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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)
OH or OH2 (swim spa slave)

FLO / CFLO or FL2 (swim spa slave)

LO1 FLO / LO2 FLO

NO FLO

HL 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)

OFF Fx, FFxx FSxx Fdxx, dx EP 0 or 1 ESxx

StbY

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 relay

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 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-Id
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 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

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

Fr-Er Sc bL P9 UP-Ld UPL / BL Comm Supp HP01-99 HIBr / HiBr LoBr / NoBr

FL-C

Sc-Er

Fx

Wipe Screen (Animation)

Switch/Buzzer (or other random message)

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 HP63 HP65 HP99 System 1 exhaust temp sensor fault

Coil temp sensor fault

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

Water flow protection

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 Pressure switch open with low spd pump **PSoL**

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

Cancel/discard changes CANC

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

Silence period start time

Filter duration

Silence timer duration





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

FPxd (1-4)

SILd

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

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

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

E3 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

PCB LED flashes 4 times every 3 seconds

High Limit condition
Pressure switch closed condition
Pressure switch open condition
Temperature sensor fault



CalderaSpas® Justralian Spa Parts

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-TECH INC. DISTROLS 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

U

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 32

Both thermistors detecting below 39F / 4C

Over book 440 F / 440

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

The was interested as a set of a

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

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

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 1 (H2O or Prime Failed)	Prime failed, insufficient water detected
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



RIFLO 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

E1

Temperature probe Open circuit

EPr

EPROM memory error

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



Ethink / Zink topside touchpad error codes & messages

KL6600 and KL8000 series except KL6200 & KL8500B

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

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

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

CPo Circulation pump current over limit

Low water level LLL

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

System is refilling InF InP Water refilling Paused out

Auto drainage process is running

KL6200 series

E1 Temperature sensor fault

E2 Flow sensor fault

E3 Actual temperature is higher than set temperature

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

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

KL8500B series

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

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

HFL Water flow is too low

LF Low flow

Insufficient water level drv **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 ΕP Low flow through Ethink heater FF Over temperature fault

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



Fusion, Force & DHP-R Series

P01	Water inlet temp sensor open or short circuit
P02	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	Water inlet temp sensor open or short circuit
P02	Water outlet temp sensor open or short circuit
P04	Ambient temp sensor open or short circuit
P15	System 1 coil temp sensor open or short circuit
P17	System 1 Absorb temp sensor open or short circuit
P19	System 1 anti freeze temp sensor open or short circuit
P25	System 2 coil temp sensor open or short circuit
P27	System 2 Absorb temp sensor open or short circuit
P29	System 2 anti freeze temp sensor open or short circuit
P35	System 3 coil temp sensor open or short circuit
P37	System 3 Absorb temp sensor open or short circuit
P39	System 3 anti freeze temp sensor open or short circuit
P45	System 4 coil temp sensor open or short circuit
P47	System 4 Absorb temp sensor open or closed circuit
P49	System 4 anti freeze temp sensor open or short circuit
P101 P102	System 1 economizer inlet temp sensor open or short circuit System 1 economizer outlet temp sensor open or short circ.
P151	System 1 coil inlet temp sensor open or short circuit
P181	Discharge 1 temp sensor open or short circuit
P182	System 1 exhaust high temp protect/Compressor high amps
P191	System 1 using side anti freeze temp sensor fault
P201	System 2 economizer inlet temp sensor open or short circuit
P202	System 2 economizer outlet temp sensor open or short circ.
P251	System 2 compressor over current protection
P281	Discharge 2 temp sensor open or short circuit
P282	System 2 exhaust high temp sensor / compressor overheat
P291	System 2 using side anti freeze temp sensor fault
P351	System 3 coil inlet temp sensor open or short circuit
P391	System 3 using side anti freeze temp sensor fault
P451	System 4 coil inlet temp sensor open or short circuit
P491	System 4 using side anti freeze temp sensor fault
E03	Water flow failure
E04	Electrical heat overheat fault
E05	Protection system fault
E06	Inlet / outlet temp differential too high, low water flow
E08	Communication failure between controller and PCB
E11	High pressure 1 switch fault
E12	Low pressure 1 switch fault
E19 E21	Primary anti freezing protection High pressure 2 switch fault
E22	Low pressure 2 switch protection
E29	Secondary anti freeze protection
E31	High pressure 3 switch fault
E32	Low pressure 3 switch fault
E41	High pressure 4 switch fault
	U

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 Hi-limit over 45c ICE Water temperature below 5c **CLDF** Circulation pump problem / flow problem LD F Load Failure – faulty pump, heater, etc E1, FF Temperature sensor failure Water pump or tap ICON flashing Water level too low Thermometer ICON flashing Low flow **CALB** Temperature calibration mode S.C. System wiring fault





Swift River Spas

Imperial Spas

Gatsby topside touchpad error codes & messages

dCP

No DC power at master relay

FC

FLO

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

FLO
FLC
Err
Prr
HL
FrE
* * * 3 flashing dots on display

* * * 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 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

F0 Open circuit thermistor or 0c detected F1 Thermostat reading 45c overheat F2 Mechanical Hi-limit 45c F3 Thermistor fault Flame Rollout detected Fame Rollout detected Heater locked out 2 minutes

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 SN₂ Temperature sensor failure

HYDROQUIP

Hydroquip topside touchpad error codes & messages

FLO FLC HL, PrH Prr FrEE Loc CL

Econ ECdu Flon Fldu

* * * 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

E96 System error 99 Temperature sensor fault

END After 72 hours of heating, system hibernates



Jacuzzi Hot Tubs topside touchpad error codes & messages

ОН 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

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



S

F

alian Spa Parts

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 Р

Pool range 20-31C 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 Bright sunlight penetrating chamber. Lo Result is below measuring range Hi Result is above measuring range bAt Battery is low Set 'Blank' bLA



Len Gordon topside touchpad error codes & messages

Spa touchpads

Flashing display

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 SH Temperature sensor short circuit

OH Overheat - water temperature over 120 F

IΡ Insufficient Power FΡ Freeze point

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



122

HI / temp display - alternating

J11 J12 **PSC PSO**

-40

Flashing 'heat' light

Temperature sensor open circuit Temperature sensor short circuit Hi-limit fault above 117F / 47C Over temp above 112F / 44C

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

Pressure switch closed Pressure switch open

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

'Heater On' LED Flashing

Temperature sensor fault



MSpa topside touchpad error codes & messages

FEF Filter Pump system failure FEF0 Filter system short circuit

FEF1 Filter system open circuit FEF2 FEF3 F1 F2 F3 F4 F7 **BBF** BBF0 BBF1 BBF2 CEF HEF0 / HFB HEF1

HEF2 SPL/E0 SPH / E0 E1 E2 **E**3 E4 E3 flashing Overcurrent / Blocked pump Water pressure switch open circuit Water pressure switch open circuit

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

*Possible pressure switch short circuit

Blower failure Blower short circuit Blower open circuit Blower overcurrent

Communication error between panel and pcb

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

Low water level Water tap icon crossed out НН Overheat 45C High Limit 42C Н Cold - under 0C CL E1

Temperature sensor or PCB failure

FL Filter cycle active



Perfect Spa Pool topside touchpad error codes & messages

EE01 EE02	Temperature sensor failure High Limit – over 42C
EE03	Low water level
EE04	Insufficient/no water pressure
EE05	Heater fault
EE06	Circulation pump fault
EE07	Jet 1 pump fault
EE08	Jet 2 pump fault
EE09	Air blower fault
EE10	Light fault
EE11	Ozone fault
Reset	Hold 'P' for 5 secs



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, Avenli

Jilong Prompt Set topside touchpad error codes & messages

Older units

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

2014+

E1	Temperature sensor open/short circuit
E2	Temperature sensor open/short circuit
E3	Temperature exceeds 45 degrees C
E4	Temperature under 2 degrees C
E5	Temperature over 50 degrees C
E6	Pressure switch open circuit
E7	Dry Run – lack of water



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 LED display flashing

00

P01 SP1 Insufficient power supply voltage Water too hot or control fault Touchpad connection fault

Heat call exceeds 4 hours without increase in temperature

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 Ρ1 Pump 1 fault P2 Pump 2 fault P3 Pump 3 fault H1 Heater fault **B1** Blower fault S₁ Low water level FF Temperature sensor not connected

CDADI III DEDC

Spa Builders topside touchpad error codes & messages

LX Series

SN1, -01, 131, -07, or -8 SN2, -02

FL1, -03 FL2, -04 COL

ICE OH

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 FrE

* * * 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 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



spaGEAR - Monarch Pool Systems topside touchpad error codes & messages

EC LP 00 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, On, Off, On, On, Off, On, Off, On, Off is normal. 'On, On, Off, On, On, On, Off indicates error 3.

XS series

ER-2 ER-3 ER-4 ER-5 ER-6 ER-7 ER-8 99.9

Heater sensor plug connection fault Water prime failed, insufficient water Heater thermal trip, over heat Over temperature. Sensor reading over 45c Heater temperature sensor failed In-pool sensor failed

Controller software fault, stuck heater relay 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	
HEAT PUMP COND	
HEAT PUMP FLOW	
HEAT PUMP LOW P	
HEAT PUMP HIGH P	
HEAT PUMP COMP	
HEAT PUMP EXCH	

Ambient thermistor sensor error
Condenser thermistor sensor error
No water flow detected
Compressor low pressure switch open
Compressor high pressure switch open
Compressor thermal cut out open
Heat exchanger thermal cut out open

Spa-Tech &



& Yang Control

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	
С	Cold / freeze – water below 7 degrees C	
Н	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 Hi Limit fault

Pump = Off

Mode = Green

Heat = Off Flow/Pressure switch open

Pump = Red

Mode = Yellow
Heat = Off Flow/Pressure switch closed

Pump = Red

Mode = Yellow or Green
Heat = Red Temperature sensor fault

Pump = Off



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

HE Temperature sensor failed Red, Green, Yellow LED's flashing Insufficient water detected

LEH ? possibly same as HE otherwise unknown

Sundance Spas

Sundance Spas topside touchpad error codes & messages

ILOC Interlock failure

FLO Flashing - flow switch open, solid – closed

FLO2 / ICE2 Flow switch closed circuit

Touchpad buttons pressed too frequently

PCB temperature too high Freeze condition detected Panel – PCB communication error

Hi-limit sensor failure

ICE PnL / PNL Sn1

Hold HOT Sn3 COOL PLuG ----LOC PF blb 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

oH Fr Flo Er0, Er1 Er2, Er3 Fc Over heat 48C
Freeze – temp below 4C
Flow switch open circuit
Regulation temperature sensor failure
Hi-limit sensor failure
Filter Cycle

T7 Touchpad

Fr SOH HOH tS LS FL Freeze – temp below 8C Software Over heat – temp above 45C 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

ΑL Alarm mode after PO. Press up or down to reset

PSI Water pressure too low

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

Warning light Indicates heating or economic mode



Spas DM Industries

Vita Spas topside touchpad error codes & messages

BJ2P Purging notification

BLO Air blower error. Fuse blown or defective blower **BUS**

Communication error

Circulation / HEET pump fault

Current sensor error Fuse 1, 2, 3, or 4 blown

Pressure switch open – low flow

Heater error

Hi Limit senses above 112F / 44C

High voltage observed Pump 1 high speed fault Pump 2 high speed fault Water temp below 50F / 10C

Light fault

Low voltage observed Pump 1 low speed fault Pump 2 low speed fault Large water sensor error Large water sensor open circuit Large water sensor short circuit

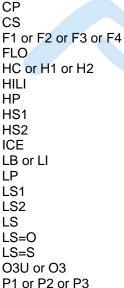
Ozonator error Pump1, 2, or 3 fault

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



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 o/t 00 No flow detected, pressure switch open circuit Over temperature Tripped 45c Temperature sensor failed



Waterway Plastics topside touchpad error codes & messages

Neo series

Plumbing error Insufficient flow Low flow Water Overheat Heater Overheat Potential Freeze Sensor 1 open Sensor 1 short Sensor 2 open Sensor 2 short

Sensor 3 open

Sensor 3 short

Swap sensors 1 & 3 for flow direction change
No water
Lack of water flow
Overtemp 48 degrees reached
Overtemp within heater
Temp too low – freeze protection enabled
sensor 1 open circuit
sensor 1 short circuit

sensor 1 open circuit sensor 1 short circuit sensor 2 open circuit sensor 2 short circuit sensor 3 open circuit sensor 3 short circuit

Signature Series

CoLd OH **HLEr SEoP SESH PSoC PSoL PSoH** ChoH ToE **CLDN ECL CHCL** UTO **PUF MENU CANC SEND** CALB FPx (1-4) SIL FPxd (1-4)

SILd

Temperature approaching zero
Over Heat condition

Hi-limit over heat sensor failure Temperature sensor open circuit Temperature sensor short circuit

Pressure switch open circuit with circ pump Pressure switch open with low spd pump Pressure switch open with high speed pump Control box over heat 115f / 46c

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 Calibration for temp Filtration period

Silence period start time

Filter duration

Silence timer duration



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

General / Technician's lock

If you have additional codes and messages for inclusion, or think our listing is incorrect, please feel free to email information to sales@spaparts.com.au so that we may correct / update accordingly.

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