P6100+

RESET / AUTO MAN	**Reset** or **Auto Reset** or **Auto/Manual**
▽	**Lower Key**
△	**Raise Key**
↻	**Function Key**

Select Mode

This mode is used to gain entry to each of the modes available in the controller.

Entry into the Select Mode

Hold down ↻ and press △ in any mode to force the controller to enter into the **Select Mode**.

Navigating in Select Mode

Once in **Select Mode**, press △ or ▽ to select the required mode, then press ↻ to enter the chosen mode.

Unlock Codes

The **ULoc** screen is seen before entry is allowed to **Configuration**, **Setup** and **Automatic Tuning** modes.

An unlock code must be correctly selected using the △ or ▽ keys to enter the required mode. An incorrect entry results in a return to **Select Mode**. The value of the lock codes only can be changed from within the modes that they apply to.

Lock Code – Entry and Default Values		
Description	**Upper/Main Display**	**Lower Display**
Default values are: Automatic Tune Mode: 0 Set-Up Mode: 10 Configuration Mode: 20	0	ULoc

Automatic Tune Mode:

This mode allows the activation of **Pre-Tune** and **Self-Tune** facilities of the controller to assist the user in setting up **Proportional band**, **Integral** and **Derivative** parameter values.

To enter this mode:

Press and hold down ⟳, then press △, then release both buttons.

Press △ or ▽ until upper screen displays **Atun** and lower screen displays **SLCt**.

Press ⟳ and use △ or ▽ to enter the appropriate **Unlock Code** (**ULoc**) for the **Auto Tune Mode**. (Default as shipped is **0** - not locked).

Press ⟳ to enter the **Automatic Tune Mode**.

Hold down ⟳ and press △ to return to **Select Mode**.

Adjustable parameters are as follows:

Ptun (Pre-tune): On/Off (Process must be further than 5% of span from setpoint and setpoint cannot be ramping to allow this parameter to be set to On).
Stun (Self-tune): On/Off
TLoc (Tuning Lock Code) Change this numeric value and you are limiting access to the Automatic Tuning Mode to personnel that know the Automatic Tune Mode Lock Code.

Use △ or ▽ to change the values of the parameters.
If there is no key activity for 2 minutes, the controller automatically returns to operator mode.

Product Information Mode

This is a read only mode describing the instrument and the options fitted to it.

Hold down ⟳ and press △ in any mode to force the unit to enter **Select Mode** and select **Information Mode**. Press △ or ▽ until upper screen displays **inFo** and lower one displays **SLCt**. Press ⟳ to view each parameter in turn. Hold down ⟳ and press △ to return to the **Select Mode**.

Entry into Configuration Mode

Hold down ⟳ and press △ to force the controller into the **Select Mode**, then

press ⟳ and use △ or ▽ to navigate to the **Configuration Mode ConF** (upper display) option, then press ⟳. Enter the appropriate Unlock (**ULoc**) code for the configuration mode using △ or ▽ . (Configuration Unlock Code -- Default is **20**)

Scrolling through Parameters and Values

Press ⟳ to scroll through the parameters.

Changing Parameters Values

Press ⟲ to navigate to the required parameter, then press △ or ▽ to set the value as required. Once the value is changed, the display will flash to indicate that confirmation of the change is required. The value will revert back if not confirmed within 10 seconds.

Press ⬛AUTO MAN to accept the change or press ⟲ to reject the change and to move onto the next parameter. Hold down ⟲ and press △ to return to **Select Mode**.

Setup Mode

This mode is normally selected only after **Configuration Mode** has been completed and is used when a change to the process set up is required. It can affect the range of adjustments available in **Operator Mode**.

Entry into Setup Mode

Hold down ⟲ and press △ to enter the **Select Mode**. Enter the appropriate Unlock **(ULoc)** code for **Setup Mode** using △ or ▽. (Configuration Unlock Code -- Default is **10**)

Press △ or ▽ to navigate to the **Setup Mode** option, then press ⟲ to enter **Setup Mode**.

Scrolling through Parameters & Values

Press ⟲ to scroll through parameters and their values.

Changing Parameter Values

Press ⟲ to select the required parameter, then press △ or ▽ to set the value as required. Once the displayed value is changed, the effect is immediate. No confirmation of the change is required.

Operator Mode

This is the mode used during normal operation of the controller. It can be accessed from **Select Mode** and is the usual mode entered at power-up. The available displays are dependent upon whether **Dual** or **Remote Setpoint** modes are being used, whether **Setpoint Ramping** is enabled and the settting of the **Display Strategy** parameter in **Configuration Mode**.

Operator mode is the default mode for the control. If the control is in one of the other modes and no buttons are pressed for two minutes, the control will revert to **Operator mode**.

You can force the unit to operator mode by:

Press and hold down ⟲ then press △, then release both buttons.

Press △ or ▽ until upper display **OPtr** and lower display **SLCt**.

Press ⟲ to enter **Operator mode**.

Navigating in Operator Mode

Press ⟲ to move between displays.

When a display value can be adjusted, use △ or ▽ to change its value.

Adjusting the Local Setpoints

Setpoints can be adjusted within the limits set by the **Setpoint Upper** and **Lower Limit** parameters in **Setup**. Operator mode adjustment of **Setpoint** is not possible if **Display Strategy 6** has been selected on **Configuration Mode**.

Press ↺ to select the adjustable setpoint display.

Press △ or ▽ to adjust the setpoint to the required value.

Adjusting the Setpoint Ramp Rate

The ramp rate may be adjusted in the range 1 to 9999 and OFF. Increasing the ramp rate value beyond 9999 will cause the upper display to go blank and setpoint ramping to be switched OFF. **Setpoint ramping** can be resumed by decreasing the ramp rate to 9999 or less.

Press ↺ to select the adjustable setpoint display.

Press △ or ▽ to adjust the setpoint to the required value.

Manual Control Mode

To allow manual control to be selected in **Operator Mode**, *PoEn* must be enabled in **Set Up Mode**. The **MAN** indicator will flash continually in **Manual Mode**.

Selecting/deselecting Manual Control Mode
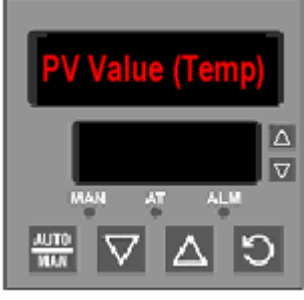
Press [AUTO MAN] key to toggle between **Automatic** and **Manual** control.

Press △ or ▽ to adjust the output power to the required value.

Display Strategies

Six (6) different display strategies are available with the 6100 Plus controls. As standard 6100 Plus is programmed for strategy #1. Strategy can be changed in the **Configuration Mode**.

Strategy #	Initial Operator Displays	Description
1		**Standard** *PV with target setpoint* Process variable in the upper display. Active Setpoint in the lower display. Operator must press ↺ to change the setpoint value. If the setpoint is ramping the target setpoint is displayed in the lower display.

Strategy #	Initial Operator Displays	Description
2		**PV with target setpoint with changeable SP.** Process variable in the upper display. Active Setpoint in the lower display. Operator can change the setpoint value by using the △ or ▽ keys. If the setpoint is ramping the target setpoint is displayed in the lower display.
3		**PV with ramping setpoint** Process variable in the upper display. Actual Setpoint in the lower display. Operator must press ↻ to change the setpoint value. If the setpoint is ramping the ramping setpoint is displayed in the lower display.
4		**PV with blank lower display** Process variable in the upper display. Blank lower display. Operator must press ↻ to change and/or display the setpoint value.
5		**SP with blank lower display** Setpoint in the upper display. Blank display. Operator must press ↻ to change and/or display the setpoint value.
6		**PV with ramping setpoint - no setpoint change is allowed.** Process variable in the upper display. Actual Setpoint in the lower display. No setpoint change is allowed in the operator mode. Setup mode must be used to change the setpoint value.

Operator Mode Standard Available Parameters
(Not all parameters are available in all configurations - See Notes)

Press Key	Parameter	Description	Notes
↺	SP	Setpoint or the target value of setpoint when ramping.	Not available with dual setpoint option. Not adjustable in strategy #6.
↺	_SP 1	Setpoint #1 when dual setpoint option is installed.	Not available if dual setpoint option is not installed. Not adjustable in strategy #6.
↺	_SP 2	Setpoint #2 when dual setpoint option is installed.	Not available if dual setpoint option is not installed. Not adjustable in strategy #6.
↺	SPrP	Actual value of setpoint while the setpoint is ramping.	Read only Not available if ramping is disabled.
↺	rP	Setpoint ramping rate in units per hour.	Not available if ramping is disabled. Not adjustable in strategy #6.