AUTO PURE WATER PURIFIER

WA / WC / WB / WG SERIES

MODEL

WA301/311 Series

WC301/311 Series

WB301/311 Series

WG301/311 Series

INSTRUCTION MANUAL

- FIRST EDITION –

- Thank you for purchasing WA / WC / WB / WG Series Auto Pure Water Purifier of Yamato Scientific.

- To use this unit properly, read this "Instruction Manual" thoroughly before using this unit. Keep this instruction manual around this unit for referencing at any time.

- ⚠ WARNING: Carefully read and thoroughly understand the important warning items described in this manual before using this unit.

CONTENTS

You have a quality, world class water treatment system that will provide ultrapure water for many years of trouble-free operation. Years of engineering and experience went into the design and manufacture of this instrument which will dispense water exceeding Type I water purity standards.

Installation and service of the equipment should be performed by authorized and trained personnel. Safety measures and local guidelines must be followed. Use good practices wearing personal protective equipment (PPE) during the installation and service of the equipment.

Electricity – Auto Pure lab water equipment should be powered by a grounded GFI electrical connection. Do not open the system unless the system is unplugged. Before any installation or service is performed on the equipment, make sure the power is isolated. To unplug the system, do not pull directly on the cord but grip the plug and remove it from the outlet.

Ultraviolet Light – Auto Pure lab water systems may include an ultraviolet light lamp in a stainless-steel housing. Make sure all power is removed prior to accessing the side panel to perform any UV maintenance. Make sure gloves are used when handling the UV bulb. (Gloves must be worn when handling the UV bulb. Which protects the integrity of the bulb) Do not look directly at the UV lamp while the system is operating.

Water Supply – Good piping practices should be followed feeding water to the lab equipment. Isolation valves, pressure gauges and bleed valves are recommended on the main water supply. Pressure should be regulated to meet the minimum and maximum specifications stated for the equipment.
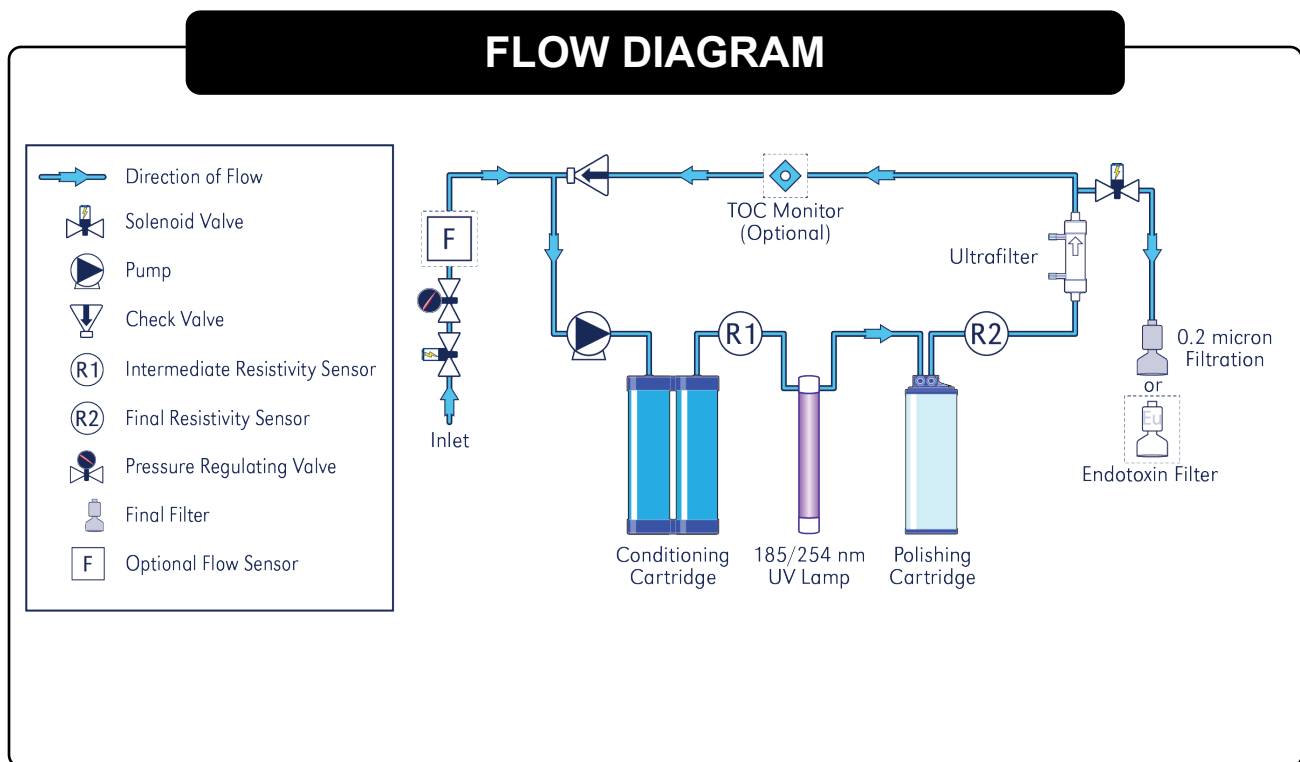
Sanitization – Make sure PPE is worn during any sanitization process. The Phoenix system uses chlorine dioxide gas as a disinfectant. Gas is generated within the system, but the chlorine dioxide gas will be discharged during sampling and flushing sequences. Chlorine dioxide gas is a respiratory irritant. Avoid breathing fumes and ensure the area is sufficiently ventilated.

The Auto Pure Lab water system delivers Type 1, 18 MΩ quality water on demand. Water is purified in a staged process consisting of high-purity ion exchange resins to remove dissolved minerals and internal recirculation to maintain purity. At discharge, a final 0.2µm filter removes particulates and bacteria to attain CLSI / ASTM Type 1 water specifications. Additional optional technologies are incorporated depending on model. Resistivity monitor provides feedback of the final water quality.

The Auto Pure system is designed to recirculate through multiple technologies to maintain purity. At designated periods, the system will transition from "Polishing" mode to "Stand By" mode and the recirculation pump, solenoid, and UV (if installed) will be automatically turned off via the PLC Controller. The main screen provides resistivity, TOC (if installed) and the life of the consumables. The status bars will transition from green, to yellow and to red. The user will still be able to operate the unit during all of these conditions. The unit comes with a built in Leak Detector and when alarmed, it will automatically shut down the system. Alarms and service events are conveniently logged. The unit comes with volumetric dispensing and provides the user six different batch sizes. The user can enter in a numeric value, in mL units, for repeated dispensing. A button is pressed and it will stop automatically once the limit has been reached.

FLOW DIAGRAM

Model	WA SERIES	WC SERIES	WB SERIES	WG SERIES
Applications	Basic Chemistry, Academic, IC Buffers	HPLC, GC/MS, Trace Organics	Life Science, Cell Culture, Microbiology	DNA Sequencing, PCR, Electrophoresis
Conditioning Cartridge	●	●	●	●
Polishing Cartridge	●	●	●	●
UV Oxidation		●		●
Ultrafiltration			●	●
0.2 micron	●	●	●	●

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Countertop   **Remote Configuration**

MODEL OPTIONS

ARI-PHADG - Dispensing Gun with 0.2 micron Final Filter – Factory Installed option. Recirculating gun mounted on the side of the unit with approximately 5 feet of span. User manually dispenses water. Option not available with remote configuration

ARI-PHADF - Direct Feed – Factory installed option. Secondary Port on the side of the system. Used to feed ancillary equipment such as analyzers and scientific equipment. Internal pressure switch automatically keeps the system operating during a water draw condition. Note, there is no final filter on this port. A downstream final filter may be considered.

ARI-PHAWB - Wall Mounting Bracket – Factory Installed option. Wall mounting bracket supplied with additional support base plate to the main system.

VOLTAGE OPTIONS

110 VAC / 60 Hz
220 VAC / 50 Hz

It is recommended to review the pre-site requirements before proceeding with the installation. Read through the entire manual prior to the start of the installation. Read through the entire manual prior to the start of the installation. Review all paperwork of items that have been ordered and compare to the items that have shipped. If any parts are missing, notify the factory or your sales contact.

CONNECTIONS
- Inlet - 3/8" Quick Disconnect Inlet
- Outlet – ¼ FNPT
- Direct Feed Port – 3/8" CPC Female Bulkhead with CPC Male x 3/8" OD Tube Compression

POWER REQUIREMENTS
- 110 VAC 60 Hz (1.0 amp), 220 VAC / 50 Hz (0.5 amp)
- Dedicated GFCI protected outlet six feet within the system

FEED WATER PRESSURE
20 – 90 PSIG regulated. If gravity feed water is used, an external delivery pump with auto shut off will be required (Part number: ARI-1200109)

INFLUENT WATER SPECIFICATIONS

PARAMETER	REQUIREMENT
Source/Type	Reverse osmosis (RO) or Service deionization (SDI) preferred. 0.2µm particulate prefiltering is recommended for SDI and tap water feeds
Conductivity	RO: < 20µS/cm SDI: > 1 MΩ (Resistivity)
TOC (Using appropriate conditioning as necessary)	RO: < 50 ppb SDI: < 200 ppb
Temperature	20° F to 100°F (5° C to 38°C)
Pressure	20 PSIG minimum / 90 PSIG maximum (1.38 to 6.21 bar)
Fouling Index	Silt Density Index: < 3
Dissolved Carbon Dioxide	< 30 ppm
Free Chlorine	< .05 ppm

Special care should be used for shipping and delivery of these systems. Similar care should be considered when removing the system from the box. Items should be inspected and itemized upon removal to ensure they have not been damaged in transit. Immediately report any noticeable damage to shipping carrier. DO NOT remove the system from the box by grabbing the top control module. Only move the system by holding to the bottom base. Unnecessary stress at the top control can cause misalignment issues.

MAIN CHECKLIST

System (Conditioning Cartridge, Polishing Cartridge, and final filter sold separately)

☐ Countertop – WA / WC / WB / WG Auto Pure Water Purification System

> **Or**

☐ Remote Configuration – WA / WC / WB / WG Auto Pure Water Purification System with side remote connections.

☐ Remote Configuration – Control Unit with Arm, tubing/electrical bundle, Mounting Hardware and Adjustment tool

Options

☐ Wall Mounting Bracket Plate (ARI-PHAWB). Includes locking hardware only.

☐ Installed Dispensing Gun (ARI-PHADG). Dispensing Gun Tubing connected to side system with bracket. 0.2-micron filter (ARI-PF006402) included with ARI-PHADG

☐ Direct Feed Port (ARI-PHADF). Side port with CPC 3/8" Female panel mount and loose CPC 3/8" Male x 3/8" Compression fitting

☐ UV Module (for WC and WG Series). UV factory installed behind side left panel. UV Bulb shipped inside of the unit.

☐ UF Module (for WB and WG Series). UF factory installed behind side left panel.

Ancillary Components

☐ Power cord

☐ Instructions

☐ Certificate of Conformance

SYSTEM CHECKLIST & UNPACKING GUIDE

☐ Drain Fitting – ¼ MNPT x HB

☐ 6 feet of 3/8" OD Tube for inlet

☐ 6 feet of 3/8" Hose for Drain Connection

☐ Final Filter (if ordered)

Recommended Items needed for Installation

☐ (2) 3/8" Quick Connection Isolation Valve for upstream isolation and depressurization (not included)

☐ 0-100 psi pressure gauge (300 grade stainless steel) for diagnostics (not included)

☐ Tube Cutter

☐ #2 Phillips Head Screwdriver

☐ Teflon Tape

☐ Basic Hand tools (adjustable wrench, pliers, socket wrench, etc.)

☐ Tie-wraps

Optional Items

☐ Drill for Wall Mount

☐ Level for Wall Mount

☐ 1-1/2 or 2" Hold Saw (Remote Config – If countertop hole is needed)

☐ Measuring Tape

☐ Small electronics size flat screwdriver (Electronics diagnostics)

☐ 6 feet of 3/8" Hose for commissioning

SYSTEM WALL MOUNT INSTRUCTION

Wall mount must be capable of supporting a minimum weight of 50 lbs. (22.7 kg). The wall mount bracket has holes on 16" centers to be secured to studs. If studs are not available, a plywood sheet mounted to the wall is recommended. Make sure holes are level.

- Mount bracket with small slots in tabs pointing up.

Tabs pointing up
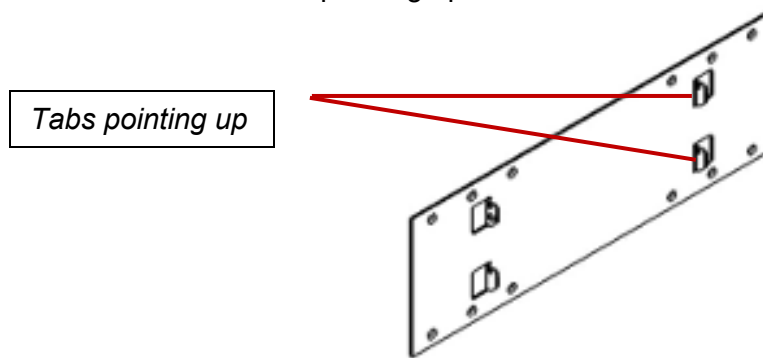
- Align slots in system back plate with tabs on mounting bracket. Insert tabs into slots and slowly lower system. Ensure all tabs are fully engaged and base of system is parallel to floor.

- To lock unit to the bracket, insert rubber bushing with screw and washer (provided) into frame as shown. Tighten screw to lock wall bracket to frame

Wall mount bracket

Insert bushing assembly here to lock system to bracket.
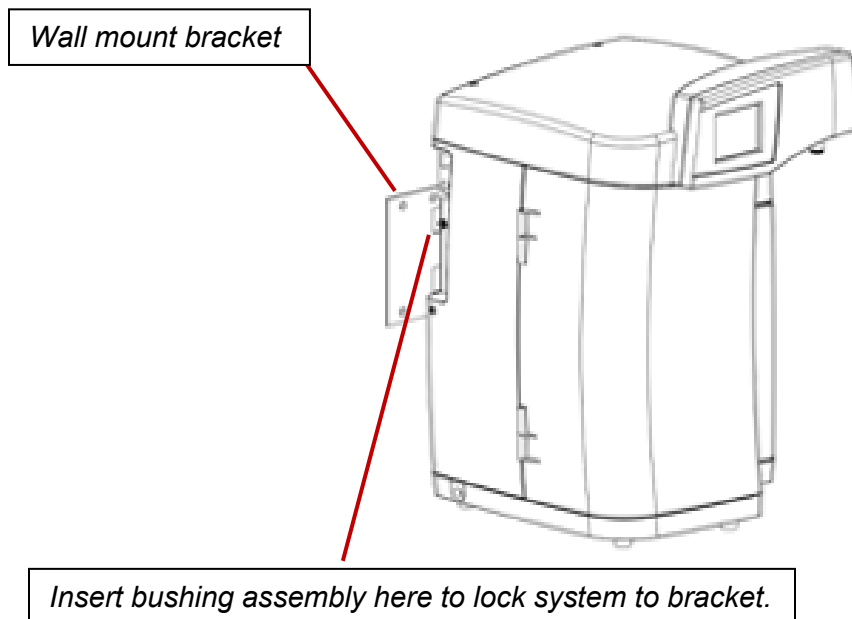
REMOTE CONFIGURATION – CONTROL UNIT WITH ARM
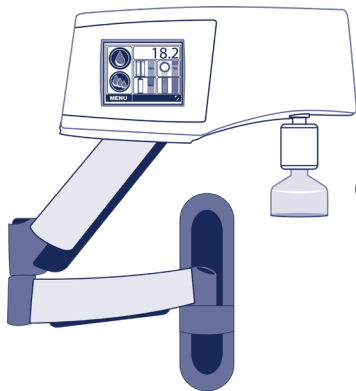
Control Module with Arm

Maximum weight requirement for reticulating control arm is 30 lbs.

For wall mount of control arm make sure that a stud or plywood backing is used for proper mounting.

Remove plastic screw covers from Arm

Using a level and measuring tape, mark three holes as shown. Drill a pilot hole using 3/16" drill bit and drill 2.2" deep

3 HOLES

ARM MOUNT BRACKET HOLE TEMPLATE

Mount the reticulating arm with the hardware provided. Re-attach plastic covers.

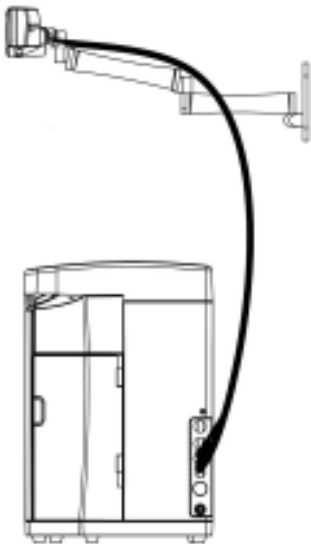Tension of the arm can be adjusted using the allen key provided. These are located at the three pivot joints.

The tubing and electrical bundle is approximately 1" in diameter. If a penetration through a sink is needed for an "under the sink" configuration, a minimum of 1-1/2" hole is required for the fluidics/electrical bundle. Use an appropriate hole saw for the countertop material of construction. Approximately 8 feet of tubing and electrical is provided. Installer can trim down the tubing to eliminate excess but make sure there is enough slack to allow for full range of motion of the reticulating arm and enough slack to remove the system for routine maintenance and repairs. Electrical cannot be modified. Make the termination points at the side, base system.

SIDE VIEW OF REMOTE ARM WITH BASE

REMOTE CONFIGURATION – CONTROL UNIT WITH ARM

Remote dispense electrical connection: Rotate connector to align tabs on umbilical plug with slots on Phoenix socket and then insert plug. Repeat with the outer locking sleeve. When slots and tabs are aligned, push and turn to lock connector in place.

ELECTRICAL CONNECTION

Power switch is located on left side of system. Ensure power switch is in OFF position. Insert power cord into electrical connection module. Insert other end of cord into GFCI power source.

⚠ **WARNING!** Must be a grounded electrical connection.

Left side panel

ULTRAVIOLET LIGHT (WC & WG SERIES)

The UV system is designed to reduce bacteria and oxidize Total Organic Carbon (TOC). The bulb produces a dual wavelength of 185 / 254 nm and will irradiate the water. The UV bulb is protected with a quartz sleeve within the stainless steel chamber. Each system that has this option will have the bulb shipped factory installed with the unit. It is important to verify and inspect the UV bulb prior to commissioning (see UV Bulb Replacement Section)

⚠ **CAUTION!** Wear gloves when handling the UV bulb to avoid contamination and reduced service life.

⚠ **CAUTION!** Never look directly at the UV bulb while in operation.

An LED, located by the dual pack mechanism, is pro-vided to give visual indication when the UV Bulb is on. The UV will turn on during POLISHING mode and will be off during STANDBY mode.

For access to UV system, remove side left panel. UV module is conveniently on an angle for bulb replacement. The UV bulb has four male connectors, and the UV socket has a female connection. A boot has a frictional fit to protect from water.

UV BULB BOOT

ULTRAFILTRATION (WB & WG SERIES)

The Ultrafiltration (UF) module is designed to remove bacteria, endotoxin, and RNase/DNase enzymes. The filter is part of the recirculation loop and is installed in the system prior to shipment. The UF is located behind left side panel mounted in the vertical position.

OPTIONS

Direct Feed

For systems plumbed with a direct feed option, an additional outlet port is provided on the side of the system above the feed water inlet. To connect the system to the remote demand, a male/female valved fitting has been supplied. When the two halves are detached, water will not flow from the direct feed outlet port.

Direct Feed Side Port   *Male CPC Quick Fitting*

The female side has a short 3/8" bulkhead connection with an internal check valve.

The male side (with O Ring) is shipped separately and uninstalled. It has a 3/8" OD Compression.

NOTE: During the initial rinse and air bleed procedure of the cartridges, the direct feed connection must be bled. Place the outlet end of the tubing in a drain or container. Insert and connect the male/female fittings as shown. The female fitting has a metal locking collar to prevent separation. Pull on the connection to verify it is engaged and does not leak. Observe the water stream. When air bubbles no longer appear disconnect the fittings.

ULTRAFILTRATION (WB & WG SERIES)

Recirculating Dispensing Gun

The dispensing gun option is factory installed using concentric, coiled tubing to send flow to the gun and back through the inner tube to keep the water recirculating. The gun is actuated with a lever and water is dispensed through a supplied 0.2-micron capsule filter. The gun has a mounting bracket on the right side of the system. With this option, the gun is treated like a direct feed and a pressure switch will turn the system on during standby and will disable certain ser-vice functions. Approximately 4 feet of coiled tubing is included. Note, recirculating gun is not available with Phoenix Remote configuration.
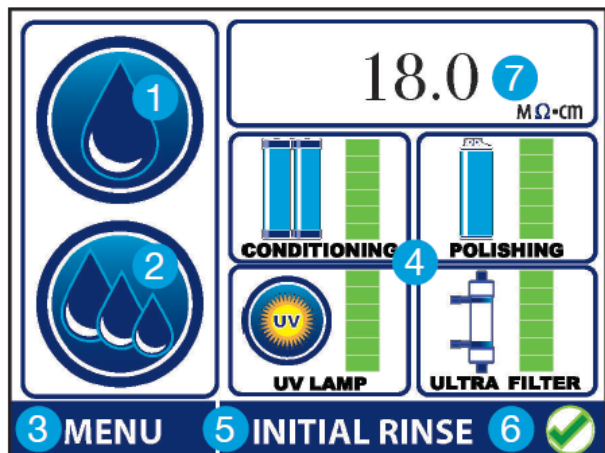
1. **DISPENSE**
   Press to toggle dispensing of water

2. **BATCH**
   Press to display the BATCH SELECT menu

3. **MENU**
   Press to display main menu

4. **CONSUMABLE REPLACEMENT & HEALTH**
   Displays current status of consumables:
   • Green – Full life
   • Yellow – Partial life
    • Red – Needs replacement

   Press and hold any component to display.
   See MAINTENANCE Section for more details

5. **RECIRCULATION MODE**
   - Initial Rinse
   - Polish
   - Standby
   - Direct Feed

6. **ALARM STATUS**
   Green Check: No Alarms
   RED "X": Alarm present

7. **RESISTIVITY**
   Displays final resistivity. Press to momentarily display conditioning cartridge resistivity. Press and hold to display Alarm set points.

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1.   CONDITIONING PACK LEVER
2.   DUAL CONDITIONING CART
3.   DRAIN CONNECTION
4.   CONTROL PANEL
5.   DISPENSE PORT WITH FILTER POLISHING CART LEVER
6.   POLISHING CART

1. POLISHING CARTRIDGE
2. DUAL CONDITIONING CARTRIDGE
3. SUB-MICRON FINAL FILTER

Feedwater - It is recommended to use reverse osmosis, deionized, or distilled water sources. Make sure all pretreatment piping and systems have been properly flushed and free of contamination. A mini-mum of 30 psi feed is required and at least 30 liters of a water source. The Phoenix system cannot use a gravity fed pretreatment therefore, a delivery pump may be required.

Dual Conditioning Cartridge Installation
1. Remove plastic plugs from the top of the cartridge pack
2. Lift the lever on the left side of the mechanism.
3. Insert conditioning cartridge. Align base of cartridge with the contour in the base of the system. Label should be facing out.
4. Slowly lower the lever making sure the plungers align properly as they seat into the cartridge.

⚠ **CAUTION!**
DO NOT APPLY EXCESSIVE FORCE when lowering the lever. If plungers cannot seat, realign cartridge, and lower the lever again. Ensure that the lever is in its fully down and locked position.

Lever down, cartridge installed

Polishing Cartridge Installation

1. Remove plastic plugs from the top of the cartridge pack
2. Open the right white door and lift the lever on the right side of the mechanism.
3. Insert the cartridge with connections facing into the system. Label should be facing out. Flanges on the side of the cartridge will rest on the alignment guide.

Alignment guide

4. Push cartridge towards system until it stops.
5. Slowly lower the lever to secure the cartridge. The cartridge will be drawn into the final position.
6. Make sure the lever is in its fully down and locked position.

Initializing the System for the First Time

Note: This is for the first-time set-up only. In the on-screen directions you will be skipping steps that would normally be required during consumable replacement.

Note: Some steps are applicable only to individual models. If your specific model does not have a UV bulb and/or Ultrafilter, these components will be greyed out on the Home Screen Display.

- Ensure feed water supply is on and connected to system.
- Turn on power switch. Splash screen will display.
- For the first time, select "Installation Start Up Procedure". By holding down "NEXT" in the instructions, this selection will automatically reset the date stamp for all of the consumables. Otherwise, "Normal Start" will keep the existing date codes that were previously set.

NORMAL START

INSTALLATION STARTUP PROCEDURE

INITIALIZE SYSTEM
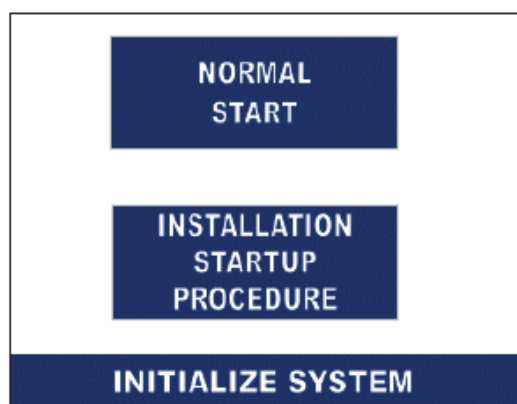
Start Up of WB and WG Series using Ultrafilters:

1- If BC or GN model, remove left side cover to access the ultrafilter, and temporarily lift Leak Detector away from velcro base.

2- Place container under dispense/POU filter.

3- Press "START" to begin air purge.

START

INSTALLATION STARTUP
SCREEN 1 OF 3
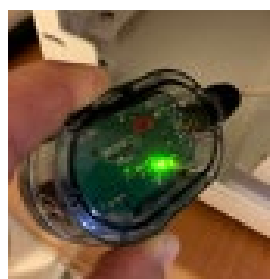
Leak Detection (left panel)

4- If BC or GN model carefully vent UF, starting with bottom, then top ports, allow filter to vent until a steady stream of water flows from vent ports.

5- If POU filter installed, open vent to purge air.

6- Once a steady stream of water is flowing, press "DONE" to proceed to the next step.

DONE

INSTALLATION STARTUP
SCREEN 2 OF 3

WARNING!
Failure to vent air from UF may affect performance, increase pump noise, and cause pack leaks.

8- If BC or GN model, cleanup any residual water, return Leak Detector to original velcro base and reinstall left side cover.

9- After Initial Startup Procedure is complete, dispense from the main screen for 5 to 10 minutes, or when the Resistivity Reading reaches 18.0 MOhm-cm.

10- Press START to go to normal operation.

START

INSTALLATION STARTUP
SCREEN 3 OF 3

Ultrafilter

Vent Ports

Final Filter

To Activate the UV Bulb for WC and WG Models:

• **The UV Bulb will be factory installed.**
The bulb will need to be activated on this initial start-up, which will set the installation date. From the Home Screen, press and hold the UV Bulb icon. Press NEXT to continue.

- Follow instructions displayed. It will not be necessary to replace bulb.

- Complete the procedure by pressing RESTART to return to the Home Screen.

To Activate the Filter Packs for All Models:

FOR WG AND WC SERIES USING THE ULTRAFILTER, AIR MUST BE BLED AS CONDITIONING AND POLISHING CARTRIDGES ARE INSTALLED.

• From the Home Screen, press and hold the CONDITIONING icon. Press NEXT to continue.

- Follow instructions displayed. As this is the first time initialization process, a new cartridge should have been installed. It will not be necessary to replace the cartridge as specified in the instructions.

- Complete the procedure by pressing Restart to return to the Home Screen.

• From the Home Screen, press and hold the POLISHING icon. Press NEXT to continue.

- Follow instructions displayed. As this is the first time initialization process, a new filter should have been installed. It will not be necessary to replace the filter as specified in the instructions.

- Complete the procedure by pressing Restart to return to the Home Screen.

• Final Filter Instructions

- Wrap 3 to 5 turns of Teflon tape on the filter threads and install into the outlet.

- Place container under final filter.

- Press the dispense button.

- Purge air by slowly turning the vent port CCW until a steady stream of water is seen.

- Press the dispense button and retighten vent port once all air is purged.

Normal Operations

Resistivity display will flash during the 2-hour initial rinse. After completion, the system enters Polishing mode for 10 minutes in which the inlet solenoid is open, and the pump is on. The UV bulb is also on if equipped. UV LED light by the dual conditioning cartridge will provide feedback when the UV bulb is on. Polishing mode recirculates water internally to maintain water purity. The system continuously monitors water quality, system performance and consumable health. System parameters for recirculation can be adjusted. See "Recirculation Adjustment".
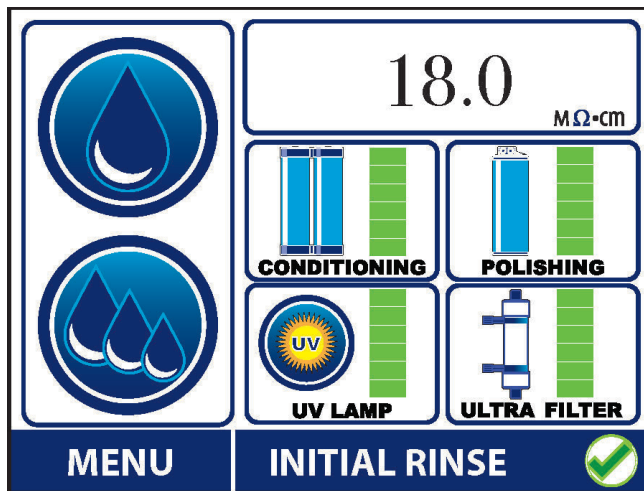
*Flashing Final Resistivity during 2-hour "Initial Rinse"*
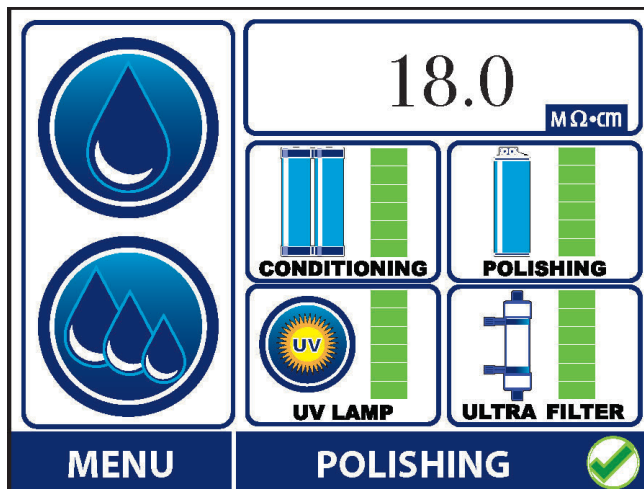
*Final Resistivity during factory recirculation setting*

NOTE: Initial rinse can be bypassed to enter Polishing mode by holding the Initial Rinse button at the bottom of the display for 3 seconds. This is useful if the system is restarted with previously rinsed consumable packs.

Final water quality after the Polishing filter (resistivity) is shown on the Home Screen. The value is shown against a white background. Resistivity at the output of the conditioning pack can be displayed by pressing the resistivity value. The display will change to a purple colored background indicating the value of the conditioning pack. The display will return to final output water quality after 5 seconds.
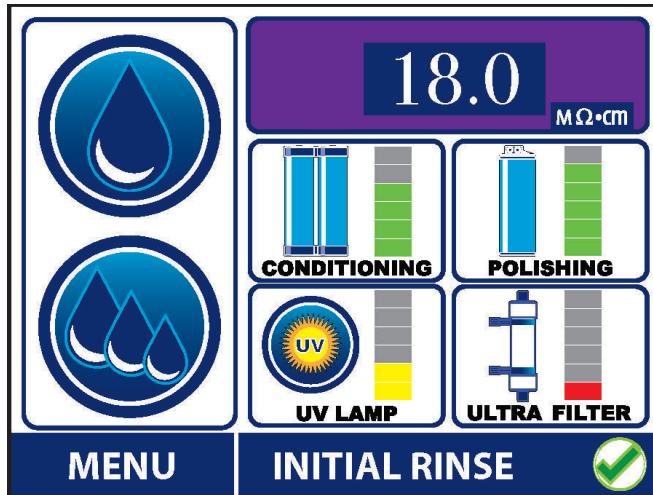
Following Polishing, the system will automatically enter Standby mode and will display WAKE. This is a 14-minute dwell to conserve system power and consumables. If equipped with a UV bulb, it is also turned off. Standby mode can be bypassed by pressing the WAKE button to refresh water before dispensing. If not bypassed, the system will automatically enter Polishing mode at the end of the dwell and will continue to alternate between Polishing and Standby.
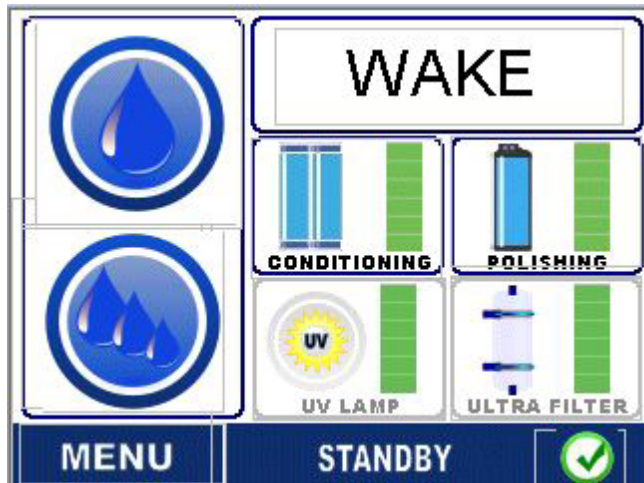
Dispensing water will bring the system into Polishing mode if it is in Standby.

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Direct feed operation (If equipped):

The system is equipped with a pressure switch that senses downstream water demand. When this occurs, the system enters direct feed mode and Direct Feed will display. The inlet solenoid and pump will come on and remain running. The system will monitor the direct feed pressure and will enter Polishing mode when demand stops for more than one minute.

> ⚠ **CAUTION!** The direct feed outlet connection must be bled during initial rinse after bleeding the Dual Conditioning Cartridge and Polishing Cartridge. See the Direct Feed Connection Section.

Water can be dispensed from the main outlet port during direct feed operation. However, access to service the consumables will be disabled during a direct feed condition. This is a safety lockout to prevent disrupted direct feed supply.

Dispensing Operations

Manual Dispense

This system can dispense water from the main home screen or through secondary dispensing ports.
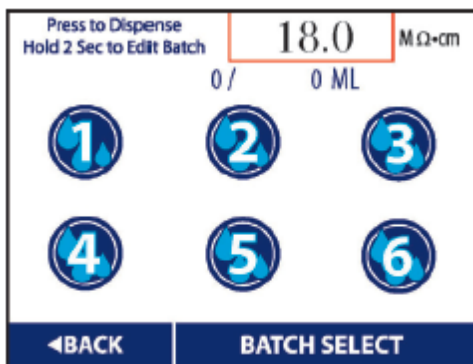

Manual Dispense Button

Manual dispense is done by pressing the single droplet button once to initiate the start. To stop the dispense, the button must be pressed again. Note, there is a safety "time out" function after 20 minutes of manual dispensing.

Batch Dispense

Batch Dispense Button

Batch Home Screen
-- Six Volumetric Settings

The system comes with six batch buttons that can be programmed by the user. Batches 1 and 2 are factory set to 500 and 1000 ml, however, they can be changed. By pressing the three droplet dispense button, it will automatically take you to the "Batch Home Screen". The user can program each button to a volumetric batch and assign a discrete label.

The batch dispense screen will have six dispense buttons. If programed, pressing the batch number will initiate the volumetric fill and will stop automatically when the limit has been reached. There is a margin of err of 3% +/- and it is important to purge air from the final filter vent before each use of any of the preset batches. Set point and dynamic volume will be displayed during dispensing. To program each of the six batches, simply press and hold about three seconds until the program screen is displayed.
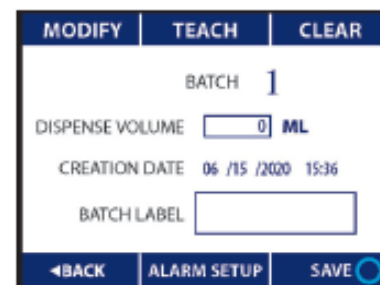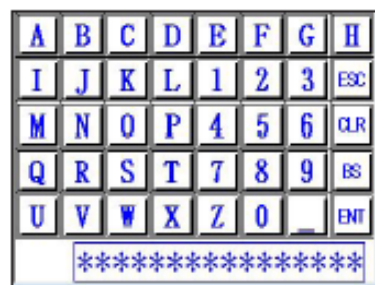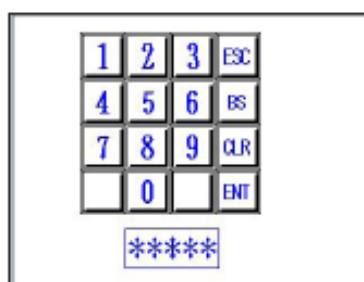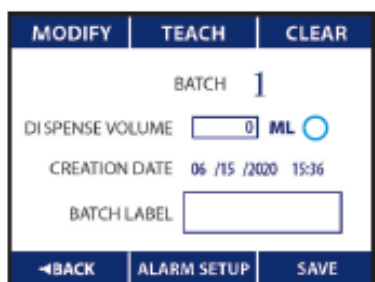
The Batch selection screen will allow the user to enter in the desired amount of volume in milliliters. The volume amount can be entered by pressing the dispense volume field or by pressing "Modify".

Using the numeric keypad, enter in the desired amount of milliliters and press "ENT". This will take you back to the program screen. Before saving, proceed to the batch label instructions.
To enter the "Batch Label", press the empty square field until the alpha numeric pad appears. Enter the desired label and press "ENT."

With both the Dispense Volume and Batch Label information complete, the user must press "SAVE" for the information to be stored.
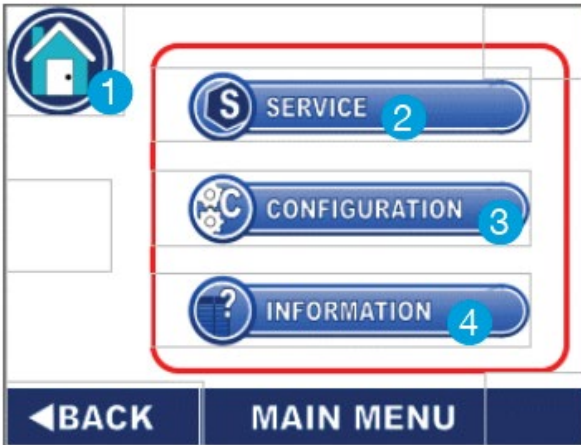
1. HOME
   Press to return to the Home Screen

2. SERVICE
   Displays Consumable Replacement, Sanitization, and Service Information options.

3. CONFIGURATION
   Displays Alarm Setup, Recirculation, and Password option

4. INFORMATION
   Displays System Information, Event Logs, and Replacement Info options.

Service

The service tab provides the user step by step instruction on replacement of the consumables, sanitization, and the ability for advanced service tasks for troubleshooting components and resistivity calibration.

The service operation is split into two different screens. Screen #1 provides details on component replacement and sanitization. Screen #2 provides information on the equipment and service contact along with the advance service tab. The advanced service tab is password protected with the code provided by the factory.

For Consumable Replacement and Sanitization, see maintenance sections.
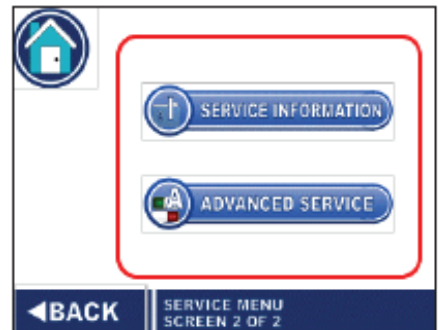
Service Information

The information screen provides factory contact information and the ability for the local service contact to insert their company name and phone number.
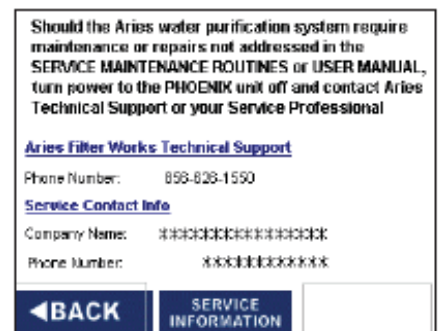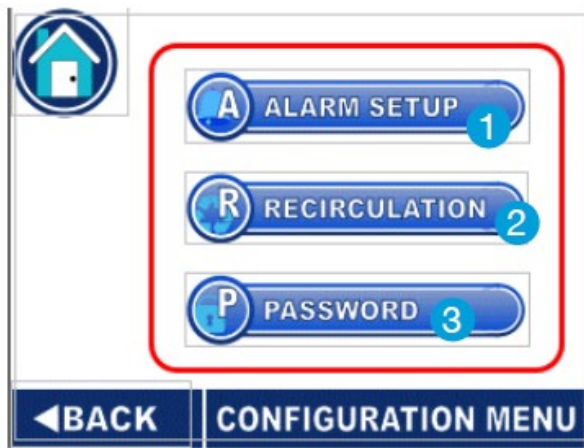
1. ALARM SETUP
Set resistivity alarm options for conditioning and polishing cartridges

2. PASSWORD
Factory preset password for service personnel only.

3. RECIRCULATION
Set Initial rinse time, polish time, standby time and sample delay

Resistivity Alarm Setup

The system measures resistivity at two points: after the conditioning cartridge (R1) and after the polishing cartridge for final resistivity (R2). The set points help to establish the status bar transition from green, to yellow and red. The factory settings are 2.0 Megohm for R1 and 10 Megohm for R2. The user can change these alarm set points. Maximum set point allowed for conditioning is 10 MΩ and 14 MΩ for polishing.
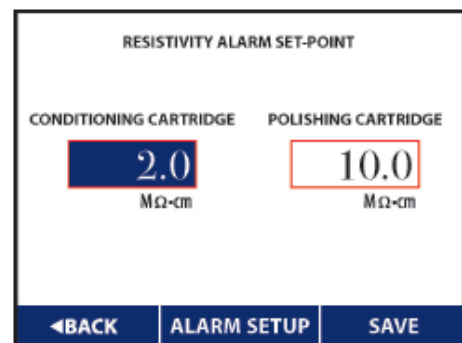
To adjust the set points:

• Home Screen – Press Menu
• Main Menu – Press Configuration
• Configuration Menu – Press Alarm Setup
• Press appropriate field box; keypad will open
• Adjust values as required
• Press ENT to exit keypad
• Press and hold SAVE until beep is heard
• Press Home icon to return to Home Screen

Recirculation Adjustment

The system is designed to turn on and off at different intervals depending on the condition or if any service has been performed. For initial startup or when a service activity has been done, the unit will go into an "Initial Rinse" phase where continual recirculation occurs. The default Initial Rinse is 120 minutes. Note, the system can be used during this period. To bypass the Initial Rinse and to place the unit into "Polishing" mode, hold the status display for 3 seconds.

During normal operation, the system will toggle between Polishing and Standby. The Polishing mode will turn on the pump, resistivity measurement, and UV if this option is installed. The Standby mode will turn off the pump and UV to conserve energy and minimize component wear. The Resistivity field will display "WAKE" during standby. Simply pressing the "Wake" button will place the unit back into Polishing.

Default settings are 10 minutes for polishing and 14 minutes for standby.

To adjust settings:

• Home Screen – Press Menu
• Main Menu – Press Configuration
• Press the appropriate field box; keypad will open
• Adjust value as required
• Press ENT to exit keypad
• Press and hold SAVE until beep is heard
• Press BACK to return to Configuration Menu

SYSTEM INFORMATION & EVENT LOGS
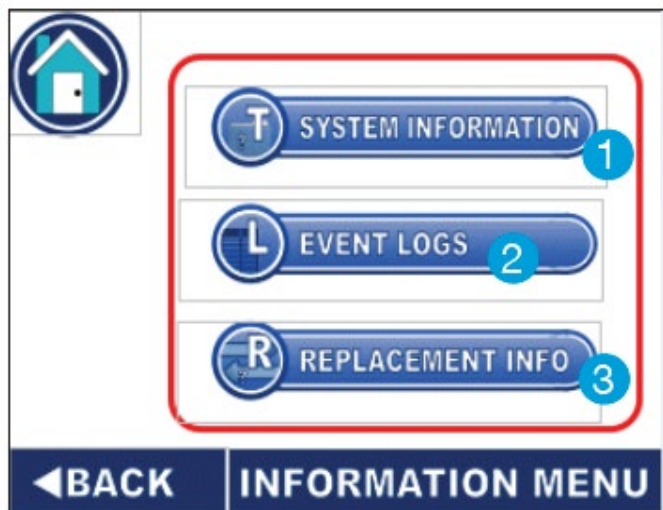
1. SYSTEM INFORMATION
Displays system and service contact

2. EVENT LOGS
Displays maintenance log and alarm log

3. REPLACEMENT INFO
Displays projected service dates

Maintenance Log Screen

The system provides the user relevant system information to include model number, serial number and loaded software version. Event logs show the Maintenance Log and Alarm Log with a description and date stamp. User can toggle up and down to view the full list. A log item can be cleared. This is password protected using "4321" and pressing CLEAR.

If the system is in an Alarm Condition, a red "X" will be shown on the home page status bar. After an alarm has been cleared, pressing "RESET" will change the status to a green check.

Alarm Log Screen

Routine preventive maintenance is recommended for optimum performance and to maintain system integrity. Below are the recommended replacement intervals for the consumables.

PART NUMBER	DESCRIPTION	FREQUENCY
ARI-PX135001 or ARI-PX135002	Conditioning cartridge	Semi-annually
ARI-PX115103 or ARI-PX115104	Polishing Cartridge	Semi-annually
ARI-PF006402 or ARI-PF007101	0.2. micron capsule filter	Semi-annually
ARI-PF007105	Ultrafilter	Annually
ARI-HPA016	UV bulb	Annually
ARI-HPA017	Sanitization kit	Annually
ARI-PX110001	Sanitization cartridge (for future sanitization)	Annually

All Models

Cartridge life is determined by a combination of elapsed time since installation and/or water resistivity. The point at which the conditioning pack and polishing filter transition from green health status to yellow can be adjusted.

See the table below for default health meter resistivity settings:

CARTRIDGE	RESISTIVITY	HEALTH METER COLOR
Conditioning	> 12 MegΩ	Green
	Between 2 MegΩ and 12 MegΩ	Yellow *
	< 2 MegΩ (default alarm set point)	Red
Polishing	> 16 MegΩ	Green
	Between 10 MegΩ and 16 MegΩ	Yellow *
	< 10 MegΩ (default alarm set point)	Red

*If set point is adjusted, (see Resistivity Alarm Setup), yellow health meter color will appear at the new set point.

The default elapse time for both the conditioning pack and polishing cartridge is six months. This may be changed to 12-months in the advanced service menu. The health status meter will automatically change from Green, to Yellow, to Red as time elapses even if the resistivity values are above their alarm limit.

WC and WG SERIES:

UV bulb life is estimated at 1 year of normal use from date of installation. The UV bulb health meter on the HOME SCREEN displays the proportional remaining life in this 1 year period as shown below:

	LIFE REMAINING	HEALTH METER COLOR
UV Bulb	> 2 months	Green
	Between 1 month and 2 months	Yellow *
	< 1 month	Red

Ultrafilter life is estimated at 1 year of normal use from date of installation. The Ultrafilter health meter on the HOME SCREEN displays the proportional remaining life over this time period as shown below:

	LIFE REMAINING	HEALTH METER COLOR
.05µm Ultrafilter	> 2 months	Green
	Between 1 month and 2 months	Yellow *
	< 1 month	Red

A replacement alarm will be displayed at 2 months remaining. It is recommended the Ultrafilter be replaced at that time to maintain acceptable bioburden.

The system has easy instructions to guide the user through each step of the consumable replacement process. There are two ways to get access to the instructions for replacing the consumables. The conventional menu method would be:

MENU => **SERVICE**

=> **CONSUMABLE REPLACEMENT**

=> "select **CONDITIONING CARTRIDE**

       POLISHING CARTRIDGE

       REPLACE UV Bulb

       REPLACE ULTRAFILTER

There is a short-cut to the instructions for replacing the primary consumables used on the SYSTEM. On the main home screen, each tile will show the icon of the consumable and the health status. Simply press the tile for approximately 5 seconds and it will take you to the information screen of the consumable to include date installed, date to replace, part number and the NEXT button to initiate the replacement sequence.
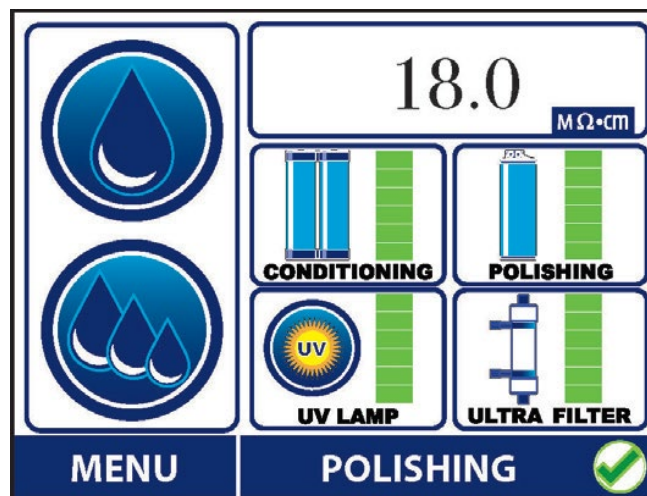
PRESS AND HOLD CONSUMABLE TILE FOR 5 SECONDS FOR SHORT CUT

The screens below provide the details on the replacement instructions for each of the consumable.

Conditioning Cartridge	Polishing Cartridge	UV Bulb	Ultrafilter

FILTER DETECTION AND LEAK DETECTION ERRORS

Filter Pack Error

To ensure that cartridges are not removed during operation, a safety switch has been installed for both the conditioning cartridge and polishing cartridge. This switch is located behind the conditioning and polishing cartridge. When a cartridge is not installed correctly or if the cartridge is removed without using the software instructions, an error will be displayed, and the system will shut down.
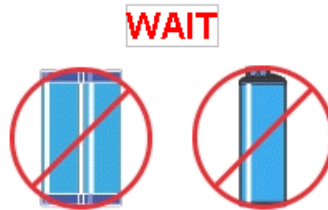
The Filter Pack Error Indicates one of the cartridges is not correctly engaged in the system. Once the cartridge is in place, the user can proceed to reset the system.

Leak Detection

The system comes equipped with a leak detection sensor in the back-left side of the system. During a leak alarm, the system will shut down the inlet solenoid valve to remove all pressure and flow. An audio beep and a Leak Detection Error will notify the user of the problem.

The "RESOLVE" tab is pressed when the leak has been fixed. Override temporarily disables the leak detection sensor for four hours.

CAUTION! After pressing OVERRIDE, the leak detector will NOT shut down the unit even if water is detected.

Sanitization is performed by circulating a chlorine dioxide (ClO_2) solution throughout the system in three sequential cycles of 10-minute dwell (standby) and 5-minute recirculation.

A sanitization kit is installed that contains the ClO_2 in deactivated, packet form sealed inside a polishing filter housing. It is not fully activated until exposed to water for approximately 20 minutes during the sanitization cycle. Under these conditions the sanitization kit is safe for handling and installation without specialized PPE.

Note – All consumables are recommended to be replaced after the sanitization. Re-installing used consumables can re-contaminate the system.

⚠ **WARNING!** Do not remove the orange sealing plugs from the sanitization polishing filter housing until just before installation. If removed, moisture from the environment will begin activation of the ClO_2.

SANITIZATION KIT

The sanitization kit includes the following:

• Sanitization Cartridge
• Jumper Tube Assembly for Dual Pack Mechanism
• Low Range Chlorine Dioxide Test Strips
• High Range Chlorine Dioxide Test Strips
• Protective Gloves• Replacement O-rings
• Barbed fitting and hose (not shown)

The on screen guide will provide instructions on each step.
NOTE: Save the orange plugs after removal from the polishing filter housing. They will be used after sanitization to dispose of the filter

The kit also contains a bypass tube that replaces the conditioning pack. This reduces the system volume and speeds the overall sanitization process.

Sanitization can be accessed through the SERVICE screen on the Main Menu Screen. Press the Sanitization tab to start this process.

Screen #1 provides the user the relevant information to include the last sanitization date and the consumable part numbers for replacement (if UV and UF options are installed, they should be replaced after the sanitization). Press NEXT to proceed to the next screen.

SANITIZATION PROCEDURE
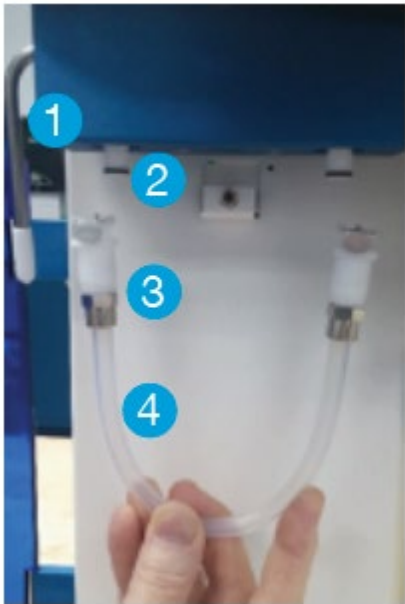
1. LEVER
2. CONNECTOR
3. LOCKING TAB
4. BYPASS TUBE

Installation of the Bypass Tube

Lower the conditioning pack lever to expose the connectors and position the bypass tube.

The Locking tabs on the bypass tube fittings should be facing outward towards you.

Insert one side of the bypass tube into the connector until the locking tab snaps into position. It will be necessary to exert downward pressure on the inner "U" frame to make this connection.

Insert the other side of the bypass tube until the locking tab snaps into position. It will be necessary to exert downward pressure on the inner "U" frame to make this connection.

Before removing, put on provided gloves. To remove the bypass tube after sanitization, depress and hold each locking tab and pull downward on the tube to disconnect.

1 - Press START to initiate the Sanitization procedure

START

◄BACK | SANITIZATION SCREEN 1 OF 11

2 - Place container under the dispense nozzle
3 - Press DISPENSE to depressurize the system
4 - Press DISPENSE again when depressurized

Press NEXT to continue

SANITIZATION SCREEN 2 OF 11 | NEXT►

5 - Remove the Conditioning Cartridge
6 - Remove the Polishing Cartridge
7 - Remove the Point of Use Filter
8 - Install the Sanitization Kit

Press NEXT to continue

SANITIZATION SCREEN 3 OF 11 | NEXT►

Proceed to remove the orange plugs of the sanitization cartridge and install in the polishing cartridge location.

Install the sanitization cartridge into the polishing cartridge position. Lock the lever into position

Proceed to screen 4 and purge air out of system and allow water to enter the sanitization cartridge to begin the chlorine dioxide reaction.

⚠ WARNING! Chlorine dioxide gas is a respiratory irritant. Avoid breathing fumes. Ensure area is sufficiently ventilated.

Install the supplied 3/8" barbed fitting into the dispense solenoid valve (where the POU filter was removed). 6 feet of 3/8" ID clear vinyl tubing is provided in the kit. Connect the tubing to the barbed fitting. Place the other end in a drain. NOTE: Insert the tubing directly into the drain, if possible, to minimize odors.

In screen 5, pressing the "Start Cycle", which will initiate the 45 minute sanitization process. The cycle will toggle between soaking (pump off) and recirculation (pump on). The cycle breakdown is as follows:

• 10 min soak
• 5 min recirc
• 10 min soak
• 5 min recirc
• 10 min soak
• 5 min recirc
• End

When 20 - 25 minutes remaining is displayed dispense a small amount of water from the drain tubing into a small, clean container. Do not allow tubing to touch the collected water. Place the tubing to the drain.

Chlorine Dioxide test strips are provided in the kit. Use the white vial high range test strips to confirm a minimum of 30 ppm chlorine in the sample by dipping a strip into the sample container. Do not place the test strip directly under the running dispense water stream.

Run water from the sink when disposing of the water sample to minimize odor.

When the cycle ends, follow instructions to dispense 2 – 4 liters of water to drain. Wearing gloves, take an additional water sample from the drain tubing into a small, clean container as above and use the blue vial low range test strips to confirm <10 ppm of chlorine. If a greater amount is present dispense an additional 2 – 4 liters and retest. Continue this process until <10 ppm is obtained.

Follow the screens 6 through 11 to complete the cycle:

The Sanitization Cycle is now complete

12 - Place container under the dispense nozzle
13 - Press DISPENSE to rinse system with 2 - 4 liters of water
14 - Press DISPENSE again when completed

Press NEXT to depressurize system

SANITIZATION
SCREEN 6 OF 11   NEXT▶

15 - Place container under the dispense nozzle
16 - Press DISPENSE to depressurize the system
17 - Press DISPENSE again when depressurized

Press NEXT to continue

SANITIZATION
SCREEN 7 OF 11   NEXT▶

18 - Remove Sanitization Kit
19 - Install a new Conditioning Cartridge
20 - Install a new Polishing Filter

Press NEXT to continue

SANITIZATION
SCREEN 8 OF 11   NEXT▶

21 - Place container under the dispense nozzle
22 - Press DISPENSE to purge air from system
23 - Press DISPENSE again when system is purged

Press NEXT to continue

SANITIZATION
SCREEN 9 OF 11   NEXT▶

24 - Install new Point of Use Filter
25 - Press DISPENSE and dispense 1 to 2 liters to
     purge air from system
26 - Press DISPENSE again when completed

Press NEXT to continue

SANITIZATION
SCREEN 10 OF 11   NEXT▶

The Sanitization procedure is now
complete

27 - Press RESTART to return to normal
     operation

RESTART

SANITIZATION
SCREEN 11 OF 11

NOTE: Dispose of the polishing filter by emptying into a sink while flushing with tap water or by replacing the orange plugs and discarding. In this case no additional precautions are required. If emptying, replace orange plugs before discarding.

After the Sanitization is complete, replace all of the o-rings supplied with the sanitization kit. Please note the conditioning cartridge mechanism as designated upper and lower o-rings.

SYMPTOM	CAUSE	REMEDY
Display is off	No power to the unit or unit in Stand By mode	Check that the unit is plugged into a live outlet. Check to see if GFI outlet is blown.
		Check the unit's fuse – replace it if it is blown.
Unit blows fuses	An electrical short exists in the unit or there is a defective component.	Return the unit to the factory for repairs or have the unit serviced by an authorized dealer.
Leaking Conditioning Pack	Excess Air In System will cause an imbalance in the system. Air issue magnified when internal UF for WG or WB are not bled during pack install	If system has an ultrafilter, remove side left panel. Re-install conditioning pack and bleed off air for UF during instructions (step 4). After RESTART, dispense water immediately before recirculation pump turns on. This will minimize a head pressure surge
	Uneven mechanism actuation. Plungers do not engage the filters evenly	Gently press down with fingers on both sides of mechanism actuation plate (unpainted aluminum)
	Uneven filter height	Check to see filter top/gap is parallel with the mechanism. If uneven, contact factory
	Defective O-ring	Replace the cartridge(s).
Unit will not dispense water	Supply water is not on.	Confirm that the supply water is turned on.
	A cartridge is loaded with particles and is clogged.	Replace the cartridge(s).
	Air trapped in the system.	Refer to symptom "Air is getting trapped in system"
	Defective inlet solenoid valve or dispense solenoid valve.	Have unit serviced by an authorized dealer or return to factory.
Pump Noise	No water supply	Pump will cavitate with low flow or no water feed
	Air bound	Bleed of Air at all major ports and ultrafilters.
	Pump Impeller or bearings damaged	Replace pump
Low flow rate	Water supply is blocked.	Clear restriction or check water supply.
	Air is getting trapped in the system	Refer to symptom "Air is getting trapped in system"
	Sub-micron point of use filter is clogged	It is recommended to replace sub-micron filters at scheduled intervals not to exceed one year.
	Low water pressure	If line pressure is below 30 psi, install booster pump.
Display indicates water purity is below set-point	The supply water is improperly treated	Check to see if inlet conductivity or TDS meet the influent specifications. Add additional pretreatment to obtain higher quality.
	Resin is exhausted.	Install fresh cartridges.
	Biological fouling from incoming water supply. Biofilm will coat the resin and cause a drop in resistivity.	Take a sample of influent and do or perform a bacteria test. If biofilm is present, sanitize lines coming into the system and install a submicron filter. It's recommended to re-sanitize the Phoenix system and replace all cartridges and filters that have been exposed to biofilm.

SYMPTOM	CAUSE	REMEDY
No Resistivity Measurement	Air pocket by probe	Dispense water to remove air and monitor resistivity change
	Loose probe wire	Inspect wire to make sure they are properly installed in terminal connections
	Fouled probe	With the use of a resistivity cell block, remove the probe connection and install the block. If measurement reached 18 Megohm, reinstall probe wires. If no measurement occurs, replace probe.
	Bad resistivity board	With the use of a resistivity cell block, remove the probe connection and install the block. If the board does not read 18 Megohm, the board will need to be replaced.
Resin cartridges exhaust quickly	High Incoming TDS/ Conductivity / TOC	Check to see if inlet conductivity or TDS meet the influent specifications. Add additional pretreatment to improve the quality of water fed to the system.
	The supply water has colloids and is improperly treated.	Make sure pretreatment equipment is properly maintained
UV Light Not Working – LED Off while system is in polish / initializing mode	Premature bulb burnout. Possible cause may be recirculation configuration settings. High cycle times lead to premature bulb failure	Change recirculation settings to 10 minutes on / 14 minutes off
	Bad ballast	Replace ballast
	Plug bulb plug not seated	Confirm bulb connection is tight
Bacteria exceeds operating specifications. Pyrogen levels are excessive after the optional 0.05 micron filter.	UV bulb is not working (WC & WG Series))	See above
	The feed water supply is grossly fouled.	Disinfect System. Replace cartridges according to the product number appearing on each
	The system is fouled with contaminants. Contaminated 0.05 micron ultrafilter.	Replace the internal 0.05 micron filter. (BIO)
		Replace the 0.2 micron filter attached to the dispense gun (systems with this option)
		Autoclave or replace the Ultrafilter.
Unit does not rinse-up to desired resistivity	New units or cartridge replacements require more time to rinse-up.	Bleed air at high points in plumbing system and/or filter housing. Use vent valve supplied where applicable.
	New units or cartridge replacements require more time to rinse-up. The system is open to atmosphere. Excessive flow, turbulence, and/or cavitation can cause gases to come out of solution.	Check flow and velocity throughout system to ensure it does not exceed filter requirements or industry standards.

SYMPTOM	CAUSE	REMEDY
Air is getting trapped in the system.	The point of use 0.2 micron filter is bound with air.	Bleed the filter by opening the bleed valve and allowing water to flow until all air is expelled.
	The 0.05 micron filter is bound with air. (WB & WG Series)	Bleed the filter by opening the bleed valve and allowing water to flow until all air is expelled.
Filter Pack Error	Cartridge not aligned	Reinstall cartridge and ensure that proximity switch is engaged
	Switch not working	If the error is still on while the cartridges are engaged, the switch may need to be adjusted. Contact Factory for instructions.

PART NUMBER	MODEL DESCRIPTION
WA301B	Benchtop or wall mount base system, 120V/60Hz
WA311B	Benchtop or wall mount base system, 220V/50Hz
WA301R	Remote Dispense Configuration base system, 120V/60Hz
WA311R	Remote Dispense Configuration base system, 220V/50Hz
WC301UVB	Benchtop - with UV Oxidation Lamp installed, 120V/60Hz
WC311UVB	Benchtop - with UV Oxidation Lamp installed, 220V/50Hz
WC301UVTB	Benchtop - with UV Oxidation Lamp installed, with TOC Monitor, 120V/60Hz
WC311UVTB	Benchtop - with UV Oxidation Lamp installed with TOC Monitor, 220V/50Hz
WC301UVR	Remote Dispense Configuration - with UV Oxidation Lamp, 120V/60Hz
WC311UVR	Remote Dispense Configuration - with UV Oxidation Lamp, 220V/50Hz
WC301UVTR	Remote Dispense Configuration - with UV Oxidation Lamp, with TOC Monitor, 120V/60Hz
WC311UVTR	Remote Dispense Configuration - with UV Oxidation Lamp, with TOC Monitor, 220V/50Hz
WB301UFB	Benchtop - with Ultrafiltration module, 120V/60Hz
WB311UFB	Benchtop - with Ultrafiltration module, 220V/50Hz
WB301UFR	Remote Dispense Configuration - with Ultrafiltration module, 120V/60Hz
WB311UFR	Remote Dispense Configuration - with Ultrafiltration module, 220V/50Hz
WG301UVUFB	Benchtop - with UV and UF installed, 120V/60Hz
WG311UVUFB	Benchtop - with UV and UF installed, 220V/50Hz
WG301UVUFTB	Benchtop - with UV, UF and TOC Monitor installed, 120V/60Hz
WG311UVUFTB	Benchtop - with UV, UF and TOC Monitor installed, 220V/50Hz
WG301UVUFR	Remote Dispense Configuration - with UV and UF installed, 120V/60Hz
WG311UVUFR	Remote Dispense Configuration - with UV and UF installed, 220V/50Hz
WG301UVUFTR	Remote Dispense Configuration - with UV, UF & TOC Monitor installed, 120V/60Hz
WG311UVUFTR	Remote Dispense Configuration - with UV, UF and TOC Monitor installed, 220V/50Hz

SYSTEM AND CONSUMABLES

PART NUMBER	FACTORY INSTALLED OPTIONS
ARI-PHADG	Dispensing Gun Option
ARI-PHADF	Direct Feed Option
ARI-PHAWB	Wall Mount Bracket
ARI-PHATOC	TOC Monitor

PART NUMBER	CONSUMABLES AND CARTRIDGES
ARI-PX135001	Dual Conditioning Cartridge for RO Feed
ARI-PX135002	Dual Conditioning Cartridge for Tap Water / Service Deionization Feed
ARI-PX115103	Polishing Ultrapure Cartridge
ARI-PX115104	Polishing Ultrapure Low Organics Cartridge
ARI-PF006402	0.2 micron capsule final filter x 1/4" MNPT x 1/4" hose barb
ARI-PF007101	0.2 micron capsule final endotoxin filter. 1/4" MNPT
ARI-PF007105	Ultrafilter – 3/8" Quick Disconnecting Fitting
ARI-HPA016	UV Bulb 254/185nm TOC Destruct
ARI-HPA017	Sanitization Kit (includes cartridges, test strips, and gloves)
ARI-PHX110001	Sanitization Cartridge only
ARI-HPA018	O-ring replacement kit (Conditioning Pack and Polishing Plunger)

ITEM #	PART NUMBER	PARTS DESCRIPTION
1	ARI-PHR017	Switch Board
2	ARI-1280018	Resistivity Board
3	ARI-PHR015	PHX Ballast (WG & WC Series)
4	ARI-1500007	Main Fuse, 5 A
5	ARI-PHR006	Pressure Regulator
6	ARI-PHR007	PHX Pump, 24V
7	ARI-1200102	Resistivity Sensor
8	ARI-HPA016	UV Bulb (WG & WC Series)
9	ARI-PF007105	Ultrafilter (WG & WB Series)
10	ARI-1200029	Pressure Switch (Direct Feed & Dispense Gun Options)

ITEM #	PART NUMBER	PARTS DESCRIPTION
11	ARI-PHR016	Flow Meter
12	ARI-PHR005	Inlet Solenoid Valve, 24V
13	ARI-PHR011	Outlet Solenoid Valve, Teflon Diaphragm Seal, 24V
14	ARI-1280051	Back Up Battery
15	ARI-1500002	Touch Screen Display Module (Preprogramed)
16	ARI-1500008	250 mAmp Fuse
17	ARI-1280053	24 V Power Fuse, 1.6A
18	ARI-1500018	24VDC Power Supply, 120W 100-240VAC Input
19	ARI-1280049	PLC (Preprogramed)
20	ARI-1500009	Pump Fuse

CONTROL MODULE
EXPLODED SIDE VIEW

DIN RAIL
TOP VIEW

Counter Top and Wall Mount Options Shown

35.1
18.0
14.5
0.1
14.6
14.4
11.2
3.2
11.2
14.7

Dual Conditioning Cartridge
Polishing Cartridge

Power Inlet

Touch Screen Display
Dispense Port
Capsule Filter (Optional)
Wall Mount Bracket (Optional)
Direct Feed Port (Optional) /
Dispense Gun Port (Optional)
Inlet Port

20.3
6.0
9.0
21.6
13.6
13.5

13.6
Table top to capsule clearance.

13.5

Wall Mount Bracket
5.0
1.0
3.0
5.0
8.0   2.0   2.0

Requirements:
- GFI within 6 feet
- Feed water within 6 feet
- Drain within 6 feet

NOTES:
- **WEIGHT** - 42 LBS. DRY / 47 LBS. OPERATING
- **INLET CONNECTION** - 3/8" O.D. TUBING
- **POWER REQUIREMENTS:**
  - "-1" - 120 VAC / 60 HZ @ 1.0 AMP
  - "-2" - 220VAC / 50 HZ @ 0.5 AMP
- **PRESSURE** - 90 PSIG MAXIMUM / 20 PSIG MINIMUM
- **TEMPERATURE (MAX)** - 100 DEGREES F.
- **FLOW RATE** - 2.5 LPM (< 2.0 LPM WITH ULTRAFILTER AND/OR ENDOTOXIN FILTER INSTALLED)

PRE-INSTALLATION CHECKLIST

General Information

Account Name: _____   Phone: _____

Contact Name: _____   Address: _____

Email: _____   _____

Conducted By: _____   Date: _____

Site Requirements - Use separate sheet to explain any deviations or special conditions

Site Pictures   Customer to provide the following digital photos
Proposed installation location showing entire working area
Proposed feedwater connection point (if not dedicated RO feed)

Electrical
- ☐ 120 V / 60 Hz Grounded, GF Protection Circuit within 6 ft of unit
- ☐ 220 V / 50 Hz Grounded, GF Protection Circuit within 6 ft of unit

General Feed Water and Connections

Type: ☐ Tap   ☐ Service DI   ☐ RO   ☐ Other

Connections: Feed water connection with isolation valve within 6 ft terminating in a 3/8" MNPT fitting

Pressure: Feed water is between 30 - 80 psi and regulated if >80 psi
- ☐ Customer acknowledges that a booster pump should be installed if pressure is <30 psi and unit performance may suffer if not installed

Flow Rate: Feed water line is capable of providing at least 2.0 liters per minute at all times

Quality: Water quality analysis report completed and attached
- ☐ Customer has opted not to perform a water quality analysis and understands the affect poor water conditions may have on unit performance

Drain: Drain available within 6 ft of unit, capable of receiving 2.0 liters per minute, plumbed to be lower than unit drain port over entire run

Wall Mounting   ☐ Not applicable

Construction: ☐ Sheetrock   ☐ Steel   ☐ Cement   ☐ Other

Support: Wall must be capable of supporting an operational weight of at least 60 lbs. If not, customer must install a 2 ft X 2 ft X 3/4" thick plywood board. Board must be centered on the unit and fastened to wall studs or by using appropriate anchors.

Remote Dispense   ☐ Not applicable

Construction: ☐ Sheetrock   ☐ Steel   ☐ Cement   ☐ Other

Arm Bracket: Wall must be capable of supporting an operational weight of at least 30 lbs. and articulated arm bracket must be mounted directly to studs. If not, customer must install a minimum 1 ft X 1 ft X 3/4" thick plywood board centered on the arm mount bracket and fastened to wall studs or by using appropriate anchors.

System Enclosure: System location and work area meets requirements as shown in the attached diagram. Modifications to countertop and surfaces to permit pass-through have been completed.

General Dimensions and Fit

Work area for unit has sufficient space for footprint and height of the unit and provides space to open side doors and/or position remote interface as shown in the attached diagram

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Customer Authorization. By signing, you confirm the above requirements have been met.

Customer Representative: _____

Signature   Date

Title: _____

WARRANTY POLICY

Yamato Scientific America warrants, from the date of shipment from warehouse in Camden, New Jersey, U.S.A., for a period of one (1) year. All products, parts and materials shall be free of defects in material and workmanship under normal use consistent with the product instructions. This product warranty does not apply to products purchased from unauthorized resellers/distributors.

Yamato reserves the right to inspect the product under claim before having an obligation to repair or replace the defective unit covered by this warranty. All costs of shipping to Yamato for inspection shall be borne solely by the purchaser. Products repaired or replaced under the terms of the warranty may be refurbished or new product will be provided at the discretion of Yamato.

Warranty Conditions

This warranty does not apply to equipment or parts which fail because of abuse, accident, alteration, misuse, erosion, improper installation, or improper replacement of a repaired item.

The buyer assumes all risks for results obtained from these products, whether used alone or in combination with other items.   It is expressly understood that we are not responsible and will not be held liable for damage and/or injury caused using our products.

Product Return Policy

If you are not satisfied with your purchase and wish to make a return, contact our customer service to inquire about a Return of Merchandise Authorization Number (RMA). Merchandise returned without an RMA number will not be accepted and will be returned to the sender. Return requests must be made within 15 days of the customer's receipt of the merchandise.

All returns must be unused and in unopened original packaging and include all items and manuals originally shipped.

WARRANTY POLICY CONTINUED

The purchaser is responsible for the shipping cost of return shipment. Insurance on the return shipment is required. Damage or loss of merchandise during shipping is the responsibility of the sender. Returned shipments that arrive damaged will be returned to the sender, and credit will not be rendered.

All returned products, parts and materials are subject to a 25% restocking fee. Shipping and handling cost are non-refundable. All retrofitted, customized, and special order item sales are final and non-returnable.

In Case of Request for Repair

If the failure occurs, stop the operation, turn OFF the power switch, and unplug the power plug. Please contact the sales agency that this unit was purchased, or Yamato Scientific's sales office.

< Check following items before contact >

- ◆ Model Name of Product
- ◆ Serial Number
- ◆ Purchase Date
- ◆ Issue (as detailed as possible)

Responsibility

Please follow instructions in this document when using this unit. Yamato Scientific has no responsibility for accidents or breakdown of device due to failure to comply. Never conduct what this document forbids as unexpected accidents or breakdown may result.

Yamato Scientific America Inc.
925 Walsh Ave, Santa Clara, CA 95050
Tel: 1-800-292-6286 / 408-235-7725
http://www.yamato-usa.com

For customer service:
Email: customerservice@yamato-usa.com
For technical support:
Email: technical@yamato-usa.com

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