Twelve Output-24V Control Board (OAT-24) User Manual



OAT-24 For Aqua-X Pro Control System

OVERVIEW

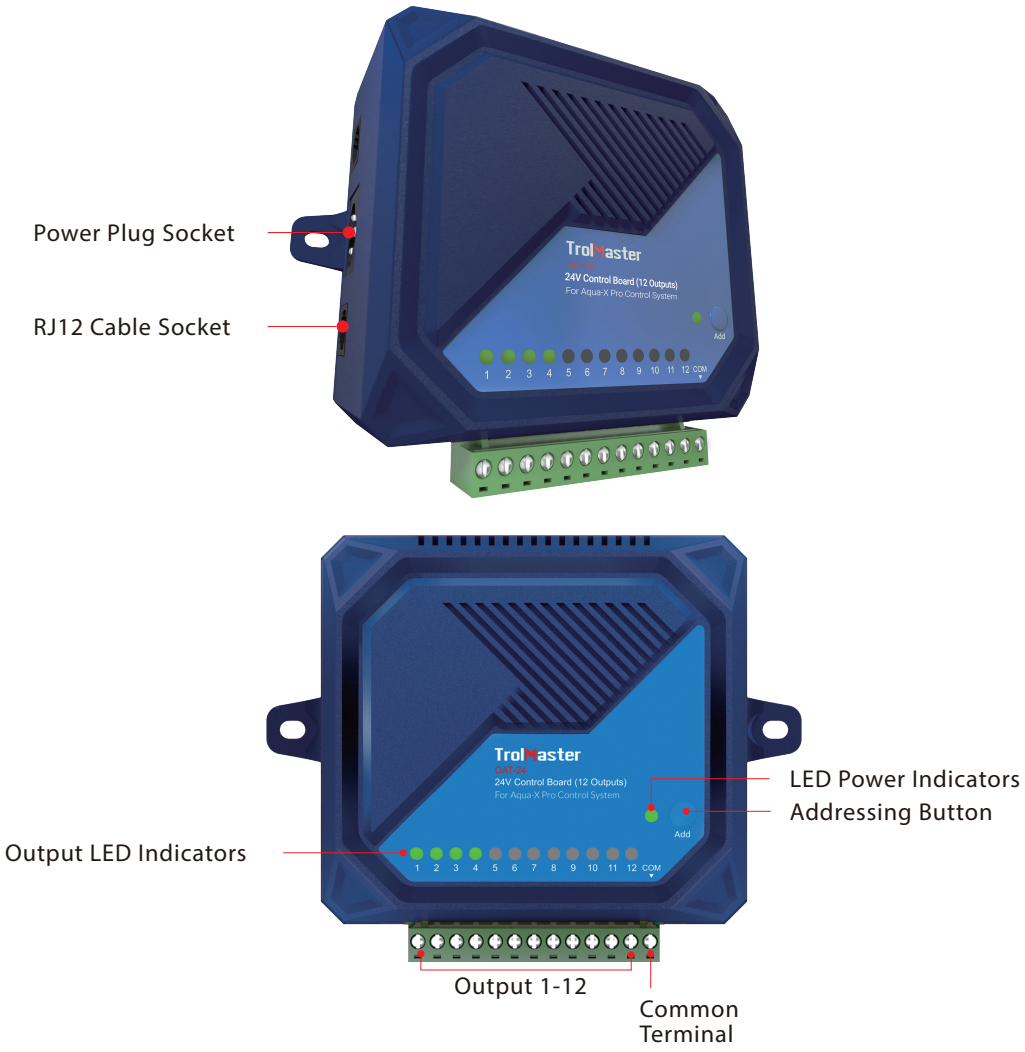
The OAT-24 module is specifically designed for the Aqua-X Pro Irrigation Control System. It features 12 individual 24V outputs that can control up to 12 individual 24-volt irrigation solenoids.

By using multiple OAT-24 modules, the Aqua-X Pro Irrigation Control System could manage up to 600 individually controlled 24V valves. Each of the solenoid valves can be independently configured by the users with one of the five control modes. Those 5 modes are feed by:
Recycle, Schedule, Demand, Volume, or Auto-fill. With the ability to control up to 600 solenoids using one of the 5 available control modes, users could easily manage irrigation schedules for multiple nutrients, rooms, and irrigation zones.

FEATURES

- 12 Individually Controlled 24V Outputs
- Max Current of 0.5A per Output
- Individual LED Indicator for Each Output
- Double RJ12 Cable Sockets for Daisy Chain Connectivity

FRONT PANEL



OPERATION INSTRUCTIONS

1. Connections to 24V Solenoids / Pump

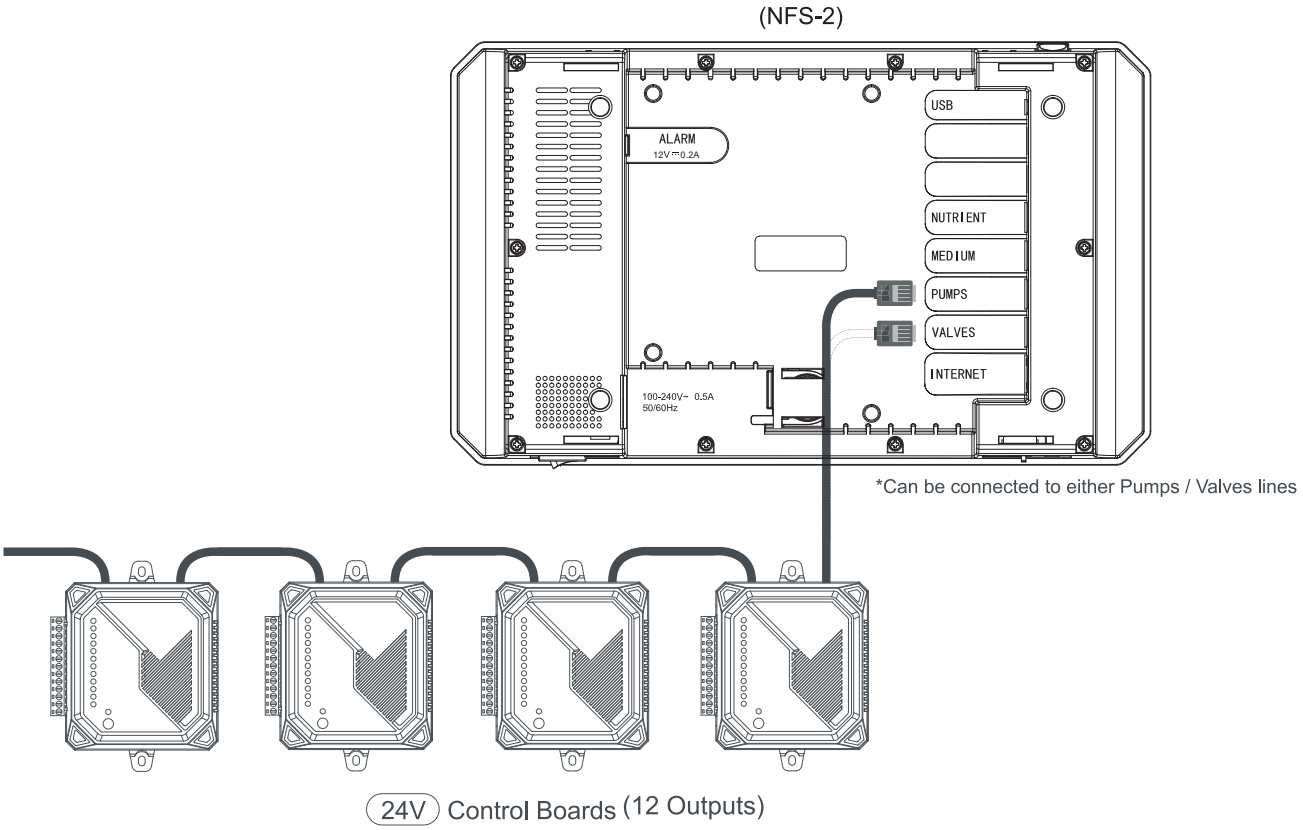
In most situations, you will be connecting the OAT-24 to 24 vac solenoid valves. Those valves have two wires each. One wire from each of the solenoids will connect to one of the twelve outputs on the OAT-24, and the other wire will connect to the Common terminal on the OAT-24. You can also use the OAT-24 to activate/trigger a pump. To control a pump with one of the outputs on the OAT-24, you would need to use a 24VAC relay or contactor. The coil of the relay would be connected to the OAT-24 like you would a 24VAC solenoid. Then the power to operate the pump would be connected to the relay / contactor's dry-contacts. That way the OAT-24 can control large pumps OR standard 24VAC solenoids making the OAT-24 twice as versatile.

*NOTE: If more than one OAT-24 is connected to the NFS Controller, you CAN'T share a common wire from one OAT-24 to another OAT-24.

2. Connection to the Aqua-X Pro

The OAT-24 can be connected to the Aqua-X Pro Controller by using an RJ12 cable. Plug the RJ12 cable into either the Valves Line or the Pumps Line at the back of the Aqua-X Pro Controller. Then, plug the opposite side of the RJ12 cable into either one of the RJ12 ports on the side of the first connected OAT-24 module.

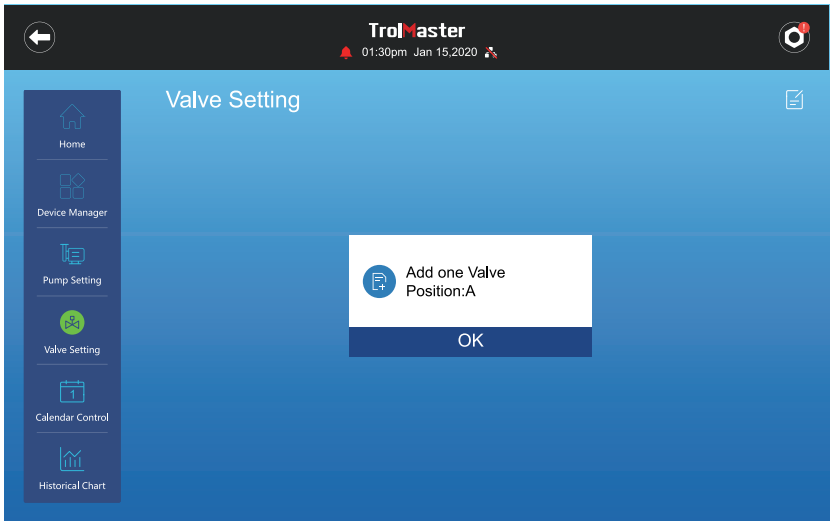
To connect the second OAT-24, it could be easily daisy-chained by plugging another RJ12 cable into the first OAT-24, then plugging the other side of the RJ12 into the second OAT-24, and so on. However, the total amount of connected OAT-24 should not exceed the maximum capacity of 50 Control Modules.

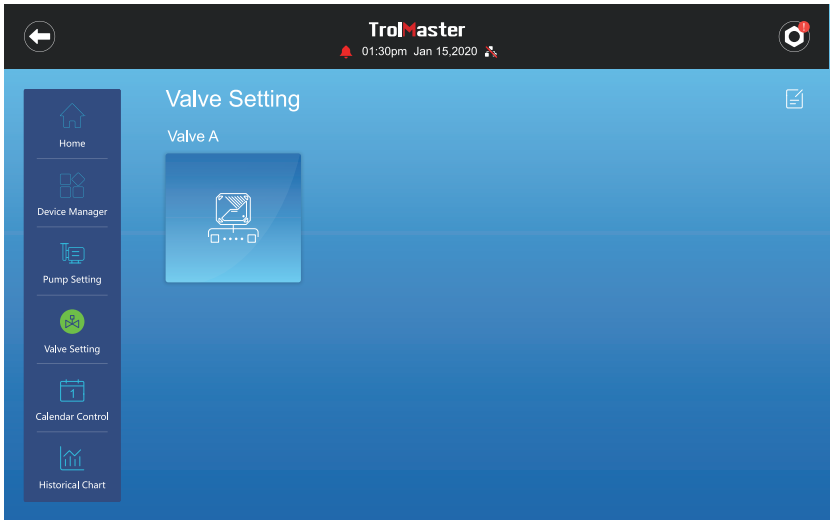


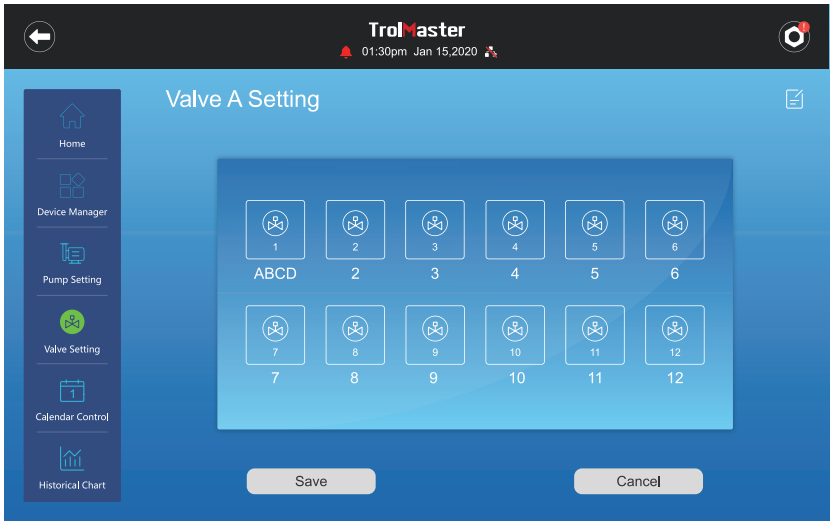
3. Address Assignment

a. Make sure the OAT-24 is successfully connected to the Aqua-X Pro Controller and powered on. (The LED indicator on the OAT-24 will be flashing green)
b. Press the address button on the OAT-24, and a message “Add 1 Valve, Position A or B etc” will appear on the Aqua-X Pro screen.
c. Once the OAT-24 is successfully addressed, the LED indicator will stay green.

*The first connected Control Board will be marked as “A”, and the second one will be marked as “B” and so on.


TrolMaster
01:30pm Jan 15,2020
Valve Setting
Home
Device Manager
Pump Setting
Valve Setting
Calendar Control
Historical Chart
Add one Valve
Position:A
OK


TrolMaster
01:30pm Jan 15,2020
Valve Setting
Valve A
Home
Device Manager
Pump Setting
Valve Setting
Calendar Control
Historical Chart


TrolMaster
01:30pm Jan 15,2020
Valve A Setting
Home
Device Manager
Pump Setting
Valve Setting
Calendar Control
Historical Chart
1
2
3
4
5
6
ABCD
2
3
4
5
6
7
8
9
10
11
12
7
8
9
10
11
12
Save
Cancel

LED Indicator

LED Indicator	Status
Green (Flashing)	No device addressed
Green (Solid)	Device successfully addressed
Orange (Solid)	Error occurred

4. Valves Line Setting

a. Tap "Valve Setting" to access the valve setting page.
b. Tap on the wired output inside the OAT-24 Control Board.
c. Then select the irrigation mode "Timer" or "Auto"
   1). Timer: Users can choose either one irrigation format (By Time/ By Volume)
      i. By Time: By Recycle/By Schedule.
      ii. By Volume: Link to a Flow Meter and choose to irrigate.
   2). Auto: Feed on Demand/Auto-Filling for Reservoirs.
d. For a detailed tutorial, tap on the "ⓘ" button on the right top corner.
e. Click "Save" to save the settings.

5.Pump Line Setting

a. Tap "Pump Setting" to access the pump setting page.
b. Tap on the output inside the OAT-24 Control Board.
c. Then choose the irrigation mode "Timer" or "Auto" or "Link"
   1). Timer: Users can choose either one irrigation format (By Time/ By Volume).
      i. By Time: By Recycle/ By Schedule.
      ii. By Volume: Link to a Flow Meter and choose to irrigate.
   2). Auto: Feed on Demand/Auto-Filling for Reservoirs.
   3). Link: The pump can be linked to automatically function with a specific Valve. Once the valve is activated, the pump will automatically be turned on at the same time.
d. For a detailed tutorial, tap on the "ⓘ" button on the right top corner.
e. Click "Save" to save the settings.

6. Troublesshooting

The OAT-24 has internal overload protection that includes high temp shutdown. If the OAT-24 detects internal high temps, all of the outputs will be turned off when the device reaches 90° C, and the LED indicator next to the (ADD) button will be illuminated orange. You will need to determine the cause of the overheating condition, and then cycle power OFF/ON to reset the unit.

SPECIFICATIONS

Input Voltage	120VAC, 50/60Hz
Certifications	ETL/FCC
Max Output Voltage/Current	24VAC / 0.5A Per Output
Working Environments	Temperature: 32-104°F
	Humidity: ≤90%
Package Dimensions	275mm(L) x 164mm(W) x 65mm(H)

GENERAL INFORMATION

WARRANTY

a. Please use with other TrolMaster components for best performance

b. In the case of defects, the Control Board will either be replaced or repaired using new or reconditioned products or parts by TrolMaster within a 3-year warranty from the original date of purchase. If you experience a problem with this product, contact TrolMaster product support and they can help you troubleshoot the problem.

c. Non-professionals DO NOT open the product, in case any dangers occurred such as electric shock or damage to the Control Board.

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Intertek
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CONFORMS TO
UL STD.61010-1
CERTIFIED TO CSA
STD.C22.2#61010-1

WARNNING: DO NOT allow the Control Board to be exposed to water or excessive heat. DO NOT open or attempt to repair or disassemble the Control Board, as there are no user-serviceable parts inside. Opening the controller will void the warranty.

1. If the surface of the Control Board is dirty, wipe it with a dry towel.
2. The Control Board is designed for indoor use only, it should be operated under natural ventilation conditions.
3. For safety, it's necessary to connect the ground wire. If a short circuit did occur, the current would flow through the ground wire, causing a blown fuse or tripped circuit breaker.
4. The Control Board should be positioned in a place that it's easy to pull out when a fault occurs.

WARNING

DO NOT allow the OAT-24 to be exposed to water or excessive heat.

DO NOT open or attempt to repair or disassemble the controller, as there are no user-serviceable parts inside.

Opening the controller will void the warranty.

If the surface of OAT-24 is dirty, wipe it with a dry towel. The OAT-24 operates under natural ventilation conditions.

AVERTISSEMENT

NE PAS exposer la carte de contact sec OAT-24 excessive.

NE PAS ouvrir ou tenter de réparer ou de démonter le contrôleur, car il ne contient aucune pièce réparable par l'utilisateur.

L'ouverture du contrôleur annulera la garantie.

Si la surface de la carte de contact sec OAT-24 est sale, essuyez-la avec une serviette sèche. La carte de contact sec OAT-24 fonctionne dans des conditions de ventilation naturelle.

For any issues or concerns with our products, DO NOT return them to the store. Please contact our tech support department at **support@trolmaster.com** or call **877-420-9876**.

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