ZODIAC®

AQUALINK RS

09/18/13 SAT
6:25 PM

SPA 942 F
AIR 782 F

EQUIPMENT ON/OFF
ONE TOUCH ON/OFF
MENU / HELP

BACK DONE

SELECT

Zodiac Pool Systems, Inc.
1-800-822-7933
www.ZodiacPoolSystems.com

Instructor_____ ext._____

Sales Representatives_____ ext._____

_____ ext._____

_____ ext._____

Service Manager_____ ext._____

ext.

IMPORTANT SAFETY INSTRUCTIONS

The information contained in this technical guide is intended for Zodiac trained service personnel only. Electrical installation and repairs should only be performed by a certified electrician or Zodiac trained professional, and must comply with all national electric codes (NEC, Canadian, etc.), state and local law, ordinances, codes and regulations.

If you have not received training, **do not attempt any of the electrical repairs presented in this document.** Contact Zodiac Pool Care, Inc. at 1-800-822-7933 for assistance.

Read and follow all instructions carefully.

When servicing equipment, basic safety precautions should always be followed including those listed below.

⚠ **WARNING**	**Failure to heed the following warnings could result in property damage, permanent injury or death.**

TO REDUCE THE RISK OF ELECTRICAL SHOCK:

- Disconnect main power to pool equipment area prior to any service or repairs.
- Keep all electrical equipment at least 10 feet (3 m) from inside wall of pool or spa.
- Connect equipment only to a receptacle (cord models) or circuit (hardwired) protected by a ground fault circuit interrupter (GFCI).
- Use only copper conductors and supply wires suitable for the specific device.
- Replace damaged power cord(s) immediately and use only identical replacement parts.
- Do not bury power cord(s). Position cord(s) to minimize abuse from lawn mowers, hedge trimmers and other equipment.
- Do not install or service equipment if precipitation is present or imminent.

TO REDUCE EQUIPMENT WATER PRESSURE HAZARD:

- Always turn pump off to release pressure prior to removing or installing in-line equipment.
- To avoid equipment damage, do not exceed water pressure (psi) specifications for the device.

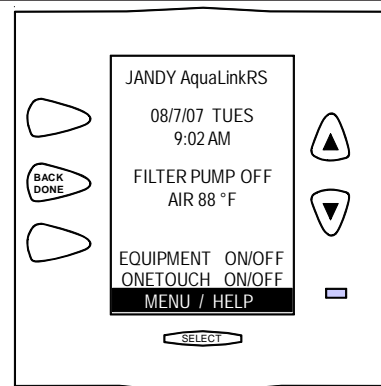**To reduce the risk of injury, do not permit children to operate, handle or play on equipment.**
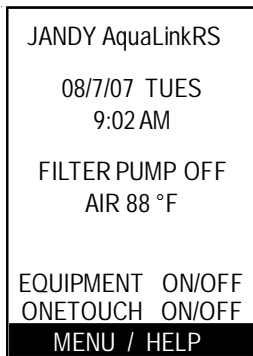
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ONETOUCH

OneTouch Setup and Programming
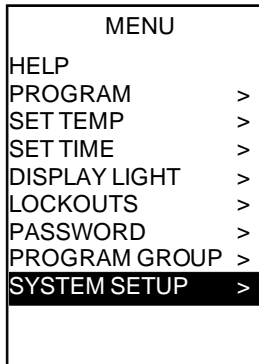
This section will cover VSP Settings:
- Pump Model
- Pump Application
- Minimum and Maximum rpm or flow
- Speed Settings, Labeling of Speeds and Assigning of Speeds
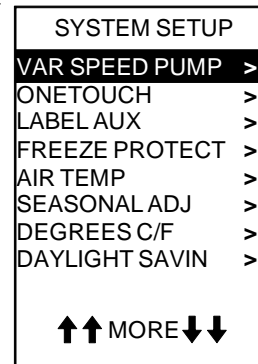- Priming (speed and duration)
- Restoring Speed Defaults

```
          JANDY AquaLinkRS

            08/7/07  TUES
             9:02 AM

          FILTER PUMP OFF
            AIR 88 °F


      EQUIPMENT  ON/OFF
      ONETOUCH  ON/OFF
        MENU  /  HELP
            SELECT
```

OneTouch Setup

```
     JANDY AquaLinkRS

       08/7/07  TUES
        9:02 AM

     FILTER PUMP OFF
       AIR 88 °F


   EQUIPMENT  ON/OFF
   ONETOUCH  ON/OFF
     MENU  /  HELP
```

From the Main Screen highlight MENU/HELP, then press Select.

```
          MENU
HELP
PROGRAM            >
SET TEMP           >
SET TIME           >
DISPLAY LIGHT      >
LOCKOUTS           >
PASSWORD           >
PROGRAM GROUP  >
SYSTEM SETUP       >
```

Scroll to SYSTEM SETUP and press Select.

```
       SYSTEM SETUP
VAR SPEED PUMP    >
ONETOUCH          >
LABEL AUX         >
FREEZE PROTECT    >
AIR TEMP          >
SEASONAL ADJ      >
DEGREES C/F       >
DAYLIGHT SAVIN    >

      ⬆⬆ MORE ⬇⬇
```

Scroll Up to VAR SPEED PUMP and press Select.

```
      VSP SETTINGS

PUMP MODEL
PUMP APPLICATION
MINI-MAX SETTINGS
SPEED/LABELS
PRIME
RESTORE DEFAULTS
```
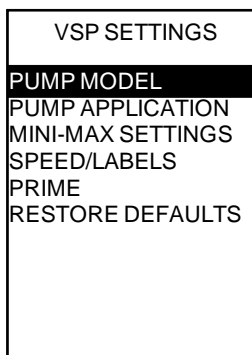
Pump MODEL will be highlighted, press Select.

```
      PUMP MODEL

PUMP 1
PUMP 2
PUMP 3
PUMP 4



Highlight an
item and press
SELECT
```
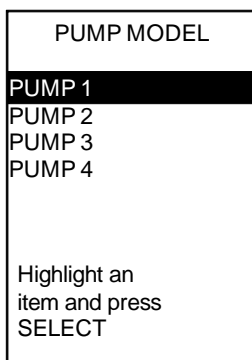
Up to 4 variable speed or variable flow pumps maybe operated by the OneTouch. Highlight the pump number to be set and press Select.

```
      PUMP MODEL
        PUMP 1

ePUMP             X
Intelliflo VF
Intelliflo VS
VSP AC



Highlight an
item and press
SELECT
```
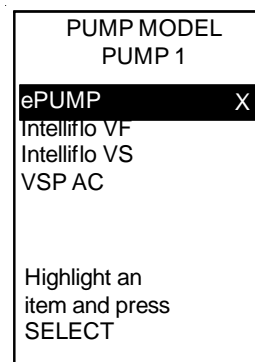
Highlight the appropriate pump type and press Select. An X will appear to the right of the pump. Press the Back button to return to VSP Settings screen.
Select ePump if the pump is a Jandy variable speed pump.
Select Intelliflo VF if the pump is a Pentair variable flow pump.
Select Intelliflo VS if the pump is a Pentair variable speed pump or a SVRS pump.
Note 1: Starting with Revision P a OneTouch system can operate any combination of variable speed and variable flow pumps.
Note 2: Do not choose VSP AC, this circuit does not operate at this time.

OneTouch Setup

```
       VSP SETTINGS

PUMP MODEL
PUMP APPLICATION
MINI-MAX SETTINGS
SPEED/LABELS
PRIME
RESTORE DEFAULTS
```

Highlight PUMP APPLICATION and press Select.

```
        PUMP MODEL

PUMP 1
PUMP 2
PUMP 3
PUMP 4


   Highlight an
   item and press
   SELECT
```

Highlight the pump number and press Select.

```
    PUMP APPLICATION
        PUMP 1

FILTRATION          X
AUX. PUMP
NOT INSTALLED



   Highlight an
   item and press
   SELECT
```

Highlight where the pump will be used and press Select. Press the Back button to return to VSP Settings screen.
Example: Pump application is as a filter pump.
Note: If the variable speed pump is removed from the system go to this screen and highlight, then select NOT INSTALLED. This will prevent an error code from appearing on the screen.

```
       VSP SETTINGS

PUMP MODEL
PUMP APPLICATION
MINI-MAX SETTINGS
SPEED/LABELS
PRIME
RESTORE DEFAULTS
```

Highlight MIN-MAX/SETTINGS and press Select.

```
        PUMP MODEL

PUMP 1
PUMP 2
PUMP 3
PUMP 4


   Highlight an
   item and press
   SELECT
```

Highlight the pump number and press Select.

```
    MNI-MAX SETTINGS
        PUMP 1

SCALE          RPM
MIN LIMIT      600
MAX LIMIT      3450



   Highlight an
   item and press
   SELECT
```
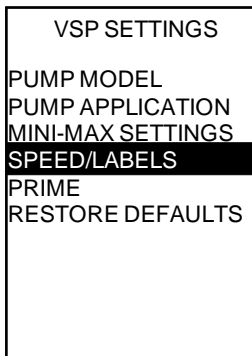
Highlight either MINI LIMIT or MAX LIMIT and press Select. Press the Back button to return to VSP Settings screen.
Note: The minimum and maximum settings are global, this means that once set, the pump can not be run lower than the minimum or higher than the maximum unless these settings are changed. In general these settings are based upon equipment (minimum speed/flow to operate a heater, chlorinator, cleaner etc.,) and maximum to not exceed the recommended velocity through pipe.
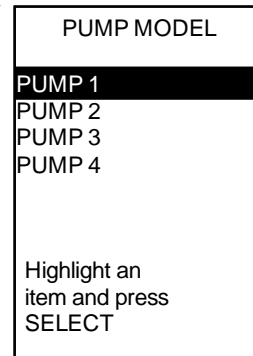
OneTouch Setup

```
    MNI-MAX SETTINGS
         PUMP 1

    SCALE        RPM
    MIN LIMIT    600
    MAX LIMIT    3450



      Highlight an
      item and press
      SELECT
```
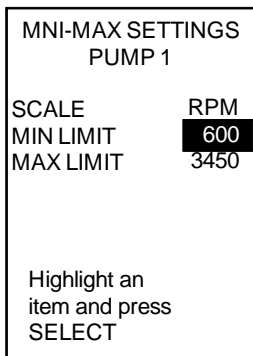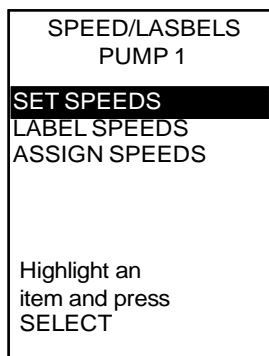
Press the Up or Down buttons to change the Speed, press Select when done. Press the Back button to return to VSP Settings screen. Note: Minimum and maximum speeds can be changed in 5 rpm increments. Low minimum limit is set to 600 rpm and the high maximum limit is set to 3450 rpm. To increase speed of change, hold down the Up or Down button for 5 seconds.
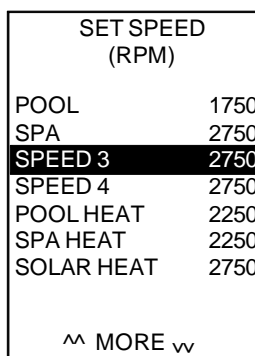
```
      VSP SETTINGS

    PUMP MODEL
    PUMP APPLICATION
    MINI-MAX SETTINGS
    SPEED/LABELS
    PRIME
    RESTORE DEFAULTS
```

Highlight SPEED/LABELS and press Select. Press the Back button to return to VSP Settings screen.

```
      PUMP MODEL

    PUMP 1
    PUMP 2
    PUMP 3
    PUMP 4



      Highlight an
      item and press
      SELECT
```

Highlight the pump number and press Select.

```
    SPEED/LASBELS
        PUMP 1

    SET SPEEDS
    LABEL SPEEDS
    ASSIGN SPEEDS



      Highlight an
      item and press
      SELECT
```

Highlight SET SPEEDS and press Select.

```
      SET SPEED
        (RPM)

    POOL         1750
    SPA          2750
    SPEED 3      2750
    SPEED 4      2750
    POOL HEAT    2250
    SPA HEAT     2250
    SOLAR HEAT   2750


       ^^ MORE vv
```
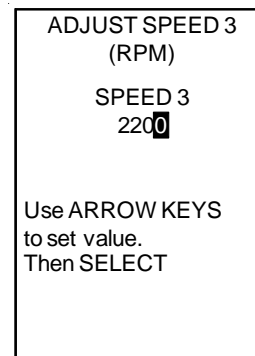
Because Filtration was chosen earlier as the application, default speeds will be assigned to various circuits. For example, pool filtration default speed is 1750 rpm and spa filtration default speed is 2750 rpm.
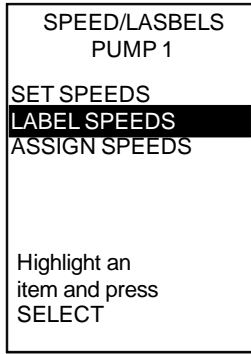To change speed for any circuit simply highlight the circuit, press Select then use the Up or Down button to change speed.

```
    ADJUST SPEED 3
        (RPM)

        SPEED 3
         2200


    Use ARROW KEYS
    to set value.
    Then SELECT
```
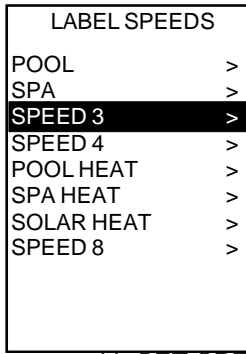
When this screen appears, the first digit in the number will be highlighted. Use the Up or Down buttons to change this digit then press Select. Do the same for the second, third and fourth digits. When the last digit is selected the screen will revert to the previous screen.
All four digits must be highlighted and selected for the speed change to be recorded.
In this example SPEED 3 has been changed to 2200 rpm.

OneTouch Setup

```
    SPEED/LASBELS
       PUMP 1

SET SPEEDS
LABEL SPEEDS
ASSIGN SPEEDS



  Highlight an
  item and press
  SELECT
```
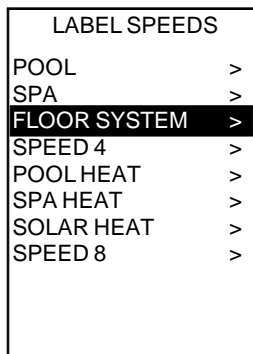
Highlight LABEL SPEEDS
and press Select.

```
     LABEL SPEEDS

POOL              >
SPA               >
SPEED 3           >
SPEED 4           >
POOL HEAT         >
SPA HEAT          >
SOLAR HEAT        >
SPEED 8           >
```

As was the case with SET SPEEDS,
since Filtration was chosen earlier as
the application, default labels will be
assigned to various circuits.
For example, pool filtration default
label is POOL and spa filtration default
label is SPA. To change labels for any
circuit simply highlight the circuit and
press Select.
Note: Names such as POOL, SPA,
POOL HEAT, SPA HEAT and SOLAR
HEAT cannot be changed.

```
    LABEL SPEED 3
   CURRENT LABEL
       SPEED 3


GENERAL LABELS  >
CUSTOM LABEL    >
```
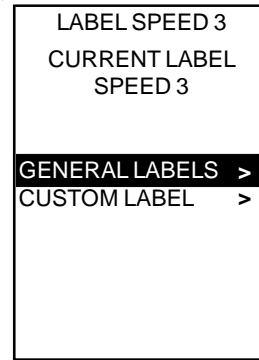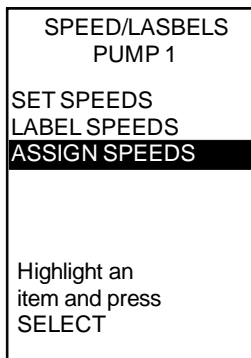
Two choices will appear on the
screen, GENERAL LABELS
and CUSTOM LABEL.
Highlight one, then use the Up
and/or Down button to change
label or type the custom name.
Note: Remember, at this screen
the changes to the labels are
changes to the *speed labels*
not the auxiliary labels.

```
     LABEL SPEEDS

POOL              >
SPA               >
FLOOR SYSTEM      >
SPEED 4           >
POOL HEAT         >
SPA HEAT          >
SOLAR HEAT        >
SPEED 8           >
```
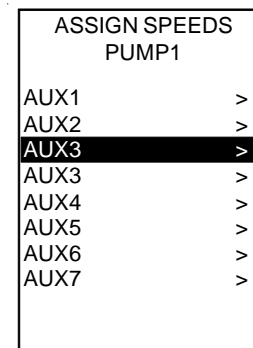
In this example SPEED 3 has
been changed to FLOOR
SYSTEM.
When labeling is done press the
Back button to return to VSP
Settings screen.
Note: Remember, at this screen
the changes to the labels are
changes to the *speed labels* not
the auxiliary labels.

```
    SPEED/LASBELS
       PUMP 1

SET SPEEDS
LABEL SPEEDS
ASSIGN SPEEDS



  Highlight an
  item and press
  SELECT
```

Highlight ASSIGN SPEEDS
and press Select.

```
    ASSIGN SPEEDS
       PUMP1

AUX1              >
AUX2              >
AUX3              >
AUX3              >
AUX4              >
AUX5              >
AUX6              >
AUX7              >
```

Highlight one of the auxiliaries,
then press Select.
Example: AUX3

NOTES:

OneTouch Setup

```
        ASSIGN SPEEDS
            AUX3

POOL
SPA
FLOOR SYSTEM      X
SPEED4
POOL HEAT
SPA HEAT
SOLAR HEAT
IN FLOOR
```

Highlight the auxiliary to which the speed will be assigned, then press Select.
Example: FLOOR SYSTEM

```
FILTER PUMP      ON
SPA              OFF
VSP1 SPD PGM
POOL HEAT        OFF
SPA HEAT         OFF
SOLAR HEAT       OFF
AUX1             OFF
AUX2             OFF
AUX3             ON
AUX4             OFF
AUX5             OFF

       ^^ MOREvv
```

Review Speed/Labels:
At this point Speed 3 has been changed as follows:
- Operating speed was changed from 2750 to 2200 rpm.
- Relabeled FLOOR SYSTEM.
- Assigned to be activated from the AUX3 circuit.

At this point AUX3 is on which also turns on the filter pump circuit. After priming the pump will run at the speed assigned to AUX3 (2200 rpm/FLOOR SYSTEM).

Once again remember the speed label was changed to FLOOR SYSTEM not the auxiliary label.

OneTouch Programming

This section will cover two ways to change speeds/flow automatically.
- Program
- Program Speeds (VSP SPD PGM)

```
   JANDY AquaLinkRS

    08/7/07  TUES
      9:02 AM

   FILTER PUMP OFF
     AIR 88 °F


 EQUIPMENT   ON/OFF
 ONETOUCH   ON/OFF
   MENU  /  HELP
```

Start by highlighting MENU / HELP and pressing Select.

```
          MENU
HELP              >
PROGRAM           >
SET TEMP          >
SET TIME          >
DISPLAY LIGHT     >
LOCKOUTS          >
PASSWORD          >
PROGRAM GROUP  >
SYSTEM SETUP      >
```

Scroll to PROGRAM and press Select.

```
        PROGRAM


FILTER PUMP
SPA
VSP1 SPD PGM
POOL HEAT
SPA HEAT
SOLAR HEAT
AUX1
AUX2

      ^^ MOREvv
```
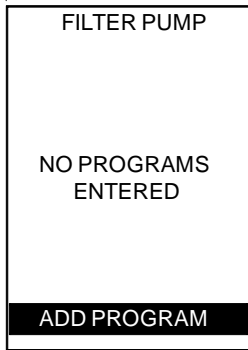
First way to turn on the pump automatically.
Highlight the circuit and press Select.
For example: To program the filter pump to turn on automatically highlight FILTER PUMP then press Select.
Very Important Note: *When changing speeds through programming, always set the speed to be switched to higher than the current programmed speed.*
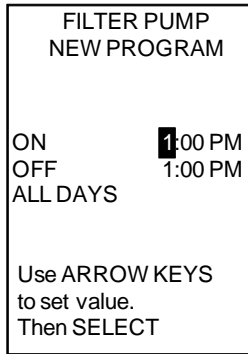Note: The items listed on this screen are the names of some of the circuits that maybe set to turn on and off automatically. To see the other circuits, press the Up or Down Button.

9

OneTouch Programming

```
        FILTER PUMP



        NO PROGRAMS
          ENTERED




      ADD PROGRAM
```

Add Program will be highlighted, press Select.

```
        FILTER PUMP
        NEW PROGRAM


   ON           1:00 PM
   OFF          1:00 PM
   ALL DAYS


     Use ARROW KEYS
     to set value.
     Then SELECT
```
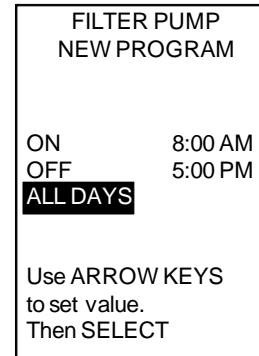
When this screen appears the default ON and OFF times will show as 1:00 PM and the ON hour will be highlighted.
To change the ON hour press the Up or Down button. Note the AM/PM indicator as the hour is changed, then press Select. Next change the on minute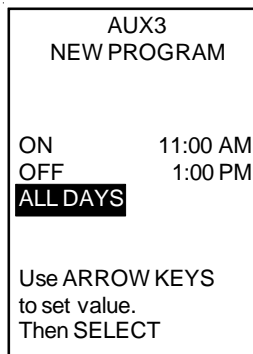s and press Select. Set the OFF time in the same manner. Finally chose whether the pump should run everyday (All Days), on individual days, on weekdays or just on weekends, then press Select. Example: The Filter Pump circuit is now programmed to turn on everyday at 8:00 AM and off at 5:00 PM.

```
        FILTER PUMP
        NEW PROGRAM


   ON           8:00 AM
   OFF          5:00 PM
   ALL DAYS


     Use ARROW KEYS
     to set value.
     Then SELECT
```
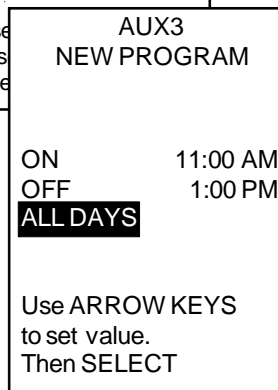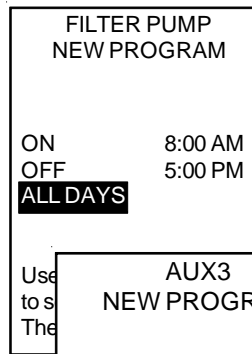
As shown here the Filter Pump circuit is now programmed to turn on everyday at 8:00 AM and off at 5:00 PM.
Follow the same procedure for setting other circuits to turn on and off automatically.

```
           AUX3
        NEW PROGRAM


   ON           11:00 AM
   OFF           1:00 PM
   ALL DAYS


   Use ARROW KEYS
   to set value.
   Then SELECT
```
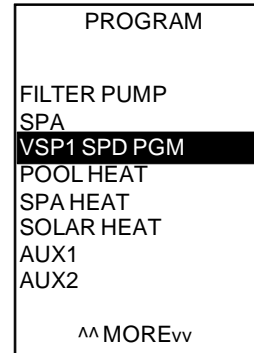
Here the AUX3 circuit has been programmed to turn on everyday at 11:00 AM and off at 1:00 PM. Remember: AUX3 circuit has been previously assigned speed label FLOOR SYSTEM which has speed setting 2200 rpm set.

```
        FILTER PUMP
        NEW PROGRAM


   ON           8:00 AM
   OFF          5:00 PM
   ALL DAYS


   Use
   to s
   The
```

```
           AUX3
        NEW PROGRAM


   ON           11:00 AM
   OFF           1:00 PM
   ALL DAYS


     Use ARROW KEYS
     to set value.
     Then SELECT
```

Review:
Programmed, as shown in these two examples, the VSP will turn on at 8:00 AM and, after priming is complete, run at 1750 rpm. At 11:00 the speed will increase to 2200 rpm (AUX3/FLOOR SYSTEM speed), and run at this speed until 1:00 PM. From 1:00 PM until the pump turns off at 5:00 PM it will return to the filtration speed of 1750 rpm.

OneTouch Programming

```
        PROGRAM


FILTER PUMP
SPA
VSP1 SPD PGM
POOL HEAT
SPA HEAT
SOLAR HEAT
AUX1
AUX2

       ^^ MOREvv
```
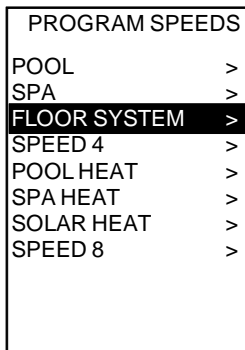
Second way to turn on the pump automatically.
Highlight VSP1 SPD PGM and press Select. VSP SPD PGM allows program times to be set so the variable speed pump will change speeds within a programmed operational time without using additional circuits such as POOL HEAT, SPA, SPA HEAT, or auxiliaries.
Note: If more than one variable speed/flow pump is installed, there will be additional Program Speeds (VSP SPD PGM) listed on this screen. Highlight the appropriate pump and press Select. Additional variable speed pumps may be listed as follows:
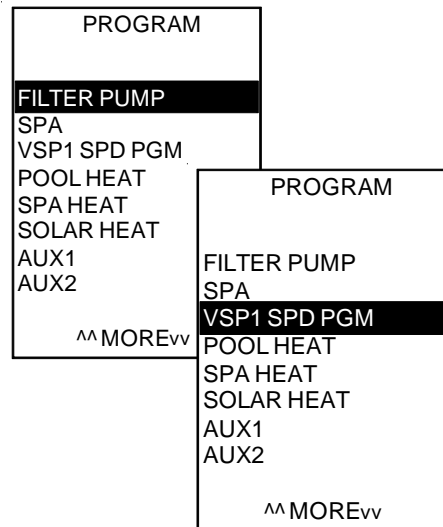VSP2 SPD PGM
VSP3 SPD PGM
VSP4 SPD PGM

```
     PROGRAM SPEEDS

POOL              >
SPA               >
FLOOR SYSTEM      >
SPEED 4           >
POOL HEAT         >
SPA HEAT          >
SOLAR HEAT        >
SPEED 8           >
```

At this screen the pump maybe programmed to change to any of the 8 speeds within an operating time without using up an equipment circuit to do so. For example: If the pool filtration pump is set to run at 1750 rpm from 8:00 AM to 5:00 PM and the FLOOR SYSTEM is set to run from 11:00 AM to 2:00 PM at 2200 rpm, the following will occur. The filter pump will turn on at 8:00 AM and go to the priming speed and run at that speed for the priming duration. The pump will then switch to the set speed of 1750 rpm until 11:00 AM. At 11:00 AM the pump will ramp up to 2200 rpm and run at that speed until 2:00 PM. From 2:00 PM until it shuts off at 5:00 PM the pump will again operate at 1750 rpm.

```
        PROGRAM


FILTER PUMP
SPA
VSP1 SPD PGM
POOL HEAT
SPA HEAT
SOLAR HEAT
AUX1
AUX2

       ^^ MOREvv
```

Very Important Note: *The same requirement as Program applies when setting VSP SPD PGM, that is, ALWAYS SET THE SWITCHING SPEED HIGHER THAN THE PREVIOUS SPEED.*

```
        PROGRAM


FILTER PUMP
SPA
VSP1 SPD PGM
POOL HEAT
SPA HEAT
SOLAR HEAT
AUX1
AUX2

       ^^ MOREvv
```

```
        PROGRAM


FILTER PUMP
SPA
VSP1 SPD PGM
POOL HEAT
SPA HEAT
SOLAR HEAT
AUX1
AUX2

       ^^ MOREvv
```

Review: Use PROGRAM to set the equipment to operate automatically using circuits. Set PROGRAM SPEEDS (VSP SPD PGM) to change speed for equipment within its automatic operating time. Always set the switch to speed higher than the switch from speed.
Note: If more than one variable speed/flow pump is installed there will be additional VSP SPD PGM listed on this screen. For example if there are 4 ePump installed they will be listed as follows:
VSP2 SPD PGM
VSP3 SPD PGM
VSP4 SPD PGM

OneTouch Manual Operation

This section will cover how to manual turn on and change speeds/flow.

```
    JANDY AquaLinkRS

      08/7/07  TUES
        9:02 AM

    FILTER PUMP OFF
       AIR 88 °F


  EQUIPMENT   ON/OFF
   ONETOUCH   ON/OFF
     MENU  /  HELP
```

```
FILTER PUMP      OFF
SPA              OFF
VSP1 SPD ADJ
POOL HEAT        OFF
SPA HEAT         OFF
SOLAR HEAT       OFF
AUX1             OFF
AUX2             OFF
AUX3             OFF
AUX4             OFF
AUX5             OFF

      ^^ MORE vv
```

There are two ways to change speeds Manually, both are selected through the EQUIPMENT ON/OFF screen. To change speeds manually highlight EQUIPMENT ON/OFF from the main screen and press Select.

First way to change speeds manually.
If a speed has been assigned to a circuit, highlight the circuit and press Select. After priming the pump will go to the speed set to that circuit.
Example: AUX1 selected. After priming the pump will run at the speed set to AUX1.
Note 1: If the pump application is filtration, and the selected speed is less than the filtration speed, the pump will not switch to the lower speed.
Example: Filtration speed 1750 rpm, AUX 1 Speed 800 rpm. AUX 1 selected, after priming the pump will run at 1750 rpm.
Note 2: If the pump application is an auxiliary pump, the pump will run at the last speed selected. If the last speed selected is turned off, the pump will revert to higher of the remaining speeds.

```
FILTER PUMP       ON
SPA              OFF
VSP1 SPD ADJ
POOL HEAT        OFF
SPA HEAT         OFF
SOLAR HEAT       OFF
AUX1             OFF
AUX2             OFF
AUX3             OFF
AUX4             OFF
AUX5             OFF

     ^^ MORE vv
```

```
FILTER PUMP       ON
SPA              OFF
VSP1 SPD ADJ
POOL HEAT        OFF
SPA HEAT         OFF
SOLAR HEAT       OFF
AUX1             OFF
AUX2             OFF
AUX3             OFF
AUX4             OFF
AUX5             OFF

     ^^ MORE vv
```

Second way to change speeds manually.
Highlight the circuit for the pump application and press select to turn on this circuit.
Example: Pump application is filtration therefore the FILTER PUMP circuit must be turned on first.

Scroll to VSP1 SPD ADJ and press Select. Note there maybe more than one VSP SPD ADJ, so chose the appropriate pump.

NOTES:

OneTouch Manual Operation

This section will cover how to manual turn on and change speeds/flow.

```
         SET SPEED
           (RPM)


POOL              1750
SPA               2750
FLOOR SYSTEM  2200
SPEED 4           2750
POOL HEAT         2250
SPA HEAT          2250
SOLAR HEAT        2750


      ︿ MORE ﹀
```

```
          SPEED4


     SET TO 1200 RPM




     Use ARROW KEYS
     To set value.
     Then SELECT
```
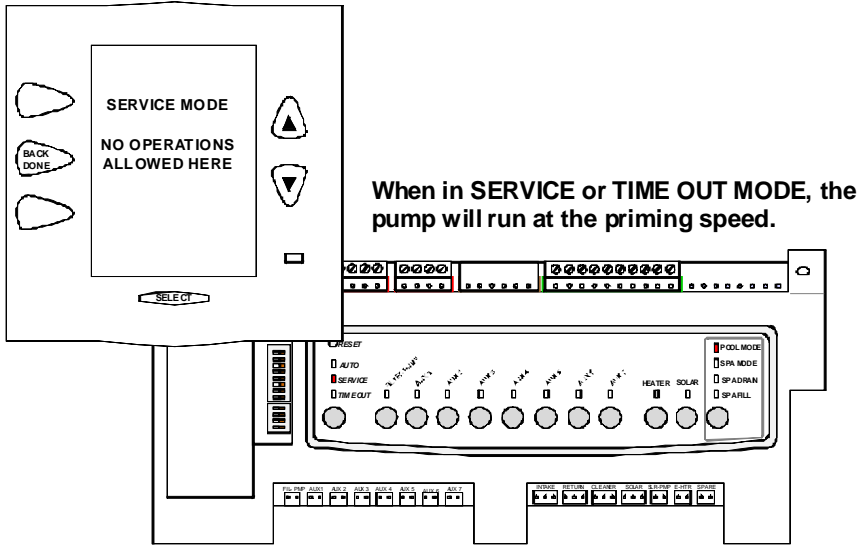
Highlight a speed, then press Select.

When this screen appears, the first digit in the number will be highlighted. Use the Up or Down buttons to change this digit then press Select. Do the same for the second, third and fourth digits. When the last digit is selected the screen will revert to the previous screen and the pump will run at the speed selected. All four digits must be highlighted and selected for the speed change to be recorded.

In this example SPEED4 has been changed to from 2750 to 1200 rpm. Example: Pump application Filtration, POOL speed set to 1750, SPEED4 set to 1200. In this example the pump will run at 1200 rpm after priming has completed. This is a temporary speed/flow change. When the pump is turned off, then on, the speed will revert to the speed set in VSP SETTINGS screen under SPEED/LABELS.
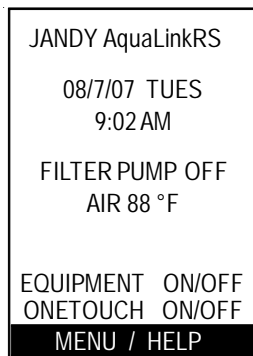
OneTouch Service or Time Out Mode

When in SERVICE or TIME OUT MODE, the pump will run at the priming speed.
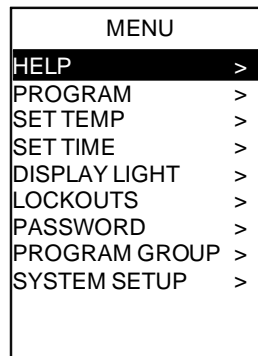
NOTES:

_____

_____

_____

_____

OneTouch - Troubleshooting
Confirm Compatibility

```
JANDY AquaLinkRS

08/7/07  TUES
9:02 AM

FILTER PUMP OFF
AIR 88 °F


EQUIPMENT   ON/OFF
ONETOUCH   ON/OFF
    MENU  /  HELP
```

```
            MENU
HELP                      >
PROGRAM                   >
SET TEMP                  >
SET TIME                  >
DISPLAY LIGHT             >
LOCKOUTS                  >
PASSWORD                  >
PROGRAM GROUP  >
SYSTEM SETUP              >
```

```
            HELP
Choose a topic
with arrow keys
and press SELECT

   GO BACK

KEYS                      >
SERVICE                   >
DIAGNOSTIS                >
```

```
MODEL       E0260801
TYPE      RS-8 Combo
FIRMWARE            R



        SENSORS
WATER              OK
AIR                OK
SOLAR              OK

          NEXT
```
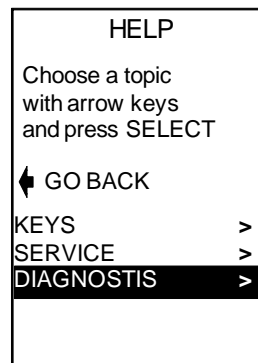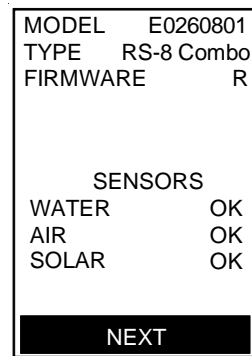
From the main screen highlight MENU / HELP then press Select.

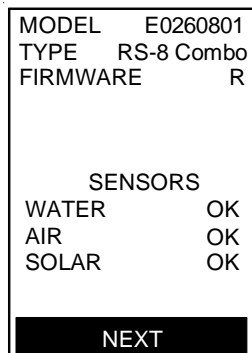HELP will be highlighted, press Select.

Scroll to DIAGNOSTICS and press Select.

Look for the FIRMWARE number in Diagnostics. The Firmware must be revision O or newer. Example: The revision of this system is Rev R.
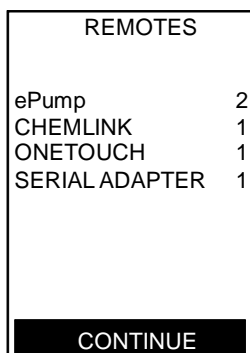
OneTouch - Troubleshooting
Confirm Communication

```
MODEL       E0260801
TYPE      RS-8 Combo
FIRMWARE            R



        SENSORS
WATER              OK
AIR                OK
SOLAR              OK

          NEXT
```

```
          REMOTES


ePump                   1
CHEMLINK                1
ONETOUCH                1
SERIAL ADAPTER     1




        CONTINUE
```

If the revision letter is correct, press Select to go to the NEXT screen.
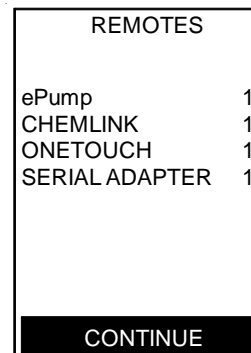
All items connected through the RS485 line will appear on this screen. If the ePump is listed check the number to its right making certain it coincides with the address of the pump.

```
          REMOTES


ePump                   2
CHEMLINK                1
ONETOUCH                1
SERIAL ADAPTER     1




        CONTINUE
```

```
          ERRORS


ePump
RS485 ERROR




        CONTINUE
```

Example: Here the ePump is addressed as ePump 2. If this is not the correct address of the ePump the dip switches, located in the junction box at the rear of the ePump, will need to be changed. If the address is correct, press Select to continue.
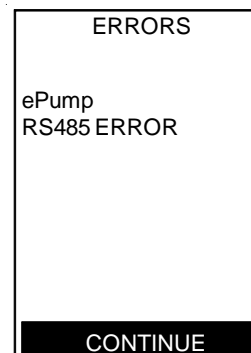
At this screen any communication issues with the connection to the RS485 line will be shown. This screen indicates any of the following:
• The RS485 line (4 conductor wire) is damaged or not connected properly.
• Power is off to the motor when it should be on.
• Variable Speed Pump is damaged.