# Chlorinator

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**This page is for the Pentair (aka AquaRite, NatureSoft, MineralSprings, SmartPure, etc) Salt Chlorinator**

# Packets

These packets are a little different than all of the others in this wiki. They all start with 16,2 and end with 16,3. There is no high bit checksum (only a low bit).

## Wiring

If you are wiring this yourself, the pinouts are also slightly different than the other pool peripherals.

```
Aquarite pins:
1=Red=Power
2=Blk = data +
3=Ylw= data -
4=Grn=Ground
```

## 0. List of Commands

| Command | Name |
|---|---|
| 0 | Get Status |
| 1 | Response to Get Status |
| 3 | Response to Get Version |
| 17 | Set Salt % |
| 18 | Response to Set Salt % & Salt PPM |
| 20 | Get Version |

| Command | Name |
|---|---|
| 21 | Set Salt Generate % / 10 |

## 1. Status Request

| Byte | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Request | 16 | 2 | 80 | 0 | 0 | 98 | 16 | 3 | |
| Response | 16 | 2 | 0 | 1 | 0 | 0 | 19 | 16 | 3 |

**Request**

| Byte | Known? | Sample | Definition |
|---|---|---|---|
| 1 | Y | 16 | Preamble 1 |
| 2 | Y | 2 | Preamble 2 |
| 3 | Y | 80 | Destination = Chlorinator |
| 4 | Y | 0 | Command = Get Status |
| 5 | N | 0 | Not sure |
| 6 | Y | 98 | Checksum Low Bit |
| 7 | Y | 16 | Post-amble 1 |
| 8 | Y | 3 | Post-amble 2 |

**Response**

| Byte | Known? | Sample | Definition |
|---|---|---|---|
| 1 | Y | 16 | Preamble 1 |
| 2 | Y | 2 | Preamble 2 |
| 3 | Y | 0 | Destination = Controller |
| 4 | Y | 1 | Status = Ok |
| 5 | N | 0 | Not sure |
| 6 | N | 0 | Not sure |

| Byte | Known? | Sample | Definition |
|---|---|---|---|
| 7 | Y | 19 | Checksum Low Bit |
| 8 | Y | 16 | Post-amble 1 |
| 9 | Y | 3 | Post-amble 2 |

## 2. Set Generate Salt % / Return Salt PPM

| Byte | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Request | 16 | 2 | 80 | 17 | 3 | 118 | 16 | 3 | |
| Response | 16 | 2 | 0 | 18 | 58 | 144 | 238 | 16 | 3 |

**Request**

| Byte | Known? | Sample | Definition |
|---|---|---|---|
| 1 | Y | 16 | Preamble 1 |
| 2 | Y | 2 | Preamble 2 |
| 3 | Y | 80 | Destination = Chlorinator |
| 4 | Y | 17 | Command = Set Salt %<br>If this is 21, then bit 5 = Set Salt %/10. |
| 5 | Y | 3 | Set Salt % (3%)<br>If bit 4 is 21, then divide this by 10 (EG 100/10=10%); |
| 6 | Y | 118 | Checksum Low Bit, This bit is checksum of 1-5 bits (MOD 256, if necessary) |
| 7 | Y | 16 | Post-amble 1 |
| 8 | Y | 3 | Post-amble 2 |

**Response**

| Byte | Known? | Sample | Definition |
|---|---|---|---|
| 1 | Y | 16 | Preamble 1 |
| 2 | Y | 2 | Preamble 2 |

| Byte | Known? | Sample | Definition |
|---|---|---|---|
| 3 | Y | 0 | Destination = Controller |
| 4 | Y | 18 | Status = Salt PPM Command |
| 5 | Y | 58 | Salt PPM * 50 (58*50=2,900PPM) |
| 6 | Y | 144 | Error bit: 0=Ok, 1=No Flow, 2=Low Salt, 4=High Salt, 144=Clean Salt Cell |
| 7 | Y | 238 | Checksum Low Bit |
| 8 | Y | 16 | Post-amble 1 |
| 9 | Y | 3 | Post-amble 2 |

## 2. Get Version / Return Name

| Byte | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Request | 16 | 2 | 80 | 20 | 2 | 120 | 16 | 3 | | | | |
| Response | 16 | 2 | 0 | 3 | 0 | 73 | 110 | 116 | 101 | 108 | 108 | 105 |

**Request**

| Byte | Known? | Sample | Definition |
|---|---|---|---|
| 1 | Y | 16 | Preamble 1 |
| 2 | Y | 2 | Preamble 2 |
| 3 | Y | 80 | Destination = Chlorinator |
| 4 | Y | 20 | Command = Get Name |
| 5 | N | 2 | Not sure. Intellitouch uses 2. Aquarite uses 0. Any of them seem to work. |
| 6 | Y | 120 | Checksum Low Bit, This bit is checksum of 1-5 bits (MOD 256, if necessary) |
| 7 | Y | 16 | Post-amble 1 |
| 8 | Y | 3 | Post-amble 2 |

Response

| Byte | Known? | Sample | Definition |
|---|---|---|---|
| 1 | Y | 16 | Preamble 1 |
| 2 | Y | 2 | Preamble 2 |
| 3 | Y | 0 | Destination = Controller |
| 4 | Y | 3 | Command = Return Name |
| 5 | Y | 58 | Salt PPM * 50 (58*50=2,900PPM) |
| 6-21 | Y | many | Ascii bits. This example returns "Intellichlor--40" |
| 22 | Y | 188 | Checksum Low Bit |
| 23 | Y | 16 | Post-amble 1 |
| 24 | Y | 3 | Post-amble 2 |



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https://github.com/tagyoureit/nodejs-poolcontroller.wiki.git