

tekmar® - User Brochure

Boiler Control 262

U 262

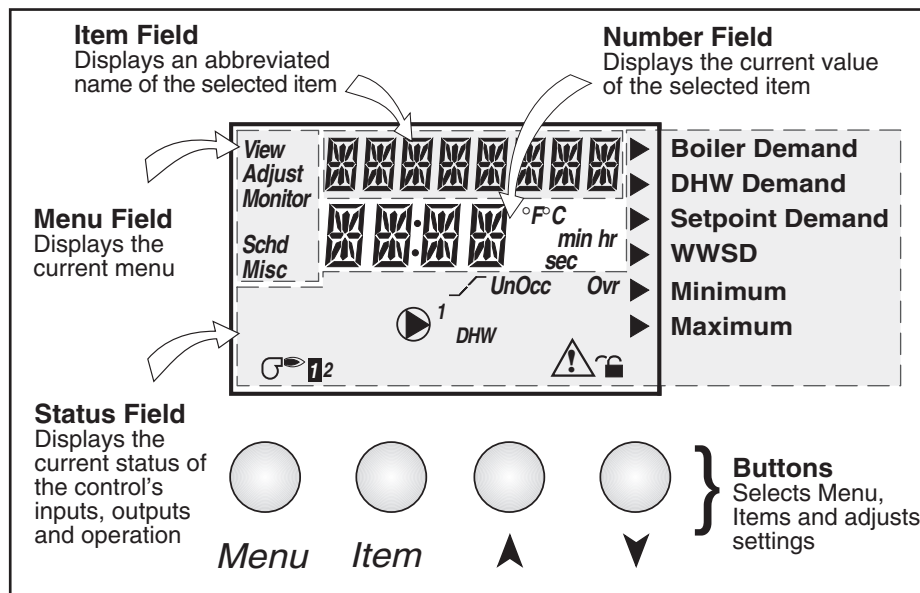
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The Boiler Control 262 is a microprocessor based control designed to stage and rotate two on/off boiler stages (or one low/high fire boiler) to maximize the comfort and efficiency of a hydronic heating system. The control is designed to operate in two distinct modes. Mode 1 allows for the control to provide a reset supply water temperature to a heating system, indirect Domestic Hot Water (DHW) generation, and the integration of a setpoint load. Multiple zone temperature control is achieved by using either thermostats or tekmar Zone Controls. Mode 2 is designed specifically for dedicated DHW applications in order to provide heat to a DHW storage system. Standard features include Equal Run Time Rotation, Auto Differential, digital temperature readouts, and pump exercising.

User Interface

Access Level(s) The tekmar Boiler Control 262 has four access levels which are **LTD** (limited), **USER**, **INST** (Installer), and **ADV** (advanced). This brochure only covers the **LTD** (Limited) and **USER** levels. Only qualified service people should adjust the **INST** (Installer) and **ADV** (advanced) access levels.



The tekmar Boiler Control 262 has a Liquid Crystal Display (LCD) and four push buttons (**Menu**, **Item**, **▲**, **▼**) which are used to view and adjust the settings.

Menu

All of the items displayed by the control are organized into various menus. These menus are listed on the left hand side of the display (Menu Field). To select a menu, use the **Menu** button. By pressing and releasing the **Menu** button, the display will advance to the next available menu. Once a menu is selected, there will be a group of items that can be viewed within that menu.

Item

The abbreviated name of the selected item will be displayed in the item field of the display. To view the next available item, press and release the **Item** button. Once you have reached the last available item in a menu, pressing and releasing the **Item** button will return the display to the first item in the selected menu.

Adjust

To make an adjustment to a setting in the control, begin by selecting the appropriate menu using the **Menu** button. Then select the desired item using the **Item** button. Finally, use the **▲** and/or **▼** button to make the adjustment.

Additional information can be gained by observing the Status and Pointers fields of the LCD. The status field will indicate which of the control's outputs are currently active. Most symbols in the status field are only visible when the View Menu is selected.

	Burner Displays when the stage 1 and / or stage 2 relay is turned on.
	Pump Displays when the boiler pump is operating.
	DHW Pump / Valve Displays when the DHW pump or valve is on.
	Boost Displays when the control is in boost after setback.
	UnOccupied Displays when control is in unoccupied mode.
	Occupied Displays when the control is in occupied mode.
	Override Displays when the control is in override mode.
	Warning Displays when an error exists or a limit has been reached.
	Lock - Unlock Displays whether access levels are locked or unlocked.
	Units of measurement. °F, °C, sec, min, hr
	Pointer Displays control operation as indicated by text.

Note: Depending on the settings the installer makes in the control, certain menu items may not appear.


Item	LTD	USER	262 View Menu	Range
OUTDOOR	●	●	Current outdoor air temperature as measured by the outdoor sensor. This is the default display for the control.	-67 to 149°F (-55 to 65°C)
ROOM TRG	●	●	Target room air temperature. “— — —” denotes no heat is required. Will not display if RTU is connected.	-- -, 35 to 100°F (2 to 38°C)
ROOM	●	●	Measured room air temperature at the indoor sensor. Will not display if RTU is connected.	-58 to 167°F (-50 to 75°C)
Boil SUP	●	●	Current boiler supply water temperature as measured by the boiler sensor.	-31 to 266°F (-35 to 130°C)
DHW TRG	●	●	Target DHW tank temperature. This item can only be viewed if a tekmar sensor is used to measure the DHW tank temperature.	-- -, OFF, 70 to 190°F (OFF, 21 to 88°C)
DHW	●	●	Current DHW tank temperature as measured by the DHW tank sensor.	-31 to 266°F (-35 to 130°C)

Item	LTD	USER	262 Adjust Menu	Range
ROOM Occ	●	●	The desired room air temperature during an Occupied period for zones in the heating system. Will not display if RTU is connected. In LTD access level, this setting can only be adjusted $\pm 3^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$).	35 to 100°F (2 to 38°C)
ROOM UnOcc	●	●	The desired, room air temperature during an UnOccupied period for zones in the heating system. Will not display if RTU is connected.	35 to 100°F (2 to 38°C)
SLAB MIN	●	●	The minimum temperature at the slab sensor, provided the control is not in Warm Weather Shut Down. This item can only be adjusted if a tekmar sensor is connected.	OFF, 35 to 120°F (2 to 49°C)
SETBACK	●	●	The amount the boiler supply water temperature will be reduced when the control is in the UnOccupied mode.	0 to 50°F (0 to 28°C)
STAGE 1	●	●	Selects stage 1 as operational or not.	AUTO, OFF
STAGE 2	●	●	Selects stage 2 as operational or not.	AUTO, OFF
DHW TANK Occ	●	●	The desired DHW storage tank's temperature during the Occupied period. This item can only be adjusted if a tekmar sensor is used to measure the DHW tank temperature.	OFF, 70 to 190°F (21 to 88°C)
DHW TANK UnOcc	●	●	The desired DHW storage tank's temperature during the UnOccupied period. This item can only be adjusted if a tekmar sensor is used to measure the DHW tank temperature.	OFF, 70 to 190°F (21 to 88°C)
WWSO Occ	●	●	The heating system's warm weather shut down during the Occupied period.	35 to 100°F, OFF (2 to 38°C)
WWSO UnOcc	●	●	The heating system's warm weather shut down during the UnOccupied period.	35 to 100°F, OFF (2 to 38°C)

Note: Depending on the settings the installer set in the control, certain menu items may not appear.

Item	LTD	USER	262 Monitor Menu	Range
OUT HI	●	●	The highest outdoor air temperature recorded since this item was last cleared. To clear this item, press and hold the ▲ and ▼ buttons until 'CLR' is displayed.	-67 to 149°F (-55 to 65°C)
OUT LO	●	●	The lowest outdoor air temperature recorded since this item was last cleared. To clear this item, press and hold the ▲ and ▼ buttons until 'CLR' is displayed.	-67 to 149°F (-55 to 65°C)
TANK HI	●	●	The highest DHW tank temperature since this item was last cleared. To clear this item, press both the ▲ and ▼ buttons until 'CLR' is displayed.	0 to 255°F (-18 to 124°C)
TANK LO	●	●	The lowest DHW tank temperature since this item was last cleared. To clear this item, press both the ▲ and ▼ buttons until 'CLR' is displayed.	0 to 255°F (-18 to 124°C)

Item	LTD	USER	262 Schd (Schedule) Menu	Range
OVERRIDE	●		The type of setback override that is in effect. DIP switch = Setback AWAY is available even if DIP ≠ Setback	NONE, TMPY Occ, PERM Occ, TMPY UnOcc, PERM UnOcc, AWAY
None – No override. TMPY Occ – Overrides to Occupied setting for 3 hours. PERM Occ – Overrides to Occupied setting until new override is selected. TMPY Unocc – Overrides to Unoccupied for 3 hours. PERM Unocc – Overrides to Unoccupied setting until new override is selected. AWAY – Room & WWSD temperature at 62°F (17°C), no DHW.				

Item	LTD	USER	262 Misc (Miscellaneous) Menu	Range
UNITS	●		The units of measurement in which all of the temperatures are to be displayed by the control.	°F, °C
BACKLITE	●		The operating mode for the back lighting of the LCD and the time until the control returns to the view menu after any button was pressed. If Backlight is set to OFF , the control returns after 10 seconds and the backlight stays off. If Backlight is set to 30 SEC , the control returns after 30 seconds and the backlight stays on for 30 seconds after any button press. If Backlight is set to ON , the control returns after 90 seconds and the backlight stays on.	OFF, 30 sec, ON
ACCESS	●	●	The access level that is to be used by the control. DIP switch =  Only qualified service people should adjust items in the ADV (Advance) and INST (Installer) access levels.	ADV, INST, USER, LTD



Room Temperature Unit (RTU) 062, 063

A single RTU may be connected to the Boiler Control 262 in order to provide the control with indoor temperature feedback for a single zone heating system in Mode = —1— (Refer to Essay E 002). When multiple zones are required for the heating system, use either a tekmar Zone Control or, through the boiler demand input, on/off zone control. When using an RTU, several items related to the heating system are no longer available in the control's User Interface. These items are available only in the RTU's User Interface. Also, the number of items that are available on the RTU depends on the type of RTU that is connected to the control.

Item	LTD	USER	062	063	262 RTU View Menu	Range
ROOM	●	●	●	●	Current room air temperature.	14 to 167°F (-10 to 75°C)
ROOM TRG	●	●	●		Target room air temperature.	35 to 85°F (2 to 29°C)
OUTDOOR	●	●	●	●	Current outdoor air temperature as measured by the outdoor sensor.	-67 to 149°F (-55 to 65°C)
SLAB	●	●		●	Current slab sensor temperature. This item is only available if a tekmar slab sensor is connected to a RTU 063.	-58 to 167°F (-50 to 75°C)


Note: Depending on the settings the installer set in the control, certain menu items may not appear.

Item	LTD	USER	062	063	262 RTU Adjust Menu	Range
ROOM Occ	●	●	●	●	The desired room air temperature during an Occupied period for the heating zone. In LTD access level, this setting can only be adjusted $\pm 3^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$).	35 to 100°F (2 to 38°C)
ROOM UnOcc	●	●	●	●	The desired room air temperature during an UnOccupied period for this heating zone. In LTD access level, this setting can only be adjusted $\pm 3^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$).	35 to 100°F (2 to 38°C)
SLAB MIN	●	●	●	●	The minimum temperature desired at the slab sensor while the control is not in WWSD. This item can only be viewed if a tekmar slab sensor is connected to a RTU 063.	OFF, 35 to 120°F (2 to 49°C)

Item	LTD	USER	062	063	262 RTU Monitor Menu	Range
OUT HI	●	●	●	●	The highest outdoor air temperature recorded since this item was last cleared. To clear this item, press and hold the ▲ and ▼ buttons until 'CLR' is displayed.	-67 to 149°F (-55 to 65°C)
OUT LO	●	●	●	●	The lowest outdoor air temperature recorded since this item was last cleared. To clear this item, press and hold the ▲ and ▼ buttons until 'CLR' is displayed.	-67 to 149°F (-55 to 65°C)
ROOM HI	●	●	●	●	The highest room air temperature recorded since this item was last cleared. To clear this item, press and hold the ▲ and ▼ buttons until 'CLR' is displayed.	14 to 167°F (-10 to 75°C)
ROOM LO	●	●	●	●	The lowest room air temperature recorded since this item was last cleared. To clear this item, press and hold the ▲ and ▼ buttons until 'CLR' is displayed.	14 to 167°F (-10 to 75°C)

Item	LTD	USER	062	063	262 RTU Schd (Schedule) Menu	Range
OVERRIDE	●	●	●	●	The type of setback override that is in effect. DIP switch = Setback AWAY is available even if DIP \neq Setback	NONE, TMPY Occ, PERM Occ, TMPY UnOcc, PERM UnOcc, AWAY

None – No override. **TMPY Occ** – Overrides to Occupied setting for 3 hours. **PERM Occ** – Overrides to Occupied setting until new override is selected. **TMPY Unocc** – Overrides to Unoccupied for 3 hours. **PERM Unocc** – Overrides to Unoccupied setting until new override is selected. **AWAY** – Room & WWSD temperature at 62°F (17°C), no DHW.

Item	LTD	USER	062	063	262 RTU Misc (Miscellaneous) Menu	Range
UNITS	●	●	●	●	The units of measurement in which all of the temperatures are to be displayed by the control.	°F, °C
BACKLITE	●	●	●	●	The operating mode for the back lighting of the LCD and the time until the control returns to the view menu after any button was pressed. If Backlight is set to OFF , the control returns after 10 seconds and the backlight stays off. If Backlight is set to 30 SEC , the control returns after 30 seconds and the backlight stays on for 30 seconds after any button press. If Backlight is set to ON , the control returns after 90 seconds and the backlight stays on.	OFF, 30 sec, ON
ACCESS	●	●	●	●	The access level that is to be used by the control. DIP switch =  Only qualified service people should adjust items in the ADV (Advance) and INST (Installer) access levels.	ADV, INST, USER, LTD

Remote Display Module (RDM)

An optional Remote Display Module can be connected to the 262 if an RTU is not used. All items displayed on the 262 menu will also be displayed on the remote module. Adjustments can be made from the Remote Display Module. This module is connected to the control through two wires and has the same physical appearance as an RTU.

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