

OPERATIONS MANUAL

HydroACT 300



Residual Chlorine Analyzer

Revised 02/10/11 JC



PLEASE NOTE: In an attempt to reduce our company carbon footprint, this manual is normally supplied in an electronic format. If you require a printed copy, please ask your sales contact.

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SAFETY PRECAUTIONS

BEFORE ATTEMPTING TO UNPACK, SET UP, OR OPERATE THIS INSTRUMENT, PLEASE READ THIS ENTIRE MANUAL.

MAKE CERTAIN THE UNIT IS DISCONNECTED FROM THE POWER SOURCE BEFORE ATTEMPTING TO SERVICE OR REMOVE ANY COMPONENT.



MAKE CERTAIN THE UNIT IS DISCONNECTED FROM OTHER SOURCES OF FORCE OR PRESSURE (FOR EXAMPLE, PNEUMATIC OR HYDRAULIC), BEFORE ATTEMPTING TO SERVICE OR REMOVE ANY COMPONENT.

FAILURE TO FOLLOW THESE PRECAUTIONS COULD RESULT IN PERSONAL INJURY AND DAMAGE TO THE EQUIPMENT.

1.0 Overview

Thank you for purchasing a HYDROACT 300 ANALYZER. The HydroAct 300 analyzer is a compact electronic communication and control system. It is designed for use with many different measuring probes.

Any other use than the one described here compromises the safety of persons and the entire measuring system and is, therefore, not permitted. The manufacturer is not liable for damage caused by improper or non-designated use.

Every analyzer is carefully checked before leaving the factory. If for any reason you are unhappy with your purchase, please contact the organization that you purchased the analyzer from, or Chemtrac, Inc. directly.

Nearly all functions in this manual are common, certain exceptions have been noted.

Ancillary items, such as probes, have their own additional manuals. Ensure you refer to them.

1.1 Specification

Power:	100-240VAC (12VDC version available as an option), at approx. 8W (sensor no. dependant)
Fuse:	1A (100-240VAC), 2A (9-36VDC)
Display:	LCD Backlit 128x64 graphical
Sensor Options:	Free Cl, Total Cl, Cl Dioxide, Ozone, pH, ORP
Sensor Inputs:	1 input with option to add 2 additional for total of 3 pH/ORP with Temp count as 2 inputs
Digital Inputs:	2 (e.g. low flow switch)
4-20mA Outputs:	1 output with option to add 2 additional for total of 3 (750 ohm load) PID option will utilize 1 output
Relays:	2 relays with option to add 2 additional for total of 4 (250 VAC, 8A / 30 VDC, 8A)
Comms:	Optional: Modbus (ASCII, RTU, TCP)
System Eventlogging:	20 events
Weight:	2.2 lbs (1kg)
IP Rating:	Nema 4X / IP65
Box material:	ABS
Lid material:	Polycarbonate
Seals:	EPDM
Expansion slot:	1

2.0 Installation

As with all instrumentation the installation and commissioning of this instrument is crucial to its safe and accurate function. This instrument must be used only for its purpose as outlined in this manual and must be installed and commissioned in accordance with this manual and by trained and qualified personnel.

2.1 Site Selection

Please choose a suitable location for the installation of the probe and the electronics. The choice of installation point on any site is a compromise and is best undertaken by experienced installation personnel. The following is a list of the factors that need to be taken into consideration. This list is not intended as a checklist neither is it implied that the list is complete.

Ensure that the mounting allows access to all serviceable parts.

Try to mount the electronics in a position where they are not habitually hosed down in a cleaning process.

Consider the length of wiring runs when mounting the instrument.

Try to keep the electronics away from substations or other large emi emitters.

Consider whether the sample will be representative and well mixed.

Consider sample return points.

In a plastic run, with a low conductivity liquid sample, consider earthing the sample.

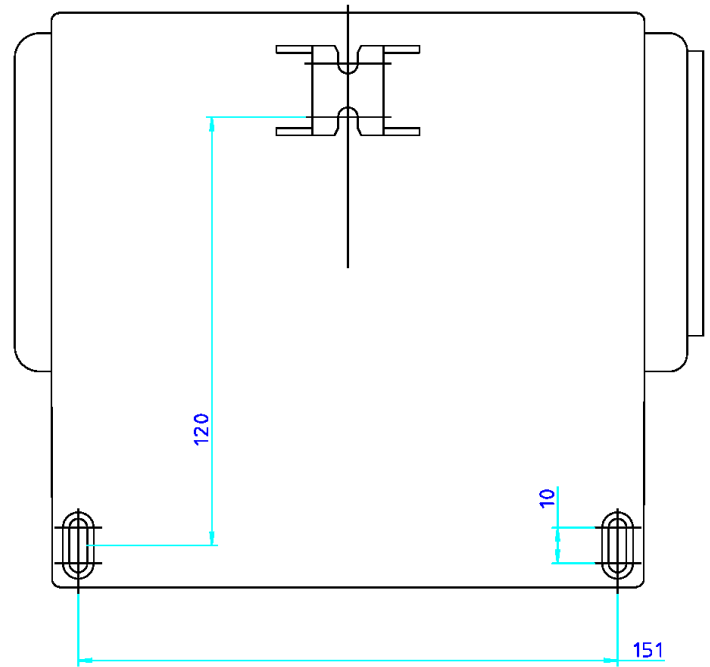
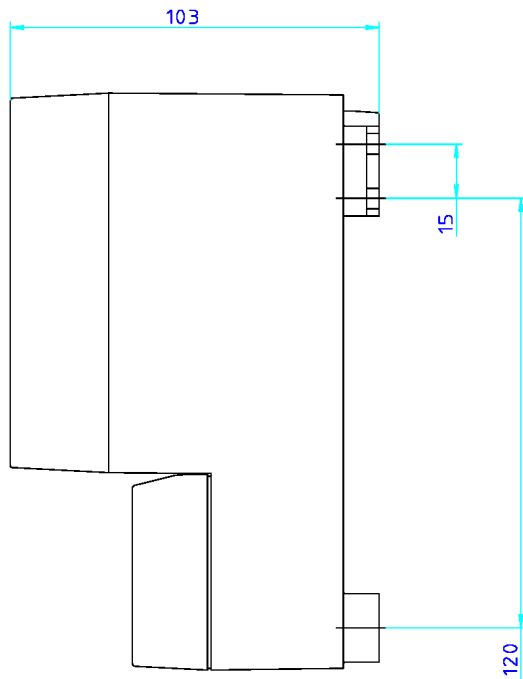
2.2 Unpacking

Please have a copy of your order with you when you unpack your instrument. All orders are checked when they leave the factory. Please double check that you have all the parts that were ordered as soon as you open the box.

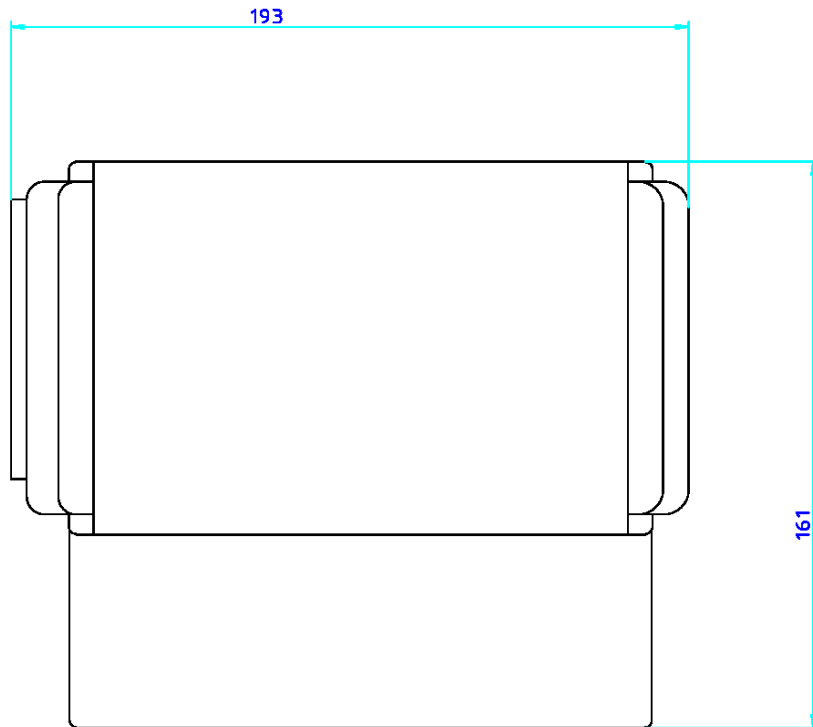
If anything is missing, or damaged, please contact your sales outlet immediately. If the instrument needs to be returned for any reason please follow the instructions given in Appendix D of this manual.

2.3 Mounting

Mounting the HydroAct 300. Please refer to the drawings below.

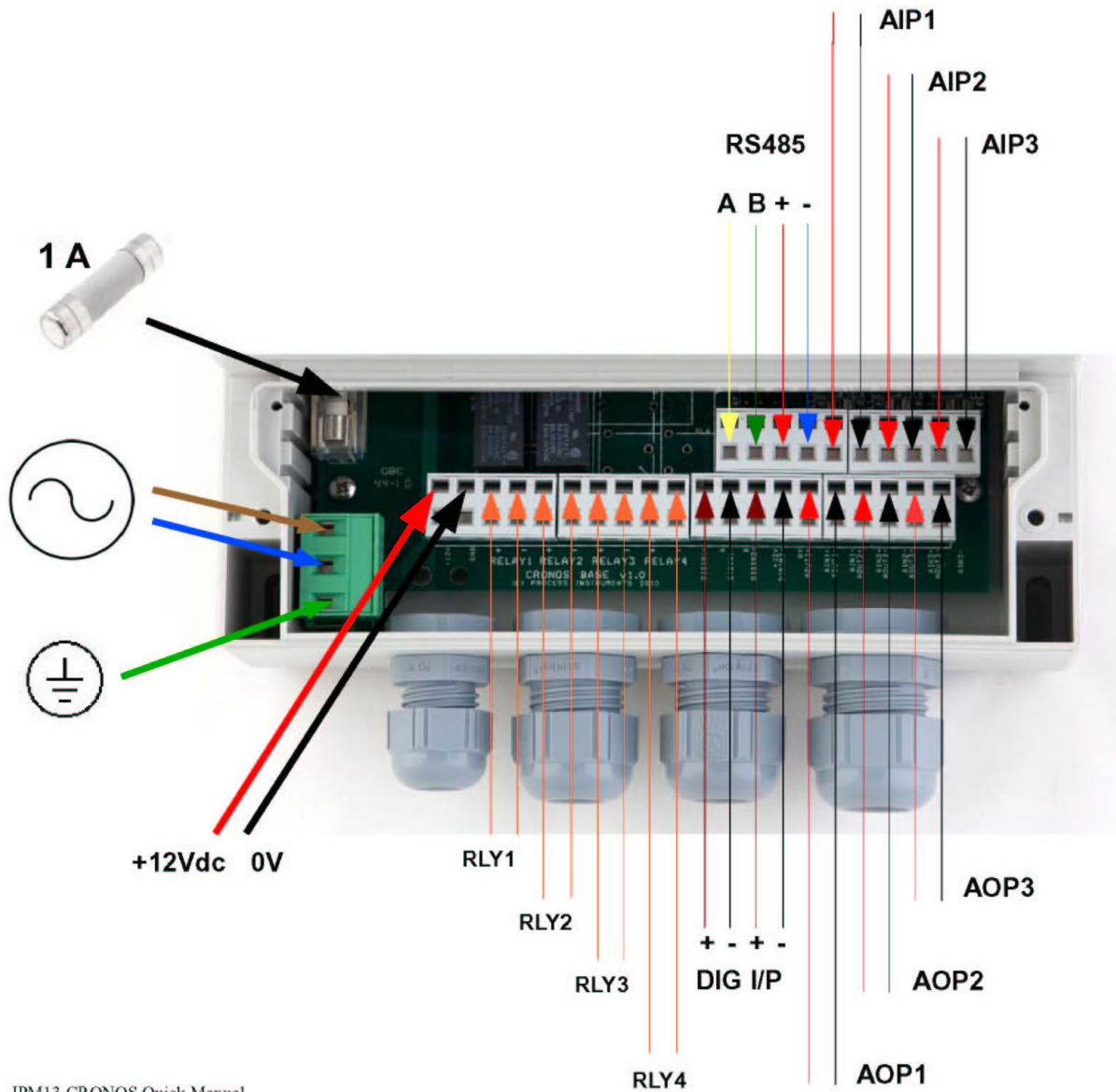


**2 slots and 2 half
holes, 5.5mm width**



The instrument electronics enclosure should be mounted away from sources of heat or direct sunlight.
For mounting of optional parts, please refer to the manual supplied with that unit.

2.4 Electrical connections

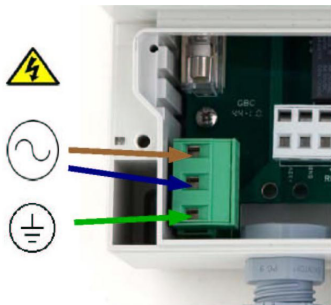


IPM13 CRONOS Quick Manual

2.4.1 Power

Cable type and rating – 6.15mm overall diameter, 3 x 0.75mm² conductors (24 strands), current rating 6A, 300V rated.

Power connector and the fuse (F1, AC 1A). Note: DC powered units use a 2A fuse.



2.4.2 RS 485

Cable type and rating – one pair, 22awg conductors, 120Ω impedance, 300V rated.

Can be reserved for probe connection (SoliSense, OxySense or Conductivity/Salinity/Total dissolved solids).

2.4.3 Relays

The unit has either up to 4 normally open (NO) relay contacts, or up to 2 solid state relays.

Cable type and rating – 6.15mm overall diameter, 3 x 0.75mm² conductors (24 strands), current rating 6A, 300V rated.

2.4.4 Probe(s)

The probes connect via the AIP connections, at the base of the HydroAct 300 board.

Cable type and rating – 4mm overall diameter, 2 x 0.25mm² conductors [HaloSense sensors (all types)], or multicore (co-axial cable together with multiple stranded cores) [for pH / ORP / fluorine sensors].

2.4.5 4-20mA Inputs and Outputs

Cable type and rating – 2 x 24awg conductors (7 strands), 300V rated, PVC outer sheath.

2.4.5.1 Inputs

The AIP 4-20mA inputs are user selectable via jumpers. Consult Chemtrac before attempting to change an input configuration.

The powered input supplies +15Vdc @ 50mA max.

NOTE: incorrect use of the input can cause failure to the board.

2.4.5.2 Outputs

AOP. Maximum loop loading is 700Ω, at 14Vdc.

2.4.6 Digital Inputs

0/12Vdc. Can be used for low flow fail indication.

Note: Please note that the use of expansion board within the HydroAct 300 means that some connectors can be difficult to access. This is a compromise to ensure that all possible functionality is available at a reasonable price inside a compact electronics unit.

3.0 Operation (Instrument)

The HydroAct 300 is a complex set of electronics.

3.0.1 Display, Buttons(☐) and Menu

The display is a backlit LCD display with variable contrast. The buttons are inductive and do not need to be pressed to activate. An extremely light touch or even hovering a finger over the button will activate it. Touching the button for an extended period will have the same effect as holding a key down on a PC keyboard.

The up and down buttons on the right hand side of the display are always up and down. The remaining four buttons along the bottom are defined for each screen by the legend above the button on the display.

The main display will look like this:



By pressing the 'Menu' button you will be taken to the LOGON screen, where a User/Technician/Engineer code is entered (Note, buzzer is silent during code entry), Use the up or down☐ and left or right☐ to alter, and OK☐ enter. Press Cancel☐ to exit. If the right code is entered, the word User/Tech/Eng will appear in the top right of the display and you will be in the main menu where configuration of the instrument is performed.

Default passwords are:

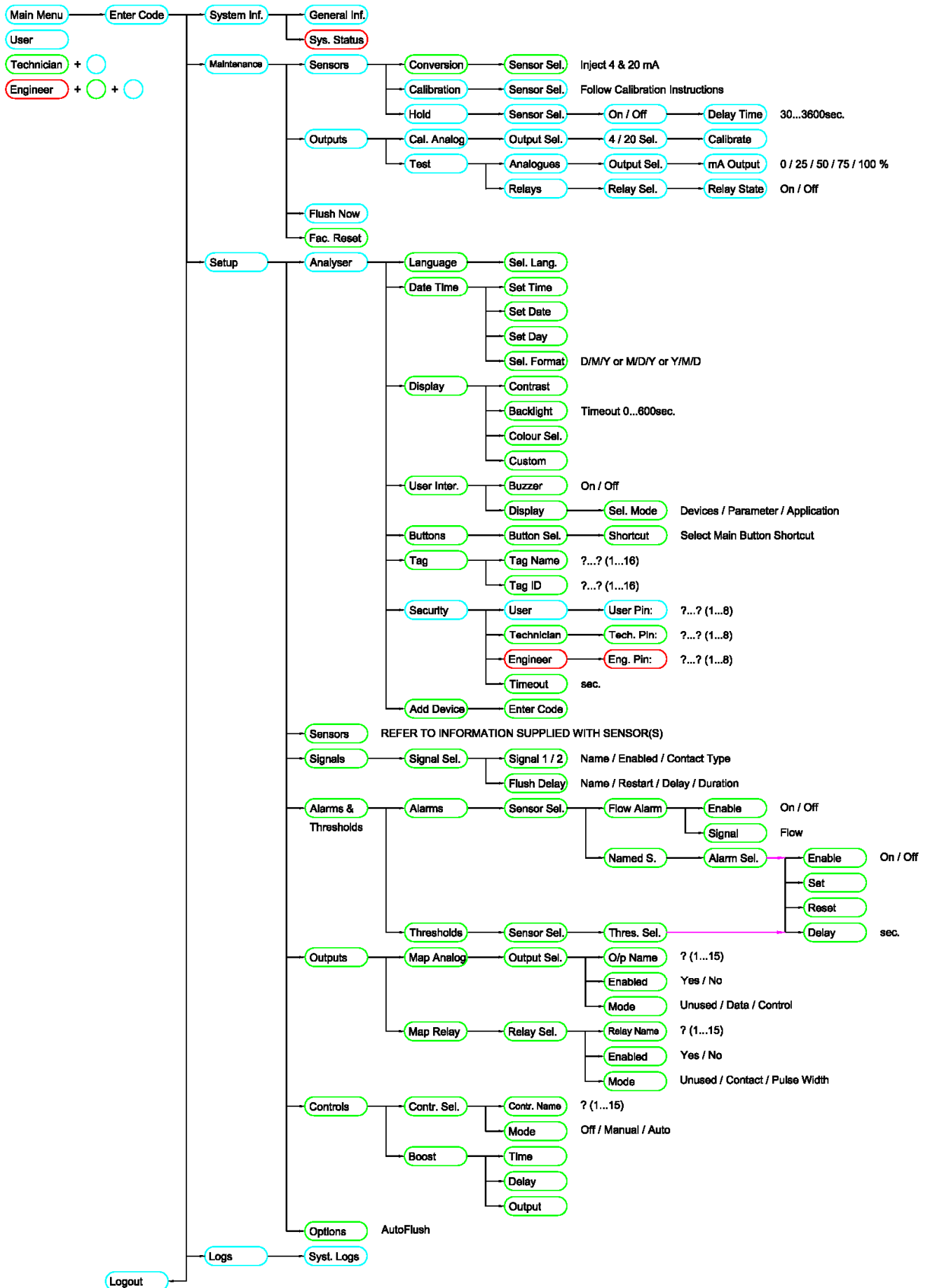
User	– 1
Technician	– 2
Engineer	– 3

By pressing the Calib button you will be taken to the calibration section, for the probe that was being displayed.

If more than one sensor is fitted, then pressing the up or down arrow buttons will scroll around the sensors.

By pressing the Alarms button you will be taken to a page that shows the current status of the alarms. When an alarm is active (screen goes Red), the alarm screen will also have a button marked Ack. Pressing this button will acknowledge the alarm and silence the buzzer (the screen goes Orange).










To return to the main menu at any time, simply press the button marked Exit, Cancel, No or Back on any of the screens shown.



NOTE: the following statement is applicable to most of the following sections of Chapter 3 of this manual.


Select  an option so it is **highlighted**.

Abbreviations


Select 	Enter options using the Select button
	Use the vertical arrow buttons
	Use the horizontal arrow buttons
OK 	Press to accept
Cancel 	Press to cancel any changes
Back 	Press to return to the previous screen
Exit 	Press to leave that menu section
Next 	Press to continue to the next screen in this menu section
Finish 	Press to save

3.1 Menu - System Information

3.1.1 General Information

Shows the Tag Name, Tag ID, Serial No., software Version and the date the software 'Hex' file was Created.
Cancel .





3.1.2 System Status - **Engineer**

Shows the Flash memory used (of 256k), the RAM used/total, HEAP (dynamic memory) used/maximum used/total, High water mark (highest address used), Stack (RAM allocated to task stacks) used/total.
Cancel .

3.2 Menu - Maintenance

3.2.1 Sensors

3.2.1.1 Conversion - **Technician**

For Current Loop's only. To calibrate the loop, inject 4mA, Next , then inject 20mA, Next . Results are displayed.
Exit  or Finish .



3.2.1.2 Calibration

Please refer to information supplied with sensors.

3.2.1.3 Hold




Each channel can have its output value placed on hold. This will maintain the output signal and alarm state in their current state for the selected period of time. The word Hold appears on the main display screen.

Select  Sensor.

OK  or Cancel .

Select  Hold,  adjust On/Off.

OK  or Cancel .

 Select  Delay,  adjust (30...3600sec.), only appears when Hold is On.

OK  or Cancel .

Exit .

3.2.2 Outputs

3.2.2.1 Calibrate Analog

⏪ Select Analog channel, ⏪ then Select 4mA or 20mA.
 ⏩ adjust the mA output.
 OK or Cancel.
 Exit or Finish.

3.2.2.2 Test

3.2.2.2.1 Analog

⏪ Select Analog channel.
 ⏩ adjust the mA output.
 OK or Cancel.
 Back.

3.2.2.2.2 Relays

⏪ Select Relay channel.
 ⏩ to change the relay state.
 OK or Cancel.
 Back.

3.2.3 Flush Now – Optional Extra

Select operates the AutoFlush software, for sensor cleaning.

3.2.4 Factory Reset - Technician

Resets the unit. Press Next, then Yes to Reset the unit, or No to exit.

NOTE: All data and devices will be lost!

3.3 Menu - Setup

3.3.1 Analyzer

3.3.1.1 Language - Technician

Select Language.
 Then use the ⏩ to adjust language.
 OK or Cancel.
 Exit.

3.3.1.2 Date & Time - Technician

⏪ Select Date / Time / Weekday / Format.
 Then use the ⏩ and ⏪ to adjust.
 OK or Cancel.
 Exit.

Format eg. D/M/Y

3.3.1.3 Display - Technician

⏪ Select Contrast / Backlight / Color.
 Then use the ⏩ and / or ⏪ to adjust.
 OK or Cancel.
 Exit.

Backlight – time light remains active from last keypress. 0 sec. is backlight permanently ON.

Color – backlight color options include Off / User / list of standard colors.

Custom is only accessible if Color is set to User. Allows custom backlight color.

3.3.1.4 User Interface - Technician

Select Buzzer / Display.
 Then use the to adjust.
 OK or Cancel .

Display – options Devices / Parameter / Dual Parameter / Application.

Devices – shows all functions of the probe (eg. pH probe, pH as main display, temp. shown also)

Parameter – main display shows only one sensor (scroll to next sensor)

Dual Parameter – main display shows two sensors (scroll to next sensor)

Application – custom display (eg. AquaSense shows dosing information on the main display)

3.3.1.5 Buttons - Technician

Select Button 1 / 2 / 3.
 Then use the to adjust.
 OK or Cancel .

Allows main display shortcut buttons to be defined (eg. Button 1 – Calibrate).

3.3.1.6 Tag Details - Technician

Select Tag Name / ID.
 Then use the and to adjust.
 OK or Cancel .

Allows customer to identify instruments by name or number.

3.3.1.7 Security

Select User / **Technician** / **Engineer**.
 Then use the and to adjust the password. Default passwords are:
 OK or Cancel .

Default passwords are:

User – 1
Technician – 2
Engineer – 3

Select Timeout.
 Then use the and to adjust the login time.
 OK or Cancel .

When this time is exceeded in either a menu or main screen, then you will be logged out. Note: if the HydroAct 300 is in a data entry screen, the time out is inhibited.

If you lose your password, please contact PI, with the serial number of your instrument. We will supply a password only valid on the day you call.

3.3.1.8 Add Device - Technician

The device security code is unit serial number specific, and will be supplied with your equipment upgrade.

Use the and to adjust.
 OK or Cancel .

3.3.2 Sensors - Technician

Please refer to separately supplied information.

3.3.3 Signals - Technician

⏸ Select **☐** Signal 1 / 2 / Flush Delay.

3.3.3.1 Signal 1 / 2

⏸ Select **☐** Name / Enabled / Type.

Use the **↔** and **⏸** to adjust.

OK **☐** or Cancel **☐**.

Exit **☐**.

Name – allows customer to identify signals (eg. Flow).

Type – eg. switch has normally open contacts.

3.3.3.2 Flush Delay

⏸ Select **☐** Name / Restart / Delay / Duration.

Use the **↔** and **⏸** to adjust.

OK **☐** or Cancel **☐**.

Exit **☐**.

Name – allows customer to identify signals (eg. Flow).

Restart – Yes/No. No – off. Yes – on.

Delay – time between flush cycles.

Duration – flush time.

3.3.4 Alarms & Thresholds - Technician

⏸ Select **☐** Alarms or Thresholds

3.3.4.1 Alarms - Technician

⏸ Select **☐** Sensor, eg. Flow or sensor name.

3.3.4.1.1 Flow Alarm

⏸ Select **☐** Flow Alarm. Then use the **↔** adjust On/Off.

OK **☐** or Cancel **☐**.

⏸ Select **☐** Signal 1 / 2, **↔**. These are the digital inputs 1 / 2.

OK **☐** or Cancel **☐**.

Exit **☐**.

3.3.4.1.2 Named Sensor – eg Free Chlorine

⏸ Select **☐** Alarm 1 / 2. Then use the **↔** adjust On/Off.

OK **☐** or Cancel **☐**.

⏸ Select **☐** Set / Reset / Delay.

Use the **↔** and **⏸** to adjust.

OK **☐** or Cancel **☐**.

Exit **☐**.

Set – alarm activates.

Reset – alarm deactivates.

Delay – wait time before alarm activates.

3.3.4.2 Thresholds - Technician

⏪ Select **☑** Sensor.

⏪ Select **☑** Threshold 1 / 2. Then use the **↔** adjust On/Off.

OK **☑** or Cancel **☑**.

⏪ Select **☑** Set / Reset / Delay.

Use the **↔** and **⏪** to adjust.

OK **☑** or Cancel **☑**.

Exit **☑**.

Set – threshold activates.

Reset – threshold deactivates.

Delay – wait time before threshold activates.

3.3.5 Outputs - Technician

3.3.5.1 Map Analog - Technician

⏪ Select **☑** Analog 1 / 2 / 3.

OK **☑** or Cancel **☑**.

⏪ Select **☑** Name / Enabled / Mode.

Use the **↔** and **⏪** to adjust.

OK **☑** or Cancel **☑**.

Exit **☑** or Next **☑**.

Name – allows customer to identify signals.

Mode – options Unused / Data / Control.

Unused – off

Data – outputs the probe signal

Control – uses the output for PID control

3.3.5.1.1 Data

⏪ Select **☑** Sensor / Parameter.

Use the **↔** and **⏪** to adjust.

OK **☑** or Cancel **☑**.

Back **☑**, Exit **☑** or Next **☑**.

Sensor – the signal source (eg. Chlorine Probe)

Parameter – some Sensors allow different parameters (eg ppm or mg/m³)

⏪ Select **☑** Minimum / Maximum scaling range.

Use the **↔** and **⏪** to adjust.

OK **☑** or Cancel **☑**.

Back **☑**, Exit **☑** or Next **☑**.

Back **☑**, Exit **☑** or **Finish** **☑**.

3.3.5.1.2 Control

Select **☑** Source PID controller 1 / 2.

Use the **↔** and **⏪** to adjust.

OK **☑** or Cancel **☑**.

Back **☑**, Exit **☑** or Next **☑**.

Back **☑**, Exit **☑** or **Finish** **☑**.

3.3.5.2 Map Relay - Technician

⏪ Select Relay 1 / 2 / 3 / 4.

⏪ Select Name / Enabled / Mode.

Use the ⏪ and ⏩ to adjust.

OK or Cancel.

Exit or Next.

Name – allows customer to identify signals.

Mode – options Unused / Contact / Pulse Width.

Unused – off

Contact – operates on signal set below

Pulse Width – uses the output for PID control

3.3.5.2.1 Contact – see flow diagram below

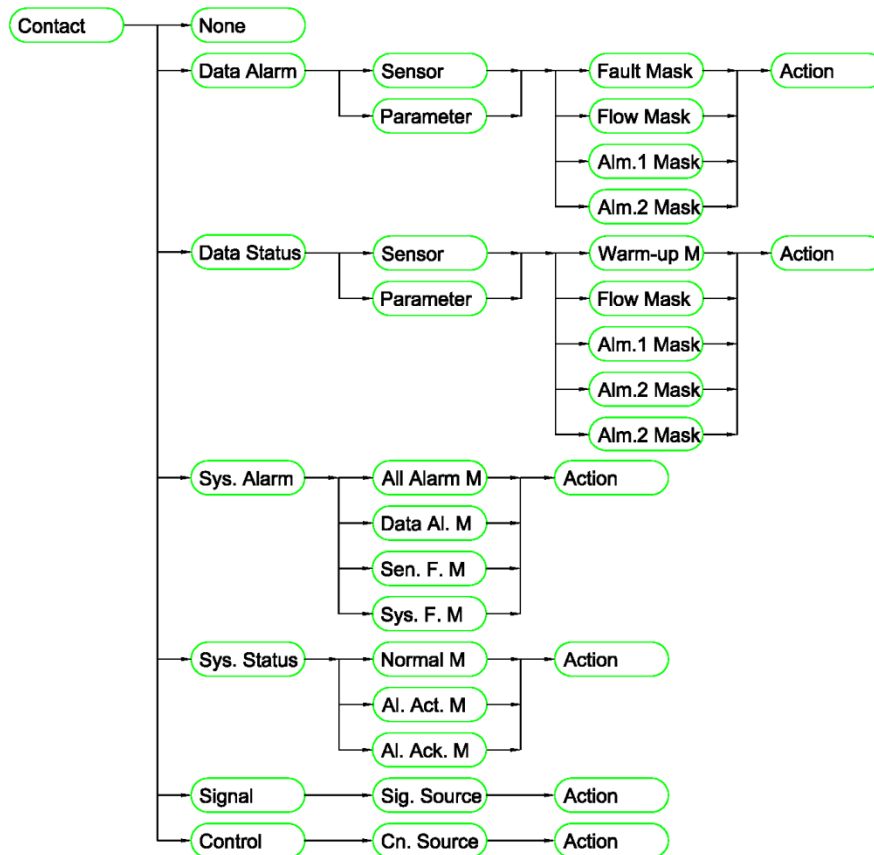
Select Source.

Use the ⏪ and ⏩ to adjust (see options listed below).

OK or Cancel.

Back, Exit or Next.

None	– off
Data Alarm	– set / reset on sensor
Data Status	– thresholds / warm-up / calibrating / set to off-line
System Alarm	– sensor disconnected / flow alarm
System Status	– alarm acknowledged / unacknowledged
Signal	– clock or digital in
Control	– AutoFlush



3.3.5.2.1.1 Data Alarm

⏪ Select **☐** Sensor / Parameter.

Use the **⏪** and **⏩** to adjust.

OK **☐** or **Cancel** **☐**.

Back **☐**, **Exit** **☐** or **Next** **☐**.

Sensor – the signal source (eg. Chlorine Probe)

Parameter – some Sensors allow different parameters (eg ppm or mg/m³)

⏪ Select **☐** Fault Mask / Flow Mask / Alarm 1 Mask / Alarm 2 Mask.

Use the **⏪** to adjust.

OK **☐** or **Cancel** **☐**.

Back **☐**, **Exit** **☐** or **Next** **☐**.

Fault Mask – operates the relay for a sensor fault *

Flow Mask – operates the relay for a flow alarm *

Alarm 1 Mask – relay operates at set/reset points*

Alarm 2 Mask – relay operates at set/reset points*

* has to be On in 3.2.4.1

Select **☐** Action (Normally Open or Normally Closed relay contacts).

OK **☐** or **Cancel** **☐**.

Back **☐**, **Exit** **☐** or **Next** **☐**.

Back **☐**, **Exit** **☐** or **Finish** **☐**.

3.3.5.2.1.2 Data Status

Select Sensor / Parameter.

Use the and to adjust.

OK or Cancel .

Back , Exit or Next .

Sensor – the signal source (eg. Chlorine Probe)

Parameter – some Sensors allow different parameters (eg ppm or mg/m³)

Select Warm-up Mask / On-line Mask / Off-line Mask / Threshold 1 Mask / Threshold 2 Mask.

Use the to adjust.

OK or Cancel .

Back , Exit or Next .

Warm-up Mask – operates the relay for sensor warming-up

On-line Mask – operates the relay if the sensor is on-line

Off-line Mask – operates the relay if the sensor is off-line

Threshold 1 Mask – relay operates at set/reset points*

Threshold 2 Mask – relay operates at set/reset points*

* has to be On in 3.2.4.2

Select Action (Normally Open or Normally Closed relay contacts).

OK or Cancel .

Back , Exit or Next .

Back , Exit or **Finish** .

3.3.5.2.1.3 System Alarm

Select All Alarms Mask / Data Alarms Mask / Sensor Fault Mask / System Fault Mask.

Use the to adjust.

OK or Cancel .

Back , Exit or Next .

All Alarms Mask – operates the relay for any alarm

Data Alarms Mask – operates the relay for any sensor alarm*

Sensor Fault Mask – operates the relay for any sensor showing a fault

System Fault Mask – operates the relay for any system fault

* has to be On in 3.2.4.1

Select Action (Normally Open or Normally Closed relay contacts).

OK or Cancel .

Back , Exit or Next .

Back , Exit or **Finish** .

3.3.5.2.1.4 System Status

Select Normal Mask / Alarm Active Mask / Alarm Acknowledge Mask.

Use the to adjust.

OK or Cancel .

Back , Exit or Next .

Normal Mask – operates the relay for normal operation (no active alarms)

Alarm Active Mask – operates the relay when any alarm is active (until the alarm is acknowledged)

Alarm Acknowledge Mask – operates the relay when any alarm has been acknowledged (stays active until alarm is cleared)

Select Action (Normally Open or Normally Closed relay contacts).

OK or Cancel .

Back , Exit or Next .

Back , Exit or **Finish** .

3.3.5.2.1.5 Signal

Select Source (Signal 1 / 2). These are the digital inputs 1 / 2.

Use the to adjust.

OK or Cancel .

Back , Exit or Next .


Select Action (Normally Open or Normally Closed relay contacts).

OK or Cancel .

Back , Exit or Next .

Back , Exit or **Finish** .

3.3.5.2.1.6 Control

Select  Source (Auto-Flush 1 / 2).

Use the   to adjust.

OK  or Cancel .

Back , Exit  or Next .

Select  Action (Normally Open or Normally Closed relay contacts).


OK  or Cancel .

Back , Exit  or Next .



Back , Exit  or **Finish** .

3.3.5.2.2 Pulse Width

  Select  Source / Pulse Width / Dead Band.

Use the   and   to adjust.

OK  or Cancel .

Exit  or Next .


Source – select PID loop

Pulse Width – the loop control time (during which the relay may be On / Off depending on PID controller).

Dead Band – if the PID controller On time for the loop is below this setpoint, do not operate the relay.



Back , Exit  or **Finish** .



3.3.6 Controls – Technician**3.3.6.1 Controller Select**

  Select  Controller (eg pH or PID).

  Select  Name / Mode.

Use the   and   to adjust.

OK  or Cancel .

Exit  or Next .

Name – allows customer to identify signals.

Mode – Off / Manual / Auto.

3.3.6.1.1 Manual**Manual Output**

Select  Value.

Use the   and   to adjust.

OK  or Cancel .

Back , Exit  or Next .

Value – the output will be limited to the % specified (eg 50%, mA output would stop at 12mA, pulse width would stop after half the loop time set at 3.3.5.2.2).

Back , Exit  or **Finish** .

3.3.6.1.2 Auto

Control Setup

⏪ Select Action / Setpoint / Maximum Output / Delay.

Use the ⏪ and ⏩ to adjust.

OK or Cancel.

Back, Exit or Next.

Action – Direct or Reverse (eg. Direct for Cl₂, reverse for pH controllers).

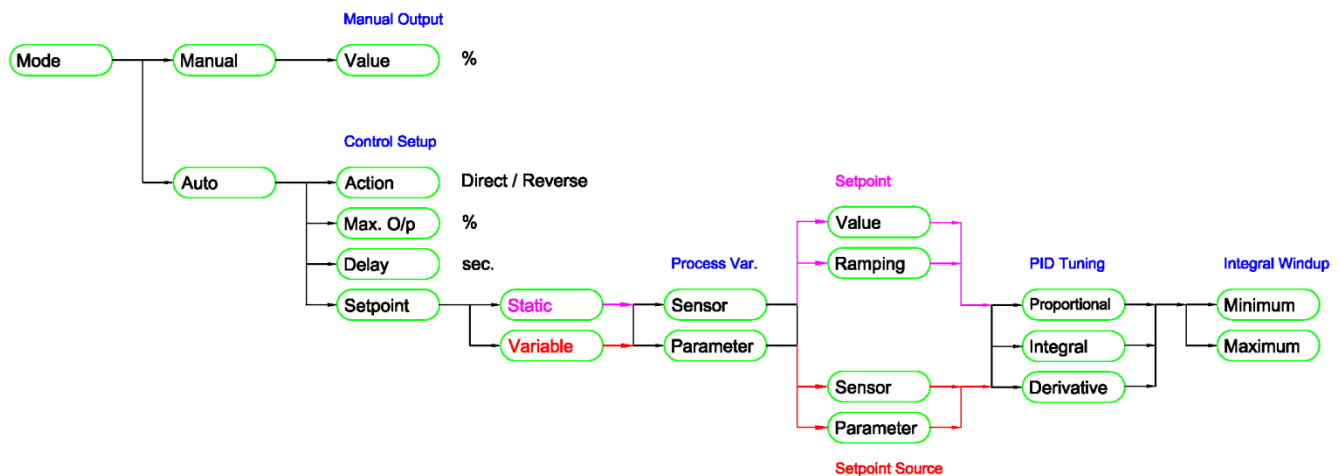
Maximum Output – the output will be limited to the % specified.

Delay – the control loop time (eg. 0.5sec, every half second the control updates. Note: AquaSense uses 60sec).

Setpoint – Static or Variable.

Static – entered at Setpoint Value (below).

Variable – tracks a 4-20mA input signal, Setpoint Source (below).



Process Variable

⏪ Select Sensor / Parameter.

Use the ⏪ and ⏩ to adjust.

OK or Cancel.

Back, Exit or Next.

Sensor – the sensor (eg. pH).

Parameter – the variable to be controlled (eg. pH or temperature signal from a pH probe).

Setpoint

⏪ Select Value / Ramping.

Use the ⏪ and ⏩ to adjust.

OK or Cancel.

Back, Exit or Next.

Value – the control point value

Ramping – 0.00 to 1.00. Zero is off. One is immediate tracking. Good process control would require a figure between these (user defined by experience of application).

Setpoint Source

⏪ Select **☑** Sensor / Parameter.
 Use the **↔** and **⏪** to adjust.
OK **☑** or **Cancel** **☑**.
Back **☑**, **Exit** **☑** or **Next** **☑**.

Sensor – the sensor to be tracked (eg. pH).

Parameter – the variable to be controlled (eg. pH or temperature signal from a pH probe).

PID Tuning

⏪ Select **☑** Proportional / Integral / Derivative.
 Use the **↔** and **⏪** to adjust.
OK **☑** or **Cancel** **☑**.
Back **☑**, **Exit** **☑** or **Next** **☑**.

Proportional – 0.00 to 10.00 gain. Zero is off. Proportional to the size of the current error.

Integral – 0.00 to 10.00 gain. Zero is off. Proportional to the sum of all errors.

Derivative – 0.00 to 10.00 gain. Zero is off. Proportional to the rate of change of error,

Integral Windup Protection

⏪ Select **☑** Minimum / Maximum.
 Use the **↔** and **⏪** to adjust.
OK **☑** or **Cancel** **☑**.
Back **☑**, **Exit** **☑** or **Next** **☑**.

Minimum – -100.00 to 0.00. Zero is off.

Maximum – 0.00 to 100.00. Zero is off.

Protects against overshoot following large errors.

Back **☑**, **Exit** **☑** or **Finish** **☑**.

3.3.6.2 Boost

⏪ Select **☑** Time / Delay / Output.
 Use the **↔** and **⏪** to adjust.
OK **☑** or **Cancel** **☑**.
Exit **☑**.

Time – boost time

Delay – time before next boost

Output – pump output level during boost (eg 50%)

3.3.7 Options – Technician

3.3.7.1 Auto-Flush

⏪ Select **☑** Name / Control / Signal / Length / Hold Delay.
 Use the **↔** and **⏪** to adjust.
OK **☑** or **Cancel** **☑**.
Exit **☑**.

Name – allows customer to identify signals.

Control – On/Off.

Signal – Flush Delay / Signal 1 / Signal 2.

Flush Delay uses the Signal in 3.3.3.


Signal 1 / 2 are the digital inputs 1 / 2.

Length – flush length time.

Hold Delay – hold the output signal / relays / etc. associated.

3.4 Menu – Logs

Select  System Logs.

Use the  to review the log.

Cancel .

4.0 Commissioning

It is recommended that the HydroAct 300 is commissioned by a trained commissioning engineer. During the commissioning the engineer can train the operators in the correct operation of the HydroAct 300.

The installation and commissioning should proceed in the following manner:

- 1) Install the unit (refer to all of section 2.0).
- 2) Check the instrument for damage.
- 3) Make up the sensor(s) as required.
- 4) Setup the instrument (refer to section 3.0) and any optional parts
- 5) **Calibrate instrument / sensor(s), then the system is fully commissioned.**

5.0 Troubleshooting Guide

Symptom	Possible cause	Possible solution
No display or LEDs	No power	Check power is getting to the instrument and check connections
		Open the unit and check the fuse
	Ribbon cable disconnected	Turn off the power, then connect ribbon cable onto board
LEDs light up, no display	Display fault	Return unit for repair
4-20mA output not working	Not selected in software	Check assignment of output
	Jumpers in wrong position	Contact PI
Relays not working	Not assigned in software	Check assignment of relays

Appendix A

Certificates and approvals

CE approval

Declaration of conformity

The product meets the legal requirements of the harmonized European standards.

Chemtrac, Inc. confirms compliance with the standards by affixing the CE symbol.

Waste electrical and electronic equipment (WEEE)

Important information

Disposal of old electrical & electronic equipment



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead, it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By insuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local council or city office, your waste disposal service or the organization from which you purchased the product.

Appendix B

Warranty

Chemtrac, Inc. warrants its product to be free of defects in material and workmanship for a period of one (1) year from date of shipment to the original customer. Upon receipt of written notice from the customer, Chemtrac, Inc. shall repair or replace (at the discretion of Chemtrac, Inc.) the defective equipment or components. Chemtrac, Inc. assumes no responsibility for equipment damage or failure caused by:

- A. Improper installation, operation, or maintenance of the equipment.
- B. Abnormal wear and tear on moving parts caused by some processes.
- C. Acts of nature (i.e. lightning, flooding, etc.)

This warranty represents the exclusive remedy of damage or failure of the equipment.

Under no circumstances shall Chemtrac, Inc. be liable for any special, incidental, or consequential damage, such as loss of production, profits or product quality. The warranty cannot be guaranteed if the customer fails to service and maintain the equipment in accordance with Chemtrac, Inc. written instructions and policies, as stated in the Operations Manual.