**Innovation In and
Out of Parlour**

Micro M3S Memory Control Installation

Manual Version - v3.0

Software Version - v4.63

Date - January 2016

Part Number - 39-0110

Current Subroutines:

Not all of the MicroM3S subroutines are detailed in this manual; some are specific to system options (i.e. Auto-ID) and are described in the publications that accompany that equipment. Below is the complete list for easy reference:

💣 *Use with caution; restores factory settings and / or deletes existing animal records permanently!*

*Indicates software version where subroutine available from (i.e. V4.01 means available from v4.01 onwards).

	Subroutine	Installation Manual Page Number	Operation Manual Page Number
Display Software Version:	2	26	12
Auto-ID/Pegasus Sorting Gate System: Link Tag Number to animal Record:	3	-	-
Buzzer: Enable/Disable:	4		12
Set the Real Time Clock:	5	27	12
Display the Real Time Clock:	6	27	12
Change 3AM Housekeeping Time (v4.28) :	7		32
Change 11AM Housekeeping Time (v4.28) :	8		33
Change 8PM Housekeeping Time (v4.28):	9		33
Browse the Animals NOT Fed:	10		31
Browse the Animals with a Variation in Milk Yield:	11		51
Browse Animals Due for Artificial Insemination (AI):	12		14
Add X (user defined) Units to ALL Animal Rations:	100		20
Take Away X (user defined) Units from ALL Animal Rations:	101		20
Feed Key Repeat (v4.45*):	102		22
Clear Daily Milk Yield: 💣	110		24
Clear Cumulative Yield of all Cows in Herd: 💣	111		22
Clear ALL Animal Records: 💣	281	47	15
Auto-ID: Enable/Disable:	300	38	
Milk Meter Interface: Enable/Disable:	301	34 / 37	
Auto-ID: Pre-Feed for LHS of Parlour: Enable/Disable (v4.14*):	302	38	
Auto-ID: Pre-Feed for RHS of Parlour: Enable/Disable (v4.14*):	303	39	
Auto-ID: Pre-Feed: Enable/Disable:	304	38	
Auto-ID: Antenna Selection Test:	305	-	-
Auto-ID: In-Stall Antenna Lag Setup:	306	39	
Portal/Walkthrough ID: Enable/Disable:	307	40	
Auto-ID: Create animal Record during In-Stall Auto-ID Tag Linking Process (v4.29*):	308	-	-
Auto-ID: Scan End Buzzer: Enable/Disable (v4.29*):	309	39	
Milk Meter System: Enable/Disable (v4.09*):	311	34	
Swingover Parlour: Enable/Disable (v4.09*):	312	34	
Milk Meter System: Wash Mode: Enable/Disable (v4.09*):	313	36	23
Milk Meter System: Enable/Disable Milk Meter Lockout (v4.18*):	317	35	22
Milk Meter System: Warning Flag Lockout Setup (v4.18*):	318	35	23
Milk Meter System: Swing-to-Start: Enable/Disable (v4.18*):	319	36	
Pegasus Sorting Gate System: Enable/Disable (v4.09*):	320	41	
Pegasus Sorting Gate System: Gate Terminal Display: Enable/Disable (v4.20*):	322	41	
Pegasus Sorting Gate System: Gate Close Delay: Enable/Disable (v4.24*):	323	41	
Pegasus Sorting Gate System: Gate Close Delay Value Setup (v4.24*):	324	42	
Pegasus Sorting Gate System: Enable Gate Close Sensor (v4.27*):	325	42	

Current Subroutines Continued:

		Installation Manual Page Number	Operation Manual Page Number
Pegasus Sorting Gate System: Test Shedding Gate (v4.27*):	*326*	51	
Pegasus Sorting Gate System: Gate Show Tag	*327*	43	
Pegasus Sorting Gate System: Enable Gate Close Sensor Warning Flags (v4.36*):	*329*	42	
Auto-ID: Enable/Disable V4 Auto-ID Interface (v4.44*):	*330*	42	
Milk Meter System: Enable V2.00 Milk Meters (v4.23*):	*331*	35	
Milk Meter System: Enable V3.00 Milk Meters (v4.34):	*332*	35	
Oriel System: Enable/Disable Oriel Stall Displays (v4.43*):	*333*	38	
Pegasus Sorting Gate System: Enable/Disable V4 Gate Interface (v4.44*):	*334*	47	
Milk Meter System: Feed when Milk Meter Starts Milking (v4.47*):	*350*		23
Auto-ID: Force Auto-ID System to Feed Warning Animals (v4.62*):	*360*		22
Enable / Disable Pulse-8 (v4.29*):	*400*	45	
Enable/ Disable Milk Pump Control:	*420*	46	
Display Milk Meter Total Yield on Wash Box (v4.63*):	💣 *440*	36	
Clear Animal Fed Flags:	*581*		21
Clear Subroutine Setting (v4.01*):	💣 *582*	47	
Clear Warning Flags For Entire Herd (v4.01*):	*585*		14
Auto-ID: Test Interface:	*600*	50	
Milk Meter Interface: Test:	*601*	50	
Test Display Board:	*602*	50	
Pegasus Sorting Gate System: Interface Software Version:	*604*	51	
Milk Meter System: Test Communications (v4.13*):	*605*	51	
Test Relay PCB Communications (v4.13*):	*606*	49	
Wash Box Communications (v4.40*):	*607*	51	
Pulse-8 Communications Test (v4.45*):	*608*	52	
Mlik Pump Control Communications Test (v4.52*):	*609*	52	
Digital Feeder Control Communications Test (v4.59*):	*610*	53	
Program/Feed Modes:	*638*	25	11
Select Animal Type (v4.63*):	*700*	27	
Select Parlour Type (v4.63*):	*701*	28	
Display Serial Number:	*777*	47	
Factory Reset to Default Settings:	💣 *888*	48	
Factory Reset and Load Entire Memory with 'Dummy' animals:	💣 *889*	48	
Display Number of animals Programmed In Memory (v4.01*):	*974*		14
Fuse Detection: Enable/Disable:	*975*	30	29
Set the Number of Milkings per Day:	*977*	28	
Set the Default Parlour Side:	*978*	28	
Milk Meter Interface: Set Discharge Volume (litres per pulse):	*979*	37	
Select the Feeding Mode:	*981*	29	18
Set the Number of Stalls (per side):	*982*	29	
Set the Number of Feeders to Run:	*983*	29	

💣 *Use with caution; restores factory settings and /or deletes existing animal records permanently!*

*Indicates software version where subroutine available from (i.e. V4.01 means available from v4.01 onwards).

Current Subroutines Continued:

	Installation Manual Page Number	Operation Manual Page Number
Select the Type of Feeder:	*984*	29	
Set Up Milk Yield Error Percentage:	*986*	37	23
Calibrate Feeders Individually:	*987*	31	
Double Feed Flag: Enable/Disable:	*992*		21
Warning Flags: Enable/Disable:	*995*		21
Entering and Clearing Once Only Warning Flags (v4.28*):	*996*	43	26
Set Number of Extra Parlour Controls:	*997*	44	
Test Displays:	*998*	49	
Test Keyboard (v4.13*):	*999*	49	

💣*Use with caution; restores factory settings and/or deletes existing animal records permanently!*

*Indicates software version where subroutine available from (i.e. V4.01 means available from v4.01 onwards).

Manual Versions

About the Micro M3S Control

The Micro M3S is a simple and easy to use memory feeder control which can be connected to a wide range of optional extras including parlour auto-id, automatic drafting gates, milk meters and animalculator dairy animal management software. It can be used on herringbone, parallel or abreast parlours.

Using the Control

As the animals enter the parlour, you just key in the animal number and press feed, the correct ration is delivered to the next available stall on the current parlour side. When that side is full the opposite side is automatically selected and the stall reset to '1'.

Features

- Memory can store up to 999 animals
- 4 digit numeric animal numbers
- 6 health attentions - AI, vet, mastitis, dry, test, bulling and slow - optional animal already fed attention
- Feeding and milking prevention on health attentions
- Optional audible attentions
- Stainless steel mounting bracket and fixing kit included

Options

- Feeding and non-feeding versions available
- Store milk yields using the ATL milk meter
- Store milk yields from Fullwood Afikim, Gascoigne Melotte, Nedap and other milk meters
- Automatically feed and store milk yields without keypad animal number entry using auto-id
- Automatically sort animals using the Pegasus drafting system
- Connect to Cowculator dairy animal management PC software to manage your animals, perform feed to yield and select animals for drafting from the comfort of your farm office

Milking Features

- 2 or 3 milkings per day
- Connects to either ATL milk meters or other manufacturers milk meters using Milk Meter Interface
- Milking totals available - current day yield for animal, previous day yield for animal, current day yield for herd and animals with percentage milk yield variation

animalculator PC Software Additional Features

- Manage your animals using feed and yield history over multiple lactations
- Monitor animals health and medicine use
- Feed to yield and feeding based on days in milk

Extra Parlour Control

- Access animal records from another terminal in the parlour using the Extra Parlour Control

Specifications

- 12/24vDC switching positive or negative feeders as standard
- 12-230vAC feeder switching voltage optional using Feeder Interface
- Drives electric or vacuum feeders
- Electronic fuse detection with power supply failure warning
- Drives 12 feeders per side as standard
- Expandable to 48 feeders per side using Feeder Relay Extender Box

Innovation In and Out of Parlour

| animal | Program | Ration | Yield/Flags | ◄ Stall/Side ► |

Cumulative Totals

Micro M3S Control

Innovation In and Out of Parlour

Reset / Cancel	Cal / Ration	AI / **1**	Vet / **2**	Mas / **3**	Fuse / Feed
Delete / Change	Clear / Yield	Dry / **4**	Test / **5**	Bull / **6**	All / Batch
Recall	Totals	Slow / **7**	**8**	**9**	Back / Step
Attn	Back / Browse	Shift	**0**	Subs / Enter	Side

Fed ●
AI ●
Vet ●
Mas ●
Dry ●
Test ●
Bull ●
Slow ●

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Website: www.atlagri.com
E-mail: info@atlagri.com

CE

Installing the Micro Control using the Supplied Stainless Steel Bracket

The Micro Control comes with a stainless steel bracket and fixing kit. This should be used to mount the control onto a crossover in the milking parlour pit. If the control us running feeders, it is recommended that it is mounted at the entry end of the pit, with the control face facing the collecting yard. If the control is only running an parlour auto-id or drafting system, it can be mounted at the entry, middle or exit end of the parlour, depending upon user preference.

IMPORTANT - Feeder Relay Extension boxes should be mounted close to the Micro Control to facilitate the operation of the stand-by feeding.

Mounting the Feeder Relay Extension boxes away from the milking pit and Micro Control will make stand-by feeding difficult and should be avoided.

2 x 45mm Exhaust Clamp (U-Bolt)

Fixing Holes for 30mm Exhaust Clamp (U-Bolt) Provided

M6 x 16mm S/S Bolt with M6 S/S Nut

STANDBY STALL   STANDBY BATCH

FEED OFF

FEED ON

STALL SELECTOR

3 4 5
2   6
1   7
12   8
11   10   9
SIDE L   R

M6 x 16mm S/S Bolt with M6 S/S Nut
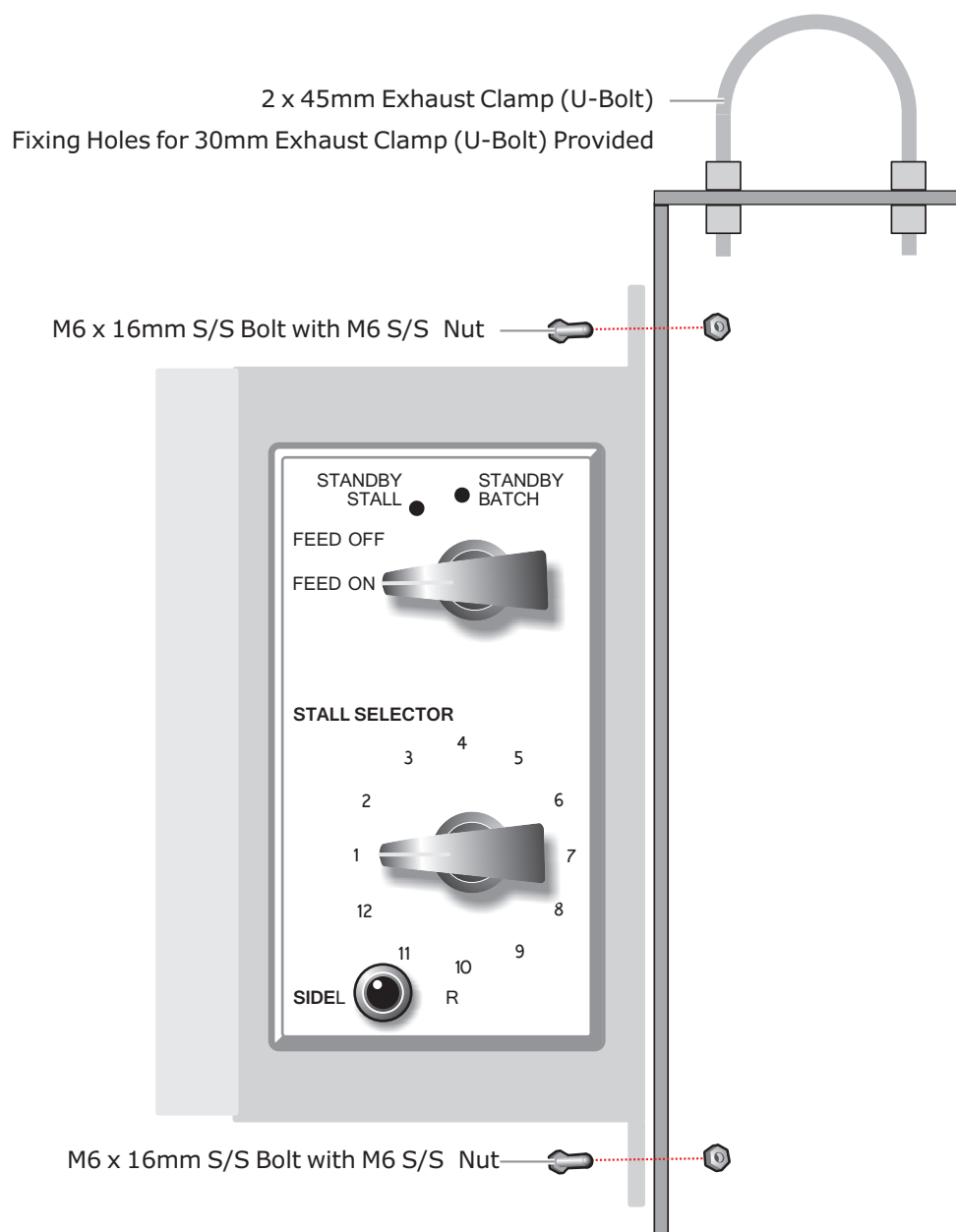
Good Practice During the Installation

- A separate mains supply and earth running directly from the consumer meter is essential.

- Avoid routing the mains cable to the power supply close to other supplies especially those providing intermittent current motors that are starting and stopping continually or high power heaters with thermostatic control.

- Terminate in a sealed, fused, double pole switched outlet fitted with a 13Amp (Type 1362) fuse or trip. A 3-pin ring main socket is not suitable in parlour conditions. All mains cabling must be contained in a firmly secured durable conduit.

Power Supply: Siting

- Fix the power supply to a wall or suitable brackets in a well ventilated area sufficiently high to avoid physical contact or damage, leaving a gap of at least 250mm (10") between the top of the power supply casing and the ceiling.

- Position the power supply so that the output (low DC voltage) cables are as short as possible even if this means extending the mains supply.

ATL Power Supplies: Output Voltages

- ATL power supply outputs are factory set and should not be adjusted.

396 Watt 12vDC PSU   60 Watt 12vDC PSU
Input: 100 - 240vAC   Input: 100 - 240vAC
Output: Nominal 12vDC   Output: Nominal 12vDC

- The 396 Watt 12vDC and 60 Watt 12vDC power supplies have a thermal cutout and overload protection which removes power from the outputs in the event of an overload.

- There are two indicators fitted to the base of the power supply casing; red indicates that the mains is present and green that the output supply is available.

Control and Feeder Cables and Conduit

- Cables must be kept as short as possible running directly from point to point. Cut out any excess cable rather than leaving it coiled.

- Wherever possible cables should be contained in a waterproof conduit using the correct csa cable specified in the diagrams.

- **Entries must be made into the bottom of power supply or control casings but never into the top. This will invalidate the warranty.**

- Strip existing cables back to bright copper before connection.

- Keep multicore cables away from other cables especially those carrying mains or heavy currents. Cross only at 90° where necessary and do not enclose in conduit with other cables.

Data Sheets Included: Datasheet 43A-D - Feeder Relay Extension Box, Datasheet 16A-B - 'M' Type Feeder Connections and Datasheet 17A-B - 'M' Type Feeder Connections.

Good Engineering Practice

Adopting good engineering practice during installation will avoid most problems with electronic control systems.

- Check the existing wiring carefully. Do not assume that it will be up to the required standard. It may have been extended with thinner wire and be unable to carry the current without a volt drop.

- Termination of cables in enclosures. Do not coil excess cable in enclosures. Loops are good transmitters of interference.

- Do not use a single aperture gland for several cables. Moisture can migrate through the gaps between the cables and cause damage to internal electronic components. Moisture damage caused in this way is not covered under warranty.

- Never run cables which are connected to ATL control units alongside mains cables. Even if they have been disconnected, they can still be carrying and transmitting interference.

- Do not place data or coaxial cables connected to ATL control units within existing conduits with other cables connected to other systems; especially unsmoothed power cables. This is a prime source of interference especially if connected to pulsators or feeder motors without diodes installed. NB - When a solenoid coil is switched off the reverse voltage is generally 10 times the peak supply voltage, with a 24vDC supply, this can be in excess of 300 volts.

- Interference is most likely on mains systems which exhibit volt drops when the parlour load is switched on.

- Variable speed drives are becoming very common. Make sure that they are installed to the manufacturers instructions. Screened cable must be used between the drive and any motors, if not electronic systems can be affected.

- RFID antennas are looking for signals around 130Khz. Variable speed drives often operate at frequencies around this value. Good installation of the variable speed drive circuit is essential to prevent interference.

- Mains earth supplies can be a source of interference. Check the voltage between the mains earth and the neutral. If there is a voltage above 3-4volts, there is a possibility that interference will be present. Earth problems of this nature can usually be avoided by fitting earth trips and separate earth electrode, which is isolated from the mains earth system.

396 Watt 12vDC Power Supply, MicroM3S and Feeder Connections: Up to 24pts

230v AC 50Hz Live
Neutral
Earth

396 Watt 12vDC Power Supply

Feeder Supply   Control Supply

Common Negatives to feeders or solenoids.
Use 2.5csa: One run per 4 feeders.

This Negative link is required for fuse detection to work properly

MicroM3S

Use 1.5csa cable to connect separate positive switched supply to each feeder or solenoid.

12 and 24volt DC Feeder Motors and Solenoids must be fitted with diodes

Band denotes (+)

396 Watt 12vDC Power Supply, MicroM3S and Feeder Connections: Up to 24pts

Mains Fuse: 5 Amp

Check that the Master Relay Board address is set to '0'. Refer to Page 5.

FEEDER REGULATED DC OUTPUTS NOMINAL 12vDC @ 33 Amps

5Amp Mains Fuse

Live Earth Neutral

Mains 230VAC Connection

+ −

Use minimum 0.75mm² for mains cable

CONTROL REGULATED DC OUTPUTS NOMINAL 12vDC @ 4Amps

WARNING: *DISCONNECT THE MAINS SUPPLY BEFORE REMOVING THE POWER SUPPLY COVER*

IMPORTANT - OUTPUT FACTORY SET TO 13.6vDC TO ACCOUNT FOR VOLTAGE DROP ALONG CABLE LENGTHS.

Spread load evenly

- Common Negative looped to Left hand feeders
- Common Negative looped to Right hand feeders
-
-
+
+
+
+

Use minimum 2.5mm² cable

MAINS INDICATOR

MAINS INPUT

OUTPUT GLAND

OUTPUT GLAND

OUTPUT GLAND

OUTPUT GLAND

OUTPUT INDICATOR

Control Supply IN

12 L R L R **11**   **10** L R L R **9**   **8** L R L R **7**

Feeders 12v(+)

Meridian System Relay Board (Master)

Feeders(-)

1 L R L R **2**   **3** L R L R **4**   **5** L R L R **6**

Feeder (+) Connector Blocks Marked with the feeder number (1..12), left(L) and right (R). Use 1.5 csa.

Two Meridian Bus Lift Off Connectors

Green Yellow Black Red Blue White

+12v DC

Common Neg

ATL Feeder Motor connections

Diode and Ballast Resistor

NB - SEE POWER SUPPLY MANUAL FOR MORE INFORMATION ON POWER SUPPLY SPECIFICATIONS

60 Watt 12vDC Power Supply Connections

CONTROL
REGULATED DC
OUTPUTS NOMINAL
12vDC @ 4Amps

5Amp Mains Fuse

Live
Earth
Neutral

Mains 230VAC Connection

+   −

MAINS
INPUT

MAINS
INDICATOR

OUTPUT
INDICATOR

OUTPUT
GLAND

WARNING: *DISCONNECT THE MAINS SUPPLY BEFORE REMOVING THE POWER SUPPLY COVER*

IMPORTANT - OUTPUT FACTORY SET TO 14vDC TO ACCOUNT FOR VOLTAGE DROP ALONG CABLE LENGTHS.

Control Supply IN

12 L R L R **11**   **10** L R L R **9**   **8** L R L R **7**

Feeders 12v(+)

Feeders(-)

Meridian System Relay Board (Master)

1 L R L R **2**   **3** L R L R **4**   **5** L R L R **6**

Feeder (+) Connector Blocks
Marked with the feeder
number (1..12), left(L)
and right (R).
Use 1.5 csa.

Two Meridian Bus Lift Off
Connectors

Green
Yellow
Black
Red
Blue
White

NB - SEE POWER SUPPLY MANUAL FOR MORE INFORMATION ON POWER SUPPLY SPECIFICATIONS

396 Watt 12vDC Power Supply, MicroM3S and Feeder Connections: To 96pts

230v AC 50Hz Live

Neutral

Earth

396 Watt 12vDC Power Supply

Feeder Supply   *Control Supply*

Left hand feeders

Right hand feeders

Negative MUST go to relay board to ensure electronic fuse operation.

MicroM3S Main Control

Feeders 13 to 24 or 25 to 36 or 37 to 48

Meridian Bus: Includes relay board supply

Extension Relay Board(s):

Feeders 1 to 12 or 13 to 24 or 25 to 36

Negative MUST go to relay board to ensure electronic fuse operation.

Extension Relay Board(s):

Feeders 1 to 12 or 13 to 24 or 25 to 36

Left hand feeders

Right hand feeders

Extension Relay Board(s):

Feeders 1 to 12 or 13 to 24 or 25 to 36

12 and 24volt DC Feeder Motors and Solenoids must be fitted with diodes

Band denotes (+)

396 Watt 12vDC Power Supply, MicroM3S and Feeder Connections: To 96pts

FEEDER REGULATED DC OUTPUTS NOMINAL 12vDC @ 33 Amps

5Amp Mains Fuse

Live
Earth
Neutral

Mains 230VAC Connection

+ -

Use minimum 0.75mm² for mains cable

WARNING: DISCONNECT THE MAINS SUPPLY BEFORE REMOVING THE POWER SUPPLY COVER

CONTROL REGULATED DC OUTPUTS NOMINAL 12vDC @ 4Amps

IMPORTANT - OUTPUT FACTORY SET TO 13.6vDC TO ACCOUNT FOR VOLTAGE DROP ALONG CABLE LENGTHS.

Spread load evenly

- Common Negative looped to Left hand feeders
- Common Negative looped to Right hand feeders
-
-
+
+
+
+

Use minimum 2.5mm² cable

OUTPUT GLAND   OUTPUT GLAND   OUTPUT GLAND   OUTPUT GLAND

OUTPUT INDICATOR

24 L R   L R 23   22 L R   L R 21   20 L R   L R 19

Control Supply IN

Feeders 12v(+)

Feeders(-)

Meridian System Relay Board: Address 2, 3 or 4

In MicroM3S

Meridian Bus connection up to lid and display board. Same colour sequence.

Green
Yellow
Black
Red
Blue
White

13 L R   L R 14   15 L R   L R 16   17 L R   L R 18

12 L R   L R 11   10 L R   L R 9   8 L R   L R 7

Meridian System Relay Board: Address 1

(Extension Box)

Feeders(-)

Feeders 12v(+)

6way Cable

! Set relay board address and standby ration.

Green
Yellow
Black
Red
Blue
White

1 L R   L R 2   3 L R   L R 4   5 L R   L R 6

Standby Feeder Operation

STANDBY: VARIABLE RATION TO INDIVIDUAL STALLS

Turn the Mode Selector to STANDBY STALL.

Turn the Stall Selector to the required stall number.

Press the SIDE Switch to the required side- L or R. Cake will be delivered to the selected stall for as long as the switch is held over.

STANDBY: BATCH RATION TO ALL STALLS.

Turn the Mode Selector to STANDBY BATCH.

Press the SIDE Switch to the required side- L or R- and release it. The feeders will run for the time set up on the jumpers (see above) but to prevent overloading the power supply, will start in blocks of four.

Release SIDE Switch after feeders have stopped.

Mode Selector Switch

Stall Selector Switch

Side Switch

STANDBY STALL   STANDBY BATCH

FEED OFF
FEED ON

STALL SELECTOR

3 4 5
2   6
1   7
12   8
11 10 9

SIDEL   R

Relay Board Address and Standby Feeder Running Time

Each relay board on a feeding system has a unique number known as an 'address' which is set up by fitting jumpers to a pin array located at the top right hand of the relay board.

For systems up to 24pts, the relay board inside the control should NOT have any jumpers fitted.

For systems larger than 24pts, the relay boards should have jumpers fitted according to the chart below. See page 5B for connection details.

In standby batch mode the feeders will run for a pre-determined time - either 1, 2, 6 or 12 seconds - depending upon the settings of the running time jumpers. The default time is 2 seconds (no jumpers fitted). Set the jumpers to suit your feeders according to the diagram opposite.
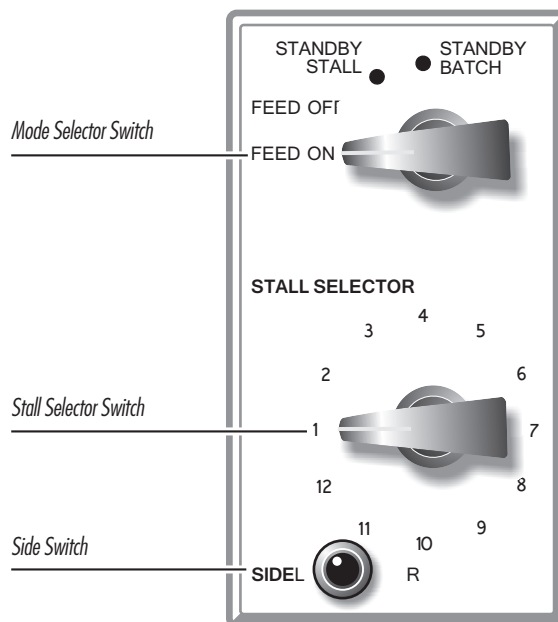
Standby Batch Feeding: Select Feeder Running Time.   Relay Board Address.

Fit jumpers to these pins to achieve the following feeder running times.

12 seconds
1 second
6 seconds
2 seconds

The Standby Feeder Running Time and Relay Board Address jumpers are located top-right corner of the relay board. With the power off, remove the control lid to gain access.

Feeders:	1 to 12	13 to 24	25 to 36	37 to 48
Relay Board:	4	3	2	1 (Control)

Feeders:	1 to 12	13 to 24	25 to 36
Relay Board:	3	2	1 (Control)

Feeders:	1 to 12	13 to 24
Relay Board:	2	1 (Control)

Parlour Layouts using Extension Relay Boards: Up to 96pts

Parlour 48/96 (maximum)

Control Power: 12v DC   *Meridian Bus including (+) and negative Control Supply to all additional relay boards*

MicroM3S Control Relay Board (4)	Relay Board (3)	Relay Board (2)	Relay Board (1)
Address =	Address =	Address =	Address =
Feeder Numbers: 37 to 48	Feeder Numbers: 25 to 36	Feeder Numbers: 13 to 24	Feeder Numbers: 1 to 12

Feeder Power: 13.5v DC Regulated to all relay boards
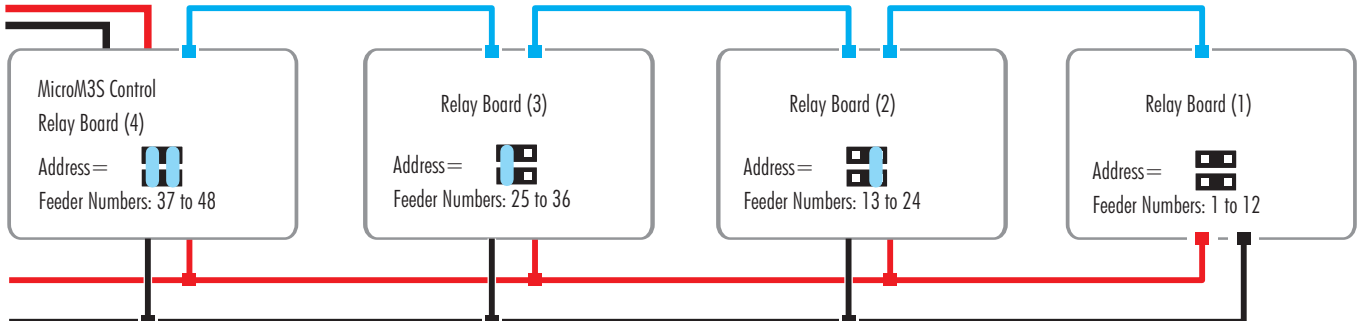
Parlour 36/72

Control Power: 12v DC   *Meridian Bus including (+) and negative Control Supply to all additional relay boards*

MicroM3S Control Relay Board (3)	Relay Board (2)	Relay Board (1)
Address =	Address =	Address =
Feeder Numbers: 25 to 36	Feeder Numbers: 13 to 24	Feeder Numbers: 1 to 12

Feeder Power: 13.5v DC Regulated to all relay boards

Parlour 24/48

Control Power: 12v DC   *Meridian Bus including (+) and negative Control Supply to all additional relay boards*

MicroM3S Control Relay Board (2)	Relay Board (1)
Address =	Address =
Feeder Numbers: 13 to 24	Feeder Numbers: 1 to 12

Feeder Power: 13.5v DC Regulated to all relay boards

60 Watt 12vDC Power Supply Connections

CONTROL
REGULATED DC
OUTPUTS NOMINAL
12vDC @ 4Amps

Live
Earth
Neutral

Mains 230 VAC
Connection

2Amp Mains Fuse

+   −

MAINS
INPUT
GLAND

MAINS
INDICATOR

OUTPUT
INDICATOR

OUTPUT
GLAND

WARNING: *DISCONNECT THE MAINS SUPPLY BEFORE REMOVING THE POWER SUPPLY COVER*
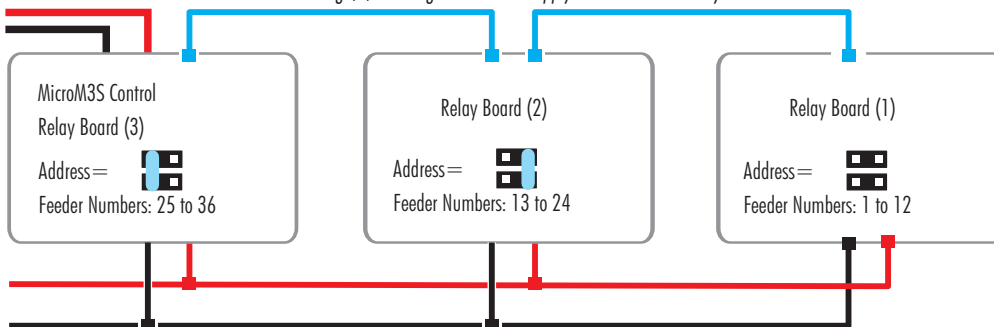
IMPORTANT - OUTPUT FACTORY SET TO 14vDC TO ACCOUNT FOR VOLTAGE DROP ALONG CABLE LENGTHS.

NB - SEE POWER SUPPLY MANUAL FOR MORE INFORMATION ON POWER SUPPLY SPECIFICATIONS

+12vDC   Neg

N/C
N/C
Black x 2
Red
White
N/C

Lift Off Connectors

N/C
Green

Yellow
Black
Red
Blue

White
N/C

C11

Green
Yellow
Black
Red
Blue
White

MicroM3S Control Circuit Board Connector: Meridian Bus
The Meridian inter-connections between the various control circuit boards are realised as a six core cable.
They are factory fitted and will not normally need to be removed.
Connector orientation and cable colours are important.

MicroM3S to Parlour Control Connections

The distribution board inside the main MicroM3S

Lift Off Connectors

Green (+12v)
Yellow
Black
Red
Blue
White (Neg)

Parlour Control Circuit Board

Green: 12volts (+)
Yellow
Black
Red
Blue
White: Negative

Address Selector

Power/Data Connector
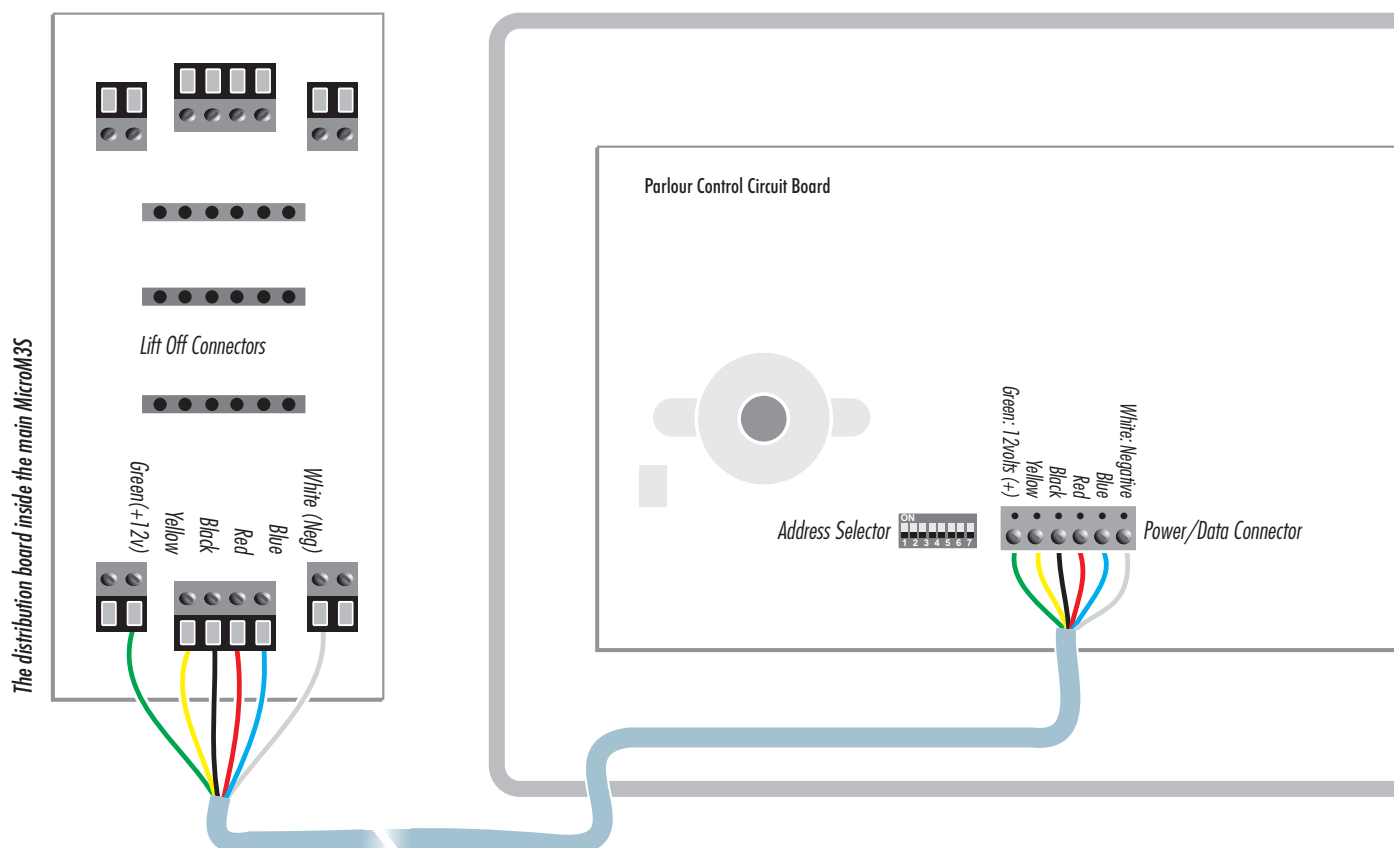
Setting the Parlour Control Address

The MicroM3S continually 'interrogates' the parlour controls searching for incoming data. So that the source of the data can be identified, each parlour control is given a unique number known as its Address. This is set up on each parlour control by a group of miniature switches located to the left of the power/data connector. The switches are numbered 1 through 8 and are closed when the small switch tab is moved up toward the 'ON' legend.

- # Switch number (8) is not used in the address.
- # Address zero (0) is not valid; the controls must start at '1'.
- # No two parlour controls can share the same address.

Using a small screwdriver or pencil, set the switches in sequence along the parlour according to the diagram opposite. The main MicroM3S must have the address '127'. All switches except (8) ON.

Selecting the Parlour Side.

If a parlour control is mounted facing the opposite direction to the convention, the Side Indicators will need to be changed to reflect 'true' left and right. This is achieved by switch (8). Turn it 'ON' to swap the indicators.

Switch Settings: Address

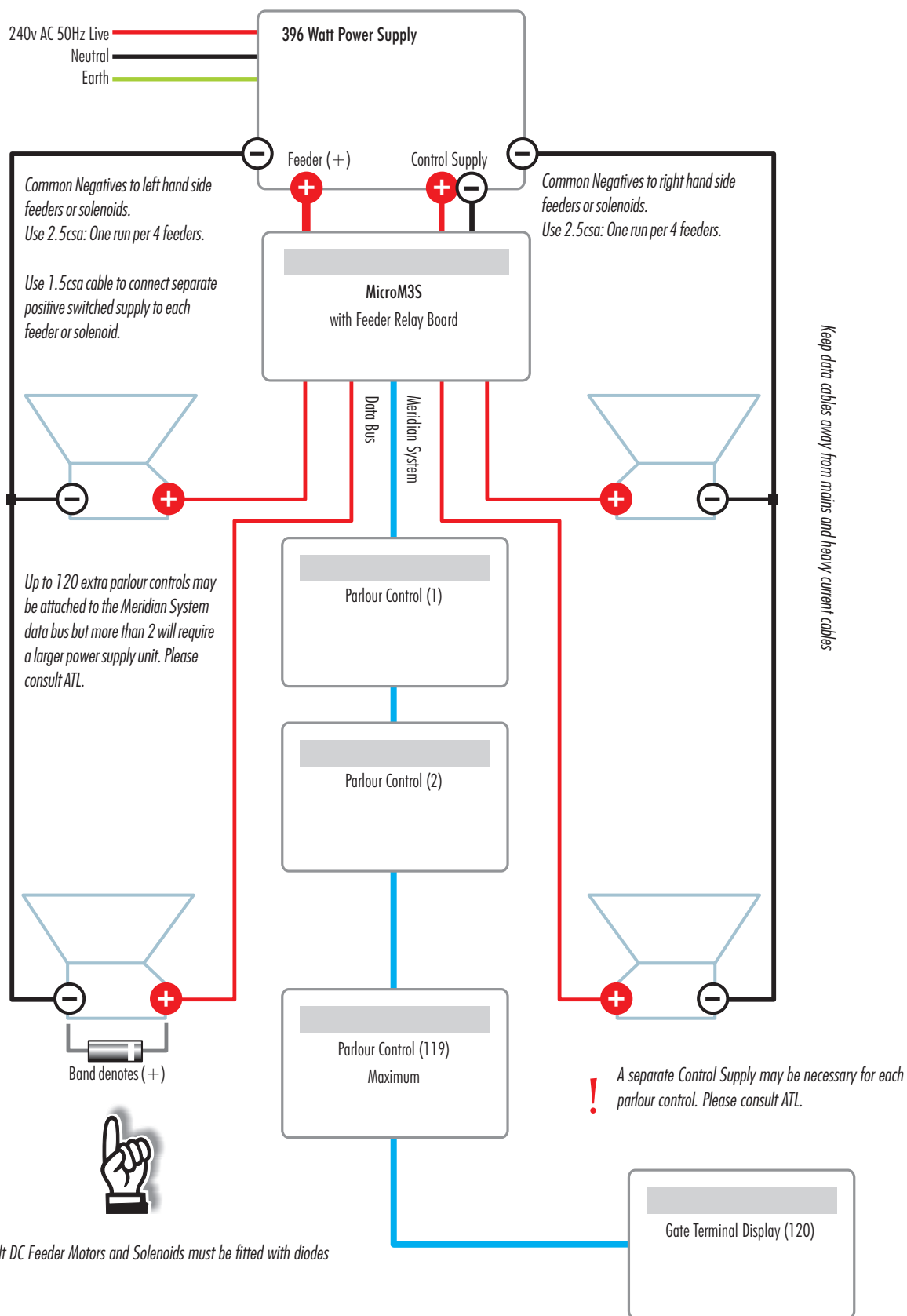1
2
3
4
5
6
7
8

Switch Settings: Address

9
10
11
12
13
14
15
16

127 - Main MicroM3S Master Display

MicroM3S with additional Parlour Controls

240v AC 50Hz Live
Neutral
Earth

396 Watt Power Supply

Feeder (+)   Control Supply

Common Negatives to left hand side feeders or solenoids.
Use 2.5csa: One run per 4 feeders.

Use 1.5csa cable to connect separate positive switched supply to each feeder or solenoid.

MicroM3S
with Feeder Relay Board

Common Negatives to right hand side feeders or solenoids.
Use 2.5csa: One run per 4 feeders.

Data Bus   Meridian System

Keep data cables away from mains and heavy current cables

Up to 120 extra parlour controls may be attached to the Meridian System data bus but more than 2 will require a larger power supply unit. Please consult ATL.

Parlour Control (1)

Parlour Control (2)

Band denotes (+)

Parlour Control (119)
Maximum

! *A separate Control Supply may be necessary for each parlour control. Please consult ATL.*

12 and 24volt DC Feeder Motors and Solenoids must be fitted with diodes

Gate Terminal Display (120)

General Information

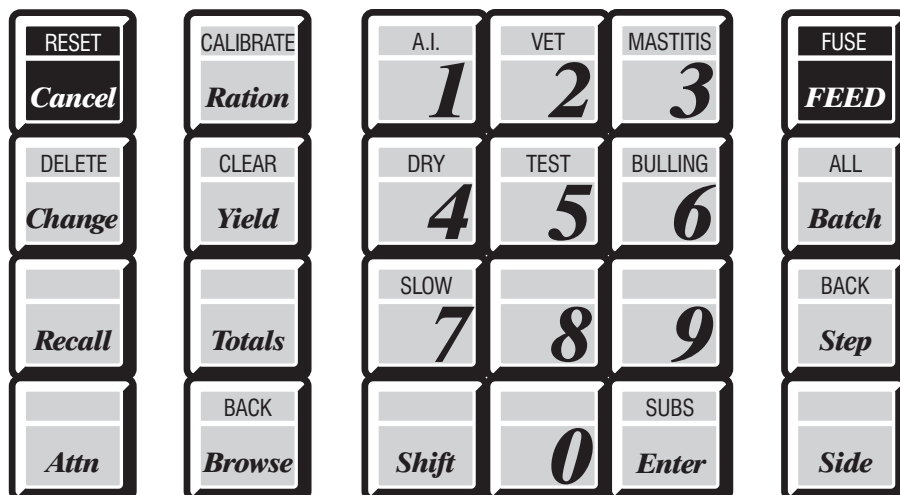An introduction the MicroM3S control.

KEYS AND DISPLAY.

The keypad is divided into three parts:

\# The Management keys are used to browse animal numbers, totals, yields, attentions, and reset the control;

\# The Numeric keys are used to enter animal numbers, subroutine numbers and access many of the Shift functions;

\# The Control keys which initiate feeding, set the parlour side, check fuse and power problems and reset the machine.

The keypads are constructed from a rugged membrane which overlays individual switches. This construction is very durable and provides a positive feedback 'click' to the operator. Wash the membrane with warm, soapy water only- do not hose down or

RESET / **Cancel**	CALIBRATE / **Ration**	A.I. **1**	VET **2**	MASTITIS **3**	FUSE / **FEED**
DELETE / **Change**	CLEAR / **Yield**	DRY **4**	TEST **5**	BULLING **6**	ALL / **Batch**
Recall	**Totals**	SLOW **7**	**8**	**9**	BACK / **Step**
Attn	BACK / **Browse**	**Shift**	**0**	SUBS / **Enter**	**Side**

The display area comprises five windows and a Status bar:

\# The animal Number window displays the current animal number, the machine mode, function and subroutine messages.

\# The Ration window in the centre section of the display will show numeric information such as ration values.

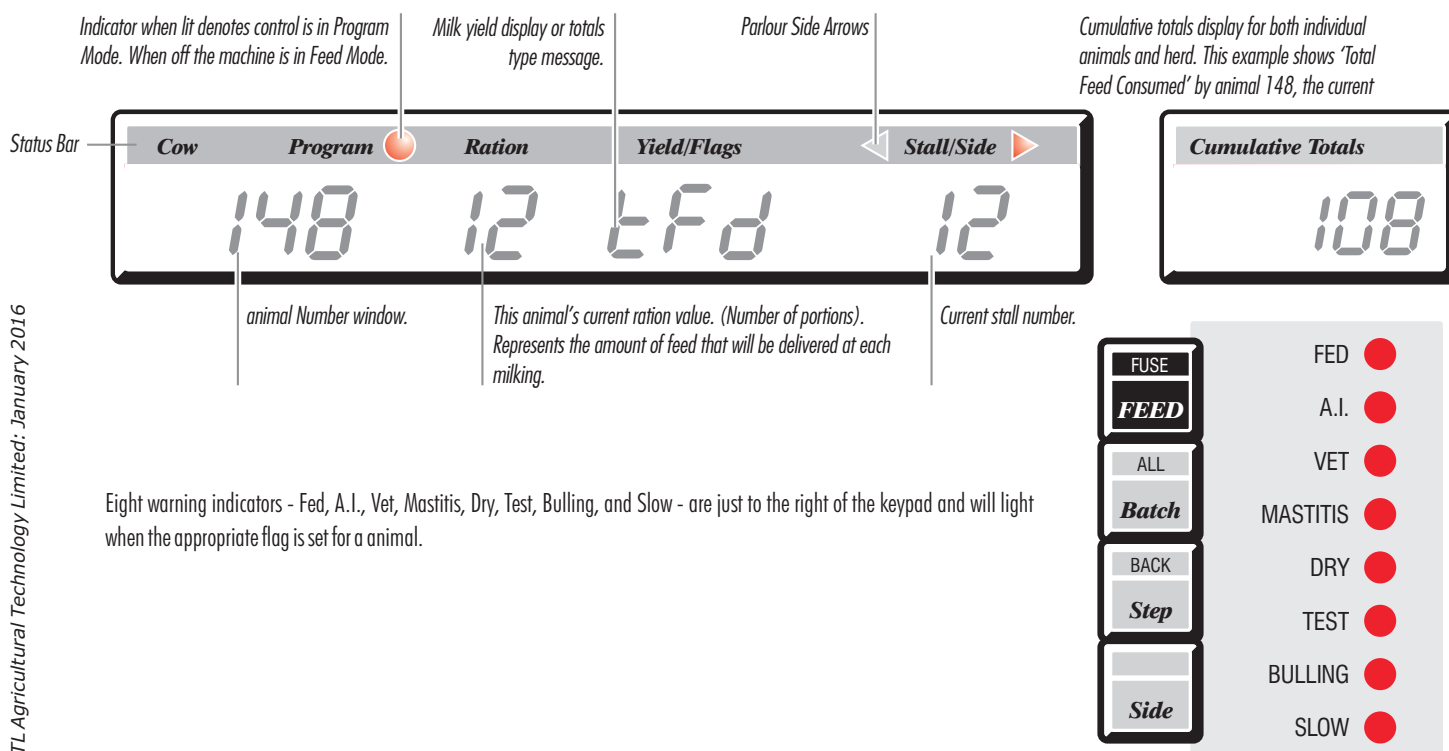\# The Yield/Flags window displays milk yields, totals messages and flag information.

\# The Stall/Side window at the right hand end of the display shows the current stall number, 1 to maximum stall count.

\# The indicator on the left of the Status Bar shows the control is in Program Mode when lit.

\# The Cumulative Totals window displays totals for both individual animals and the herd.

\# The active parlour side is shown by either the left or right arrows at the right hand end of the bar.

\# The MicroM3S is very energy efficient and every effort has been made to keep power consumption to a minimum when the machine is running. If it is left unused for a short period, the displays will blank to conserve even more energy. Simply press any key to reactivate the display.

Indicator when lit denotes control is in Program Mode. When off the machine is in Feed Mode.

Milk yield display or totals type message.

Parlour Side Arrows

Cumulative totals display for both individual animals and herd. This example shows 'Total Feed Consumed' by animal 148, the current

Status Bar — | **Cow** | **Program** ● | **Ration** | **Yield/Flags** | ◁ **Stall/Side** ▷ | | **Cumulative Totals** |

148   12   tFd   12   108

animal Number window.

This animal's current ration value. (Number of portions). Represents the amount of feed that will be delivered at each milking.

Current stall number.

| FUSE / **FEED** |
| ALL / **Batch** |
| BACK / **Step** |
| **Side** |

FED ●
A.I. ●
VET ●
MASTITIS ●
DRY ●
TEST ●
BULLING ●
SLOW ●

Eight warning indicators - Fed, A.I., Vet, Mastitis, Dry, Test, Bulling, and Slow - are just to the right of the keypad and will light when the appropriate flag is set for a animal.

SHIFT FUNCTIONS

There are many features of the MicroM3S which are accessed either as Functions- simple 'one-shot' actions that produce an immediate result such as displaying the animals fed, or Subroutines which require a degree of interactivity to configure the machine or access specific information.

The Shift key in combination with another key is used to run Subroutines and Functions. The procedure is always:

Press and *Hold* the Shift key

Press the Combination key: The functions are shown as small labels along the top edge of some keys; SUBS for example.

Release the Combination key.

Release the Shift key.

RUNNING A SUBROUTINE

Subroutines are 'miniature' programs that carry out a specific task, usually to configure the system, set up feed dispensing or establish data parameters. To run a subroutine:

Check that Program Mode is selected. (See below).

Press the Shift + Enter(SUBS) combination. The 'Sub' message will appear with the entry prompt _ _ _ in the Yield/Flags window.

Key the subroutine number. This may be either 1, 2 or 3 digits.

Press Enter. The subroutine will now run.

Press Cancel to exit the subroutine.

NB. If unknown subroutine number entered, 'Err' message will flash in the Yield/Flags window for 2 seconds, after which another subroutine number can be entered. Please note that this is only available in MicroM3S software v4.29 or above. Please run subroutine 2 to check.
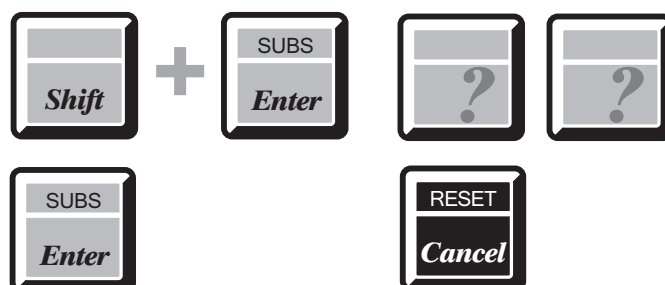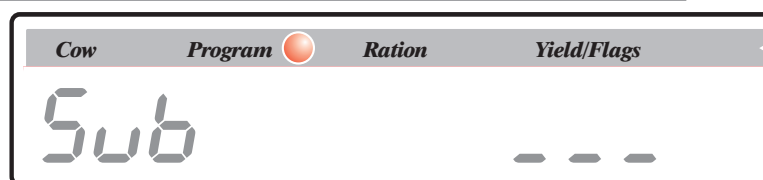
## PROGRAM & FEED MODES: Subroutine 638

The MicroM3S operates in 2 modes:

Program Mode allows system data and setup parameters to be changed. Program Mode is active when the red 'Program' indicator on the display bar is lit.

Feed Mode allows animals to be fed and flags set but prevents alterations to the system setup. This mode is provided for relief milking to avoid vital data being changed inadvertently.

This subroutine operates as a 'toggle'; each time it runs, the mode alternates. No further operator input is required.

Press Cancel to exit the subroutine.
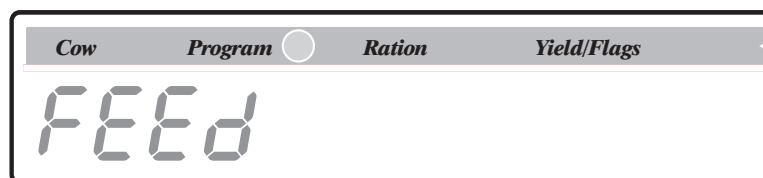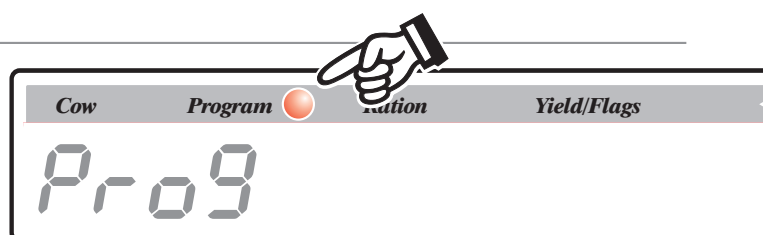
DISPLAY SOFTWARE VERSION: Subroutine 2:

This subroutine displays the Main PCB software version of the MicroM3S:

Check that Program Mode is selected.
Run the subroutine. The message 'SoFt' is displayed.
The current software version is displayed in the Yield/Flags window.
Press Cancel to exit the subroutine.

Cow	Program	⬤	Station	Yield/Flags
			SoFt	*463*

SUBS
Enter

RESET
Cancel
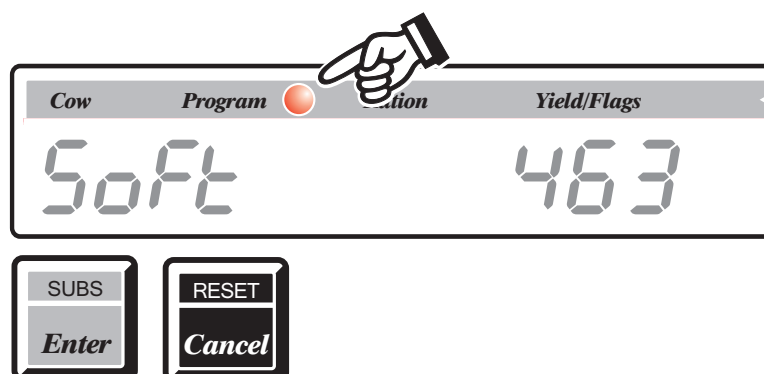
CONFIGURING THE MicroM3S:

The MicroM3S has to be programmed with some essential data about your parlour and preferred working methods. The following series of subroutines have been designed to set up the systems, simply and quickly.

Most of the subroutines have a 'default' value- that is a figure the control will use in the absence of a specific instruction. For instance, the number of feeders to run simultaneously will default to 4 if no other value is entered. If the default value matches your needs then there is no need to run the subroutine.

SET REAL TIME CLOCK: Subroutine 5.

The MicroM3S has a built-in real time clock and calendar which is used to perform automatic housekeeping operations.

During the clock setup, the message prompt appears in the animal Number window and the value in the Yield/Flags window. There is no need to key leading zeros for single digits. With either program or feeding mode selected, the prompt sequence is:
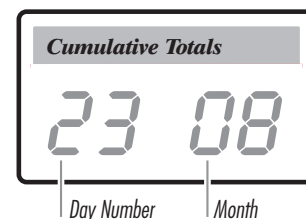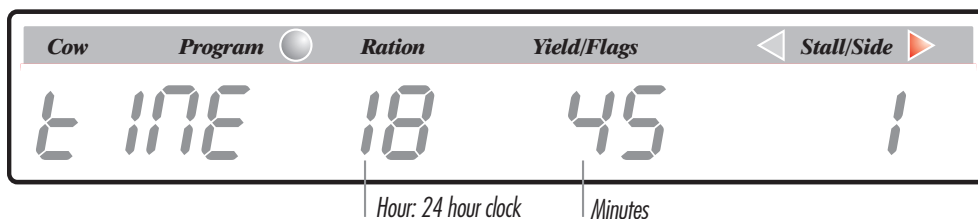
Hour: 'hOUr':	Range 0 to 23: 24 hour clock format.
Minutes: 'MIn'	Range 0 to 59
Date: 'dAY'	Range 1 to 31: No month check.
Month: 'Mont'	Range 1 to 12
Year: YEAr'	Range 0 to 99: 00 is acceptable.

Press Enter to store each value.
Press Cancel when the display clears (subroutine finished).

Cow   Program   ⬤   Ration   Yield/Flags

hOUr   – –

SUBS
Enter

RESET
Cancel
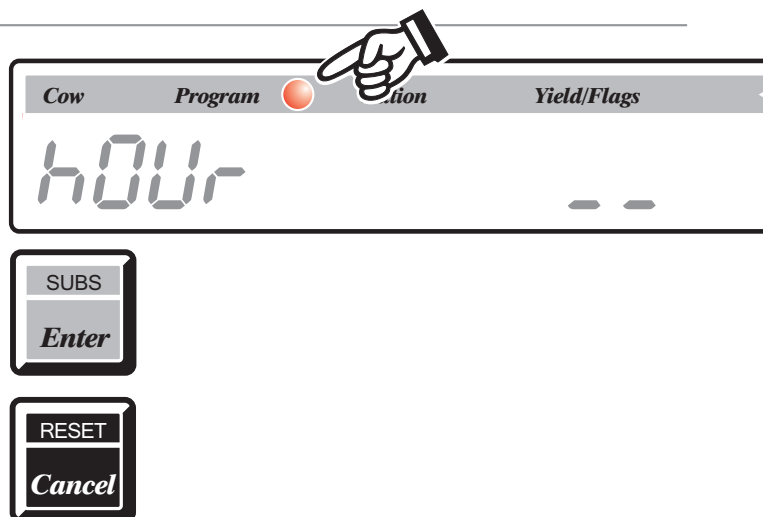
DISPLAY REAL TIME: Subroutine 6.

To check the real time clock settings in either program or feeding mode, run subroutine 6 which displays the time and date (day number and month number) in the format below:

Press Cancel to exit the subroutine.

RESET
Cancel

Cow   Program   ◯   Ration   Yield/Flags   ◁ Stall/Side ▷

t IME   18   45   1

Hour: 24 hour clock | Minutes

Cumulative Totals

23   08

Day Number | Month

SELECT ANIMAL TYPE: Subroutine 700: *Default = animal*

This subroutine toggles between the animal types of animal, sheep and goats.

Check that Program Mode is selected.
Run the subroutine. The message 'SAT' is displayed.
Press Change to toggle between 'animal', 'Sheep' and 'Goat'.
Press Enter to store the parlour type.
Press Cancel to exit the subroutine.

Cow   Program   ⬤   Ration   Yield/Flags

SAt   cou

DELETE
Change

SUBS
Enter

RESET
Cancel
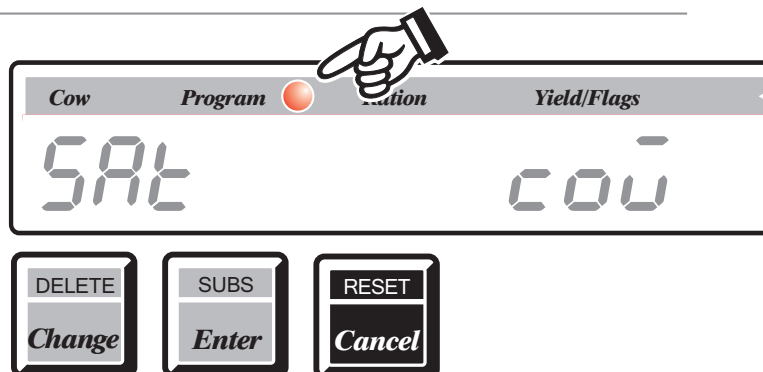
## SELECT PARLOUR TYPE: Subroutine 701: *Default = Herringbone*

This subroutine sets the parlour type as either herringbone, abreast, rotary or single sided herringbone.

Check that Program Mode is selected.
Run the subroutine. The message 'Hb' is displayed.
Press Change to toggle between herringbone 'Hb', abreast 'Abr', rotary 'rot' or single sided herringbone 'SSh'.
Press Cancel to exit the subroutine.

Cow	Program	⬤	Ration	Yield/Flags
PtY				*hb*

DELETE *Change* SUBS *Enter* RESET *Cancel*
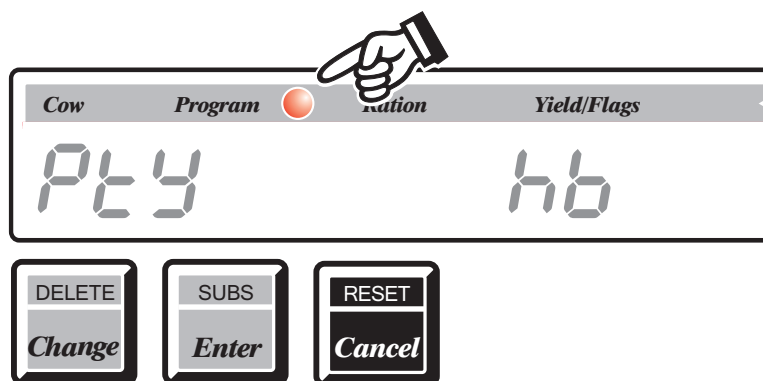
SET MAXIMUM STALL COUNT: Subroutine 982: Default = 8

This subroutine sets the number of stalls along one side for Herringbone layouts, or the parlour total for Abreast layouts.

Check that Program Mode is selected.

Run the subroutine. The message 'StAL' is displayed with the current number of stalls in the Yield/Flags window.

Press Change to alter the number of stalls. The Yield/Flags window changes to the entry prompt _ _.

Key the number of stalls.

Press Enter to store the new value.

Press Cancel to exit the subroutine.

Cow	Program	⬤	Ration	Yield/Flags
StAL				*8*

DELETE *Change* ? ?

SUBS *Enter* RESET *Cancel*
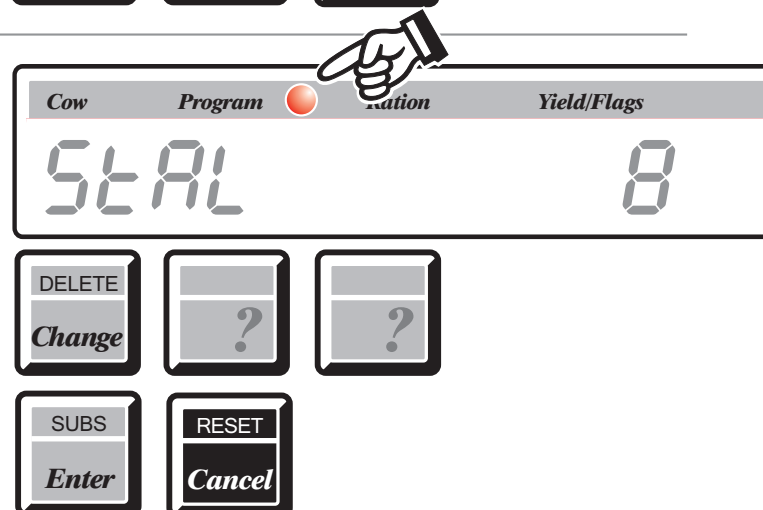
SET THE DEFAULT PARLOUR SIDE: Subroutine 978: Default = Right Hand Side

This subroutine determines which side of the parlour (left or right) will be selected when the control is switched on or reset. The selection is made by turning the right hand side on or off (when it is off the left hand side is selected).
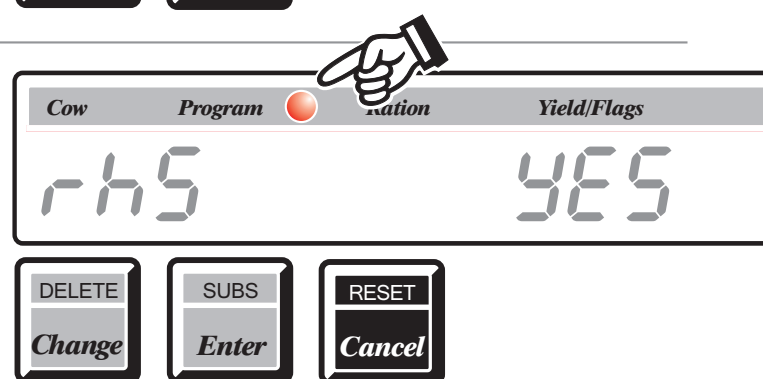
Check that Program Mode is selected.

Run the subroutine. The message 'rHS' is displayed with the current setting 'on' or 'off'.

Press the Change key to toggle between on or off.

Press Enter to store the default side.

Press Cancel to exit the subroutine.

Cow	Program	⬤	Ration	Yield/Flags
rhS				*YES*

DELETE *Change* SUBS *Enter* RESET *Cancel*

SET NUMBER OF MILKINGS PER DAY: Subroutine 977. *Default = 2*

This subroutine will set the number of milkings per day to either 1, 2 or 3; no other values are permissible.
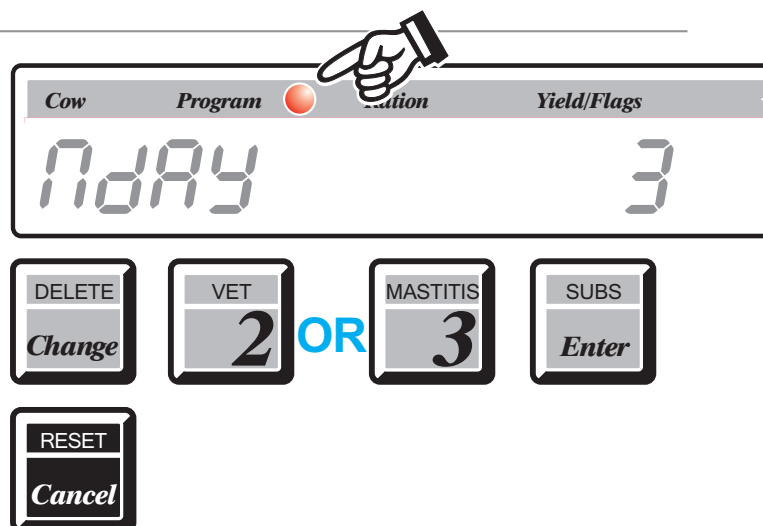
Check that Program Mode is selected.

Run the subroutine. The message 'NdAY' is displayed with the current setting in the Yield/Flags window.

Press Change to alter the value. The display will change to the entry prompt _ _.

Key the new value- either 2 or 3.

Press Enter to store the new value.

Press Cancel to exit the subroutine.

Cow	Program	⬤	Ration	Yield/Flags
NdAY				*3*

DELETE *Change* VET **2** OR MASTITIS **3** SUBS *Enter*

RESET *Cancel*

Setting Up the MicroM3S with the Herringbone Feeding System

If the Herringbone Feeding system is linked to a MicroM3S, the following subroutines are relevant.

SELECT PULSED OR TIMED ELECTRIC FEEDERS: Subroutine 984: Default = No (Off)

The MicroM3S will control vacuum, pulsed electric or timed electric feeders. Vacuum and pulsed electric are grouped together generically as 'Pulsed'. This subroutine determines the feeder type by switching on or off the pulsed option; when pulsed is off, timed electric is presumed.

Check that Program Mode is selected.

Run the subroutine. The message 'PULS' will appear in the animal number window with 'YES' (Pulsed selected) or 'no' (Timed Electric selected) in the Yield/Flags window.

Press Change to toggle the selection between yes and no.

Press Enter to store the selection.

Press Cancel to exit the subroutine.

| Cow | Program | ● | Ration | Yield/Flags |

PULS   YES

DELETE / Change

SUBS / Enter   RESET / Cancel
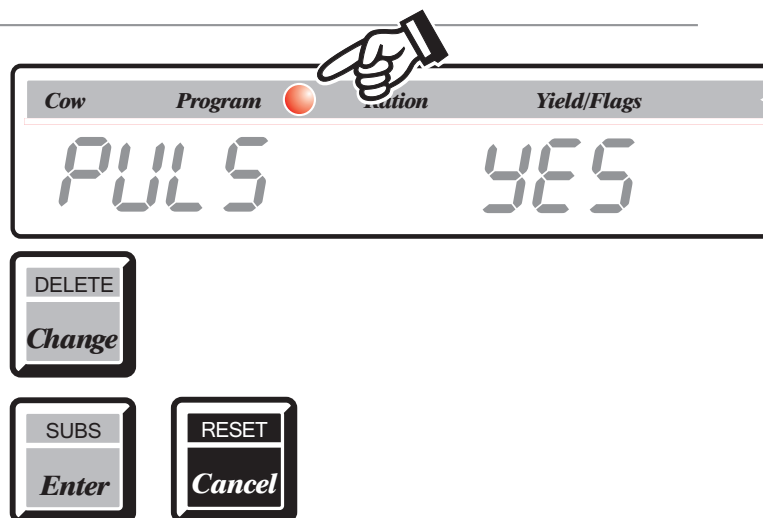
SET NUMBER OF FEEDERS TO RUN: Subroutine 983. *Default = 4*

To prevent undue demands upon the power supply, the number of feeders that may run simultaneously can be set to a safe, maximum level. If the maximum stall count is changed, the number of feeders to run will automatically default to 4.
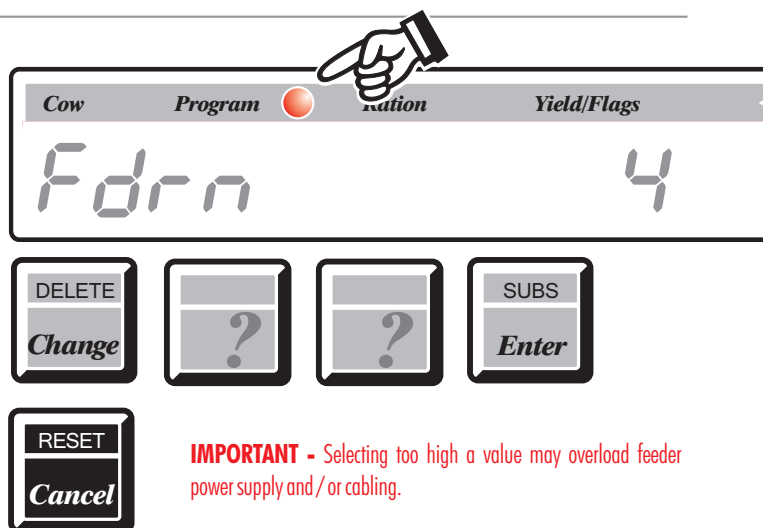
Check that Program Mode is selected.

Run the subroutine. The message 'Fdrn' appears with the current value in the Yield/Flags window.

Press Change to alter the value. The entry prompt _ _ will appear in the Yield/Flags window.

Key in the new value which must not be greater than the maximum stall count.

Press Enter to store the new value.

Press Cancel to exit the subroutine.

| Cow | Program | ● | Ration | Yield/Flags |

Fdrn   4

DELETE / Change   ?   ?   SUBS / Enter

RESET / Cancel

IMPORTANT - Selecting too high a value may overload feeder power supply and / or cabling.

STORED FEEDING MODE: ON/OFF: Subroutine 981. *Default = Sequential*

The MicroM3S has two feeding modes:

Sequential, in which each animal is fed as it is identified, or

Stored mode in which feeding is suspended until an entire parlour side is filled and then all of the animals are fed simultaneously.

To select the required feeding mode:

Check that Program Mode is selected. .

Run the subroutine. The message 'Stor' is displayed with the current setting 'Yes' (Stored mode = On) or 'no' (Stored mode = Off) displayed in the Yield Flags window.

Press the Change key to toggle between the two states; each press alternates the setting.

Press Enter to store the mode setting.

Press Cancel to exit the subroutine.

| Cow | Program | ● | Ration | Yield/Flags |

Stor   YES

DELETE / Change   SUBS / Enter

RESET / Cancel
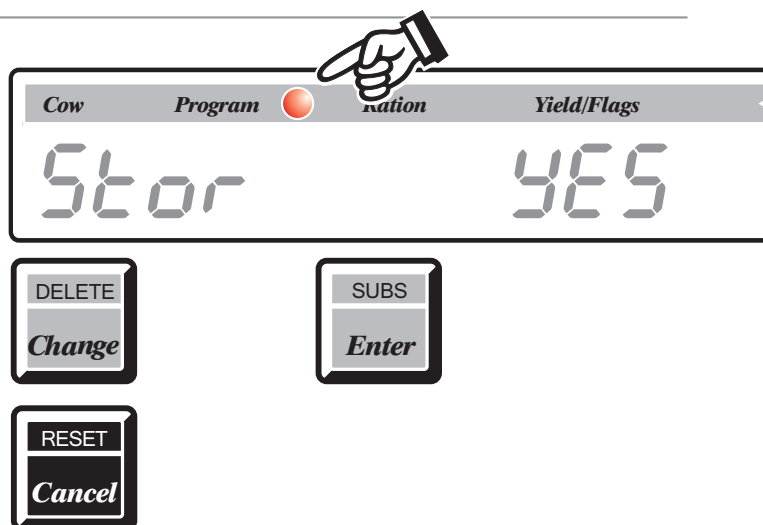
ELECTRONIC FUSES : Subroutine 975 : Enable/Disable Electronic Fuses. Default = Yes (Enabled)

Check that Program mode is selected.

Run subroutine 975 by pressing and holding down the Shift key and then pressing and releasing key Enter(SUBS). The 'Sub' message will appear on the display. Then key 975 and Press Enter.

MicroM3S display shows message 'FUSE' with the current setting shown as 'YES' (Fuse Protection = On) or 'no' (Fuse Protection = Off)..

Press Change key to toggle between the two states; each press alternates the setting.

Press Enter to store the mode setting.

Press Cancel to exit the subroutine.

| Cow | Program | Ration | Yield/Flags |

FUSE **YES**

Shift **+** SUBS Enter ? ?

DELETE Change
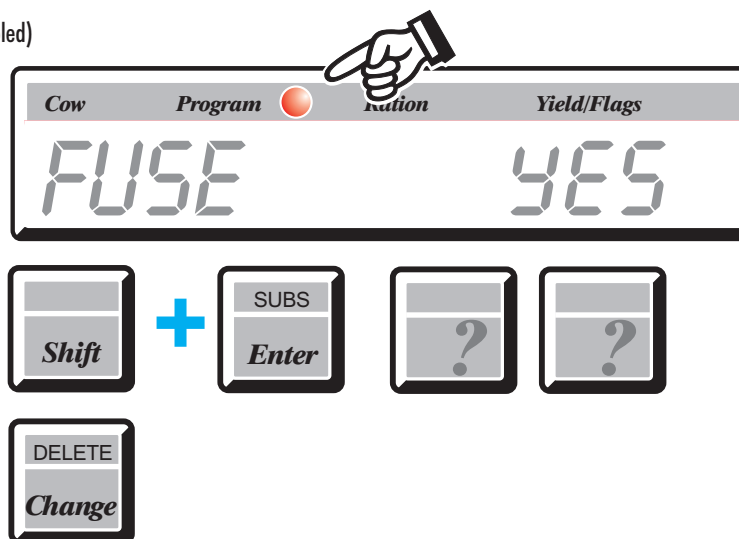
SETTING UP THE FEEDERS

The portion of cake delivered by a feeder depends upon the time that the feeder is running or is being pulsed. The MicroM3S will control feeders in good condition precisely so that they constantly deliver accurate rations.

> There are four stages to setting up the feeders:

1: Calibration Reset: (Shift + Ration (CALIBRATE) = 100

2: Selecting the Feeder Run Time (Subroutine 987)

3: Applying the Feeder Run Time (Subroutine 987), and

4: Fine Calibration (Shift + Ration (CALIBRATE): Key function.

SETTING UP THE FEEDERS: 1 Calibration Reset: Key Function. Default = 100%

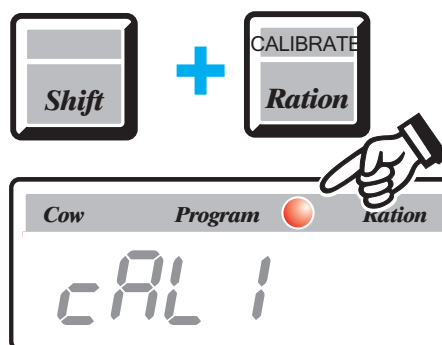The Calibration setting must be set to '100' before adjusting the feeder run time.

> Check that Program Mode is selected.

> Press Shift + Ration (CALIBRATE). The 'cALI' message will appear in the animal window and the current calibration value in the Yield/Flags window.

> Press Change to alter the calibration value if it is not set at '100' and key 100.

> Press Enter.

> Press Reset.

SETTING UP THE FEEDERS: 2 Selecting the Feeder Run Time: Subroutine 987. Default = 200

The aim of this subroutine is to get Feeder(1) on the default parlour side (or Feeder(1) for Abreast parlours) delivering a single portion of cake weighing a 'set' amount- 500grams for example. To achieve this, the run time value is entered, the feeder is run and the delivered cake weighed. Variations in the target weight are corrected by adjusting the run time and re-weighing.

> Start the calibration process by placing a suitable container- a plastic carrier bag is ideal- beneath the down pipe of feeder(1) and selecting Program mode (Subroutine 638).

> Run subroutine 987. The existing run time value will appear in the animal window and the message 'cAL' in Yield/Flags. The stall number will reset to '1' on the default side.

> Press Feed. The feeder will start and deliver a portion of cake.

> Weigh the cake. If it is acceptably close to the target weight then:

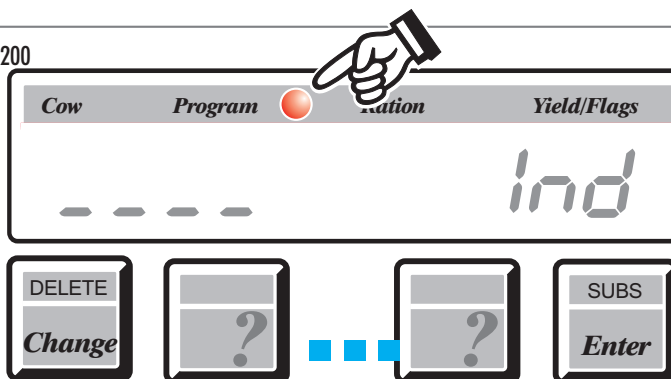>> *Press Enter to store the run time value.*

>> *Go to Step(3) on the following page.*

> If the weight is too high or too low:

>> *Press Change. The animal window will clear for entry with the message 'Ind' in the Yield/Flags window.*

>> *Key the new run time value. See the chart opposite for guide values.*

>> *Now repeat the feed/weighing procedure.*

Make	Type	Run Time
ATL	Timed	200
Ration Master	Pulsed	100
Hosier	Timed	100
Alfa Laval 2	Pulsed	200
Simplex Alum	Timed	200
Westfalia EZ	Timed	1200
Westfalia M	Pulsed	200
Westfalia EP	Pulsed	200
Auger Master	Timed	1100
Orby	Pulsed	100
Surge	Timed	1200
Gascoigne	Timed	600
Simplex Galv	Timed	600
E.B.	Timed	1200
Somerset	Pulsed	100
Alfa Laval 4	Pulsed	200
Alfa Laval 24	Timed	2500

Feeder Run Time.
The length of time that a feeder is set to deliver a constant, pre-set ration is called the Run Time. It is measured in 0.01seconds (1/100sec) with a maximum allowable value of 99.99seconds.

When the run time is entered during Subroutine 987, *the trailing zeros are important* and must be entered. For example, a required run time of 2 seconds must be entered as:

2 0 0 .

The Feeder Run Times shown opposite are a starting guide only; actual values depend upon the feeder condition and the power supply.

SETTING UP THE FEEDERS: 3 Applying the Feeder Run Time: Subroutine 987

With the delivered cake portion within the desired weight limits, the run time setting has to be applied to the remaining feeders. There are two ways of achieving this:

A: Set the run time for each feeder individually by repeating the process described on the previous page; this would be a preferred option if the feeders are worn, or

B: Applying the selected run time to all the feeders simultaneously, the preferred method if they are new and in good condition.

A: Setting the run time for each feeder individually.

Run subroutine 987. The stall will reset to '1' on the default side.

Press Side to change the parlour side if necessary and press Step until the desired stall (Feeder) is reached.

Press Change to alter the run time setting for the selected feeder.
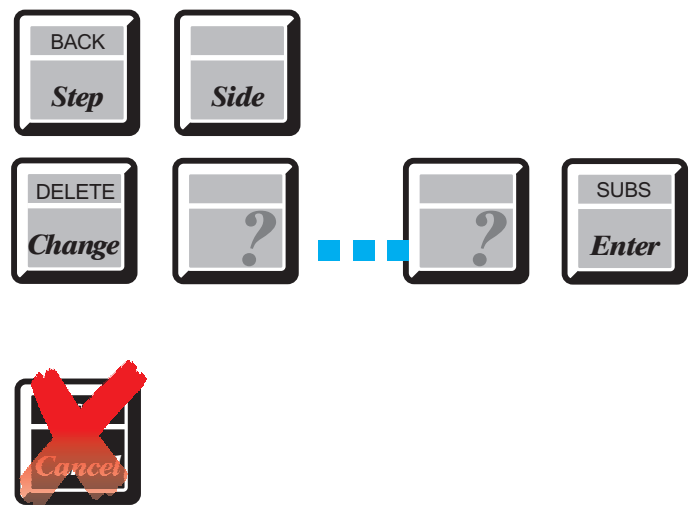
Key in the new value.

Press Enter.

Press Feed and carry out the weighing procedure described on the previous page.

When the correct weight is achieved, do NOT press Cancel; instead start again at the Step key to select the next feeder.

Loop around in this fashion until all of the feeder run times are set.

Press Cancel to exit the subroutine.

B: Setting the run time for all feeders simultaneously:

Run the subroutine as described previously to determine the correct feed time. Make a note of it.

Do NOT press Cancel but stay in the subroutine.

Press Shift + Batch(ALL). The display will clear to the entry prompt (_ _ _ _) with 'ALL' under Yield/Flags.

Key the noted feed time value.

Press Enter. The run time value will be applied to all feeders automatically.

Press Cancel to exit the subroutine.
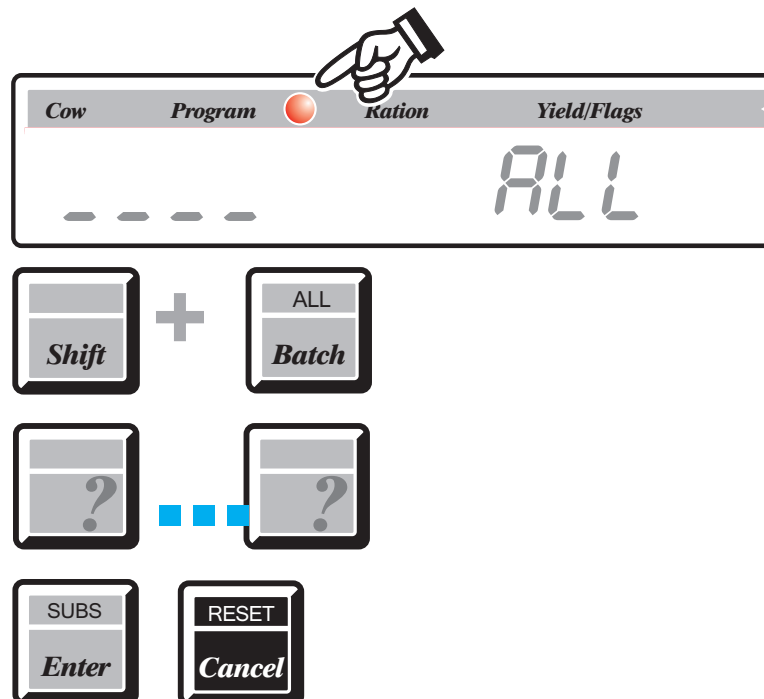
SETTING UP THE FEEDERS : 4 Fine Tuning

The Calibration value is a percentage (%) of the run time. Set to 100% the feeders will run for precisely their run time value. If the calibration value is set to 200 then the feeders will run for twice the length of the run time- 200%. In a similar fashion the feeder running time may be reduced by setting the value to less than 100. Calibration affects all the feeders as a group.

The Calibration feature allows the amount of cake delivered by all of the feeders to be fine tuned; it is of particular value for adjusting rations after cake deliveries when mix and density tend to change, without having to alter the run time for each of them. To 'fine tune' the ration:

Place a suitable container beneath feeder(1) on the default parlour side:

Check that Program mode is selected (Subroutine 638).

Press Shift + Cancel(RESET) to reset the parlour side and select feeder(1).

Press Feed. The display will show the message 'rAtn' in the animal   window and '_ _' under   Ration.

Key '1'

Press Feed. The cake will be delivered.

Weight the ration. If it is acceptably close to the targer weight:

>   *Press Reset to exit from the calibration process.*

If the ration is too small or too large, change the calibration value as follows:

>   *Press Shift+Ration (CALIBRATE). The 'cALI' message will appear in the animal window and the current calibration value in the Yield/Flags window.*

>   *Press Change to alter the calibration value. If the weight dropped was too high, decrease the calibration value; if it was too low, increase the value.*

>   *Key a new calibration value.*

>   *Press Enter.*

...and repeat the feed/weighing process.

Setting Up the MicroM3S with the Milk Meter System

If the Milk Meter system is linked to a MicroM3S, the following subroutines are relevant.

SET MILK METER SYSTEM: Subroutine 311. Default = No (Off)

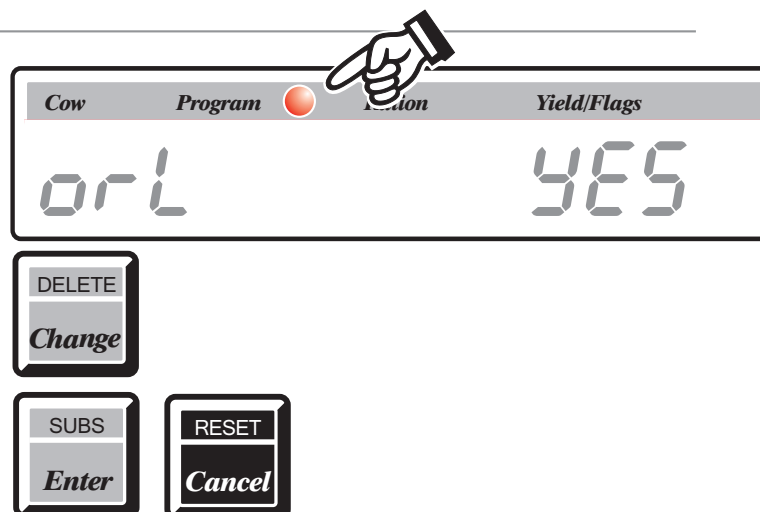This subroutine turns the link to the Milk Meter system on or off.

> Check that Program Mode is selected.
>
> Run the subroutine. The message 'orL' is displayed with 'yES' or 'no' in the Yield/Flags window.
>
> Press Change to toggle between 'yES' and 'no'.
>
> Press Enter to store the new setting.
>
> Press Cancel to exit the subroutine.

| Cow | Program | ● | Ration | Yield/Flags |

`orL`   `YES`

DELETE / *Change*

SUBS / *Enter*   RESET / *Cancel*

SET SWING OVER PARLOUR TYPE: Subroutine 312. Default = Yes (On)

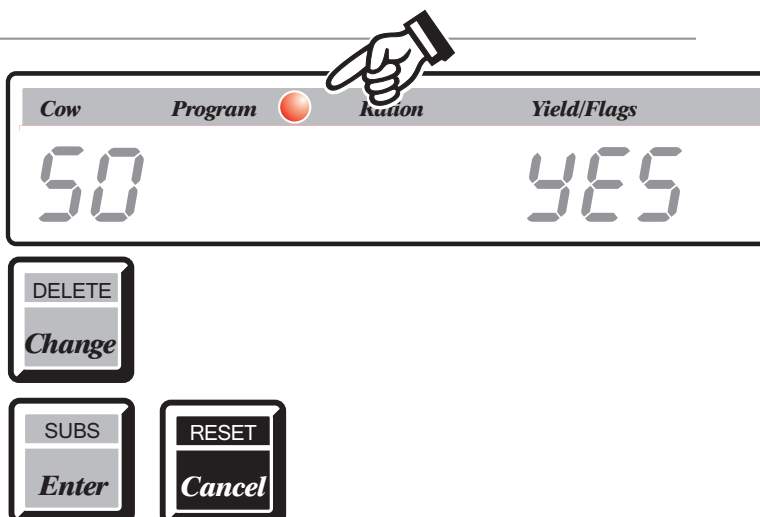This subroutine sets the parlour type; 'no' equals doubled-up; 'yES' equals swingover.

> Check that Program Mode is selected.
>
> Run the subroutine. The message 'SO' is displayed with 'yES' or 'no' in the Yield/Flags window.
>
> Press Change to toggle between 'yES' and 'no'.
>
> Press Enter to store the new setting.
>
> Press Cancel to exit the subroutine.

| Cow | Program | ● | Ration | Yield/Flags |

`SO`   `YES`

DELETE / *Change*

SUBS / *Enter*   RESET / *Cancel*

ENABLE/DISABLE MILK METER INTERFACE: Subroutine 301: Default = NO(OFF)

If ATL Milk Meters are attached to the system, and the MicroM3S software version is pre v4.20, this subroutine needs to be turned ON for daily yields to be calculated. From v4.20 onwards, this subroutine should be turned OFF as per the default setting. To check the MicroM3S software version, please use subroutine 2.

IMPORTANT - This subroutine should be turned ON for all systems connected to the ATL milk meter interface that are counting yields from 'competitor' milk meters.

> Check that Program mode is selected.
>
> Run subroutine 301. The message 'MMIF' will be displayed with the current setting - 'YES' or 'no'.
>
> Use the Change key to toggle between 'YES' (Interface ON) or 'no' (Interface OFF).
>
> Press Enter to store the setting.

| Cow | Program | ● | Ration | Yield/Flags |

`MMIF`   `YES`

DELETE / *Change*   SUBS / *Enter*
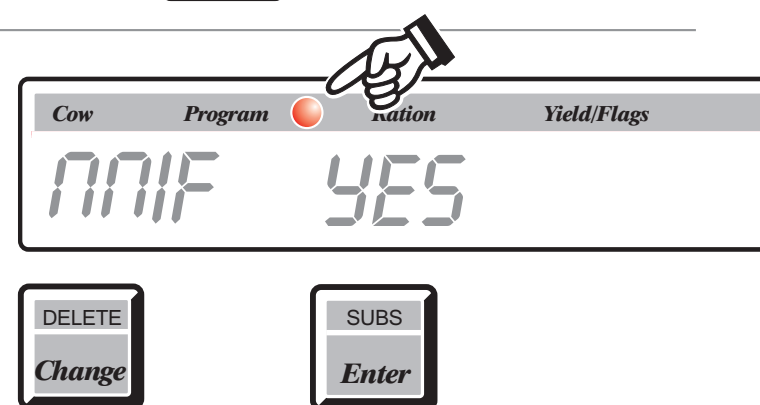
SET VERSION 2 MILK METER SYSTEM: Subroutine 331. Default = On (Enabled)

This subroutine tells the micro control to communicate using version 2 protocols.
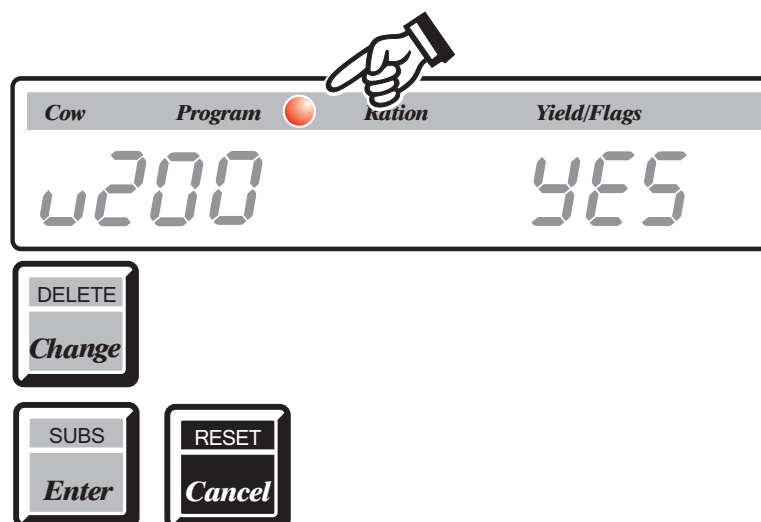
> Check that Program Mode is selected.
>
> Run the subroutine. The message 'v200' is displayed with 'yES' or 'no' in the Yield/Flags window.
>
> Press Change to toggle between 'yES' and 'no'.
>
> Press Enter to store the new setting.
>
> Press Cancel to exit the subroutine.
>
> **NB** - ATL Milk Meter software display versions V2.01.00 and above require this - please refer to the Milk Meter manual.

Cow	Program	●	Ration	Yield/Flags
v200				YES

DELETE / *Change*

SUBS / *Enter*   RESET / *Cancel*

SET VERSION 3 MILK METER SYSTEM: Subroutine 332. Default = Off (Disabled)

This subroutine tells the micro control to communicate using version 3 protocols.

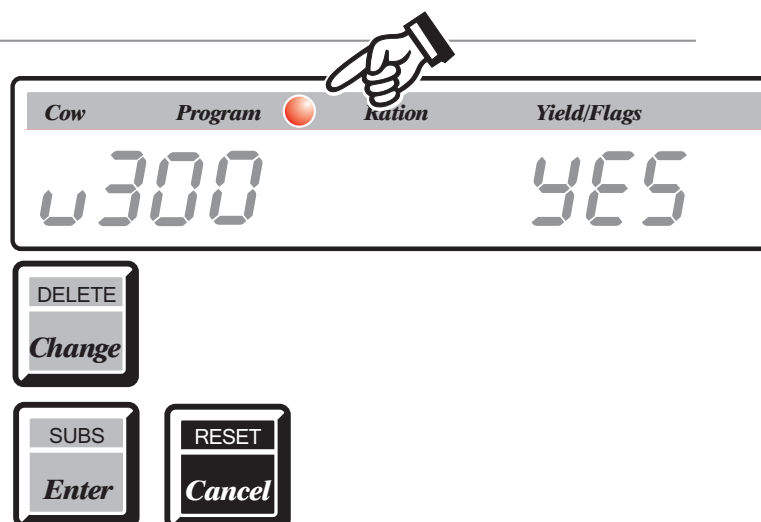> Check that Program Mode is selected.
>
> Run the subroutine. The message 'v300' is displayed with 'yES' or 'no' in the Yield/Flags window.
>
> Press Change to toggle between 'yES' and 'no'.
>
> Press Enter to store the new setting.
>
> Press Cancel to exit the subroutine.
>
> **NB** - ATL Milk Meter software display versions V3.01.00 and V4.01.00 and above require this to be turned on- please refer to the Milk Meter manual.

Cow	Program	●	Ration	Yield/Flags
v300				YES

DELETE / *Change*

SUBS / *Enter*   RESET / *Cancel*

ENABLE/DISABLE METER LOCKOUT : Subroutine 317 : DEFAULT = NO(OFF)

This routine enables or disables the meter lockout function, this function will lockout a Milk Meter if a animal has the selected warnings from subroutine 318.

> Check that Program Mode is selected.
>
> Run the subroutine. The message 'ENLK' is displayed with 'yES' or 'no' in the Yield/Flags window.
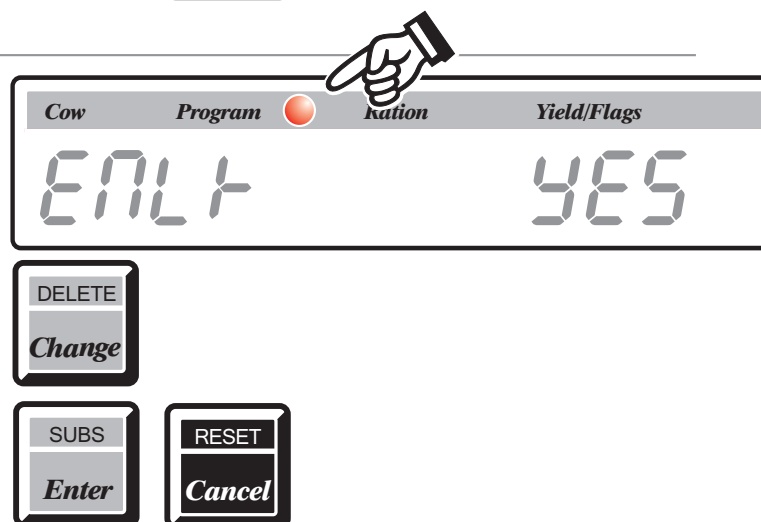>
> Press Change to toggle between 'yES' and 'no'.
>
> Press Enter to store the new setting.
>
> Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.17 or above. Please run subroutine 2 to check.

> 💣 *Use with caution; milk meter lockout is not a 'fool proof' method of preventing cross infection or milking of animals treated with antibiotics!*

Cow	Program	●	Ration	Yield/Flags
ENLK				YES

DELETE / *Change*

SUBS / *Enter*   RESET / *Cancel*

Innovation In and Out of Parlour

ENABLE/DISABLE METER LOCKOUT FLAGS: Subroutine 318: Default = All Off

The lockout flags setting enables which flags will lockup the Milk Meter if they are selected against a animal.
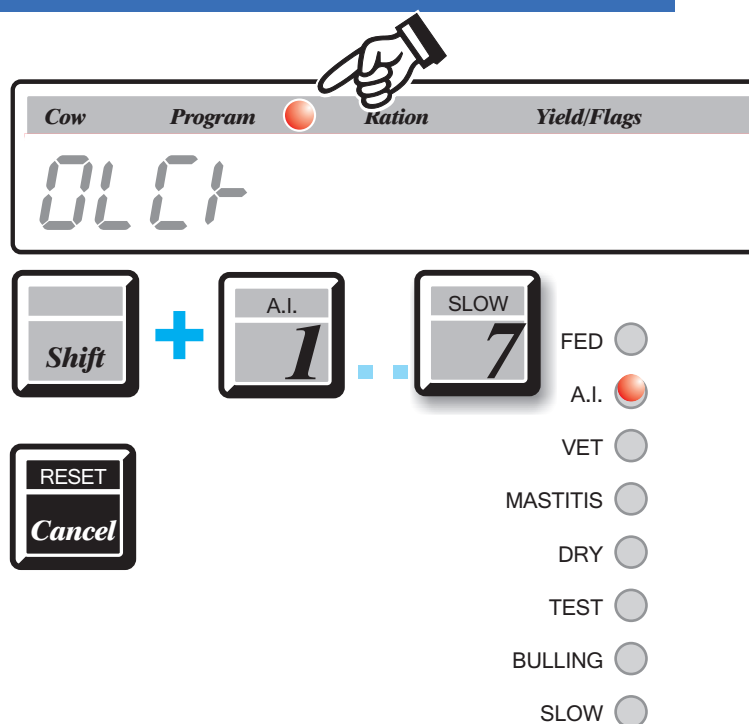
Check that Program mode is selected.

Run the subroutine. The message 'OLCK' will be displayed and the warning flag indicators will show the current settings. If an indicator is lit then that warning flag is enabled to lockup the milk meter if an animal has them and the operator attempts to milk them.

Press Shift + (Key 1 through 7) to toggle an indicator 'on' (enabled) or 'off' (disabled). Each time the combination is pressed the flag setting alternates and this is reflected by the indicator.

Press the Cancel key to exit the subroutine.

NB. This is only available on MicroM3S software v4.17 or above. Please run subroutine 2 to check.

Cow	Program	●	Ration	Yield/Flags

OLCt

Shift **+** A.I. **1** . . SLOW **7**

RESET Cancel

FED ○
A.I. ●
VET ○
MASTITIS ○
DRY ○
TEST ○
BULLING ○
SLOW ○

ENABLE/DISABLE METER SWING-TO-START : Subroutine 319 : DEFAULT = NO(OFF)

This routine enables or disables the meter swing-to-start function, where by the meter will automatically start milking when the side is changed in a swing over parlour.
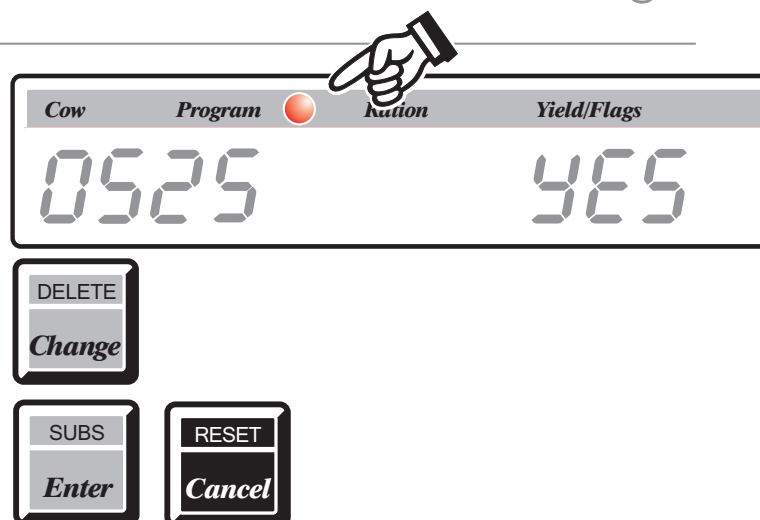
Check that Program Mode is selected.

Run the subroutine. The message 'OS2S' is displayed with 'yES' or 'no' in the Yield/Flags window.

Press Change to toggle between 'yES' and 'no'.

Press Enter to store the new setting.

Press Cancel to exit the subroutine.

Cow	Program	●	Ration	Yield/Flags

OS2S   **YES**

DELETE Change

SUBS Enter   RESET Cancel

WASH MODE IDLE/WASH : Subroutine 313

This routine provides a backup to the wash control, enabling the user to select either idle or wash mode from the MicroM3S.

Check that Program Mode is selected.

Run the subroutine. The messages 'IdLE' or 'wASh' are displayed depending on the current mode of the Milk Meter System, with 'NEt' in the Yield/Flags window.
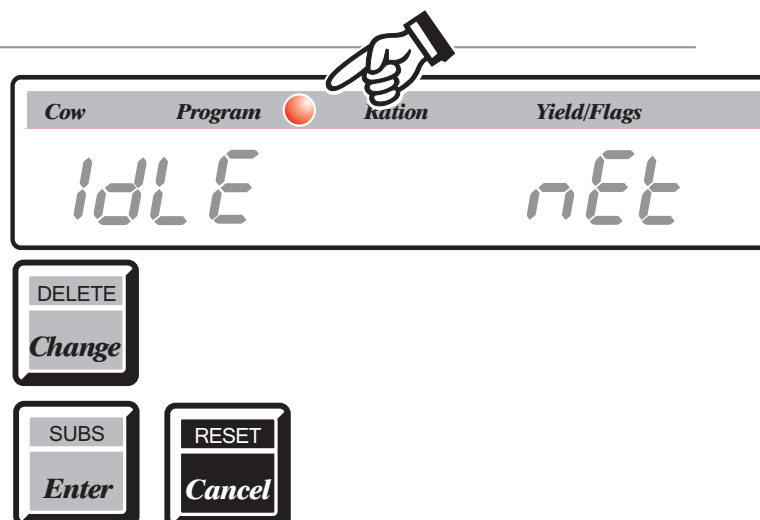
Press Change to toggle between 'IdLE' and 'wASh'.

Press Enter to store the new setting.

Press Cancel to exit the subroutine.

NB - If a Pulse-8 is connected to the Mk3S and subroutine 400 is turned ON, toggling between 'IdLE' and 'wASh' will turn the pulsators OFF and ON respectively.

NB - Software version 4.52: Updated so that wash box goes into wash countdown - requires v2.12 of wash box software.

Cow	Program	●	Ration	Yield/Flags

IdLE   **nEt**

DELETE Change

SUBS Enter   RESET Cancel

DISPLAY MILK METER TOTAL YIELD ON WASH BOX: Subroutine 440 : DEFAULT = NO(OFF)

This routine displays the milk meter total yield on the wash box during milking.
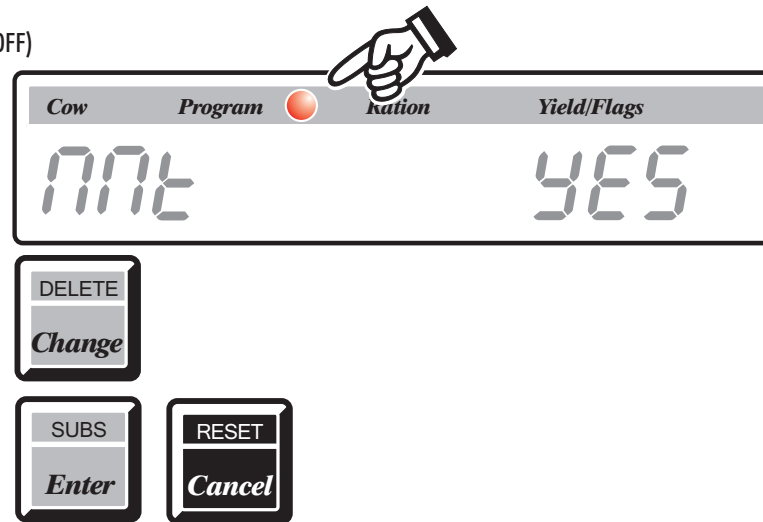
> Check that Program Mode is selected.
>
> Run the subroutine. The message 'MMt' is displayed with 'yES' or 'no' in the Yield/Flags window.
>
> Press Change to toggle between 'yES' and 'no'.
>
> Press Enter to store the new setting.
>
> Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.63 or above. Please run subroutine 2 to check.

Cow	Program		Ration	Yield/Flags
NNt				*YES*

DELETE
Change

SUBS
Enter

RESET
Cancel

Setting Up the MicroM3S with the Oriel Stall Display System

If the Oriel Stall Display system is linked to a MicroM3S, the following subroutines are relevant.

SET ORIEL STALL DISPLAY SYSTEM: Subroutine 333. Default = No (Off)

This subroutine turns the link to the Oriel Stall Display system on or off.

> Check that Program Mode is selected.
>
> Run the subroutine. The message 'oSd' is displayed with 'yES' or 'no' in the Yield/Flags window.
>
> Press Change to toggle between 'yES' and 'no'.
>
> Press Enter to store the new setting.
>
> Press Cancel to exit the subroutine.

Cow	Program	Ration	Yield/Flags
oSd			YES

DELETE
Change

SUBS
Enter

RESET
Cancel
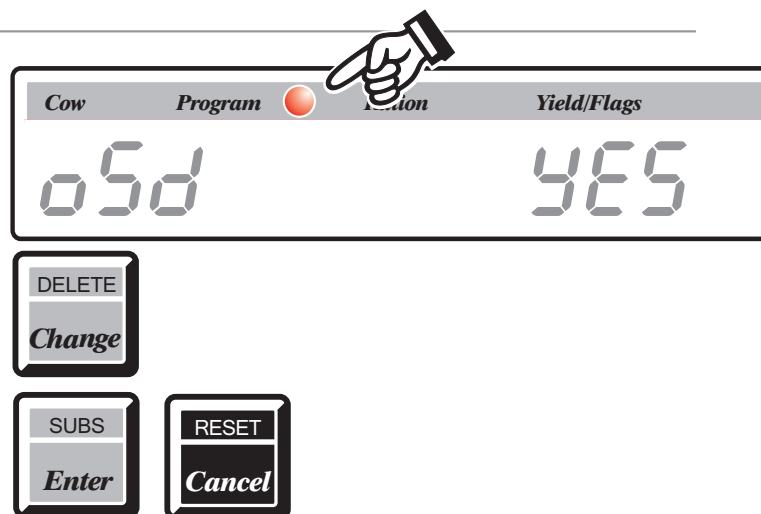
Setting Up the MicroM3S with the Milk Meter Interface

If a Milk Meter Interface is linked to a MicroM3S, the following subroutines are relevant.

ENABLE/DISABLE MILK METER INTERFACE: Subroutine 301: Default = NO(OFF)

If competitor milk meters are attached to the system, the interface- the electronic device that converts the output from the milk meters to information that the MicroM3S can 'understand'- has to be enabled.

Check that Program mode is selected.

Run subroutine 301. The message 'MMIF' will be displayed with the current setting - 'YES' or 'no'.

Use the Change key to toggle between 'YES' (Interface ON) or 'no' (Interface OFF).

Press Enter to store the setting.

Cow	Program	● Ration	Yield/Flags

MMIF   YES

DELETE / Change   SUBS / Enter

SET % VARIATION IN MILK YIELD: Subroutine 986: *Default = 10%*

For farmers using milk meters or the milk meter interface, it is possible to display animals that have a significant yield variation from milking session to session. This variation is measured as a percentage of the original yield and may be set up to suit the farmer.

Check that Program Mode is selected.

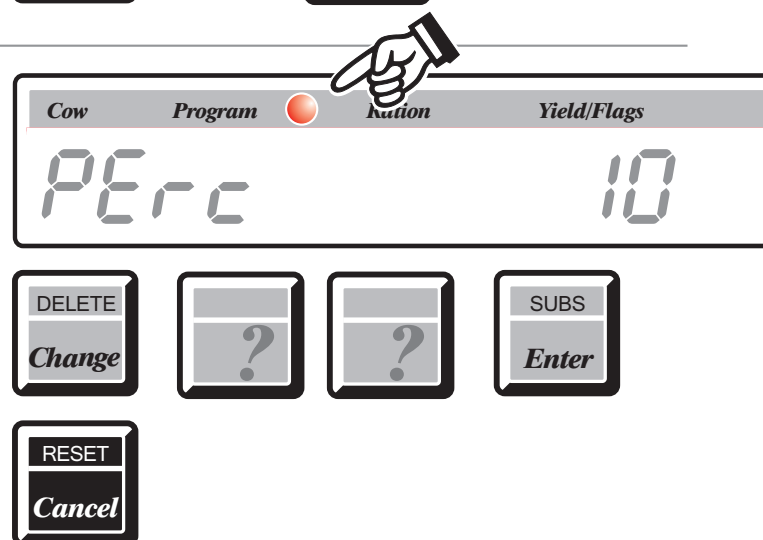Run the subroutine. The message 'PErc' is displayed with the current setting in the Yield/Flag window.

Press Change to alter the value. The display will clear to the entry prompt _ _.

Key the new value in the range 0 to 99.

Press Enter to store the value.

Press Cancel to exit the subroutine.

NB - To view these animals with yields variations, please use Subroutine 11.

Cow	Program	● Ration	Yield/Flags

PErc   10

DELETE / Change   ?   ?   SUBS / Enter

RESET / Cancel

SET MILK METER DISCHARGE VOLUME (ml/pulse): Subroutine 979. *Default = 200*

Most milk meters are designed to send out an electrical pulse when a pre-determined volume of milk has been reached and is discharged into the milk line. This volume will vary between milk meter types so this subroutine is designed to establish a value (in millilitres) per pulse for the installed meters.

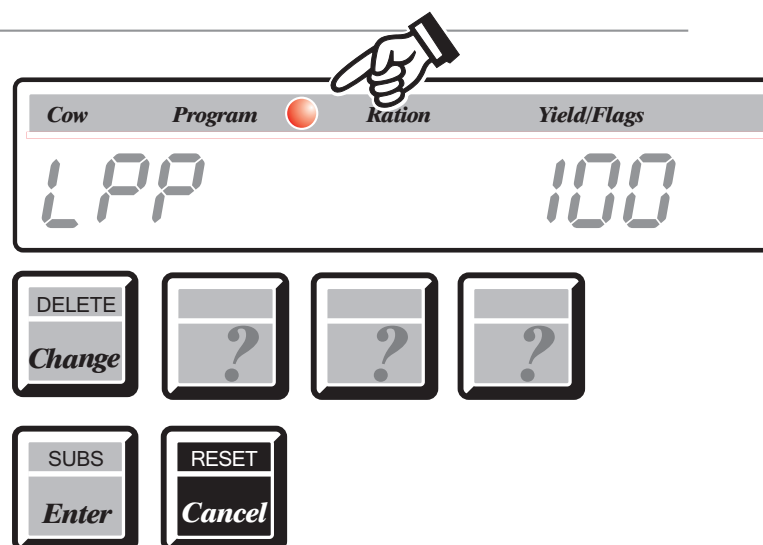Check that Program Mode is selected.

Run the subroutine. The message 'LPP' is displayed with the current ml/Pulse value in the Yield/Flags window.

Press Change to alter the value. The Yield/Flags window clears to the prompt _ _ _.

Key the new value in the range 1 through 999.

Press Enter to store the new value.

Press Cancel to exit the subroutine.

Cow	Program	● Ration	Yield/Flags

LPP   100

DELETE / Change   ?   ?   ?

SUBS / Enter   RESET / Cancel

Setting Up the MicroM3S with the Herringbone In-Stall Auto-ID System

If a Herringbone In-Stall Auto-ID system is linked to a MicroM3S, the following subroutines are relevant.

AUTO-ID ENABLE/DISABLE: Subroutine 300. Default = No (Off)

This only applies to systems that have electronic Automatic Animal Identification (Auto-ID) fitted. The subroutine enables (Yes) or disables (No) the Auto-ID system.

> Check that Program Mode is selected.
>
> Run the subroutine. The message 'AId' will appear in the animal window with the current setting Yes/No (Enabled/Disabled) in the Yield/Flags window.
>
> Press the Change key to toggle between 'Yes' and 'no'.
>
> Press Enter to store the setting.
>
> Press the Cancel key to exit the subroutine.

Cow	Program	●	Ration	Yield/Flags

A Id   **YES**

DELETE / *Change*   SUBS / *Enter*

RESET / *Cancel*
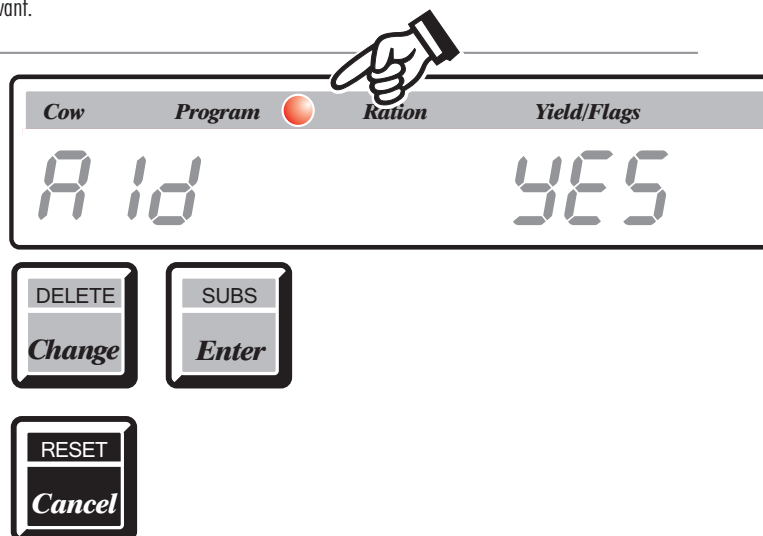
ENABLE/DISABLE PRE-FEED FOR AUTO-ID: Subroutine 304: *Default = OFF*

Pre-feed, sometimes known as 'enticement feed', drops a small portion of feed prior to a animal reaching a stall to ensure that she does occupy the correct stall. It can be very helpful in 'training' new animals to follow the herd regime and usually is only needed for a few weeks at most. NB - Use this subroutine to set pre-feed active - then use Subroutine 302 and / or 303 to select which sides require pre-feed.
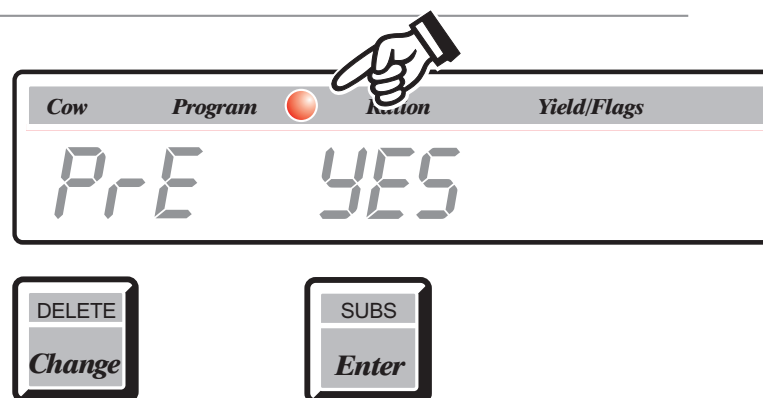
> Check that Program mode is selected.
>
> Run subroutine 304. The message 'PrE' will be displayed with the current setting -'YES' or 'no'.
>
> Use the Change key to toggle between 'YES' (Pre-feed ON) or 'no' (Pre-feed OFF).
>
> Press Enter to store the setting.
>
> NB - Pre-feed is set at a ration unit of 1. This is not user changeable. For example, if a animal is programmed to be fed 6 units and pre-feed is turned on, the animal will be

pre-fed   1 unit and then when identified, fed the remaining 5 units. Conversely, if a animal
is set a 0   ration, she will be pre-fed 1 unit and then when identified, will not be fed.
However,   the MicroM3S, will not record the feeding of the pre-feed ration against the

Cow	Program	●	Ration	Yield/Flags

PrE   **YES**

DELETE / *Change*   SUBS / *Enter*

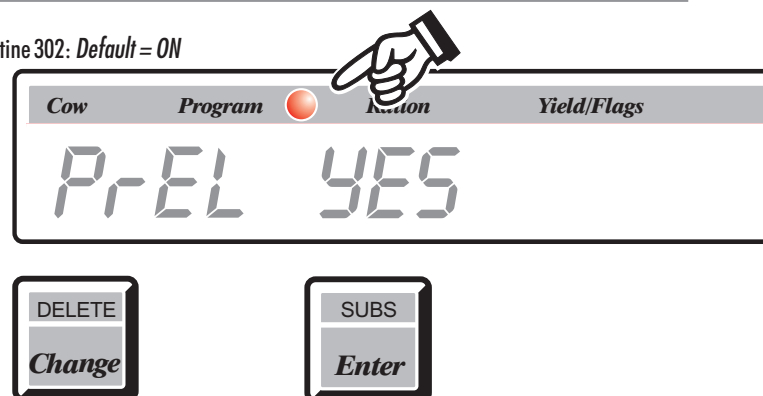### ENABLE/DISABLE PRE-FEED FOR AUTO-ID FOR LEFT-HAND SIDE OF PARLOUR: Subroutine 302: *Default = ON*

Please refer to Subroutine 304 for more information.

> Check that Program mode is selected.
>
> Run subroutine 302. The message 'PrEl' will be displayed with the current setting -'YES' or 'no'.
>
> Use the Change key to toggle between 'YES' (Pre-feed ON) or 'no' (Pre-feed OFF).
>
> Press Enter to store the setting.

Cow	Program	●	Ration	Yield/Flags

PrEL   **YES**

DELETE / *Change*   SUBS / *Enter*

ENABLE/DISABLE PRE-FEED FOR AUTO-ID FOR RIGHT-HAND SIDE OF PARLOUR: Subroutine 303: *Default = ON*
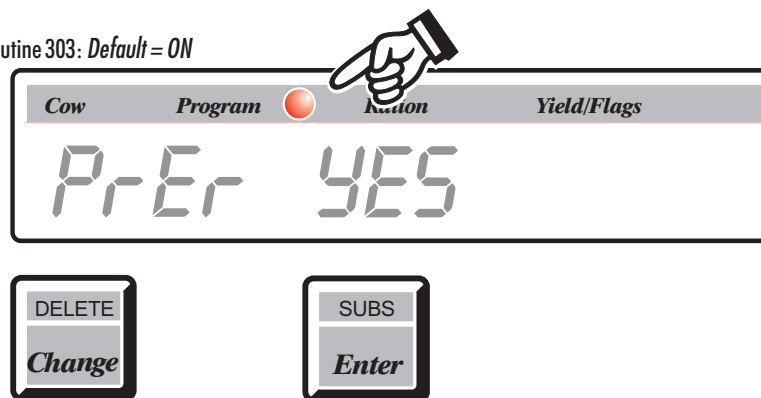
Please refer to Subroutine 304 for more information.

> Check that Program mode is selected.
>
> Run subroutine 303. The message 'PrEr' will be displayed with the current setting -'YES' or 'no'.
>
> Use the Change key to toggle between 'YES' (Pre-feed ON) or 'no' (Pre-feed OFF).
>
> Press Enter to store the setting.

Cow	Program	●	Ration	Yield/Flags

PrEr   YES

DELETE — *Change*   SUBS — *Enter*

SET UP STALL LAG FOR AUTO-ID: Subroutine 306: Default 0 (OFF)

Some parlours may be prone to 'cross reading' between stalls when the Auto-ID system is scanning. Cross-reading is where the system identifies a animal in the stall next to the one being scanned and sets it in the wrong stall. Therefore, to avoid this happening, stall lag delays the feeding process to allow the animals to settle and confirm the ear tag reads. The setting represents the number of stalls feeding will lag behind scanning and identifying.

Example 1: If the stall lag is 1, the animal in stall 1 will be fed when the animal in stall 2 has been identified and the system is scanning stall 3.

Example 2: If the stall lag is 2, the animal in stall 1 will be fed when the animal in stall 3 has been identified and the system is scanning stall 4.

Start with a small number- 1 or 2- and gradually increase it until cross reading does not pose a problem.
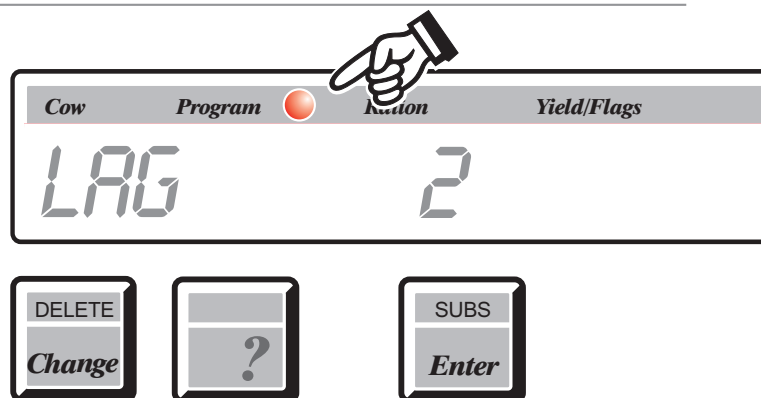
> Check that Program mode is selected.
>
> Run subroutine 306. The message 'LAG' will appear with the current setting.
>
> Press Change to alter the setting. The input prompt '___' will appear.
>
> Key the new value.   ! *Entering '0' will turn OFF the stall lag feature.*
>
> Press Enter to store the new setting.

Cow	Program	●	Ration	Yield/Flags

LAG   2

DELETE — *Change*   **?**   SUBS — *Enter*

ENABLE/DISABLE SCAN END BUZZER: Subroutine 309: *Default = OFF*

If this subroutine is turned on, the MicroM3S buzzer will bleep when each side has finished scanning.
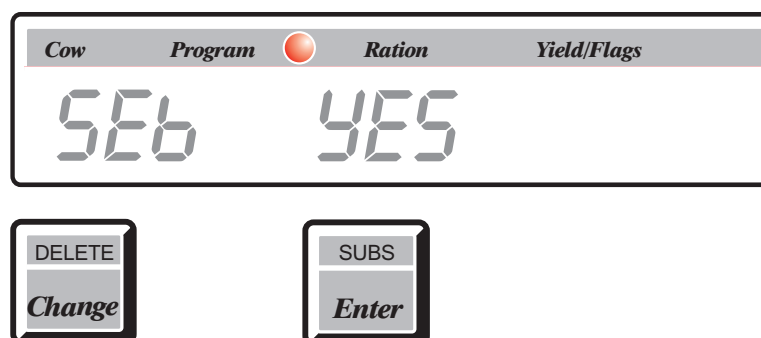
> Check that Program mode is selected.
>
> Run subroutine 309. The message 'Seb' will be displayed with the current setting -'YES' or 'no'.
>
> Use the Change key to toggle between 'YES' (Buzzer ON) or 'no' (Buzzer OFF).
>
> Press Enter to store the setting.
>
> NB - The buzzer will only bleep if there are no attentions to be acknowledged.

Cow	Program	●	Ration	Yield/Flags

SEb   YES

DELETE — *Change*   SUBS — *Enter*

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SET VERSION 4 AUTO-ID INTERFACE ENABLE/DISABLE: Subroutine 330. Default = No (Off)

This only applies to systems that have a parlour Auto-ID System with a version 4 Auto-ID Interface. The subroutine enables (Yes) or disables (No) the version 4 Auto-ID Interface. **IMPORTANT** - This should only be turned on when instructed by ATL.
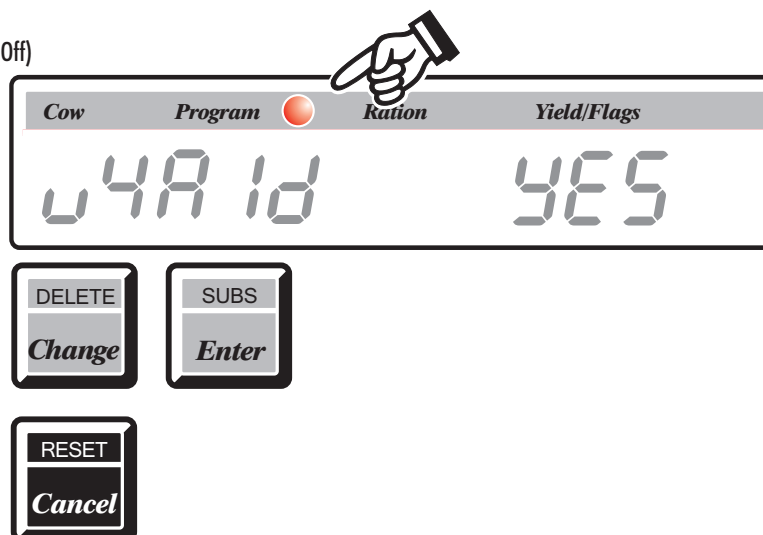
Check that Program Mode is selected.

Run the subroutine. The message 'u4AId' will appear in the animal window with the current setting Yes/No (Enabled/Disabled) in the Yield/Flags window.

Press the Change key to toggle between 'Yes' and 'no'.

Press Enter to store the setting.

Press the Cancel key to exit the subroutine.

Cow	Program	Ration	Yield/Flags
u4A Id			YES

DELETE / Change

SUBS / Enter

RESET / Cancel

Setting Up the MicroM3S with the Pegasus Walkthrough Auto-ID System

If a Pegasus Walkthroughl Auto-ID system is linked to a MicroM3S, the following subroutines are relevant.

ENABLE/DISABLE PORTAL / WALKTHROUGH AUTO-ID: Subroutine 307: *Default = OFF*

This setting allows the MicroM3S to communicate with Pegasus Walkthrough Auto-ID system on a parlour. The subroutine enables (yes) or disables (No) the system.

Check that Program Mode is selected.

Run the subroutine. The message 'PrtL' will appear in the animal window with the current setting Yes/No (Enabled/Disabled) in the Yield/Flags window.

Press the Change key to toggle between 'Yes' and 'no'.

Press Enter to store the setting.

Press the Cancel key to exit the subroutine.

| *Cow* | *Program* | *Ration* | *Yield/Flags* |

PrtL YES

DELETE
Change

SUBS
Enter
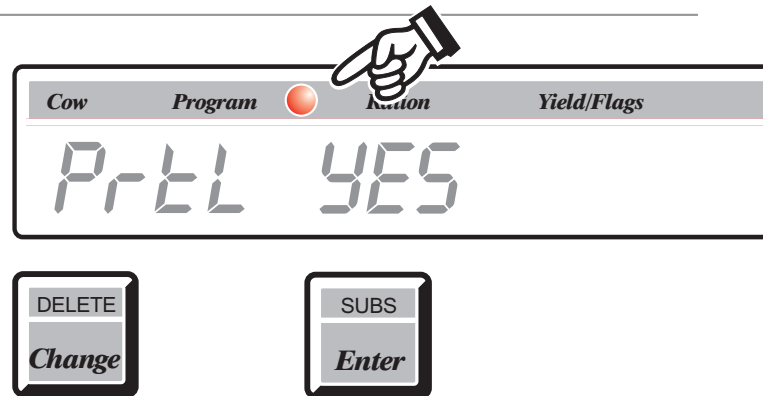
IMPORTANT - For the Pegasus Walkthrough ID system to function correctly, subroutine 300 needs to be enabled and subroutine 701 needs to be set to Single Sided Herringbone (SSh).

Setting Up the MicroM3S with the Pegasus Sorting Gate System

If a Pegasus Sort Gate system is linked to a MicroM3S, the following subroutines are relevant.

Enabling the Pegasus Sorting Gate System: Subroutine 320: Default = No (Off)

Check that Program mode is selected.

Run subroutine 320 by pressing and holding down the Shift key and then pressing and releasing key Enter(SUBS). The 'Sub' message will appear on the display. Then key 320 and Press Enter.
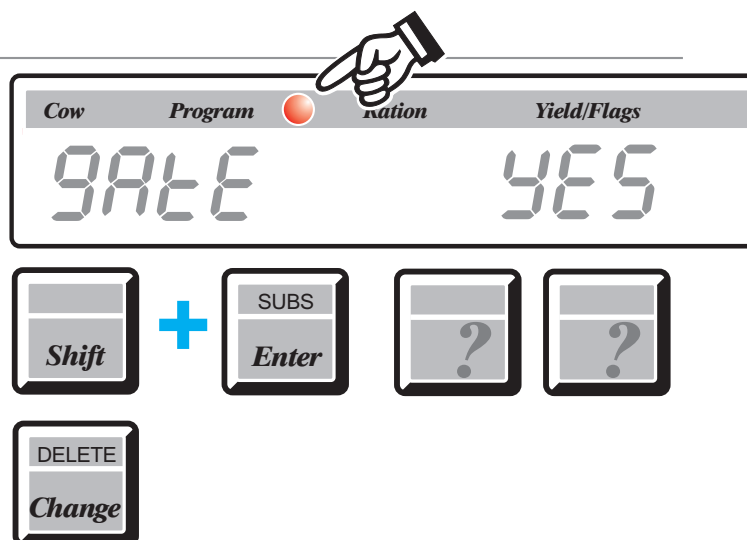
MicroM3S display shows message 'gAtE' with the current setting shown as 'YES' (Pegasus Sort Gate System = On) or 'no' (Pegasus Sort Gate System = Off)..

Press Change key to toggle between the two states; each press alternates the setting.

Press Enter to store the mode setting.

Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.05 or above. Please run subroutine 2 to check. For software versions V3.16 to V4.04, the Pegasus Sort Gate System is permanently enabled.

Cow	Program	Ration	Yield/Flags

gAtE   YES

Shift **+** SUBS Enter   ?   ?

DELETE Change

Enabling the Gate Terminal Display: Subroutine 322: Default = No (Off)

This subroutine enables an Extra Parlour Control to be installed next to the Pegasus Sorting Gate which displays the animal number of the animal that has just be read by the antenna.

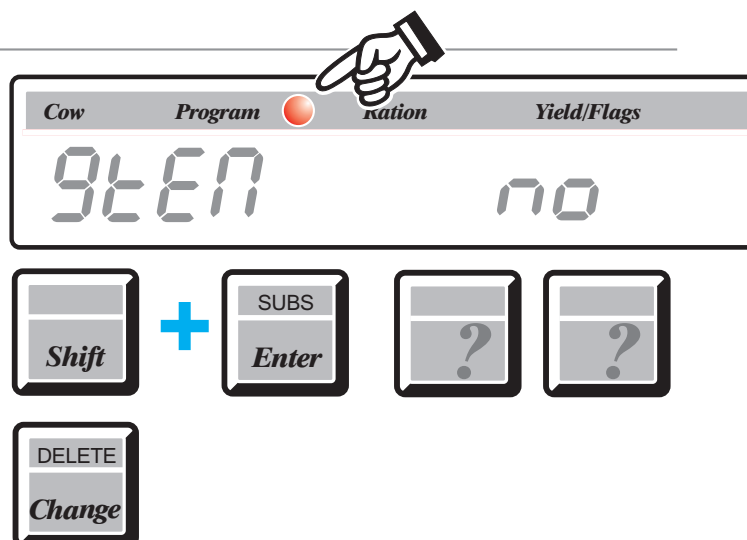Check that Program mode is selected.

Run subroutine 322.

MicroM3S display shows message 'gtEr' with the current setting shown as 'no' (Gate Terminal Display = Yes) or 'no' (Gate Terminal Display = No)..

Press Change key to toggle between the two states; each press alternates the setting.

Press Enter to store the mode setting.

Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.24 or above. Please run subroutine 2 to check. The Gate Terminal Display must have a hardware address setting of 120.

Cow	Program	Ration	Yield/Flags

gtEr   no

Shift **+** SUBS Enter   ?   ?

DELETE Change

Enabling the Gate Close Delay: Subroutine 323: Default = No (Off)

This subroutine enables the gate to be closed automatically after a set time period; preventing animals from walking back through the gate system.

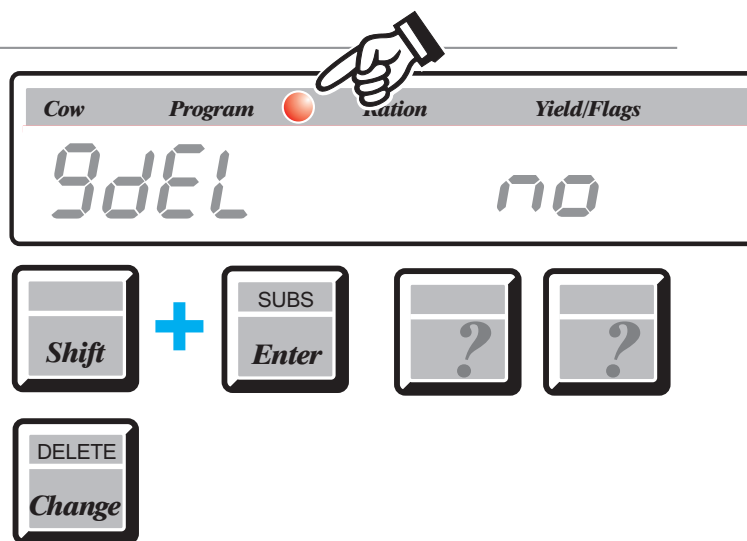Check that Program mode is selected.

Run subroutine 323.

MicroM3S display shows message 'gdEL' with the current setting shown as 'no' (Gate Close Delay = Off) or 'yES' (Pegasus Sort Gate System = On).

Press Change key to toggle between the two states; each press alternates the setting.

Press Enter to store the mode setting.

Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.24 or above. Please run subroutine 2 to check.

Cow	Program	Ration	Yield/Flags

gdEL   no

Shift **+** SUBS Enter   ?   ?

DELETE Change

Changing the Gate Close Delay Value: Subroutine 324: Default = 20

This subroutine enables the time delay before the gate closes to be manually adjusted.

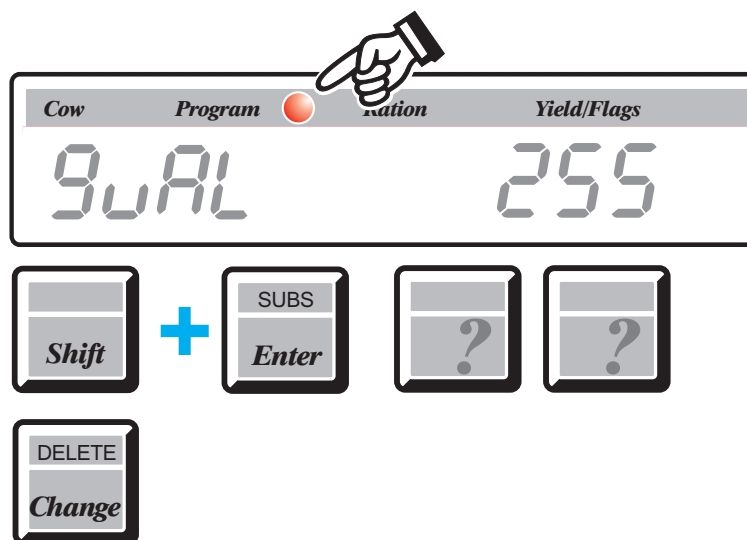Check that Program mode is selected.

Run subroutine 324.

MicroM3S display shows message 'gvAL' with the current setting shown as 'YES'.

Press Change key to enter a new value between 0 - 255 seconds.

Press Enter to store the mode setting.

Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.24 or above. Please run subroutine 2 to check.

| Cow | Program | ● | Ration | Yield/Flags |

9vAL   255

Shift + SUBS Enter ? ?

DELETE Change

Enabling the Gate Close Sensor: Subroutine 325: Default = No (Off)

This subroutine enables a gate close sensor to trigger the gate close delay in Subroutine 323.

Check that Program mode is selected.

Run subroutine 325.

MicroM3S display shows message 'gtCS oFF' with the current setting shown as 'no'.

Press Change key to toggle between Yes and No.

Press Enter to store the mode setting.

Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.27 or above. Please run subroutine 2 to check. This function requires v4.00 or above Pegasus Gate Interface software.

| Cow | Program | ● | Ration | Yield/Flags |

9SEn   no

Shift + SUBS Enter ? ?

DELETE Change
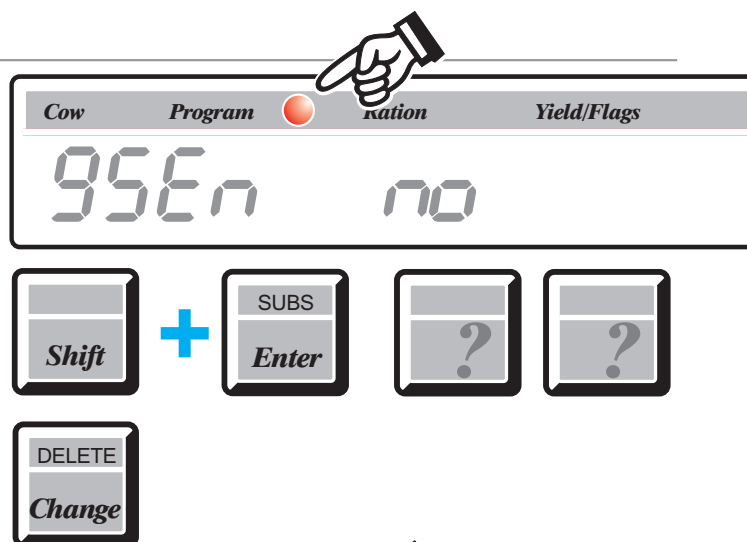
Enabling Gate Sensor Attention Flags: Subroutine 329. Default = All Off

This subroutine enables a gate sensor with time delay to be used against certain warning flags only. Thereby, it can be used on one gate on a two gate system.
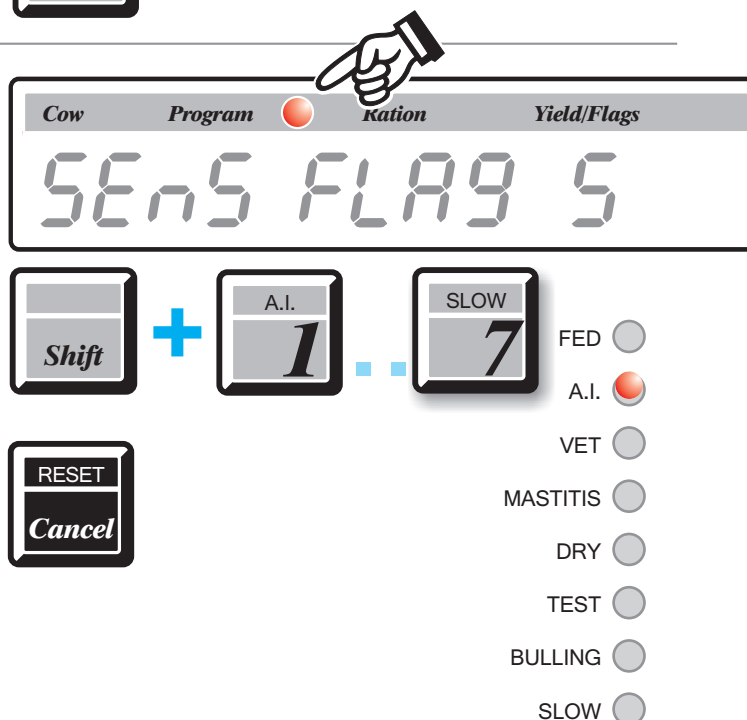
Check that Program Mode is selected.

Run the subroutine. The message 'SEnS FLAg S' will be displayed and the warning flag indicators will show the current settings. If an indicator is lit then that warning flag is enabled to be used with the gate sensor and delay.

Press Shift + (Key 1 through 7) to toggle an indicator 'on' (enabled) or 'off' (disabled). Each time the combination is pressed the flag setting alternates and this is reflected by the indicator.

Press the Cancel key to exit the subroutine.

NB. This is only available on MicroM3S software v4.36 or above. Please run subroutine 2 to check.

| Cow | Program | ● | Ration | Yield/Flags |

SEnS FLAg S

Shift + A.I. 1 .. SLOW 7

FED ○
A.I. ●
VET ○
MASTITIS ○
DRY ○
TEST ○
BULLING ○
SLOW ○

RESET Cancel

Enabling and Clearing Once Only Flags: Subroutine 996: Default = None and Clear During House Keeping.

This subroutine controls when attention flags are cleared from the animal - there are 2 options - either as the animal goes through the sorting gate system or at house keeping.

Check that Program mode is selected.

Run subroutine 996.

MicroM3S display shows message 'oFLg' and 'cdh' (clear daily house keeping) or 'cas' (clear after sorting).

Press Change key to change the setting.

The warning flag indicators will show the current settings. If an indicator is lit then that warning flag is enabled to be once only.

Press Shift + (Key 1 through 7) to toggle an indicator 'on' (enabled) or 'off' (disabled). Each time the combination is pressed the flag setting alternates and this is reflected by the indicator.

Press Enter to store the settings.

Press Cancel to exit the subroutine.

NB. This was introduced in MicroM3S software version v4.28. In this version it removes the flags when the animal is seen by the sorting gate. It was changed in v.4.44 to only clear them at the house keeping times. It was further updated in v4.53 to give the option or either removing the flag when the animal is seen by the sorting gate or at the house keeping times. Please run subroutine 2 to check. This function requires v4.00 or above Pegasus Gate Interface software.

| Cow | Program | Ration | Yield/Flags |

oFL9   cdh

Shift + SUBS/Enter   ?   ?

DELETE/Change

Shift + A.I. 1 .. SLOW 7

FED ○
A.I. ○
VET ●
MASTITIS ○
DRY ○
TEST ○
BULLING ○
SLOW ○

SUBS/Enter

Enabling the Gate Show Tag: Subroutine 327: Default = None

This subroutine allows the animal number or the full 16 digit electronic ID tag number to be displayed on the Micro.

Check that Program mode is selected.

Run subroutine 327.

MicroM3S display shows message 'gtS' and 'nonE'.

Press Change key to toggle between no information ('nonE'), animal number ('cou') and 16 digit electronic ID tag number ('tAg').

Press Enter to store the mode setting.

Press Cancel to exit the subroutine.

NB. This was introduced in MicroM3S software version v4.28. In this version it just shows the full 16 digit electronic ID tag number. It was updated in v.4.48 to allow the animal number to be displayed. Please run subroutine 2 to check. This function requires v4.00 or above Pegasus Gate Interface software.

| Cow | Program | Ration | Yield/Flags |

9t5   tA9

Shift + SUBS/Enter   ?   ?

DELETE/Change

SET VERSION 4 GATE INTERFACE ENABLE/DISABLE: Subroutine 334. Default = No (Off)

This only applies to systems that have a Pegasus Sorting Gate System with a version 4 Gate Interface. The subroutine enables (Yes) or disables (No) the version 4 Gate Interface. **IMPORTANT** - This should only be turned on when instructed by ATL.
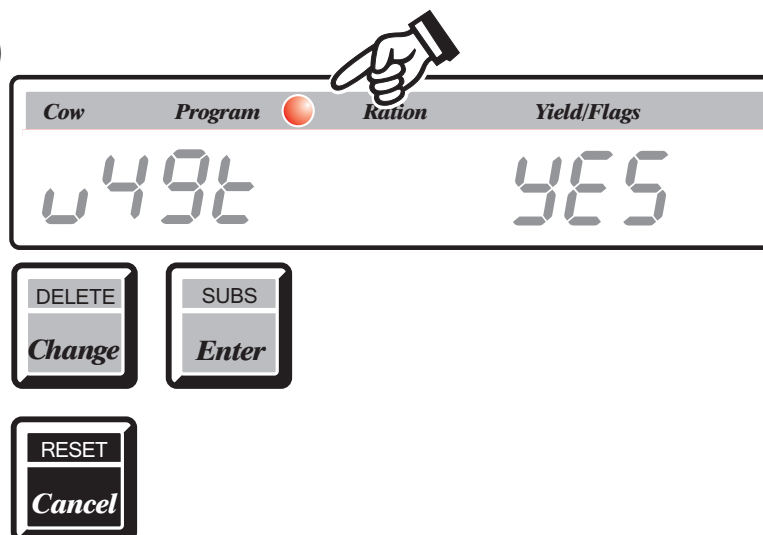
Check that Program Mode is selected.

Run the subroutine. The message 'u4gt' will appear in the animal window with the current setting Yes/No (Enabled/Disabled) in the Yield/Flags window.

Press the Change key to toggle between 'Yes' and 'no'.

Press Enter to store the setting.

Press the Cancel key to exit the subroutine.

Cow	Program	Ration	Yield/Flags
u4gt			YES

DELETE
Change

SUBS
Enter

RESET
Cancel

Setting Up the MicroM3S with the Extra Parlour Control

If a MicroM3S is linked to an Extra Parlour Control, the following subroutines are relevant.

Setup Number of Extra Parlour Controls: Subroutine 997: Default = 0

Check that Program mode is selected.

Run subroutine 997 by pressing and holding down the Shift key and then pressing and releasing the Enter(SUBS) key. The 'Sub' message will appear on the display. Then key 997 and Press Enter.

MicroM3S display shows message 'tErN' with the current number of Extra Parlour Controls shown as '1'.

Press Change key to enter a new value between 0 - 255.

Press Enter to store the mode setting.

Press Cancel to exit the subroutine.

NB - See Datasheet 48 at the back of this manual for Extra Parlour Control address settings.

Cow	Program	Ration	Yield/Flags

tErN   1

Shift ＋ SUBS Enter   ？   ？

DELETE Change
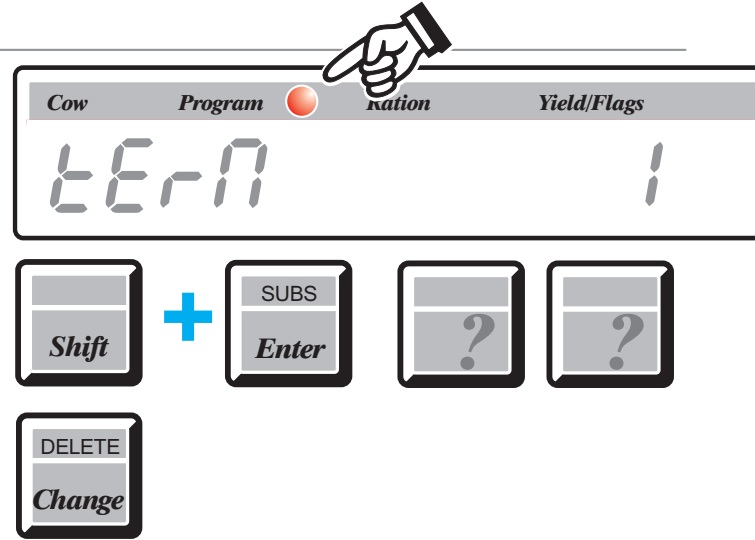
Setting Up the MicroM3S with the Pulse-8 Pulsation Control

If a MicroM3S is linked to the Pulse-8 Pulsation Control, the following subroutines are relevant.

ENABLE / DISABLE PULSE-8: Subroutine 400: Default = OFF

This subroutine turns the link to the Pulse-8 on or off.
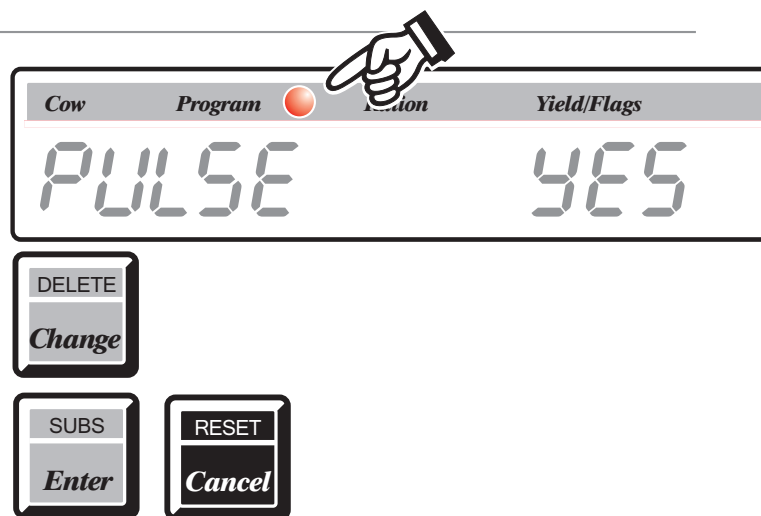
Check that Program Mode is selected.

Run the subroutine. The message 'PULSE' is displayed with 'yES' or 'no' in the Yield/Flags window.

Press Change to toggle between 'yES' and 'no'.

Press Enter to store the new setting.

Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.29 or above. Please run subroutine 2 to check.

Cow	Program	Ration	Yield/Flags

PULSE *YES*

DELETE
Change

SUBS
Enter

RESET
Cancel

Setting Up the MicroM3S with the Milk Pump Control

If a MicroM3S is linked to the Milk Pump Control, the following subroutines are relevant.

ENABLE / DISABLE MILK PUMP CONTROL: Subroutine 420: Default = OFF

This subroutine turns the link to the Milk Pump Control on or off.
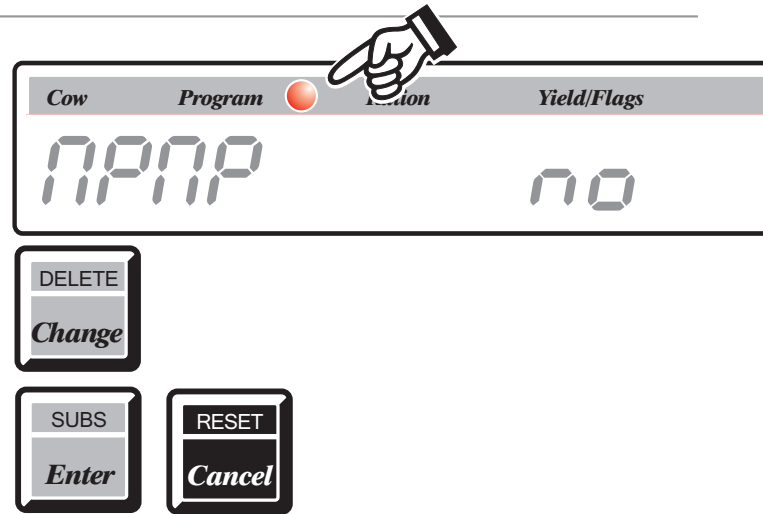
Check that Program Mode is selected.

Run the subroutine. The message 'nPc' is displayed with 'yES' or 'no' in the Yield/Flags window.

Press Change to toggle between 'yES' and 'no'.

Press Enter to store the new setting.

Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.52 or above. Please run subroutine 2 to check.

Cow	Program	Ration	Yield/Flags

nPnP

no

DELETE
Change

SUBS
Enter

RESET
Cancel

Performing Administrative Tasks on the MicroM3S

RESET ALL SUBROUTINES TO DEFAULT VALUES : Subroutine 582

This subroutine will reset all subroutines to their default, factory set values.
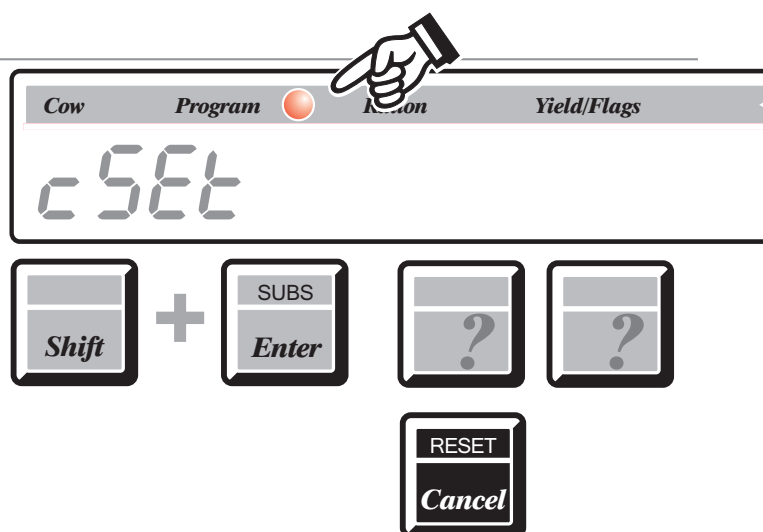
Check that Program Mode is selected.

Run the subroutine. The message 'CSEt' will appear in the animal number window.

Press Cancel to exit the subroutine.

NB - animal records will be kept unchanged.

💣 *Handle with Care. Data cannot be retrieved. Only available from software version V4.01.*

| Cow | Program | ● | Ration | Yield/Flags |

cSEt

[Shift] **+** [SUBS Enter] [?] [?]

[RESET Cancel]

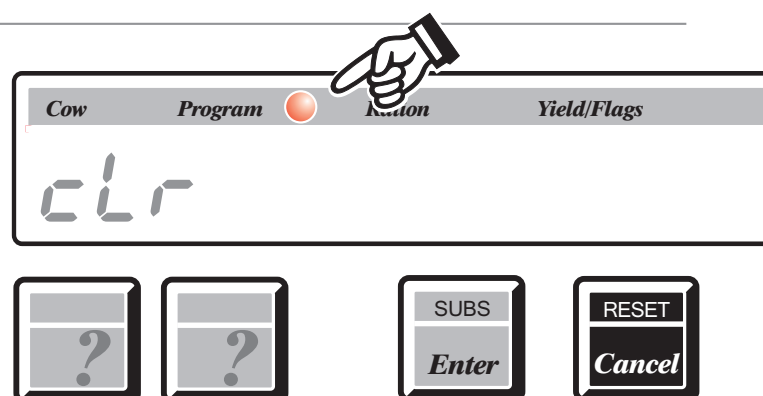## CLEAR ALL ANIMAL RECORDS : Subroutine 281.

This subroutine clears ALL animal records. The data is lost and is not recoverable so use with caution.

Run the subroutine.

The message 'cLr' is displayed in the animal number window.

Press Cancel to exit the subroutine.

💣 *Handle with Care. Data cannot be retrieved.*

| Cow | Program | ● | Ration | Yield/Flags |

cLr

[?] [?] [SUBS Enter] [RESET Cancel]

DISPLAY SERIAL NUMBER: Subroutine 777

The Serial Number can be displayed by running this subroutine.

Check that Program Mode is selected.

Run the subroutine 777. The message 'SErL'. The Serial Number is displayed in the Cumulative Totals window.

Press Cancel to exit the subroutine.

| Cow | Program | ● | Ration | Yield/Flags |

SErL   _ _ _

[Shift] **+** [SUBS Enter] [?] [?]
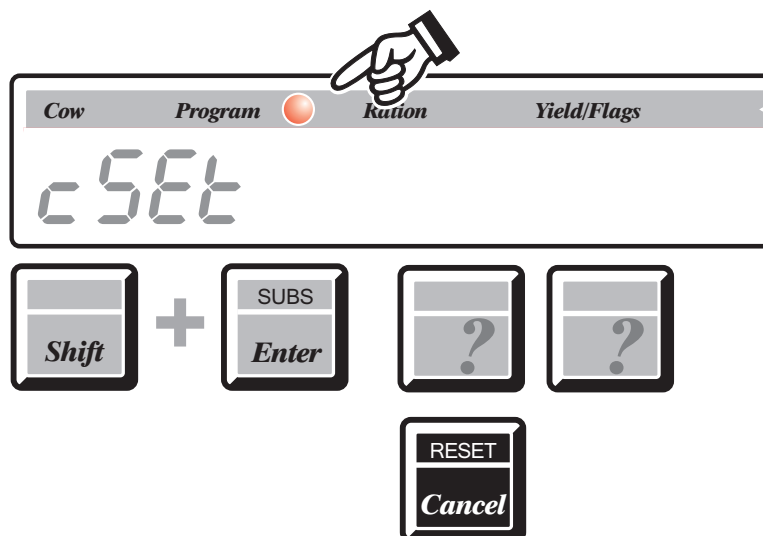
[RESET Cancel]
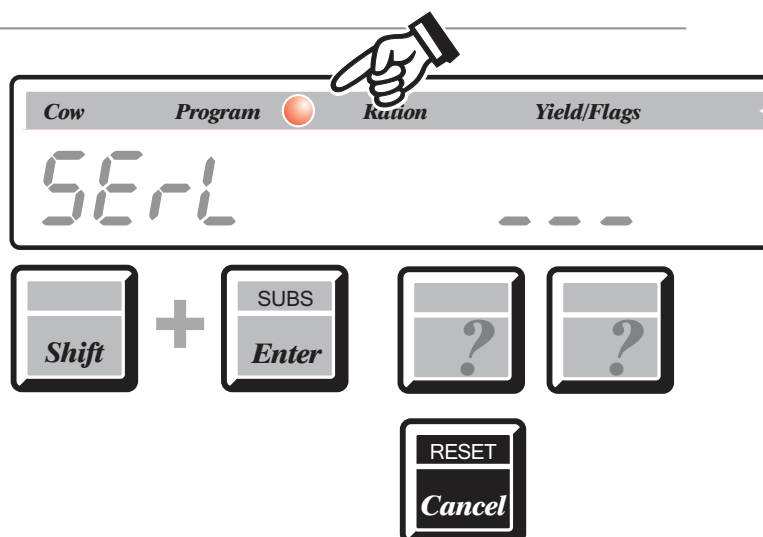
FACTORY RESET: Subroutine 888

This subroutine will reset all subroutine settings to their default, factory set values and delete all animal numbers.

> Check that Program Mode is selected.

> Run the subroutine. The message 'CSEt' will appear in the animal number window; shortly followed by 'cLr'.

> Press Cancel to exit the subroutine.

> 💣 *Handle with Care. Data cannot be retrieved.*

Cow	Program	●	Ration	Yield/Flags

c 5Et

Shift + SUBS Enter ? ?

RESET Cancel

## FACTORY RESET AND LOAD ENTIRE MEMORY WITH 'DUMMY' ANIMALS: Subroutine 889

This subroutine will reset all settings to their default, factory set values, delete all animal numbers and fill the entire memory with 'Dummy' animals.

> Check that Program Mode is selected.

> Run the subroutine. The message 'CSEt' will appear in the animal number window, shortly followed by 'cLr' and then 'FILL'.

> Press Cancel to exit the subroutine.

> 💣 *Handle with Care. Data cannot be retrieved.*

Cow	Program	●	Ration	Yield/Flags

c 5Et

Shift + SUBS Enter ? ?

RESET Cancel
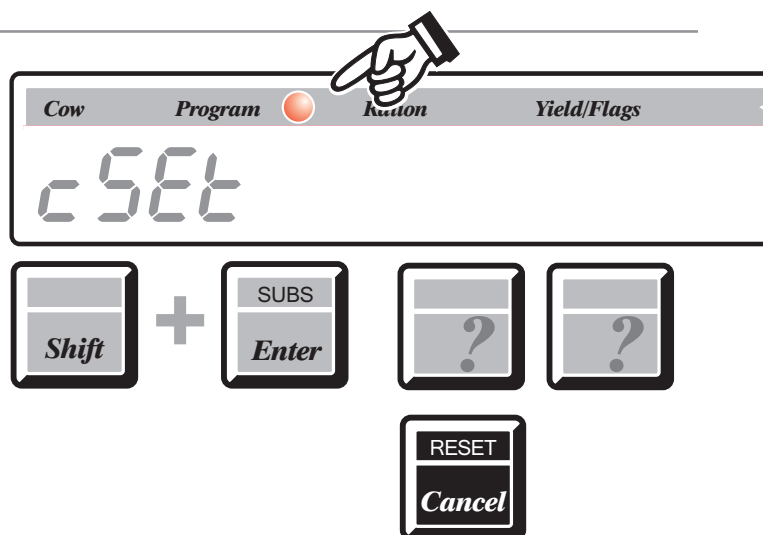
Running Test Routines on the MicroM3S
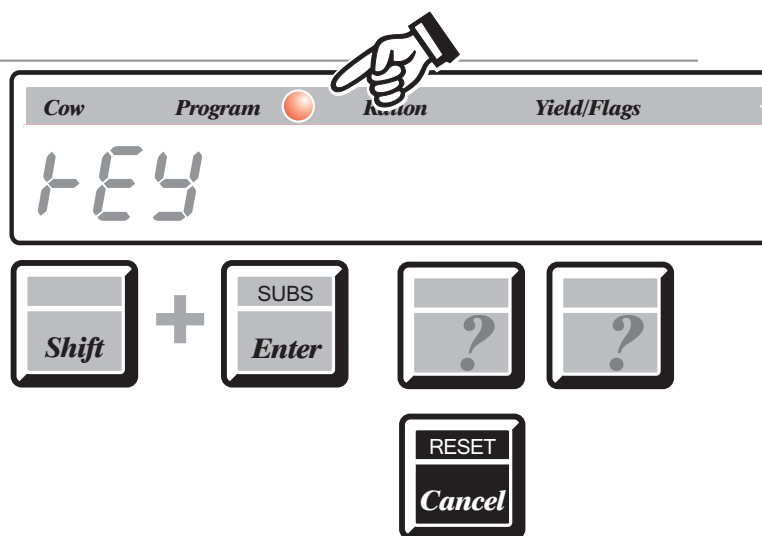
KEYBOARD TEST: Subroutine 999

The keyboard can be tested by running this subroutine.

Check that Program Mode is selected.

Run the subroutine 999. The message 'kEy' will appear in the animal number window.

Pressing each key in turn will display it's key matrix code. All keys can be tested this way.

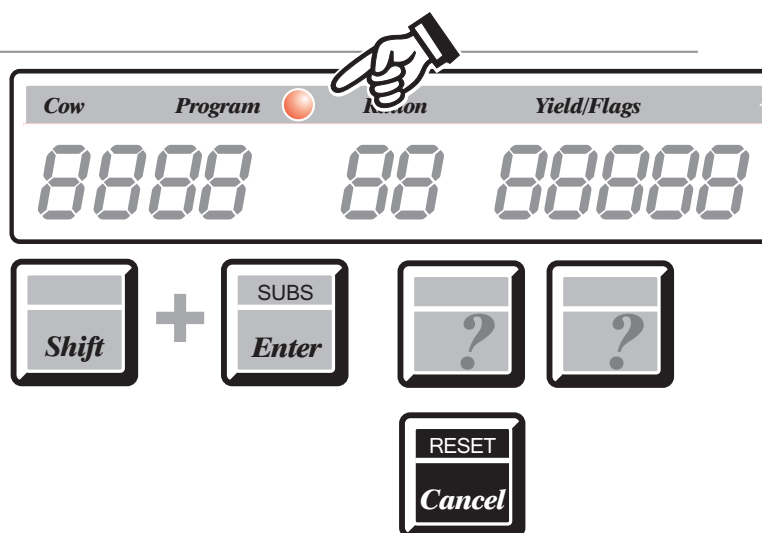Press Cancel to exit the subroutine.

DISPLAY TEST: Subroutine 998

The display can be tested by running this subroutine.

Check that Program Mode is selected.

Run the subroutine 998. The display will light ALL characters.

Press Cancel to exit the subroutine.

FEEDER RELAY PCB COMMUNICATION (IDS) TEST: Subroutine 606

The communications with the Feeder Relay PCB(s) can be tested by running this subroutine.

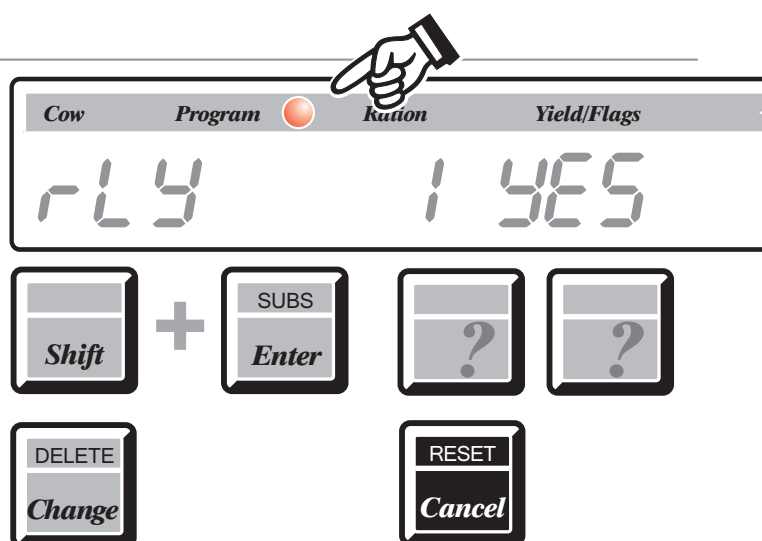Check that Program Mode is selected.

Run the subroutine 606. The message 'rLy' followed by '1 Yes'.

Press the STEP key to check additional Relay PCBs. Or press the CHANGE key to enter the number of the Relay PCB to be checked (only available from software v4.29 onwards).

If a Relay PCB is not present, the message 'rLy' followed by '1 No'.

The software version of each Relay PCB present (i.e. '105') is displayed in the Cumulative Totals display.

Press Cancel to exit the subroutine.

DISPLAY PCB COMMUNICATION (IDS) TEST: Subroutine 602

The communications with the Display PCB(s) can be tested by running this subroutine.
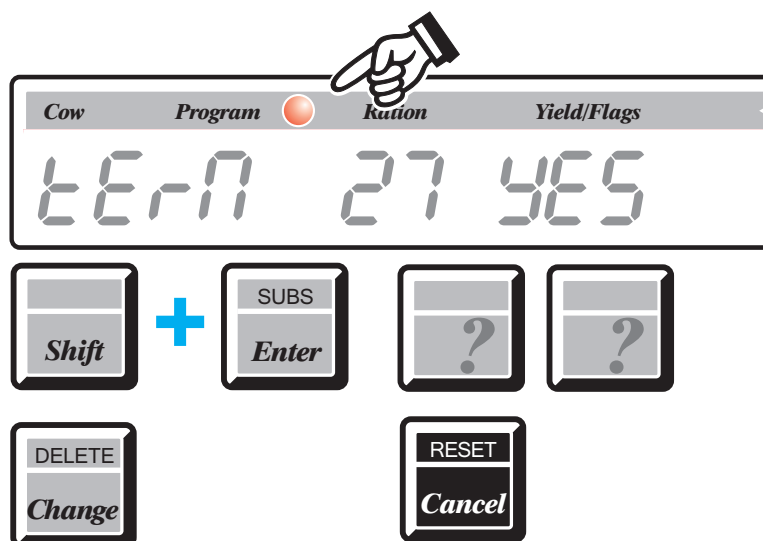
Check that Program Mode is selected.

Run the subroutine 602. The message 'tErN27 YEs' will be displayed.

Press the STEP key to check the communication with any additional displays. Or press the CHANGE key to enter the number of the Display PCB to be checked (only available from software v4.29 onwards).

The software version of each Display PCB present (i.e. '201') is displayed in the Cumulative Totals display. 'tErN x No' indicates a communications failure to the terminal being tested (x).

Press Cancel to exit the subroutine.

NB - Terminal 27 (actual address 127) is the main MicroM3S control. Additional Extra Parlour Control terminals are addressed from 1 onwards. The Gate Terminal Display address is 120.

| Cow | Program | ● | Ration | Yield/Flags |

tErN   27 YES

Shift + **SUBS Enter**   **?**   **?**

DELETE Change   **RESET Cancel**

AUTO-ID INTERFACE COMMUNICATION (IDS) TEST: Subroutine 600

The communications with the Auto-ID Interface can be tested by running this subroutine.
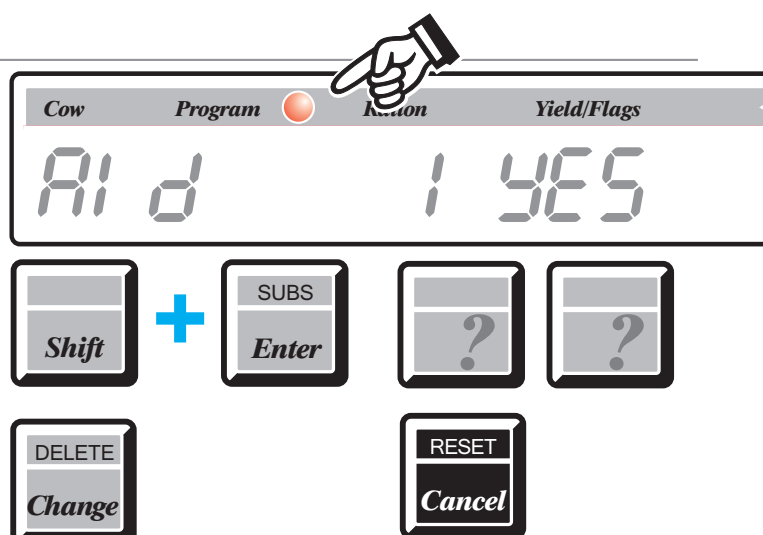
Check that Program Mode is selected.

Run the subroutine 600. The message 'AId 1 Yes' will be displayed.

The software version of the Auto-ID Interface present (i.e. '203') is displayed in the Cumulative Totals display.

Error Message 1 - 'AID 1 No ' indicates a communications failure with the Auto-ID Interface.

Error Message 2 - 'AID Err 4' indicates a tag reader failure.

Press Cancel to exit the subroutine.

| Cow | Program | ● | Ration | Yield/Flags |

AI d   1 YES

Shift + **SUBS Enter**   **?**   **?**

DELETE Change   **RESET Cancel**

MILK METER INTERFACE COMMUNICATION (IDS) TEST: Subroutine 601

The communications with the Milk Meter Interface can be tested by running this subroutine.

Check that Program Mode is selected.

Run the subroutine 601.

| Cow | Program | ● | Ration | Yield/Flags | ◁ Stall/Side ▷ |

MMI Fu1   YES   t1

The message 'MMI F u1 Yes T1' will be displayed in the main window and '103' will be displayed in the totals window.

T1 relates to the type of Milk Meter Interface installed and the type of milk meter's it is connected to - other types of interfaces are T2 and T3.

Press the STEP key to check the communication with any additional Interfaces. For example, checking communications with Interface 2 would result in 'MMI Fu2 Yes T1' being displayed in the main window and '103' in the totals window.
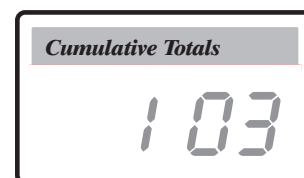
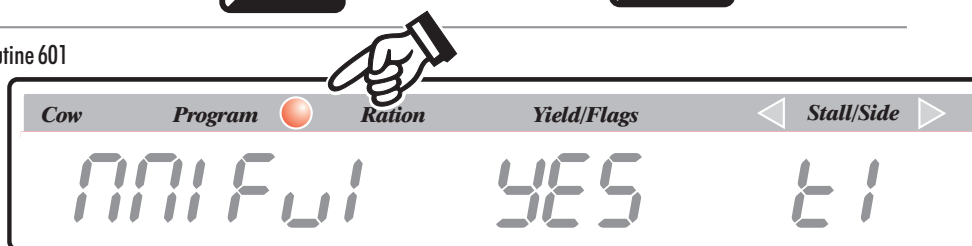The software version of each Milk Meter Interface present (i.e. '103') is displayed in the Cumulative Totals display.

Error Message 1 - 'Err 1' is RAM failure in the Milk Meter Interface.

Error Message 2 - 'Err 64 + X' indicates that input X is continuously turned on.

Press Cancel to exit the subroutine.

NB - Err + message is shown if a milk meter solenoid is activated during testing.

Cumulative Totals

1 03

PEGASUS SORTING GATE INTERFACE COMMUNICATION (IDS) TEST: Subroutine 604

The communications with the Pegasus Sorting Gate Interface(s) can be tested by running this subroutine.

Check that Program Mode is selected.

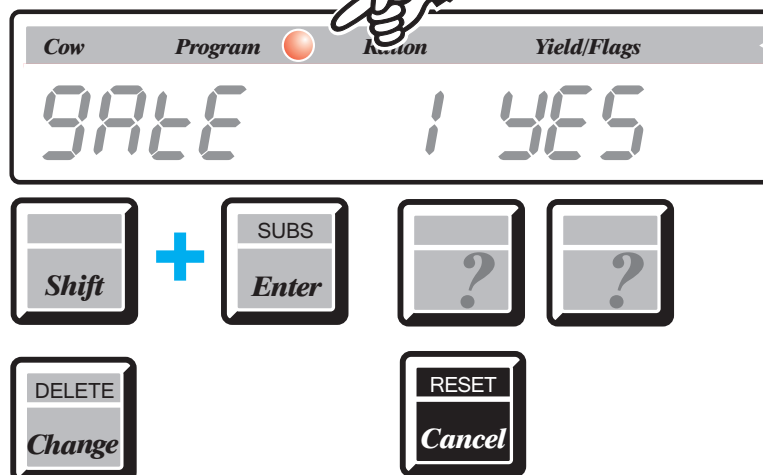Run the subroutine 604. The message 'gAtE 1 YEs' will be displayed.

Press the STEP key to check the communication with any additional Pegasus Sorting Gate Interfaces. Or press the CHANGE key to enter the number of the Pegasus Gate Interface to be checked (only available from software v4.29 onwards).

The software version of each Pegasus Sorting Gate Gate Interface present (i.e. '102') is displayed in the Cumulative Totals display.

Error Message 1 - 'Gate X No' indicates a communications failure with the Pegasus Gate Interface.

Error Message 2 - 'Err 4' indicates a tag reader failure.

Press Cancel to exit the subroutine.

Cow	Program		Ration	Yield/Flags

9AtE   1 YES

| Shift | **+** | SUBS Enter | ? | ? |

| DELETE Change | | | RESET Cancel |

MILK METER COMMUNICATION (IDS) TEST: Subroutine 605

The communication with each Milk Meter point can be tested by running this subroutine.
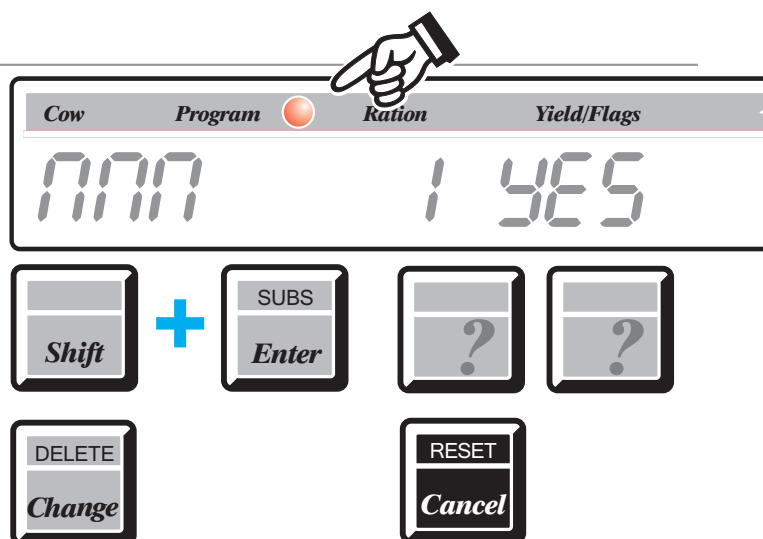
Check that Program Mode is selected.

Run the subroutine 605. The message 'MMM 1 Yes' will be displayed.

Press the STEP key to check the communication with each point. Or press the CHANGE key to enter the number of the Milk Meter Display to be checked (only available from software v4.29 onwards).

Milk meters on the left-hand side of the parlour are numbered 1-63, and milk meters on the right-hand side of the parlour are number 64 and above. NB - Swingover parlour milk meters are numbered from 1 and upwards. Or press the SIDE key to poll milk meters on the right-hand side of the parlour (only available from software v4.29 onwards).

The software version of each Milk Meter present (i.e. '200') is displayed in the Cumulative Totals display. 'MMM X No' indicates a communications failure to milk meter X.

Press Cancel to exit the subroutine.

Cow	Program		Ration	Yield/Flags

MMM   1 YES

| Shift | **+** | SUBS Enter | ? | ? |

| DELETE Change | | | RESET Cancel |

WASH BOX BOX COMMUNICATION (IDS) TEST: Subroutine 607:

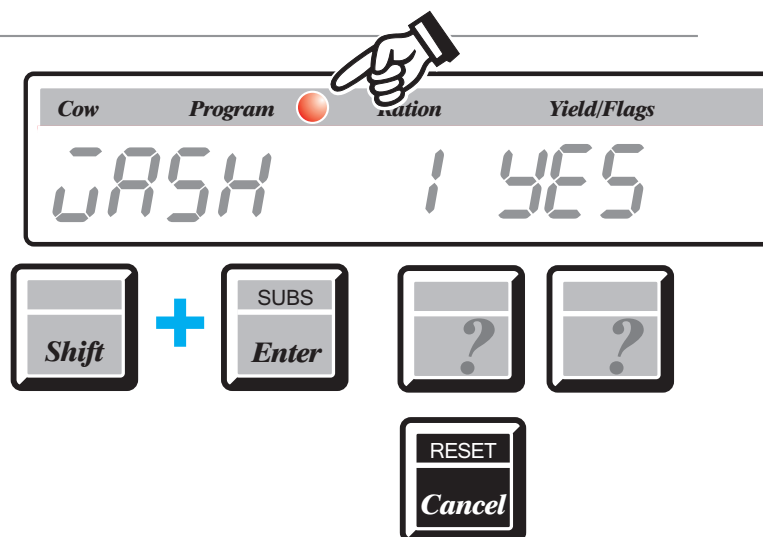TThe communication with the Wash Box can be tested by running this subroutine.

Check that Program Mode is selected.

Run the subroutine 607. The message 'WASH 1 Yes' will be displayed.

The software version of the Wash Box (i.e. '200') is displayed in the Cumulative Totals display. 'WASH X No' indicates a communications failure to the wash box.

Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.40 or above. Please run subroutine 2 to check.

Cow	Program		Ration	Yield/Flags

WASH   1 YES

| Shift | **+** | SUBS Enter | ? | ? |

| | | | RESET Cancel |

PULSE-8 CONTROL COMMUNICATION (IDS) TEST: Subroutine 608

The communications with the Pulse-8 Master Pulsation Control can be tested by running this subroutine.

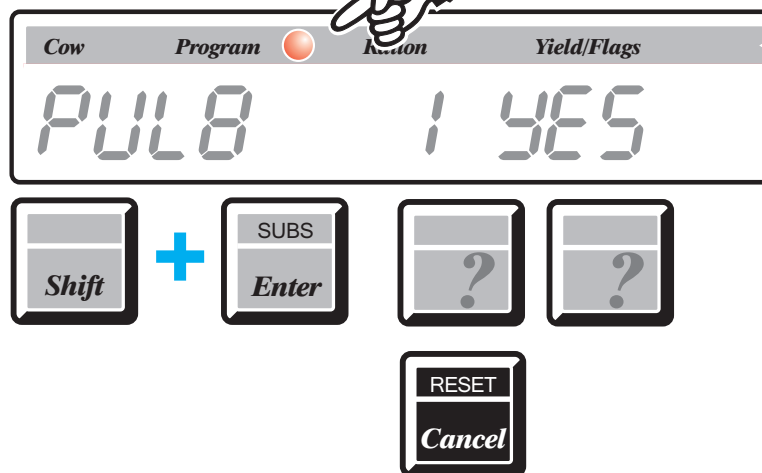Check that Program Mode is selected.

Run the subroutine 608. The message 'PUL8 1 yES' will be displayed.

The software version of the Pulse-8 control present (i.e. '102') is displayed in the Cumulative Totals display.

Error Message 1 - 'PUL8 1 No' indicates a communications failure with the Pulse-8 Control or no Pulse-8 control is present.

Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.45 or above. Please run subroutine 2 to check.

MILK PUMP CONTROL COMMUNICATION (IDS) TEST: Subroutine 609

The communications with the Milk Pump Control can be tested by running this subroutine.
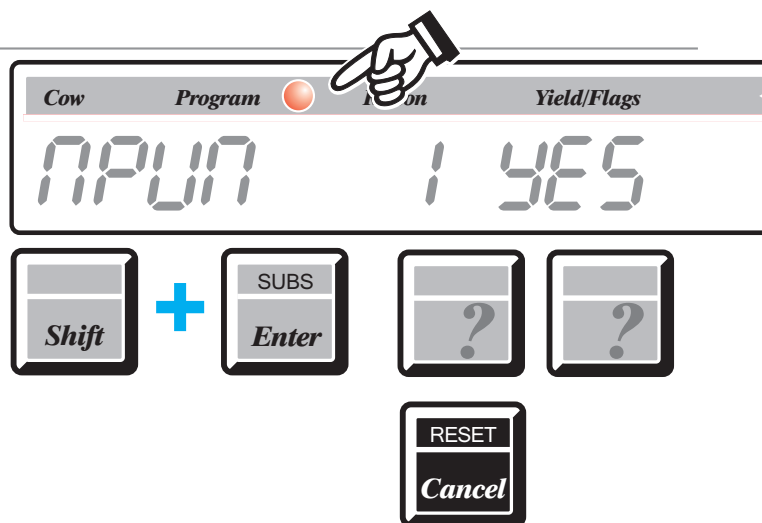
Check that Program Mode is selected.

Run the subroutine 609. The message 'NPUN 1 yES' will be displayed.

The software version of the Milk Pump Control present (i.e. '102') is displayed in the Cumulative Totals display.

Error Message - 'NPUN 1 No' indicates a communications failure with the Milk Pump Control or no Milk Pump Control is present.

Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.52 or above. Please run subroutine 2 to check.

TEST PEGASUS SORTING GATE SYSTEM: Subroutine 326:

The MicroM3S can test to see if the Pegasus Sort Gate System is functioning correctly.

Check that Program Mode is selected.

Run the subroutine. The message 'gAtE tESt' will be displayed.

Press Shift + (Key 1 through 7) to toggle an warning flags 'on' (enabled) or 'off' (disabled). Each time the combination is pressed the flag setting alternates and this is reflected by the indicator. If the gate control switch on the side of the Pegasus Interface matches the flag settings on the MicroM3S to gate will open.

NB - Please ensure all warning flags are disabled before exit.

Press the Cancel key to exit the subroutine.

NB. This is only available on MicroM3S software v4.27 or above. Please run subroutine 2 to check.
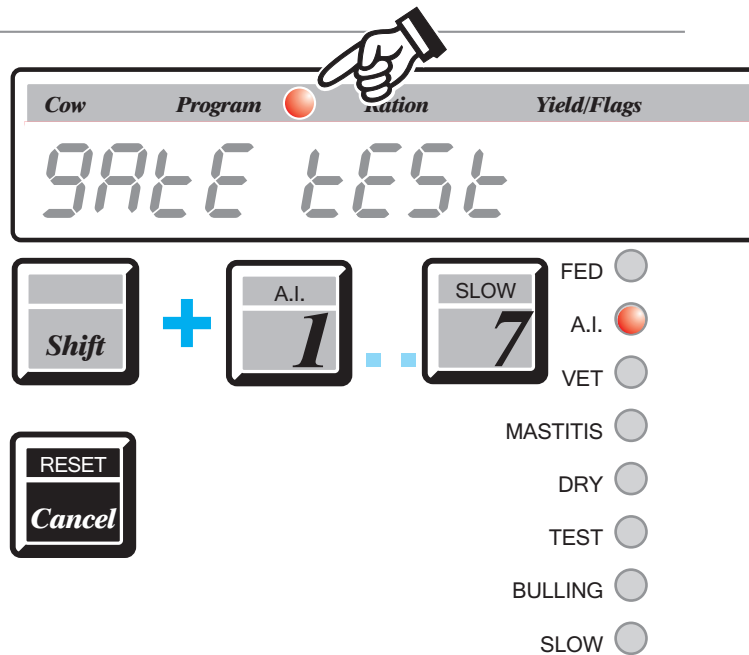
DIGITAL FEEDER CONTROL COMMUNICATION (IDS) TEST: Subroutine 610

The communications with the Digital Feeder Control can be tested by running this subroutine.

Check that Program Mode is selected.

Run the subroutine 610. The message 'dIgI 1 yES' will be displayed.

The software version of the Digital Feeder Control present (i.e. '102') is displayed in the Cumulative Totals display.

Error Message 1 - 'dIgI 1 No' indicates a communications failure with the Digital Feeder Control or no Pulse-8 control is present.

Press Cancel to exit the subroutine.

NB. This is only available on MicroM3S software v4.59 or above. Please run subroutine 2 to check.

Cow	Program	Ration	Yield/Flags

d1 91   1 YES

Shift **+** SUBS Enter ? ?

RESET Cancel
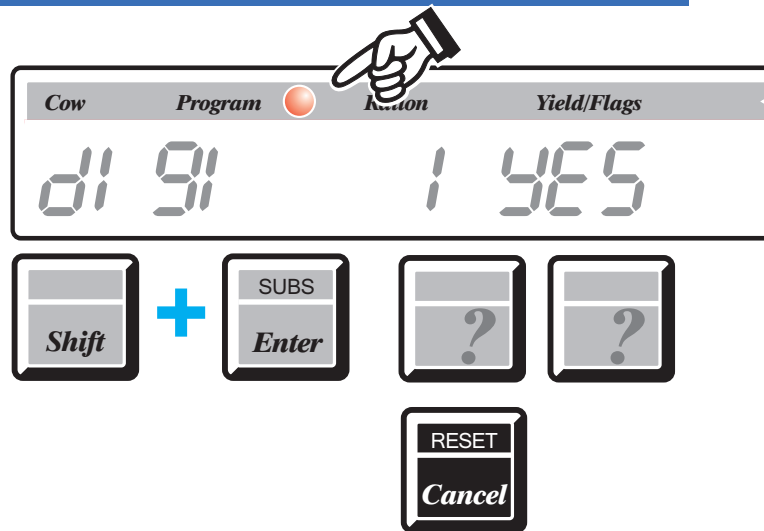
'M' Type Feeders **WITH** Integral Ballast Resistor: In Parlour Feeder Control Relay Board and Feeder Connections

60 Watt Switch Mode Power Supply

(+) 24volts DC to all Feeders

(-) 24volts DC to all Feeders

Fuse: In-line T2A

2 x 1N4002 Diodes
Note White (+) Band

Green (+)
Brown (+)
Grey (Trig)
White (-)
Yellow (-)

Feeder Connector Block Assembly

Check that the motor is fitted with an Integral Ballast Resistor
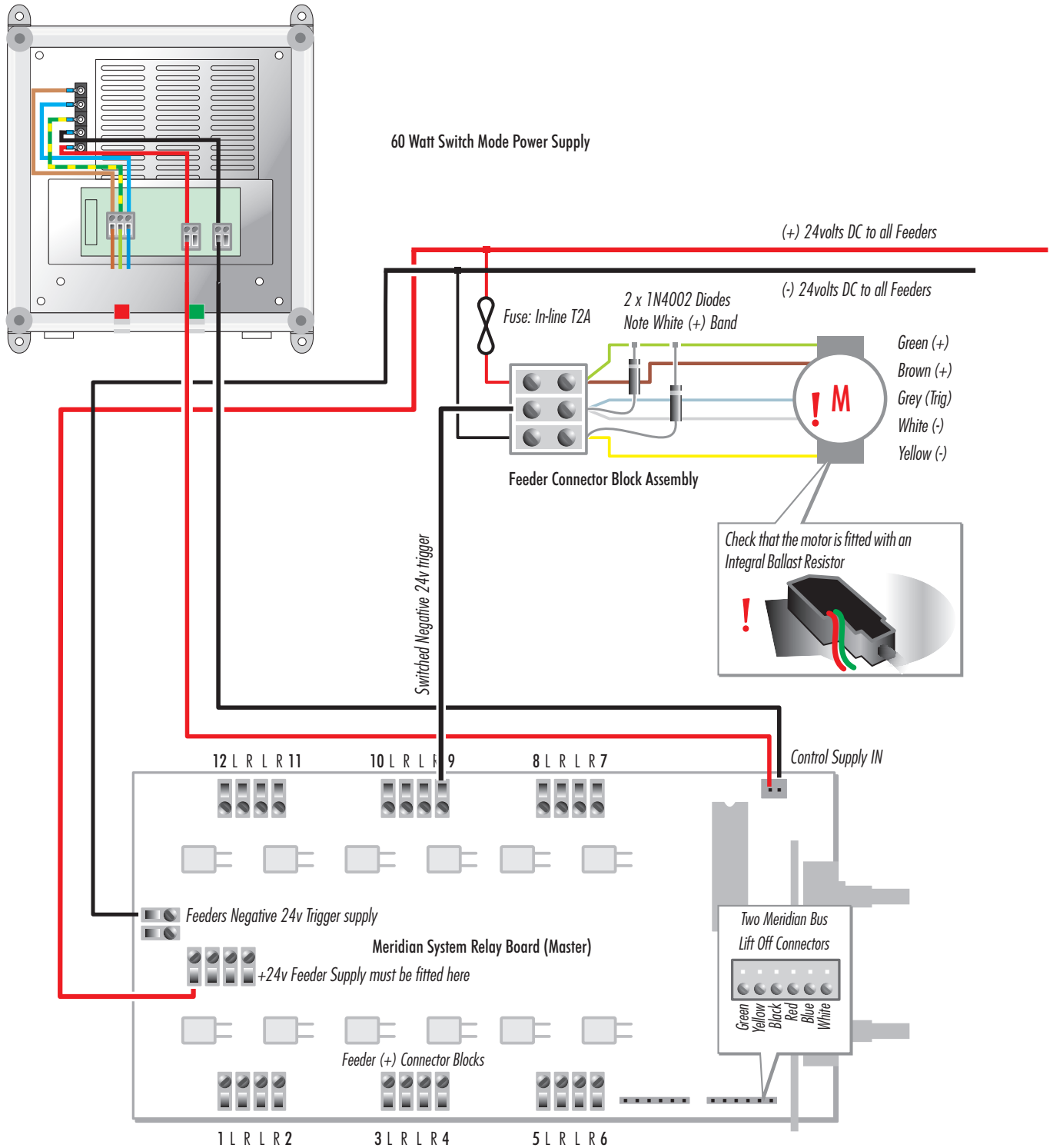
Switched Negative 24v trigger

12 L R L R 11   10 L R L R 9   8 L R L R 7   Control Supply IN

Feeders Negative 24v Trigger supply

Meridian System Relay Board (Master)

+24v Feeder Supply must be fitted here

Two Meridian Bus
Lift Off Connectors

Green
Yellow
Black
Red
Blue
White

Feeder (+) Connector Blocks

1 L R L R 2   3 L R L R 4   5 L R L R 6

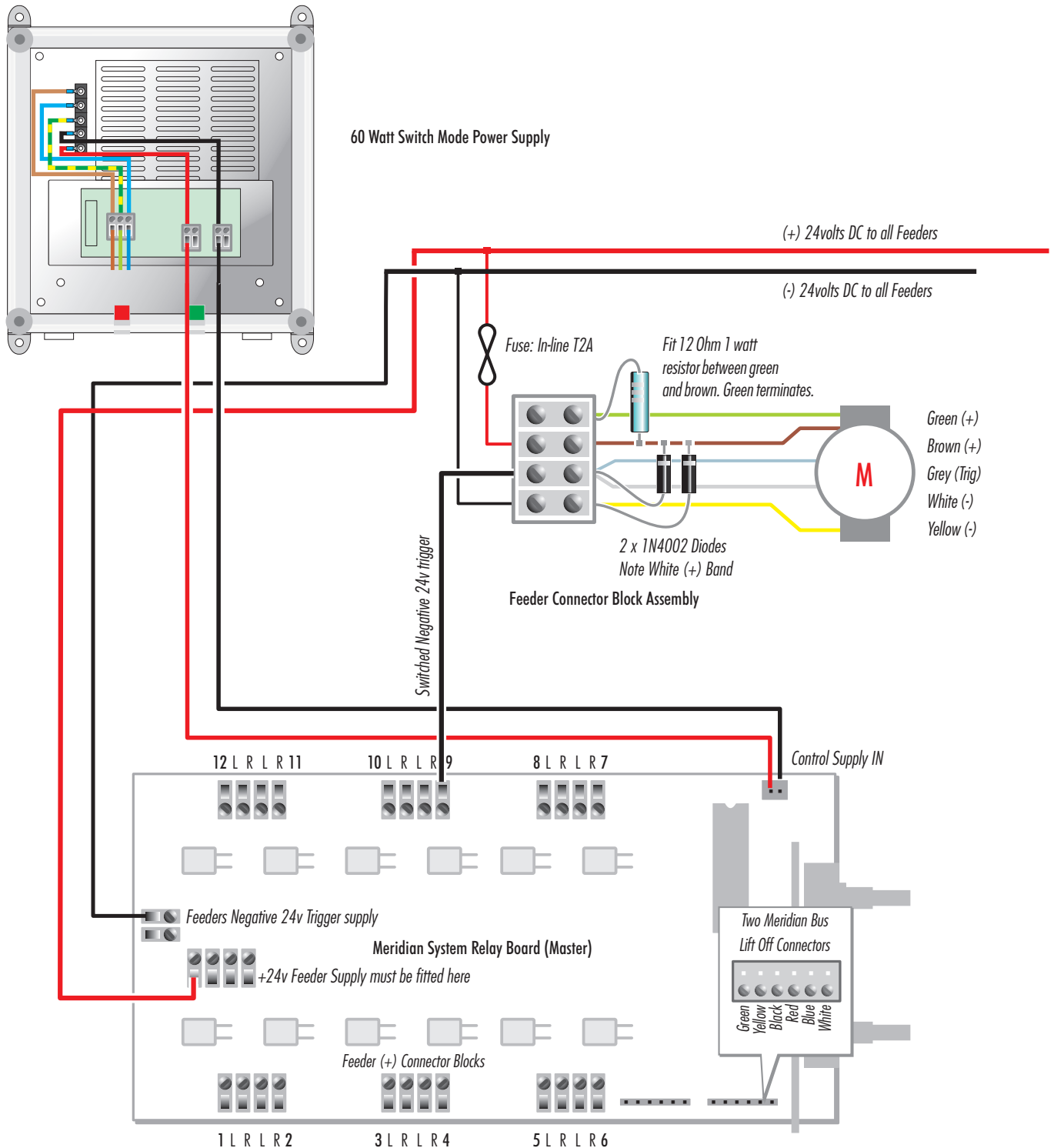**WARNING:** *DISCONNECT THE MAINS SUPPLY BEFORE REMOVING THE POWER SUPPLY COVER*

'M' Type Feeders **WITHOUT** Integral Ballast Resistor: In Parlour Feeder Control Relay Board and Feeder Connections

60 Watt Switch Mode Power Supply

(+) 24volts DC to all Feeders

(-) 24volts DC to all Feeders

Fuse: In-line T2A

Fit 12 Ohm 1 watt resistor between green and brown. Green terminates.

Green (+)
Brown (+)
Grey (Trig)
White (-)
Yellow (-)

M

2 x 1N4002 Diodes
Note White (+) Band

Feeder Connector Block Assembly

Switched Negative 24v trigger

12 L R L R 11   10 L R L R 9   8 L R L R 7   Control Supply IN

Feeders Negative 24v Trigger supply

Meridian System Relay Board (Master)

+24v Feeder Supply must be fitted here

Two Meridian Bus
Lift Off Connectors

Green
Yellow
Black
Red
Blue
White

Feeder (+) Connector Blocks

1 L R L R 2   3 L R L R 4   5 L R L R 6

WARNING: *DISCONNECT THE MAINS SUPPLY BEFORE REMOVING THE POWER SUPPLY COVER*