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# Spa & Hot Tub Topside Touchpad Error Messages & Fault Codes

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The spa/hot tub messages and codes listed here are a combination of error or fault codes, operational and reminder messages for ALL (that we've managed to source) brands of spa equipment from around the world, from the late 1980's to Present.

It includes brands manufactured in USA, Canada, UK, Italy, Israel, Australia, and China, including inflatable spas, portable spas and in-ground spa control systems.

Many have been used on spas sold or imported into Australia, but many others have only been used in Europe or North America. There is still a very large number of unknown Chinese spa systems we are yet to identify and acquire manuals and codes for.

Along-side each code is a brief description of its meaning.

Under no circumstances should you use this information to attempt a repair unless properly qualified to do so. We have provided this information as a reference, and for qualified tradesmen to utilise as required.

Causes of the most common following spa / hot tub error fault codes

Flow/Pressure switch open – dirty filters, blockages, switch failure, low water level, pump failure. Flow/Pressure switch closed – switch failure, pump PCB relay stuck closed Hi-Limit fault – dirty filters, blockage, low flow, sensor fault, failed pump – sensor reads 45C+ / 112F+

Temperature sensor fault – sensor failed, low flow, incorrectly positioned sensor Over heat fault – Same as sensor fault, pump not running, relay failed – sensor reads 38-45C / 100-112F

Spa/Hot Tub topside touchpad messages and codes are listed by brands.



## Gecko Aeware topside touchpad error codes & messages

#### in.xe and in.y series

If the code is a 'Slave' code, it's a fault with the slave unit - same error cause as the main unit

AOH or AO2 (swim spa slave) Prr / Pr or Pr2 (swim spa slave) or OH2 (swim spa slave) OH

FLO / CFLO or FL2 (swim spa slave)

LO1 FLO / LO2 FLO

NO FLO

or HL2 (swim spa slave) Hr / HR or Hr2 (swim spa slave) HR / HRA or HR2 (swim spa slave)

**FCL** SPin **PoUP** Lxx / LLxx UPL / BL

Er1 (swim spa) SLA (swim spa) LLxx (swim spa) **LLEr** (swim spa)

StbY OFF Fx, FFxx **FSxx** 

Fdxx, dx EP 0 or 1

**ESxx** Edxx **EExx Econ** rLY

Comm / CoE

Supp HP1-99 HIBr / HiBr LoBr / NoBr

Wipe Screen Animation

Switch/Buzzer (or other random message)

HP01-99

Spa pack temperature too high Temperature sensor failure

Over heat 43c Flow error Flow error

Persistent flow error

Hi-limit 48c

Internal hardware error - Thermal Fuse Internal hardware error - Stuck relav

Pressure switch closed Input voltage too low

Power Up

Low level software setting No low level software loaded

Communication between Master & Slave failure Main touchpad has been connected to the slave unit

Unable to select LL program – reverts to menu – faulty Slave LL program is not a swim spa config & slave unit detected

Standby mode 30 min all outputs off

Filter cycle frequency per day

Filter cycle start time Filter duration in hours Economy mode on/off

Economy mode start time Economy mode duration in hrs Economy mode end time

Economy mode set

Stuck relay

Verify cable connections – communication error

Connect power to 240v Heat pump error service code

Add fresh water Add BromiCharge

Too much water on in.k1000 touchscreen

Touchpad factory test mode triggered – faulty touchpad

Heat pump error service code

#### in.xm

SP-br

SP-Ot SP-OH SP-Hr SP-in SP-Fx (x=1, 2, or 3) SP-OC rH-Hr

rH-HL rH-nF rH-Pr rH-nC rH-nH Incorrect input current set

in.xm Spa pack under spa too hot Over heat – water temp 48c Internal hardware error Input voltage too low Fuse 1-3 blown

Overcurrent by more than 10% Hardware error in in.therm heater

Hi-limit circuit tripped No flow detected

Regulation temperature sensor failed Communication error - heater to pack Not heating - no temp increase detected rH-ld Px-Er CP-Er bL-Er Fn-Er Sc-Er LLxx Ph-xP brxx --- (after initial priming)

Switch/Buzzer (or other random message)

Cycling Heat & Thermometer symbols

#### in.xm2

rH-Id Hr HR HL OH rH-nC Rh-Er Pr-r / Pr AO-H SP-in FL-O / CFLO LO1 FLO / LO2 FLO

NO FLO FL-C Fx Sc-Er Fr-Er

Sc

bL **P9** UP-Ld UPL / BL Comm Supp HP01-99

HIBr / HiBr

HP99

LoBr / NoBr Wipe Screen (Animation)

Switch/Buzzer (or other random message)

No match between heater and pack models No detection of Pump current draw P1-5-Er No detection of current change on circ pump No detection of current change on blower No detection of current change on fan

System learning error Low level software setting

Incoming power - number of phases 1-3

Input current setting

Possible broken or bent heater sensor pin(s)

Touchpad factory test mode triggered - faulty touchpad Reg slope temperature check issue - clean/align heater

element or replace in therm heater

No match between heater and pack models Hardware error detected - thermal fuse Hardware error detected – stuck relay Hi-Limit circuit tripped 50c

Overheat, Water temp at 44.5c Communication error – heater to pack Lazboy hot tub remote heater fault Temperature sensor failed

Spa pack under spa too hot Input voltage too low No flow detected

Flow error

Persistent flow error Flow switch closed Fuse blown F1-3

Scan error detected / system learning error Input power frequency 50/60hz out of range

System scanning – 1st power up No firmware downloaded into system Programming firmware into system No valid low level software uploaded No valid low level software uploaded

Verify cable connections Connect power to 240v Heat pump error service code

Add fresh water Add BromiCharge

Too much water on in.k1000 touchscreen

Touchpad factory test mode triggered - faulty touchpad

#### in.temp Heat pump

HP01 HP05 HP09 HP18 **HP19** HP22 HP41 HP42 HP46 HP51 HP55 HP56 HP63 HP65

System 1 exhaust temp sensor fault

Coil temp sensor fault

Water flow protection

System 1 return gas temp fault Water outlet temp sensor fault Water inlet temp sensor fault Ambient temp too low

System 1 high pressure protection System 1 low pressure protection System 1 exhaust temp too high

Water inlet-outlet temp differential protection

Water outlet too cold for cooling

Water outlet temp too low when defrosting

Ambient temp too low Communication Error





## ACC topside touchpad error codes & messages

CoLd Temperature approaching zero

ОН Over Heat condition

**HLEr** Hi-limit over heat sensor failure **SEoP** Temperature sensor open circuit **SESH** Temperature sensor short circuit

**PSoC** Pressure switch open circuit with circ pump

**PSoL** Pressure switch open with low spd pump Pressure switch open with high speed pump **PSoH** 

CboH Control box over heat 115f / 46c Time out error – system shutdown ToE

**CLDN** Cool down cycle ECL Energy saving cycle Air blower Channel clear CHCL

UTO User time out **PUF** Post use filtration

**MENU** Menu access **CANC** Cancel/discard changes

**SEND** Save changes **CALB** Calibration for temp Filtration period FPx (1-4)

Silence period start time SIL

Filter duration FPxd (1-4)

Silence timer duration SILd





# **Spa Parts**

## Arcadia A-tech topside touchpad error codes & messages

Water tap icon crossed out

Bell icon & HEAT Bell icon & ICE

**ICE** 

Bell icon & LD F Bell icon & LEAK

**CLDF FHL** 

**RPH** 

**RSA RCL** 

RT9 **RDR RCO** 

**RTR** 

Low water level detected

Water temperature above 45c

Water temperature below 5c

Winter mode Load failure

Faulty wiring detected

Low flow

Temperature difference over 5c - low flow

Reminder – test pH Reminder – sanitise spa Reminder - clean the filter

Reminder - test RCD safety switch

Reminder - drain / refill Reminder - clean spa cover

Reminder – treat / clean spa cabinet



Arctic Spas topside touchpad error codes & messages

Prr

HL (flashing) HL (solid)

FLO FLC OtH

FrEEzE ProtEct (scrolling)

dEcL GF LocP LocF

tSt HPt

Hd pH

Spa light flashing

Temperature probe failure or disconnected

Over temperature 44.5 degrees

High Limit 48 degrees Flow switch open circuit Flow switch closed circuit

Heater barrel rate of heating is too fast

Water temp below 10 degrees – freeze protection mode

Circuit breaker setting overload error

Ground/Earth Fault Partial touchpad lock Full touchpad lock

System testing hi-limit probe on start up Heater probe test failed – re-attach to heater

Hi Limit probe disconnected pH error – pH above 8.2 Damaged PCB processor Error code/condition present



## Astrel Modo topside touchpad error codes & messages

FLC FLO

Ho or HL (flashing) HoH, HOH or HL (steady)

H2O HPF

rPF or Prr

Ferr

FULL Fus1

Fus2 Fus3

Er1 Er2

Er3

Pressure / Flow Switch Closed Pressure / Flow switch Open Over Temperature 44C High Limit 55C (48C for HL)

Low water level
Hi Limit sensor failure
Temperature sensor failure

System error

Compensation vat detecting water

Fuse 1 failure Fuse 2 failure Fuse 3 failure

Wrong pump configured with heater 2 speed pump low and high reversed

Output load not detected



## Balboa topside touchpad error codes & messages

#### M7 messages

--- or ---- F, -- C, or --

**BUF** 

CFE or CONFIG ERROR
CrC or CHKSUM FAIL

dr, HEATER MAY BE DRY WILL RETEST SHORTLY

drn, DRAINING

drY, dY, HEATER DRY SERVICE REQD

Ecn, Ec

gFI, GFCI FAILURE

HFL, HL, HTR FLOW LOW Hot, HOT-CALL SVC Temperature not available

Temperature not available - priming

Internal problem detected

Configuration error

Firmware installation failure

Possible inadequate water detected Indicating pump is on while draining

Inadequate water detected Economy mode set

Spa could not trip RCD

Substantial difference between sensors

Possible pump stuck on

ICE, IC, 1C, FREEZE COND

LF, LOW FLOW

OHH, HH, HTR TEMP LMT SERVICE REQD

OHS, OH, SPA TEMP LMT PHH, PH IS HIGH LOWER PH PHL, PH IS LOW RAISE PH Pr, PRIMING MODE TAKES 4 MIN

PSt, PERSIST FAIL rt9, TEST GFCI

rCA, CHANGE MINERAL CARTRIDGE

rCH, NEW FILTER
rCL, CLEAN FILTER
rCO, CLEAN COVER
rdr, DRAIN WATER
rPH, CHECK PH
rSA, CK SANITIZER
rtC, RTC FAILURE
rtr, TREAT WOOD
SAH, SANITIZER HIGH
SAL, SANITIZER LOW
SbY, Sy, STANDBY MODE
SE, STANDARD ECONOMY
SF, SAFETY FAULT

SLP, SL

SnA, SA, SnR, SENSOR A SERVICE REQD Snb, Sb, SENSOR B SERVICE REQD

SnH Snt SnS, Sn

Std, St, STANDARD StU, STUCK ON Potential freeze condition – pumps run

Persistent low flow problem Overheat – spa shut down Overheat – spa shut down

pH is high pH is low

Initial priming mode active

Hardware failure Reminder – test RCD

Reminder - change Nature 2 cartridge

Reminder – replace filter Reminder – clean filter Reminder – clean spa cover Reminder – drain & refill spa

Reminder – test/adjust chemical levels Reminder – test/adjust sanitiser levels

Hardware Failure

Reminder - wood retreatment required

Sanitiser level is high Sanitiser level is low Spa is in 'standby' mode

Spa is in 'Standard-Economy' mode

Suction protection fault Spa is in 'sleep' mode Sensor A not working Sensor B not working High Limit sensor fault Temperature sensor fault Sensors out of balance Spa is in 'standard' mode Pump appears to be stuck on

## Non M7 messages (older controllers with pressure switch)

pd OH Flo, Fl Cool ICE, IC Sn1, Sn Sn3, Sn ILOC Ec. Econ

Std, St

SI, SIp

Power down, on battery back up

Parts

Overheat Flow problem

Spa is 11 degrees below set point

Possible freeze condition

Hi-limit fault

Temperature sensor fault

Interlock fault

Spa is in 'economy' mode Spa is in 'standard' mode Spa is in 'sleep' mode

#### Flashing LED messages - Balboa

1 flash, 3 second gap

2 flashes, 3 second gap 3 flashes, 3 second gap

4 flashes, 3 second gap Flash – 1 second on, 1 second off

Flash – briefly OFF once per second Flash – briefly ON once per second Hi-limit fault

Pressure switch closed (FLC) Pressure switch open (FLO) Temperature sensor fault

Hi-limit, OH Sensor fault

Pressure switch fault



## onga (Balboa) topside touchpad error codes & messages

#### Onga 4352, 4353, 4395

LED 1 flash per second LED 3 flashes per second Pressure switch open circuit, insufficient flow Temperature sensor or pcb fault

#### **Director & Turbo series**

Jet LED slow Green (2-3 sec interval) Jet LED fast Green (1 sec interval) Jet LED slow Red 2-3 sec interval) Jet LED fast Red (1 sec interval) Initial prime fail, pressure switch open cct Pressure switch open beyond initial start Temperature sensor failed Hi-limit over temperature cut out

#### **Bathmaster Series**

LED green flashing 'Power' indicator LED orange flashing 'Jets / Pump' indicator LED red flashing – 3 flashes Low or high voltage condition or pump in 'lock out' Loss of prime. Pressure switch open PCB fault



## Bestway Lay-Z-Spa topside touchpad error codes & messages

**GCF** 

-.-. and RED heater light -.-. and GREEN heater light

All lights flash E01 (some models)

E01 E02 E03 E04

E05 E06

E08

E09

E10 E11

E12

E13 End Not grounded/earthed correctly

Over temp condition

Water temperature detected below 4 degrees C Safety circuit operation – 'Test' button pressed

System error

Flow sensor closed circuit Flow sensor open circuit

Water temperature below 4 degrees C Water temperature over 50 degrees

Thermometer sensor fault

Power supply fault

Manual reset thermal cut out fault

104C Fuse Fault High salt level alarm Low salt level alarm

Water leak inside the pump

Signal line disconnected between touchpad and PCB System stops after 72 hrs operation. Press 'Unlock' 3 secs



Brett Aqualine topside touchpad error codes & messages

#### BL-46 / BL-70 / BL-80

OH Fr

FL / FLo E0

E1 E2

**E**3 E4 **E7** 

Fc diS / time remaining alternating Over temperature

Freeze condition detected 4 degrees

Pressure switch open circuit Temperature sensor short circuit Temperature sensor open circuit Hi-limit sensor short circuit Hi-limit sensor open circuit Flow switch short circuit

Improper electrical connection Filter cycle in operation

Disable / standby mode and time remaining

#### BL-45 / BL-50 / BL-60

All LED's Flashing Orange 98 & Red 104 Red 102 & Red 104 Orange 100 & Red 104 48 degrees Overtemp Low Flow error Temperature Sensor fault Hi-Limit Sensor fault

#### Other models

PCB LED flashes 1 time every 3 seconds PCB LED flashes 2 times every 3 seconds PCB LED flashes 3 times every 3 seconds

High Limit condition Pressure switch closed condition Pressure switch open condition PCB LED flashes 4 times every 3 seconds Temperature sensor fault



## Caldera Spas topside touchpad error codes & messages

'TEMP' flashing \_\_\_ flashing .\_.\_. or =:=:=:=

=====

Orange Ready light flashing Grey Power & Ready lights flashing Grey Power light flashing

Pressure switch or temperature sensor failed Hi limit tripped Pressure switch open circuit Pressure switch open circuit Pressure switch closed circuit (jets operate) Temperature sensor fault Low flow. Pressure switch open circuit High limit fault



## Cleverspa

FC SL / HL SH

Change filter – 168 hours of running – Press filter to reset Temperature fault Temperature sensor fault



## **Custom Molded Products - Nexxus Bath Control systems**

No H2O / Warning icon / pump won't operate Too Hot

Insufficient water level
Water temperature exceeds 43.9C



## Coates heater error codes & messages

Err

Temperature sensor fault



## SPA-N-A-BOX

## Comfort Line Products CLP topside touchpad error codes & messages

EN1 / OH EN2 Sensor 1 failure Sensor 2 failure



# CORRECT-IECH INC. COLLITY SPA CONTROLS AND EQUIPMENT Correct-Tech CTI topside touchpad error codes & messages

th1 / 39 or ---/39 th2 / 39 or ---/39

th1 / "current water temp" or - - - / "current water temp" th2 / "current water temp" or - - - / "current water temp"

th3 / 39

OH or HOT

HL

HL / 210

FLO or - -

FLC or - -

Freeze protection – temp under 39F / 4C

Both thermistors detecting below 39F / 4C Temperature sensor error – connected to J2

Temperature sensor error – connected to J1

Both thermistors detecting below 39F / 4C

Over heat 112 F / 44C Hi-limit 118 F / 47C

Thermister short sireuit

Thermistor short circuit

Electronic failure of touchpad or pcb – check J8

Flow switch open circuit

Flow switch



Ampac, Aquaswim, AquaPacific

Davey Spa-Quip topside touchpad error codes & messages

Red/green flashing on two LED's Green/Green, or Orange flashing LED Red/green flashing <u>pump</u> LED Hi-limit sensor tripped, electronic fault

Prime failed, insufficient water detected

Insufficient water detected

Insufficient water detected (some models only)

#### Digital 2000 (stainless steel heater tube with pressure switch)

01	Stuck touchpad button
02	Touchpad Communication error
03	Temperature sensor failure mk2 sensor
04	Pressure switch closed circuit
05	Over temperature condition
06	Heater thermal cut-out overheat
07	Stuck heater relay
08	Temperature sensor failure mk1 sensor
09	Prime failed, pressure switch open circuit

#### Spa Power 1000 & 2000

Error 1 (H2O or Prime Failed)

01	Stuck touchpad button
02	Touchpad communication error
03	Temperature sensor failure
04	Optical water sensor failure
05	Over temperature condition detected
06	Heater thermal cut-out overheat
07	Stuck heater relay
09	Prime failed, insufficient water detected
Display contrast too Light or Dark to read (SP2000)	Hold down 'Display' button and Up or Down to adjust

#### Spa Power 400, 500, 600, 601, 750, 800, 1200

Error 2 (Spa Power 800 & 1200 only)	Variable Speed Drive fault
Error 3	Stuck touchpad button
Error 4	Optical water sensor failure
Error 5	Over temperature condition detected
Error 6	Heater thermal cut-out overheat
Error 7	Stuck heater relay
Error 8	Temperature sensor failure
Error 9 (Spa Power 800 &1200 only)	Clock fault
Warning 1 (Spa Power 800 & 1200 only)	Temperature sensor failure (pool OR heater)
Ht.d (Spa Power 500 only)	Heating mode - Demand Heating
Ht.F (Spa Power 500 only)	Heating mode – Filtration Only Heating
Green Pump LED flashing (SP400/600/601 only)	Sleep mode active
Display contrast too Light or Dark to read (SP800,1200)	Hold down 'Light' button and Up or Down to adjust

#### **Xcelsior Spa Pool System QX350**

Error 1 (H2O/CHE)	Prime failed, insufficient or 'too pure' water
Error 3	Stuck touchpad button
Error 5	Over temperature condition detected 45c
Error 6	Pump heater thermal cut out overheat
Error 7	Stuck heater relay
Error 8	Temperature sensor failure
Error 9	Heater control circuit failure

#### **Celsior Bath Pumps**

Pump stops 10 secs after heater button engaged Sensor fault/unplugged

#### **SPSVB Variable Speed Blower**

Error 2 (2 LED flashes / beep) Error 3 (3 LED flashes / beep) Communication or electronic failure Stuck touchpad button



#### 2017 Bay series spas - in.yt / in.k1000

HL **CFLO FLO** HR HRA OH Pr **AOH FCL** SPin UPL Comm Supp PoUP

High Limit 48C No flow

No flow for over 2 hours Hardware error – thermal fuse Hardware error - stuck relay

Over heat 43C

Temperature sensor fault Elevated controller temperature Pressure/flow switch closed

Input voltage low

No valid software installed Communication error Connect to 240v Power Up



# lian Spa Parts

#### **Eezi-Touch**

Green 'Power' LED on, Blue 'Pump' LED flashing once per second

Touchpad or cable fault

#### Sensa-Touch

Green 'Power' LED on, Blue 'Pump' & 3 x red heater LED's flashing once per second in unison

Touchpad or cable fault

Green 'Power' LED on, Blue 'Pump' LED off & 3 x red heater LED's flashing three times per second in unison Temperature sensor fault

Green 'Power' LED on, Blue 'Pump' LED on, low & high red heater LED's flashing twice per second in unison

Circuit board program fault. Power off 30s to attempt reset



#### FLUID DYNAMICS

### Elecro Optima Compact & Titan Optima Tecnologic Z31SE thermostat error codes & messages

noF No flow – flow switch open E1 Temperature probe Open circuit **EPr EEPROM** memory error

Locked – Press 'P' and 'Up' simultaneously 5 secs to unlock Ln



## Ethink / Zink topside touchpad error codes & messages

#### KL6600 and KL8000 series except KL6200 & KL8500B

ESA Temperature sensor error
ESb Water flow sensor error
Eob Water flow sensor error

EHH Heater error over heat 48 degrees
EoH Heater error over heat 43.5 degrees

EPL Water flow error
ECP Water flow error
EUH High input voltage 280v
EUO High input voltage 260v
Elo Lamp current over limit

CPo Circulation pump current over limit

LLL Low water level

ICE Freeze warning – below 44F / 7C Eln Auto moisturizing overtime

InF System is refilling InP Water refilling Paused

Auto drainage process is running

#### KL6200 series

out

E1 Temperature sensor fault

E2 Flow sensor fault

Actual temperature is higher than set temperature

Temp Key LED flash 0.5 sec on/0.5 sec off Water flow not detected

Temp Key LED flash 1 sec on/1 sec off 1C over set temperature reached, heater off

#### KL8500B series

SnA Temperature sensor error
Snb Water sensor error
oHb Water sensor over limit

oHH Heater error over heat 48 degrees oHS Heater error over heat 43.5 degrees

HFL Water flow is too low

LF Low flow

dry Insufficient water level ICE Freeze warning – below 7C

InF System is refilling

#### Ethink KL8-2 and KL8-3 series

E1 Temperature sensor open / short circuit

E2 Flow sensor open circuit
EP Low flow through Ethink heater
FF Over temperature fault

00 Touchpad Locked: Press Power-Music-Volume Up-Power



## Fusion, Force & DHP-R Series

P01 P02	Water inlet temp sensor open or short circuit Water outlet temp sensor open or short circuit
P04	Ambient temp sensor open or closed circuit
P05	Coil temperature sensor fault
P07	Suction temperature sensor fault
P08	Exhaust temperature sensor fault
E01	High pressure switch fault or Low water flow
E02	Low pressure switch fault or Loss of refrigerant
E03	Flow switch fault or Low water flow
E06	Inlet/Outlet temp differential >13C
E07	Anti freeze protection <2C
E08	Communication error controller to PCB
E19	Primary anti freeze protection – ambient temp too low
E29	Secondary anti freeze protection – ambient temp too low

CS Series	
P01 P02 P04 P15 P17 P19 P25 P27 P29 P35 P37 P39 P45 P47 P49 P101 P102 P151 P181 P182 P191 P201 P202 P251 P281 P282 P291 P351 P381 P381 P451 P481 P491 E03 E04 E05 E06 E08 E11 E12 E19 E21 E22 E29 E31 E32	Water inlet temp sensor open or short circuit Water outlet temp sensor open or short circuit Ambient temp sensor open or short circuit System 1 coil temp sensor open or short circuit System 1 Absorb temp sensor open or short circuit System 2 coil temp sensor open or short circuit System 2 coil temp sensor open or short circuit System 2 coil temp sensor open or short circuit System 2 anti freeze temp sensor open or short circuit System 3 coil temp sensor open or short circuit System 3 anti freeze temp sensor open or short circuit System 3 anti freeze temp sensor open or short circuit System 4 coil temp sensor open or short circuit System 4 Absorb temp sensor open or short circuit System 4 anti freeze temp sensor open or short circuit System 1 economizer inlet temp sensor open or short circuit System 1 economizer outlet temp sensor open or short circuit System 1 exhaust high temp protect/Compressor high amps System 1 using side anti freeze temp sensor open or short circuit System 2 economizer outlet temp sensor open or short circuit System 2 economizer outlet temp sensor open or short circuit System 2 economizer outlet temp sensor open or short circuit System 2 economizer outlet temp sensor open or short circuit System 2 economizer outlet temp sensor open or short circuit System 2 economizer outlet temp sensor open or short circuit System 2 economizer outlet temp sensor open or short circuit System 2 economizer outlet temp sensor open or short circuit System 3 using side anti freeze temp sensor fault System 4 coil inlet temp sensor open or short circuit System 3 using side anti freeze temp sensor fault System 4 coil inlet temp sensor open or short circuit System 3 using side anti freeze temp sensor fault System 4 coil inlet temp sensor open or short circuit System 4 using side anti freeze temp sensor fault System 4 coil inlet temp sensor open or short circuit System 4 coil inlet temp sensor open or short circuit System 4 coil inlet temp sensor open or short circuit System 3 using side anti freeze temp sensor faul
E41	High pressure 4 switch fault

E42	Low pressure 4 switch fault
E151	System 1 compressor current protection
E171	System 1 anti freeze temp sensor open or short circuit
E251	System 2 compressor current protection
E271	System 2 anti freeze temp sensor closed or short circuit
E371	System 3 heat source side anti freeze / low water flow
E471	System 4 heat source side anti freeze / low water flow



## Fasco pump motor error codes & messages

#### imPower Lockout Codes (on numerous variable speed pool pumps)

None	Eeprom load failure
1 blink	Micro processor failure
2 blinks	Under voltage below 180v AC
3 blinks	Temperature – over 100C or under -20C
4 blinks	Over current tripped
5 blinks	Over voltage above 269v AC
6 blinks	Shaft seized
7 blinks	Self check – self testing failed
8 blinks	Motor fault – phase disconnected
10 blinks	Other fault



## Gao Er Da – GD topside touchpad error codes & messages

HEAT
ICE
CLDF
LD F
E1, FF
Water pump or tap ICON flashing
Thermometer ICON flashing
CALB
S.C.

Hi-limit over 45c
Water temperature below 5c
Circulation pump problem / flow problem
Load Failure – faulty pump, heater, etc
Temperature sensor failure
Water level too low
Low flow
Temperature calibration mode
System wiring fault





Imperial Spas Swift River Spas

## Gatsby topside touchpad error codes & messages

dCP FC FLO No DC power at master relay Freeze condition under 15 degrees C No circ pump current draw Ht
HtS
HtS-OHt
OHt
tS-0-tS
tS-255-Ht-OHt
PS1
PS2

Over 43 degrees C Open hi-limit sensor Short hi-limit sensor Overheat 48 degrees C Open temp sensor Short temp sensor Pressure switch closed Pressure switch open





#### **Class Series**

#### Gecko topside touchpad error codes & messages

FLC
Err
Prr
HL
FrE
\* \* \* 3 flashing dots on 6

\* \* \* 3 flashing dots on display
\* \* \* with red LED lit on pcb

0.0 / 32F H2O BOO CLE, CF SbY LOC LocP / LoP LocF / LoF Fxx, Fdxx

**FLO** 

dxx, Fdxx, Fsxx Pxx Exx, Edxx Edxx, Esxx Orxx (2.5-9) CAL SUS

---F

Flow / pressure switch open circuit Flow / pressure switch closed circuit

Electronic software error Regulation temp sensor failure Hi-limit sensor failure

Possible freeze condition FLO or FLC

Hi-limit sensor failure

Regulation temp sensor failure

Insufficient water level Pump 1 boost mode Reminder – clean filter

Spa is in 'standby' mode – 1hr shutdown

Touchpad panel keys locked Touchpad partial lock Touchpad full lock

Filter cycle duration in hours
Filter cycle start delay in hours
Purge cycle duration in hours
Economy cycle duration in hours
Economy cycle start delay in hours

Over range beyond normal temp limit (not a fault)

Calibration error

Suspend mode – Pump 2 Button may be stuck Dimension One Spas Communication Error



## Hercules topside touchpad error codes & messages

OH Over temperature condition detected FLO Flow problem

ICEFreeze condition detectedSN1Hi-limit sensor failureSN2Temperature sensor failure



# Hot Spring Spas & Tiger River Spas topside touchpad error codes & messages

'Ready' & 'Power' Logo lights flashing 'Power' blue light flashing 'Power' light flashing 'Ready' green (or red) light flashing Pressure switch open circuit
Hi limit fault – spa hi limit or heater hi limit
Spa cabinet door open / faulty magnetic door switch
Temperature sensor fault



### Hot Spot Spas & Solana Spas topside touchpad error codes & messages

'Ready' icon flashing
\_\_\_\_ & power icon flashing
=:=:=:=
= = = & power & ready icons flashing
= = = =
------ & power & ready icon flashing
ut1 - ut4

Control sensor open or short circuit Hi limit (nothing operates) Pressure switch open circuit Pressure switch open circuit Pressure switch closed circuit Pressure switch closed circuit Temp over-range setting above 40c



## Hurlcon Astral topside touchpad error codes & messages

# Hurricane topside touchpad error codes & messages

PS Pressure switch failure SH Shorted sensor OP or OS Open sensor LO Low temp, potential freeze HL Hi-limit OH Overheat **FLO** Flow problem **ICE** Freeze condition detected SN1 Hi-limit sensor failure SN<sub>2</sub> Temperature sensor failure

## **HYDRO**QUIP

## Hydroquip topside touchpad error codes & messages

FLO
FLC
HL, PrH
Prr
FrEE
Loc
CL
Econ
ECdu
Flon

\* \* \* 3 flashing dots on display
\* \* \* with red LED on pcb

0.0 / 32F

Flow / pressure switch open circuit Flow / pressure switch closed circuit

Hi-limit, OH sensor failure
Regulation temp sensor failure
Possible freeze condition
Touchpad key lock
Current time of day
Economy mode on
Economy cycle duration

Filter cycle turn on

Filter cycle duration in hours

FLO, or FLC Hi-Limit

Regulation temp sensor failure



## Infinity Megastore topside touchpad error codes & messages

#### HLW-15B

COOL FREEZING ERR E1 Anti freezing mode – power off Anti freezing mode – power on Temperature sensor probe failure Temperature sensor probe failure





## Intex Purespa topside touchpad error codes & messages

E90 No water flow
E91 Low salt alarm
E92 High salt alarm

E94 Low temperature under 4C E95 Temperature too high System error

E96 System error 99 Temperature sensor fault

END After 72 hours of heating, system hibernates



Jacuzzi Hot Tubs topside touchpad error codes & messages

OH
COOL
FLO
Hold
HOT
ICE
ICE2
PnL
--Sn1
Sn3
FLO2
PluG

Over Temperature detected
Water temp is 11 degrees below set point
Flow / pressure switch open circuit
Panel buttons pressed to frequently
PCB temperature too high
Freeze protection
Freeze protection
Touchpad – pcb communication error
'Watchdog' major fault, spa de-activated
Hi-limit sensor failure
Temperature sensor failure

Shorted flow / pressure switch
Test sensor plug left plugged in after service



### Joyonway topside touchpad error codes & messages

E1 Temperature sensor fault E2 Temperature too high E4 Heater thermostat tripped E5 Communication error – touchpad to control box F1 Temperature sensor open circuit F2 Temperature sensor closed circuit F3 Temperature too high F4 Temperature too low F5 Auto reset thermoswitch open F6 Manual reset thermoswitch open F8 Eprom memory error F9 System settings error



#### K-Star Electric Heater error codes & messages

**OFF** Temperature below lowest set point 20C PSI Low/no water pressure LO Low water temperature detected HI, HAUT High water temperature detected LOC Lock mode – press up or down to unlock RA Temperature range access Ρ Pool range 20-31C S Spa range 20-40C Set point mode SC Temperature scale access С Celsius scale Fahrenheit scale

## LaMotte ColorQ error codes

Er3 Insufficient light reaching detector
Er7 Blank not properly set, dirty tube, damaged tube

SUN Lo Hi bAt bLA Bright sunlight penetrating chamber. Result is below measuring range Result is above measuring range Battery is low Set 'Blank'

## LEN GORDON —Genuine

#### Len Gordon topside touchpad error codes & messages

#### Spa touchpads

Flashing display

UU

Damaged temp sensor or heat circuit failure

Memory loss – reset required

#### Lennovator

NC No communication

SP Spa mode PO Pool mode

Data is being sent to master unit

OP
Temperature sensor open circuit

Temperature sensor short circuit

OH
Overheat – water temperature over 120 F

IP Insufficient Power FP Freeze point

Temperature flashing on/off
WAIT
High water temp 109 F – 120 F
Valve turning or fireman's timeout



-40 Temperature sensor open circuit

122 Temperature sensor short circuit
HI Hi-limit fault above 117F / 47C

HI Hi-limit fault above 117F / 47C
HI / temp display – alternating Over temp above 112F / 44C

J11 Temp sensor plugged in Jack 11 is faulty or dangling
J12 Temp sensor plugged in Jack 12 is faulty or dangling

PSC Pressure switch closed PSO Pressure switch open

Flashing 'heat' light Hi-limit fault on older units – reset with light or pump key



Monarch Spas, Paramount Pool Equipment, S&P Ultima Micro Controlled Spa Command Centre topside touchpad error codes & messages



F3

F4

HEF1

HEF2

E1

E2

E3

E4

SPL / E0

SPH / E0

E3 flashing

## MSpa topside touchpad error codes & messages

FEF Filter Pump system failure
FEF0 Filter system short circuit
FEF1 Filter system open circuit
FEF2 Overcurrent / Blocked pump
FEF3 Water pressure switch open

FEF3 Water pressure switch open circuit
F1 Water pressure switch open circuit
F2 Filter system open circuit

Filter system open circuit
Overcurrent / Blocked pump
Filter system short circuit

F7 \*Possible pressure switch short circuit

BBF Blower failure
BBF0 Blower short circuit
BBF1 Blower open circuit
BBF2 Blower overcurrent

CEF Communication error between panel and pcb HEF0 / HFB Heating system short circuit

Heating system short circuit
Heating system open circuit
Heating system overcurrent
Temp below 0c – Freeze condition

Abnormally high temperature detected 60c

Low water pressure / level

Low water level / detect function failure

System Failure Heater failure

Press On/Off, C/F, and Temp+ sequentially to reset



#### **Pahlen Electric Heaters**

E1 Low / No Flow

E2 Temperature sensor fault
E6 Hi-Limit thermostat open circuit

E7 Control circuit contactor, overheating limit control

E10 Pump is inactive E12 Communication error

HC High temperature on pcb 40C HP / Hi Overtemperature condition 45



## Peips Spas - France

Water tap icon crossed out

HH

Overheat 45C

High Limit 42C

CL Cold – under 0C

E1 Temperature sensor or PCB failure

FL Filter cycle active



#### Perfect Spa Pool topside touchpad error codes & messages

Temperature sensor failure **EE02** High Limit - over 42C **EE03** Low water level **EE04** Insufficient/no water pressure EE05 Heater fault Circulation pump fault EE06 **EE07** Jet 1 pump fault Jet 2 pump fault **EE08 EE09** Air blower fault **EE10** Light fault **EE11** Ozone fault Hold 'P' for 5 secs Reset



## Pinnacle topside touchpad error codes & messages

OH Over heat 110F / 43C SN Sensor failure FL Flow switch closed



#### Presair topside touchpad error codes & messages

Er Topside or control failure or temp sensor not connected Temp over 44.4C
Lo Temp under 7.2C
FC Filter cycle
FL Flow error or pressure switch fail
FL (flashing) Pressure switch closed
Fr Freeze protection mode – very low temp detected



## Jilong Prompt Set topside touchpad error codes & messages

#### Older units

E1	Temperature sensor fault
E2	Temperature Protection Sensor Fault (HL)
E3	High Temperature Protection (OT) over 38C
E4	Low Temperature Protection under 20C
E5	No Heating – flow / thermal tripped

#### 2014+

E1 Temperature sensor open/short circuit E2 Temperature sensor open/short circuit Temperature exceeds 45 degrees C E3 E4 Temperature under 2 degrees C E5 Temperature over 50 degrees C E6 Pressure switch open circuit **E7** Dry Run - lack of water CH6 FIL (CHG FIL) Filter clean reminder 150 hrs. Hold 'heat' 5 sec.

**BUB** 

Massage pump on

## S&G SPA Blue Lagoon Spas, Oceane Spas S&G Spa topside touchpad error codes & messages

E0 or E1 (depending on model) E1 or E0 (depending on model) Filtration pump icon flashing

Temperature sensor open circuit Temperature sensor short circuit Low flow – press on/off to reset



## Softub topside touchpad error codes & messages

IPS or IP5 Insufficient power supply voltage LED display flashing Water too hot or control fault Touchpad connection fault 00 P01 Heat call exceeds 4 hours without increase in temperature SP1 Special temp mode set to 40.5C or 41C



## SOWO topside touchpad error codes & messages

E0 Temperature sensor short circuit E1 Temperature sensor open circuit P1 Pump 1 fault P2 Pump 2 fault P3 Pump 3 fault Heater fault H1 **B1** Blower fault S<sub>1</sub> Low water level FF Temperature sensor not connected



## Spa Builders topside touchpad error codes & messages

#### **LX Series**

SN1, -01, 131, -07, or -8 SN2, -02 FL1, -03 FL2, -04 COL **ICE** OH

Hi-limit sensor failure Temperature sensor failure Flow / pressure switch open circuit Flow / pressure switch closed circuit Cool condition 11 degrees below set point Freeze condition detected

Over heat condition

'Watchdog' major fault, spa deactivates

#### Class Series (Gecko)

**FLO FLC** Err Prr HL \* \* \* 3 flashing dots on display \* \* \* with red LED lit on pcb 0.0 / 32F **H2O** BOO CLE, CF SbY LOC LocP / LoP LocF / LoF Fxx, Fdxx dxx, Fdxx, Fsxx

Flow / pressure switch open circuit Flow / pressure switch closed circuit

Electronic software error Regulation temp sensor failure

Hi-limit sensor failure Possible freeze condition FLO or FLC

Hi-limit sensor failure

Regulation temp sensor failure

Insufficient water level Pump 1 boost mode Reminder - clean filter

Spa is in 'standby'mode - 1hr shutdown

Touchpad panel keys locked Touchpad partial lock Touchpad full lock

Filter cycle duration in hours Filter cycle start delay in hours Purge cycle duration in hours Economy cycle duration in hours Economy cycle start delay in hours

Over range beyond normal temp limit (not a fault)

Calibration error
Suspend mode – Pump 2 Button may be stuck Dimension One Spas Communication Error



### spaGEAR – Monarch Pool Systems topside touchpad error codes & messages

EC LP 00

Pxx

CAL SUS ---F

Exx, Edxx

Edxx, Esxx

Orxx (2.5-9)

Start up checks in progress Insufficient water in heater Temperature sensor fault Flush cycle active



## Spanet topside touchpad error codes & messages

In addition to the below error codes, both XS & SV series have a 'heartbeat' LED that flashes to indicate the error condition. On, Off, On, Off is normal. 'On, On, On, Off, On, On, Off' indicates error 3.

### **XS** series

ER-2 ER-3 Heater sensor plug connection fault Water prime failed, insufficient water

ER-4	Heater thermal trip, over heat
ER-5	Over temperature. Sensor reading over 45c
ER-6	Heater temperature sensor failed
ER-7	In-pool sensor failed
ER-8	Controller software fault, stuck heater relay
99.9	Temperature sensor failed

#### **SV Series**

ER-2	Heater sensor failed
ER-3	Water prime failed, insufficient water
ER-4	Heater thermal trip, over heat
ER-5	Over temperature. Sensor reading 45c
ER-6	12v overload – too many LED lights
ER-8	Stuck heater relay
ER-10	Over current – excessive power draw
99.9	Temperature sensor failed

## **SV Heat Pump**

HEAT PUMP AMB	Ambient thermistor sensor error
HEAT PUMP COND	Condenser thermistor sensor error
HEAT PUMP FLOW	No water flow detected
HEAT PUMP LOW P	Compressor low pressure switch open
HEAT PUMP HIGH P	Compressor high pressure switch open
HEAT PUMP COMP	Compressor thermal cut out open
HEAT PUMP EXCH	Heat exchanger thermal cut out open

# Spa-Tech &



## Spa-Tech topside touchpad error codes & messages

## C-1 Control System – S1 & L1 Touchpads

E0	CPU is fully loaded or loose cables
E1	Heater temperature sensor fault
E2	Heat pump temperature sensor fault
E3	Environmental temperature sensor fault
E4	Water level sensor detecting insufficient water level
E5	Unmatched power input or voltage fluctuations
E6	Water pressure sensor fault – FLO error
C	Cold / freeze – water below 7 degrees C
H	Overheat – water temperature over 43 degrees C
HH	Overheat – water temperature over 45-47 degrees C

# C-II Control System Blue & Grey (used on Oasis Spas, Classic Spas and others)

E1	Temperature sensor 1 fault
E2	Temperature sensor 2 fault
E3	Heat pump temperature sensor fault
E4	Water level sensor detects insufficient water
E5	Input voltage either too high or too low
E6	Flow switch fault

E8 Heat pump compressor pressure fault

E9 Insufficient water flow
C Low water temp below 7c
H High temperature hi-limit 43c

HH Overheat 47c
PL Panel locked
HPL (and flashing snowflake icon) Defrost Cycle

## C-III Control System – Black (used on Oasis Spas, Classic Spas and others)

E0 Communication Error touchpad to control pack

E1 Temperature sensor 1 fault E2 Temperature sensor 2 fault

E3 Heat pump temperature sensor fault
E4 Water flow switch open circuit
E5 Input voltage either too high or too low

E8 Heat pump compressor pressure fault
E9 Insufficient water flow
C Low water temp below 6c

H High temperature hi-limit 43c HH Overheat 47c

PL Panel locked – press Warm & Cool to unlock

HPL (and flashing snowflake icon)

Defrost Cycle

## Spa-Tron

Mode = Off Heat = Red

Pump = Off

Mode = Green Heat = Off

Pump = Red

Mode = Yellow

Heat = Off Pump = Red

•

Mode = Yellow or Green Heat = Red

Pump = Off

Flow/Pressure switch open

oa Parts

Hi Limit fault

Temperature sensor fault

Flow/Pressure switch closed



## Splash Pool Accessories (S.P.A.) topside touchpad error codes & messages

HE Red, Green, Yellow LED's flashing

LEH

Temperature sensor failed Insufficient water detected

? possibly same as HE otherwise unknown



Sundance Spas topside touchpad error codes & messages

**ILOC FLO** 

FLO2 / ICE2

Hold HOT

ICE PnL / PNL

Sn1 Sn3 COOL PLuG

LOC

PF blb Interlock failure

Flashing - flow switch open, solid - closed

Flow switch closed circuit

Touchpad buttons pressed too frequently

PCB temperature too high Freeze condition detected

Panel - PCB communication error

Hi-limit sensor failure Temperature sensor failure

water temp 11 degrees below set point Test sensor plug left plugged in after service 'Watchdog' major failure. Spa deactivated

Panel locked Power Failure

UV bulb/lamp replacement required



#### Tecmark TDI topside touchpad error codes & messages

Flashing display OP or OB SP, SB, SPb 8888

Over heat 110F / 43C Open probe Short probe Voltage spike



## Trinity Electronic Labs touchpad error codes & messages

#### **Apollo 11**

**HEATING FILTER OVERHEAT** FTR ONLY NO FLOW SENSOR FAILURE **HEATER** 

**TEST PROGRAM**  Heater is on Filter cycle on

Water temperature above 112 F

Heating safety component failure - filtering only

Insufficient water flow Invalid sensor value Heater not working

Test mode – press / hold Jets 1 to access Program mode – press / hold Jets 1 to access



## United Spas topside touchpad error codes & messages

#### T5 Touchpad

οН Over heat 48C

Fr Freeze - temp below 4C Flo Flow switch open circuit

Er0, Er1 Regulation temperature sensor failure Er2, Er3

Hi-limit sensor failure

Filter Cycle

#### T7 Touchpad

Freeze - temp below 8C Fr

SOH Software Over heat – temp above 45C HOH tS LS FL

**PSI** 

LO

Hardware Over heat - hi-limit above 46C

Temperature sensor error Hi-limit sensor error Flow switch open circuit



#### Valtherm error codes & messages

#### Models A and C

PO Overtemp 110F / 43C AL

Alarm mode after PO. Press up or down to reset

Water pressure too low

Low temp below 65F / 18C. Warning lights lit = heater on.

Warning light Indicates heating or economic mode

## Spas DM Industries

## Vita Spas topside touchpad error codes & messages

BJ2P BLO

Purging notification

Air blower error. Fuse blown or defective blowe BUS Communication error

CP Circulation / HEET pump fault

CS Current sensor error

F1 or F2 or F3 or F4 Fuse 1, 2, 3, or 4 blown

**FLO** Pressure switch open - low flow

HC or H1 or H2 Heater error

Hi Limit senses above 112F / 44C HILI HP High voltage observed Pump 1 high speed fault HS<sub>1</sub> Pump 2 high speed fault HS<sub>2</sub>

Water temp below 50F / 10C ICE

LB or LI Light fault

LP Low voltage observed LS1 Pump 1 low speed fault LS2 Pump 2 low speed fault LS Large water sensor error Large water sensor open circuit

Large water sensor short circuit

Ozonator error Pump1, 2, or 3 fault

Power board communication to topside error

Pressure switch closed error

Relay stuck

Small heater sensor error

Small heater sensor open circuit Small heater sensor short circuit

LS=O LS=S O3U or O3 P1 or P2 or P3 Pb or PB or P6 PS **REL** SS SS=O

SS=S



## Waterco topside touchpad error codes & messages

#### **Portapac SSC**

00 'Heat' indicator flashing

'Power' indicator flashing

SP1 or SP2

Temperature sensor fault
Over temperature sensor fault

Over temperature resettable device tripped out 45 degrees

Blower speed adjustment (do not alter – press 'Demand')

#### **Digi-Heat Heaters**

nFL No flow detected, pressure switch open circuit

o/t Over temperature Tripped 45c Temperature sensor failed



#### Waterway Plastics topside touchpad error codes & messages

#### **Neo series**

Plumbing error Swap sensors 1 & 3 for flow direction change

Insufficient flow No water

Low flow

Water Overheat

Lack of water flow

Overtemp 48 degree

Water Overheat

Overtemp 48 degrees reached

Overtemp within heater

To the first transfer of the first transfer

Potential Freeze Temp too low – freeze protection enabled

Sensor 1 open sensor 1 open circuit
Sensor 1 short sensor 1 short circuit
Sensor 2 open sensor 2 open circuit
Sensor 2 short sensor 2 short circuit

Sensor 3 open sensor 3 open circuit
Sensor 3 short sensor 3 short circuit

#### **Signature Series**

CLDN

**CHCL** 

UTO

**PUF** 

**MENU** 

CANC SEND

**ECL** 

CoLd Temperature approaching zero

OH Over Heat condition

HLEr Hi-limit over heat sensor failure
SEoP Temperature sensor open circuit
SESH Temperature sensor short circuit

PSoC Pressure switch open circuit with circ pump
PSoL Pressure switch open with low spd pump
PSoH Pressure switch open with high speed pump

CboH Control box over heat 115f / 46c
ToE Time out error – system shutdown

Cool down cycle Energy saving cycle Air blower Channel clear

User time out
Post use filtration
Menu access

Cancel/discard changes

Save changes

CALB FPx (1-4) SIL FPxd (1-4) SILd Calibration for temp Filtration period Silence period start time Filter duration Silence timer duration

General / Technician's lock



## **Zeng ZNG Spa Controls**

ER2
ER3
ER4
ER5
ER6
ER7
ER8
FLO
HL
FCL
LOC
3 blinks on display
3 horizontal lines on display

Sensor A short circuit or water temp over 80 degrees
Sensor A open circuit or water temp below 10 degrees
Heater safety sensor short circuit or over 80 degrees
Heater safety sensor open circuit or below 10 degrees
Short Jumper/Bridge to determine fault
Open Jumper/Bridge to determine fault
Flow switch closed when there is no water flow
Flow switch open when there is water flow
Hi Limit water temp over 44 degrees
Filter clean reminder message – clean filters
Full touchpad lock
Partial touchpad lock – can operate pumps, blower, light

ustralian Spa Parts

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