. By checking this box you can reduce the size of the Excel file for faster down loading. The complete raw job data will still be in the RFC Charter job file for future use if needed. (Click on the Cancel button if you need to return to the RFC Charter preview screen and re-configure the Legend before exporting the job file to Excel.)

The second check box allows you to create a Quick Report customized to display only selected measurements at time intervals you select. A drop down menu allows you to select Minutes, Hours or Days as the unit of measurement and there is a box to enter the interval at which the data will be displayed. In this example 10 minutes has been selected as the plotting interval.

Plot data every	10	Minutes 💌
		Minutes Hours Days

You can now select the different measurements from your job data you want displayed in your Quick Report. No matter what you select for the Quick Report, all of the exported data will still be charted in the Summary Report in the Excel file. Clicking on the **Select measure** tab will display a list of your sensor measurements. Highlight and click on your selection.

🕅 Excel Startup	×
Excel Filename: 11231001.2013-09-25.08.30.01	
Change Name of Excel Report if desired	
Export only items configured in the Legend. (Unselect to Export Raw data as well	)
Create Quick Report Quick Report Setup	
Start Time Duration End Time	
Original: 8:32 AM 9/25/2013 149:56 2:27 PM 10/1/2013	
Desired: 8:32 AM 9/25/2013 🗘 149:56 2:27 PM 10/1/2013	a
Plot data every 10 Minutes	
Use Fixed Target Measurement Dry Standard Standard Value	
Select measure   Select measure	
red rh ▲ red air red surface red moisture red gpp yellow rh yellow air	-
Use         yellow surface         surement         Cancel         Start Expo           Fixed         Target         yellow gpp	t
blue moisture  Select measure  Select measure.	
Add New Quick Report Measurement     Cancel     Start Export     332E2 Mst       HEATER     HEATER	

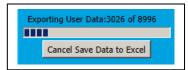
A second sensor reading can be selected as your **Dry Standard**, or a Fixed Dry Standard Value can be used in your Quick Report. Use the drop down menu or check the **Use Fixed Standard** box and enter the **Target Value**.

Measurement	Dry Standard		Use Fixed Standard	Target Value	
blue moisture	<ul> <li>Select measure</li> </ul>	Ŧ		14	-
Select measure	<ul> <li>Select measure</li> </ul>	•		0	
					V
Add New Quick Report Me	easurement	Ca	ncel	Start Expo	rt

Click on the **Add New Quick Report Measurement** to select additional sensor readings and dry standards you wish to display in your Quick Report.

Click the **Start Export** button to save the job file in Excel where you can create and print a job report. Only click the **Start Export** button once and be patient. Large job files take a long time to transfer to Excel.

The progress of the data transfer will be displayed at the bottom of the screen. When completed the Excel file will open on the Summary Report page.



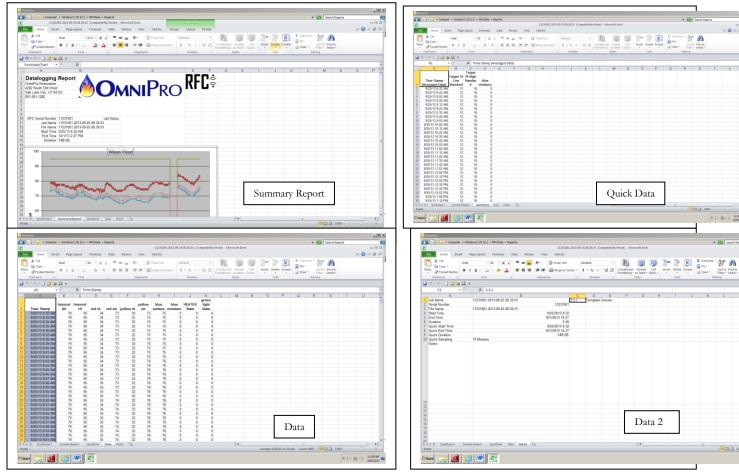
The Excel report will be saved in the Reports subfolder in your RFC Data folder in the Reports subfolder on your computer.

# The job data is secured and cannot be edited.

X							13-09-25.08.30.01 [C	ompatibility	Mode] - Microsoft Excel								
Paste V Clipbe	Home Inse Cut Copy * Format Painter toard 5 N * 1 20 10 10	Arial B I U -	ut Formula:			Hew Add-Ins	General r • \$ • % • G Number	- 18 43 5	Conditional Format C Formatting * as Table * Styles	el in	sert Delete Cells		AutoSum * Fill * Clear * Ed	Sort & Find Filter * Selecting			- # X
		• (* <i>f</i> e															•
	A ck Repo		В	С		D	E	F	G H	1	J	K	L	M	N	0	P
3 4282 S 4 Salt La 5 801-26 6 7 8 9	File Name Start Time End Time Duration		3-09-25.08.30. 3-09-25.08.30. VM	Job Notes:		I <b>P</b> RC											
17 18 19	18			· · · · ·													
20 21 22 23 24 26 26 27 28 26 27 28 29 20 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	14																
18 19 10	12																
34 <b>d</b>	10 QuickReport	SummaryReport		/ Deta / Det	12 / 🛀 /				] (						100% 🗩	0	•
				E	xce	el Fil	e of	R	FC Jo	b	Fi	ile					

Click on the tabs at the bottom of the screen to move from the Quick Report to see the Summary Report or any of the Data files. (Data cannot be edited)

You can now edit the company info on the report or close the Excel file for later use. The Excel file can be saved under a different name or in a different folder if desired.



## **Customizing Excel Data Template:**

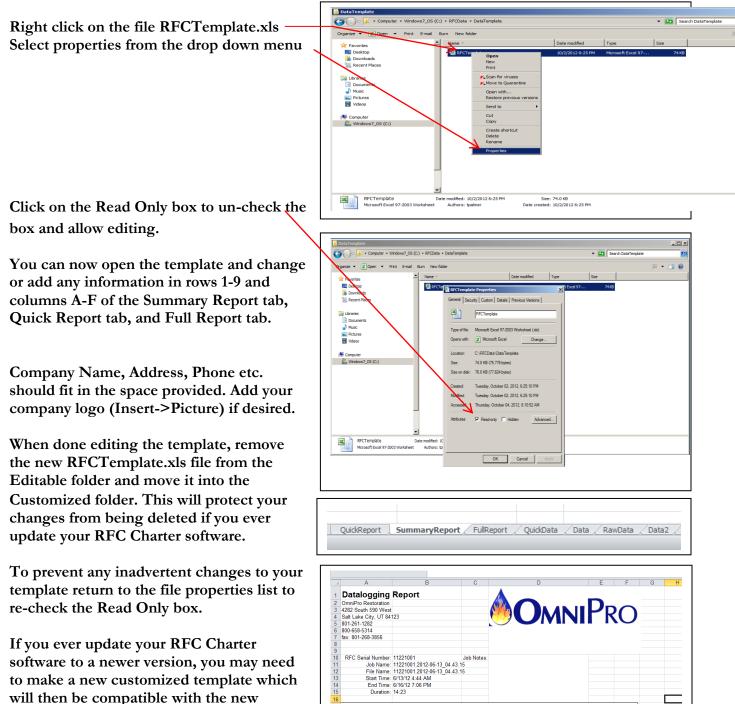
The Excel Data Template can be customized with your company logo and other information.

When you install the RFC Charter software on your computer, the Excel Data Template is created and stored in the RFC Data folder on your computer and used to create the Excel files when you save your job file data to Excel.

The file location for the Excel Data Template is C:\RFCData\Data Template\Editable.

The file is called RFCTemplate.xls

RFCTemplate.xls is set as read-only, so you must change the file properties to edit the template.



version.

# **SOFTWARE UPDATES:**

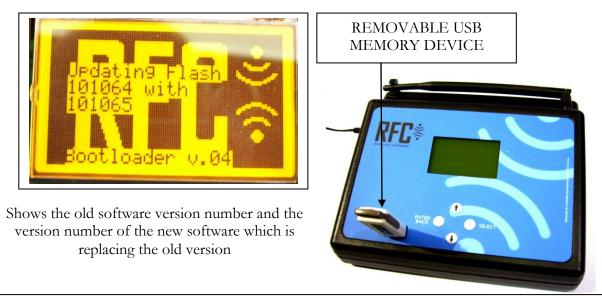
The RFC Base Station software can be updated using a removable data storage device such as an USB Flash Drive or Memory Stick. When software updates are available they will be posted on the remotefieldcommander.com website. Click on the **Resources** tab to see the available software under the Downloads heading.

Remote Field Commander									Main Screen RESOURCES TAB		
REMOTE FIELD COMMU Home Do you kn	Register	Remote Control	Resources jobs, right no	Alerts	Contact Us	s				esources Sc OWNLOA HEADIN	ADS
off equipment, to a home. any and leaves you <b>With the R</b> What if you go to be able to fo	the owner unplugs ytime something like u liable for damage Remote Field ( ot a text message of	commander you of email any time the power or off remotely, with your	drying equipment ou money can! er was cu	malfunctions whic	ime or another p b could cause fer	mneratures to snike	or drop or causes	damage	mander		
				Home	Register	Remote Control	Resources	Alerts	Contact Us		
				Manuals Operator's Manua	al	Spec Sheet Take Control o Site		Sales Br Program, N	ochures Ionitor, Control	Downloads Charting Softwa Version 3.2.8 Firmware Version B0101085	re

Click on the link to copy to your computer or install the RFC **Charting Software version** or to copy the RFC Base Station **Firmware version** to your computer.

### (Downloads are also available after logging in to Remote Control website. (See Page 47)

To update the RFC Base Station software, copy the new firmware version to a USB memory device or flash drive and simply plug the memory devise into USB port on front panel and then connect the power supply to the RFC Base Station. The firmware will automatically be updated. The display will read **Updating Flash** along with the old version and new version numbers. The screen will not change until the update is complete. Then remove the memory device and disconnect the power supply.



If your USB Flash Drive is protected by a password, you will need to temporarily disable the password to connect it to the RFC Base Station. This goes for installing updates and downloading the job data.

From our tests it was not necessary to disable the Flash Drive's auto-run programs, such as the SanDisk U3 Launchpad to work with the RFC Base Station.

# Section

# **RFC Base Station Operation Procedure**

### Knowledge of the proper operation of the heater and heat exchange system is required for safe operation and to keep heater and components operating properly.

- Read and understand the System Set-up procedures and Menu Navigation in SECTION #1 and SECTION #2 before proceeding with set-up and operation.
- 2) Place the drying equipment as required for your drying situation.
- 3) Place Remote Sensors in desired locations. Connect Remote Power Controllers to desired equipment. Be sure to note ID numbers of Remote Sensors and RPC units and where each is being used.
- Connect the 12volt Power Supply to the RFC Base Station and plug the Power Supply into a 120volt AC wall outlet.
- 5) Use Lap Top Computer and a direct connection to the RFC Base Station or use the control panel display to check the Remote Sensor & RPC signals. Check for signals from other RFC units if needed.
- 6) Set up sensor controls for RPC's and equipment as needed. If multiple RFC units are being used make sure there are no conflicting settings.
- 7) Check Date and Time setting and adjust as needed.
- 8) Lock out Sensors and RPC's as needed.
- 9) Set alarms as needed.

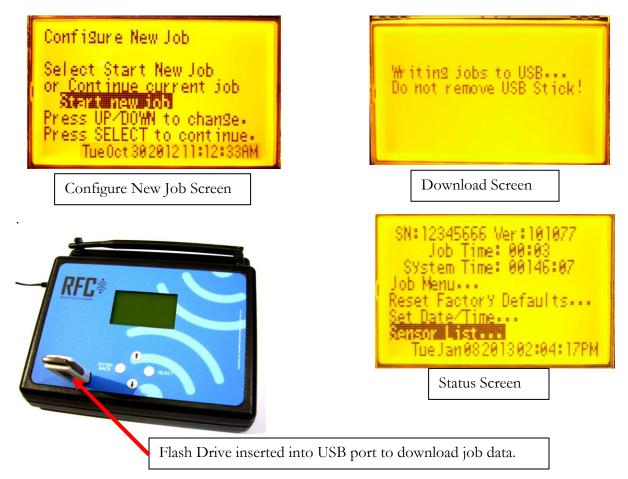
(Remote Connection with RFC Charter required to add, or change, alarm numbers and e-mail addresses.)

- 10) Check Modem Connection if remote monitoring & control to be used during job.
- 11) Force RPC's ON to make sure all connected equipment is operational.
- 12) Clear RPC Force ON setting to return RPC's to controlled conditions.
- 13) Start new job file.
- 14) Disconnect computer connection if used.
- 15) During job, monitor environmental conditions and equipment. Change settings as needed.

### **RFC BASE STATION SHUTDOWN**

- 1) After job is complete shutdown equipment with shutdown procedures required for each type of equipment.
- 2) Job file data can be downloaded from the RFC Base Station now or later as desired. If you wish to download job data, you can use a Direct Computer connection as described in Section 2 Page 27 of this manual or download job data using an USB Flash Drive.

Insert USB Flash Drive into the USB port on the RFC Base Station front panel and then connect the power supply to log data from job. When the RFC display advances to the "**Configure New Job**" screen, use the **UP** or **DOWN** button move the cursor to "**Start new job**". Press **SELECT** and before the RFC display advances to the Status screen, the display will freeze on "**Writing jobs to USB... Do not remove USB Stick!** "screen while data is downloading. When the display advances to the Status Screen, the downloading is complete and the USB Flash Drive can be removed.



(Job data files can also be downloaded remotely, but it is a slower process than using a direct connection or USB Flash Drive.

# RFC Charter software is required to view and chart job data log information downloaded from the RFC Base Station.

3) Remove drying equipment, Remote Power Controllers, Remote Sensors & RFC Base Station from job site.

# **RFC BASE STATION**

# hlachaotine

Problem	Cause	Solution					
Circuit							
Breaker	Defective 12V Power Supply	Replace Power Supply (NM5903)					
Blowing	Faulty Power Jack or internal wiring	Check wiring - Repair as needed *					
	Circuit Board Defective	Replace Circuit Board					
		Move plug to another outlet & circuit or have electrician					
	Circuit breaker faulty	replace circuit breaker					
Dianlay	C						
Display Blank	No Power from outlet	Move Power Supply to different outlet					
	Defective 12V Power Supply	Replace Power Supply (NM5903)					
	Faulty Power Jack or internal wiring	Check wiring - Repair as needed *					
	Faulty indicator Display	Replace Circuit Board					
	Software Corrupted	Reprogram processor					
No Modem	Local Interference	Move Base Station to different location					
Connection	Modem disconnected	Make sure modem is secured to circuit board					
	Antenna Disconnected	Make sure Antenna is secured to modem					
	RFC Server Down	Contact Omni Pro Customer Service					
	Modem Obsolete	Replace 2G modem with CDMA (3G) Modem					
	Defective Modem	Replace Modem					
	Circuit Board Defective	Replace Circuit Board					
Can't	No RFC modem connection	(See Above)					
Remote	Wrong Username or Password	Contact Omni Pro Customer Service					
Connect	Forgot Password	Follow Forgot Password & Reset Instructions					
	Problem with Account	Contact Omni Pro Customer Service					
	RFC Charter Software Corrupted	Re-install RFC Charter Software on computer					
	RFC Website Down	Contact Omni Pro Customer Service					
Can't	Bad cable	Replace USB Cable					
Direct	Bad USB Port on RFC Base Station	Replace Circuit Board					
Connect	Circuit Board Defective	Replace Circuit Board					
	RFC Charter Software Corrupted	Re-install RFC Charter Software on computer					

\* To reduce the risk of injury, repairs to electrical systems should only be performed by experienced technicians. Contact your nearest service center for assistance.

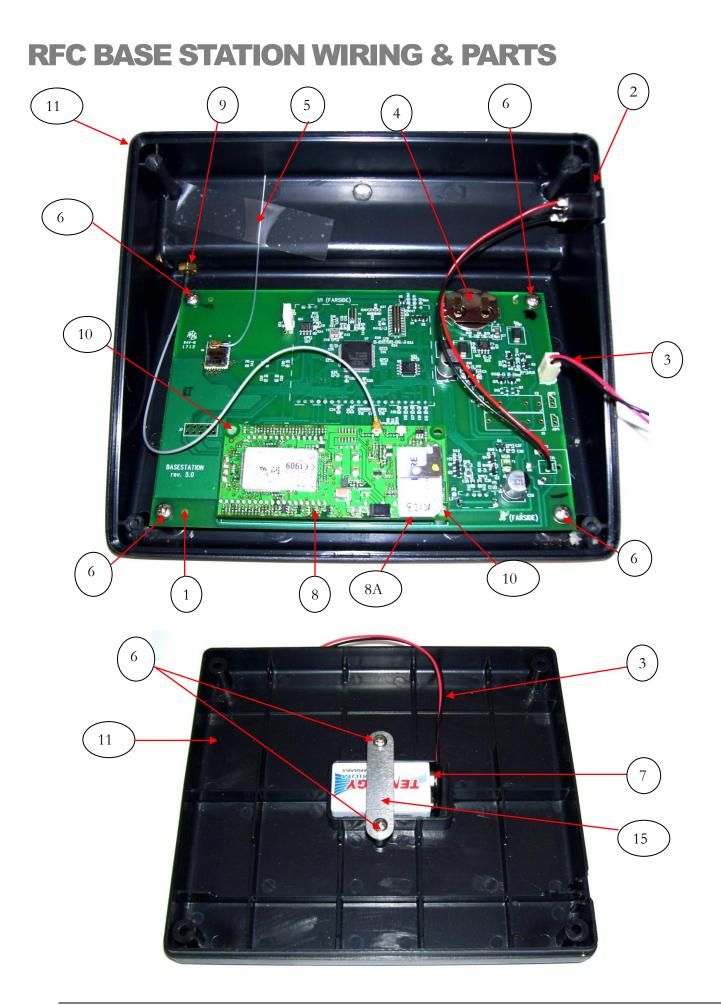
Contact Omni Pro Customer Service

Try another computer - Repair or replace

Computer not setup properly Bad USB Port on computer

# **RFC BASE STATION Troubleshooting Continued**

Problem	Cause	Solution						
Wireless	Faulty sensor	Replace sensor						
Sensor	Bad Signal	Move Sensor or RFC Base Station for better reception						
Not	Sensor Too far away	Use RFC to hop signal or activate sensor hopping						
		Replace Batteries (NOTE: Alkaline type batteries are						
<b>D</b> "		recommended for proper monitoring of the low battery						
Reading	Weak Batteries in Sensor	feature.)						
	Internal Antenna Disconnected	Reconnect internal antenna to Base Station Circuit Board						
	Software Corrupted	Reprogram processor – Update Software						
RPC	No power at outlet	Reset Breaker or use another outlet						
Not	Faulty RPC	Replace sensor						
reading	Bad Signal	Move RPC or RFC Base Station for better reception						
	RPC Too far away	Use another RFC to hop signal						
	Internal Antenna Disconnected	Reconnect internal antenna to Base Station Circuit Board						
	Software Corrupted	Reprogram processor						
Clock, Date								
or	Temporary Glitch	Reset Date & Time						
Time Wrong	Software Corrupted	Reprogram processor						
Time wrong	Battery Dead	Replace 3V Coin Battery on Circuit Board						
	Circuit Board Faulty	Replace Circuit Board						
Cannot		Check instructions for available key options for each						
move	Wrong key being pushed	screen						
through								
menu	Processor locked up	Disconnect Power Supply & Reconnect to reset						
	Faulty push buttons	Replace circuit board						
	Faulty circuit board	Replace circuit board						
	Software corrupted	Reprogram processor						
	1							
Equipment								
not	System not set properly	Reset condition, limit & equations as needed						
Turning ON & OFF	Conflicting signals from other REC units	Check signals & settings of other RFC units						
Properly	Sensor set to control wrong RPC	Check RPC ID of sensors reset as needed						
riopeny	Defective Remote Sensors	Replace Remote Sensors						
	Defective RPC	Replace RPC						
	Faulty circuit board	Replace circuit board						
	Software corrupted	Reprogram processor						
	Equipment Connected to RPC Faulty	Repair or Replace equipment						
	Outlet Power turning OFF	Check to be sure circuits are not overloaded						
	Sensors or RPC's going offline	Change Locations – check possible interference						
No Alarm Sent for	No Alarm Set	Enable Alarm (See Misc Alarms in section "RPC STATE & ALARMS")						
RFC loss of		See "No Modem Connection" in section "RFC BASE						
AC power	No Modem Connection	STATION Troubleshooting" above.						
		Replace 9V Re-chargeable NiMH battery (!WARNING -						
	Dead Battery	Use only part number NM5971 or equivalent NiMH type battery)						
		, summer y/						



# **RFC BASE STATION WIRING & PARTS**

VEV	DECOUDTION	
KEY	DESCRIPTION	PART #
1	<b>RFC Base Station Circuit Board</b>	NM5912
	Circuit Board Includes #2, 3, 4, 5 & 10	
2	12Volt Power Jack	NM5903A
3	9 Volt Battery Connector	NM5968
4	<b>3Volt Lithium Coin Battery</b>	NM5965
5	Internal Antenna	NM5944C
6	Screw #6 x 1/2" Sheet Metal PHP SS (Qty 4)	NM5142
7	9Volt Re-chargeable NiMH Battery	NM5971
8	Modem 3G	NM5948
8A	SIM Card	NM5945
9	External Antenna Connector	NM5944D
10	Standoff Modem Mount (Qty 2)	NM5944B
11	RFC Base Station Case (Top & Bottom)	NM5902
12	External Antenna	NM5944A
13	Overlay RFC Base Station	NM5905
14	Screw #6 x 3/4" Sheet Metal PHP SS (Qty 4)	NM5958
15	Battery Bracket	NM5969

