Cover story
User Restrictions & Controller Protections, Part 1

There was a time when we had to protect the controllers to prevent users from changing the setpoint or the mode. This was done with the help of ugly thermostat covers. If the intention is to restrict users, we have features to accomplish just that. Obviously, if the location of the controller has a risk of impact, I would suggest keeping the covers to maintain the controller's integrity. The following is the first of 3 parts in which we look at some of the features found in our controllers to help reduce tampering and to protect your equipment.

Temperature Setpoints

Temperature setpoints can either be limited, using the minimum & maximum setpoint configurations or locked, using temperature setpoint lock. When using minimum & maximum setpoints, the user will be limited within the range configured. Note that the minimum & maximum temperature setpoints can be set to the same value which is the same as using the setpoint lock function. If setpoint lock is used, the user will not be able to change the setpoint. The arrow buttons which are responsible for changing the setpoint can also be used to lock the setpoint (see complete section below).

	EVCB	EFCB	TUCB/TUHB
Minimum Setpoint	AV.16	AV.10	AV.10
Maximum Setpoint	AV.17	AV.11	AV.11
Setpoint Lock	BV.2	BV.2	BV.2

Control Mode

There are several ways you can limit or restrict the control mode of the controller. It can be done by enabling certain configurations or by locking the buttons.

The *user system off mode* configuration either allows or restricts the user from turning the system off while scrolling the controller modes. Usually this function is used when

servicing the unit but can be useful for clients that want full control. In other cases, you want to prevent the user from turning off the unit. In that case, disable the off mode.

	EVCB	EFCB	TUCB/TUHB
User system off mode	BV.3	BV.3	BV.3
User system mode select	MSV.17	MSV.20	MSV.20

The *user system mode select* configuration is used to set control mode permissions. It can be set to:

- *Auto:* which allows the user to change modes between auto, heating, cooling and off (if off mode is enabled);
- *Heating*: only heating & off modes will be available;
- *Cooling*: when configured, only cooling & off modes will be available. If *heating & cooling* is configured, the user will have to toggle between heating, cooling & off modes manually. And finally, the;
- *Auto lock* function: this limits the user to automatic mode only. Note that the EFCB controller does not have this option. It can still be achieved by locking the mode button (snowflake/flame) using the *keypad bottom left lock*.

Keypad Locks

Keypad locks are very useful but can also prevent you from accessing certain menus or information. You should always verify the functions attached to each button to make sure it will not become a problem. Even though buttons are locked, when entering the program mode, the lock functions will no longer apply. The only configuration that locks everything is the *program lock* function. It can only be accessed via a BMS or BACnet browser to prevent locking yourself out.

	EVCB	EFCB	TUCB/TUHB
Keypad upper left lock	BV.7	BV.86	BV.86
Keypad bottom left lock	BV.8	BV.87	BV.87
Keypad arrow lock	BV.9	BV.88	BV.88
Program lock	BV.10	BV.89	BV.89

HVAC Controls   Electric Actuators   Actuated Valves   Humidifiers   Electric Heaters

Ramp Restrictions:

Individual ramps can be locked out when using a BMS.

	EVCB	EFCB	TUCB/TUHB
Heat ramp lock	Not available	BV.10	BV.10
Reheat ramp lock	Not available	BV.11	BV.11
Cool ramp lock	Not available	BV.13	BV.13
Changeover ramp lock	Not available	BV.17	BV.17

Next month:

In part 2 we will continue to expolore our control features designed to prevent tampering, **Unoccupied and Night Setback Mode**; and **Humidity Control (EFCB & TUCB/TUHB only).**