AMB4/AMB8
MULTIPLE BOILER SEQUENCERS

INSTALLATION MANUAL AND OPERATING INSTRUCTIONS

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RETAIN THIS MANUAL FOR FUTURE REFERENCE

SAFETY SYMBOLS & WARNINGS

The following defined symbols are used throughout this manual to notify the reader of potential hazards of varying risk levels.

⚠ DANGER

Indicates an *imminently* hazardous situation which, if not avoided, *will* result in death, serious injury or substantial property damage.

⚠ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death, serious injury or substantial property damage.

⚠ CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury or property damage.

I**MPORTANT:** Read the following instructions completely before installing

⚠ WARNING

All installations should be done only by a qualified expert and in accordance with the appropriate Argo manual. Installing an electric appliance with improper methods or materials may result in serious injury or death due to fire.

INTRODUCTION

This manual is intended to familiarize the installer and user of the Argo AMB4 and AMB8 Multiple Boiler Sequencers with their installation and operation so as to assure normal trouble-free operation.

Argo controls are designed and manufactured with quality components for maximum life and durability and require minimum service. To insure a satisfactory installation, it is imperative that the instructions be followed carefully before operating the control. Failure to do so may result in breach of warranty.

PRODUCT DESCRIPTION

The AMB4 and AMB8 are designed to control a multiple boiler system feeding a single supply line. The AMB4 can control up to 4 boilers and the AMB8 is capable of controlling up to 8 boilers. Both boiler sequencers have numerous operating options that can be selected through the control interface.

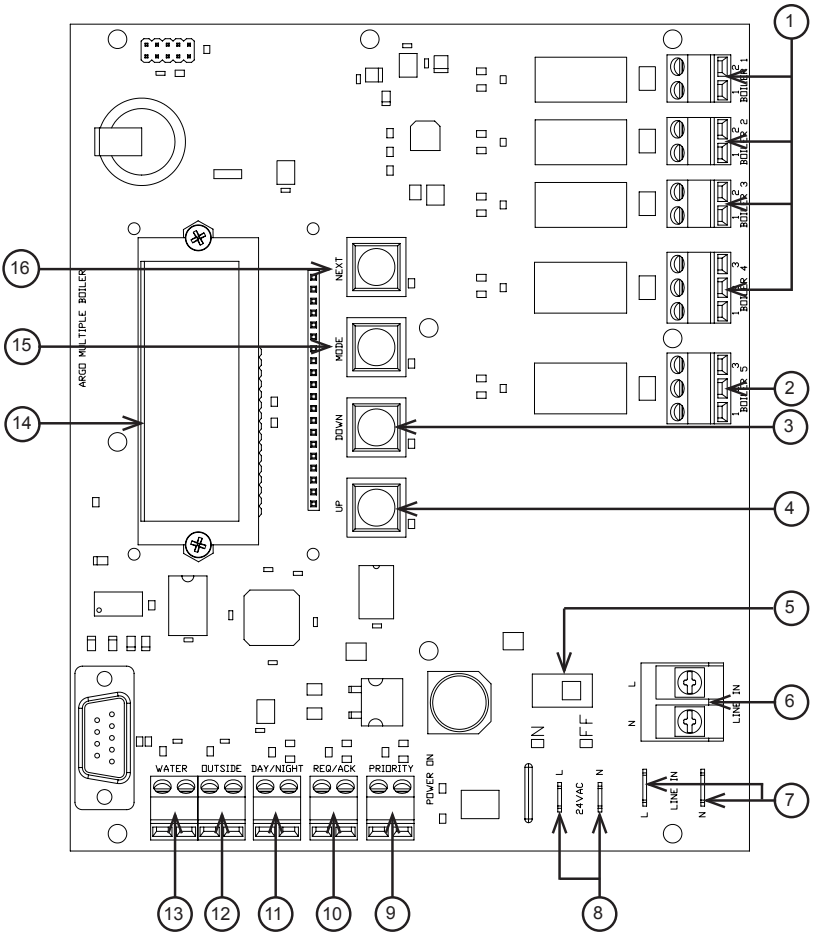
COMMON TERMINOLOGY USED IN THIS MANUAL

- Adjust Mode – Mode in which parameters can be modified by user
- Control Point – The boiler water temperature that the control will maintain.
- Day/Night Option – Reduces the set point by 20˚F or 7˚C at night.
- Day Option Time Set - When using the night set back function, this is the time of day in which the setpoint will return to the programmed value and no longer be reduced by 20°F for night operation.
- Down Button – Used to scroll down through menus.
- Minimum Off Time - Minimum amount of time a boiler will be off before the control re-evaluates the water temperature and how close it is to the control point.
- Minimum On Time - Minimum amount of time a boiler will be allowed to run before the control re-evaluates the water temperature and how close it is to the control point.
- Minimum Water Temperature – The lowest temperature that the AMB will allow the system water to drop to.
- Mode Button – Used to enter menus and return to a previous menu
- Next Button – Used to select a menu option or save selections.
- Night Option Time Set - Time in which the control will begin operating in night mode.

COMMON TERMINOLOGY USED IN THIS MANUAL

- Outdoor Shutdown Temperature – The outdoor temperature at which the AMB will turn off all boilers unless there is a priority call for heat (factory setting 66°F).
- Priority – Eliminates outdoor reset allowing the water temperature to reach the set point for domestic hot water supply heating.
- RTD – Temperature sensor
- Request/Acknowledge – Allows the control to function as an on demand system if turned on and a dry contact type thermostat is connected to the REQ/ACK terminals. Note: Do not connect 24V to the REQ/ACK terminals.
- Reset Defaults – Will reset the AMB to its original factory settings.
- Review Mode – Mode to review system settings
- Rotation – Changes the lead boiler for each day based on the number of run-time hours each boiler has.
- Run Mode – Standard operating mode
- Set Back Ratio – The ratio that the control will adjust for outdoor temperature
- Set Point – Target water temperature
- System Boilers – The number of boilers in the system.
- System Check Mode – Diagnostic mode used to verify circuit board operation
- Temperature Differential – Number of degrees below the control point at which the control will turn on boilers
- Up Button – used to scroll up through menus

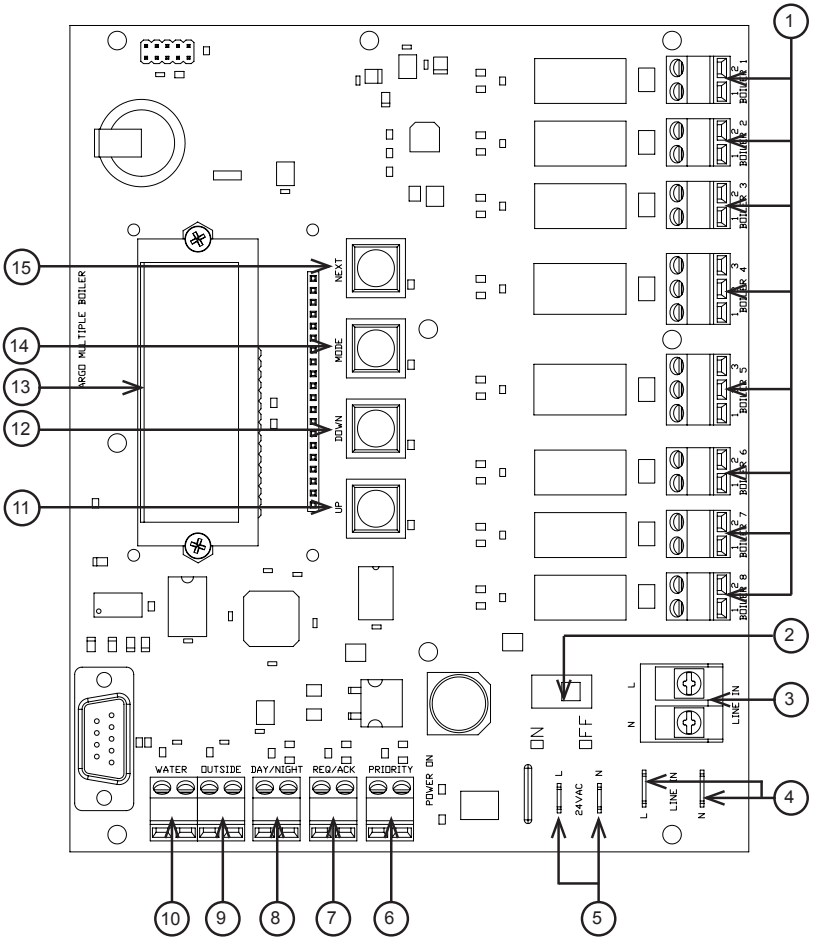
AMB4 CONTROL BOARD



1. Boiler Terminal Block
2. Auxiliary Terminal Block
3. Down Selection Button
4. Up Selection Button
5. On/Off Power Switch to Board
6. Line Voltage Primary Terminal
7. Transformer Primary Terminals (120VAC) (Supplied with Control)
8. Transformer Terminals (24VAC) (Power to Board Only)
9. Priority Terminal Block
10. Req/Ack Terminal Block, TT or Thermostat connection. (Dry contact only)
11. Day/Night Terminal Block
12. Outside Temperature Sensor Terminal Block
13. Water Temperature Sensor Terminal Block
14. Digital Display
15. Mode Selection Button
16. Next Selection Button

Note: *Items 1, 2, 8, 9, 10, 11, 12, & 13 are Class 2 terminals.*

AMB8 CONTROL BOARD



1. Boiler Terminal Block
2. On/Off Power Switch to Board
3. Line Voltage Primary Terminal
4. Transformer Primary Terminals (120VAC) (Supplied with Control)
5. Transformer Terminals (24VAC) (Power to Board Only)
6. Priority Terminal Block
7. Req/Ack Terminal Block. TT or Thermostat connection (Dry contact only)
8. Day/Night Terminal Block
9. Outside Temperature Sensor Terminal Block
10. Water Temperature Sensor Terminal Block
11. Up Selection Button
12. Down Selection Button
13. Digital Display
14. Mode Selection Button
15. Next Selection Button

Note: *Items 1, 5, 6, 7, 8, 9, & 10 are Class 2 terminals.*

MOUNTING INSTRUCTIONS

Mount the AMB Boiler Sequencer vertically on a solid wall or partition. For your convenience it is recommended that the control be mounted as close as possible to the device to be controlled. Select a location that is easily accessible for installation and verify that the swing door on the AMB can be fully opened for serviceability of the control.

> **NOTE:** *To reduce the possible transformer hum and relay noise that is sometimes amplified by mounting surfaces such as sheet metal, plasterboard, and similar materials, place rubber or felt washers between the case and the mounting surface.*

1. Position the control and mark the mounting holes.
2. Start screws (not provided) for the keyhole type mounting holes in the upper corner(s). Tighten the screws down to about 1/8" (3mm) from the surface.
3. Hang the control on the screw(s), position the case, and start the bottom screws.
4. Tighten all screws.

ELECTRICAL SPECIFICATIONS AND WIRING

⚠ WARNING

ELECTRICAL SHOCK HAZARD! Disconnect power before installing or servicing. Can cause severe personal injury, death, or substantial property damage if ignored.

– GENERAL WIRING NOTICE –

All primary wiring must be 14 AWG minimum. Torque terminal screws 6 to 7 inch pounds.

U.S.A. - National Electric Code and any other national, state, or local code requirements. Wiring must be N.E.C. Class 1.

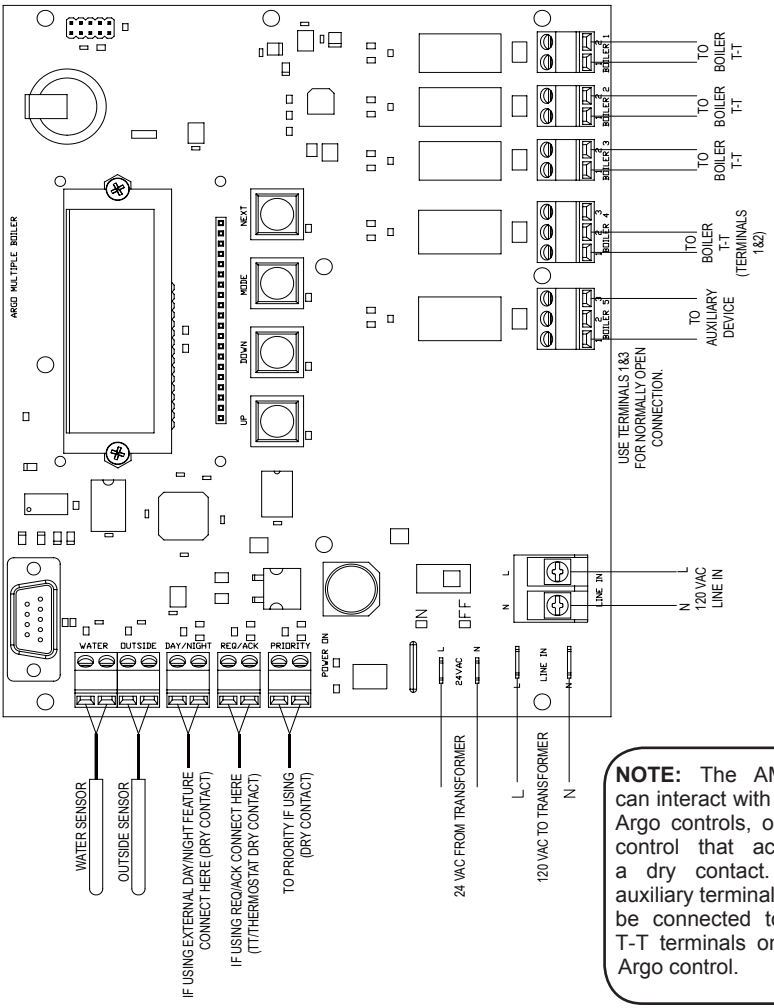
CANADA - C.S.A. C22.1 Canadian Electrical Code Part 1 and any other national, provincial, or local code requirements. Wiring must be C.S.A. C22.1 C.E.C. Part 1.

Electrical Specifications

Model Number	Domestic / International	Transformer Voltage	Relay Switching Action
AMB-4	Domestic	120V/60Hz/40Va	SPST
AMB-8	Domestic	120V/60Hz/40Va	SPST

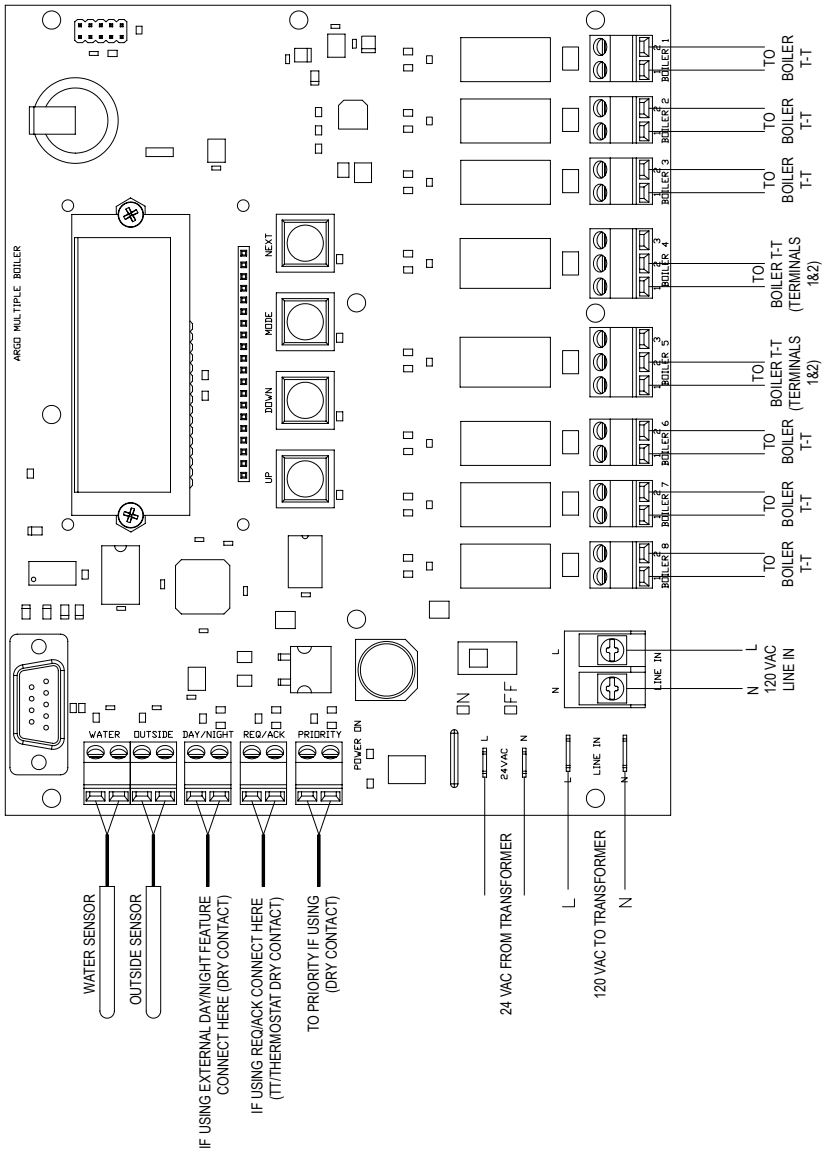
AMB4 WIRING SCHEMATIC

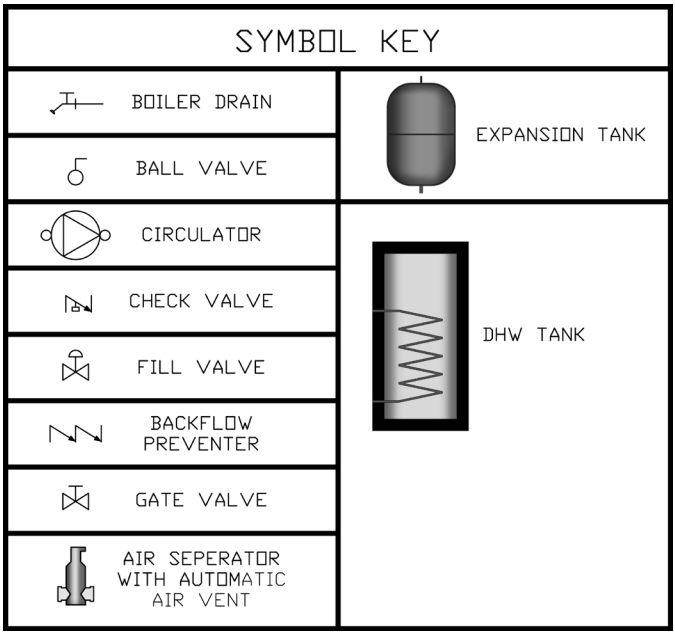
NOTE: The switching relay terminals are approved for use with COPPER wires only. Torque terminal block screws 6 - 7 inch pounds.



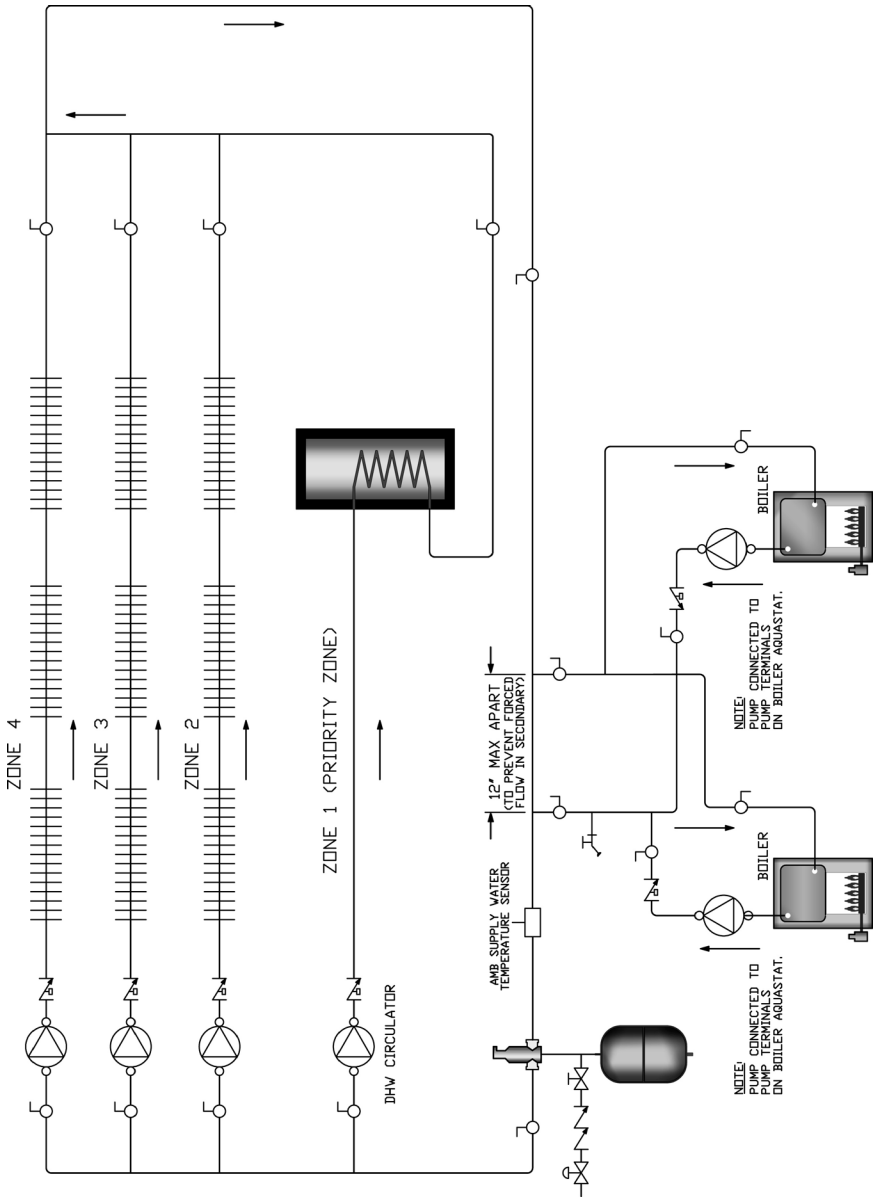
NOTE: The AMB4A can interact with other Argo controls, or any control that accepts a dry contact. The auxiliary terminals can be connected to the T-T terminals on any Argo control.

AMB8 WIRING SCHEMATIC

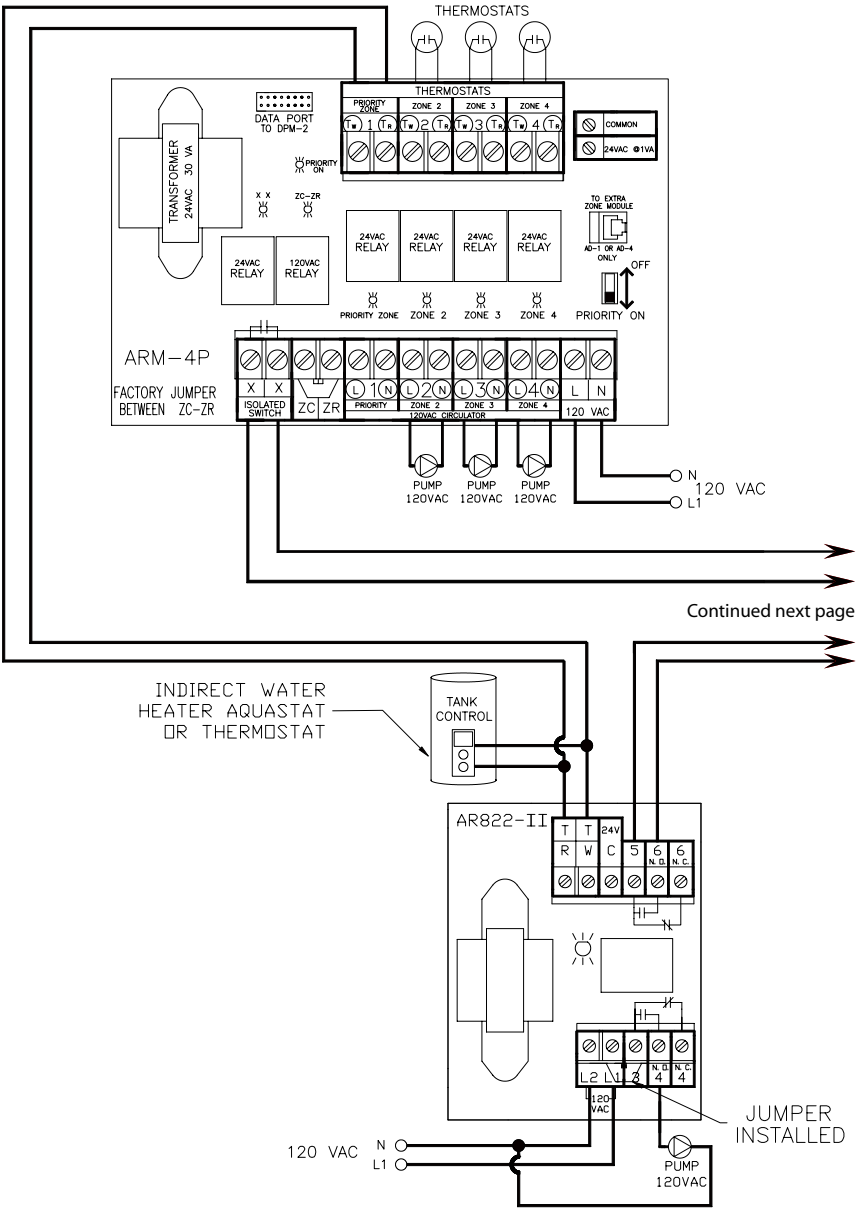



SYMBOL KEY
BOILER DRAIN
BALL VALVE
CIRCULATOR
CHECK VALVE
FILL VALVE
BACKFLOW PREVENTER
GATE VALVE
AIR SEPERATOR WITH AUTOMATIC AIR VENT
EXPANSION TANK
DHW TANK

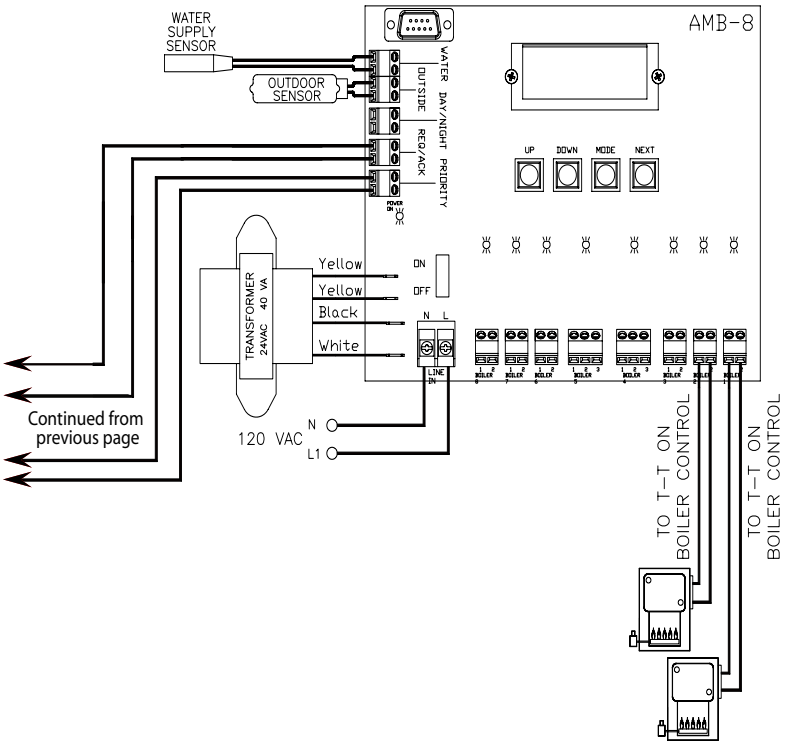
ZONING WITH CIRCULATORS



ZONING WITH CIRCULATORS WIRING DIAGRAM



ZONING WITH CIRCULATORS WIRING DIAGRAM

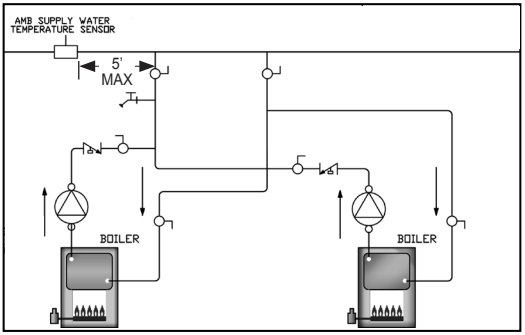


– TEMPERATURE SENSORS –

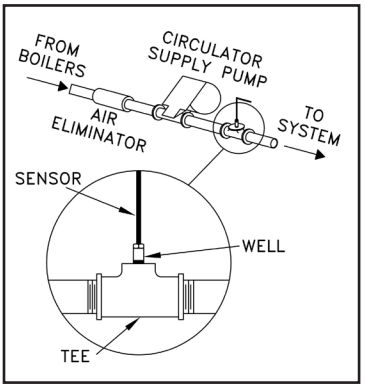
Provided with the AMB Boiler Sequencers are two temperature sensors, one of which is used to measure outdoor temperature while the other is used to measure system supply water temperature. Both sensors must be properly installed for the control to function properly.

– WATER SENSOR –

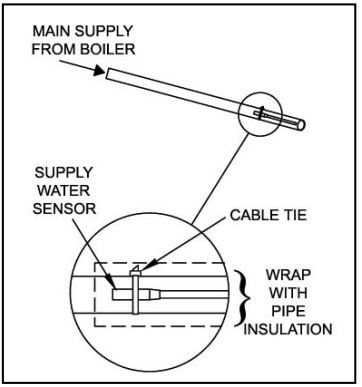
The Water Temperature RTD should be located in the supply piping within 5 feet of the boiler connection. Refer to the diagram below. An immersion well is supplied with the control. Insert the RTD into the well and fix in place using the set screw in the hex head of the well.



The sensor can also be attached to the supply header with a cable tie in a retrofit installation. When installing the sensor in this manner it must be wrapped with pipe insulation to provide an accurate reading.



SUGGESTED SENSOR INSTALLATION



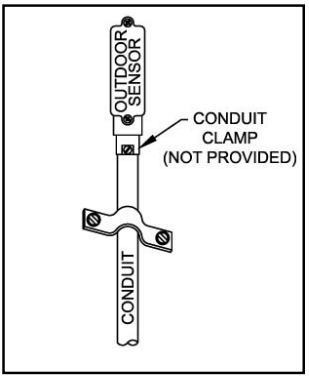
ALTERNATE SENSOR INSTALLATION

SENSORS

After the sensors are installed the leads must be connected to the corresponding terminals on the AMB control. 18 gauge two-wire thermostat wire should be used to connect the leads to the control board.

NOTE: If a jumper is placed on the RTD terminals of the AMB control, a temperature of 0°F or -17°C will display and be used in calculations. This feature can be used to diagnose the control.

– OUTDOOR SENSOR –



The outdoor sensor can be identified by its shorter probe and 14” long lead length. The outside temperature RTD can be located up to 500 feet from the control. A weather tight outdoor housing is supplied with the control. The outdoor housing should be located on the side of the structure that is the least exposed to direct sunlight. Exposure to direct sunlight could send false readings to the AMB and cause problems with the system. It is important to leave a 4-foot space between sensor wires or thermostat wires as they run parallel to any other electrical or telephone wire. Failure to do so could cause false readings due to electrical interference.

– RTD SENSOR CHECK –

To confirm that the RTD sensor is functioning properly:

1. Remove both RTD leads from the terminal block on the control board.
2. Use a multimeter to take an ohm reading across the RTD leads. A properly functioning RTD will produce a reading of approximately 1005 ohms at 70°F. A faulty RTD will provide an ohm reading outside of ± 25 ohms.
3. Replace RTD if necessary.

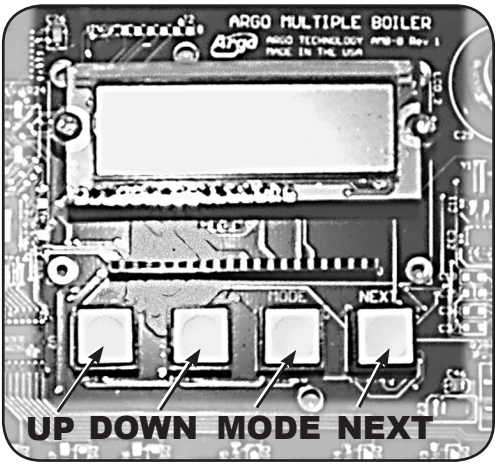
NAVIGATING THE AMB CONTROLS

Verify that the ON/OFF power switch to the board is in the ON position.

The control board contains 4 selection keys located in the middle of the control board: UP, DOWN, MODE, and NEXT. These keys are described below.

– UP/DOWN –

The UP and DOWN keys are used to navigate through the AMB menus. Pressing and holding the UP or DOWN key will scroll through the menus at a faster rate.



– MODE –

Pressing the MODE key while the control is in RUN mode will enter the Mode Selection Menu.

The MODE key is also used to return to the previous menu.

– NEXT –

The NEXT key is used to select a menu option. The NEXT key is also used as a save button while in ADJUST mode. When a parameter is changed the user **must press NEXT** to save the changes before pressing MODE to return to the previous menu. The setting displayed on the screen will flash to indicate the value has been saved. Returning to the previous menu without pressing NEXT will result in all changes in the current menu being lost.

NOTE: If the AMB control selection switches are inactive for 5 minutes the control will automatically return to RUN mode.

AMB MODES OF OPERATION

The AMB Boiler Sequencers have 4 modes of operation: **Run, Adjust, Review, and System Check.** These modes are described in the following section.

– RUN MODE –

While in RUN mode the AMB control will function in accordance with the settings modified while in ADJUST mode *(see below)*. The display on a properly functioning control will cycle through the DATE AND TIME, OUTDOOR TEMPERATURE, WATER TEMPERATURE and CONTROL POINT while in RUN mode.

NOTE: Pressing the MODE key while in RUN mode will bring the user to the menu options.

– ADJUST MODE –

In ADJUST MODE the user can input their specific parameters using the 4 selection keys. Mode selection will appear on the display screen such as:

SET POINT:
The SET POINT is the target water temperature the control will maintain before compensating for the outdoor temperature.

NOTE: Boiler Aquastat/Hi-Limit setting must be set higher than the AMB set point.

Range: *50°F to 250°F (10°C to121°C)*

SET BACK RATIO:
Is the ratio at which the control will acknowledge and adjust for outdoor temperature. For example: For every degree increase from 0°F in outdoor temperature, the water temperature will decrease by the SET BACK RATIO multiplied by the outdoor temperature. This value is called the CONTROL POINT.

CP = SP – (OT x RR)

Where: CP = Control Point
SP = Set Point
OT = Outdoor Temperature
RR = Reset Ratio or Set Back Ratio

NOTE: The higher you set your RR value the lower your control point will be. *The factory setting is 1.5.*

Range: 0.2 to 5.2

TEMPERATURE DIFFERENTIAL *(Temp Diff)*:
During the heating cycle the AMB will continue to activate the boilers to heat water until the CONTROL POINT is reached at which point the control will turn off all boilers. When the water temperature drops the number of degrees the TEMPERATURE DIFFERENTIAL is set for below the CONTROL POINT, the AMB reactivates the boilers to heat the water.

Range: 1°F to 20°F (1°C to 20°C)

OUTDOOR SHUTDOWN TEMPERATURE *(Shutdown Temp)*:
When the outdoor temperature reaches the SHUTDOWN TEMPERATURE, the AMB will turn all boilers off, unless the priority function has been chosen and there is a call for domestic hot water.

Range: 50°F to 149°F (10°C to 65°C)

MINIMUM WATER TEMPERATURE *(Min. Water Temp)*:
This is the lowest temperature the AMB will allow the boiler water to drop to. It is recommended that this value be set at least 20°F or 7°C below the SET POINT. The factory setting is 149°F.

Range: 50°F to 149°F (10°C to 65°C)

SYSTEM BOILERS *(No. Sys Boilers)*:
The number of boilers in the system.

Range: *1-4 boilers (AMB4)*
1-8 boilers (AMB8)

PRIORITY:
The priority function eliminates outdoor reset allowing the water temperature to reach the setpoint for domestic hot water supply heating when there is a closed, dry contact on the priority input terminals and priority is turned on. When this signal is present, the AMB will ignore the outdoor temperature setback function within the control. When the priority dry contact signal is removed the control will once again set back the water temperature based on the outdoor temperature. When the control is in priority mode, priority will flash on the top line of the display.

Range: ON or OFF (Accessed through the 4 selection keys, the mode selection will appear on the display screen.)

IMPORTANT: A thermostat that requires 24V from the control can not be used. The signal to the priority terminal must be a dry contact.

ROTATION:
The rotation feature can extend boiler life by periodically rotating the lead boiler. The lead boiler is the first boiler turned on during a heating cycle. Boiler life can be extended by rotating the lead boiler. The AMB can be directed to rotate the lead boiler every 24 hours. The lead boiler is selected by analyzing the number of hours on each boiler, the boiler with the fewest hours will be the lead boiler for the day. A day begins at 12:00 am.

Range: ON or OFF

OPTION# (AMB4 ONLY):
The OPTION# setting can be set to the following values:

Note: *This is a dry contact.*

0 - No Auxiliary Relay
1 - Priority Auxiliary Relay
2 - Request/Acknowledge Auxiliary Relay
3 - Temperature Auxiliary Relay

NO AUXILIARY RELAY - The Auxiliary Relay does not operate.

PRIORITY AUXILIARY RELAY - The Auxiliary Relay operates when Priority is set to on and there is a closed dry contact on the priority terminals.

REQUEST/ACKNOWLEDGE AUXILIARY RELAY - The Auxiliary Relay operates whenever a request / acknowledge is set to on and there is a closed dry contact on the request / acknowledge terminals.

TEMPERATURE AUXILIARY RELAY - The Auxiliary Relay activates when the outdoor temperature exceeds the shutdown temperature.

READ OUT DEG:

Choose between Fahrenheit or Celsius for temperature display.

DAY/NIGHT OPTION:

Reduces the SETPOINT by 20°F or -7°C when activated. This option can be activated by the internal AMB clock setting or by a dry contact usually a wall switch across the DAY/NIGHT terminal block. The user is prompted to select ON to use the internal AMB clock or EXTERNAL to connect a device to the DAY/NIGHT terminal block. This is generally used as an energy saving feature to help reduce energy consumption during sleeping hours. When in night set back mode SB will be displayed by the control point while in run mode.

DAY/OPTION TIME SET (Day Opt Timeset):

This feature sets the time in which the control will come out of night setback and operate in day mode. Day/Night Option must be set to ON for this feature to be active.

Range: 00:00 to 12:00 *or* 12:00AM to 12:00PM

NIGHT OPTION TIME SET (Nite Opt Timeset):

This feature sets the time in which the control will begin operating in night mode and reduce the setpoint by 20°F. Day/Night Option must be set to ON for this feature to be active.

Range: 12:00 to 24:00 *or* 12:00PM to 12:00AM

REQUEST/ACKNOWLEDGE *(Req/Ack)*:

When in REQ/ACK mode the control will function as a demand system and require a closed dry contact on the Req/Ack terminals before sending a signal to the boiler control. With Req/Ack off the control will maintain the boiler water temperature at the **control point** setting regardless of whether there is a call for heat or not. The Req/Ack terminals can be used as a TT or Thermostat connection. This terminal does not have 24V present, it is a dry contact only.

BOILER CONFIGURATION (*Boiler Config*)**:**

The following selections can be made with the boiler config menu:

0 - Normal Mode
1 - High/Low Fire Mode
2 - Low Fire Both Boilers

NOTE**:** Boilers will not phase in or out in high/low fire mode or low fire mode. All boilers turn off when the water temperature reaches the control point.

NORMAL MODE - The control will turn on one boiler at a time when there is a demand for heat.

HIGH/LOW FIRE MODE - This mode will perform the following sequence of events:

1. When there is a demand for heat, the Boiler 1 terminal will activate.

2. The control will wait the minimum on time and then check to see if there is still a demand for heat. If more heat is required, the AMB4 will switch to HIGH FIRE mode by turning off the Boiler # 1 terminals and activate the Boiler # 2 terminals.

3. If the demand for heat is still present, the control will leave the Boiler # 2 terminals active and bring on the Boiler # 3 terminals or Boiler # 2 in LOW FIRE mode.

4. The final step if there is still a demand for heat after Step 3 is to bring on both boilers in HIGH FIRE mode. To accomplish this, the AMB4 will turn off the Boiler # 3 terminals and activate the Boiler # 4 terminals so both the Boiler # 2 and Boiler # 4 terminals are activated.

NOTE**:** The AMB8 will follow the same sequence utilizing all 8 boiler terminals.

LOW FIRE BOTH BOILERS - This feature is designed to bring on two boilers in LOW FIRE mode only. When there is a demand for heat, the AMB4 will bring on Boiler # 1 in LOW FIRE mode by activating the Boiler # 1 terminals. If a demand for heat is still present after waiting out the minimum on time, Boiler # 2 will also be brought on by activating the Boiler # 3 terminals.

NOTE: If using the High/Low or Low fire boiler option set the number or system boilers as follows:

Number of High/Low or Low Fire Boilers	Set the number of system boilers to this value
1	2
2	4
3	6
4	8

LANGUAGE:
A user can select between English or French.

DISPLAY TIME:
This option selects the time delay between each parameter and the values displayed on the panel while in RUN mode.

Range: 5 to 120 sec

DATE AND TIME:
This option is used to set the date, day of week and time of day. A flashing cursor indicates the value that is being controlled by the UP/DOWN keys. When a value is properly set, press the next key to save the value and move on to the next value.

TIME FORMAT:
This option is used to change the time display from 24 hours to AM/PM format.

MINIMUM ON TIME (Min On Time):
This is the minimum amount of time that the control will allow a boiler to heat the system water before the control looks at the supply water temperature and decides if additional boilers need to be turned on or off.

Range: 2 to 500 seconds

MINIMUM OFF TIME (Min. Off Time):
After turning a boiler off, this is the amount of time that the control will delay before looking at the supply water temperature and again deciding if additional boilers need to be turned off or off.

Range: 2 to 500 seconds

RESET DEFAULTS:
When selecting “yes” all parameters will reset to there original factory settings. These values can be viewed in the table on the following page.

DEFAULT SETTINGS		
PARAMETERS	**FACTORY VALUE**	**RANGE**
Set Point	180°F	50° to 250°F or 10° to 121°C
Set Back Ratio	1.5	0.2 to 5.2
Temp Diff	10°F	1° to 20°F or 1° to 20°C
Shutdown Temp	66°F	50° to 149°F or 10° to 65°C
Min. Water Temp	149°F	50° to 149°F or 10° to 65°C
No. System Boilers	4 (AMB4) or 8 (AMB8)	1-4 (AMB4) or 1-8 (AMB8)
Priority	On	On or Off
Rotation	On	On or Off
*Option #	0 *(No Aux Relay)*	0, 1, 2, 3
Read Out Degree	°F	°F or °C
Day/Night Option	Off	On or Off
Day Option Time Set	5:00	00:00 to 12:00
Night Option Time Set	19:00	12:00 to 24:00
Minimum On Time	180 sec.	2 to 500 sec.
Minimum Off Time	180 sec.	2 to 500 sec.
Display Time	20 sec.	5 to120 sec.
Req/Ack	Off	On or Off
Boiler Config	0 *(Normal Mode)*	0, 1, 2
Time Format	24 Hr.	24Hr. or AM/PM
Language	English	English or French

**** Note:** Feature found on the AMB4 only, option # is locked at 0 on the AMB8.*

IMPORTANT: The factory settings may not be the correct settings for your application. Reprogram the AMB control to fit your system.

– REVIEW MODE –

REVIEW mode will display the current value of your parameter. The following parameters are displayed in review mode:

- OUTDOOR TEMP
- SUPPLY WATER TEMP
- CONTROL POINT

I. The CONTROL POINT is the boiler water temperature that the control will maintain. The CONTROL POINT is calculated using the OUTDOOR TEMPERATURE, SETBACK RATIO, and the SET POINT.

CP = SP – (OT x RR)

Where: CP = Control Point
SP = Set Point
OT = Outdoor Temperature
RR = Reset Ratio or Set Back Ratio

NOTE: If the CONTROL POINT is less than the MINIMUM WATER TEMPERATURE, then the AMB will regulate the water temperature to the higher value.

- SET POINT
- SET BACK RATIO
- NO. SYS BOILERS
- LEAD BOILER #
- ROTATION
- BOILER (1-8) HOUR SINCE LAST RESET
- BOILER (1-8) HOUR TOTAL TIME

II. TOTAL TIME on each boiler can be reset by holding down the NEXT button for 5 seconds while in REVIEW mode.

- DEGREE DAYS

I. A degree day is the daily average of the outdoor temperature below 65°F/18°C. Temperatures above 65°F/18°C are ignored.

- DAY/NIGHT OPTION
- PRIORITY
- REQ/ACK

AMB MODES OF OPERATION

– SYSTEM CHECK MODE –

The control will verify and test the operation of the relays and microprocessor. If everything is functioning properly, the display will read:

SYSTEM CHECK
OK
(VERSION OF SOFTWARE)

PROGRAMMING THE AMB CONTROL

The following directions will outline how to program the AMB control for a system that has the following components:

- 3 boilers
- Priority
- 60 second minimum on time

The following steps can be followed to setup the AMB control with the above system information. The steps assume that the AMB control has been installed and wired in accordance with this manual.

1. Be sure that power is run to the control and the on board switch is in the ON position.
2. Press the MODE button until the display enters the menu selection screen.
3. Press the DOWN or UP button until the pointer is beside Adjust Mode and press NEXT to enter Adjust mode.
4. Press the DOWN button until the selection arrow is beside NO. SYSTEM BOILERS. Press NEXT to enter the NO. SYSTEM BOILERS parameter. Use the UP and DOWN buttons to change the value to 3 BOILERS. Pressing and holding the UP or DOWN buttons for a few seconds will result in the setting values scrolling at a faster rate. Once the value is set to 3 BOILERS, press the NEXT key to save the value followed by the MODE button to return to the previous menu. If you wish to return to the previous menu without saving data just press the MODE button. When a parameter is saved the value will flash on the screen.

5. The display should once again be in ADJUST mode. Press the down key until the arrow is next to the Priority setting and press next. Change the value to ON using the UP and DOWN buttons. When ON is displayed on the screen press NEXT to save the value and MODE to return to adjust mode.
6. While in Adjust mode press the down key until the selection arrow is beside Min. On Time. Press NEXT to enter the minimum on time selection screen where you can use the up or down button to change the selection to 60 Seconds. Press NEXT to save your selection and then press MODE twice to return to the mode selection screen.
7. Press the up or down button until the selection arrow is beside RUN MODE and press next to enter RUN MODE. The AMB is now running with the desired parameters.

SEQUENCE OF OPERATION

— DEMAND APPLICATION —

To use the AMB control in a cold start application the control must have REQ/ACK turned ON. This setting can be changed in ADJUST mode.

1. When used in a cold start application, the AMB will stand by until there is a closed dry contact on the REQ/ACK terminals. When a closed contact is sensed on the terminals the control will bring on the lead boiler for that day. The first time the control is powered up boiler 1 will be the lead boiler.
2. The control will wait the number of seconds that the minimum on time is set to and then check to see if there is still a closed contact on the REQ/ACK terminals.
3. If a closed contact is still present the AMB will bring on the next boiler in the sequence. This process will continue until all of the boilers in the system are turned on.
4. As the water temperature approaches the control point, boilers will be phased on or off so that the water temperature will ease up to the control point.
5. When the closed dry contact is removed from the REQ/ACK terminals all boilers will turn off.

SEQUENCE OF OPERATION

6. If at any point the water temperature is 10°F above the control point, all boilers will be turned off.

— CONTINUOUS APPLICATION —

To use the AMB control in a continuous application the control must have REQ/ACK turned OFF. This setting can be changed in ADJUST mode.

1. When used in a continuous application the AMB will regulate the water temperature in the system through the use of the water sensor and it will always keep the water warm.
2. The AMB will monitor the water temperature until the temperature drops the number of degrees below the control point that the TEMP DIFF (temperature differential) feature is set to. The control will then bring on the lead boiler.
3. The AMB will monitor the boiler temperature and if it has not reached the control point it will bring on the next boiler.
4. Boilers will be phased on or off based on how close the water temperature is to the control point.
5. If at any point the water temperature is 10°F above the control point, all boilers will turn off.

BACKUP SYSTEM

The AMB boiler sequencer is equipped with a setting backup system. Should the control lose power the settings will be saved in memory for up to one year.

REPLACEMENT PARTS AND CONTROLS

Part Description	Part Number
AMB4A Control English/French	AMB4A
AMB8A Control English/French	AMB8A
Transformer 120V/24V 40VA	T79
RTD 2” Probe 14” Leads *(Outdoor Sensor)*	240005445
RTD 3¾” Probe 36” Leads *(Water Sensor)*	240005446
Brass Well	240004756
Outdoor Sensor Shield	S60

INSTALLER SETTINGS

For future reference record system setting below:	
Setpoint	
Set Back Ratio	
Temp Diff	
Shutdown Temp	
Min Water Temp	
No. Sys Boilers	
Priority	
Rotation	
Option #	
Read Out Degree	
Day/Night Option	
Day Option Time Set	
Night Option Time Set	
Display Time	
Req/Ack	
Boiler Config	
Time Format	
Minimum On Time	
Minimum Off Time	

TECHNICAL SUPPORT

For technical support on this and all Argo products, please contact ECR International Technical Service at 1-800-325-5479. Please have the following information available when calling.

Information Needed When Calling
Model Number
Serial Number
Installation Date
Installer