Signature® CONTROL SYSTEMS, INC.

Galaxy RT

Solar Series

Irrigation Controller

Quick Start Guide

www.scs-share.com

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FEATURES

- Signature Share™ Internet based ET capable controller.
- Operates on Solar power.
- 6-zone 12V DC Latching output.
- Indoor/Outdoor Enclosure.
- Connects directly to Signature Share™ cellular network, via Signature® proprietary designed data modem, right out of the box.
- Integrates to other Signature® products to expand the control network, making it ideal for remote control of other DC or battery operated valves or controllers.
- No complex keypad or display; simple operation via Smart Phones, web based devices, or iOS applications.

• *Please visit www.signaturecontrolsystems.com for the latest Installation & Users Guide.*

INSTALLATION INSTRUCTIONS

The Galaxy-RT™ Solar Series controller can be mounted both indoors or outdoors. Find a location near a 120V receptacle (230/240V for international models). Install the controller near eye level if possible. Use the 3-mounting holes in the enclosure as a mounting template. Insert the top 2 screws through the enclosure, into the wall, level the enclosure and once level, tighten both screws for a snug fit. Suspend the controller on the top 2 mounting screws and insert and tighten the third screw through the lower mounting hole provided in the enclosure; anchor the enclosure as necessary.

LOW VOLTAGE WIRING

Low voltage output cables should be enclosed in conduit affixed near the controller. Conduit should be secured near the case and comply with all local electrical and safety standards. All field wiring and connections must be completed, with the Battery and Solar panel disconnected from the unit.

TERMINAL STRIP

All zone, pump and sensor wire connections made inside the controller utilize screw type connectors that require a small screwdriver. The terminal strips in the controller accept 14 AWG (1.63mm) wire or smaller.

CONNECTING RAIN/MOISTURE SENSOR

The controller is equipped with two normally open, normally closed, or pulse type flow sensor ports. Each sensor port requires 2-wires from each sensor. To connect a sensor, connect the sensor wires to either the terminals marked "S1". To connect a second sensor, connect the 2nd sensor to the terminals marked "S2". Each sensor port is user defined via the SCS-Share.com web site or the SCS-Share iPhone App. Refer to the sensor manufacturer's instructions for specific installation details. Define sensor type via SCS-Share.

NOTE: Manual operations will ignore the rain sensor

CONNECTING THE BATTERY

Remove the protective cover from the battery positive (Red) terminal and attach the Red wire. (See page 15)

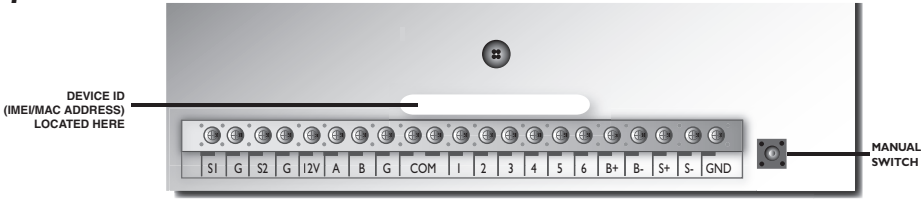
CONNECTING THE SOLAR PANEL

Connect the Red wire from the solar panel to the terminal marked "S+" and the White wire to "S-" terminal.

EMERGENCY STATION CYCLE

The controller incorporates Signature's Manual Advance feature in the MANUAL procedure. To start a manual cycle press and hold the manual-start switch (See Figure-1 below) for five seconds then release when the four LED's on the front panel flash. Station one will start for the default run time of three min. To advance to the next or another station, each 'press' of the manual switch will advance irrigation to the next zone. The indicator LED's sequentially light as each station advances. (LED1, LED2, LED3, LED4, LED1 and so on) To stop a manual cycle at any time, simply press and hold the manual switch for five seconds, then release when all four LED's on the front panel flash simultaneously.

Figure 1



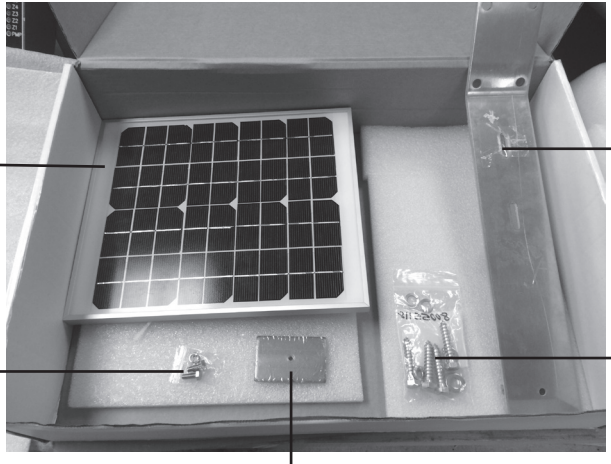
WATER MANAGEMENT FEATURES

The Galaxy-RT™ Solar Series can run conventional time based watering schedules or ET-based scheduling via the purchase of the Intelligent Irrigation Option from your Dealer or directly from www.signaturecontrolsystems.com.

• *Please visit www.signaturecontrolsystems.com for the latest Installation & Users Guide.*

INSTALLATION INSTRUCTIONS

Box 1- *Solar Panel, Cable and Wall Mounting Frame*



Solar Panel Wall Mounting With Attached Cable

Wall Mounting Frame For Panel

Bolts And Washers For The Panel And Frame

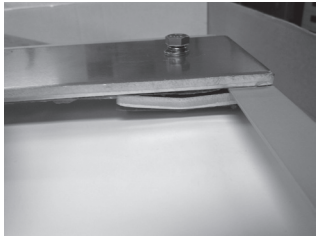
4 Lag Bolts And Washers For The Frame to Bolt To The Wall

2 Plates for the Panel and Frame

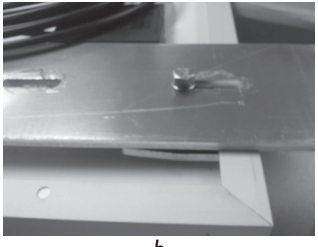
Box 1

Step 1

1. Remove packaging
2. Attach the solar panel to the frame.
3. Attach the 2 plates loosely to the frame as shown, with the bolts and washers.
4. Turn the panel upside down.
5. Set the frame on top of the panel and slide the plates under the panel lip.
6. Tighten the 2 bolts.



a



b

c

Box 1

Step 2

NOTE;

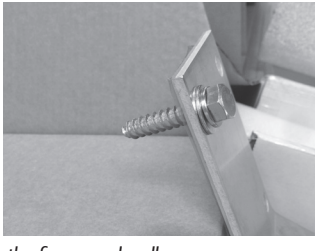
Optimum orientation and tilt

- Find out the optimum orientation and tilt of the solar panel for your region to achieve the maximum annual yield. Generation of maximum power occurs when sunlight shines perpendicularly onto the solar panel.

Avoid shading

- Even the slightest partial shading (e.g., from dirt deposits) will cause a reduction in yield. A module is considered "shadow-free" if it is unobstructed across its entire surface for the whole year. Even on the shortest day of the year, unobstructed sunlight can reach the solar panel.

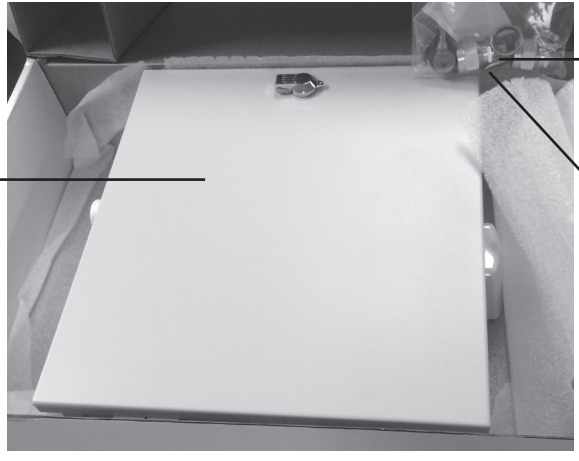
1. Attach the frame to the structure, using the Lag bolts and washers. (pre drill as needed)
2. Run the cable to the enclosure.



4 Lag Bolts and Washers for the frame and wall

Box 2

1. Remove packaging and take note of the enclosure, cable-gland components, mounting hardware and key.

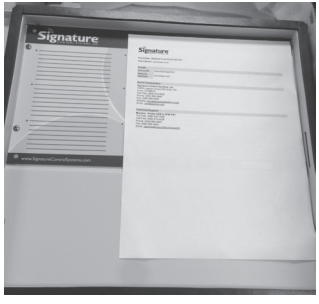


Mounting Hardware & Key
(3 Screws)

Cable Gland Hardware
(2 each provided)

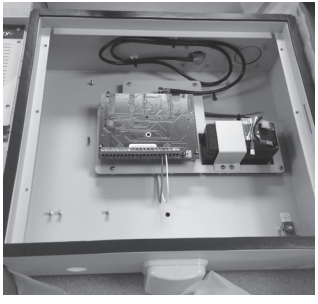
Box 2

Step 1



a

b



c

1. Open the lid and remove the 6 screws and 2 panels to expose the interior.
2. Shown in the photo is the PCB and battery (at center), a vent (center bottom), a grounding connection (lower right) and an antenna cable with connections to the antenna and PCB (top).
3. The 2 wires connected to the terminal strip are from the battery. Note: One wire is not hooked up to the battery during shipping and must only be terminated to the battery terminal, only once all wiring and connections are complete and tested.
4. The battery needs to remain disconnected until all other connections are made.
5. Locate the enclosure on a wall using the 3-mounting holes through the rear of the enclosure and attach securely to the wall using the mounting hardware provided.
6. Use care not to damage the enclosure components.

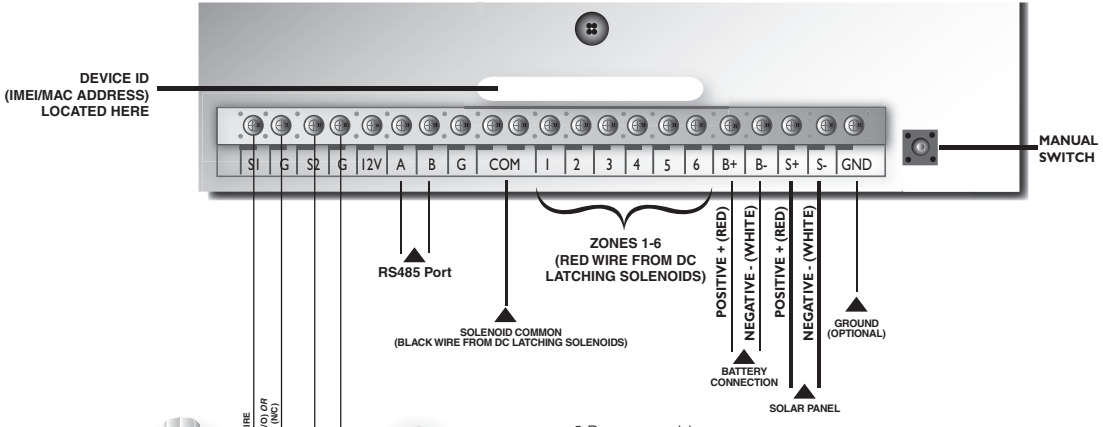
Box 2

Step 2

1. Assemble the water tight cable gland parts through the left access-hole of the enclosure bottom panel and run the required cables through it.
2. If the second cable gland is needed [not provided], knock out the tab on one of the bottom right access-holes and insert the assembled cable gland through it.
3. Snugly tighten each cable gland nut after attaching the cables as needed to the terminal strip and grounding connections.

Box 2

Step 3 a WIRING CONNECTIONS



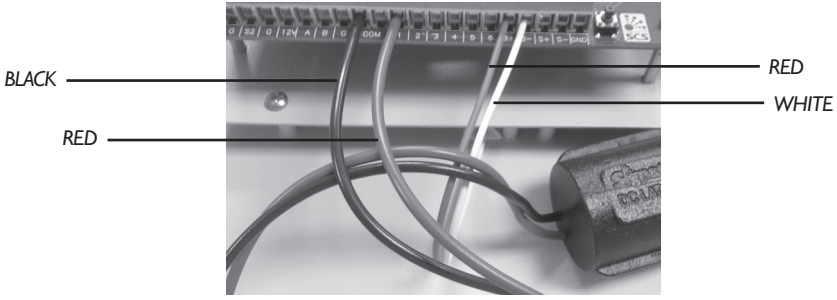
2 Programmable
Sensor Ports (S1 & S2)

Sensor Options:

- **Switch Sensor:**
  Normally Open Or Closed
  i.e. Rain Switch; Signature #8501
- **Pulse Sensor:**
  Open Collector
  (12VDC Source)
  i.e. Flow Sensor; Signature #AC220SS

Box 2

Step 3 b *CONNECTING WIRES AND CABLES TO THE TERMINAL STRIP*

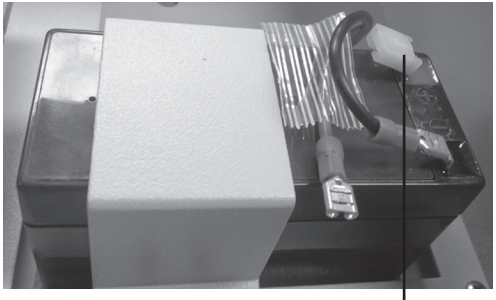


1. Connect the irrigation valves to terminals on the terminal strip marked "COM" and "1, 2, 3, 4, 5, 6".
2. The controller is supplied with both the RED & BLACK wires from the battery connected to the terminal strip ; the terminals marked B+ (RED = + pos) and B- (white = - neg) are for the battery. Note: One wire is not hooked up to the battery during shipping and must only be terminated to the battery terminal, only once all wiring and connections are complete and tested.

Box 2

Step 4

Battery Hookup - Connect the battery after the terminal strip connections are made.

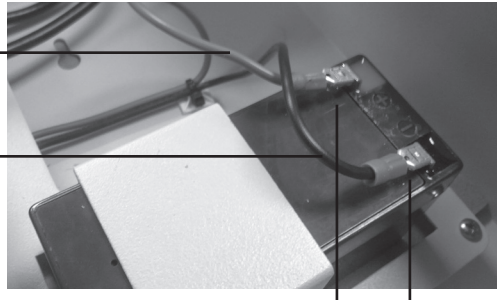


Before

Remove the Plastic Cover

RED

BLACK



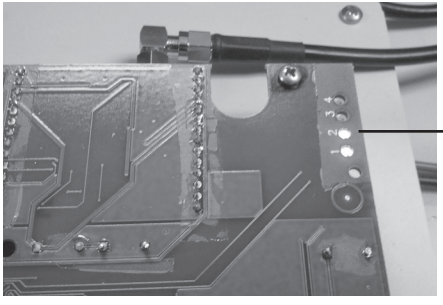
After

Attach the Cable

Box 2

Step 5

1. Check that LED lights 1 and 2 light up. LED 1 solid, LED 2 flashing, this is after the power-up sequence where they light up one at a time until all 4 are lit, then they will flash while it connects, then 1 solid 2 flashing when it's connected. (See page 30)
2. Replace the 2 front panels and 6 screws.
3. Close the lid and lock with key.



PLEASE READ THIS FIRST

SCS-Share.com Account Creation And Setup

- To start, please go to www.scs-share.com using a web browser on a desktop, laptop, or tablet.
- Please follow the instructions on "SCS-Share.com Initial Setup"
  IMPORTANT: To create your new account using admin functions such as adding Controller(s), Zip/City, and User Accounts. Please review the information from page 18 - page 22

iPhone And iPad Users

- Please follow "SCS-Share.com Account Creation And Setup".
- After you create your account on the web, you can visit the App store from your iPhone or iPad to download "SCS-Share" - a free App which is designed for controller functions such as Manual Operation, Programming, and Manual Programming.
- To download "SCS-Share", please follow instructions on "IOS Installation Guide"
  Please review the information from page 23 - page 25

Android Smartphone And Tablet Users

- Please follow "SCS-Share.com Account Creation And Setup".
- After you create your account on the web, you can visit the Google Play store from your Android smartphone or tablet to download "SCS-Share" - a free App which is designed for controller functions such as Manual Operation, Programming, and Manual Programming.
- To download "SCS-Share", please follow instructions on "Android Installation Guide"
  Please review the information from page 26 - page 28

SCS-SHARE.COM INITIAL SETUP (via scs-share.com)

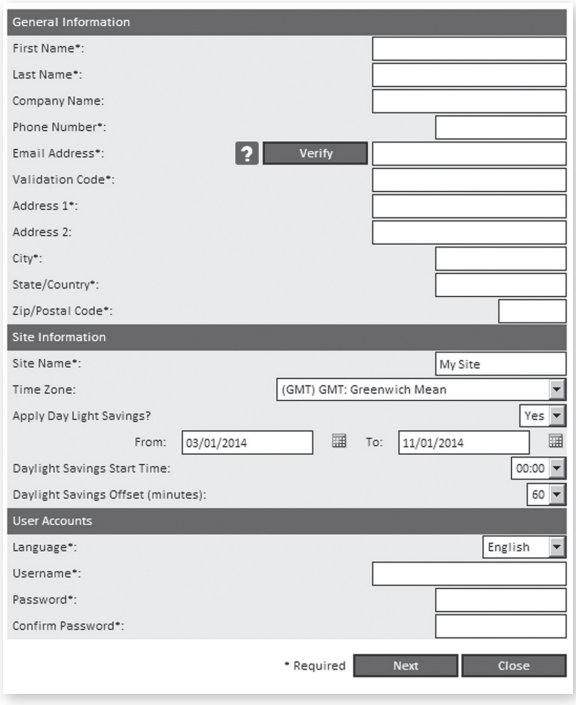
• Creating A New Account

1. Open http://scs-share.com/
2. Click on "Create New Account" Button
3. Fill out the sign up form

Note: Make sure all leading and trailing blank spaces are removed from the Validation Code

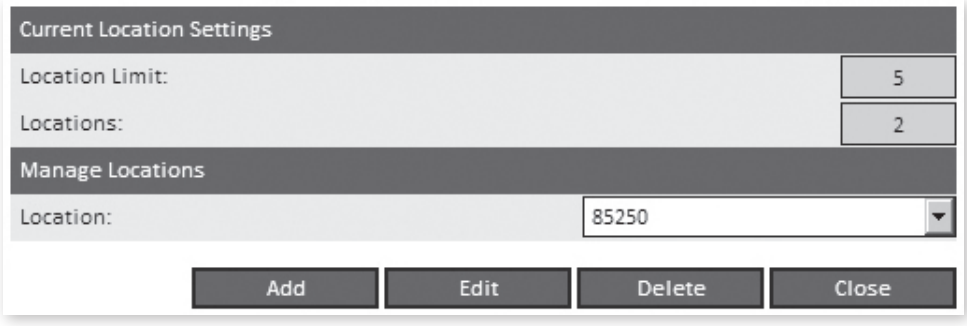
4. The account is active and ready to use
5. All new accounts have the following default settings.
   a. One zip code or city limit
   b. One site limit
   c. Intelligent Water and Weather Service is disabled and sold separately.
   d. Contact Signature or the Dealer to buy Intelligent Water & Weather Service

Note: To request additional zip codes and/or sites and to enable Smart Water and/or Weather Service the user can contact SCS.



- **First Login and Initial Setup (via scs-share.com)**
  - **Adding A Zip Code (USA) or City (INTL)**
    1. Go to "Account Function"→"Manage Locations", then click on "Add City" or "Add Zip" button and save your settings

Note: Please add a city for international and a zip code for USA



- **Adding A Controller**

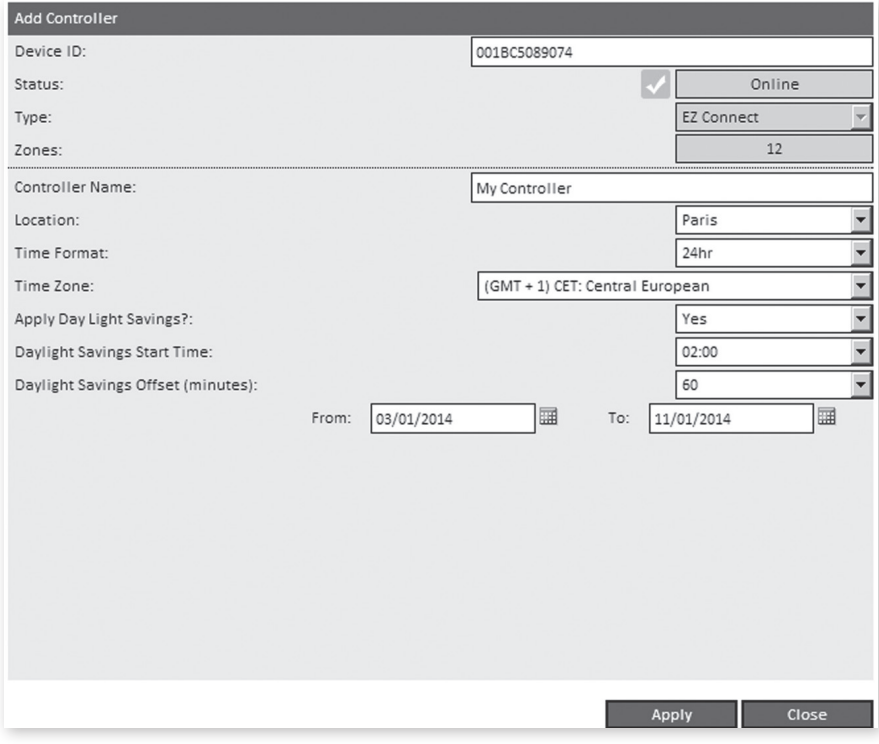
1. Plug in your controller(s) and make sure they have connection/signal

2. Login at scs-share.com using the admin username/password that was set in "Creating a new account" step

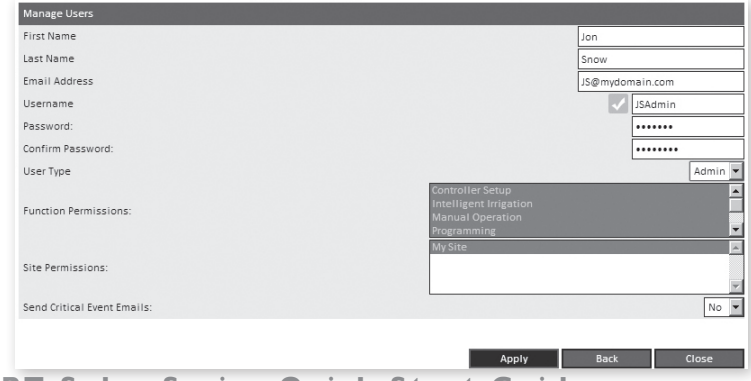
3. Have your Device ID (IMEI/MAC Address) ready and go to "Site Function"→ "Add Controller" button
   (See *Figure 1* on page 7 for the location of your Device ID)

4. Enter the Device ID, a name, and select a location and other details. The website will automatically detect your controller type as long as it is connected.

5. Repeat these steps for all your controllers


Add Controller
Device ID:
001BC5089074
Status:
Online
Type:
EZ Connect
Zones:
12
Controller Name:
My Controller
Location:
Paris
Time Format:
24hr
Time Zone:
(GMT + 1) CET: Central European
Apply Day Light Savings?:
Yes
Daylight Savings Start Time:
02:00
Daylight Savings Offset (minutes):
60
From:
03/01/2014
To:
11/01/2014
Apply
Close

- **Adding User Accounts**
  1. Each account can have multiple users (there is no limit on the number of user accounts)
  2. Each user account can either be "Admin" or "User"
  3. "Admin" accounts have access to all functions and features by default and can add, edit, and delete other user accounts
  4. "User" accounts have limited access to functions and features (selected by the Admin) and can't add, edit, and delete other user accounts
  5. To add a user account login using an "Admin" account and go to "Account Function"→ "User Management" and then the "Add New User" button
  6. Here you can select the user type and assign a username and password. If the user type is "User" you need to select which functions they can have access to

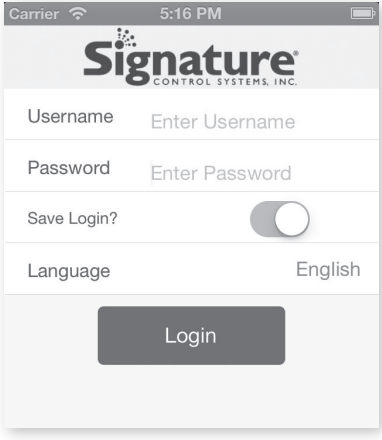


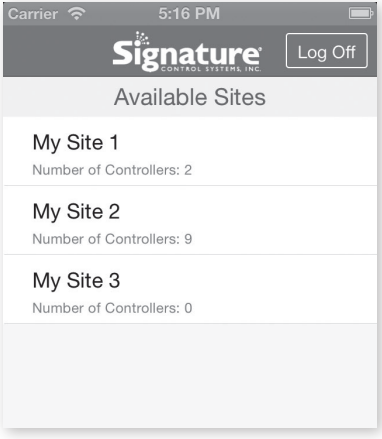
iOS INSTALLATION GUIDE

- Open the App Store App from your device.
- Press the search tab
- Type in SCS Share in the search bar and press enter
- Press the install button on the SCS Share app and the app will automatically download to your device.

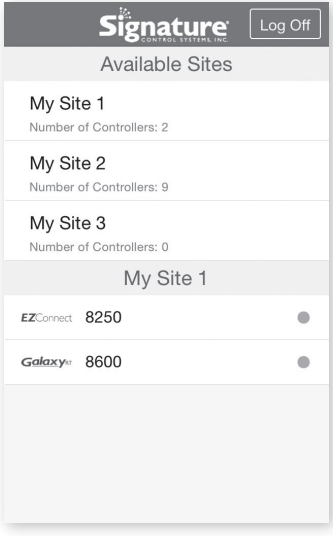
Download on the App Store

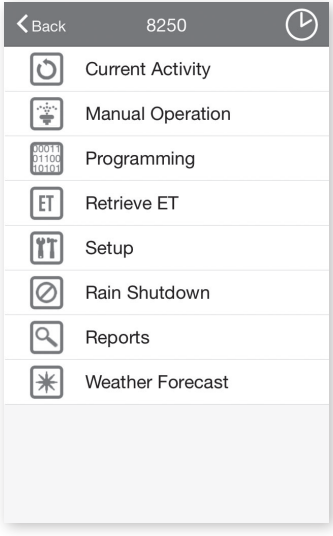
- Make sure that you have done the initial account setup on SCS-Share.com
- Once you have your account set up you can log into that same account on your iOS device from the login screen
- After you log in you will see a user license agreement popup for this app





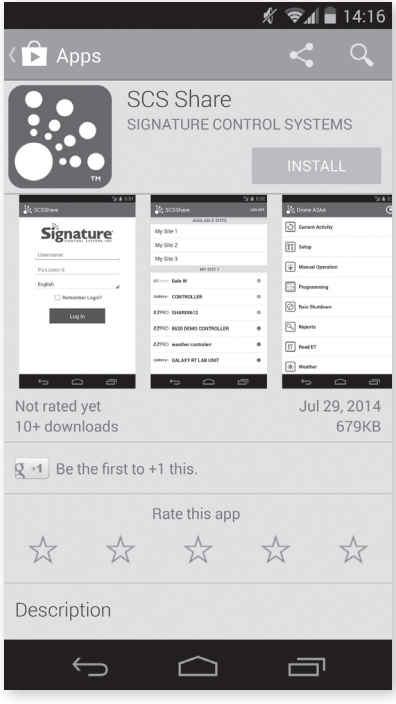
- After reading this agreement and then select agree, you will see all of your sites that you set up
- Press each site to see the controllers on that site
- Press the controller with green online signal and you will be taken to the controller screen. From there you will be able to use Programming, Manual Operation and many other functions available for your controller.





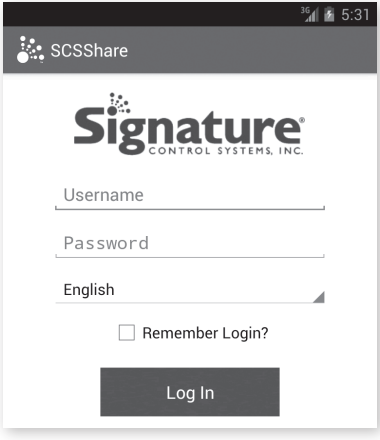
ANDROID INSTALLATION GUIDE

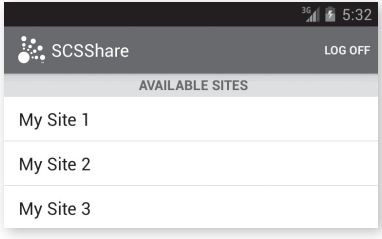
- Open the Google Play Store App from your device.
- Press the search tab
- Type in SCS Share in the search bar and press enter
- Press the install button on the SCS Share app and the app will automatically download to your device.



ANDROID APP ON Google play

- Make sure that you have done the initial account setup on SCS-Share.com
- Once you have your account set up you can log into that same account on your Android device from the login screen
- After you log in you will see a user license agreement popup for this app





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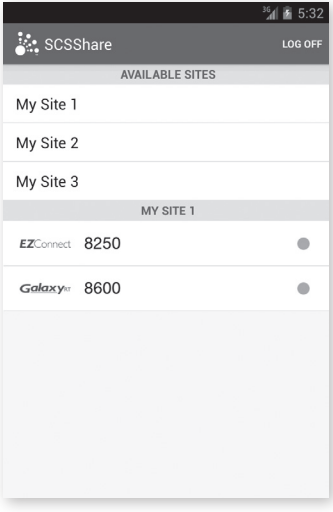

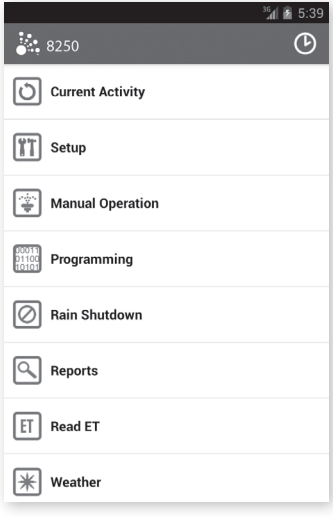

TECHNICAL DATA

1. **POWER SOURCE**
   12V 10W solar panel.

2. **Surge Protection**
   TVS style protection on zone outputs.
   MOV style protection on other secondary wiring.

3. **Sensor Operation**
   Galaxy-RT™ Solar Series is equipped with two normally open, normally closed, or pulse type flow sensor ports. Each sensor port is user defined via the SCS-Share.com web site or the SCS-Share iPhone App.

4. **Zone Lines**
   Galaxy-RT™ Solar Series irrigation controller will operate one 12V DC Latching solenoid or single coil latching relay per output.

5. **Temperature Range**
   Operating: -20° to +55° C (23° to 131° Fahrenheit)
   Storage: -30° to +85° C (-22° to 185° Fahrenheit)

LED State	LED 1	LED 2	LED 3	LED 4
NORMAL MODE				
1 Sec RTC tick	FLASH			
SNTP server contacted and Time update received		ON		
TCP Socket to SCS server established.		FLASH		
Data being received on TCP port			ON	
STATION TEST MODE				
Station 1, 5	ON			
Station 2, 6		ON		
Station 3			ON	
Station 4				ON

STATEMENT OF CONDITIONS

In the interest of improving internal design, operational function, and/or reliability, Signature Control Systems, Inc. reserves the right to make changes to the product described in this document without notice.
Signature Control Systems, Inc. does not assume any liability that may occur due to the use or application of the product(s) or circuit layout(s) described herein.

Federal Communications Commission (FCC) Compliance Notice: Radio Frequency Notice

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (SIGNATURE CONTROL SYSTEMS Model Galaxy-RT™ does not exceed the Class B limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

SIGNATURE CONTROL SYSTEMS, INC LIMITED WARRANTY

LIMITED WARRANTY

SIGNATURE CONTROL SYSTEMS INC("Signature") warrants this Signature brand product ("Product"), ONLY TO THE FIRST CONSUMER PURCHASER (defined as the first consumer that purchases Product for its own installation) to be FREE FROM DEFECTIVE MATERIAL AND WORKMANSHIP for two (2) years from the date of original retail purchase. ("The Warranty Period"). This Limited Warranty shall cover parts only.

THIS LIMITED WARRANTY IS VALID ONLY IN THE FIFTY (50) UNITED STATES, ALL UNITED STATES TERRITORIES AND CANADA.

This Limited Warranty may be transferable upon sale of the Product or overall system so long as the Product remains installed in its original location during the Warranty Period. Any such transfer will not cause the beginning of new warranty terms, nor shall the original terms of this Limited Warranty be extended.

PRODUCT MODEL NUMBERS COVERED BY THIS LIMITED WARRANTY: Galaxy RT.

This Limited Warranty covers the specific models and does not constitute a warranty for the entire system. (Be sure to have this information available when you need service for your product)

WHAT IS NOT COVERED:

This Limited Warranty **does not cover:**

1. Product which has been damaged, defaced, or subjected to modification, misuse, tampering, negligence, abnormal service or handling, Acts of God;
2. Product which the serial number or model number has been altered, tampered with, defaced, or removed;
3. Product that has been installed, repaired or serviced by a non-Signature certified contractor or servicer or has been installed, repaired or serviced in a manner other than that outlined in Signature's GalaxyRT Installation Manual;
4. Mechanical failure due to corrosion;
5. Product that has been installed in, or at any time during the course of the Warranty Period falls within, an area where the mechanical load pressure exceeds 50 PSF, or in a location with abnormal environmental conditions including but not limited to acid rain and chemical buildup;
6. Abnormal external corrosion, discoloration, or other cosmetic changes that do not affect the Product's structural integrity;
7. Damage that occurs during shipment;
8. Consumable parts; and
9. Product which has been moved from its original installation.

There are no express warranties except as listed above.

THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN. THE WARRANTIES DESCRIBED HEREIN SHALL BE THE SOLE AND EXCLUSIVE WARRANTIES GRANTED BY SIGNATURE AND SHALL BE THE SOLE AND EXCLUSIVE REMEDY AVAILABLE TO THE FIRST CONSUMER PURCHASER. CORRECTION OF DEFECTS, IN THE MANNER AND FOR THE PERIOD OF TIME DESCRIBED HEREIN SHALL CONSTITUTE COMPLETE SATISFACTION OF ALL LIABILITIES AND RESPONSIBILITIES OF SIGNATURE TO THE FIRST CONSUMER PURCHASER WITH RESPECT TO THE PRODUCT AND SHALL CONSTITUTE FULL SATISFACTION OF ALL CLAIMS, WHETHER BASED ON CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE. IN NO EVENT SHALL SIGNATURE BE LIABLE, OR IN ANY WAY RESPONSIBLE, FOR ANY DAMAGES OR DEFECTS IN THE PRODUCT WHICH WERE CAUSED BY REPAIRS OR ATTEMPTED REPAIRS PERFORMED BY ANYONE OTHER THAN AN AUTHORIZED SERVICER, NOR SHALL SIGNATURE BE LIABLE OR IN ANY WAY RESPONSIBLE FOR ANY DIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

Some states do not allow the exclusion of incidental or consequential damages or limitations on how long an implied warranty lasts, so these limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

WHAT WE WILL DO:

If this Product is found to be defective, Signature will, at its option, repair the Product or replace it with a new or remanufactured equivalent at no charge to the Purchaser during the Warranty Period. Such repair and replacement services shall be rendered by Signature or its authorized agents during normal business hours at Signature authorized service centers. Parts used for replacement are warranted only for the remainder of the Warranty Period.

Replacement Product shall be as closely compatible with or equivalent to the Product as possible from Signature's then-existing product line or inventory. The repair, replacement of the Product, or the supply of additional Product does not cause the beginning of new warranty terms, nor shall the original terms of this Limited Warranty be extended. Any replaced Product shall become Signature's property.

WHAT YOU MUST DO FOR WARRANTY SERVICE:

Call Signature at 1-949-580-3640 with proof of purchase to begin the return merchandize authorization process.

You may be required to ship your Product to Signature. If you ship the Product, be sure it is prepaid, insured and packaged securely.

This Limited Warranty does not include the costs of de-installation or reinstallation for product being repaired or replaced under this Limited Warranty.

NOTES:

Signature®
CONTROL SYSTEMS, INC.

www.SignatureControlSystems.com

FOR MORE INFORMATION

SIGNATURE CONTROL SYSTEMS, INC.

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