

NETTO MULTI-MAJOR CONTROLLER

Set Up Guide

SGM31_01

INTRODUCTION

The Multi-Major Controller will control one to four cabinet evaporators, across one or two temperature zones, or a single coldstore evaporator.

Each evaporator has individual defrost outputs and liquid solenoid valve outputs for each temperature zone, with common fans and cabinet lights outputs, (the cabinet lights output becomes the tray heater output when set to control a coldstore)

The controller can be connected to the System Manager via any existing RCS communication network, and so providing datalogging, alarm indication and remote parameter alteration facilities.

Valid for software version NMCC0102

WARNING !

For the safety of personnel and the proper functioning of the equipment it is essential that everybody who uses or works on this equipment must be competent to prevent danger and injury. The safety instructions in this manual are intended to draw attention to potential hazards that may be encountered during installation, commissioning and operation of the equipment.

While the installer is responsible for the correct and safe installation and commissioning of the equipment, once this is complete, the owner and/or user of the equipment is responsible for its safe operation and maintenance. It is essential that personnel who operate or maintain the equipment know how to isolate each part of the system from its electricity supply.

I/O ASSIGNMENT

Temperature Inputs

Temperature_01	Air On Temperature 1
Temperature_02	Air Off Temperature 1
Temperature_03	Defrost Termination 1
Temperature_04	Air On Temperature 2
Temperature_05	Air Off Temperature 2
Temperature_06	Defrost Termination 2
Temperature_07	Air Off Temperature 3
Temperature_08	Air Off Temperature 4

Digital Input

Digital Input 1	Sleep Mode
Digital Input 2	Door Switch

CONTROLLER CONFIGURATION

BIT SWITCH SET S1 (NUMBER OF TEMPERATURE ZONES / EVAPORATORS AND COMMS PROTOCOL)

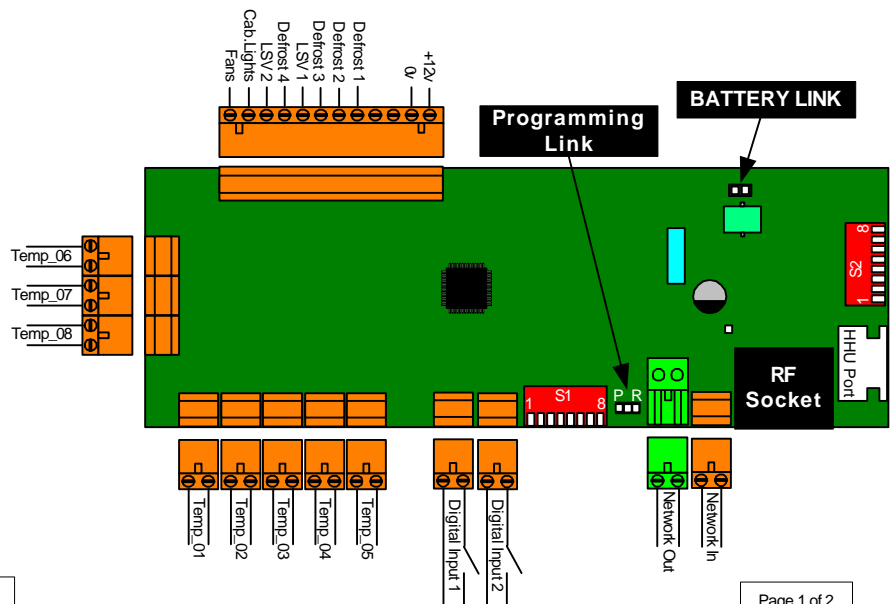
NUMBER OF EVAPORATORS / TEMPERATURE ZONES		Configuration/Protocol (Switches 4 to 8)	
ONE CONTROL ZONE, ONE EVAPORATOR		Back to Back Irios operation (2 Evap. Single Zone Only)	On = Back to Back Selected Off = Normal operation
ONE CONTROL ZONE, TWO EVAPORATORS		RF COMMS IN USE (Direct Transceiver connection only)	On = RF Transceiver in Use Off = RF Transceiver NOT in Use
ONE CONTROL ZONE, THREE EVAPORATORS		Linde Probes in Use	On = Linde Probes in Use Off = RCS Probes in Use
ONE CONTROL ZONE, FOUR EVAPORATORS		Comms. Settings	RMS 19200 Bps
TWO CONTROL ZONES, TWO EVAPORATORS. (ONE EVAP. IN EACH ZONE)			RMS 600 Bps
TWO CONTROL ZONES, THREE EVAPORATORS. (TWO EVAPS. IN FIRST ZONE)			Reserved for Future Use
TWO CONTROL ZONES, FOUR EVAPORATORS. (TWO EVAPS. IN FIRST ZONE)			RMS 9600 Bps

BIT SWITCH SET 2 (APPLICATION & TEMPERATURE RANGE)

Application (Switches 1 to 5)		Temperature Range ZONE 1 (Switches 5 to 6)		
Fan State In Defrost	On = Fans On During Defrost	-24.0 °C Frozen Food		
	Off = Fans Off During Defrost			
Cabinet or Coldstore	On = Coldstore Control	+4.0 °C Fresh Meat Poultry Fish		
	Off = Cabinet Control	+1.0 °C Provisions Fresh Milk, Cheese		
Defrost Probe Fitted? Temp. Zone 1	Off = Not Fitted	+8.0 °C Produce		
	On = Fitted	Temperature Range ZONE 2 (Switches 7 to 8)		
Defrost Probe Fitted? Temp. Zone 2	Off = Not Fitted	-24.0 °C Frozen Food		
	On = Fitted	+4.0 °C Fresh Meat Poultry Fish		
Key to Symbols		+1.0 °C Provisions Fresh Milk, Cheese		
		+8.0 °C Produce		
		Switches viewed side-on from edge of board		Switch OFF (up)
			Switch ON (down)	

Note: If you change any switch settings, remember to power down/up the controller and load defaults.

BOARD LAYOUT AND CONNECTION DETAILS



HHU EDITING EXAMPLES

LOADING DEFAULT PARAMETERS

```

→ Unit Number 2.0
Cold Cab VCCP 9.04
Any Alarms? NO
Mode REF
    
```

The Load Defaults item is on the Startup list. Press ESC to display the list of menus.

The Power Up List

```

→Alarms Defrost
Status Settings
Manual Times
Startup
    
```

Use the arrow keys to move the arrow to Startup and press ENT.

The Menu List

```

→ Load Defaults DONE
Unit Number 301.0
Evap Type 23C
Current Time 13:00
    
```

The Load Defaults item is the first in the list. (Don't be fooled by DONE appearing next to this item ... it isn't done yet.)

Press ENT to enter this item.

The Startup List

```

Edit: Load
Defaults
                                DONE
    
```

Ignore Done ... it still isn't. Press the down arrow key until you see BEGIN.

The Load Defaults Item

```

Edit: Load
Defaults
                                BEGIN
    
```

Press ENT to start loading the default parameters. (Pressing ESC twice at this point returns you to the Startup list without loading the default parameters).

The Load Defaults Item

```

→ Load Defaults DONE
Unit Number 0.0
Evap Type 23C
Current Time 13:01
    
```

The Startup list reappears - all parameters have been set to their default values. (Note that because the Unit Number is a parameter, it has returned to the default value of 0.0. The Unit Number must always be set up again after loading defaults - see below.)

The Startup List

SETTING UP THE UNIT NUMBER (RMS AND RCS13bit COMMS ONLY)

```

→ Unit Number 2.0
Cold Cab VCCP 9.04
Any Alarms? NO
Mode REF
    
```

The Unit item is on the Startup list. Press ESC to display the list of menus.

The Power Up List

```

→Alarms Defrost
Status Settings
Manual Times
Startup
    
```

Use the arrow keys to move the arrow to Startup and press ENT.

The Menu List

```

Load Defaults DONE
Unit Number 301.0
Evap Type 23C
Current Time 13:00
    
```

The Unit Number item is the second in the list.

Press ENT to enter this item.

The Startup List

```

Edit: Unit Number
Max Value 199.9
                                0.0
Min Value 0.0
    
```

The maximum and minimum values allowed are displayed. The current value (0.0) is shown between them.

Press the left and right arrow keys to change the unit number value.

The Unit Number Item

```

Edit: Unit Number
Max Value 199.9
                                2.0
Min Value 0.0
    
```

Press ENT to confirm the change.

The Unit Number Item

```

→ Load Defaults DONE
Unit Number 2.0
Evap Type 23C
Current Time 13:01
    
```

The Startup list reappears - the unit number has been updated.

The Startup List

COMMISSIONING A CONTROLLER

Select the Application bit-switch setting you require, ie Cabinet or Coldstore, PEV or LSV etc....

Select the comms protocol and speed bit-switch setting you require.

Are you using new RCS 5 bit comms ?

Yes

No

Set the unit address bit-switch setting you require.

Power up the controller

Plug in a Phoenix HHU and load defaults (within startup menu) wait for 5 seconds for defaults to be correctly loaded.

Are you using old RMS or new RCS 13 bit comms ?

Yes

No

Set the unit number you require (within the startup menu)

Are replacing a faulty controller, or commissioning New a new controller.

Faulty

Setup the defrost times and any other parameters that you wish.

Remove the HHU

Check that the unit is communicating to the system manager.

Notes :

1. If you wish to connect a Major controller to an existing zone of Minor or Skytron controllers, RCS 5bit 9600 bps comms must be selected.