

HANSCRAFT[®]
european spa producer

USER MANUAL

TP 700

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Hot tub performance specifications

For your own safety and the safety of your product, please observe the following instructions. Read the following information carefully and follow the user manual exactly when using the hot tub to avoid damaging the product or the risk of injury. This appliance is intended for use by children 8 years of age or older with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, provided they are under supervision or have been instructed on the use of the product and understand the risks. Children must not play with the product. Cleaning and maintenance must not be performed by children without supervision.

1 Hot tub performance specifications

Performance specifications

nominal voltage:	three-phase connect. 230/400 V 50 Hz*
maximum work current:	3× 16 A
current surge:	up to 3× 25 A
voltage resistance:	1 250 V/min. without puncturing
insulation resistance:	≥ 1 M Ω
water resistance:	IPX5
electrical shock protection:	first level

*The product does not use 400 V phase to phase voltage. It is possible to adjust it to 1× 230 V. When setting to 1× 230 V, it is necessary to observe the cross-section of the supply wire; namely: CYKY – 3× 10. A circuit breaker 63 A and Residual Current protective Device 40 A type C or D, according to the applicable standards of the country where the product is installed. This setting is necessary to maintain all functions of the tub.

Stress load

heating:	1× 230 V/3 kW/13.6 A
ozone:	1× 230 V/50 Hz/80 mA
blower:	1× 230 V/0.66 kW/2.9 A
circulation pump 1/1 + 1/1:	2.2 kW + 2.2 kW + 0.4 kW
overall wattage (depends on the hot tub type):	8.5 kW/h
protection class:	I.
lighting:	LED 12 V/10 W
maximum output:	20 W

Preparation and electrical connection options – AC three-phase current 3× 230/400 V/16 A/20 A

Ensure that the hot tub is always connected to a circuit protected by a Residual Current protective Device with a rated tripping current of 0,03 A. It is necessary to use

Preparation for the installation of the hot tub

a Type C or Type D circuit breaker with a rated current of 16 A (motor circuit breaker) downstream of the Residual Current protective Device.

Recommended Type C circuit breaker

Hot tubs with two massage motors:

3× 16 A/C or D

Hot tubs with three massage motors:

3× 20 A/C or D

!!! THE HOT TUB MUST BE INSTALLED BY AN ELECTRICIAN WITH THE APPROPRIATE QUALIFICATION ONLY !!!

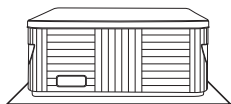
2 Preparation for the installation of the hot tub

Check the hot tub first before the installation. Immediately contact the seller in case any of the parts are broken or missing. Make sure that all the components correspond to your order. Check the hot tub before every use. In case of any damage, do not use the hot tub. In case your spa is equipped with screwless cabinet, it is prohibited to install additional accessories or load the cabinet in a way not specified by the manufacturer. Damage caused by failure to follow this precaution is not covered by the warranty!

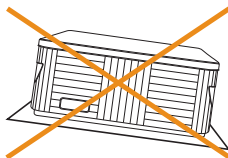
2.1 Preparation of the place for installation and connection to electricity

The hot tub must be installed on a flat, sufficiently solid base plate, taking into account the load-bearing capacity of the building. If the hot tub is installed outdoors, we recommend constructing a concrete monolithic base slab with a minimum strength (thickness) of 10 cm. It is important to also always select the load-bearing capacity of the base slab with regard to the dimensions and the weight of the hot tub. Consult your building supervisor. The weight is specified in the technical description of the given hot tub. The tubs are prepared by us for an electrical connection of 3× 230 V/400 V~ alternating current. Therefore, use a circuit breaker 3× 16 A/C or D, alternatively 3× 20 A/C or D and a Residual Current protective Device corresponding to this connection. Furthermore, it is necessary to have a cable with parameters corresponding to the rightful regulations for this type of connection. **The cable must also have 4 usable meters at the location of the hot tub**, so that it can be pulled through and connected to the control unit without complications. Do not route the cable under the hot tub!

YES



NO



2.2 Preparation for the interior hot tub installation

If the hot tub is installed in an interior space, it is necessary to comply with safety instructions. The basic safety requirements are mainly non-skid floors and drainage in the place of the installation in case of a water overflow. It is also crucial to keep in mind that the humidity around the hot tub will rise and can damage surrounding electric appliances. Therefore we recommend customizing the place of the installation according to these conditions. The hot tub should be accessible from all sides for future repair services. If it is not sufficiently accessible during the guarantee period, the owner has a duty to ensure the access.

2.3 Preparation for the exterior hot tub installation

If the hot tub is installed in an exterior space, it is necessary to comply with safety instructions. The basic safety requirements are mainly non-skid floors and water drainage in case of a rainfall or water overflow from the hot tub. Therefore we recommend customizing the place of the installation according to these conditions.

3 Installation of the hot tub

Warning: connection to electricity must be done according to norms valid in Czech Republic ČSN 33 2000-7-701

3.1 General information

We strongly recommend you to hire professionally trained and qualified technicians for the process of installation. If you decide to install the hot tub by yourself, please abide by the following instructions.

- a) Carefully remove all the packaging material from the hot tub and position the hot tub on a beforehand selected place of installation.
- b) Demount the front panel on the side of the hot tub control panel. Demount the upper cover of an electrical wiring under which you can find a residual current device, a ground fault circuit interruptor (if it is part of the hot tub equipment) and a ground staple. The connection itself must be done by a person with an expert qualification.
- c) Every hot tub is tested in real life conditions during the production process, therefore there is a possibility some technical parts of the hot tub have remained slightly dirty. We recommend you to clean the surface of the hot tub using a suitable method; lukewarm water works best for this purpose. Clean the surface using a soft cloth only. Don't use any rough abrasive means and cloths which could permanently damage the surface of the hot tub. If you decide to use a generic cleaning detergent, it cannot be aggressive towards the hot tub surface.
- d) Before filling the hot tub, make sure that all the screws on the equipment are tightened to prevent water leakage.

3.2 Filling the hot tub with water

Fill the hot tub with a sufficient amount of water. The level of water in the hot tub cannot ever fall under the skimmer level. If you notice a water leak, stop the water until the defect is fixed. Hot tubs do not possess the technology for water-softening and hard water can be damaging to them. The damages caused by poor handling and upkeep are not covered by the guarantee.

- a) Fill the hot tub through a skimmer to prevent an over aeration of the circulation pumps.
- b) Do not fill the hot tub with water of temperature over 104 °F.
- c) Once the water reaches the desired level, put the cartridge filter inside the skimmer. Tilt the filter during the installation to prevent air bubbles. Only after removing the air from the filter, install the filter into place.

3.3 Running the power supply of the hot tub

If the hot tub is connected by a moving supply cable, this cable cannot come in contact with sharp objects or be exposed to external forces. Therefore we recommend putting the supply cable inside a protective case. Turn on a residual current device intended for a hot tub.

3.4 Programming of the hot tub control unit using the control panel

Now you can start the programming of the hot tub. The process is described in the chapter "Control panel". After you are finish the programming, cover the hot tub with a thermo cover and let the water temperature to stabilize. Check the water level inside the hot tub regularly.

4 Aquatic AV audio system

Aquatic AV audio system AQUATIC/MY MUSIC (relevant only for hot tubs equipped with the system)

If you want to play music from an external device, it is necessary to pair the device with the hot tub first (phone, tablet, computer). Turn on the bluetooth system on your external device and search for the AQUATIC device. The connection is not restricted by a code and only one connection can be active at a time. You can play music immediately after the devices are successfully paired. You can control all the functions of the audio system on your connected external device.

5 Control panel (BALBOA TP 700)

5.1 Main displayed data

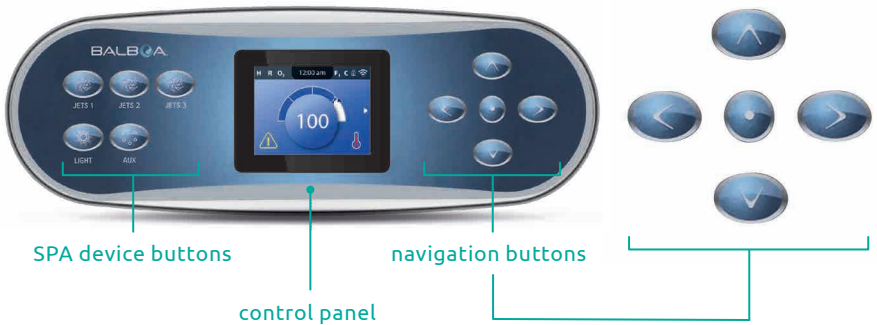


- | | |
|---|---|
| <p>A temperature range</p> <ul style="list-style-type: none"> - high h - low l <p>B heat mode</p> <ul style="list-style-type: none"> - ready r - rest R - ready-in-rest rr <p>C ozone running O₃</p> <p>D time-of-day</p> <p>E filter cycles</p> <ul style="list-style-type: none"> - filter cycle 1 f1 - filter cycle 2 (optional feature) f2 - filter cycles 1 & 2 f+ <p>F cleanup cycle (optional feature)</p> <p>G panel locked and/or settings locked</p> <p>H wifi (local or cloud connection)</p> <p>I navigation arrow</p> <p>J heat status</p> <p>K selection box</p> | <p>L message (may appear)</p> <ul style="list-style-type: none"> - information ⓘ - reminder Ⓜ - error – normal error or warning ⚠ - error – spa will not function until fixed ⚠ <p>M water temperature</p> <ul style="list-style-type: none"> - fahrenheit temperatures are displayed without decimal points (for example, 100 °F is displayed as 100) - celsius temperatures are displayed with decimal points (for example, 37.5 °C is displayed as 37.5) <p>N water temperature bar</p> <p>O set temperature arrow</p> |
|---|---|

Important information about the current state of your spa is displayed on the main screen. *(Not all control systems are configured the same. Spa devices, Settings, and various menu items may vary on your control panel.)*

Control panel

5.2 User interface



SPA device buttons

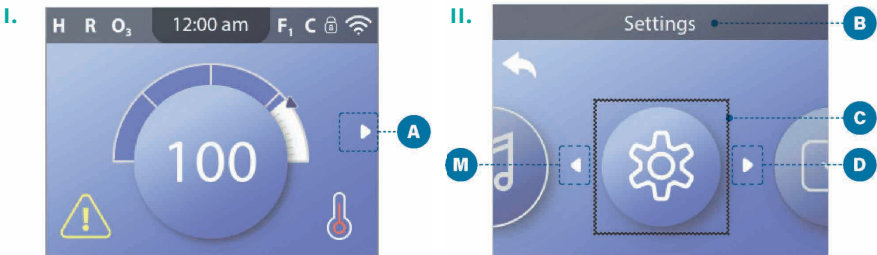
These buttons control various spa devices, such as jets, lights and/or blowers.

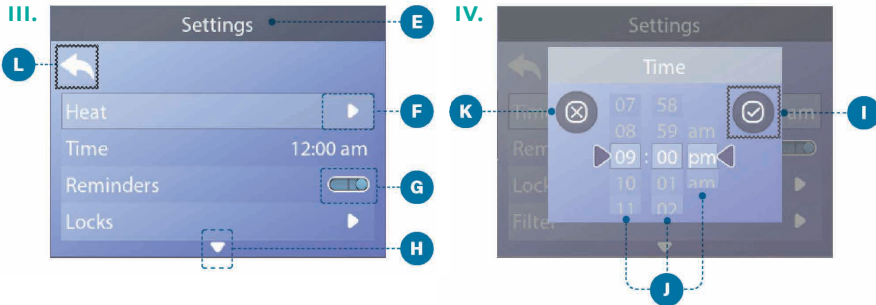
Navigation buttons

Navigate the entire menu structure with the 5 navigation buttons on the control panel. The names shown to the right refer to the navigation buttons in this user guide. The names will be written in uppercase letters. Operating or changing a selected item on the panel screen is generally done with the SELECT button (center button).

Selection box

The selection box is a fundamental navigation tool. It indicates a selected item. Move the selection box by pressing the UP, DOWN, LEFT, RIGHT navigation buttons. When an item is selected, press the SELECT navigation button to act upon the selected item. The next page shows various examples of selected items **C I L**.





Menu navigation

The right navigation arrow **A** on the main screen indicates a menu. Press the RIGHT navigation button to enter that menu. A selection box **C** indicates that a menu item is selected. When a menu item is selected, its name appears at the top of the screen **B**. In this example the *Settings* menu is selected. Press the SELECT navigation button to enter the settings window **E**.

Navigation arrows

Navigation arrows **D F H M** indicate more menu items. Each navigation arrow corresponds to a navigation button (*view page 8*). For example, the right navigation arrow **D** corresponds to the RIGHT navigation button. The left navigation arrow **M** corresponds to the LEFT navigation button, etc.

Back button

Use the *Back button* **L** to navigate back in the menus. Use the navigation buttons to select the *Back button*. The selection box **L** indicates that the *Back button* is selected. Press the SELECT navigation button.

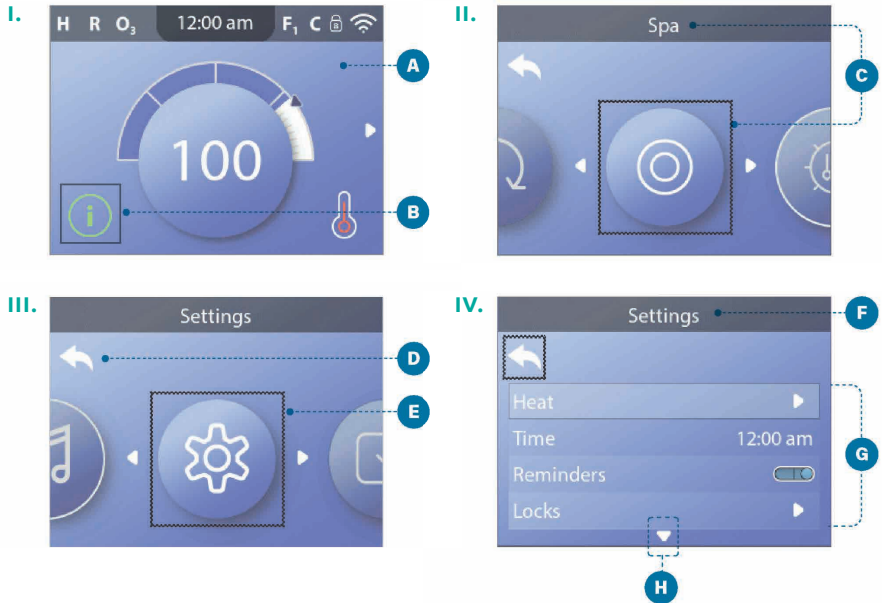
On/Off switches

In this example the *Reminders* setting has an On/Off switch **G**. When the *Reminders* setting line is selected, press the SELECT navigation button to turn the switch On/Off. In this example the switch is On **G**.

Select, Save, Cancel

Select one of these columns **J** with the RIGHT and LEFT navigation buttons. Change the selected setting with the UP and DOWN navigation buttons. After you change the settings, choose the *Save button* **I** and press the SELECT navigation button. After you press SELECT, the change is complete. If you decide to cancel your new settings, select the *Cancel button* **K** and press the SELECT navigation button.

Control panel



Navigate the *Main menu*

- 1 Start from the main screen **A**, and press the RIGHT navigation button to enter the *Main menu*. If the selection box **B** is on the *Message icon*, you need to press the RIGHT navigation button twice to enter the *Main menu*.
- 2 *Spa* is the first item in the *Main menu* **C**. Continue pressing the RIGHT navigation button to view all items in the main menu.
- 3 If you want to navigate back to the main screen, press the UP navigation button to select the *Back button* **D**. Once the *back button* is selected, press the SELECT navigation button and the main screen **A** will appear.

Navigate the *Settings menu*

- 1 Start from the main screen **A**, and press the RIGHT navigation button to enter the *Main menu*.
- 2 *Spa* is the first item in the *Main menu* **C**. Continue pressing the RIGHT navigation button until the *Settings menu* is selected **E**.
- 3 Press the SELECT navigation button to enter the *Settings menu* **F**.
- 4 The navigation arrow **H** indicates more *Settings*. Press the DOWN navigation button to scroll down the list.

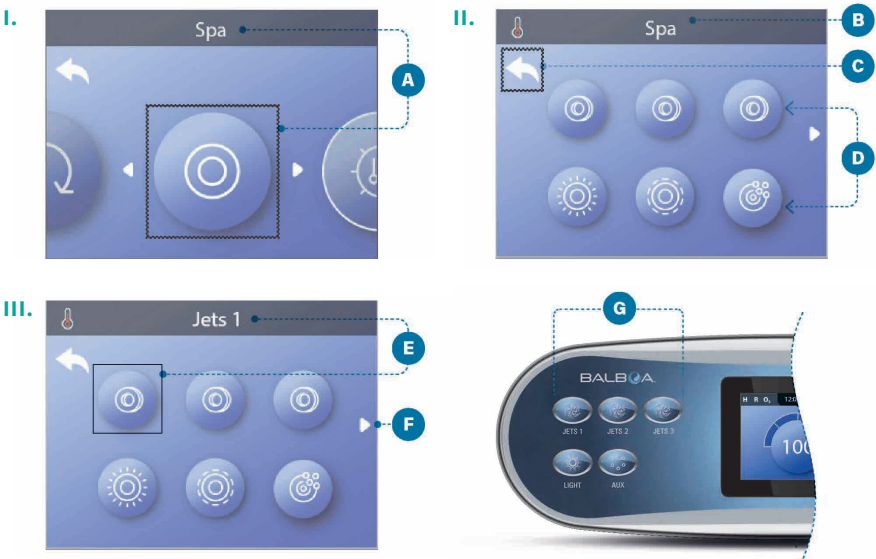
Press-and-Hold

If you need to navigate a long list, press-and-hold the navigation button. For example, press-and-hold the DOWN navigation button to scroll down the *Settings menu* list **G**. The navigation arrow **H** indicates more menu items.

View Message Screen

- 1 Start from the main screen **A**, and press the LEFT navigation button to select the *Message icon* **B**.
- 2 Pressing the SELECT navigation button to view the message screen.
- 3 The message screen may have an *Exit button* or a *Clear button*. Select the button on the screen and press the SELECT navigation button. (view “Exit and Clear Buttons” on page 28 for more information)

5.3 Run spa devices




There are two ways to run spa devices.

- a) Run spa devices by pressing any of these buttons **G**.
- b) Run spa devices from the *Spa screen* by following these steps.
 - Navigate to the *Spa menu* **A**. (view “Navigate the Settings menu” on page 10)
 - Press the SELECT navigation button to view the *Spa screen* **B**. Each icon **D** shown in the Spa screen represents a spa device.

Control panel

- Select JETS 1 **E**. When you select an icon, its name appears at the top of the screen **E**.
- Press the SELECT navigation button to run the spa device.

The spa device is running. 

If you want to navigate back to the main screen, select the *Back button* **C** and press the SELECT navigation button. The main screen will appear. The functionality of each spa device may vary. For example, some devices may have a single speed or state, while other spa devices may have multiple speeds or states. Your spa configuration will determine the number of spa devices and the functionality of each device. One *Spa screen* **B** can display a maximum of six devices. If your spa has more than six, a menu arrow will appear **F**. Press the RIGHT navigation button to view and/or run the other spa devices.

5.4 Spa behavior

Filtration and ozone

If your spa does not have a circulation pump, pump 1 low and the ozone generator will run during a filter cycle. If your spa has a circulation pump, the ozone will run with the circulation pump. Many control systems are factory-programmed with one filter cycle that will run in the evening (assuming the time-of-day is properly set) when energy rates are often lower. The filter cycle time and duration are programmable (*view chapter 5.6*). A second filter cycle can be enabled as needed. At the start of each filter cycle, any additional water devices (such as pumps and blower) will also run briefly to purge its plumbing to maintain good water quality.

Freeze protection

If the temperature sensors within the control system's heater detect a low enough temperature, then the pump(s) and the blower automatically activate to provide freeze protection. The pump(s) and blower will run either continuously or periodically depending on conditions. In colder climates, an optional additional freeze sensor may be added to protect against freeze conditions that may not be sensed by the standard sensors. Auxiliary freeze sensor protection acts similarly except with the temperature thresholds determined by the switch. See your dealer for details.

Cleanup cycle (Optional)

When a pump or blower is turned on by pressing a button on the panel, a clean-up cycle begins 30 minutes after the pump or blower is turned Off or times out. The pump and the ozone generator will run for 30 minutes or more, depending on the control system. On some control systems, you can change this setting.

Pumps

Press the JETS button once to turn Pump 1 On or Off, and to shift between low-speed and high-speed if equipped. If left running, Pump 1 will turn Off after a time-out period. If your spa does not have a circulation pump, Pump 1 will run at low speed when the blower or any other pump is on. If the spa is in *Ready Mode* (view chapter 5.8.2), Pump 1 low may also activate for at least 1 minute every once in a while to detect the spa temperature (polling) and then to heat to the set temperature if needed. When the low-speed turns on automatically, it cannot be deactivated from the panel, however the high speed may be started.

5.5 Settings menu

I. Settings

- Heat
- Time 12:00 am
- Reminders
- Locks
- Filter
- Hold
- Cleanup 1.0 hr
- Units
- Language
- Panel
- Diagnostics

II. Units

- Temperature °F
- Time 12 HR

III. Language

- English
- French
- Spanish
- German

IV. Panel

- Screen sleeps after 30 min
- P. Light
- Brightness 100 %

V. Panel

- Brightness 100 %

Control panel

Fine tune your spa with a wide variety of settings

Navigate to *Settings* **A** to view and/or control your spa. (view chapter 5.2, on page 10, "Navigate the Settings menu") This is an example of a *Settings list* **B**. Your *Settings list* may vary.

HEAT

Make sure your spa is heated and ready to enjoy with *Heat Settings* (view chapter 5.8.1).

TIME

Set the *Time* to insure scheduled features have proper timing (view chapter 5.7).

REMINDERS

Reminders **A** are helpful spa maintenance messages that display periodically.

LOCKS

Lock the *Panel* and/or *Settings* (view chapter 5.10).

FILTER

Keep your spa water clean and ready to enjoy by setting *Filter Cycles* (view chapter 5.6).

HOLD

Hold is used to disable the pumps during service functions like cleaning or replacing the filter. *Hold Mode* will typically last for 1 hour unless the mode is exited manually. You can see how much longer *Hold* will last at the bottom of the screen (for example, "Holding for 0:58"). If you exit this screen, *Hold Mode* ends. If spa service will require more than an hour, it may be best to simply shut down power to the spa.

Drain mode (optional)

Some spas have a special feature that allows Pump 1 to be employed when draining the water. When available, this feature is a component of *Hold*.

CLEANUP CYCLE (Optional)

When a pump or blower is turned On by a button press, a cleanup cycle begins 30 minutes after the pump or blower is turned Off or times out. The pump and the ozone generator will run for 30 minutes or more, depending on the system. You can change this setting on some control systems. If cleanup is set to zero hours, this feature will be disabled. (*Cleanup is not included with all control systems, and control of cleanup is not included with all control systems that have cleanup.*)

UNITS

Specify *Time* and *Temperature Units* **C**. The temperature choices are Fahrenheit or Celsius. The time display choices are 12 hour or 24 hour.

LANGUAGE

Select from a variety of languages **D**.

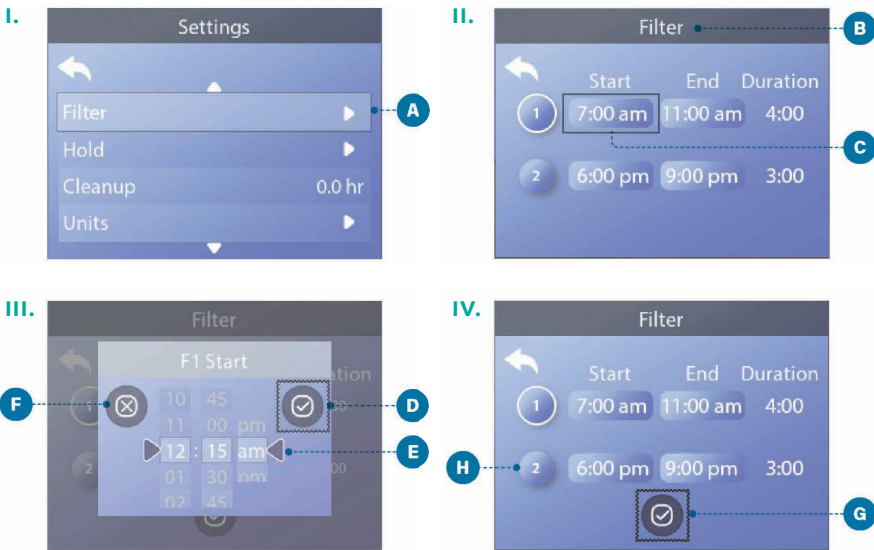
PANEL

Set how long it takes the panel to go to sleep after the last activity. The default is 30 minutes **F**. Turn On/Off the panel lights **G**. Control the brightness of both the panel lights and the panel display together **H**.

DIAGNOSTICS

Spa technicians can find useful information and features in *Diagnostics* (view chapter 5.11).

5.6 Set filter cycle times




Follow these steps to set the Filter Cycles:

- 1 Navigate to *Filter* **A**. (view chapter 5.2, on page 10, "Navigate the Settings menu")
- 2 Press the SELECT navigation button to view the *Filter* screen **B**.
- 3 Select the start time for filter Cycle 1 **C**. Press the SELECT navigation button to view the time controls **E**.

Control panel

- 4 Enter your time settings **E** with the navigation buttons.
- 5 Select the *Save button* **D** and press the SELECT navigation button.

You have set the start time for filter Cycle 1. 

If you do not want to save your settings, select the *Cancel button* **F** and press the SELECT navigation button.

- 6 Follow the same process to change the other filter time settings if desired.
- 7 Once all of the time changes are set, select the *Save button* **G** and press the SELECT navigation button.

You have set all of the filter Cycle times. 

How can you tell if Filter Cycle 2 is enabled?

Filter Cycle 2 is enabled when a white ring appears around the 2 **H**. In this example there is no white ring, so Filter Cycle 2 is disabled. Filter Cycle 2 is disabled by default on many spas.

5.7 Set time-of-day

I. 

II. 

III. 


IV. 

Be sure to set the time-of-day

Setting the time-of-day can be important for determining water filtration times and other background features.

Follow these steps to set the time-of-day:

- 1 Navigate to *Time* **A**. (view chapter 5.2, on page 10, "Navigate the Settings menu")
- 2 Press the SELECT navigation button, and the time screen will appear **B**.
- 3 Use the navigation buttons to adjust your settings **B**.
- 4 Select the *Save button* **C** and press the SELECT navigation button.

You have set the time-of-day. 

If you do not want to save your settings, select the *Cancel button* **H** and press the SELECT navigation button.

If time-of-day has not been set, this information icon appears **G**. Select the *Information icon* and press the SELECT navigation button to view the corresponding message in the *Information screen* **F**. Select the *Exit button* **E** and press the SELECT navigation button to exit the *Information screen*. You can choose a 12-hour or 24-hour time display (view chapter 5.5, on page 15, UNITS). If you choose 24-hour time, "am" and "pm" are removed. CE control systems default to a 24-hour time display.

5.8 Heat settings

Keep your spa heated and ready to enjoy, or keep it cool and save energy. Heat settings help you do both.

Heat settings are divided into two groups:

- Heat modes
- Temperature ranges

5.8.1 Heat modes

There are three Heat modes

READY MODE

Ready Mode usually keeps the water temperature close to the set temperature 24 hours a day. If you use your spa consistently, you probably want to use *Ready Mode*.

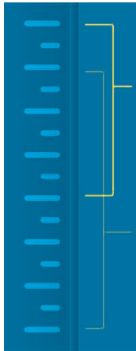
REST MODE

Rest Mode only heats the water during filter cycles. If you do not use your spa for an extended period of time, you may want to use *Rest Mode*.

Control panel

READY-IN-REST MODE

This mode is a sub-feature of *Rest Mode*. When your spa is in *Rest Mode*, and you press the JETS 1 button, *Rest Mode* will automatically switch to *Ready-In-Rest Mode* for one hour. During this hour the control system will attempt to keep the water temperature close to the Set Temperature.



TEMP RANGES

High range

80°–104°F
26,5°–40,0°C

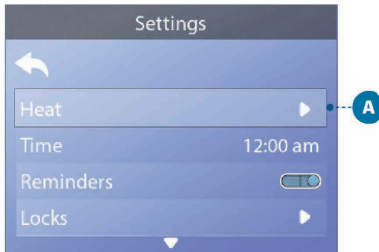
Low range

50°–99°F
10,0°–37,0°C

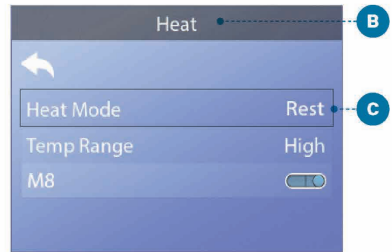
Different high and low temperature ranges may be determined by the manufacturer. Freeze protection is active in high and low ranges.

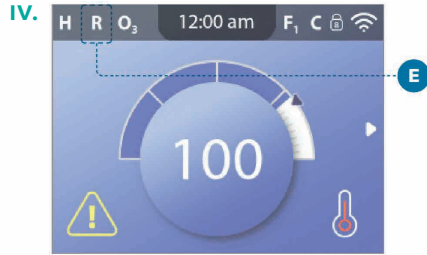
5.8.2 Heat modes

I.



II.





Follow these steps to view the current heat mode and/or change the heat mode:

- 1 Navigate to *Heat* **A**. (view chapter 5.2, on page 10, "Navigate the Settings menu")
- 2 Press the SELECT navigation button to view the *Heat screen* **B**. The current heat mode will appear here **C**. In this example the current heat mode is *REST*. There are two heat modes to choose from: *READY*, *REST*.
- 3 Press the SELECT navigation button to change the heat mode to *READY* **D**.

You have set the heat mode to *READY*.

The change takes effect immediately. No need to press a *Save button*. *READY-IN-REST Mode* is a third heat mode. But, it is a sub-feature of *REST Mode* and is not selectable from the panel menu. The only place you can see whether you're in *READY-IN-REST Mode* is on the main screen, where it shows all three heat modes in icon form. If you are in *READY-IN-REST Mode*, and you want to cancel it (ie, you want to return to *REST Mode*), just go view the current heat mode (where it will say *REST Mode*) and exit. That simple action takes you back to *REST Mode*

Where can I view the current heat mode on the main screen?

The current heat mode is displayed here with an icon **E**. In this example the current heat mode is *READY*. The following list shows which icons may appear on the main screen.

Heat mode icons

READY: **R** / *REST*: **☰** / *READY-IN-REST*: **RR**

5.8.3 Temperature ranges



Follow these steps to view the current temperature range and/or change the temperature range:

- 1 Navigate to *Heat* **A**. (view chapter 5.2, on page 10, "Navigate the Settings menu")
- 2 Press the SELECT navigation button to view the heat screen **B**. The current temperature range will appear here **C**. In this example the current temperature range is *Low*. There are two temperature ranges to choose from: *High*, *Low*.
- 3 Press the SELECT navigation button to change the temperature range from *Low* to *High* **D**.

You have set the temperature range to *High*.

The change takes effect immediately. No need to press a *Save* button.

Can I see the current temperature range on the main screen?

Yes. The current temperature range is displayed here with an icon **E**. In this example the current temperature range is *High*. The following list shows which icons may appear on the main screen.

Temperature range icons

High: H / *Low*: L

5.8.4 M8

M8 is artificial intelligence software contained in your spa's BP control system. M8 looks for opportunities to decrease device usage by evaluating water temperature readings. Stable water temperatures equal less device usage and less wear and tear.



Follow these steps to view the current M8 setting and/or turn it On/Off:

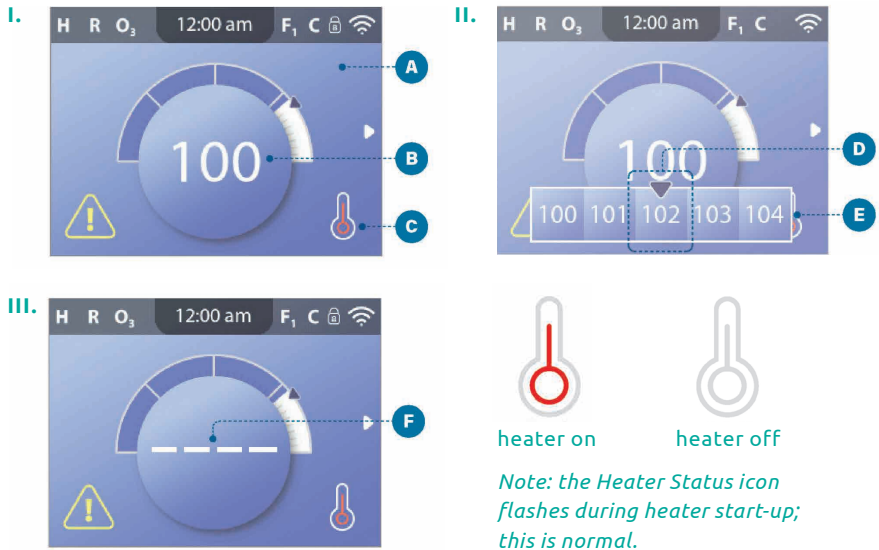
- 1 Navigate to *Heat* **A**. (view chapter 5.2, on page 10, "Navigate the Settings menu")
- 2 Press the SELECT navigation button to view the heat screen **B**. The current *M8* will appear here **C**. In this example the current *M8* setting is Off.
- 3 Press the SELECT navigation button to change the *M8* from Off to On **D**.

You have set the *M8* to On.

The change takes effect immediately. No need to press a *Save* button.

Note: M8 is not available on all control systems!

5.8.5 Change the set temperature



Follow these steps to change the set temperature:

- 1 Start at the main screen **A**. Press the SELECT navigation button to view the temperature menu **E**.
- 2 Press the RIGHT and/or LEFT navigation buttons to change the set temperature. The center box **D** indicates the current set temperature. In this example the current set temperature is 102.
- 3 Once your desired set temperature is in the center box **D**, press the SELECT navigation button, or just wait a few seconds.

The change is complete.

How do I view the water temperature?

The water temperature is displayed here **B** on the main screen.

How do I view the set temperature?

Start at the main screen **A** and press the SELECT navigation button. The set temperature is displayed in the center box of the temperature menu **D**.

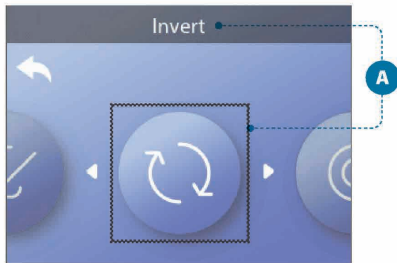
How do I know when the water heater is On?

The center of the *Heater Status* icon turns red **C** when the heater is On, and it turns white when the heater is Off.

What do the dashes indicate **F**?

When the spa is powered On, four dashes appear **F** in the water temperature display for one minute. The dashes indicate that the spa is checking the water temperature. After the pump runs for 1 minute, the dashes disappear and the water temperature is displayed **B**. The dashes may reappear after the pump has not run for one hour.

5.9 Invert display



B inverted display



C default display orientation

Follow these steps to invert the display:

- 1 Navigate to *Invert* **A**. (view chapter 5.2, on page 10, "Navigate the Settings menu")
- 2 Press the SELECT navigation button to invert the panel display **B**. Every screen will be inverted.

You have inverted the display **B**.

(Follow the same steps to restore the default display orientation. **C**)

5.10 Restrict operations



The control can be restricted to prevent unwanted use or temperature adjustments. *Locking the panel* (D) prevents the controller from being used, but all automatic functions are still active.

Locking the settings (C) allows Jets and other features to be used, but the set temperature and other programmed settings cannot be adjusted. Settings lock allows access to a reduced selection of menu items. These include *Filter Cycles*, *Invert*, *Information* and *Fault log*. They can be seen, but not changed or edited.

Follow these steps to lock the settings:

- 1 Navigate to *Locks* (A). (view chapter 5.2, on page 10, "Navigate the Settings menu")
- 2 Press the SELECT navigation button to view the *Lock screen* (B).
- 3 Navigate to *Settings* (C). In this example the *Settings* are unlocked.
- 4 Press-and-hold the SELECT navigation button for approximately 5 seconds. After 5 seconds, the toggle switch will move to the right and turn blue (G) and a lock icon will appear (E).

You have locked the *Settings*.

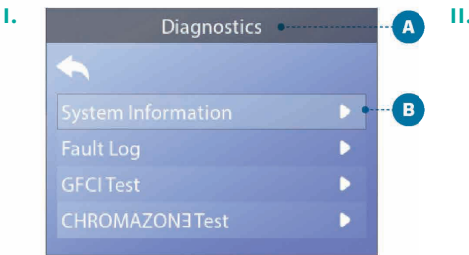
Follow the same steps to lock/unlock the *Settings* and/or *Panel*.

- Navigate back to the main screen. The lock icon on the main screen **H** indicates that the *Settings* are locked.

Can *Settings* and *Panel* be locked simultaneously?

Yes. The lock icon **H** appears if the *Settings* or the *Panel* or both are locked. The current lock states are indicated by the toggle switches in the lock screen **C** **D**.

5.11 Diagnostics



SYSTEM INFORMATION

Follow these steps to view the system information:

- Start from the main screen and navigate to the *Settings* menu. (view chapter 5.2, on page 10, "Navigate the *Settings* menu")
- Navigate to *Diagnostics* and select it to view the *Diagnostics* screen **A**.
- Navigate to *System Information* and select it to view the *System information* screen **C**. This is an example of a *System Information* list **C**. Your *System Information* list may vary. Press the DOWN navigation button to scroll down the whole list.

6 PANEL MESSAGES

This chapter lists all of the panel messages and explains each one. Some panel messages have corresponding *Message codes*. If so, the message code appears below the panel message.

MESSAGE CODES

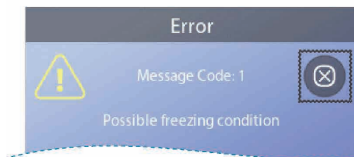
The easiest way to explain a message codes is with a troubleshooting scenario. For example, what happens if the spa water overheats? The panel will display "The water is too hot". Also, the control system will capture the following information and save it in a fault log:

- Time-Of-day.
- Water temperature, Set temperature.
- The number of days that have passed since the water overheated.
- Temperature range.
- Heat mode.
- Message code.

The message code links the panel message to the corresponding fault log information. On this panel, both the panel message text and the message code are displayed in the fault log.

6.1 General messages

Several alerts and messages may be displayed in a sequence.



Possible freezing condition

A potential freeze condition has been detected, or the Aux freeze switch has closed. All water devices are activated. In some cases, pumps may turn On and Off and the heater may operate during *Freeze protection*. This is an operational message, not an error indication.

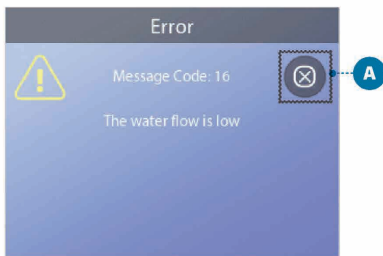
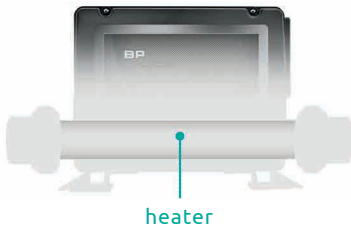
The water is too hot (Message code: M029*)

The system has detected a spa water temp of 110 °F (about 43 °C) or more, and spa functions are disabled. System will auto reset when the spa water temp is below 108 °F (about 42 °C). Check for extended pump operation or high ambient temp.

* View chapter 6.8 for instructions on how to review the fault log that corresponds with the message code

6.2 Heater-related messages

control system



The water flow is low (Message code: M016*)

There may not be enough water flow through the heater to carry the heat away from the heating element. Heater start up will begin again after about 1 minute. See "Flow Related Checks" below.

The water flow has failed (Message code: M017*)

There is not enough water flow through the heater to carry the heat away from the heating element and the heater has been disabled. (see "Water Flow Checklist" on chapter 3.2) After the problem has been resolved, reset the message**.

The heater may be dry** (Message code: M028*)

Possible dry heater, or not enough water in the heater to start it. The spa is shut down for 15 minute. Reset this message* to reset the heater start-up. (see "Water Flow Checklist" on chapter 3.2)

The heater is dry** (Message code: M027*)

There is not enough water in the heater to start it. The spa is shut down. After the problem has been resolved, you must reset the message* to restart heater start up. (see "Water Flow Checklist" on chapter 3.2)

* View chapter 6.8 for instructions on how to review the fault log that corresponds with the message code

**This message can be reset from the panel using the CLEAR button (see the box on page 28)

Panel messages



The heater is too hot** (Message code: M030*)

One of the water temp sensors has detected 118 °F (about 48 °C) in the heater and the spa is shut down. You must reset the message* when water is below 108 °F (about 42 °C). (see "Water Flow Checklist" on chapter 3.2)

Flow-related checks

Check for low water level, suction flow restrictions, closed valves, trapped air, too many closed jets and pump prime. On some systems, even when spa is shut down by an error condition, some equipment may occasionally turn on to continue monitoring temperature or if freeze protection is needed. (see "Water Flow Checklist" on chapter 3.2)

EXIT and CLEAR Buttons

Some messages can be reset from the panel. Messages that can be reset will appear with a *Clear button* **B**. If the message has an *Exit button* **A**, the Message icon will remain on the Main screen once you exit the Message screen.

6.3 Sensor-related messages

Sensors are out of sync (Message code: M015*)

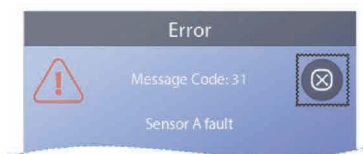
The temperature sensors may be out of sync by 3 °F. Call for service if this message does not disappear within a few minutes.

Sensors are out of sync** (Message code: M026*)

The temperature sensors ARE OUT of sync. The fault above has been established for at least 1 hour. Call for service.

* View chapter 6.8 for instructions on how to review the fault log that corresponds with the message code

**This message can be reset from the panel using the CLEAR button (see the box above)



Sensor A fault, sensor B fault

(Sensor A: Message code: M031*)

(Sensor B: Message code: M032*)

A temperature sensor or sensor circuit has failed. Call for service.

6.4 System-related messages

Program memory failure** (Message code: M022*)

At power-up, the system has failed the *Program Checksum Test*. This indicates a problem with the firmware (operation program) and requires a service call.

The settings have been reset (Persistent Memory Error)** (Message code: M021*)

Contact your dealer or service organization if this message appears on more than one power-up.

The clock has failed** (Message code: M020*)

Contact your dealer or service organization.

Configuration error

The spa will not start up. Contact your dealer or service organization.

The GFCI test failed (system could not test the GFCI) (Message code: M036*)

(North America only) May indicate an unsafe installation. Contact your dealer or service organization.

A pump may be stuck *On* (Message code: M034*)

Water may be overheated. POWER DOWN THE SPA. DO NOT ENTER THE WATER. Contact your dealer or service organization.

Hot fault (Message code: M035*)

A pump appears to have been stuck *ON* when spa was last powered POWER DOWN THE SPA. DO NOT ENTER THE WATER. Contact your dealer or service organization.

* View chapter 6.8 for instructions on how to review the fault log that corresponds with the message code

**This message can be reset from the panel using the CLEAR button (see the box on page 28)

6.5 Reminder messages



Reminder messages can be reset from the panel. Press the *Clear icon* to reset the reminder message.

General maintenance helps

Reminder messages can be suppressed by using the *Reminders Screen*. Reminder messages can be chosen individually by the manufacturer. They may be disabled entirely, or there may be a limited number of reminders on a specific model. The frequency of each reminder (i.e. 7 days) can be specified by the manufacturer.

Check the pH

May appear on a regular schedule, i.e. every 7 days.

Check pH with a test kit and adjust pH with the appropriate chemicals.

Check the sanitizer

May appear on a regular schedule, i.e. every 7 days.

Check sanitizer level and other water chemistry with a test kit and adjust with the appropriate chemicals.

Check ozone

May appear on a regular schedule.

Change the UV as instructed by the manufacturer.

Service check-up

May appear on a regular schedule.

Do a service check-up as instructed by the manufacturer. Additional messages may appear on specific systems.

Clean the filter

May appear on a regular schedule, i.e. every 30 days.

Clean the filter media as instructed by the manufacturer.

Test the GFCI (or RCD)

May appear on a regular schedule, i.e. every 30 days.

The GFCI or RCD is an important safety device and must be tested on a regular basis to verify its reliability. Every user should be trained to safely test the GFCI or RCD associated with the hot tub installation. A GFCI or RCD will have a TEST and RESET button on it that allows a user to verify proper function.

Change the water

May appear on a regular schedule, i.e. every 90 days.

Change the water in the spa on regular basis to maintain proper chemical balance and sanitary conditions.

Clean the cover

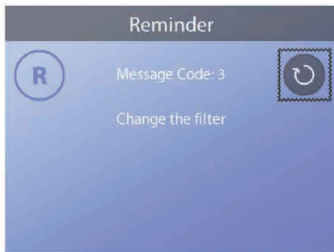
May appear on a regular schedule, i.e. every 180 days.

Vinyl covers should be cleaned and conditioned for maximum life.

Treat the wood

May appear on a regular schedule, i.e. every 180 days.

Wood skirting and furniture should be cleaned and conditioned per the manufacturers instructions for maximum life.



Change the filter (Message code: M03*)

May appear on a regular schedule, i.e. every 365 days.

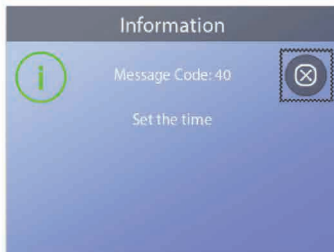
Filters should be replaced occasionally to maintain proper spa function and sanitary conditions.

Change the UV

May appear on a regular schedule.

Change the UV as instructed by the manufacturer.

6.6 Miscellaneous messages



Set the Time-of-Day

When a control system that displays this message is powered On, its time-of-day is initialized to 12:00 PM. Setting the proper time-of-day is important for determining filtration times and other background features (*view chapter 5.7*).

* View chapter 6.8 for instructions on how to review the fault log that corresponds with the message code

Panel messages

6.7 Message notes

Some messages include the "call for service" text as it requires a service technician to fix the problem. If the panel is locked and a message alert appears, you will be taken to the lock screen (where you will need to unlock the panel) before you can clear the message.



The selection box defaults to the *Clear* or *Exit icon* **A** on the *Message* screen. Press the LEFT navigation button to move the selection box to the *Error/Warning/Reminder icon* **B** and then press the SELECT navigation button to go to the *System Information* screen (view chapter 5.11).

control panel

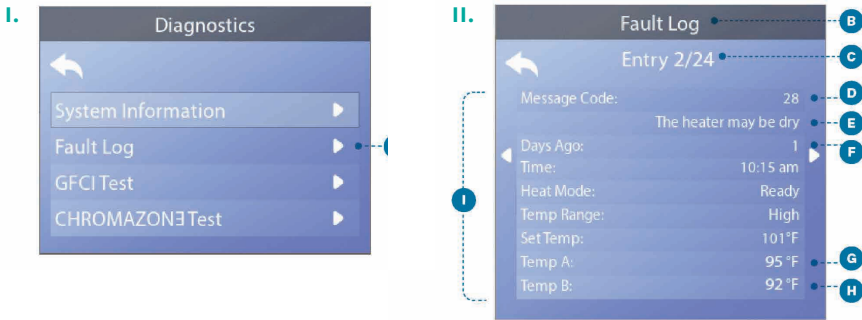
panel cable



Communications error

The control panel is not receiving communication from the control system (view diagram beside). This can appear briefly during system start-ups. This is normal. If it does not go away quickly, call for service.

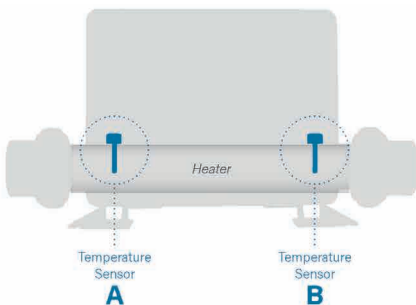
6.8 Fault log



Useful information about your spa is captured when a fault occurs. The information is stored in a *Fault log* **B**. Up to 24 faults can be stored in the *Fault log*. This is an example of information that is captured in one fault **I**; Your information may vary. This information can help spa technicians diagnose and fix issues. Not every entry in the *Fault log* is an actual "fault". For example, message code **M019** is inserted into the fault log to identify each time the spa restarts.

Each time a fault occurs, it is assigned a unique number, starting with number 1. The next fault is assigned number 2, and so on. Up to 24 faults can be stored in memory. In this example the fault number is 2/24 **C**. This means it is the second fault in a list of 24 faults. The fault with the highest fault number is the most recent fault. Each fault is assigned a message code **D**. The code corresponds with a panel message **E**. In this example the message code is 28. All panel messages and message codes are listed and explained in the start of chapter 6 (*view page 26*).

control system



"Days Ago" indicates the number of days that have passed since the fault occurred **F**. Each time power to the spa is cycled Off and On again, a new day is added. "Temp A" **G** is the temperature reading from sensor A, which located inside of the control system's heater shown below. "Temp B" **H** is the temperature reading from sensor B, which located inside of the control system's heater shown below.

7 SUPPLEMENTS

WARNING! Qualified technician required for service and installation.

Basic installation and configuration guidelines

- Use minimum 6AWG copper conductors only.
- Torque field connections between 21 and 23 in lbs.
- Readily accessible disconnecting means to be provided at time of installation.
- Permanently connected.
- Connect only to a circuit protected by a class A ground fault circuit interrupter (GFCI) or residual current device (RCD) mounted at least 5' (1.52 m) from the inside walls of the spa/hot tub and in line of sight from the equipment compartment.
- CSA enclosure: type 2
- Refer to wiring diagram inside the cover of the control enclosure.
- Refer to installation and safety instructions provided by the spa manufacturer.

Warning: People with infectious diseases should not use a spa or hot tub. To avoid injury, exercise care when entering or exiting the spa or hot tub. Do not use a spa or hot tub immediately following strenuous exercise. Prolonged immersion in a spa or hot tub may be injurious to your health. Maintain water chemistry in accordance with the Manufacturers instructions. The equipment and controls shall be located not less than 1.5 meters horizontally from the spa or hot tub.

Warning! GFCI or RCD protection

The Owner should test and reset the GFCI or RCD on a regular basis to verify its function.

Warning! Shock Hazard!

No User Serviceable Parts. Do not attempt service of this control system. Contact your dealer or service organization for assistance. Follow all owner's manual power connection instructions. Installation must be performed by a licensed electrician and all grounding connections must be properly installed.

CSA Compliance/Conformité

Caution!

- Test the ground fault circuit interrupter or residual current device before each use of the spa.
- Read the instruction manual.
- Adequate drainage must be provided if the equipment is to be installed in a pit.
- For use only within an enclosure rated CSA enclosure 3.
- Connect only to a circuit protected by a class A ground fault circuit interrupter or residual current device.

- To ensure continued protection against shock hazard, use only identical replacement parts when servicing.
- Install a suitably rated suction guard to match the maximum flow rate marked.

Warning!

- Water temperature in excess of 38 °C may be injurious to your health.
- Disconnect the electrical power before servicing.

Warning/Advertissement!

- Disconnect the electric power before servicing. Keep access door closed.

8 Upkeep of the hot tub

8.1 General information

Do not expose the hot tub to sun without water inside or a cover on top. The direct sunlight can cause fading and deformation of the surface material. When you are not using the hot tub, cover it with the thermocover, regardless of whether it is empty or full. Protect the hot tub from rain and snow. Place the hot tub under a gazebo or a roof if possible.

- Do not open the control unit. There are no user-fixable parts inside.
- Drain, clean and fill the hot tub with clean water on regular schedule.
- Clean the filter cartridge at least once a week.
- The hot tub user should have a proper shower before and after the use of the hot tub.

8.2 Removal and cleaning of the filter cartridge

The hot tub filter cartridge can get clogged by calcareous and mineral particles from a hard water, which can lead to a restricted water flow inside the filtration system.

We recommend to clean the filter cartridge at least once a week.

Remove the cartridge and the skimmer insertion. Using a garden hose, clean the cartridge so that no settled dirt remains in the corners of the filter. Once clean, put the insertion back to the skimmer. Put the cartridge inside the skimmer tank next and close it. Remember that the filter cartridge has to be replaced every 3–6 months. Replace it even sooner if it is damaged or clogged, it is not usable in such state.

Make-up, sunscreens and other types of body lotion decrease the quality of the water and lower the filter cartridge longevity.

8.3 Maintaining the quality of the water in the hot tub

WARNING: Always add the chemicals to the water, never the other way around. Add the chemicals to the water only when there are no people inside. Use the circulation pumps to mix the chemicals with the water. Store the chemicals according to the instruction on their label.

- a) Use a suitable water hardness regulator regularly (the **HANSCRAFT SPA Water hardness regulator** is recommended) and follow the instructions on the chemicals' label.
- b) Depending on the frequency of use of the hot tub, test the water quality regularly by a suitable water quality tester.
- c) Adjust the water pH level accordingly by suitable water chemicals (the **HANSCRAFT SPA – pH PLUS** and **pH MINUS** is recommended).
- d) Adjust the Cl (chlorine) level with suitable water chemicals (**HANSCRAFT SPA – MULTI MINI 3 in 1 tablets** are recommended). Follow the instructions on the chemicals' label.
For the chlorine to have the desired effect, the pH level needs to be adjusted first.
- e) We recommend you to clean/replace the filter cartridge before adding the chemicals.

Chlorine shock – in case of extreme pollution, it is necessary to treat the water with a dose of fast dissolving chlorine and thus perform a chlorine shock. The pH level of the hot tub water has to be adjusted to 7.0–7.6 first and the chlorine level has to be checked. Once a week or after adding a large amount of fresh water to the hot tub, add a shock dose of chlorine 10–20 g/m³ (2 table spoons) into the water. Add the chlorine only when there are no people in the hot tub. After you add the chlorine, turn on the circulation pumps so that the chemicals mix well with the water. If you are using a granulated form of the chemical, dissolve it in a small amount of water first. Let the chlorine level drop to 3 mg/l before you start using the hot tub.

Oxygen shock – in case of extreme pollution, it is necessary to treat the water with a large dose of fast dissolving oxygen and thus perform an oxygen shock. The pH level of the hot tub water has to be adjusted to 7.0–7.6 first and the oxygen concentration in the water has to be checked. Once a week or after adding a large amount of fresh water to the hot tub, add a shock dose of oxygen (2 tablets) into the water. Add the oxygen only when there are no people in the hot tub. After you add the oxygen, turn on the circulation pumps so that the chemicals mix well with the water. Let the oxygen level drop to 15 mg/l before you start using the hot tub.

Store the chemicals according to the instructions on the label.

Ideal chemical levels

Free chlorine concentration (active oxygen concentration)	0.7–1.0 mg/l (10–15 mg/l)
pH level	7.0–7.6
Calcium	100–180 mg/l
Overall alkalinity	80–120 mg/l

8.4 Replacing the water

It is important to keep the hot tub water fresh and clean. We recommend you to replace the water at least every 3 months unless the water quality drops sooner. The hot tub water can be used for watering the garden for example, given that it has not been chemically treated at least one week prior.

- Disconnect the hot tub from the power supply (turn off the residual current device).
- Check the power supply cable and make sure it is not wet.
- Drain the water through a water drainage system, close it carefully and fill the hot tub with fresh water.
- Connect the hot tub back to the electrical circuit (turn on the residual current device).

8.5 Cleaning the outer shell of the hot tub

Use a mild, not abrasive cleaning detergent and a soft cloth.

8.6 Hot tub hygiene and disinfection

Taking care of hygiene is extremely important for elimination of any germs, algae and other harmful organisms polluting the water in the hot tub. Test the water using the testing kit first (to find out the pH and Cl level) and follow by using suitable water chemicals accordingly. Follow the instructions on the chemicals' label carefully.

8.7 Thermocover

Using the thermocover helps saving up energy expenditures by minimizing temperature loss and evaporation. The cover is an effective way of protecting your hot tub from impurities and fallen leaves.

Upkeep of the hot tub/Winter and summer time

WARNING: For safety and damage prevention reasons, do not sit, stand or lie on top of the cover. Do not place any objects on top of it. The thermo cover does not serve as a fence around the bathing area either. Do not let animals walk on top of the thermo cover. Prevent a large snow layer build up on top of the thermo cover.

8.8 Upkeep of the thermocover and upkeep instructions

It is important to take a proper care of the thermocover: clean it when necessary and treat it with a product intended especially for an eco-leather or fake leather. The guarantee does not cover damages caused by an inappropriate cleaning product.

- a) The right balance of water chemicals represents an important factor in prolonging the longevity of your hot tub thermocover.
- b) Remove the hot tub's cover and place it on the ground surface down.
- c) Wash the cover with a large amount of water from a garden hose or a water bucket.
- d) Clean the thermocover surface using a soft brush and a mild dish soap solution (1 tea spoon of dish soap per 8 litres of water).

Attention: Do not let the dish soap solution dry on the thermocover before washing it off!

- e) Wash off the cleaning solution thoroughly.
- f) Return the cover back on the hot tub.
- g) Open the thermocover regularly so that the chemical vapours can disperse. Flip the thermocover inner side up at least twice a year for 3–4 hours.
- h) If the thermocover does not get regularly cleaned twice a month, the surface material can become frail or age prematurely. The seams can separate. If you do not clean the thermocover appropriately, the guarantee becomes invalid.

WARNING: Do not lift the thermocover by the handles. A vacuum forms between the thermocover and the hot tub therefore lifting by the handles could result in a damage. It is necessary to support the thermocover from below by hand.

9 Winter and summer time

Winterizing the hot tub, a process recommended by the producer.

It is required that all water gets drained from the hot tub during the process of winterizing it, as well as water from all the technical parts of the hot tub (circulation pumps, pipes, etc.) We recommend you to use our specialized service for this purpose because flawed winterizing of the hot tub can result in a loss of the guarantee. If you decide to use our professional services, it is necessary to order them sufficient

Winter and summer time/Final establishments

amount of time in advance. In case of winterizing the hot tub by yourself, it is crucial to do it when the air temperature is still above zero. If the winterizing is done in temperatures below zero, it can be very difficult because water in the motors could have frozen already and damaged some parts of the hot tub.

9.1 Winter time – using the hot tub, all year operation (SLP)

If you decide to keep using the hot tub during the winter time, it is necessary to keep checking the hot tub for cases of for example: circuit break failure, motor not working, heating not working, filter cartridge getting clogged.

If the instructions above are not complied with and it results in a damage of the hot tub, the warranty cannot be claimed.

9.2 Summer time

Do not expose the hot tub to direct sunlight; do not use inappropriate cleaning detergents for upkeep. Prevent the hot tub surface coming in direct contact with chemicals as well as surface scratches cause by sharp objects. Ensure the safety of children in the hot tub by a continuous adult supervision. Only eligible persons over 18 years of age, educated about the whole process, can be operating the hot tub. The same goes for handling the water chemicals, which have to be stored out of children's reach.

10 Final establishments

10.1 Guarantee conditions

Guarantee conditions abide by terms and conditions of your distributor.

10.2 Safe disposal of the product after the service life

Hire a professional service to dispose of the hot tub after it reaches the end of its longevity. According to the WEEE directive (Electronics and electrical appliances waste) this device cannot be disposed of like a regular waste.



10.3 Warranty claims and repair services

Potential warranty claims abide by the consumer protection laws and the warranty claims policy of your distributor.

Repair services chart/Notes

11 Repair services chart

A TABLE FOR YOUR NOTES, PLEASE FILL OUT THE FOLLOWING INFORMATION. You will need the filled out information in case of a repair requested through the customer service line.

Purchase date	
Delivery date	
Model name	
Serial number	
Seller information (name, phone number)	

12 Notes

Illuminated cabinet

If you have a product with an illuminated cabinet (not illuminated corners) or extended casing and use a Bypass, it is always necessary to connect the external device by creating an opening in the cabinet, as it cannot be routed through the bottom.

HANSCRAFT[®]
european spa producer

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