

## Supra Cabinets & Counters from 1996 Onwards

### Factory Set Parameters

SET No	Cabinet Models			Counter Models		
1	GS	501, 601, 1131, 1351, 2101	HT, HTR	GSC	ALL	H
	GS	501, 601, 1131	HU, HUR	GSC	ALL	HR
	GS	ALL (High Temp Section)	HLT			
2	GS	501, 601, 1131	WT, WTR, WU, WUR			
3	GS	601, 1131	FT	GCS	ALL	F
4	GS	501,601,1131,1351	LT	GCS	ALL	FR
5	GS	501,601,1131,1351	MT	GSC	ALL	L
6	GS	501,601,1131,1351	CT	GSC	ALL	M
7	GS	2101	MT	GSC	ALL	MR
	GS	501,601,1131,1351,2101	MTR			
	GS	501,601,1131	MU, MUR			
8	GS	2101	CT	GSC	ALL	CR
	GS	501,601,1131,1351,2101	CTR			
	GS	501,601,1131	CU, CUR			
9	GS	501,601	LU	GSC	ALL	LR
	GS	All (Low Temp Section)	LUR			
10	GS	501,601,1351	LTR			
	GS	All (Low Temp Section)	LUR			
11	GS	2101, 2101	LT, LTR			
	GS	1131	LU			

Parameter Set No.		1	2	3	4	5	6	7	8	9	10	11	
<b>Parameter</b>													
Temperature Set Point	C1	1	10	-1	-21	-2	0	-2	0	-21	-21	-21	C1
High Food Temp Alarm	C2	8	19	5	-15	5	8	5	8	-15	-15	-15	C2
Low Temp Food Alarm	C3	0	4	-3	-25	-4	-1	-4	-1	-25	-25	-25	C3
Condenser Clean Interval	C4	0	0	0	0	0	0	0	0	0	0	0	C4
Time Since Last Defrost	L1												L1
Temperature Differential	P1	3	2	2	3	2	2	2	2	3	3	3	P1
Time Between Condenser Clean	P2	15	15	15	15	15	15	15	15	15	15	15	P2
Maximum Set Point	P3	5	17	2	-15	0	2	0	2	-15	-15	-15	P3
Minimum Set Point	P4	1	5	-2	-25	-3	-1	-3	-1	-25	-25	-25	P4
Evap Fan Operating During Defrost	P5	1	1	1	0	0	0	0	0	0	0	0	P5
Air Temperature Offset	P6	0	0	0	0	0	0	0	0	0	0	0	P6
Number of Defrost Per Day	D1	4	4	4	4	4	4	4	4	4	4	4	D1
Termination Temperature	D2	30	30	30	30	30	30	15	15	20	30	15	D2
Termination Time	D3	15	15	15	10	5	5	10	10	15	15	12	D3
Defrost Type	D4	0	0	0	1	1	1	0	0	0	0	0	D4
Drain Down Time	D5	1	0	1	1	1	1	1	1	1	1	1	D5
Fan Delay Time	D6	5	5	5	5	3	3	3	3	5	5	5	D6
Fan Delay Temperature	D7	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	D7
Recovery Time	D8	5	5	5	8	5	5	5	5	5	5	5	D8
Door Alarm Delay	A1	5	5	5	5	5	5	5	5	5	5	5	A1
Internal Audible Alarm Select	A2	1	1	1	1	1	1	1	1	1	1	1	A2
External Alarm Select	A3	1	1	1	1	1	1	1	1	1	1	1	A3
Probe Failure Response	A4	0	0	0	0	0	0	0	0	1	1	1	A4
Max. High Food Temp Alarm	A5	10	20	8	-10	8	10	8	10	-10	-10	-10	A5
Min. Low Food Temp Alarm	A6	-5	2	-5	-30	-5	-2	-5	-2	-30	-30	-30	A6

### INTRODUCTION

NOTE: All Controllers are supplied set for high temperature +1 to +4 applications.


A microprocessor temperature controller which holds and displays a pre-set counter / cabinet air temperature. The controller performs many other functions which include automatic defrost initiation, alarm functions and calculation of stored product temperature.


The display fascia panel and microprocessor control board form a single integral unit, from here on referred to as the controller.


### SYMBOLS AND INDICATORS


The symbols on the fascia panel consist of a seven segment display together with the following indicators and symbols.


Illuminated indicators — these appear adjacent to the three digit display.

Condensing Unit -  LED illuminated green when Condensing Unit output is high.

Evaporator Fans -  LED illuminated green when Evaporator Fan output is high.

Condenser Clean -  LED illuminated green when Condenser Clean time (P2) has elapsed.

Food temperature -  LED illuminated amber when Calculated Stored Product Temperature is outside the pre-set High and Low Food Temperature Alarm Settings (C2 and C3 respectively).





Door Open -  LED illuminated red when the Door Alarm Delay (A1) has elapsed. Extinguished when all doors are re-closed.


### PARAMETER PROGRAMMING AND OPERATING INSTRUCTIONS

The parameters which control the operation are divided into User Parameters (those to which the operator has access) and the Factory Set parameters (additional parameters not intended to be modified by the user).

User Parameter Programming — Access to the user parameters can be made by a simple series of key operations.

While the controller is switched in and operating normally, pressing the **SET** button will cause the controller to enter the programming mode, with the display showing **SET**. Further operation of the **SET** key causes the display to scroll through the User Parameters C1 to C4.

While the **SET** key is depressed, the parameter number is displayed, releasing the **SET** key causes the value of the parameter to be displayed. A parameter value may be altered using the  (Increment) or  (Decrement key). While the  or  key is depressed, the parameter number is displayed, releasing the key causes the new value of the parameter (incremented or decremented) to be displayed.

To exit the User Parameter Programming Mode and return to normal operation of the Controller, the  key must be pressed while holding down the **SET** key. While both buttons are depressed the display will show **FIN** and releasing the buttons will return the Controller to normal operation with the display showing internal air temperature. Note, while the Controller is in the programming mode, control of the cabinet/ counter refrigeration components is still maintained.

Note, while in the programming mode, if no button is depressed for two minutes, the Controller will revert to normal operation.

Example:

Press <b>SET</b>	Display shows <b>SET</b>	
Press <b>SET</b>	Display shows <b>C1</b>	(while <b>SET</b> button is depressed)
	Display shows value	(when <b>SET</b> button is released)
Press <b>SET</b>	Display shows <b>C2</b>	(while <b>SET</b> button is depressed)
	Display shows value	(when <b>SET</b> button is released)

Pressing  $\triangle$  or  $\nabla$  buttons will cause the value of a parameter to increment.

Press $\triangle$	Display shows <b>C2</b>	(while the $\triangle$ button is depressed)
	Display shows new value	(when the $\triangle$ button is released)

Press <b>SET</b>	Display shows <b>C3</b>	(while the <b>SET</b> button is depressed)
	Display shows new value	(when the <b>SET</b> button is released)

Press <b>SET</b>	Display shows <b>C4</b>	(while the <b>SET</b> button is depressed)
	Display shows new value	(when the <b>SET</b> button is released)

Pressing the **SET** button after the last parameter will cause the display to return again to the first parameter.

Press <b>SET</b>	Display shows <b>C1</b>	(while <b>SET</b> button is depressed)
	Display shows value	(when <b>SET</b> button is released)

If desired, the controller can be caused to exit the programming mode having saved any new parameter values.

Press <b>SET</b> & $\triangle$ together	Display shows <b>FIN</b>	(while buttons are depressed)
	Display shown Air Temp	(when buttons are released)

## ENTERING FACTORY SET AND PROGRAMMING MODE

Display Factory Parameter

Access to the Factory Parameter settings is made by first entering the User Programme C1 to C4. Holding down the **SET** key and pressing the  $\triangle$  key will cause the controller to display **FIN**. Releasing the  $\triangle$  key and depressing the 'I/O' (with the **SET** key still pressed) will cause the controller to display **LLL**. Pressing the **SET** key will scroll through to parameter L1.

**Display / Amend Parameters P1 - P6.**

Holding the **SET** key and pressing the  $\nabla$  key will cause the controller to display 'OPS'. Pressing the **SET** key will scroll through parameters P1 to P6. Parameter values may be altered using  $\nabla$  or  $\triangle$  key.

**Display / Amend Parameters D1 - D8.**

Holding the **SET** key and pressing the  $\nabla$  key will cause the controller to display 'df'. Pressing the **SET** key will scroll through parameters D1 to D8. Parameter values may be altered using  $\nabla$  or  $\triangle$  key.

**Display / Amend Parameters A1 - A8.**

Holding the **SET** key and pressing the  $\nabla$  key will cause the controller to display 'AL'. Pressing the **SET** key will scroll through parameters A1 to A8. Parameter values may be altered using  $\nabla$  or  $\triangle$  key.

## Exit Factory Parameters.

To exit Factory Parameter Programming and return to normal operation of the controller, the **SET** key must be held down and the  $\nabla$  key must be pressed. While both buttons are pressed, the display will show **FIN** and releasing the buttons will return the controller to normal operation.

Note, while in the programming mode, if no button is pressed for a period of thirty seconds, the controller will revert to normal operation.

## Defrost.

During the Defrost operation the display will show DEF. The evaporator indicator will be off. At the end of the defrost operation there will be a drain down period when neither the compressor or evaporator will run, therefore both indicator lights will be off. During this period DEF will be displayed. Upon completion of the drain down period, the Recovery operation is initiated with the display showing REC.

The compressor will run and the green compressor on indicator will illuminate.

On completion of the fan delay period (either by temperature or time) the evaporator fan will run with the green fan indicator LED illuminated.

At the end of the Recovery time the display will revert back to displaying the internal cabinet temperature.

To initiate a MANUAL DEFROST press and hold the defrost button, press the  $\triangle$  button, the display will show DEF, release both buttons.

The defrost will be the same as an automatic defrost.

Should a temperature probe failure occur the controller will indicate the fault by flashing on the fascia: **PF1** or **PF2**.

**PF1.** When an air probe fault occurs the Condensing Unit Output may fall low depending on the status of the parameter Probe Failure Response (A4).

**PF2.** If an evaporator probe failure occurs, the parameter defrost Termination Temperature (D2) is ignored and defrosts are caused to terminate only after the period Termination Time (D3) has elapsed.

## Please Note:

As of November 1998 the **RED** defrost probe (PF2) has been removed and replaced with a 5.1kOhm Resistor.

All new controllers come with the resistor fitted. Should you require resistors you can contact the Product Support at King's Lynn and they will be issued free of charge.

For Supra Cabinet and Counter products having hot gas defrost, no changes are required to the parameter settings.

For Supra Cabinet and Counter electric defrost models, a heat limit Klixon should be fitted as an additional safety device. The type of Klixon to be fitted will depend on the particular model, for further information on type contact the Product Support Department on Telephone Number: 01553 691122.

The effect of removing the probe will mean that the coil probe will always be shown as between -1°C or +1°C when pressing the  $\triangle$  button.

## Ferrite Ring Suppressor on the Supra Controller.

As of October 1998 a ferrite core has been fitted to give immunity to the controller from mains borne electrical noise ('EFT' = Electrical Fast Transients). The ferrite operates by absorbing energy from the noise, thus reducing the amount of noise passed on to the controller.