

NexPump Ai Manual



NexPump, Inc. Phone: 630-365-4639 Fax: 630-365-6919 Email: support@nexpump.com Web Address: www.nexpump.com	User's Manual 7.00.0000 NexPump is a Registered Trademark of NexPump, Inc. Copyright © 2003-2018 NexPump, Inc., All Rights Reserved Patent Pending
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NexPump User's Manual

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The NexPump Ai is the World's Most Reliable Sump Pump

Box Contents

Qty. 1 - NexPump Ai System Unit

(AN - Phone Notification Module Installed)

(ANi – Wired Internet Notification Module Installed)

(ANiw – Wireless Internet Notification Module Installed)

(ENi – Wired internet with Email Notification Only)

(ENiw – Wireless internet with Email Notification Only)

Model Ai Single

Qty. 1 - High Capacity Pump w/Adapter

Model Ai Dual

Qty. 2 - High Capacity Pumps w/Adapters

Model Ai Jet

Qty. 1 - Ultra Capacity Pump w/Adapter

Model Ai Turbo

Qty. 1 - High Capacity Pump w/Adapter

Qty. 1 - Ultra Capacity Pump w/Adapter

Model Ai Rage

Qty. 2 - Ultra Capacity Pumps w/Adapters

Qty. 1 - Gray Sensor with SS mounting clamp (Sensor 1)

Qty. 1 - White Sensor with SS mounting clamp (Sensor 2)

Qty. 1 - Owner's Manual

Purchased Separately: (Required to operate)

1 - Deep-Cycle Marine Battery (See Battery section for more information)

You will also need to supply for installation:

- 1-1/2" or 2" rigid PVC pipe and fittings
- PVC cement and primer
- Check Valves (if applicable)

Please take a moment and review this manual before starting installation or powering up your NexPump Ai System

Safety Instructions

Save these instructions - This manual contains important safety and operating instructions for the NexPump. Follow these important safety precautions. Failure to follow safety precautions can result in personal injury or damage to the NexPump.

CAUTION - To reduce the risk of injury, charge only lead type rechargeable batteries. Other types of batteries may burst causing personal injury and damage.

Do not expose the NexPump system unit to rain or snow.

Do not install the NexPump system unit where temperatures will be below freezing (32 degrees Fahrenheit).

Do not charge a battery that may be frozen. Allow the battery to sit at room temperature before connecting to the NexPump.

If an extension cord must be used, make sure

A. That the pins on the plug or extension cord are the same number, size and shape as those of the plug on the NexPump system unit.

B. That the extension cord is properly wired and in good electrical condition.

C. That the wire size is large enough for the AC ampere rating of the NexPump system unit.

Do not operate the NexPump system unit if it has received a sharp blow, been dropped, or otherwise damaged in anyway- take it to a qualified serviceman.

Do not operate the NexPump system unit with a damaged cord or plug - have them replaced or repaired immediately.

Do not disassemble the NexPump system unit- take it to a qualified serviceman when service or repair is required. Dis-assembly may result in a risk of electric shock or fire and void the warranty.

Never pull directly on any wiring connected to pumps, battery, AC power or sensors. Disconnect by pulling on connectors only.

Never force the connectors out of place, they should disconnect and connect easily. Some connectors have safety latches, so make sure they are depressed.

Never attempt any maintenance and/or cleaning with the NexPump powered up. Risk of electric shock may result.

WARNING - RISK OF EXPLOSIVE GASES WORKING IN THE VICINITY OF A LEAD-ACID BATTERY CAN BE DANGEROUS. BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS OF THE UTMOST IMPORTANCE THAT EACH TIME BEFORE USING YOUR NEXPUMP CONTROL UNIT YOU READ THIS MANUAL AND FOLLOW THE INSTRUCTIONS EXACTLY.

A SPARK NEAR THE BATTERY MAY CAUSE AN EXPLOSION.

Be sure the area around the battery is well ventilated.

Personal Precautions

If LEAD-ACID battery is used

Someone should be within range of your voice and/or close enough to come to your aid when you work near a lead-acid battery.

Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.

Wear complete eye protection and clothing protection. Avoid touching your eyes while working near the battery.

If the battery acid contacts skin and/or clothing, wash immediately with soap and water. If acid enters the eye, immediately flood eye with running cold water for at least ten minutes and get medical attention immediately.

When the battery fluid level is low, add distilled water in each cell until the level reaches the indicator on each cell. Do not overfill.

Precautions for all Batteries

NEVER smoke or allow a spark or flame in the vicinity of the battery.

Be extra cautious to reduce the risk of dropping a metal tool onto the battery. It might spark or short-circuit the battery or another electrical part that may cause an explosion.

Remove personal metal items such as rings, bracelets, necklaces and/or watches when working with a battery. A battery can produce a short circuit current high enough to weld a ring (or the like) to metal, causing a severe burn.

When cleaning the battery terminals be careful to keep corrosion from coming in contact with eyes.

Do not use the system unit for charging dry-cell batteries that are most commonly used with household appliances. These batteries may burst and cause injury to persons and damage to property.

NexPump Precautions

NexPump system unit location

Locate the NexPump system unit as far away from the battery as the DC cables permit.

Do not operate the NexPump system unit in an area with restricted ventilation.

Do not set a battery on top of the NexPump system unit.

Do not allow the NexPump system unit to sit on top of the battery.

Do not block the NexPump system unit ventilation in any way. Allow at least six inches of free space from the fan exhaust on the right side of the NexPump unit.

Do not install the NexPump system unit where temperatures will be below freezing (32 degrees Fahrenheit).

Do not install the NexPump system unit where it will be exposed to outside elements.

DC Connection Precautions

The NexPump unit requires a connected marine type deep-cycle battery for proper operation. You must assure the battery is connected while the NexPump unit is operating.

When attaching the battery cables to the battery posts, secure them to insure a good connection.

The BLACK wire from the NexPump system unit connects to the NEGATIVE (-) post of the battery. The RED wire from the NexPump system unit connects to the POSITIVE (+) post of the battery.

The 'REVERSE POLARITY LED' will illuminate if the battery connections are reversed.

Battery Reversed Polarity



AC Power Requirements

The NexPump system unit must be operated from 120 volt household current from the AC outlet.

GROUNDING AND AC CORD INSTRUCTIONS

The NexPump system unit should be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER- Never alter the AC cord or plug provided – if it will not fit the outlet, have a proper outlet installed by a qualified electrician. Improper connection can result in a risk of an electric shock. An adapter should not be used with the NexPump system unit.

Important Safe Guards

Never allow other items that discharge into the sump pit to be unsecured. Unsecured items such as garden hoses, laundry hoses and other medium used to discharge water may interfere with the NexPump pumps or sensors. Be sure to secure all items that may be used to discharge water into the sump pit and verify that secured items will not interfere with any NexPump operations.

Installation Procedures

Installing the NexPump does require some plumbing expertise. You can use the installation diagrams at the end of this document as a reference for proper installation. For a Dual Pump NexPump System, separate discharges are recommended for maximum discharge rates and multiple output paths. If a Dual Pump NexPump System is installed as a backup, then you can use a WYE, however install one NexPump Pump on the straight through of the WYE and your normal electric pump on the 45 degree of the WYE. The remaining NexPump Pump should be installed as a separate discharge. You can install all the pumps in a multiple wye configuration, however this type of installation may reduce the total discharge capacity about fifteen (15%) percent at high discharge rates.

Points for Proper Installation

Tighten hose clamps on check valves if applicable.

Tighten pump adapters securely.

Install separate discharges for maximum discharge rate.

Make sure the RED filter screen is securely attached to each pump.

For very narrow sump pits, pumps can be stacked on top of each other. Pump 1 must be the lowest pump.

IMPORTANT: When using a check valve, a small 1/8" hole must be drilled in the vertical discharge pipe of each pump. DO NOT DRILL INTO THE PUMP OR THE ELBOW. The hole should be drilled at a 45 degree downward angle to prevent water spraying upwards and position the hole about 2" above the top of the elbow.

IMPORTANT: Ai Turbo NexPump. Pump 1 must be the pump with the RED WIRE LOOM.

REVIEW ALL SAFETY PRECAUTIONS AND INSTRUCTIONS BEFORE PROCEEDING!

Finishing Installation

Step 1: Positioning the Sensors

Sensor 1 is the main sensor and will operate the pump(s) when the water rises above the sensor. The gray sensor should be used for Sensor 1. Sensor 2 does not operate exactly like Sensor 1 however, functions as a backup and high water alarm. (See Sensor Operations). The white sensor should be used for Sensor 2. Attach the sensors to any discharge pipe securely with the supplied stainless steel clamps (float side down, sensor cable up, mounting bracket up, remove any shipping tape). Float on each sensor should move freely up and down.

Position the sensors as described below.

Sensor 1 (Left Sensor Receptacle)

NexPump in Backup Mode:

Position Sensor 1 approximately 4 - 6 inches above the activation level of the main pump. If not, the NexPump may show the pumps have been activated prematurely.

NexPump in Primary Mode (only sump pump):

Position Sensor 1 approximately 2 - 4 inches above the pumps.

NexPump in Primary Mode (with electric sump pump):

Position Sensor 1 above the level of the NexPump pumps and below the level that the AC pump will turn on.

Sensor 2 (Right Sensor Receptacle)

Sensor 2 is used as a backup and alert for high water. When activated the NexPump will begin operation in a special emergency mode and with the 'Auto Notification' feature will alert immediately. Position Sensor 2 about six inches above all other trigger

points.

Be sure the sensor is positioned vertically with the mounting bracket at the top. Verify the sensor is not tilted in any way.

IMPORTANT: If a vent hole is drilled in the discharge pipe make sure a sensor or sensor clamp does not block the vent hole. Do not position the sensor on the side of the discharge pipe facing the drain tile or any incoming rush of water.

Step 2: Secure Wires

Secure the pump and sensor wires to discharge pipes with nylon wire ties.

IMPORTANT: Make sure the wire ties or wires do not interfere with the operation of the sensor.

Step 3: Position Battery and System Unit

Place the battery in a battery box (if used) on the floor or on a secure shelf, rack or ledge. Position the NexPump system unit in a secure place ideally above the floor. The pump wires and sensor wires should be long enough to position the NexPump system unit approximately 3-4 feet above the floor. Be sure the power cord will reach the AC power socket. Secure the electrical power cord as needed. **Do not plug in at this time.** Make sure battery cables will reach battery. **Do not connect battery cables at this time.**

Step 4: Pump and Sensor Connections

Plug the pump connectors into the NexPump system unit. If both pumps are not on the bottom of the pit then Pump 1 must be the lowest pump. Plug in the sensors. Primary sensor (Sensor 1) to left receptacle. Backup sensor (Sensor 2) to right receptacle. The sensor connectors plug in with the security latch to the right of the NexPump System Unit. Verify the sensor connectors are securely attached.

IMPORTANT: Ai Turbo NexPump. Pump 1 must be the pump with the RED WIRE LOOM.

To disconnect a pump connector, slightly depress the security latch on the bottom of the connector and pull out the connector.

To disconnect a sensor connector, slightly depress the security latch on the right side of the connector and pull out the connector.

Step 5: Connecting the AC Power Cord

IMPORTANT: Make sure that the AC outlet is a grounded outlet.

Plug in the NexPump's AC power cord and verify a secure connection. The display will illuminate and 'Operating Status' Green LED should be blinking.

Note: An alarm may sound at this time because the battery is not connected.

Step 6: Connect Battery

Attach the battery cables to the battery, the BLACK wire to the NEGATIVE (-) post, the RED wire to the POSITIVE (+) post and tighten securely.

IMPORTANT: Check the 'Battery Reverse' LED on the NexPump system unit and if it is illuminated the connections are reversed.

Step 7: Check Your NexPump

All alarms should be off at this time. Set your preferred mode setting (see mode selection). The NexPump will schedule an automatic self-test approximately two minutes after power up. If there are any alerts they will be displayed on the LCD display and an alarm will sound.

Step 8: Secure Battery Boxes

If battery boxes are used, place each battery in the battery box.

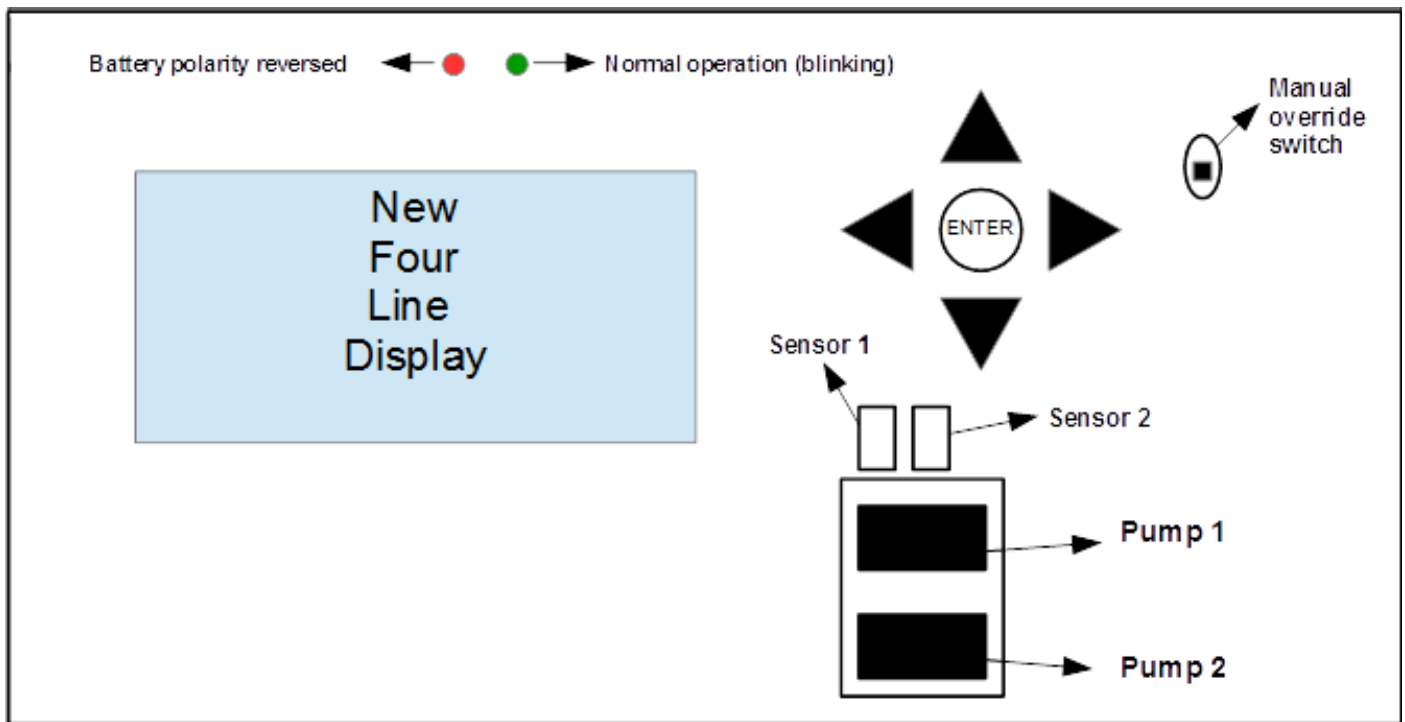
Step 9: Set Battery Type/Amp Hours and Enable Charger

These all can be found in the configuration menu. Use the up and down arrows on the navigation panel to find the configuration menu then press ENTER. Use the left and right arrows to move the cursor/increase the amp hours and the press ENTER when cursor is on desired position.

Note: Always perform this step when installing new batteries.

Your NexPump is ready for use!

Control Box Overview



Pump 1: If system is a single or jet pump(one pump system), make sure pump one is in the pump 1 slot.

Pump 2: If system is a two pump system, put pump two in the pump 2 slot. (On Turbo, black loomed pump **HAS** to be in the pump 2 slot)

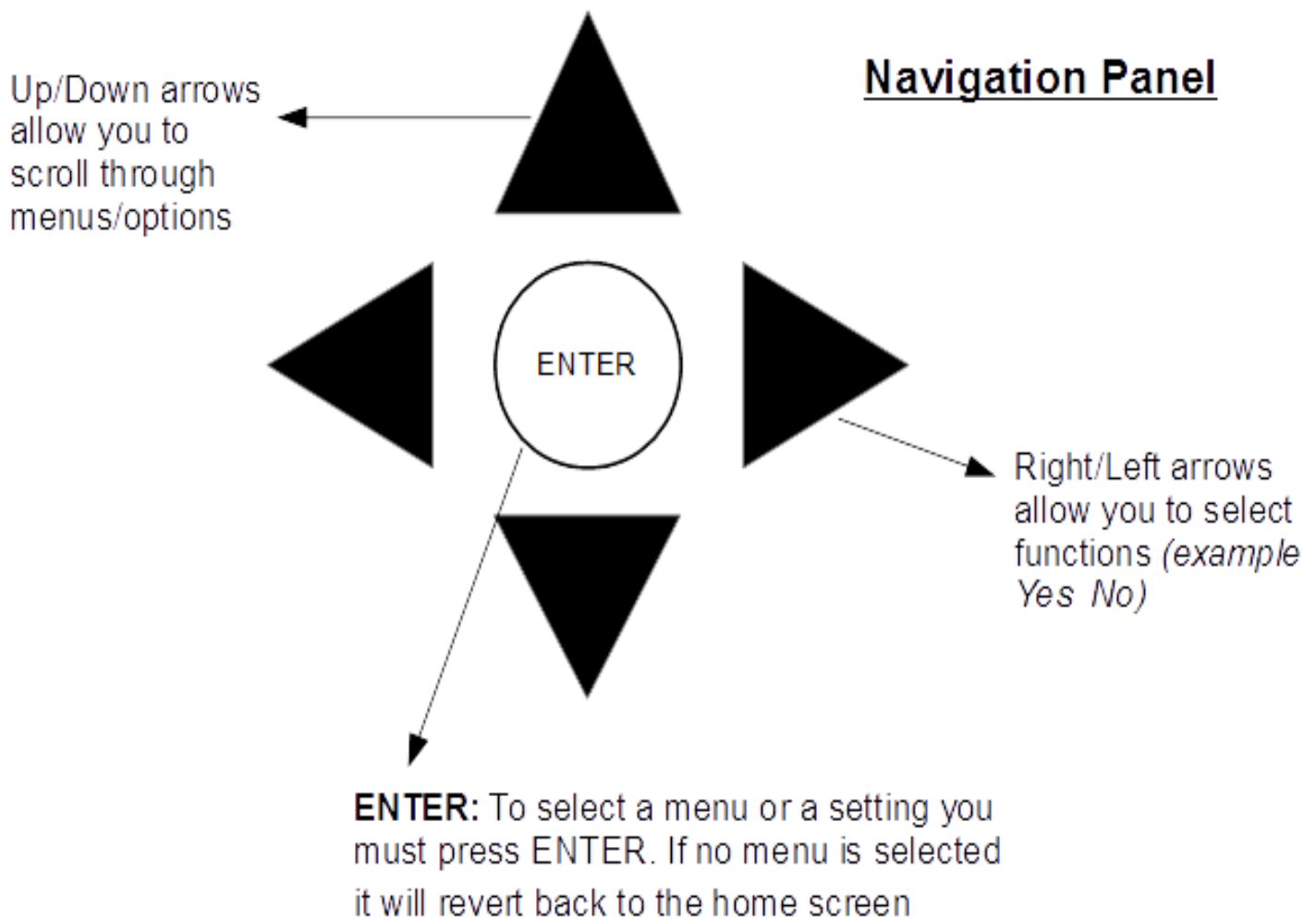
Sensor 1: Should be installed as the lowest of the two sensors (*closest to the bottom of the pit*)

Sensor 2: Should be placed about 4-6 inches higher than sensor one.

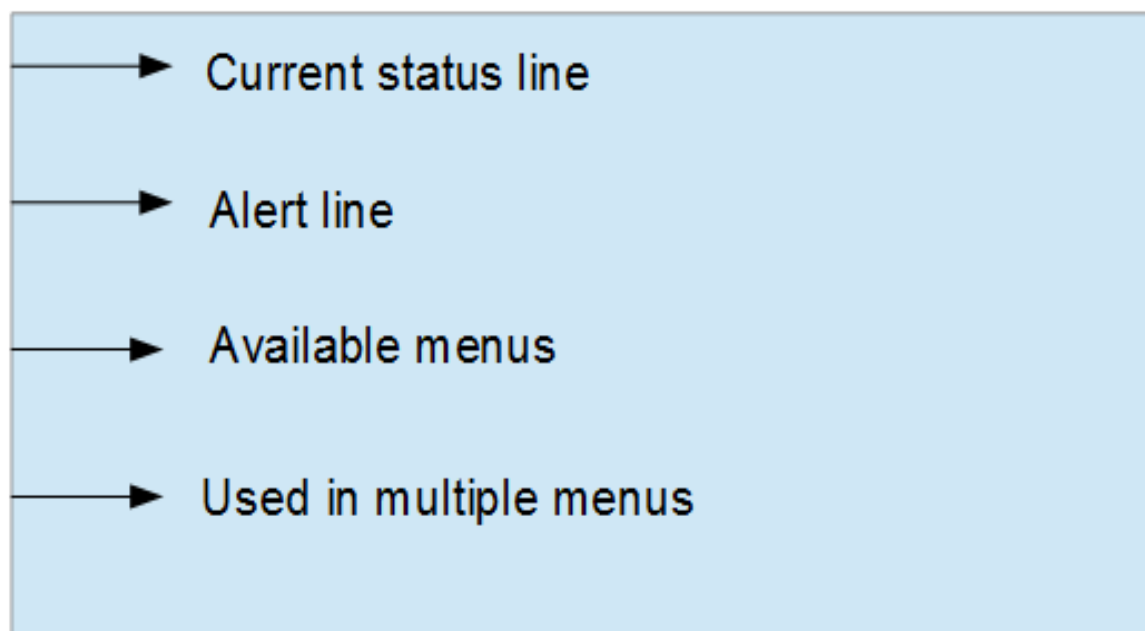
Manual Override Switch: Will turn on pump(s) continuously. **ONLY** use in emergencies.

Battery Polarity Reversed: If red light is on, check battery connection.(*reversed*)

Normal Operation (Blinking): Steady green light flashing means normal operations.



Display Screen



System Operating Status



Normal Operation (steady flash)

The 'Normal Operation' LED must be blinking to indicate the NexPump system is operating. If it is NOT blinking then there may be problem with the NexPump system.

Mode Selection

Primary Mode – This should be used when pump is the primary pump.

- NexPump WILL NOT display or sound an alarm if pump(s) are activated.

Backup Mode – Should be used when pump is a backup pump

- Mode switch in down position. The letter 'B' will be blinking in the mode position on display.
- NexPump WILL display and sound an alarm if pump(s) are activated.

Note: To select or change a mode it can be found under the configuration menu. Use the left and right arrows and press ENTER when cursor is over desired position.

Manual Mode – Will manually turn on both pumps

- Switch in up position manual mode is ON and in down position manual mode is OFF.
- When operating on battery power the NexPump will not calculate battery life remaining.
- Clog or vapor lock detection is disabled.
- Pumps will turn off for 5 seconds each minute to clear possible vapor lock conditions.
- Auto self-test is disabled



Emergency Mode – Will automatically be selected

- Mode Emergency will be displayed on the first line of the unit.
- Alarm will sound with display indicating the reason NexPump went into the Emergency mode.

Mode Emergency
Alert 1 of 1

Note: The Emergency mode is automatically selected if the NexPump detects certain conditions. Below is an example of the display when operating in the emergency mode.

Pump Operation

The NexPump system can only be used with a NexPump specified pump. The Single pump units (Ai Single, Ai Jet) must be plugged in to the pump 1 slot. The Ai Turbo Pump 1 (red loomed pump) has to be plugged in to the Pump 1 slot. Make sure all pumps are plugged in properly.

Possible Pump Alerts

Pump is off- pump is not currently pumping

Pump is on- pump is currently running

Pump Activated (backup mode only) - pump needed to run

Pump Problem (Low) - pump may be defective or not working correctly. The system will specify which pump number.

Pump Problem (High) - pump may be defective or not working correctly. The system will specify which pump number.

Pump Problem (Run) - circuit board issue. The system will specify which pump number.

Pump is over hour lifespan- pump has gone over its expected life span of 2500 hours.

Possible Plumbing Alerts

Vapor Lock- This alert indicates there may be air trapped in the discharge plumbing. It may also indicate Sensor 1 is stuck in the

up position. If a check valve is used, check for a proper vent hole in the pump discharge pipe or check if the vent hole is clogged.

Clog Alerts- This alert indicates a possible clog in the plumbing discharge. Verify the discharge is clear of obstructions. In the winter it may indicate a frozen discharge pipe.

If Notification is installed

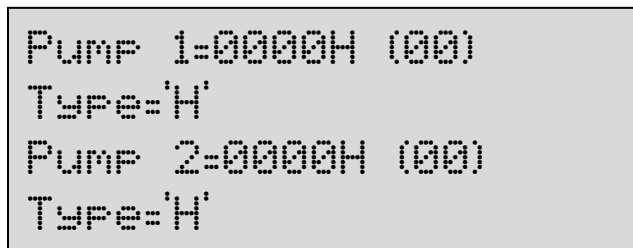
Notification will occur on all pump alerts after approximately five minutes, with the exception of (Pump Activation) which will occur after approximately thirty minutes.

Clear Pump Alerts

To clear any pump alert use the navigation panel up and down arrows to find the menu clear alarms. Press ENTER to select.

Testing

Pumps are tested on 12 hour self-tests or manual tests.



Pump 1=0000H (00)
Type='H'
Pump 2=0000H (00)
Type='H'

Pump Hours/Type

This screen has the current stats of your pumps. This can be found in the information menu.

Pump 1= is the current run hours on pump 1

Pump 2= is the current run hours on pump 2

Type= will either have an 'H' or 'U' depending on the system.

'H' = High capacity, 'U' = Ultra capacity)

(00)= indicates how many times the pump has gone over 2500 hours.

The pump is rated at 2500 hours.

Sensor Operations

Sensor Operation

Sensor 1 runs and operates each pump independently. Sensor 2 DOES NOT operate the same as Sensor 1. An active Sensor 2 will double-beep for approximately sixty seconds before a High Water Alert is triggered. You can test the operation of Sensor 1 by lifting the float and verifying Pump 1 turns on. Sensor 2 can be tested by lifting the float and verifying a double-beep from the NexPump System Unit.

Note: The gray sensor should be used as Sensor 1. Sensor 1 should be installed as the lower of the two sensors. The white sensor should be used for Sensor 2 and should be installed 4-6 inches higher than sensor 1.

Testing

Sensors are continually monitored.

If Notification is installed

Notification will occur on all sensor alerts after approximately five minutes, with the exception of a (High Water Alert) which will occur in approximately one minute.

Clear Sensor Alerts

Sensor alerts will clear automatically when condition is corrected.

Sensor Displaying Disconnected

Verify the sensors are plugged in and wires are attached to each connector. If the sensors are connected correctly, the sensor may be defective.

AC Power

AC Power Operation

The NexPump runs on AC power as long as AC is available. During an AC Power outage the NexPump will automatically switch to battery power. The NexPump will display AC Power problem and sound its alarm. If the alarmed is silenced the system will still display alerts. When power is restored the alarm will turn off automatically.

Testing

AC Power is continually monitored.

If Notification is installed

Notification will occur on AC Power loss after approximately thirty minutes.

Clear AC Power Alerts

AC power alerts will clear automatically when condition is corrected.

AC Power Loss

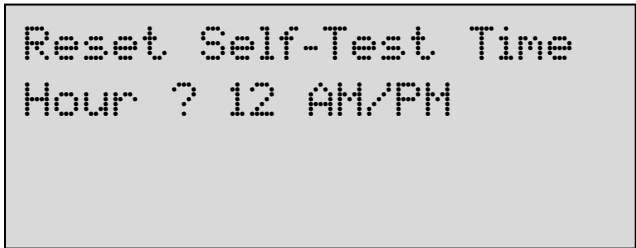
If the NexPump is alerting about an AC Power loss and there is not an issue with the AC Power in your household, you should check the electrical outlet the NexPump AC Power cord is plugged into with a portable device to check if the electrical outlet is live. If the electrical outlet is live then there may be an issue with the internal power supply in the NexPump system unit.

IMPORTANT: The power supply is not field serviceable. Do not attempt to disassemble the NexPump or power supply.

Testing

A screenshot of a monochrome LCD screen displaying the text "Manual Self-Test?" in a pixelated font.

The NexPump schedules an automatic self-test every 12 hours. A manual test can be done by selecting the menu manual self-test. The self-test feature will test pumps, battery, electronics, etc. To run a manual self-test use the up, down arrows and select the menu manual self-test by pressing ENTER.

A screenshot of a monochrome LCD screen displaying the text "Reset Self-Test Time" on the first line and "Hour ? 12 AM/PM" on the second line in a pixelated font.

Resetting the self-test time can be found in the reset menu or can be performed with command console on internet versions. Resetting should be performed at the time you want the self-test to begin. Once reset the automatic self-test will start at the new time.

To change the self-test time of the system use the left and right arrows to adjust the time. When on desired time press ENTER to set. The system self-tests every twelve hours so this will be the time for AM and PM.

Battery

Battery Specifications

The NexPump requires a deep-cycle marine battery. A 105 amp hour or greater rating is required. This is usually a group 27 or group 31 deep-cycle marine battery.

Multiple Batteries:

Two batteries may be connected in PARALLEL to increase time on battery power. This configuration is highly recommended.

IMPORTANT: DO NOT CONNECT BATTERIES IN SERIES. CONNECTING MULTIPLE BATTERIES IN SERIES WILL DAMAGE THE UNIT AND VOID THE WARRANTY.

Testing

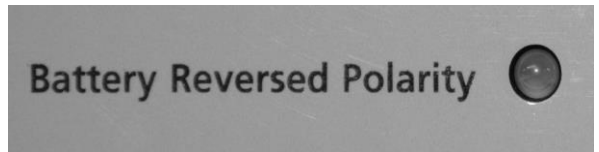
Battery is tested on 12 hour self-tests or manual tests. Exceptions: Charge system is active, battery disconnected or battery replacement alert is active.

If Notification is installed

Notification will occur on a battery disconnected or low battery or battery replacement alert after approximately five (5) minutes. After an AC Power Outage when running on battery, Notification will occur after approximately thirty (30) minutes.

Battery Connected Improperly

If the battery cables are connected to the wrong posts, the 'Reversed Polarity' red LED will illuminate and an alarm will sound for 'Battery Problem.'



Note: Correct by reversing the battery cables.

```
Battery Type ? W A
W=Wet A=AGM.Gel
```

Battery Type

Be sure to select the battery type installed with the system. This screen can be found under the configuration menu.

Use the left, right arrows and press ENTER when cursor is over desired position.

```
Battery Amps ? 105AH
```

Battery Amp Hours

Select the battery amp hours on your battery. If multiple batteries are connected add the total amp hours together. This can be found in the configuration menu.

Use the right and left arrows to increase or decrease amp hours. When on desired number press ENTER.

```
Charger ? On Off
```

Battery Charger

The charger should be turned on when the system is first installed or when replacing the batteries. This can be found in the configuration menu.

Use the left, right arrows and press ENTER when cursor is over desired position.

```
Reset Battery Timer?
Confirm ? Y N
```

Battery Timer

Batteries have a lifespan and should be replaced when the NexPump reports this time frame has expired. This should also be reset when replacing batteries. Defaults for battery type selected. (WET = 1300 days, 3.5 years, AGM = 1600 Days, 4.5 Years)

This can be found in the Reset menu. To select use the left and right arrows and press ENTER when cursor is over desired position.

```
BA=105 AH
E/S=On Batt=Wet
Replace Battery
In: 1350 Days
```

Battery Information

This screen can be found under the information menu.

BA=current amp hours of your battery

Batt=battery type

Replace battery= how many days until the system recommends changing the battery

Battery Life 333H
AC Power Problem

Running On Battery Power

When AC power is out the system will alert of an AC power problem. It will then indicate how many hours are remaining on the battery. '999' hours is the maximum number displayed. The battery life monitor calculates the remaining life about four times an hour. When running on battery power you should closely monitor the battery life when the hours indicated are ten or below. Battery life will not be accurate if the battery amp hours are not set correctly before the power outage began. You can silence this alarm by using

the up, down arrows until the menu silence alarm (24H) appears. To select press ENTER. Once AC power is restored the display will again display a normal status.

IMPORTANT: When the battery life is calculated at two hours or below, a 'Low Battery' alarm will sound, in addition a notification will take place if this is the only critical alert. When zero hours are calculated, the pump(s) will no longer operate to prevent total battery discharge.

Note: If battery life is LOW and battery power is still needed you should connect a replacement battery at this time.

Battery Maintenance:

Check fluid levels, if applicable for each installed battery at least once every six months. To fill fluid levels:

Remove the cell caps of battery. Add distilled water to each cell. If distilled water is not available, tap water with a low mineral content may be used. NEVER ADD MORE ACID. Fill the battery cell so water is just below the fill cap.

Clean battery posts as needed with a 50/50 solution of water and baking soda or a wire brush. Do not allow any cleaning solution to enter the battery. Thoroughly dry the terminals and apply petroleum jelly to terminals as needed.

Battery Replace

Battery Replacement

The NexPump is constantly monitoring the battery state and will fail a battery if any one of several tests are not passed within tolerance.

IMPORTANT: Review the safety instructions before proceeding to replace the battery or batteries.

1. Disconnect each battery, you DO NOT need to power off the NexPump system unit.
2. Remove each battery and dispose of properly.
3. Connect each new battery. Attach the battery cables to the battery - the BLACK wire to the NEGATIVE (-) post, the RED wire to the POSITIVE (+) post and tighten securely.

IMPORTANT: Verify the 'Battery Reverse' LED is NOT illuminated. If so, reverse connections.

5. Verify battery type and amps under the configuration menu.
6. Turn ON Charger under the configuration menu.

Charger Operation

Charge Mode F00

Charger System Operation:

Charge Rate: 20 Amps

The charging circuit is disabled anytime the battery or electric power is disconnected or if both pumps are operating. The charge status can be 'Full', 'Trickle', 'Maintain Mode' and 'Disabled'. When the charge is started the display will show 'Fxx', where the 'xx' is the actual charge rate in amps. The charge is automatically monitored at all times. After a full charge is complete the NexPump unit will go into a trickle charge mode. The display will show 'Txx' where the

'xx' is the charge rate. When the Trickle mode is complete, the NexPump will go into the 'Maintain Mode'. In the 'Maintain Mode' charge rates can be very low and may even display 'M00' for extended times. It is normal for the 'Maintain Mode' to run for multiple days. When the battery is disconnected the charging mode will go into the 'Disable mode'. The display will show 'D00'.

Battery Disconnected to Reconnected

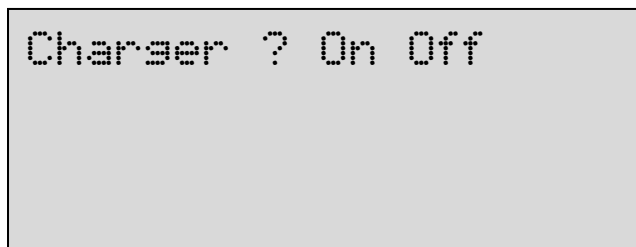
S30- The count in seconds when the charge system will start. This allows time for the battery to be reconnected before the charger starts again.

If Notification is installed

Notification will occur on all charger system alerts after approximately five minutes.

Testing

Charger system is tested on 12 hour self-tests or manual tests. Exceptions: Full or Trickle charge is currently active, AC Power is off or battery is disconnected.



Turn Charger On

The charger should be turned on when system is first installed or when replacing the batteries.

This can be found in the configuration menu. Use the left, right arrows and press ENTER when cursor is over desired position.

Charger Problem

Charger system problems may also be a result of an AC Power problem while a charger system test was active. In that case use the up, down arrows to find the menu clear alarm and press ENTER. If that is not the case it may indicate a problem with the battery charger system.

Note: If the battery is completely discharged the NexPump may display the battery disconnected then count down from five seconds. This may cycle until the battery is at a sufficient level to start the full charge mode. This prevents an overload to the charge system or battery.

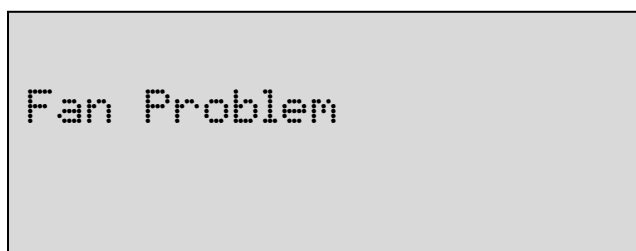
Internal Cooling Fan

Fan Operation

The internal fan does not run continually and is only in use when the charging system is active, any pump is in use or it is in the test mode, however the fan will continue to run for some time after any pump has run.

Testing

The fan is testing during operation, on self-tests and during manual tests.



If Notification is installed

Notification will occur on any fan alerts after approximately five minutes.

Fan Problem

A fan problem usually means that the fan is defective and must be repaired.

Internal Electronics

Primary VRef Alert

A 'Primary VRef Problem' indicates an internal hardware problem. This will display as a 'VRef Problem' in the alert line of the display. The NexPump automatically switches over to its backup VRef if this alert is detected.

Testing

The Primary VRef is continually monitored.

If Notification is installed

Notification will occur on a Primary VRef alert after approximately five minutes.

Clear Primary VRef Alerts

Primary VRef alerts will clear automatically when condition is corrected.

Alerts

The NexPump system monitors 38 critical points on the unit. In the case of an alert the system will alarm followed by a notification if you have that option.

Normal Alerts

Pump Activation

AC Power Loss

Notifications: After approximately thirty minutes

Note: Pump Activation lets you know there may be an issue with your main pump. If you find you have a problem with your main pump you can switch the NexPump mode to 'Primary' until the main pump problem is corrected.

Critical Alerts

All other alerts

After approximately five minutes, except a High Water Alert, which is approximately one minute.

A screenshot of the NexPump display showing the text "Silence Alarm? (24H)" in a monospaced font.

Silencing or Un-Silencing the Alarm

The alarm can be silenced for normal alerts only. It will silence for 24 hours. A silenced alarm clears automatically after 24 hours.

To silence or unsilence alarm press Enter when on menu 'Silence Alarm (24H)' or 'unsilence alarm.'

Note: When the alarm is silenced the alerts will blink to notify which conditions are in the alarm state.

A screenshot of the NexPump display showing the text "Disable Alarm? (5D)" in a monospaced font.

Disabling or Enabling the Alarm

The alarm can be disabled if needed. When disabled, the alarm will not sound for any reason. The alarm will stay disabled for five days and automatically be enabled after that time. You can enable the alarm before the five day period by selecting the Enable Alarm menu and pressing ENTER.

Note: All notifications will take place while the alarm is disabled, disabling the alarm simply turns off the sound.

A screenshot of the NexPump display showing the text "Alert History Display ? Y N" in a monospaced font.

Alert History

Under the information menu you can retrieve the history of the last ten alerts registered. The date and time will be displayed with the alert.

To find the alert history select the information menu and once on the screen 'Alert History Display' use the left and right arrows to move the cursor then press ENTER.

Displaying Alerts:

Below are two examples of what the display will look like when there are alerts on the NexPump. Line two of the display will show you each alert approximately every three seconds. The first example will let you know the number of alerts and the current number it will be displaying. The format will be 'Alert x of x'. The second example is the actual alert that follows the first example.

Alert 1 of 1

Sensor 2 Problem

Clearing, Silencing, Disabling Alarms

Clear Alarm?

To clear the alarm use the up, down arrows to find the menu clear alarm. To select press ENTER.

Silence Alarm? (24H)

The alarm can be silenced for normal alerts only. These include Pump Activation and AC Power Loss. A silenced alarm clears automatically after twenty four hours.

To silence the alarm use the up, down arrows to find the menu silence alarm. To select press ENTER.

Note: When the alarm is silenced the alerts will blink to notify which conditions are in the alarm state.

UnSilence Alarm?

If the alarm is silenced you can unsilence it by selecting the menu unsilence alarm.

To unsilence the alarm use the up, down arrows to find the menu unsilence alarm. To select press ENTER.

Disable Alarm? (5D)

The alarm can be disabled if needed. When disabled, the alarm will not sound for any reason. The alarm will stay disabled for five days and automatically be enabled after that time. You can enable the alarm before the five day period.

To disable the alarm use the up, down arrows to find the menu disable alarm. To select press ENTER. It will ask to confirm disabling the alarm, use the left, right arrows to select desired position then press ENTER.

Note: All notifications will take place while the alarm is disabled, disabling the alarm simply turns off the sound.

A screenshot of a menu screen with a light gray background. The text "Enable Alarm?" is displayed in a black, monospaced font at the top of the screen.

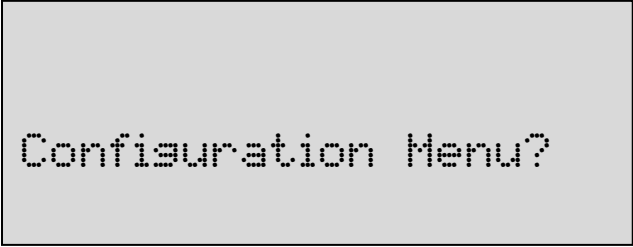
Enable Alarm?

If the alarm is disabled you can enable it by selecting the menu enable alarm.

To enable the alarm use the up, down arrows to find the menu enable alarm. To select press ENTER.

Configuration Menu

Note: If you have a notification unit please see the Notification Guide for additional screens.

A screenshot of a menu screen with a light gray background. The text "Configuration Menu?" is displayed in a black, monospaced font at the top of the screen.

Configuration Menu?

The configuration menu allows unit specific information to be input into the system. Battery, amps, charger, etc.

To select the configuration menu use the up, down arrows until you see configuration menu on the third display line then press ENTER.

A screenshot of a menu screen with a light gray background. The text "Battery Type ? W A" is displayed on the first line, and "W=Wet A=AGM.Gel" is displayed on the second line, both in a black, monospaced font.

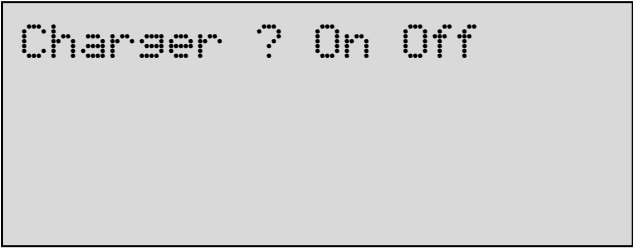
Battery Type ? W A
W=Wet A=AGM.Gel

Select the battery type currently on your system. Press ENTER when cursor is over desired position.

A screenshot of a menu screen with a light gray background. The text "Battery Amps ? 105AH" is displayed in a black, monospaced font at the top of the screen.

Battery Amps ? 105AH

Select the battery amp hours on your battery. If multiple batteries are connected add the total amp hours together. Use the right and left arrows to increase or decrease amp hours. When on desired number press ENTER.

A screenshot of a menu screen with a light gray background. The text "Charger ? On Off" is displayed in a black, monospaced font at the top of the screen.

Charger ? On Off

Charger will turn on the battery charger if selected. It is recommended to turn on the charger when system is first installed or when replacing batteries. Press ENTER when cursor is over desired position.

```
Mode ? Back Prim
```

There are two types of modes to select.

Primary Mode – Should be used when pump is the primary pump. NexPump WILL NOT display or sound an alert if pump(s) are activated.

Backup Mode - Used when pump is a backup pump. NexPump WILL display and sound an alarm if pump(s) are activated.

To select a mode use the left and right arrows and press ENTER when cursor is over desired position.

Information Menu

Note: If you have a notification unit please see the Notification Guide for additional screens.

```
Information Menu?
```

The information menu has specific information on your system including stats, serial number, alert history, etc.

To select the information menu use the up, down arrows until you see information menu on the third display line, then press ENTER.

```
System Type
```

```
SN-NPB00000000
```

```
Version Type
```

First line will display current system type.

SN= stands for the serial number of the system

The last line will indicate the current version of the system.

```
Pump 1=0000H (00)
```

```
Type='H'
```

```
Pump 2=0000H (00)
```

```
Type='H'
```

This screen has the current stats of your pumps

Pump 1= is the current run hours on pump 1

Pump 2= is the current run hours on pump 2

Type= will either have an 'H' or 'U' depending on the system.

'H' = High capacity, 'U' = Ultra capacity)

(00)= indicates how many times the pump has gone over 2500 hours.

The pump is rated at 2500 hours.

```
CPU=00123 Days
```

```
TPU=00123 Days
```

```
Auto Tests=00123
```

```
Man Tests=00123
```

CPU=current power up days of the system

TPU= total power up days of the system

Auto Tests= amount of self-tests the system has preformed

Man Tests= amount of manual tests the system has preformed

Man Tests= amount of manual tests the system has preformed

BA=105 AH
E/S=On Batt=Wet
Replace Battery
In: 1350 Days

BA=current amp hours of your battery
E/S=empty sump option
Batt=battery type
Replace battery= how many days until the system recommends changing the battery

Time=12:12AM/PM
Date=01-01-18

Current time and date set to the system.

Note: Notification systems will automatically set the date and time.

Alert History
Display ? Y N

Alert history will display the last ten alerts of the system. It will display the alert as well as the date and time the alert occurred.

Advanced Menu

Note: If you have a notification unit please see the Notification Guide for additional screens.

Advanced Menu?

To select the advanced menu use the up, down arrows until you see advanced menu on the third display line, then press ENTER.

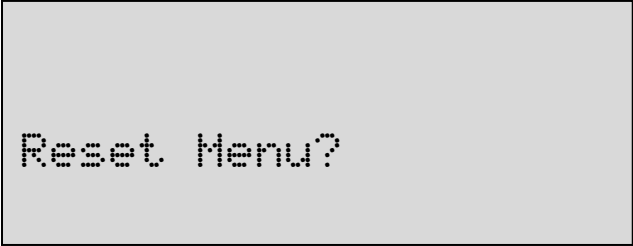
Empty Sump ? On Off

The empty sump option will pump the water out of the pit after each 12 hour self-test. This is useful so no standing water is left in the pit especially when the NexPump is a backup pump for another pump that could corrode.

To select use the left and right arrows and press ENTER when cursor is over desired position.

Reset Menu

Note: If you have a notification unit please see the Notification Guide for additional screens.



Reset Menu?

The reset menu allows you to change or reset the time, date, timers, etc.

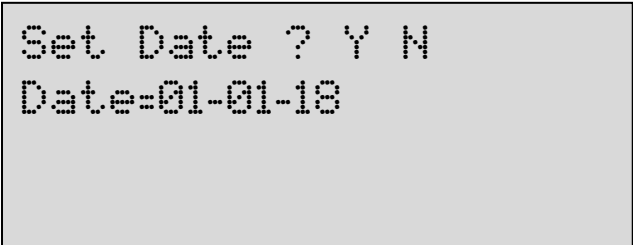
To select the reset menu use the up, down arrows until you see reset menu on the third display line, then press ENTER.



Set Time ? Y N
Time=12:12 AM/PM

This will allow you to set the current time on the system. If you want to set the time select the 'Y' and use the up, down arrows to adjust the time.

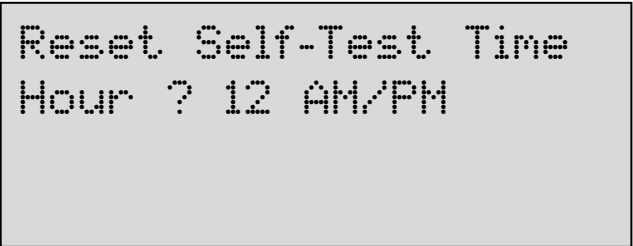
Note: the up, down arrows will adjust the time and the left, right arrows will move the cursor.



Set Date ? Y N
Date=01-01-18

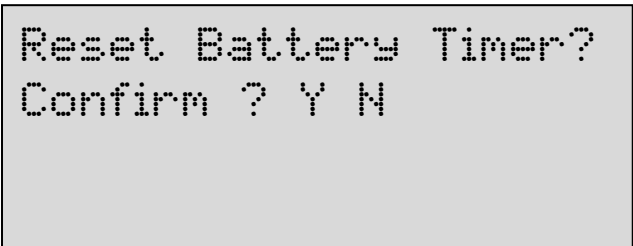
This will allow you to set the current date on the system. If you want to set the date select the 'Y' and use the up, down arrows to adjust the time.

Note: the up, down arrows will adjust the time and the left, right arrows will move the cursor.



Reset Self-Test Time
Hour ? 12 AM/PM

To change the self-test time of the system use the left and right arrows to adjust the time. When on desired time press ENTER to set. The system self-tests every twelve hours so this will be the time for AM and PM.



Reset Battery Timer?
Confirm ? Y N

Batteries have a lifespan and should be replaced when the NexPump reports this time frame has expired. This should also be reset when replacing batteries. Defaults for battery type selected. (*WET = 1300 days, 3.5 years, AGM = 1600 Days, 4.5 Years*)

To select use the left and right arrows and press ENTER when cursor is over desired position.

Quick Reference Guide

Power OFF

1. Disconnect Battery
 - a. Disconnect (+) Positive Cable (Red)
 - b. Disconnect (-) Negative Cable (Black)
2. Unplug NexPump's AC Power Cord

Power ON

1. Plug in the AC Power Cord FIRST!
2. Connect Battery
 - a. Connect (-) Negative Cable (Black)
 - b. Connect (+) Positive Cable (Red)
 - c. Verify Battery Reverse Indicator

Manual Override Mode

1. Set Override switch to up position.
2. Pump(s) should turn on.
3. Battery life will not be calculated.
4. Clog or vapor lock detection is disabled.
5. Set Override switch to down position to turn pump(s) off and return to normal.

Clear Alarm(s)

To clear the alarm use the up, down arrows to find the menu clear alarm. To select press ENTER.

Silence Alarm

To silence the alarm use the up, down arrows to find the menu silence alarm (24H). To select press ENTER.

Note: Automatically cleared after 24 hours. Alarm will only silence for 'Pump Activated' and 'AC Power Problems Alarms'

UnSilence Alarm

If the alarm is silenced you can unsilence it by selecting the menu unsilence alarm.

To unsilence the alarm use the up, down arrows to find the menu unsilence alarm. To select press ENTER.

Manual Test

To run a manual self-test use the up, down arrows to find the menu manual self-test. To select press ENTER.

Retrieve Serial Number

The NexPump serial number is located on a card on the top of the unit or a sticker on the rear of the unit.

Battery Amp Hours Setup

1. Use the up, down arrows to find the configuration menu. Select it by pressing ENTER.
2. Wait for the screen 'Battery Amps?'
3. Use the left and right arrows to increase or decrease the amps. Press ENTER when on correct amps.

Stats Information

The stats can be found under the information menu. Use the up and down arrows to find the information menu. Select it by pressing ENTER.

Disable Alarm

To disable the alarm use the up and down arrows to find disable alarm (5D). Select it by pressing ENTER. To confirm it use the left and right arrows until the cursor is over the desired position. Select it by pressing ENTER.

Enable Alarm

If the alarm is disabled you can re-enable it by using the up and down arrows to find enable alarm. Select it by pressing ENTER.

Reset Battery Timer

1. Use the up, down arrows to find the reset menu. Select it by pressing ENTER.
2. Wait for the screen 'Reset Battery Timer Confirm?'
3. Use the left and right arrows until the cursor is over the desired position. Select it by pressing ENTER.

NexPump Specifications

Maximum input/output levels

Input: AC

Ai Extreme, Ai Dual

- Full Load 115 Volts AC @ 8.5 amps
- Standby Load 115 Volts AC @ 0.17 amps

Ai Single

- Full Load 115 Volts AC @ 4.5 amps
- Standby Load 115 Volts AC @ 0.17 amps

Charge Output

20 Amps

Operating Temperature

9°C~38°C (48°F~100°F)

Storage Temperature

0°C~38°C (32°F~100°F)

LIMITED WARRANTY:

This NexPump, Inc. product is warranted against defects in workmanship and materials. If any failure of these components, resulting from a defect in either workmanship or material shall occur under normal use within THREE YEARS (3) from the original date of purchase for Ai Extreme Series Pumps and Ai Dual or under normal use within TWO YEARS (2) from the original date of purchase for the Ai Single, such failure shall be corrected free of charge to the original purchaser by repair or, at NexPump's sole option, replacement of the defective part or parts.

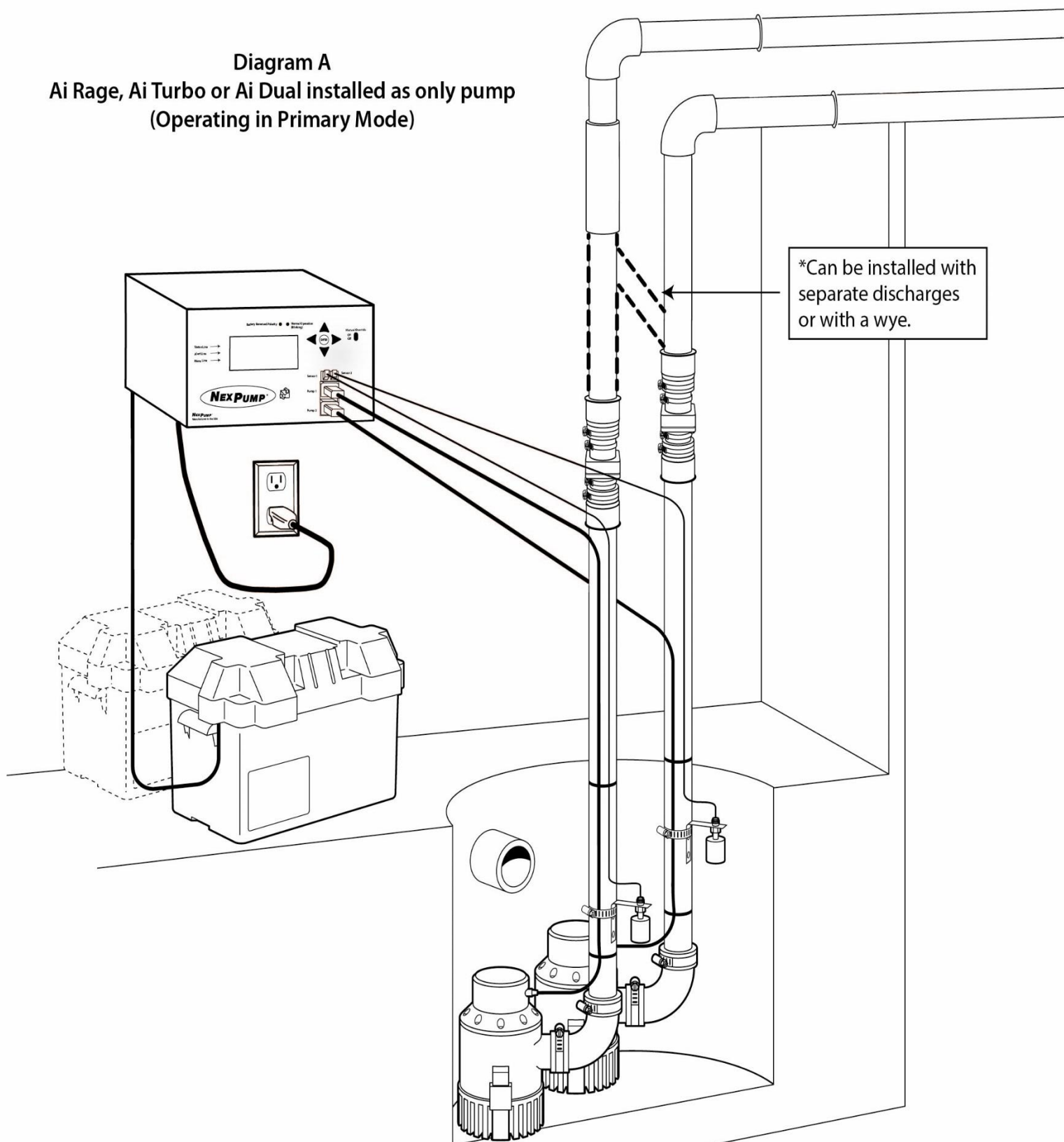
No charge shall be made for labor or services performed during the said warranty period providing the defective product is sent prepaid to our Authorized Service Station. NexPump, Inc. will either repair or at its sole option, replace any such part except for fuses, circuit breakers under normal and proper use. This warranty does not cover High Capacity pumps that have exceeded 2500.0 hours of operating time or Ultra Capacity pumps that have exceeded 2500.0 hours of operating time and does not cover equipment, which had been tampered with in any way, or to damage caused by accident, negligence, alteration, misapplication or natural disasters.

This product must be returned transportation prepaid, properly packed and insured. NexPump, Inc. bears transportation cost of the repaired product back to the purchaser. This warranty applied only to the original purchaser.

NO OTHER WARRANTIES ARE EXPRESSED OR IMPLIED. NEXPUMP, INC. IS NOT LIABLE FOR CONSEQUENTIAL DAMAGES.

EXCEPT AS SET FORTH HEREIN, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO NEXPUMP PRODUCTS. NEXPUMP, INC. EXPRESSLY EXCLUDES AND DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY AND ANY WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, APPLICATION OR USE. UNDER NO CIRCUMSTANCES WILL THE COMPANY BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER SUCH DAMAGES ARE SOUGHT IN CONTRACT, IN TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE AND STRICT LIABILITY) OR OTHERWISE, AND THE COMPANY'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE NEXPUMP PRODUCTS ON WHICH SUCH LIABILITY IS BASED.

Diagram A
Ai Rage, Ai Turbo or Ai Dual installed as only pump
(Operating in Primary Mode)

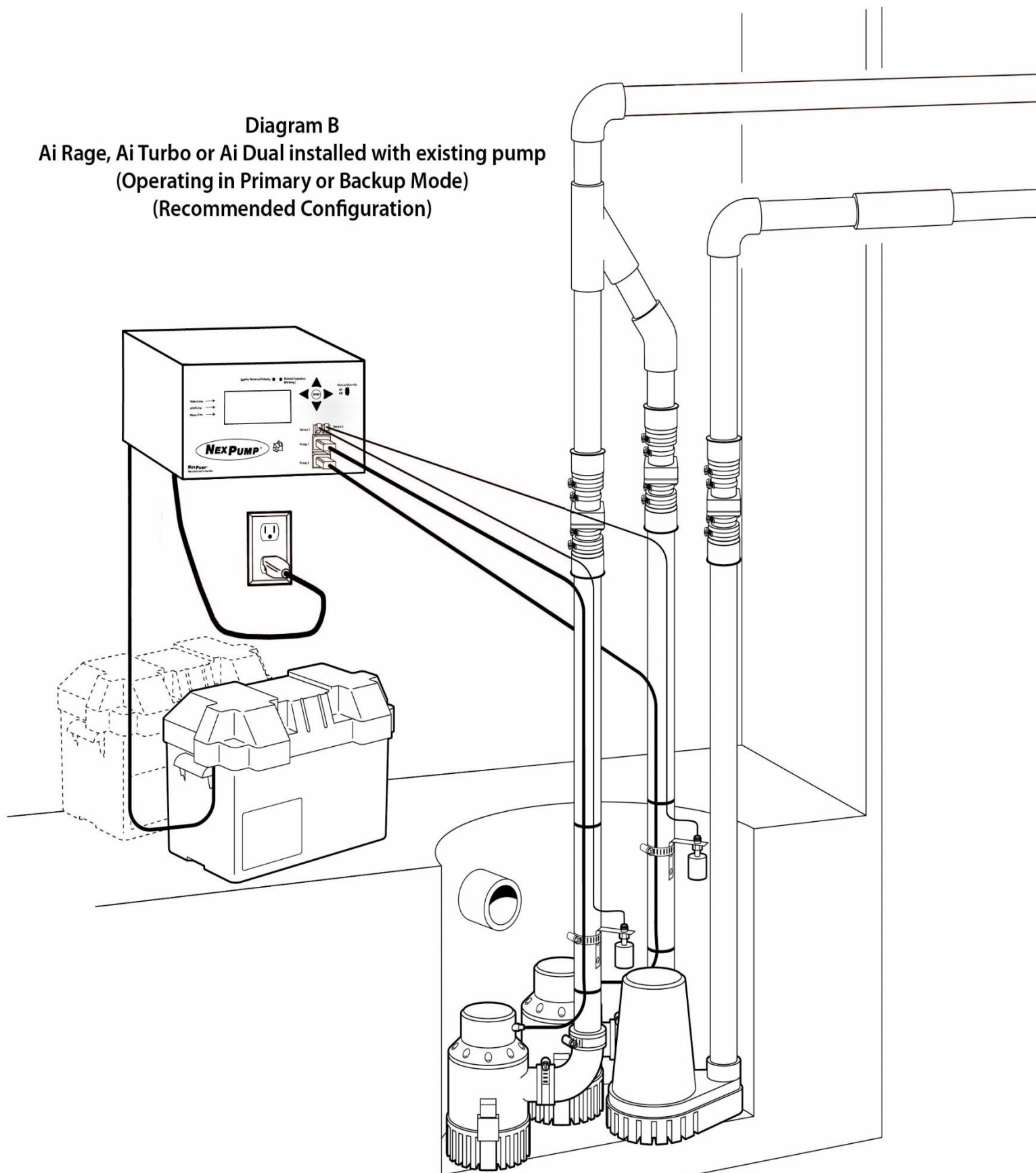


*Can be installed with separate discharges or with a wye.

Note: Diagram is not to scale

**For the Ai Rage: If a wye is used, it is recommended to use 2" PVC after the wye.*

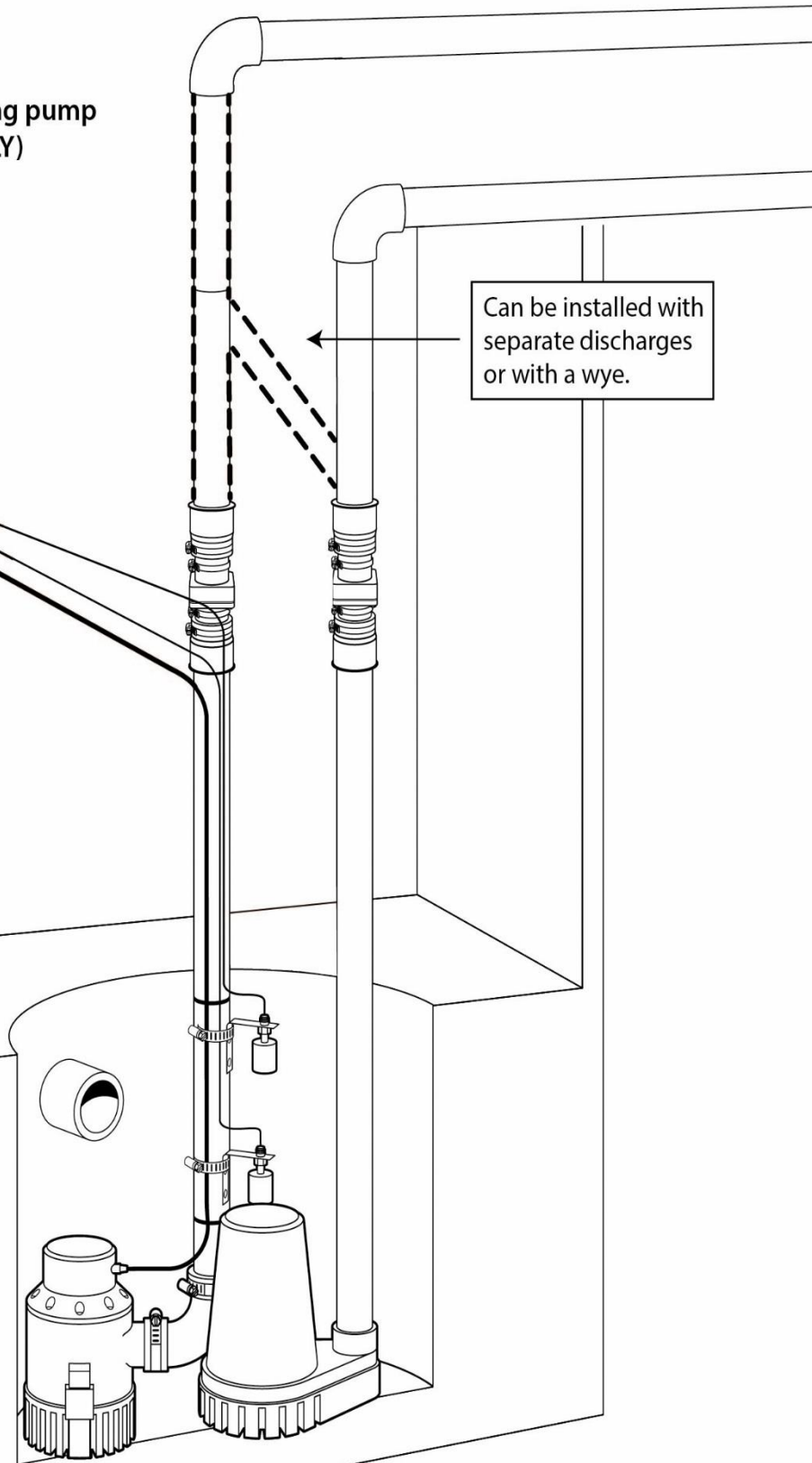
Diagram B
Ai Rage, Ai Turbo or Ai Dual installed with existing pump
(Operating in Primary or Backup Mode)
(Recommended Configuration)



Note: Diagram is not to scale

For the Ai Rage: If a wye is used, it is recommended to use 2" PVC after the wye.

The diagram illustrates the NEXPUMP unit, which is a rectangular box with a control panel on top. The panel includes a digital display, several buttons, and a power switch. A power cord is shown plugged into a standard wall outlet. A long cable runs from the unit down to a large, multi-compartment pump unit, which is shown in a dashed outline to indicate its position relative to the main unit.



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