

# kanmor® - User Brochure

Zone Control 369e

U 369e

06/03



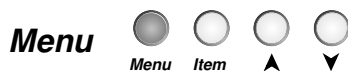
The Zone Control 369e is designed to control the temperature in up to six heating zones using Room Temperature Units (RTUs) or indoor sensors. The 369e uses a PID Zoning logic and allows one stage heating zones, two stage heating zones, or a combination of one stage and two stage heating zones. The 369e is capable of operating a single cooling output and can provide automatic or manual heat/cool change over. Standard features include digital temperature readouts, individual zone setback, and many other useful items.

## User Interface

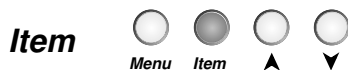
**Access Level(s)** The kanmor Zone Control 369e has four access levels which are **LTD** (limited), **USER**, **INST** (installer), and **ADV** (advanced). This brochure only covers the **LTD** (limited) and **USER** levels. Only qualified service people should make adjustments in the **INST** (installer) and **ADV** (advanced) access levels.

<p><b>Item Field</b> Displays an abbreviated name of the selected item</p> <p><b>Number Field</b> Displays the current value of the selected item</p> <p><b>Menu Field</b> Displays the current menu</p> <p><b>Status Field</b> Displays the current status of the control's inputs, outputs and operation</p> <p><b>Buttons</b> Selects Menu, Items and adjusts settings</p>	<p><b>Pump</b> Displays when the system pump is in operation.</p> <p><b>Zone</b> Zone 1 2 3 4 5 6 Displays when a zone is in operation.</p> <p><b>Optimum Stop</b> Displays when a zone, which is assigned to the control schedule is in optimum stop.</p> <p><b>Optimum Start</b> Displays when a zone, which is assigned to the control schedule is in optimum start.</p> <p><b>UnOccupied Schedule</b> UnOcc Displays when the control is in UnOccupied (Night) mode.</p> <p><b>Occupied Schedule</b> Occ Displays when the control is in Occupied (Day) mode.</p> <p><b>Override</b> Ovr Displays when the control is in override mode.</p> <p><b>Cooling</b> Cool Displays when the cooling relay is on.</p> <p><b>Warning</b> Displays when an error exists or when a limit has been reached.</p> <p><b>Lock/Unlock</b> Displays whether the access levels are locked or unlocked.</p> <p><b>Temperature</b> °F °C Displays the unit of measure that all of the temperatures are to be displayed in the control.</p> <p><b>Time</b> AM min hr PMsec Displays the unit of measure that all of the times are to be displayed in the control.</p>
---	--

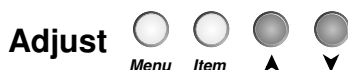
The kanmor 369e uses a Liquid Crystal Display (LCD) as the method of supplying information. You can use the LCD in order to setup and monitor the operation of your system. The 369e has four push buttons (Menu, Item, ▲, ▼) for selecting and adjusting settings.



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.



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.



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 Pointer 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.

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

Item	Ltd	User	View Menu	Range
OUT DOOR	●	●	Current outdoor temperature as measured by the outdoor sensor. This is also the default display for the control.	---, -67 to 149°F (---, -55 to 65°C)
ROOM 1		●	Current room air temperature of zone 1.	---, -58 to 167°F (---, -50 to 75°C)
ROOM 2		●	Current room air temperature of zone 2.	---, -58 to 167°F (---, -50 to 75°C)
ROOM 3		●	Current room air temperature of zone 3.	---, -58 to 167°F (---, -50 to 75°C)
ROOM 4		●	Current room air temperature of zone 4.	---, -58 to 167°F (---, -50 to 75°C)
ROOM 5		●	Current room air temperature of zone 5.	---, -58 to 167°F (---, -50 to 75°C)
ROOM 6		●	Current room air temperature of zone 6.	---, -58 to 167°F (---, -50 to 75°C)

Item	Ltd	User	Monitor Menu	Range
OUT HI	●	●	The highest recorded outdoor air temperature since this item was last cleared. <b>Note:</b> To clear the recorded information in the specific item field, press and hold ▲ and ▼ until "CLR" is displayed.	-67 to 149°F (-55 to 65°C)
OUT LO	●	●	The lowest recorded outdoor air temperature since this item was last cleared. <b>Note:</b> To clear the recorded information in the specific item field, press and hold ▲ and ▼ until "CLR" is displayed.	-67 to 149°F (-55 to 65°C)

Item	Ltd	User	Time Menu	Range
------	-----	------	-----------	-------

The 369e has an internal clock used for setback purposes. In order to set the clock, the Setback/None **DIP switch** must be in the **Setback** position.

Press and release the **Menu** button to select the Time menu.

SATURDAY 12:00 AM	●	●	Displays current time of day and the day of week.	
----------------------	---	---	---	--

Press and release the **Item** button to select the minutes. Use the ▲ and ▼ buttons to set the minutes.

12:00		●	Real time clock minutes.	:00 to :59
-------	--	---	--------------------------	------------

Press and release the **Item** button to select the hour. Use the ▲ and ▼ buttons to set the minutes.

12:00 AM		●	Real time clock hours.	12: AM to 11: PM or 00: to 23:
----------	--	---	------------------------	-----------------------------------

Press and release the **Item** button to select the day of the week. Use the ▲ and ▼ buttons to set the day.

SATURDAY		●	Day of the week.	SATURDAY, . . . , FRIDAY
----------	--	---	------------------	-----------------------------

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

Item	Ltd / User	Schd (Schedule) Menu (1 of 2)	Range
OVERRI DE	•	The type of setback override that is in effect for all schedules. <b>DIP switch = Setback</b> HOL is available even if <b>DIP ≠ Setback</b>	NONE, TMPY Occ Ovr, PERM Occ Ovr, TMPY UnOcc Ovr, PERM UnOcc Ovr, HOL
<p><b>None</b> – No override. <b>TMPY Occ</b> – Overrides to Occupied setting for 3 hours. <b>PERM Occ</b> – Overrides to Occupied setting until new override is selected. <b>TMPY UnOcc</b> – Overrides to UnOccupied for 3 hours. <b>PERM UnOcc</b> – Overrides to UnOccupied setting until new override is selected. <b>HOL</b> – Heating setpoints to a maximum of 62°F (17°C), cooling setpoint to at least 83°F (28°C), ignores slab minimum settings and existing schedules.</p>			

The 369e can use a separate schedule for each day of the week, or the same schedule for every day of the week.

**PROGRAMMING A SEPARATE SCHEDULE FOR EACH DAY OF THE WEEK.**

Once in the Schedule (Schd) menu, press and release the **Item** button to select the 7DAY/24h item. Use the ▲ and ▼ buttons to select 7DAY.

7DAY/24h	•	Selects the same schedule for each day of the week, or a separate schedule for each day of the week.	7DAY, 24hr
----------	---	--	------------

Press and release the **Item** button to select the first Occupied event for Saturday. Use the ▲ and ▼ buttons to set the time for the first Occupied event.

SATURDAY Occ 1	•	Time when the first Occupied period begins on Saturday.	--:-- to 11:50 PM or --:-- to 23:50
-------------------	---	---	--

Press and release the **Item** button to select the first UnOccupied event for Saturday. Use the ▲ and ▼ buttons to set the time for the first UnOccupied event.

SATURDAY UnOcc 1	•	Time when the first UnOccupied period begins on Saturday.	--:-- to 11:50 PM or --:-- to 23:50
---------------------	---	---	--

Press and release the **Item** button to select the second Occupied event for Saturday. Use the ▲ and ▼ buttons to set the time for the second Occupied event.

SATURDAY Occ 2	•	Time when the second Occupied period begins on Saturday.	--:-- to 11:50 PM or --:-- to 23:50
-------------------	---	--	--

Press and release the **Item** button to select the second UnOccupied event for Saturday. Use the ▲ and ▼ buttons to set the time for the second UnOccupied event.

SATURDAY UnOcc 2	•	Time when the second UnOccupied period begins on Saturday.	--:-- to 11:50 PM or --:-- to 23:50
---------------------	---	--	--

To program a schedule for SUNDAY, MONDAY, TUESDAY, WEDNESDAY, THURSDAY and FRIDAY, follow a similar procedure as described for SATURDAY.

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

Item	Ltd User	Schedule (Schd) Menu (2 of 2)	Range
------	-------------	-------------------------------	-------

**PROGRAMMING A SAME SCHEDULE FOR EACH DAY OF THE WEEK.**

Once in the Schedule (Schd) menu, press and release the **Item** button to select the 7DAY/24h item. Use the ▲ and ▼ buttons to select 24hr.

7DAY/24h	●	Selects the same schedule for each day of the week, or a separate schedule for each day of the week.	7DAY, 24hr
----------	---	--	------------

Press and release the **Item** button to select the first Occupied event. Use the ▲ and ▼ buttons to set the time for the first Occupied event.

ALL DAYS Occ 1	●	Time when the first Occupied period begins every day.	--:-- to 11:50 PM or --:-- to 23:50
-------------------	---	---	--

Press and release the **Item** button to select the first UnOccupied event. Use the ▲ and ▼ buttons to set the time for the first UnOccupied event.

ALL DAYS UnOcc 1	●	Time when the first UnOccupied period begins every day.	--:-- to 11:50 PM or --:-- to 23:50
---------------------	---	---	--

Press and release the **Item** button to select the second Occupied event. Use the ▲ and ▼ buttons to set the time for the second Occupied event.

ALL DAYS Occ 2	●	Time when the second Occupied period begins every day.	--:-- to 11:50 PM or --:-- to 23:50
-------------------	---	--	--

Press and release the **Item** button to select the second UnOccupied event. Use the ▲ and ▼ buttons to set the time for the second UnOccupied event.

ALL DAYS UnOcc 2	●	Time when the second UnOccupied period begins every day.	--:-- to 11:50 PM or --:-- to 23:50
---------------------	---	--	--

**PROGRAMMING A “NULL” EVENT**

Once in the Schedule (Schd) menu, press and release the **Item** button until the desired event is displayed. Use the ▲ and ▼ buttons to select the “time” between 11:50 PM and 12:00 AM, “--:--” is displayed indicating that the event will not occur during the schedule.

Item	Ltd User	Misc (Miscellaneous) Menu	Range
UNITS	●	The units of measure that all of the temperatures are to be displayed.	°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. <b>If Backlight is set to OFF</b> , the control returns after 10 seconds and the backlight stays off. <b>If Backlight is set to 30 SEC</b> , the control returns after 30 seconds and the backlight stays on for 30 seconds after any button press. <b>If Backlight is set to ON</b> , 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 = <input checked="" type="checkbox"/> Only qualified service people should adjust items in the ADV (Advance) and (Installer) access levels.	ADV, INST, USER, LTD

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

## Room Temperature Units (RTUs) 062e and 063e



A display RTU may be connected to the Zone Control 369e in order to provide the control with indoor temperature feedback for the heating system. When using display RTUs, several items related to the 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	062e	063e	RTU View Menu	Range
COOL AVG		●	●	●	Average temperature of all the zones assigned to the cooling group.	---, 20 to 120°F (---, -7 to 49°C)
ROOM	●	●	●	●	Current room air temperature.	---, 20 to 120°F (---, -7 to 49°C)
ROOM TRG		●	●	●	Target room air temperature.	---, 35 to 100°F (---, 2 to 38°C)
OUT DOOR	●	●	●	●	Current outdoor air temperature.	-67 to 140°F (-55 to 60°C)
FLOR		●		●	Current slab (floor) sensor temperature. This item is only available if a kanmor slab sensor is connected to an RTU 063e	-40 to 158°F (-40 to 70°C)

Item	Ltd	User	062e	063e	RTU Adjust Menu	Range
MODE		●	●	●	The operating mode for this zone.	OFF, HEAT
MODE		●	●	●	The operating mode for this zone. This item is available for RTU 6 if cooling operation is selected.	OFF, HEAT, AUTO, COOL
HEATING Occ	●	●	●	●	The desired heated room air temperature during an Occupied period for this zone. <b>Note:</b> There is only a ±3°F (±1°C) adjustment in the LTD access level.	35 to 100°F (2 to 38°C)
HEATING UnOcc	●	●	●	●	The desired heated room air temperature during an UnOccupied period for this zone. <b>Note:</b> There is only a ±3°F (±1°C) adjustment in the LTD access level.	35 to 100°F (2 to 38°C)
COOLING Occ	●	●	●	●	The desired cooled room air temperature during an Occupied period. <b>Note:</b> There is only a ±3°F (±1°C) adjustment in the LTD access level.	35 to 100°F (2 to 38°C)
COOLING UnOcc	●	●	●	●	The desired cooled room air temperature during an UnOccupied period. <b>Note:</b> There is only a ±3°F (±1°C) adjustment in the LTD access level.	35 to 100°F (2 to 38°C)
FLOR MIN		●		●	The minimum target temperature at the slab sensor. This item can only be adjusted if a kanmor slab sensor is connected to an RTU 063e	OFF, 35 to 120°F (OFF, 2 to 49°C)

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

Item	Ltd	User	062e	063e	RTU Monitor Menu	Range
OUT HI	•	•	•	•	The highest recorded outdoor air temperature since this item was last cleared. <b>Note:</b> To clear the recorded information in the specific item field, press and hold ▲ and ▼ until "CLR" is displayed.	-67 to 140°F (-55 to 60°C)
OUT LO	•	•	•	•	The lowest recorded outdoor air temperature since this item was last cleared. <b>Note:</b> To clear the recorded information in the specific item field, press and hold ▲ and ▼ until "CLR" is displayed.	-67 to 140°F (-55 to 60°C)
ROOM HI		•	•	•	The highest room air temperature recorded since this item was last cleared. <b>Note:</b> To clear the recorded information in the specific item field, press and hold ▲ and ▼ until "CLR" is displayed.	20 to 120°F (-7 to 49°C)
ROOM LO		•	•	•	The lowest room air temperature recorded since this item was last cleared. <b>Note:</b> To clear the recorded information in the specific item field, press and hold ▲ and ▼ until "CLR" is displayed.	20 to 120°F (-7 to 49°C)

Item	Ltd	User	062e	063e	RTU Time Menu	Range
------	-----	------	------	------	---------------	-------

The 369e has an internal clock used for setback purposes. In order to set the clock, the *Setback/None* DIP switch must be in the **Setback** position.

Press and release the **Menu** button to select the *Time* menu.

SATURDAY 12:00 AM	•	•	•	•	Displays current time of day and the day of week.	
----------------------	---	---	---	---	---	--

Press and release the **Item** button to select the minutes. Use the ▲ and ▼ buttons to set the minutes.

12:00	•	•	•	•	Real time clock minutes.	:00 to :59
-------	---	---	---	---	--------------------------	------------

Press and release the **Item** button to select the hours. Use the ▲ and ▼ buttons to set the hours.

12:00 AM	•	•	•	•	Real time clock hours.	12: AM to 11: PM or 00: to 23:
----------	---	---	---	---	------------------------	-----------------------------------

Press and release the **Item** button to select the day of the week. Use the ▲ and ▼ buttons to set the day.

SATURDAY	•	•	•	•	Day of the week.	SATURDAY, . . . , FRIDAY
----------	---	---	---	---	------------------	-----------------------------

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

Item	Ltd	User	062e	063e	RTU Schd (Schedule) Menu (1 of 2)	Range
ZONE OVR	•	•	•		The type of setback override that is in effect for this zone's schedule. <b>Note:</b> NONE, TMPY Occ Ovr and PERM UnOcc Ovr is available in the LTD access level.	NONE, TMPY Occ Ovr, PERM Occ Ovr, TMPY UnOcc Ovr, PERM UnOcc Ovr, HOL Ovr
<p><b>None</b> – No override. <b>TMPY Occ</b> – Overrides to Occupied setting for 3 hours. <b>PERM Occ</b> – Overrides to Occupied setting until new override is selected. <b>TMPY UnOcc</b> – Overrides to UnOccupied for 3 hours. <b>PERM UnOcc</b> – Overrides to UnOccupied setting until new override is selected. <b>HOL</b> – Heating setpoint to a maximum of 63°F (17°C), cooling setpoint to at least 83°F (28°C), ignores slab minimum settings and existing schedules.</p>						
HEAT SCH	•	•	•		The schedule this zone uses for heating.	NONE, ZONE, CTRL
COOL SCH	•	•	•		The schedule that is to be used for the cooling system.	NONE, ZONE, CTRL

**PROGRAMMING A SEPARATE SCHEDULE FOR EACH DAY OF THE WEEK.**

Once in the Schedule (Schd) menu, press and release the **Item** button to select the 7DAY/24h item. Use the ▲ and ▼ buttons to select 7DAY.

7DAY/24h	•	•	•		Selects the same schedule for each day of the week, or a separate schedule for each day of the week.	7DAY, 24hr
----------	---	---	---	--	--	------------

Press and release the **Item** button to select the first Occupied event for Saturday. Use the ▲ and ▼ buttons to set the time for the first Occupied event.

SATURDAY Occ 1	•	•	•		Time when the first Occupied period begins on Saturday.	--:-- to 11:50 PM or --:-- to 23:50
-------------------	---	---	---	--	---	--

Press and release the **Item** button to select the first UnOccupied event for Saturday. Use the ▲ and ▼ buttons to set the time for the first UnOccupied event.

SATURDAY UnOcc 1	•	•	•		Time when the first UnOccupied period begins on Saturday.	--:-- to 11:50 PM or --:-- to 23:50
---------------------	---	---	---	--	---	--

Press and release the **Item** button to select the second Occupied event for Saturday. Use the ▲ and ▼ buttons to set the time for the second Occupied event.

SATURDAY Occ 2	•	•	•		Time when the second Occupied period begins on Saturday.	--:-- to 11:50 PM or --:-- to 23:50
-------------------	---	---	---	--	--	--

Press and release the **Item** button to select the second UnOccupied event for Saturday. Use the ▲ and ▼ buttons to set the time for the second UnOccupied event.

SATURDAY UnOcc 2	•	•	•		Time when the second UnOccupied period begins on Saturday.	--:-- to 11:50 PM or --:-- to 23:50
---------------------	---	---	---	--	--	--

To program a schedule for SUNDAY, MONDAY, TUESDAY, WEDNESDAY, THURSDAY and FRIDAY, follow a similar procedure as described for SATURDAY.

**PROGRAMMING A SAME SCHEDULE FOR EACH DAY OF THE WEEK.**

Once in the Schedule (Schd) menu, press and release the **Item** button to select the 7DAY/24h item. Use the ▲ and ▼ buttons to select the 24hr.

7DAY/24h	•	•	•		Selects the same schedule for each day of the week, or a separate schedule for each day of the week.	7DAY, 24hr
----------	---	---	---	--	--	------------

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

Item	Ltd	User	062e	063e	RTU Schd (Schedule) Menu (2 of 2)	Range
------	-----	------	------	------	-----------------------------------	-------

Press and release the **Item** button to select the first Occupied event. Use the ▲ and ▼ buttons to set the time for the first Occupied event.

ALL DAYS Occ 1	●	●	●	Time when the first Occupied period begins every day.	--:-- to 11:50 PM or --:-- to 23:50
-------------------	---	---	---	---	--

Press and release the **Item** button to select the first UnOccupied event. Use the ▲ and ▼ buttons to set the time for the first UnOccupied event.

ALL DAYS UnOcc 1	●	●	●	Time when the first UnOccupied period begins every day.	--:-- to 11:50 PM or --:-- to 23:50
---------------------	---	---	---	---	--

Press and release the **Item** button to select the second Occupied event. Use the ▲ and ▼ buttons to set the time for the second Occupied event.

ALL DAYS Occ 2	●	●	●	Time when the second Occupied period begins every day.	--:-- to 11:50 PM or --:-- to 23:50
-------------------	---	---	---	--	--

Press and release the **Item** button to select the second UnOccupied event. Use the ▲ and ▼ buttons to set the time for the second UnOccupied event.

ALL DAYS UnOcc 2	●	●	●	Time when the second UnOccupied period begins every day.	--:-- to 11:50 PM or --:-- to 23:50
---------------------	---	---	---	--	--

**PROGRAMMING A “NULL” EVENT**

Once in the Schedule (Schd) menu, press and release the **Item** button until the desired event is displayed. Use the ▲ and ▼ buttons to set the “time” between 11:50 pm and 12:00 am. “--” is displayed indicating that the event will not occur during the schedule.

Item	Ltd	User	062e	063e	RTU Miscellaneous (Misc) Menu	Range
------	-----	------	------	------	-------------------------------	-------

UNITS	●	●	●	The units of measure that all of the temperatures are to be displayed.	°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. <b>If Backlight is set to OFF</b> , the control returns after 10 seconds and the backlight stays off. <b>If Backlight is set to 30 SEC</b> , the control returns after 30 seconds and the backlight stays on for 30 seconds after any button press. <b>If Backlight is set to ON</b> , 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 RTU. DIP switch = <input type="checkbox"/> Only qualified service people should adjust items in the ADV (Advance) and (Installer) access levels.	ADV, INST, USER, LTD

**REMOTE DISPLAY MODULE (RDM)**

An optional Remote Display Module can be connected up to the 369e. All items displayed on the 369e and display RTU(s) can be displayed on the RDM. To access the controls user interface, select CTRL through the DEVICE item in the Misc menu. To access a display RTU’s user interface, select RTU (where it corresponds to the appropriate zone) through the DEVICE item in the Misc menu.

kanmor Control Systems Ltd. 5100 Silver Star Road Vernon, B.C. CANADA V1B 3K4 250-545-2693 Fax. 250-549-4349 Web Site: <a href="http://www.kanmor.com">www.kanmor.com</a>	
---	--