APOLLO BATH

ELEVATING SENIOR HEALTH...WITH STYLE

Solares™ Smart Spa

Bathing System Operating Manual

(Manual Part Number 990132A)

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Thank you for purchasing the Solares™ Smart Spa Bathing System from the Apollo Corporation. Please read this manual carefully before operating your new bathing system.

Apollo Bathing Systems are designed and built to give you years of reliable service. To assure the safety of caregivers and residents and to realize the maximum benefits from your system, it must be properly operated and maintained. This System Operating Manual gives you the information needed for safe, effective day-to-day resident hygiene and hydrotherapy.

The primary purpose of this operating manual is to introduce the key information and features of the Solares™ Smart Spa, present the benefits of this system, explain and define the critical warnings and precautions that are required to be taken with the bathing system, and define the pre-bath, bathing, and post-bath procedures.

The information in this operating manual is important. All personnel operating the Solares™ Smart Spa must read and understand this manual completely. Any questions should be directed to Apollo Corporation or an authorized representative.

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Introducing the Solares™ Smart Spa

Apollo's Tradition of Innovation Continues with the Medical Industry's First Intelligent Whirlpool Spa. Computer-automation and on-screen instructions mean minimal dependency on the memory of busy staff. A network of sensors monitors safe usage and provides step-by-step guidance when desired.

Therapeutic Spa Experience

The Solares™ Smart Spa features the Hydrologic™ Therapy System, a highly advanced whirlpool water flow system that provides gentle, balanced, and total body hydromassage. Hydrotherapy has been shown to boost blood flow, stimulate endorphin production, strengthen the immune system, reduce inflammation, ease pain, promote healing, reduce anxiety, and energize the body and spirit.

Remedy+™ UV Germicidal Water Purification

Apollo's original UV water purifier is clinically proven to reduce UTIs by 50% and Respiratory Infections by 35%. Our new Remedy+ UV System is the next generation of FDA-recognized, broad-spectrum germicidal water purification. A study by the Medical College of Pennsylvania shows the dramatic levels of bacteria a bather brings to their bath and proves the efficacy of ultraviolet light (UV) at disinfecting the water. The Remedy+ UV System provides a major leap forward with even faster pathogen eradication

Taking Care of Caregivers

Caregivers will enjoy the Solares™ Smart Spa because it is safe and easy to use. Computer-automated operation and on-screen instructions reduce dependency on training and the memory of busy staff. The chair moves easily to allow access to all areas of the resident's body. The design virtually eliminates the risk of injury to both caregivers and residents.

Rapid Fill™ Reservoir - when equipped

Provides for maximum efficiency and resident comfort, silently filling the bath from the bottom up in less than 60 seconds

Secure-Glide™ Transfer System

The safest, most reliable, and comfortable transfer system ever, providing single-caregiver transfers of residents up to 500 pounds.

Integrated Weigh Scale

Quickly and automatically capture residents' weight when seated in the tub.

Easy Cleaning and Maintenance

The Solares™ Smart Spa provides comprehensive infection control, featuring our Remedy+ UV Water Purification, the bath chair embedded with BioGuard™ Antimicrobial Protectant, and automated cleaning and disinfecting. All components are designed for convenient access, minimal maintenance, and easy service.

Plumbing and Electrical Codes

All states and municipalities may differ extensively in their plumbing and electrical codes. Therefore, Apollo Corporation recommends that you check with the proper enforcement agencies in your area before installation.

All Apollo bathing systems are manufactured with built-in backflow prevention. However, due to different plumbing codes, ask your installer whether there is a need to install additional backflow prevention valves (such as RPZ valves) on any new construction.

This product tested as Group 1 Class A for Emissions purposes.

Tested to comply with the following Emissions and Immunity standards:

Emission Limits

Phenomenon	Standard
Conducted and Radiated RF Emissions	CISPR 11; Group 1, Class A
Harmonic Distortion	See IEC 61000-3-2
Voltage Fluctuations and Flicker	See IEC 61000-3-3

Enclosure Port

Phenomenon	Basic EMC Standard or method	Immunity Test Levels
Electrostatic Discharge	IEC 61000-4-2	± 8kV contact ± 2 kV, ± 4 kV, ±8 KV, ±15KV air
Radiated RF EM fields	IEC 61000-4-3	10 V/m 80 MHz - 2.7 GHz 80 % AM at 1 kHz
Proximity fields from RF wireless communications equipment	IEC 61000-4-3	See 8.10.
Rated power-frequency magnetic fields	IEC 61000-4-8	30 A/m 50 Hz or 60 Hz

Input A.C. Power Port

Phenomenon	Basic EMC Standard	Immunity Test Levels
Electrical fast transients/ bursts	IEC 61000-4-4	± 2 kV 100 kHz repetition frequency
Surges Line-to-line	IEC 61000-4-5	± 0.5 kV, ± 1kV, ± 2kV
Conducting disturbances induced by RF fields	IEC 61000-4-6	3V 0.15 MHz - 80 MHz 6V in ISM bands between 0.15 MHz and 80 MHz 80 % AM at 1 kHz
Voltage dips	IEC 61000-4-11	0 % U_t: 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270°, and 315°
		0 % U_t: 1 cycle and 70 % U_t: 25/30 cycles Single-phase at 0°
Voltage interruptions	IEC 61000-4-11	0 % U_t: 250/300 cycle

Transportation and Storage Conditions

- Ambient Temperature: -40°F to 158°F (-40°C to 70°C)
- Relative Humidity Range: 10% to 100%
- Atmospheric Pressure Range: 800 to 1060 hPa

Operation Conditions

- Ambient Temperature: 75°F to 95°F (24°C to 35°C)
- Relative Humidity Range: 10% to 100%
- Atmospheric Pressure Range: 800 to 1060 hPa

Identification Label Location

The label describing the model #, Serial #, and electrical information is located behind the panel on the right side of the tub. Remove the panel and kneel next to the right side of the tub to review the label's information. (Label is on front of the upper frame.)

Intended Use

Apollo bathing systems are designed and sold for use in medical field markets including but not limited to nursing homes, hospitals, and assisted living facilities. Apollo's bathing systems are designed to be operated by trained operators and are not intended to be operated by the individual taking the bath. The device is intended to be operated with the resident to be bathed seated in the tub and the operator at either side.

Critical Safety Mechanisms

The critical safety mechanisms of the device required for it to be operated safely includes the functionality of the primary lock, secondary locking mechanism, carrier latch, and the unit's ability to maintain safe bathing temperature.

The carrier base's primary lock (the latch on the front left of the carrier rails) must be able to securely latch on to the chair when it is rolled to the front of the base. If the chair can move while on the carrier, it's possible the primary latch is disengaged or has failed.

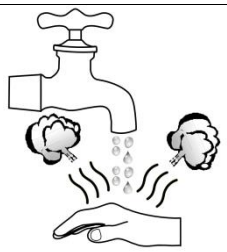
The secondary locking mechanism on the chair (The shafts located beneath the chair with rods sticking out of either side) must automatically move upwards when not actively forced downward. If this mechanism is operating correctly then the chair should become "trapped" in the channels located on the tub and carrier rails until the secondary release handle is pulled.

The carrier latch located on the plate to the front of the tub's frame needs to be able to securely latch onto the carrier base's pin. If the carrier is pushed into the latch it should not be possible to release the carrier from the tub without pulling the emergency release handle or operating the release button.

The equipment must produce water at a safe bathing temperature. The primary safety mechanism for this is the use of a temperature and pressure balanced valve that's factory set to prevent filling at temperatures at or above 110°f. If the filling temperature of the tub ever exceeds 110°f then the adjustment of this valve needs to be corrected. None of the above-mentioned mechanisms are susceptible to EM disturbances. Please Note: device software prevents filling above 105°f.

In the event of an AC line voltage surge, an ESD event, or Rf Electro-magnetic interference, the unit will maintain its normal operation or shut down in a manner that will not expose a patient to physical harm.

Critical Warnings

Attention	
	WARNING: To avoid the risk of electric shock, this equipment must only be connected to supply mains with protective earth.
	-Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally
	-Portable RF communications equipment can affect medical electrical equipment. Such equipment should be used no closer than 12" from the tub.
	"WARNING: No modification of this equipment is allowed."
	Hot water above 110° F (43° C) can scald people causing severe injury or death. Some residents may not be able to tell attendants about painful or uncomfortable conditions. • Monitor water temperature entering the bathing system and in the reservoir with thermometers provided.
	Proper usage of the Secure-Glide™ Transfer System is critical to assure safe resident transfer. Before moving the Secure-Glide™ Transfer System: • Verify chair is locked into the carrier's primary lock. • Properly secure resident to chair with seat belts. • Ensure armrests are in the raised and locked position. • Never leave resident unattended in chair or tub. Before transferring resident between carrier and tub or tub and carrier: • Ensure carrier is latched securely to the tub. • Ensure armrests are in the raised and locked position. • Ensure casters are locked. • Ensure Touch Screen indicates it is safe to transfer the resident.
	• Failure to clean and disinfect the bathing system could help to spread infection or disease. • Clean and disinfect the bathing system and chair before bathing each resident. • Do not leave water in the reservoir between bathing sessions or overnight.

Chemicals used for cleaning and disinfecting could be injurious to health if used incorrectly. Please follow the below guidelines when handling Apollo's cleaning and disinfecting chemicals:

Cid-A-L:

Hazard:
Toxic if swallowed. May cause severe skin burns and eye damage. May cause damage to organs.

Precautionary:
Use in a well-ventilated area. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/clothing/eye protection/face protection.

Response: Collect spillage. If swallowed: Immediately call a poison center/doctor. If swallowed: Rinse mouth with water and spit. Do NOT induce vomiting. If in eyes: flush eyes with plenty of water for at least 15 minutes. If on skin: rinse with water. If on clothing: removed affected outerwear and wash.

Turbo-Clean:

Non-toxic.

If swallowed: Do NOT induce vomiting. Drink lots of water and call a physician if necessary. If in eyes: Flush eyes with plenty of water for 15 minutes. If on skin: Sensitive-skinned persons should wash off with soap and water.

Disposal of waste products and equipment at end of life

Chemicals
Dilute Cid-A-L and Turbo Clean 1:128 and rinse down the drain.

Electronic Equipment (HMI, Actuator, Slide Valves, Servo Motor, Solenoid Valves, Dock Latch, Electrical Boxes)
Do not throw away. Contact local electrical recycling services

UV Lamps
Do not throw away. Contact local disposal services and inquire about the disposal of mercury lamps.

Resident Transfer and Emergency Removal

Pre-Bathing Session Checkout

1. Verify the carrier latches securely by docking the carrier to tub and pulling the carrier away from tub. The carrier should not release from the tub.
2. Check that the chair transfers smoothly in and out of the tub.
3. Ensure the chair is locked to the carrier's primary lock. (Chair should not move relative to the base.)
4. Check that seat belts are in good condition and secured to the chair.

Before using the Secure-Glide™ Transfer System:

- ✓ Carrier latches securely to tub.
- ✓ Chair locks to carrier's primary lock.
- ✓ Seat belts are installed.

Resident Transfers in or out of Chair

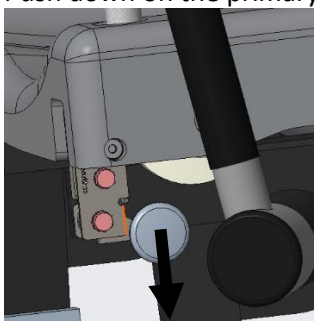
Before transferring resident in or out of chair…

1. Lock casters on the carrier.
2. Verify the chair is slid all the way forward on the carrier and the Primary Lock is engaged. (Chair should not move relative to base if the primary lock is engaged.)
3. The lower arm rests to the down position by pulling them to the outside and pushing them forward.
4. Transfer resident in/ out of the chair.
5. Return armrests to a raised position.

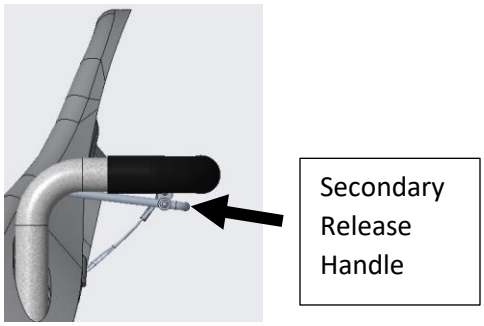
Chair/Resident Transfers into Tub

Transferring Chair/Resident into tub…

1. Open door.
2. Dock carrier to tub. Verify carrier is secure by pulling carrier away from tub. The carrier should not release from the tub.
3. Lock the casters on the carrier.
4. Push down on the primary lock release.

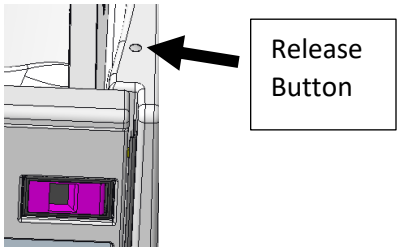


5. Lift the secondary lock handle and glide the chair of the carrier and into the tub.



While Chair/Resident is in tub…

6. Unlock the casters on the carrier.
7. Push the Carrier Release button twice to unlatch the carrier from the tub.



8. Close the door

Chair/Resident Transfers out of Tub

Transferring Chair/Resident out of tub…

1. Open door.
2. Dock carrier to tub. Verify carrier is secure by pulling carrier away from tub. The carrier should not release from the tub.
3. Lock the casters on the carrier.
4. The lower arm rests in the down position.

5. Lift the secondary lock handle and glide the chair out of the tub and onto the carrier until the Primary lock engages. Verify the chair is locked to the carrier by pushing the chair back towards the tub. If the chair is secure, it will not be able to move into the tub.

6. Unlock the casters on the carrier.

Push the Carrier Release button twice to unlatch the carrier from the tub.

Emergency Resident Removal

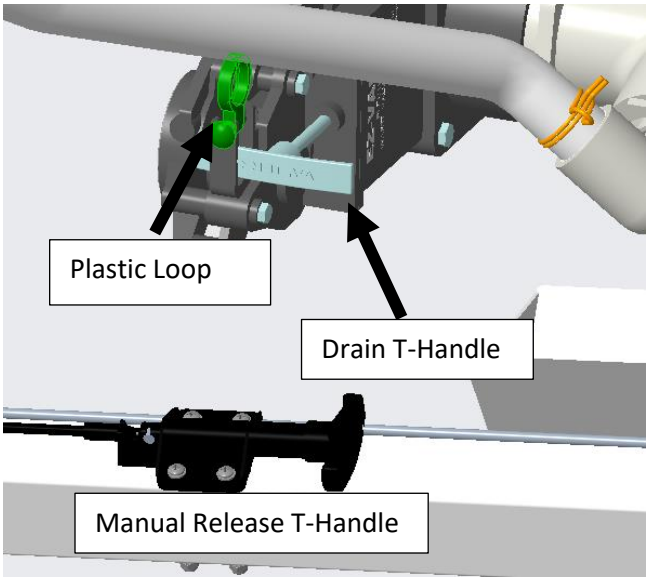
1. In a life-threatening situation, all attention must focus on resident welfare, removal from the tub, and acquiring medical assistance.
2. Push Open Drain on the touch screen and then open the tub door. Water may rush out and drain to the floor.
3. The whirlpool motor will automatically shut off when the water level drops below the water level sensor.

Remove Resident and attend to emergency

Electrical Failure

When electrical power has failed, the drain and carrier must be operated manually.

1. Remove the right-side access panel from the tub
2. Locate the drain latch assembly; a plastic loop (ring) is attached to it. Pull the ring up until it pops out of the assembly.
3. Turn the T-Handle 90° to the right and pull the T-Handle to open the tub drain.
4. When the tub is drained; open the door, latch the carrier to the tub, lock the casters and transfer the chair with the resident onto the carrier. If the tub is tilted down, additional help may be needed to transfer the chair out of the tub onto the carrier.
5. The Secure-Glide™ Transfer System must be manually released from the tub. Unlock the casters. Pull the black manual carrier release T-Handle to undock the Secure-Glide™ Transfer System from the tub.



Remedy+™ UV Water Purification System (if applicable)

Your bathing system is equipped with the Remedy+™ UV Germicidal Water Purification System, an electronic germicidal ultraviolet (UV) light disinfecting system.

When you operate the bathing system, the bathwater is continuously circulated through two ultraviolet chambers, where the water passes over and around two UV lamps.

The UV light is monitored electronically, and indicator lights show that the UV light is sufficient to disinfect.

The Remedy+™ UV Germicidal Water Purification System is automatic; it turns on and off with the Hydrologic™ Therapy System, a highly advanced whirlpool water flow system, and has no separate controls.

Use only ultraviolet transmissible cleaners, disinfectants, soaps, and bath oils, such as Apollo's Turbo Clean™ Pre-Disinfectant Detergent, Cid-A-L™ II Quaternary Disinfectant, Hygena™ Shampoo and Body Wash, and Therasol™ Natural Bath Oil. Use of other cleaners, soaps, and bath oils is not recommended and could compromise the Remedy+™ UV Infection Protection System.

Cleaning & Disinfecting Considerations

The Solares™ Smart Spa provides comprehensive infection control, featuring our Remedy+ UV water purification, the bath chair embedded with BioGuard™ antimicrobial protectant, and an automated cleaning and disinfecting system.

Your Solares™ Smart Spa arrived with an Intro Pack which includes Turbo Clean™ Pre-Disinfectant Detergent and Cid-A-L™ II Quaternary Disinfectant.

Turbo Clean™ is used after each bath to remove residue, bacteria, and gross soils.

Cid-A-L™ II is used after cleaning to effectively kill bath-borne bacteria, fungi, and viruses.

Your Solares™ Smart Spa is calibrated to dilute Turbo Clean™ and Cid-A-L™ II at the mixture stipulated by the manufacturer's instructions. Use of other cleaners and disinfectants is not recommended and could compromise the overall process.

With Remedy® UV Infection Protection™ System

- Always follow the Cleaning Procedure after every bath.
- When equipped with Remedy+ UV water purification, it may not be necessary to follow the Disinfecting Procedure after every bath in the same bathing session. Consult with your infection control specialist or infection control policy to determine your disinfecting requirements.
- For a Special Care Resident or in the event potentially infectious matter is released into the tub (e.g. fecal matter, wound debridement, blood, mucus, etc.), consult infection control management to determine if terminal disinfecting (Disinfecting Procedure) is required before using again.
- Always follow the Disinfecting Procedure after the last bath of the bathing session.

Without Remedy® UV Infection Protection™ System

- Always follow the Cleaning and Disinfecting Procedure after every bath.

Replacing Cleaning and Disinfecting Products

- Remove the right-side access panel from the tub. Place product in the tray as indicated by the labels.

Solares™ Smart Spa Bathing System Operation

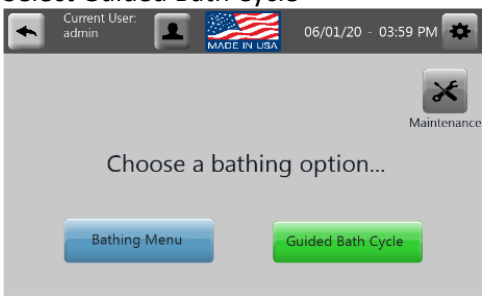
Note: A safe bathing temperature is 95-105°F (35-41°C).

Attention: Monitor water temperature. Do not use if water temperature is above 105°F (41°C).

Guided Bath Cycle

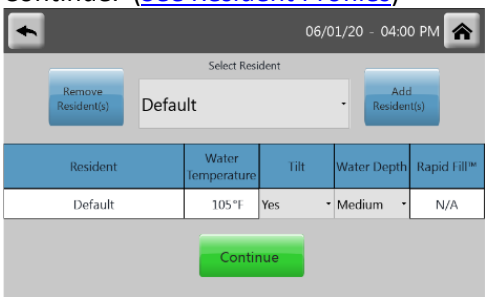
Pre-Bath

1. Select Guided Bath Cycle

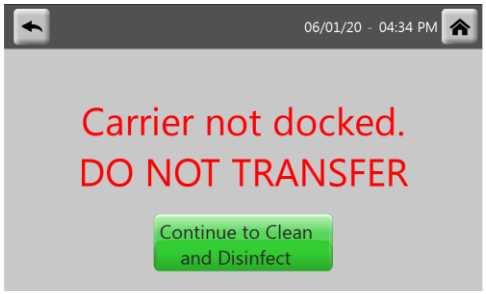


*Note: If you return to the home page during a cycle, you can return to where you left off at any time by pushing "Continue" on the home page.

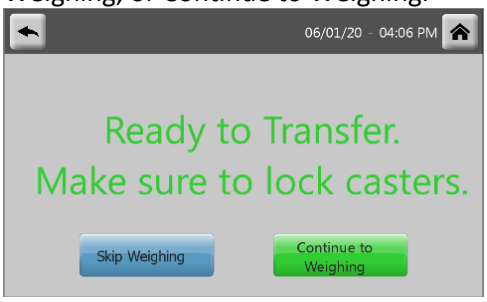
2. Select desired resident profile and hit Continue. (See Resident Profiles)



3. Follow the procedure for docking carrier, transferring carrier into the tub, and undocking carrier from tub. "Carrier not docked. Do Not Transfer" indicates the carrier is NOT docked, so it is not safe to transfer.



4. "Ready to Transfer" indicates the carrier is docked to the tub. Select Continue, Skip Weighing, or Continue to Weighing.



5. If Continue to Weighing was selected, follow the on-screen instructions. Otherwise, proceed to the next stop. Select Take Weight. Once the weighing process is completed select Continue.

6. Adjust Tilt as needed. This screen will not appear if auto tilt is configured.

Bathing

Adjust water temperature using the up/down arrows to maintain a water temperature of 95-105°F (35-41°C).

Operating Shower Wand:

1. Pull Shower Wand out of the holder, direct wand away from resident.
2. Select Shower to turn on.

3. Select Shower again to turn off.

4. Retract Shower Wand.

Whirlpool Operation:

1. Hit “Close Drain” if the drain is open.
2. Start filling the tub by pressing the Tub Fill button.
3. If the “Hydrologic™ Whirlpool” button is pushed in; then Whirlpool will start automatically when the water level is above the whirlpool water sensor.
4. Push the HydroLogic™ Whirlpool to stop the whirlpool.

Rapid Fill™ Reservoir Filling (if applicable):

Attention: Monitor water temperature. Do not use if the water temperature is above 105°F (41°C).

1. Select the applicable button to fill the reservoir.

Fill Rapid Fill™ Reservoir — Manual fill. Tank set to fill when button depressed. The button will release once the tank is full and the user will need to push it in again to repeat filling.

Disable Reservoir Auto-Fill — Autofill. Tank set to keep itself full. The tank will fill whenever water is below the top sensor and the tub is not filling.

Disable Reservoir Auto-Fill — Autofill. Fill disabled. Will not fill the tank until the user pushes the button.

Tub Filling from Rapid Fill™ Reservoir (if applicable):

1. Verify water in the reservoir is warm enough to use by checking the reservoir temperature in the top left-hand corner. (Only displays if reservoir full.
2. Select Rapid Fill™.

Draining:

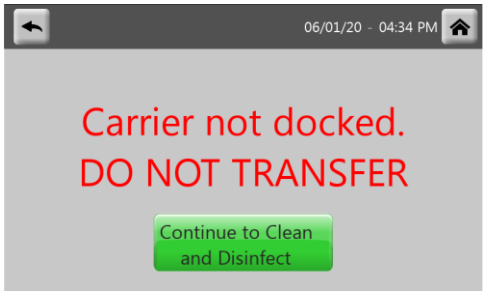
1. Select Open Drain.

If Open Drain is selected while the whirlpool is running, it will shut off automatically when the water level drops below the sensor.

Completing Bathing Session

1. Hit continue to prepare to remove the resident from the tub.
2. If auto-tilt is disabled, you will need to hold the up button until the screen displays “Tub is level. Ready to continue.” You can then press continue.

3. Follow the procedure for docking carrier, transferring carrier out of tub, and undocking carrier from the tub. “carrier not docked DO NOT TRANSFER” indicates carrier is NOT docked, so it is not safe to transfer.



“Ready to Transfer” indicates that carrier is docked to tub and tranfer can now be completed. Hit “Continue to Clean and Disinfect once the Resident has been removed and you are ready to move on to cleaning. (See Whirlpool Cleaning Procedure)

Operation In Detail

Universal Buttons:

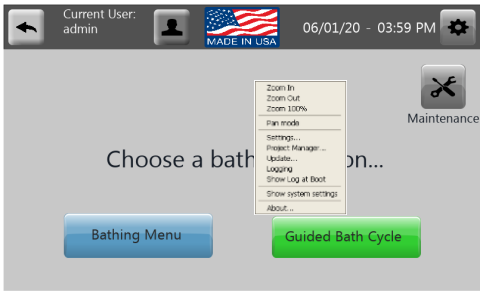

Goes to Home Screen


Goes to last visited page

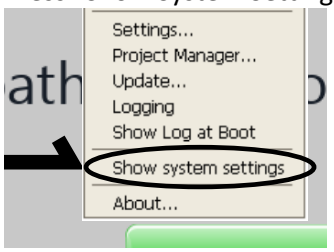
HMI Setup-Time & Brightness

Time and brightness settings can be accessed by navigating to the HMI's system settings. To reach the system settings:

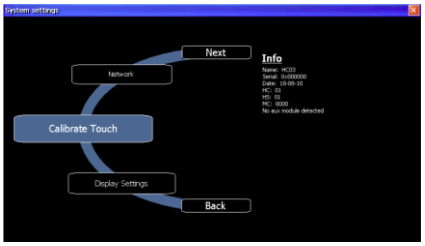
1. Hold your finger down on an open portion of the screen for a couple of seconds until the following menu appears.



2. Press "Show System Settings"

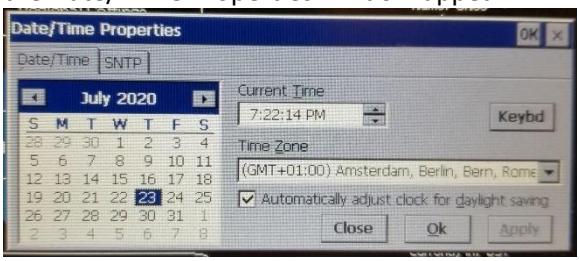


Once you have reached the system settings menu, you navigate through dragging the options bubble on the left of the screen up and down until the option you desire is in the middle. You can leave the menu at any time by hitting the x in the top right corner or navigating to "Close."



Setting Time:

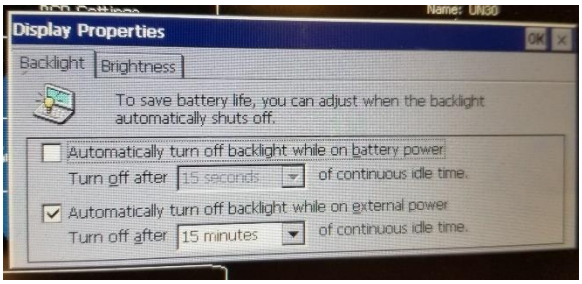
1. Navigate to "Time" and click on it to make the Date/ Time Properties window appear.



2. Choose your time zone from the Time Zone dropdown.
3. Set the current time hitting by "Keypad" and then tapping the hour/ minute under Current time and entering the desired value. It can be difficult to do this with your finger, so a plastic stylus or a round piece of plastic can be used.
4. Hit "Ok" to finish. It is worth noting that the system will need to be restarted for the correct time to show on the HMI.

Brightness Settings:

You can adjust the backlight brightness and idle duration by navigating to the display settings menu. The tub is automatically configured to dim the backlight after 15 minutes of inactivity to extend the life of the display, but this can be adjusted in this menu. You can also adjust the brightness of the backlight by clicking on the brightness tab and moving the slider.



User Management

Initial accounts:

operator: standard user. Can run all tub operations but cannot access maintenance menu or create users.

Factory Password= operator

maint: Can run all tub operations and access maintenance menu but cannot create users.

Factory Password = maint

admin: can do everything including creating users and manually exporting cleaning/ disinfecting data.

Factory Password = admin

Changing User:

1. Navigate to the home screen and select the change user button.

2. Select “Switch User” on the next screen and then select “Sign In”
3. Fill in the user name and password for the desired account. (See “initial accounts” above)
4. Once you hit “Sign In” it will return you to the last page if you were successful or it will let you know in the bottom left corner if the username or password was incorrect.
5. You can now hit the home button in the top right of the screen to return to the home page.

Changing Passwords:

1. Login to the account that you want to have a different password per “Changing User”.
2. Hit the change user button on the home page.
3. Select “change password”
4. Fill in the form and hit “Change” to update the password.

Changing Passwords/ user details (admin):

1. Login as Admin.
2. Click on user button on home screen.
3. Click on the “edit user” button in the middle.
4. Select user to modify under user name.
5. Update and hit “Apply.”

Creating New Users:

1. Log in to an admin account.
2. Hit the change user button on the home page.
3. Select “Create New User”.
4. Fill in the form.
   Note: A plastic stylus will make filling out information easier.
   Group: The group assigns access rights that the new user will be given. This can be set to admin, maintenance, or user.
   Must Change Initial Password: Forces user to change the password the first time they log in to that account if checked.
   Enable Logoff Time: sets account to automatically log out after the amount of time you enter in “Inactivity Logoff Time.
5. Click “Add” to finish creating a user.

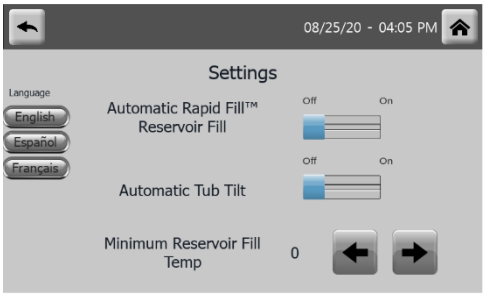
Auto Tilt

The Solares™ is designed to be tilted down during the bath to maximize immersion without requiring additional water. This tilting is initially set to be done manually (with a button on the screen) out of the box to allow operators to control it before learning how to use resident settings. Once your facility is ready to move on to having the tilt function automatically you can enable it at any time.

To enable Auto Tilt:

1. Go to settings.

2. Move the "Automatic Tub Tilt" slider to "On"



Auto Tilt will now be active as long as the selected resident profile has "Tilt" set to "Yes" See "Resident Profiles" for more information.

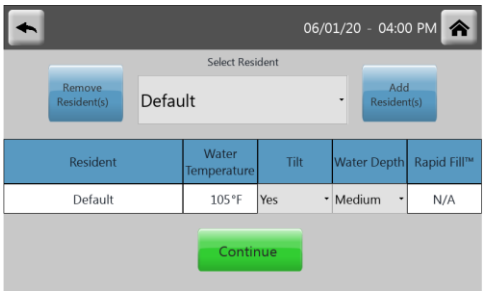
Changing Language

The language text language can be easily changed by going to settings and then clicking on the desired language. (Screen is shown in the above section.)

Bathing Menu

The Bathing Menu allows you to jump to any screen involved in the bathing and cleaning/ disinfecting processes. This screen can be accessed by clicking "Bathing Menu" on the Home Screen.

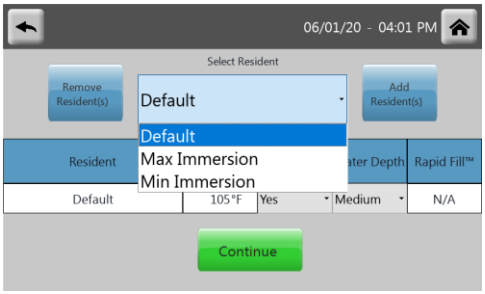
Resident Profiles



The Solares™ comes equipped with the ability to store custom bathing profiles centered around the needs of different residents. You can choose to either create profiles that meet the needs of certain groups of your residents or make custom profiles for each resident as well.

<u>Selecting a Profile:</u>

Click on the drop-down box underneath "Select a Resident" and select the desired profile.



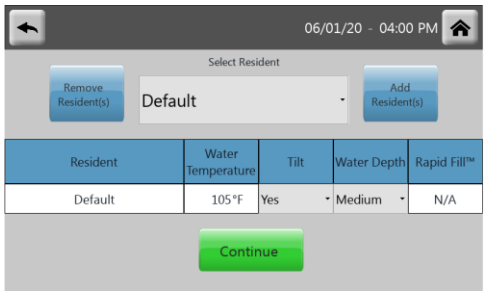
The system comes with 3 profiles preloaded including Default, Max Immersion, and Min Immersion.

"Max Immersion" is for residents who like to take full advantage of the tub's immersion. This profile enables auto-tilt and fills the water up to the bottom of the overflow.

"Min Immersion" is for those who do not want the additional immersion. This profile disables auto tilt and only fills high enough to turn on the whirlpool system.

"default" is a middle of the road setting. It uses auto tilt and fills midway between the min and max immersion profiles.

Changing Profile Settings:



Changing profile settings is as easy as selecting the profile and then changing the settings listed below. The settings are as follows:

Resident- Name/ identifier of profile.

Water Temperature- Temperature tub fill will be set to when the profile is selected.

Tilt- Enables/ Disables Auto Tilt. Auto Tilt is enabled when set to “Yes” Note: Auto Tilt needs to be enabled under settings for it to take effect.

Water Depth: Sets water height tub automatically stops filling at. Low stops right above top jets to allow whirlpool to run and High fills to just below the overflow.

Rapid Fill™- enables/ disables rapid fill through the reservoir while a profile is selected.

Adding Profiles:

1. Push the “Add Resident(s)” button on the Residents screen to go to the Add Residents screen.

2. Adjust profile name/ settings per the requirements of the profile.
3. Tap “Add Resident” to save the profile and start a new one or tap “Save Changes” to save the resident and return to the Resident screen.

Removing Profiles:

1. Push the “Remove Resident(s)” button on the Residents screen to go to the Remove Residents screen.

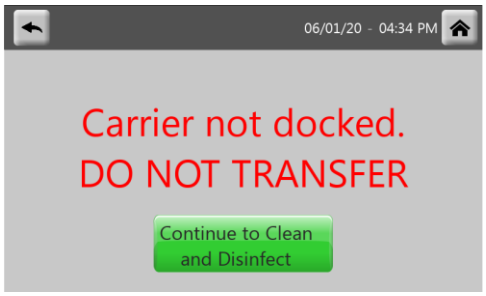
2. Select the profile you want to remove and tap “Remove”.
3. Tap “Return to Residents” when finished.

Transfer Screen

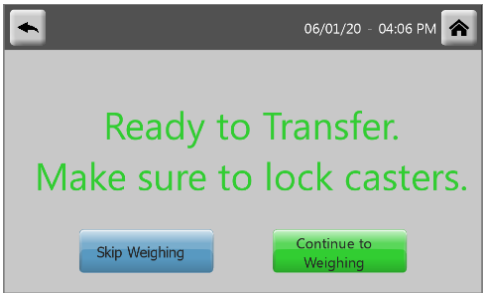
This screen is used to make it easier for operators to know when the carrier is properly secured to the tub.

Follow the procedure for docking carrier, transferring carrier out of the tub, and undocking carrier from tub whenever transferring residents.

"Carrier not docked" indicates that the carrier is not secured and that it is not safe to transfer.



"Ready to Transfer" indicates that the carrier is secured to the tub.



Weighing Screen

It is important to be aware that the scale automatically tears itself when residents are docked and transferred into the tub. Once the scale is teared anything that was on the tub including towels or anything else should be left on until weighing is complete.

If "Unstable tare value. Weight may not be inaccurate." Shows in the bottom left corner then a problem occurred when docking the resident that prevented the scale from tearing properly. This could be caused by leaning on or otherwise manipulating the tub during the docking process.

The resident's weight will be displayed under "Current Weight"

You can hit "Take Weight" to save the weight for future reference. The weight that was saved will show under "Recorded weight." And this number will remain until you take another weight. This will allow you to return to this screen to collect the weight if you forget to jot it down right away.

The last recorded weight for the selected resident profile is displayed at the top of the screen for your reference. If profiles are being used for individual residents this could help identify if something is off.

It's important to make sure the weight of any accessories added or removed from the chair are accounted for to ensure displayed weights are correct. Accessory weights can be automatically offset by toggling the appropriate button in the top right corner. (They show up green when you've identified that the accessory in question is on the chair or grey if it is not.)

For example: if you select the gel pad button to indicate that one is being used on the chair then the 7.8lbs of the gel pad will be subtracted from the weight displayed. (Assuming it was not on when the chair weight was last calibrated.)

Tilt Screen

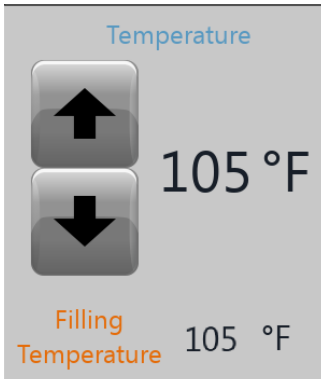
Press and hold UP arrow to tilt the tub up. The tub will automatically stop when it is at the correct height for transfer.

Press and hold the Down Arrow to lower the tub. The tub will stop automatically when it reaches maximum depth. You can release the button at any time if you do not want to tilt all the way in either direction.

Bathing Screen

The water screen contains all the controls that you will be using in the bathing process.

Temperature Control:

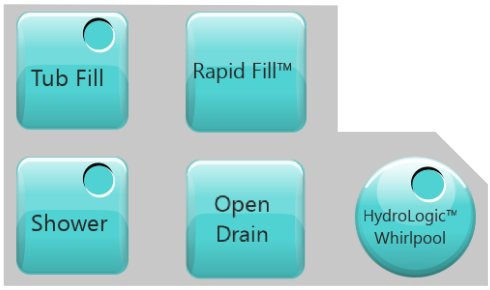


The temperature shown to the right of the arrows is the temperature that the tub is set to maintain. Push the up arrow to bump up the temperature and the down arrow to bump it down. You can also tap the temperature itself and enter your desired water temperature.

The filling temperature is the temperature of the water as it passes through the manifold. If this is lower than the set temperature it could mean that you are low on hot water.

Bathing:


A green light on a button indicates that the valve is currently open or that the whirlpool is running in the case of the Whirlpool button.



Tub Fill – Push the tub fill button in to start filling the tub. You can stop filling at any time by pushing it again. The button will release itself when the tub finishes filling.

Shower – Push the Shower button to activate the shower wand.

Open/ Close Drain - operates tub drain.

Rapid Fill – opens the valve to drain water in the Reservoir into the tub. Pump assisted filling will begin once the water has filled above the intake. The valve will close itself after the tank is done draining, but it can be closed at any time by pushing the button again. Note: Pushing this will automatically close the drain and enable tub fill.

Hydrologic™ Whirlpool – Turns on the whirlpool pump when pushed in. The pump will only activate when water is above the top jets. The button can be pushed before the water level is high enough, the pump just will not start until water has reached the required level.

Reservoir operation *only if equipped:

Reservoir water temperature is displayed in the top left of the screen when the tank is full.

The light next to the fill button will turn green when the tank is actively filling.

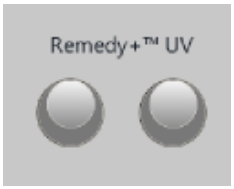
The reservoir fill button looks and operates a bit differently depending on whether autofill is enabled.

Manual fill. Tank set to fill when button depressed. The button will release once the tank is full and the user will need to push it in again to repeat filling.

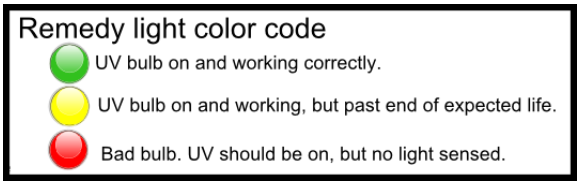
Autofill. Tank set to keep itself full. The tank will fill whenever water is below the top sensor and the tub is not filling. Push to prevent the reservoir from continuing to fill at the end of the day/ shift. If you don't stop it before it starts filling you can manually drain per these instructions.

Autofill. Fill disabled. Will not fill the tank until the user pushes the button. Push button to reenable reservoir filling.

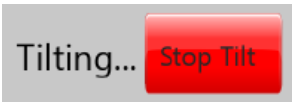
Remedy+™:



UV indicator lights. Report current status of UV Bulbs. These lights appear off when UV is turned off and for a few seconds after it is first started. The Remedy+™ disinfection system will turn on automatically when the whirlpool turns on.



Tilting:



The above image will show up in the bottom right-hand corner of the screen while the tub is lowing itself. (happens if auto-tilt is enabled). You can press “Stop Tilt” at any time to prevent the tub from tilting down further.

Errors:

If “Error” is displayed at the bottom left of the screen, then there has been a problem detected with the system. You will need to check the maintenance screen for a detailed description of the problem. (See Maintenance)

Cleaning and Disinfection Menus

1. Place the chair in the tub, release the carrier from the tub, and close the door before beginning cleaning.
2. Select “Begin Automatic Clean and Disinfection” on the touch screen to be guided through the cleaning/ disinfecting process.

You can select “Manual Clean and Disinfection” to go to the cleaning, disinfecting, or rinsing page directly.

Whirlpool Cleaning Procedure

1. Select Begin Cleaning. The tub drain will close and the tub will begin filling the whirlpool plumbing with water mixed with the correct ratio of cleaning product. The whirlpool motor will start automatically. Observe the flow of detergent and water through the tub’s jets. Close off each of the tub’s jets. Detergent should be observed flowing from all the jets.

2. The whirlpool motor will shut off automatically and the touch screen will prompt you to Scrub all surfaces. Using the provided tub brush and the detergent/water mixture in the foot-well, scrub the tub surfaces and the chair.
3. Select Continue To Disinfection on the touch screen. *move on to Whirlpool disinfecting procedure if disinfecting tub as well.

4. Select Continue to Rinse on the touch screen. Then select Begin Rinse on the touch screen. The drain will open and the whirlpool motor will start. Clean water will be pumped through all the jets and down the drain. Use the shower wand to rinse the tub and chair.
5. When finished select Return to Home on the touch screen.

Whirlpool Disinfecting Procedure

1. Clean the tub and chair following the Whirlpool Cleaning Procedure.
2. Select “Continue to Disinfection” on the touch screen.

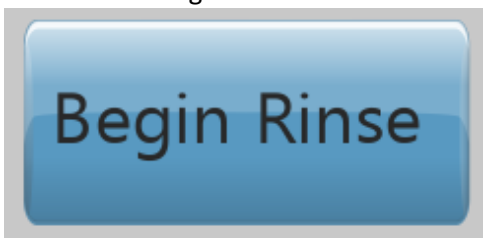
3. Select “Begin Disinfection” on the touch screen.

4. The tub drain will close and the tub will begin filling the whirlpool plumbing with water mixed with the correct ratio of disinfecting solution. The whirlpool motor will start automatically.
5. Observe the flow of disinfectant through the tub’s jets. Close off each of the tub’s jets. The disinfectant should be seen flowing from all the jets.
6. The whirlpool motor will shut off and the screen will prompt you to scrub the tub surfaces and keep wet for 10 minutes.

Using the provided tub brush and the disinfecting product in the foot-well, scrub the tub surfaces and the chair. The tub and chair surfaces must be kept wet for 10 minutes for proper disinfection to occur. There is a timer counting down on the touch screen.

7. Select “Continue to Rinse” on the touch screen.

Then select “Begin Rinse”.



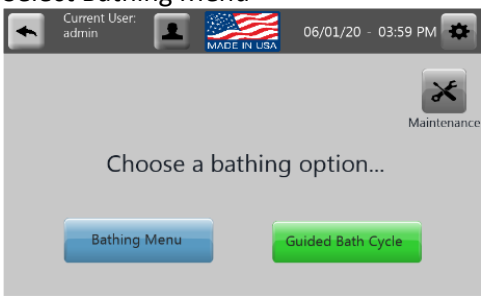
The drain will open and the whirlpool motor will start. Clean water will be pumped through all jets and down the drain. Use the shower wand to rinse the tub and chair.

8. When finished select “Return to Home” on the touch screen.

Rapid Fill™ Reservoir

Draining Reservoir:

1. Select Bathing Menu



2. Select Reservoir Tank Drain.

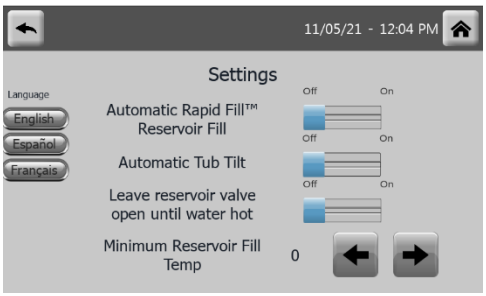
3. Select Drain Reservoir.

> **Note:** Do not leave water in the reservoir between bathing sessions or overnight.

Enabling/ Disabling AutoFill:

1. Go to Settings.

2. Move the "Automatic Rapid Fill™ Reservoir Fill" slider to on if you want to enable or off if you want to disable.



Language:

The language of the user interface can by changed by tapping on the desired language on the left side of the settings page.

Leave Reservoir Valve Open:

This setting will set the tub to open the reservoir and tub drains when the reservoir starts filling. The valve is left open until the water passing through the manifold is up to temp. This setting is primarily for facilities that have to wait a long time to get hot water to the tub due to their plumbing. Having this active will ensure only hot water makes its way into the reservoir.

Minimum Reservoir Fill Temp:

Under the settings page (see above) you will also see a "Minimum Reservoir Fill Temp" setting. This setting allows you to set the lowest water temperature that you want to allow the reservoir to fill at. If for instance you set this to 90 and your hot water supply fell to 89 degrees due to the hot water heater not keeping up, then the reservoir would stop filling for a few minutes and then resume when the water heater has had some time to catch up.

Reservoir Holding Tank Cleaning & Disinfecting Procedure

To minimize the likelihood of contamination or bio-film growth, the tank must be drained after the last bath every night and allowed to dry. The door on the tub should be closed to prevent water spills when draining the reservoir.

The tank must be visually inspected monthly to assure it remains clean. If hard water deposits develop the tank should be cleaned with Turbo Clean™ Pre-Disinfectant Detergent. If biofilm or other residues develop, the tank should be cleaned with Turbo Clean™ Pre-Disinfectant Detergent and disinfected with Cid-A-L™ II Quaternary Disinfectant.

To clean the reservoir tank, fill the bottom of the reservoir with about 5-6 inches of warm water. Add 7-8 ounces of Turbo Clean™ Pre-Disinfectant Detergent. Using a long-handled, soft-bristled brush, scrub the inside of the tank with the cleaning mixture. When finished, drain the cleaning product from the reservoir (with the tub door closed), and use the shower wand to rinse the inside of the tank.

To disinfect the reservoir tank, fill the bottom of the tank with 5-6 inches of water. Add 7-8 ounces of Cid-A-L™ II Quaternary Disinfectant. Scrub all inside surfaces with the disinfecting product. Keep the tank surfaces wet with the mixture for at least 10 minutes. When finished, drain the cleaning product from the reservoir (with the tub door closed), and use the shower wand to rinse the inside of the tank. Allow the tank to dry.

When disinfecting in response to possible contamination by a specific pathogen, consult the Cid-A-L list of pathogens for which it is effective. For disinfection with other antibacterial chemicals, consult with your infection control specialist and the manufacturer’s direction for proper procedures and dilution ratios.

Secure-Glide™ Transfer System

The Secure-Glide™ Transfer System provides a fast and dignified way to help residents enter and exit the Solares™ Smart Spa Bathing System, eliminating the need for hazardous and time-consuming resident lifts. To ensure you realize the maximum usefulness and safety of the Secure-Glide™ Transfer System, the system must be used properly. This operating manual provides the information needed to correctly use your Secure-Glide™ Transfer System. Failure to follow the instructions given in this guide could result in injuries to residents or attendants.

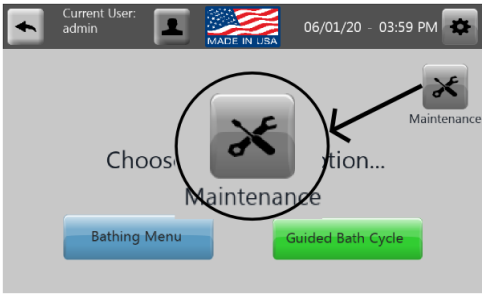
Secure-Glide™ Transfer System chair removal

1. Open tub door
2. Place the carrier in front of the door.
3. Push gently. Do not force latching pin into pin receiver.
4. Latch carrier to tub.
5. Lock the casters. (Press down to lock. Lift up to unlock.
6. Release the primary lock
7. Squeeze the Secondary Lock handle and transfer the chair from the carrier into the bathing system.

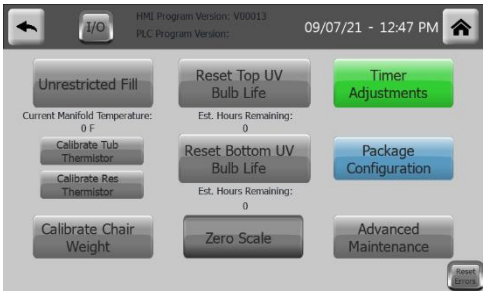
Maintenance

To reach the Maintenance Menu, you will need to be logged in as either admin or maint (maintenance).

To reach the maintenance menu, push the maintenance button on the home page.



Maintenance screen



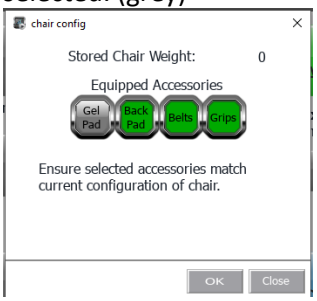
Calibrating Scale

Calibrate scale per WI0114-Solares Scale Calibration. (Copy located on included flash drive.)

Calibrating Chair Weight

For the tub to provide an accurate resident weight, it will need to know the weight of the transfer chair. In calibrating the chair's weight, it is important to ensure that the chair is equipped with all the same items that it will have on it during a typical bath. I.e. Belts, gel pad, handles, etc.

1. With the door all the way open and the carrier disengaged from the tub, lightly tap "Zero Scale".
2. Transfer the chair into the tub and remove the base.
3. Push "Calibrate Chair Weight" to bring up the chair config menu.
4. Ensure that all accessories currently on the chair are selected (green) and all items not currently equipped are not selected. (grey)



5. Lightly press "OK" to finish calibrating chair weight.
6. Transfer chair out of tub and disengage carrier.
7. Transfer chair back into tub and verify weight reads 0.

Note: stored chair weight displays the current chair weight in the system. Default = 28.5

-The equipped accessories selected on the weighing page will be set to those selected in the chair config dialog at completion of chair weight calibration.

The table below shows the weights of various carrier accessories for your reference. These are the wights that will be offset from the chair when the calibration configuration doesn't match the currently set configuration.

Item	Weight
Arch Support Pad	1lb
Gel Pad	7.8lbs
Belts	0.4lbs (0.2lbs each)
Handles	2.3lbs (1.2lbs each)

For example. If the chair was zeroed without the gel pad and the operator selects the gel pad as being used on the weighing screen then 7.8 lbs. will be subtracted from the weight to account for it.

Maintenance Buttons/ Controls

Unrestricted Fill – Disables temperature control and opens tub fill. Used for

mechanically setting Rada's temperature limit. The current temperature read in the manifold is located below this button.

Advanced Maintenance – brings you to Advanced Maintenance Screen.

Reset Top/ Bottom UV Bulb Life – pushing these buttons will reset the bulb's estimated remaining life expectancy. This would typically be used when replacing a UV bulb. The estimated life expectance of the bulb is shown below the button.

Timer adjustments – brings you to the timer adjustment screens.

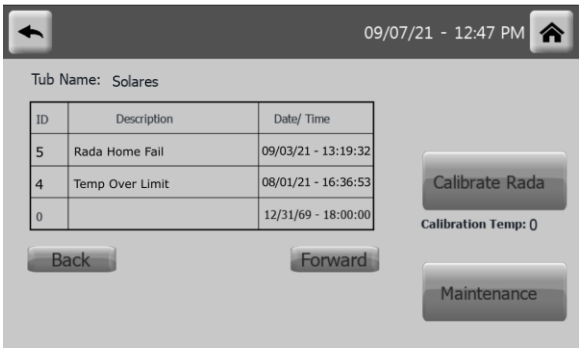
Calibrate tub/ thermistor – Used to calibrate thermistors to ensure accuracy.

Package Configuration – Goes to package screen, which allows you to enable/ disable options on the tub.

I/O – Allows you to review the status of sensors, actuators, valves, etc. Used for troubleshooting and calibration.

Reset Errors – resets any current errors. (Displayed to the left of the button.)

Advanced Maintenance



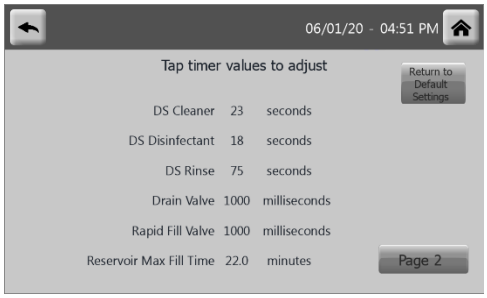
Tub Name – Tap on name to change tub's name. Used to identify source of disinfection data after export.

Calibrate Rada – Fills tub and runs shower wand at calibration temp to realign temperature profile. Does not need to be run but can help the tub find temperatures faster out of the gate. Even without running this, the tub will map the Rada as the tub is run at different temperatures.

Error Log – Displays last 30 errors flagged by the tub with the latest error on top. Hit "Forward" to go deeper in the list and "Back" to move back towards the top.

Timer Adjustments

The Timer Adjustment screens are used for making timing adjustments to the tub to accommodate for low water flow or simply to better adjust the tub's function to your facility's needs. You can adjust any of the times listed below by touching the number and entering your desired value in the keypad that pops up on the screen. "Return to default settings" will return all times to initial values.



DS Cleaner – How long the tub runs cleaner into the tub during the cleaning cycle. Increasing this value will pull more cleaner into the tub and help ensure cleaner makes its way through all the jets.

DS Disinfectant - How long the tub runs disinfectant into the tub during the disinfection cycle. Increasing this value will pull more disinfectant into the tub and help ensure disinfectant makes its way through all the jets.

DS Rinse – How long the system runs water through the plumbing to rinse out cleaning chemicals. Will lengthen both the first and middle stages of the rinse process.

Drain/ Rapid Fill Valve – Determines how long the slide valves on the tub will be powered when opening. This value can be decreased to prevent the valve from opening all the way if

your facility's plumbing cannot keep up with the tub's drain.

Reservoir Max Fill Time – The maximum amount of time it should take the reservoir to fill. This value can be increased if the facility's plumbing cannot fill the reservoir in time. This value does not need to be particularly close to the actual fill time as the top float sensor stops the tank from overfilling. The important thing is that it is set higher than the fill time you expect to see as this should only come into play if the top float sensor fails.

Tub Max Fill Time – The maximum amount of time the tub should take to fill. Will throw an error if filling takes longer. Only used to prevent the tub from overfilling too long if the top water sensor were to fail.

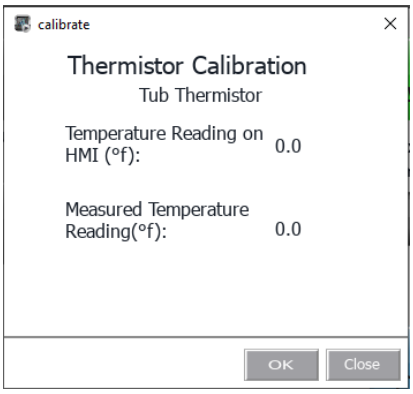
Tub Medium Fill Time – The amount of time the tub should continue filling once it reaches the middle water sensor to reach the medium water fill height.

Thermistor Calibration

The tub's thermistors can be easily calibrated to ensure that they are reading as accurately as possible.

Calibrating tub thermistor:

1. Go to the bathing screen and open the drain if it is not open already.
2. Hit "Tub Fill" to start running water into the tub.
3. Wait for the "filling temperature" to match the set temperature displayed above.
4. Use a cup or mug to catch the water coming out of the tub's intake and measure the temperature of the water using a thermometer. (You can also close the drain and measure the water accumulating in the base of the tub.) Jot your reading down.
5. Go to the maintenance screen and hit "Calibrate tub thermistor"

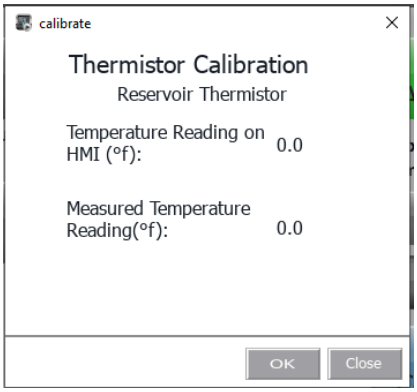


6. When the calibration dialog box comes up, tap on the number next to Temperature Reading on HMI. Enter the filling temperature that was shown on the HMI when you measured the water temperature.
7. Press the number next to Measured Temperature Reading and enter the value you measured with your thermometer.
8. Press OK to complete calibration.
9. Steps 1-4 should be repeated to verify that the calibration was successful. If the displayed temperature and the measured temperature are not in line, you will need to repeat the procedure.

Calibrating Reservoir Thermistor:

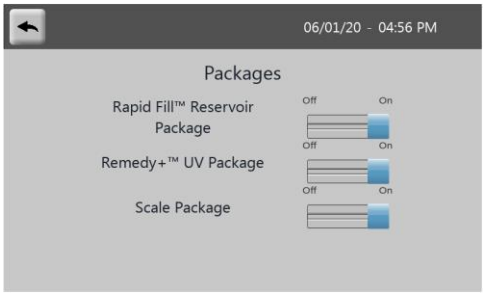
1. Ensure that the reservoir is empty before beginning. Note: if you do not have a temperature probe you can drop it into the top of the tank then you will want to ensure the tub thermistor is calibrated before continuing.
2. Go to the bathing screen and press "Fill Rapid Fill Reservoir" or "Disable Reservoir Auto-Fill" if the button is red.
3. Let the reservoir tank fill to at least halfway. The reservoir tank's temperature probe is a bit slow to react, so it needs some time to read.

4. If you filled the tank all the way, then you can write down the reservoir temperature shown in the top left of the bathing screen. Otherwise, you will need to collect the temperature from the inputs page under maintenance.
5. If you have a probe that you can drop down into the reservoir to measure the water temperature, then you can use it and write down the current temperature of the water. If you do not have such a probe and have calibrated the tub's thermometer then you can just use the filling temperature displayed on the bathing page. This is not as accurate as measuring directly but should be sufficient if this is not an option.
6. Go to the maintenance screen and hit "Calibrate Res Thermistor."



7. When the calibration dialog box comes up, tap on the number next to Temperature Reading on HMI. Enter the filling temperature that was shown on the HMI when you measured the water temperature.
8. Press the number next to Measured Temperature Reading and enter the value you measured with your thermometer.
9. Press OK to complete calibration.
10. Steps 1-4 should be repeated to verify that the calibration was successful. If the displayed temperature and the measured temperature are not in line, you will need to repeat the procedure.

Package Configuration



The package configuration screen enables and disables the tub's accessories in the program. When an accessory is disabled; all its buttons, pages, and options are hidden from view. Options should never be set to enabled if the tub is not equipped with the option as it will add confusion for the operator.

Rapid Fill™ Reservoir Package – Enables operation of the reservoir. Should be set to "On" if the tub is equipped with a reservoir.

Remedy+™ UV Package – Enables UV lamp operation. Should be set to "On" if the tub is equipped with Remedy™.

Scale Package – Enables scale operation. Should only be set to "On" if the tub is equipped with a scale.

I/O Screens

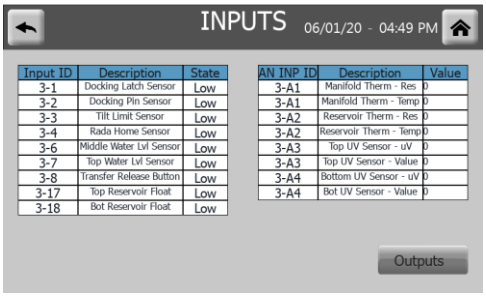
The I/O screens display the status of the system's various inputs and outputs to aid in troubleshooting.

Input Screen:

The inputs screen can be accessed by clicking the I/O button on the maintenance screen.

The inputs screen displays the status of all the tub's inputs. The inputs on the left are the

digital inputs and those on the right are analog inputs. The digital inputs display “Low” when the sensor is not triggered and “High” when the sensor is triggered.



Docking Latch Sensor – The sensor that is embedded in the docking latch itself. Shows “High” if the latch is closed.

Docking Pin Sensor – The sensor protruding from the front of the tub frame. This sensor shows “High” when it detects the carrier frame in front of it.

Tilt Limit Sensor – The limit switch is mounted on the back of the tub frame. Shows “High” when the tub tilts up and the upper frame hits the sensor.

Rada Home Sensor – The sensor connected to the Rada. This sensor displays “High” when it detects the screw protruding from the large pulley.

Middle Water Lvl Sensor – Water sensor located next to left side jet.

Top Water Lvl Sensor – Water sensor located next to left overflow.

Transfer Release Button – metallic button by the right side of door used for releasing carrier.

Top Reservoir Float – Top float sensor in the reservoir tank. Should show “Low” if a sensor is disconnected or if the water is <u>above</u> the sensor.

Bot Reservoir Float – Bottom float sensor in the reservoir tank. Should show “Low” if the sensor is disconnected or if the water is <u>above</u> the sensor.

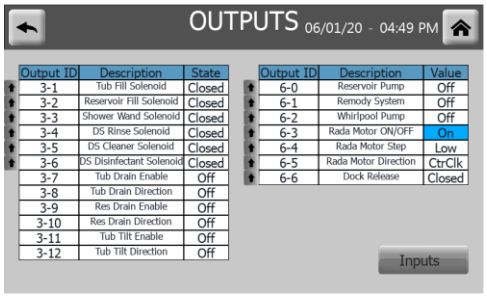
Manifold Therm – Top value displays raw thermistor input and the bottom value displays temperature in Fahrenheit. (values are for the thermistor in the manifold for filling.)

Reservoir Therm - Top value displays raw thermistor input and the bottom value displays temperature in Fahrenheit. (values are for the thermistor in the bottom reservoir float.)

Top/ bottom UV Sensor – top value is raw input in microvolts & bottom value is value in volts.

<u>Outputs Screen:</u>

Click on the “Outputs” button in the bottom right of the inputs screen to get to the outputs screen. The outputs screen shows the status of each output and allows you to force output on by pushing the arrow next to the output. The arrows are small, so a plastic stylus is recommended for operating them.



Tub Fill Solenoid – ¾” solenoid valve that allows water to flow into the bottom of the tub from the manifold.

Reservoir Fill Solenoid – solenoid valve that allows water to flow into the reservoir tank.

Shower Wand Solenoid – Solenoid valve that allows water to flow to shower wand.

DS Rinse Solenoid – Solenoid valve that routes water to the rinsing line of DS system.

DS Cleaner Solenoid – Solenoid valve that routes water to the cleaning line of the DS system.

DS Disinfection Solenoid – Solenoid valve that routes water to Disinfecting line of DS system.

Tub Drain/ Res Drain/ Tilt Enable – Status of primary activation relay of output.

Tub Drain/ Res Drain/ Tilt Direction – Status of DPDT relay used for reversing the direction of the output.

Reservoir Pump – Reservoir pump used for pumping water out of the reservoir and into the tub.

Remedy System – UV system.

Whirlpool Pump – Tub's whirlpool pump.

Rada Motor On/ Off – enable/ disable status of Rada Motor - Should only show "On" if Rada is being adjusted. When "On" is shown, then you should not be able to move the Rada easily.

Rada Motor Step – Turns on to move Rada Motor one step.

Rada Motor Direction – direction Rada motor is set to turn. ctrClk = counterclockwise.

Dock Release – Carrier latch release mechanism.

Errors

Errors are displayed on the bottom of the maintenance screen and can be reset by hitting the "Reset Error" button in the bottom right-hand corner of the screen. Manual Reset errors need to be manually reset under maintenance, Auto Reset errors will automatically clear once the offending conditions have passed, and Auto/ Manual Reset errors automatically clear, but can be manually cleared as well. The effects shown in the below table describe the features that are disabled until the error is reset.

Error List:

ID	Error as shown on screen.	Expanded explanation	Type [effect]
1	[Tilt Sensor Error] Tilt sensor not detecting tub. Verify tilt sensor is working and adjusted appropriately and ensure the actuator is functioning.	Means tub was able to raise longer than expected without hitting the upper limit. Likely causes are poor positioning of the tilt limit switch and limit switch/ wiring issue.	Manual Reset [Disables tub from tilting upward]
2	[Res Drain Error] Reservoir not draining. Verify that the reservoir slide valve opens and that the top float sensor is working correctly.	Float switches still show the tank as full after the tank has been draining for a while. Likely float sensor or slide valve problem.	Manual Reset [Disables Drain Pump]
3	[Therm Fault] Thermometer Fault. Please ensure the thermometer is connected properly.	Unlikely resistance value was measured from the manifold thermometer. Likely caused by the thermometer being disconnected or wired incorrectly.	Auto Reset [Disables Valves]
4	[Temp Over Limit] Temperature over the limit. Verify Rada cartridge adjusted appropriately.	Rada unable to bring the water temperature down into an acceptable range. Could be caused by the cold-water supply being turned off.	Auto/ Manual Reset [Disables Valves]

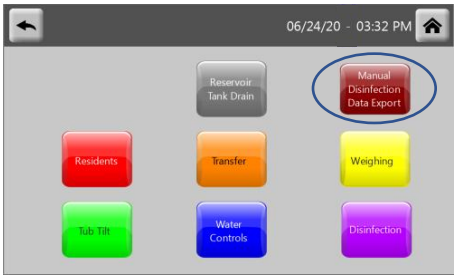
5	[Rada Home Fail] Rada homing failed. Check Rada limit sensor adjustment and stepper motor connection.	Rada limit never detected screw coming off of Rada. Could be an issue with the inductive sensor or Rada motor mount, wiring issue, stepper motor failure.	Manual Reset [Disables Valves]
6	[Res Long Fill] Reservoir taking too long to fill. Verify correct operation of top float sensor	Reservoir filling for a long time without top sensor being triggered. This can be triggered if the plumbing does not have adequate flow or if the water heater cannot keep up resulting in a reduced flow. If this is the case, then adjust the "Reservoir Max Fill Time" variable under "Timer Adjustments" accordingly. Could also be a sensor/ wiring failure.	Manual Reset [Closes Reservoir Fill]
7	[tub long fill] Tub filling for too long. Verify top water sensor is working correctly.	The tub took significantly longer than expected to fill. Top capacitive sensor likely the culprit. Check function/ wiring or increase "Tub Max Fill Time" under "Timer Adjustments" if the cause is slow plumbing.	Manual Reset [Closes Tub Fill Valve]
8	[res long drain] Reservoir taking too long to drain. Verify correct operation of bottom reservoir float sensor.	The bottom float does not reflect that tank has emptied after a given amount of time. Could be sensor failure.	Manual Reset [Prevents reservoir pump from running]
9	[UV Stuck On] Light detected from UV lamps after UV system deactivated. Possible relay failure.	Light sensor indicate that UV lights didn't turn off when they should have. Could also be caused by relay getting stuck in closed position (This is the case if UV lights are truly on.) or by there being too much ambient light behind the tub.	Auto Reset
10	[No Cold Supply] Cold Supply Error – Can't bring down water temp. Check cold supply and verify pully secured to Rada shaft.	System unable to drop water temperature. Could be caused by cold supply be turned off, loss in cold side water pressure, or screw/ setscrew securing large pully to Rada becoming loose. If large pully becomes loose it will slip relative to brass shaft.	Auto/ Manual Reset

Cleaning/ Disinfecting Data Export

Cleaning/ Disinfecting data export.

The Solares tub keeps a log of every time disinfecting, rinsing, and tub filling processes are completed to aid facilities in their disinfection documentation. To pass this information on; the tub will export CSV files into the flash drive that is installed in the USB cable located by the electrical box. The tub will automatically create a CSV data file of logged actions on the first of every month if a USB is installed; however, CSVs can be exported manually as well.

To manually export a CSV file, you will need to be logged in as “admin” and go to the Bathing Menu. From here you just click on “Manual Disinfection Data Export.” If this button is not visible, then you are either not logged in as admin or there is no USB inserted in the device.



Importing Data

Being that the data can be a bit hard to follow as it is exported, we have created a Solares Log.xlsm file to convert the data into a cleaner format and to compile it into one file. This tool can be found on the tub’s flash drive and can be either left on the flash drive or copied onto your device/ server. If you relocate it on your device, you can keep the data from all of your Solares tubs together in a single file. If you have multiple Solares tubs, then you’ll want to set a name for the tubs under Maintenance -> Advanced Maintenance so you can filter your data later.

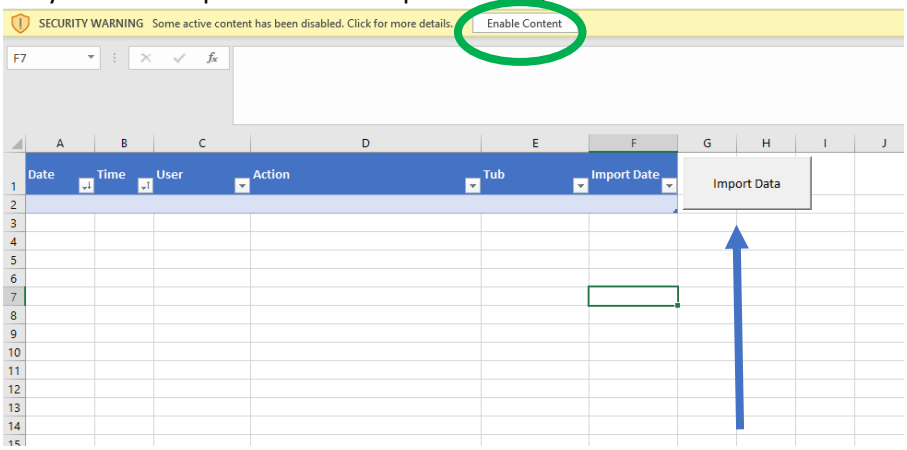
Upon opening the tool, you will need to hit the “Enable Macros” button at the top of your screen if a yellow bar appears. Once this is done you simply push the “Retrieve Data” button to pull the data from the flash drive and enter it into the files table.

Step by Step Import process:

1. Remove Flash drive from USB port to the left of the electrical box.

2. Plug the flash drive into a USB port of your PC and open the Solares Log.xlsm file you wish to import the data into.

3. If a yellow bar is present at the top of the page click on “Enable Content”



4. Click on the “Import Data” button to the right of the table to import the data from the flash drive. Be sure to save the log before closing to avoid losing data.
5. Return USB to USB cable on tub you retrieved it from.