Pumps

tagyoureit edited this page on Mar 24, 2018 · 7 revisions

Messages originated from the Pump(s)

This page lists the messages that are sent by the pump. This application is built around systems that have a modern Pentair pool controller (EasyTouch, et al). ~~If you want to control the pumps directly, without the use of a pool controller, see this~~ [CocoonTech thread](#) ~~(registration required).~~ This application will now read all of the pump commands.

Action	Mode\Command	Description
<01>	<02><96>	Speed mode set to
<01>	<03><33>	Run the following Ext. Program <00><00>=Off, <00><08>=1, <00><10>=2, <00><18>=3, <00><20>=4
<01>	<03><39>	Set Speed Setting Program 1 to speed in rpm
<01>	<03><40>	Set Speed Setting Program 2 to speed in rpm
<01>	<03><41>	Set Speed Setting Program 3 to speed in rpm
<01>	<03><42>	Set Speed Setting Program 4 to speed in rpm
<01>	<03><43>	set pump timer to minutes (or might be hour:min??)
<01>	<04><196>	set pump to rpm speed
<01>	<04><228>	set pump to gpm speed
<04>	<00>	set pump control panel to local (local panel on)
<04>	<255>	set pump to remote control (local panel off)
<05>	<00>	set pump to filter
<05>	<01>	set pump to manual
<05>	<02>	set pump to speed 1
<05>	<03>	set pump to speed 2

Action	Mode\Command	Description
<05>	<04>	set pump to speed 3
<05>	<05>	set pump to speed 4
<05>	<06>	set pump to feature 1
<06>	<04>	Turn pump off
<06>	<10>	Turn pump on
<07>		Request/Return Status
<09>	<02><96>	run pump at <00> xx gpm (from Intellitouch)

Pump Status Message

Request

Byte	1	2	3	4	5	6
Example	96	16	7	0	1	28

Response

Byte	1	2	3	4	5	6	7	8	9	10	11	12	13
Example	16	96	7	15	10	0	0	0	170	4	226	0	0

Byte	Known?	Definition	Details
1	Y	Destination	Destination Address of message
2	Y	Source Address	Sender Addresses of message
3	Y	Action	7 = Status
4	Y	Length	Number of bytes in the message after this byte
5	Y	Mode/Command	4=Off; 10=On
6	N	Drivestate	Not sure

Byte	Known?	Definition	Details
7	Y	Watts High Bit	This bit * 256 + low bit = total watts
8	Y	Watts Low Bit	
9	Y	RPM High Bit	This bit * 256 + low bit = total RPM
10	Y	RPM Low Bit	
11	N	PPC?	Some control bit?
12	N	?	
13	N	Error(?)	Error message bit?
14	N	Timer (?)	Some kind of timer, maybe?
15	N	?	
16	Y	Timer high bit	Either hh:mm (16:17) or mm:mm ?
17	Y	Timer low bit	How long before pump shuts off
18	Y	Hours	Hour of actual time
19	Y	Min	Mins of actual time
20	Y	Checksum High Bit	This bit * 256 + low bit = checksum
21	Y	Checksum Low Bit	

Set Speed Mode

Request

Byte	1	2	3	4	5	6	7	8	9	10
Example	96	16	1	4	3	39	2	238	2	52

Byte	Known?	Definition	Details
1	Y	Destination	Destination Address of message
2	Y	Source Address	Sender Addresses of message
3	Y	Action	1=Set speed mode

Byte	Known?	Definition	Details
4	Y	Length	Number of bytes in the message after this byte
5	Y	Mode/Command	3=Run program
6	Y	Action	33=Run program XX/Turn off pump 39=Save Program 1 as XX Speed 40=Save Program 2 as XX Speed 41=Prog3 42=Prog4 43=Set pump time for XX mins
7	Y	High bit	if save program, the high*256+low=RPM. If timer, hh:mm or mm:mm(?) in low bit & high bit.
8	Y	Low Bit	If Run then 0=off; 8=Prog1; 16=Prog2;24=Prog3;32=Prog4 (Low bit will be 0)
9	Y	Checksum High Bit	This bit * 256 + low bit = checksum
10	Y	Checksum Low Bit	

Response

Byte	1	2	3	4	5	6	7	8
Example	34	96	1	2	3	232	2	21

Byte	Known?	Definition	Details
1	Y	Destination	Destination Address of message
2	Y	Source Address	Sender Addresses of message
3	Y	Action	1=Speed mode set
4	Y	Length	Number of bytes in the message after this byte
5	Y	Speed Mode High	(256)*this byte+byte 5

Byte	Known?	Definition	Details
6	Y	Speed Mode Low	
7	Y	Checksum High Bit	This bit * 256 + low bit = checksum
8	Y	Checksum Low Bit	

Remote Control Mode

Request

Byte	1	2	3	4	5	6	7
Example	96	16	4	1	255	2	25

Response

Byte	1	2	3	4	5	6	7
Example	16	96	4	1	255	2	25

Byte	Known?	Definition	Details
1	Y	Destination	Destination Address of message
2	Y	Source Address	Sender Addresses of message
3	Y	Action	4 = Pump Control Panel On\Off
4	Y	Length	Number of bytes in the message after this byte
5	Y	Mode/Command	0=Set pump control panel (local) on; 255=Set pump control panel (local) off
6	Y	Checksum High Bit	This bit * 256 + low bit = checksum
7	Y	Checksum Low Bit	

Run Program X has a different type of response

```
16:55:52.137 VERBOSE Sent Packet 255,0,255,165,0,96,34,1,4,3,33,0,8,1,88 Try: 1
16:55:52.150 DEBUG Msg# 7  Msg received: 34,96,1,2,0,8,1,50
                           Msg written: 255,0,255,165,0,96,34,1,4,3,33,0,8,1,88
                           Match?: true
16:55:52.164 VERBOSE Msg# 7   Pump1: Speed Set to 8 rpm: [34,96,1,2,0,8,1,50]
```

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