



## MICRO MILK METER OPERATION

### **Version - October 2011**

For Milk Meter Display Software  
Version V3.14.00 or above  
For Wash Box Software Version  
V2.05.00 or above



**Part Number - 39-0070**



# MICRO MILK METER OPERATION: **INDEX**

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The Milking Procedure	13	Please read all of the un-colour-coded sections.	
End of Milking Procedure	14		



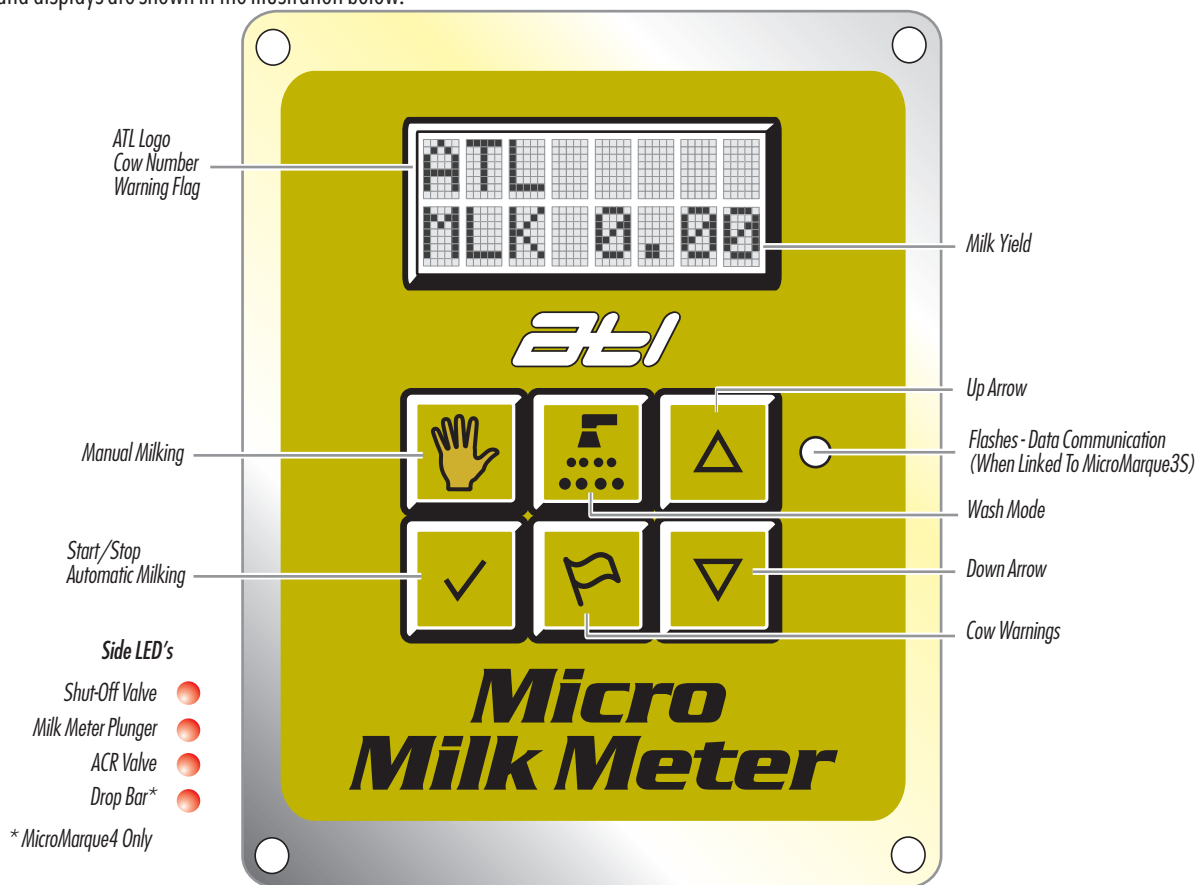
# MICRO MILK METER OPERATION: 1

## The Micro Milk Meter Control Unit

The Micro Milk Meter Control Unit is the electronic display which provides the user with control of the milking procedure and provides data at the milking point.

It can be used stand-alone or in conjunction with the MicroMarque3S Memory Control to provide further information such as previous milk yield, feed ration, warning flags and lactation number (only available when MicroMarque3S is linked to ATL Cowculator Feed-To-Yield PC Software) and the ATL automatic identification system.

The keys and displays are shown in the illustration below:



## Micro Milk Meter Control Box Features:

The available features depend on the level of integration with other ATL equipment such as the MicroMarque3S and automatic identification system.

- Display the identified cow number.
- Display the recorded milk yield.
- Display the previous milk yield.
- Display the lactation number.
- Display the feed ration.
- Display the warning flags for the identified cow at the milking point:
  - Artificial Insemination

- Veterinary Attention
- Mastitis
- Dry-Off
- Test
- Bulling
- Slow

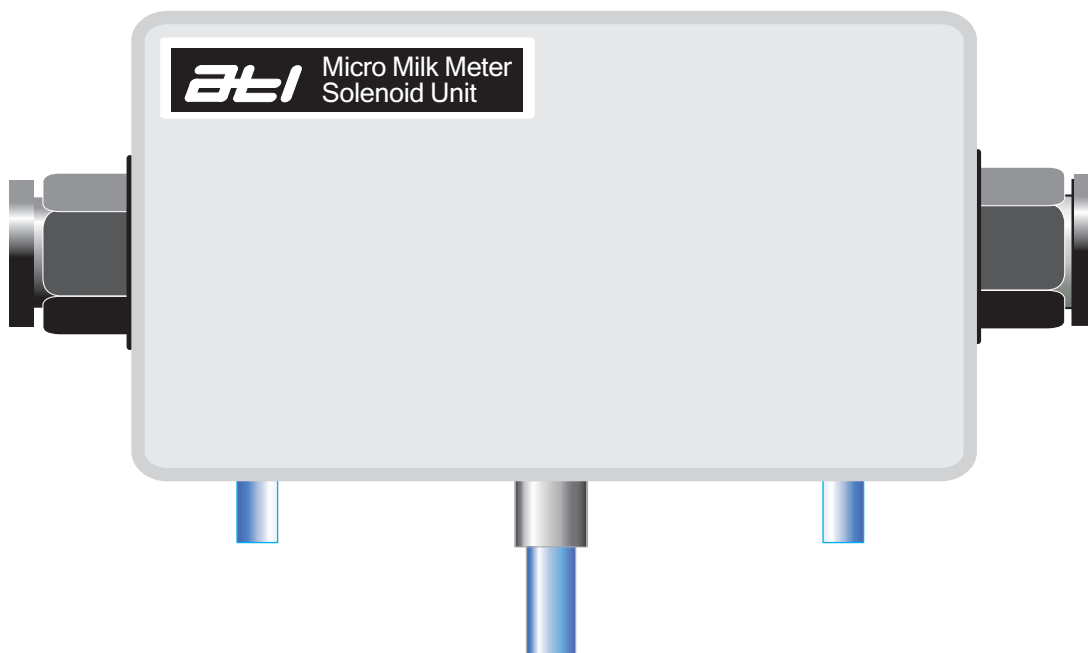
- Automatic cluster removal
- Ability for instant cluster removal
- Manual milking mode



## MICRO MILK METER OPERATION: 2

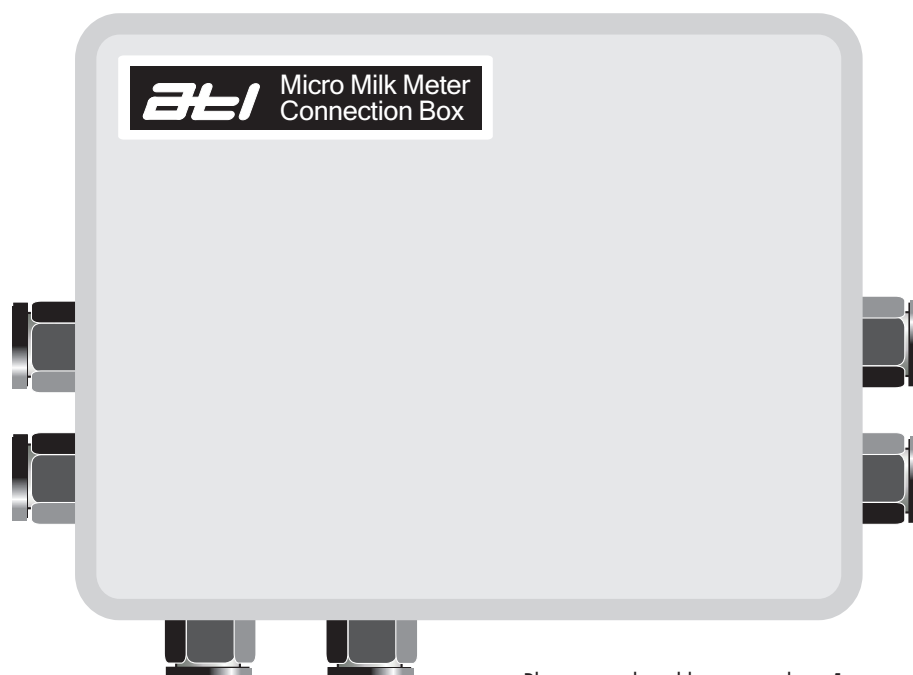
### The Micro Milk Meter Solenoid Box

The solenoid box contains two vacuum solenoids. One controls the vacuum shut-off valve in-line with the claw piece and the other controls the operation of the milk meter plunger. Under normal operation, when the solenoid valves are powered, the shut-off valve opens to allow vacuum to the cluster, the milk meter plunger lifts and milk is allowed to drain out of the milk meter.



### The Micro Milk Meter Connection Box

The connection box provides an easy way of connecting all the necessary components together (i.e. The control unit, the milk meter, the ACR and other associated peripherals). It also provides an easy means to daisy chain the power and data connections from milking point to milking point.

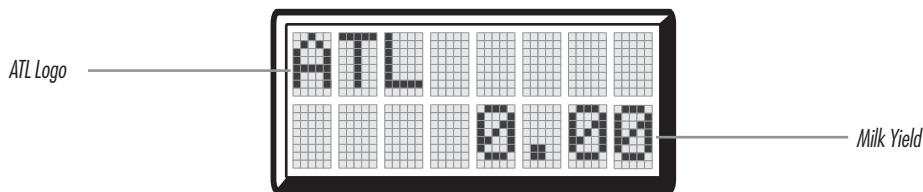


Please note that older systems have 1 connection box per milk meter, but newer systems have 1 connection box per 6 milk meters.

## Using the Micro Milk Meter System - Stand-Alone

The Micro Milk Meter system can be used in stand-alone format which means that it is not integrated into the MicroMarque3S; for information on using the Micro Milk Meter with a MicroMarque3S please see page 4 and the automatic identification system please see page 9.

### Control Power Up



### Stand-Alone Milking with the Micro Milk Meter

The Micro Milk Meter system has two milking modes - automatic and manual. The automatic milking mode allows the user to start the milking process and have it completed automatically (i.e. If ACR s are present, the clusters are lifted off the cow and milking is finished without user intervention). Manual milking mode allows the user to control the whole milking process from start to finish.

### The Milking Procedure

- Press the TICK key to start milking in automatic mode:

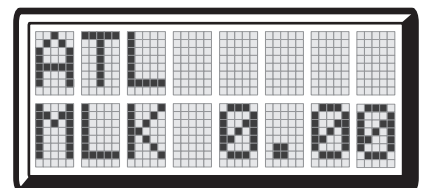
The display will show MLK in the bottom left hand corner.

If automatic cluster remover (ACR) connected, the cluster will be dropped and the shut-off valve opened applying vacuum to the teat cups.

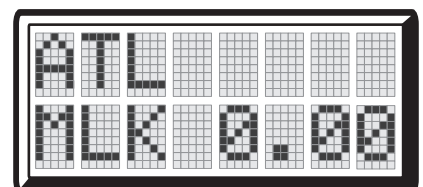
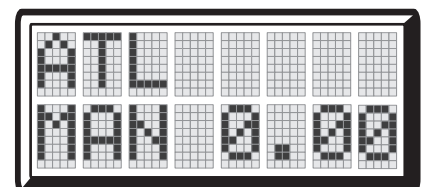
The ACR can be raised or lowered in automatic mode independently of milking by pressing the HAND key and either the UP or DOWN key for the respective movements.

- The HAND key can be pressed during automatic milking to put the meter into manual milking mode (MAN is shown on the LCD display). This can be used if the cluster is kicked off, pressing the HAND key continues milking without zeroing the yield (NB - There is no ACR operation in manual mode).

During manual mode the HAND key can be pressed again to return to automatic mode. The display will show MLK in the bottom left hand corner of the display and the yield will not be zeroed.



or



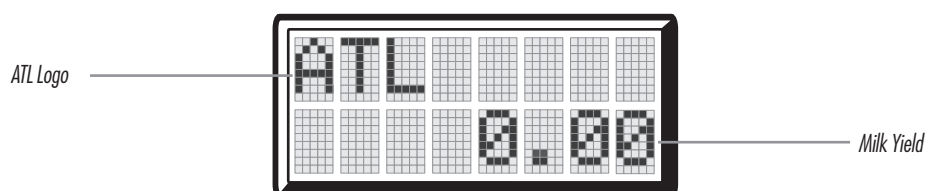


## MICRO MILK METER OPERATION: 4

### Using the Micro Milk Meter System with the MicroMarque3S

The Micro Milk Meter system can be fully integrated into the MicroMarque3S parlour control enabling the display of individual cow management information at each milking point; for information on using the Micro Milk Meter stand-alone turn to page 3 or with the automatic identification system please see page 9.

#### Control 'Power Up'



### Extra Functionality Available with MicroMarque3S Integration

Before starting the actual milking procedure, the Micro Milk Meter control shows the number of the cow at each individual milking point, along with the provision of warning flag, previous milk yield, lactation number and feed ration information.

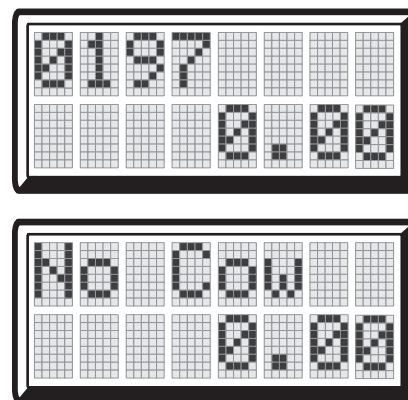
The following sections provide information on these functions

#### Displaying Cow Numbers

- The cow number is displayed in the top left hand corner of the LCD display. As the cow numbers are entered into the MicroMarque3S control to feed the cows, the cow number is sent to the relevant Micro Milk Meter control.

NB - Cow numbers cannot be entered using the Micro Milk Meter control box; they can only be entered using the MicroMarque3S or the Extra Parlour Control.

- If no cow is entered for the stall, either ATL or No Cow is displayed.
- Make sure the correct cow number is present at the stall before starting milking.



## Using the Micro Milk Meter System with the MicroMarque3S Continued 1

### Acknowledging Warning Flags

Any cow identified that has a warning flag set against it will cause the Micro Milk Meter control to warn the operator. The warning is shown flashing in the lower half of the display.

- To acknowledge the warning, press the UP key.

NB - If there is more than one warning set against a cow, the next warning flag in the sequence will be displayed on the control.

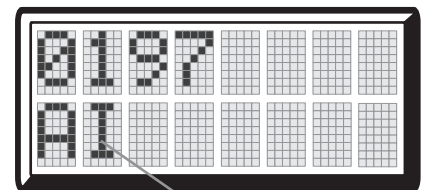
- Milking cannot commence until this warning has been acknowledged by the operator.

The following warning flags are available for each cow:

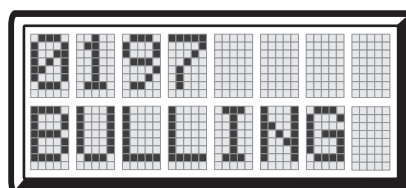
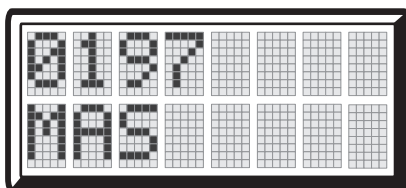
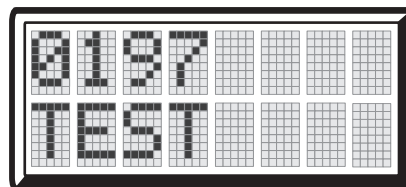
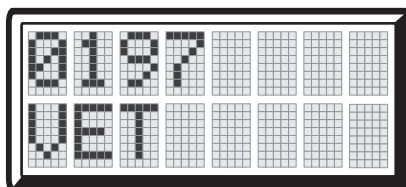
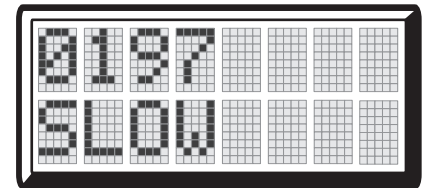
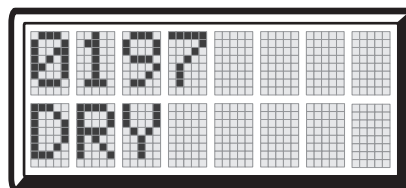
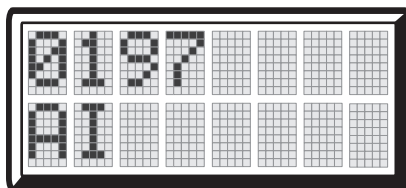
- AI - Artificial Insemination
- VET - Veterinary Attention/Illness Treatment
- MAS - Mastitis
- DRY - Dry-Off
- TEST - Shows Up After X Days (User Set) Of Mastitis Flag Being Set
- BULLING - Expected In Heat
- SLOW - Slow Milker

For a more detailed explanation of the warning flags please refer to the MicroMarque3S manual.

The warning flags are not a foolproof method of identifying problem cows. The use of red dye on the rear of the cow, is advised where milk must be discarded.



Flashes When Warning  
Flag Set Against Cow  
Number



## Using the Micro Milk Meter System with the MicroMarque3S Continued 2

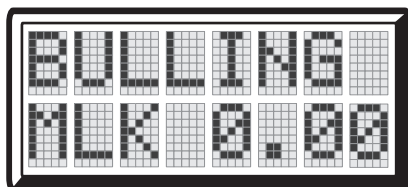
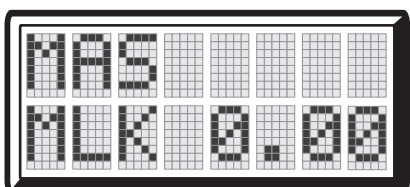
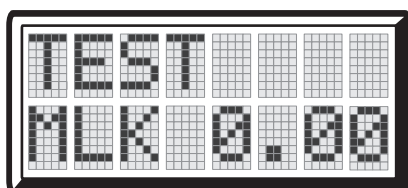
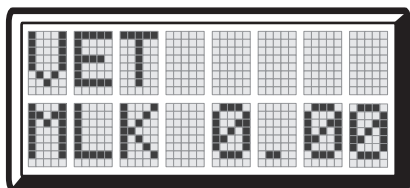
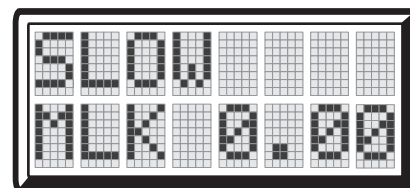
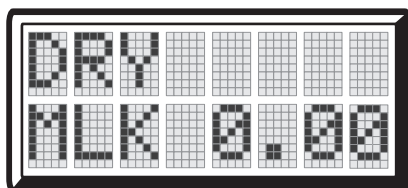
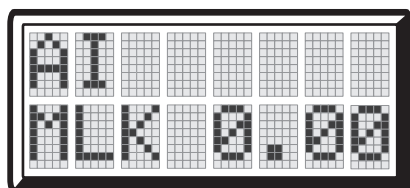
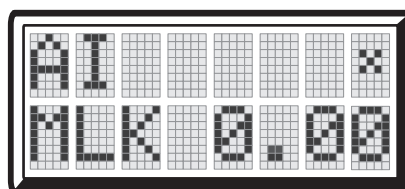
### Setting and Clearing Warning Flags

- Ensure the correct cow number is displayed.
- Press the FLAG key to view the warning flags.
- Press the FLAG key again to step through the warning flags.
- If a warning flag is set against a cow, a cross will be in the top right of the LCD display.
- To set or clear a warning flag against a cow, press the UP key.
- To step to the next warning flag, press the FLAG key.
- To exit from the warning flags routine, press the DOWN key.

The following warning flags are available for each cow:

- AI - Artificial Insemination
- VET - Veterinary Attention/Illness Treatment
- MAS - Mastitis
- DRY - Dry-Off
- TEST - Shows Up After X Days (User Set) Of Mastitis Flag Being Set
- BULLING - Expected In Heat
- SLOW - Slow Milker

For a more detailed explanation of the warning flags please refer to the MicroMarque3S



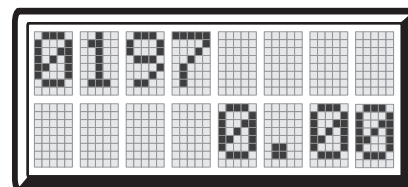




## MICRO MILK METER OPERATION: 7

### Using the Micro Milk Meter System with the MicroMarque3S Continued 3

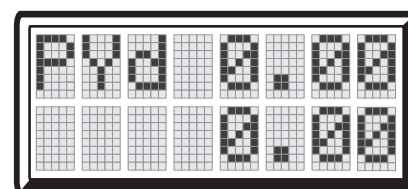
Further information about each cow can be accessed from the main screen on the Micro Milk Meter control box by pressing the UP key at any point during the milking process.



#### Previous Milk Yield

The Previous Milk Yield (PYd) for each individual cow is available by pressing the UP key.

- Press the UP key to step to the Lactation Number screen.
- Or, press the DOWN key to exit.

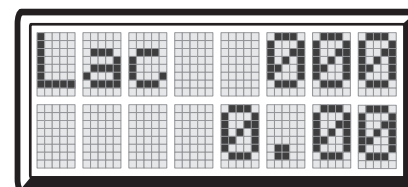


#### Lactation Number

The Lactation Number (Lac) is the number of days the cow is into the current lactation.

- Press the UP key to step to the Feed Ration screen.
- Or, press the DOWN key to exit.

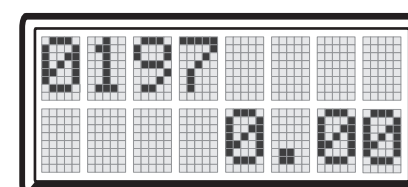
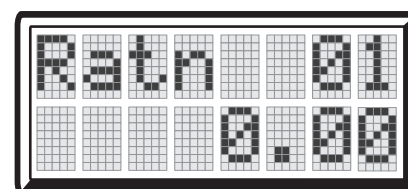
NB - Micro Milk Meter system must be connected to Cowculator For Windows PC software for lactation number to be viewed.



#### Feed Ration

The Feed Ration (Ratn) is the feed ration value for this cow.

- Press the UP or DOWN key to exit.



## Using the Micro Milk Meter System with the MicroMarque3S Continued 4

The Micro Milk Meter system has two milking modes - automatic and manual. The automatic milking mode allows the user to start the milking process and have it completed automatically (i.e. If ACR s are present, the clusters are lifted off the cow and milking is finished without user intervention). Manual milking mode allows the user to control the whole milking process from start to finish.

### The Milking Procedure

- Press the **TICK** key to start milking in automatic mode:

The display will show **MLK** in the bottom left hand corner.

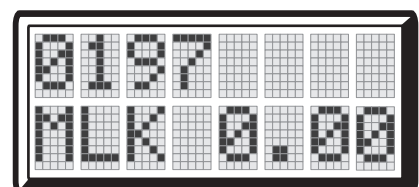
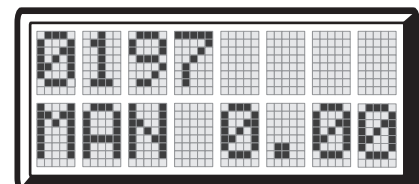
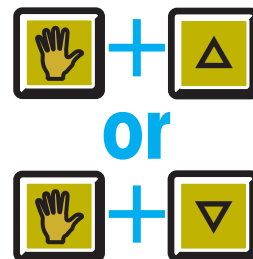
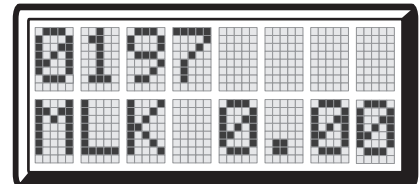
If automatic cluster remover (ACR) connected, the cluster will be dropped and the shut-off valve opened applying vacuum to the teat cups.

The ACR can be raised or lowered in automatic mode independently of milking by pressing the **HAND** key and either the **UP** or **DOWN** key for the respective movements.

- The **HAND** key can be pressed during automatic milking to put the meter into manual milking mode ( **MAN** is shown on the LCD display). This can be used if the cluster is kicked off, pressing the **HAND** key continues milking without zeroing the yield (NB - There is no ACR operation in manual mode).

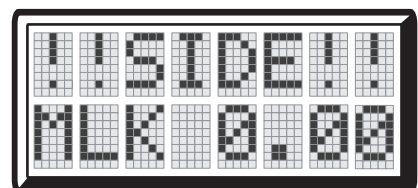
During manual mode the **HAND** key can be pressed again to return to automatic mode. The display will show **MLK** in the bottom left hand corner of the display and the yield will not be zeroed.

- **IMPORTANT** - Do not leave the milk meter in manual milking mode when entering new cow numbers into the MicroMarque3S. If this happens, the milk yield will start at the previous cow's milk yield instead of zero and therefore be incorrect.



### Swingover Parlours Only

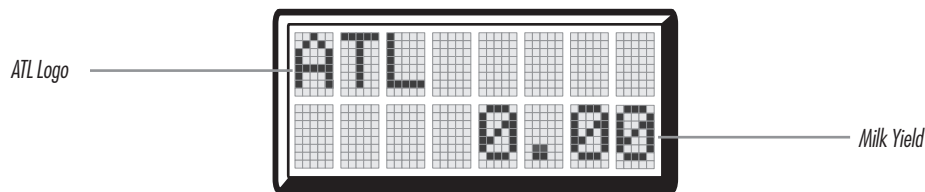
- If the swingarm is mistakenly moved past the magnet, whilst the meter is milking, the meter will continue to milk and the display **!!SIDE!!**. This will continue to be displayed until the swingarm is moved back past the magnet.
- If the swingarm was correctly moved past the magnet, press the **TICK** key to stop the milking procedure, return the arm to the correct side and press **TICK** to re-start the milking.



## Using the Micro Milk Meter System with the Automatic Identification System

The Micro Milk Meter system can be fully integrated with the automatic identification system enabling cow management information to be displayed at each milking point; for information on using the Micro Milk Meter stand-alone turn to page 3 or integrated with the MicroMarque3S please turn to page 4.

### Control 'Power Up'



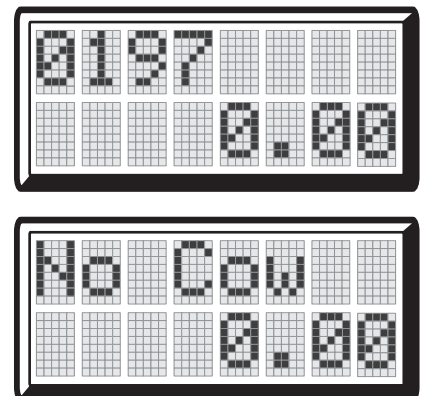
## Extra Functionality Available with Automatic Identification System Integration

Before starting the actual milking procedure, the Micro Milk Meter control shows the number of the cow at the each individual milking point, along with the provision of warning flag, previous milk yield, lactation number and feed ration information.

The following sections provide information on these functions

### Cow Numbers

- The cow number, automatically read from the cow's ear tag, is displayed in the top left hand corner of the LCD display.
- During the scanning of each side by the Auto-ID system, SCANNING will be displayed on the milk meter control until a cow has been identified in that stall.
- If there is no cow in the stall, No Cow will be displayed.
- Make sure the correct cow number is present at the stall before starting milking.



## Using the Micro Milk Meter System with the Automatic Identification System Continued 1

### Acknowledging Warning Flags

Any cow identified that has a warning flag set against it will cause the Micro Milk Meter control to warn the operator. The warning is shown flashing in the lower half of the display.

- To acknowledge the warning, press the UP key.

NB - If there is more than one warning set against a cow, the next warning flag in the sequence will be displayed on the control.

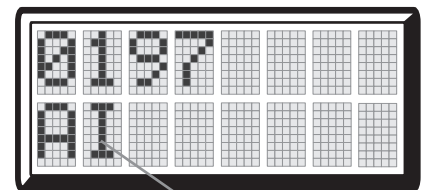
- Milking cannot commence until this warning has been acknowledged by the operator.

The following warning flags are available for each cow:

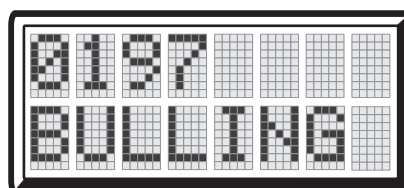
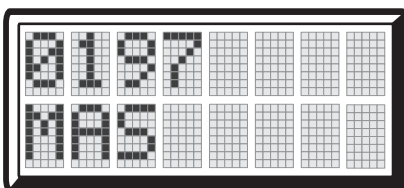
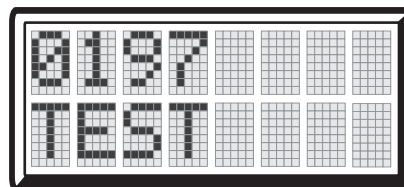
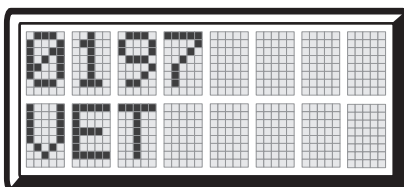
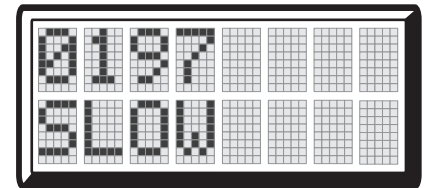
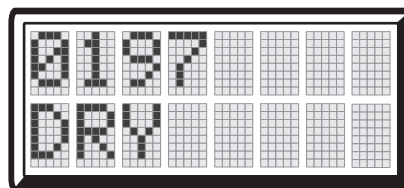
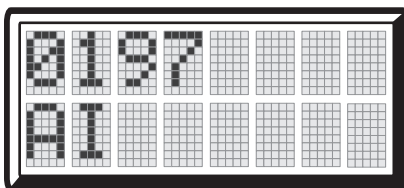
- AI - Artificial Insemination
- VET - Veterinary Attention/Illness Treatment
- MAS - Mastitis
- DRY - Dry-Off
- TEST - Shows Up After X Days (User Set) Of Mastitis Flag Being Set
- BULLING - Expected In Heat
- SLOW - Slow Milker

For a more detailed explanation of the warning flags please refer to the MicroMarque3S manual.

The warning flags are not a foolproof method of identifying problem cows. The use of red dye on the rear of the cow, is advised where milk must be discarded.



Flashes When Warning  
Flag Set Against Cow  
Number



## Using the Micro Milk Meter System with the Automatic Identification System Continued 2

### Setting and Clearing Warning Flags

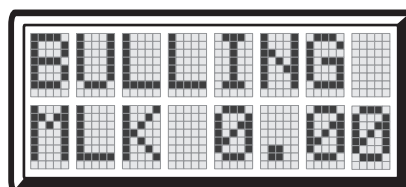
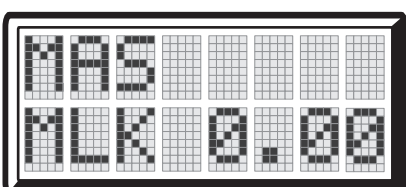
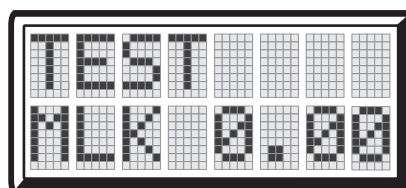
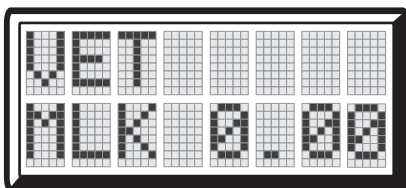
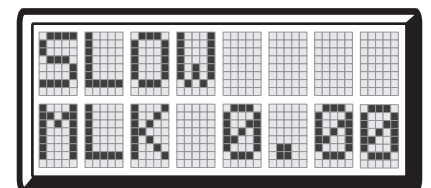
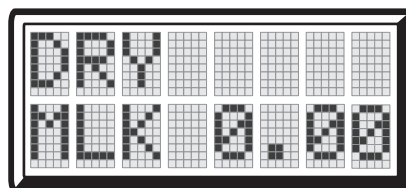
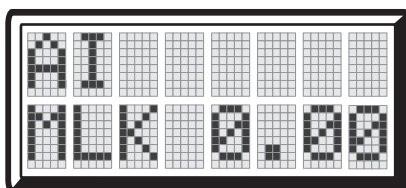
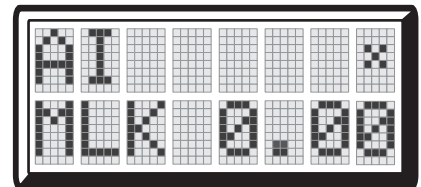
- Ensure the correct cow number is displayed.
- Press the FLAG key to view the warning flags.

Press the FLAG key again to step through the warning flags.

- If a warning flag is set against a cow, a cross will be in the top right of the LCD display.
- To set or clear a warning flag against a cow, press the UP key.
- To step to the next warning flag, press the FLAG key.
- To exit from the warning flags routine, press the DOWN key.

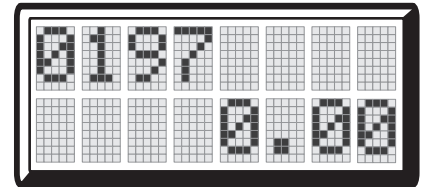
The following warning flags are available for each cow:

- AI - Artificial Insemination
- VET - Veterinary Attention/Illness Treatment
- MAS - Mastitis
- DRY - Dry-Off
- TEST - Shows Up After X Days (User Set) Of Mastitis Flag Being Set
- BULLING - Expected In Heat
- SLOW - Slow Milker



## Using the Micro Milk Meter System with the Automatic Identification System Continued 3

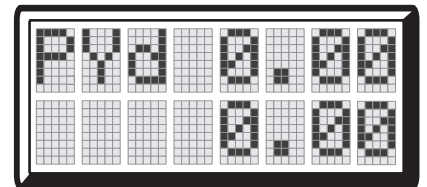
Further information about each cow can be accessed from the main screen on the Micro Milk Meter control box by pressing the UP key at any point during the milking process.



### Previous Milk Yield

The Previous Milk Yield (PYd) for each individual cow is available by pressing the UP key.

- Press the UP key to step to the Lactation Number screen.
- Or, press the DOWN key to exit.

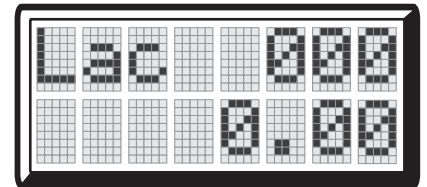


### Lactation Number

The Lactation Number (Lac) is the number of days the cow is into the current lactation.

- Press the UP key to step to the Feed Ration screen.
- Or, press the DOWN key to exit.

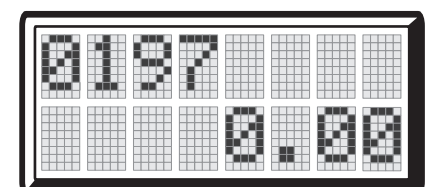
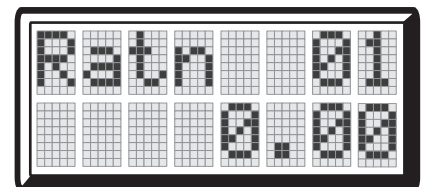
NB - Micro Milk Meter system must be connected to Cowculator For Windows PC software for lactation number to be viewed.



### Feed Ration

The Feed Ration (Ratn) is the feed ration value for this cow.

- Press the UP or DOWN key to exit.



## Using the Micro Milk Meter System with the Automatic Identification System Continued 4

The Micro Milk Meter system has two milking modes - automatic and manual. The automatic milking mode allows the user to start the milking process and have it completed automatically (i.e. If ACR s are present, the clusters are lifted off the cow and milking is finished without user intervention). Manual milking mode allows the user to control the whole milking process from start to finish.

### The Milking Procedure

- Press the **TICK** key to start milking in automatic mode:

The display will show **MLK** in the bottom left hand corner.

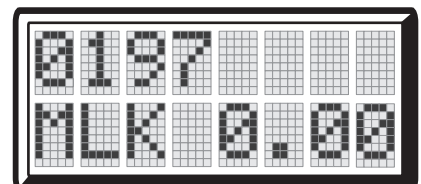
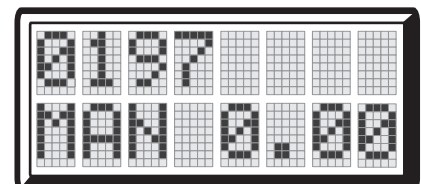
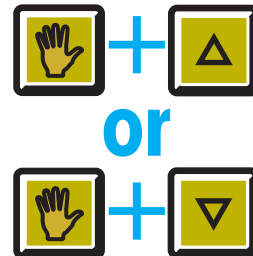
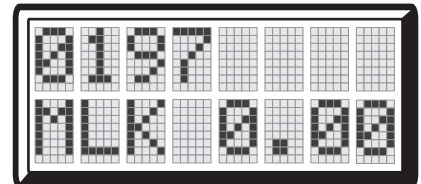
If an automatic cluster remover (ACR) is connected, the cluster will be dropped and the shut-off valve opened applying vacuum to the teat cups.

The ACR can be raised or lowered in automatic mode independently of milking by pressing the **HAND** key and either the **UP** or **DOWN** key for the respective movements.

- The **HAND** key can be pressed during automatic milking to put the meter into manual milking mode ( **MAN** is shown on the LCD display). This can be used if the cluster is kicked off, pressing the **HAND** key continues milking without zeroing the yield (NB - There is no ACR operation in manual mode).

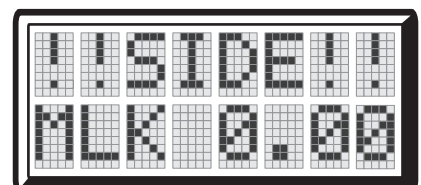
During manual mode the **HAND** key can be pressed again to return to automatic mode. The display will show **MLK** in the bottom left hand corner of the display and the yield will not be zeroed.

- **IMPORTANT** - Do not leave the milk meter in manual milking mode when starting to scan a new side using the Auto-ID system. If this happens, the milk yield will start at the previous cow s milk yield instead of zero and therefore be incorrect.



### Swingover Parlours Only

- If the swingarm is mistakenly moved past the magnet, whilst the meter is milking, the meter will continue to milk and the display **!!SIDE!!**. This will continue to displayed until the swingarm is moved back past the magnet.
- If the swingarm was correctly moved past the magnet, press the **TICK** key to stop the milking procedure, return the arm to the correct side and press **TICK** to re-start the milking.





# MICRO MILK METER OPERATION: 14

## The End of Milking Procedure

### For Each Individual Milking Point After Each Individual Cow Has Finished Milking

When the Micro Milk Meter system is in automatic milking mode, the milk flow rate is continuously compared against the Automatic Cluster Removal (ACR) setting and when the rate falls below the setting the end of milking routine is started.

- The shut-off valve is closed.
- The system then waits for the user-set time in the Vacuum Delay setting to allow the vacuum to dissipate.
- The ACR ram activates and gently pulls the cluster off the cow.
- If the Purge setting is on, the shut-off valve is opened momentarily to allow a blast of air into the cluster and to purge any remaining milk into the line.

### For Complete System After Herd Has Finished Milking

When the whole herd has finished milking, the milk yields measured during the milking must be moved to the relevant storage locations in the MicroMarque3S. For systems with a wash box, pressing the wash key also performs Yield Clear on the MicroMarque3S. Otherwise:

- On the MicroMarque3S, press and hold the SHIFT key, then press the YIELD key to complete the operation.
- The display will then show yld clear .



The daily and total yield figures are then able to be calculated at the 11.00am housekeeping time by the MicroMarque3S control.





# MICRO MILK METER OPERATION: 15

## Cleaning the Micro Milk Meter

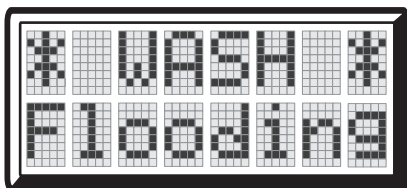
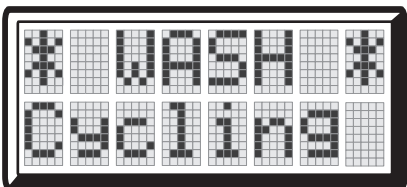
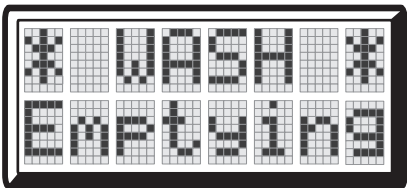
The Micro Milk Meter has been designed to be flood washed in the normal milk flow direction, with the control box controlling the pattern of washing.

### Wash Requirements

- Always refer to the chemical suppliers instructions and safety procedures.
- After milking, clean the clusters and wash jettors externally with a hot sanitant solution.
- The Micro Milk Meter system requires 0.5 litres of cleaning liquid per point per cycle.
- There are three washing cycles; pre-rinse, main wash and final rinse.
- The hot water used must be of a suitable temperature to match the working temperature of the cleaning chemical being used.
- Please ensure that the correct temperature is maintained according to the chemical suppliers instructions
- A milkstone remover wash must be used at least once a month or sooner if recommended by the chemical supplier. Please use an approved brand and follow the instructions carefully.
- The main wash with cleaning agent should circulate for a minimum of 8 minutes at a temperature of no less than 40°C unless advised differently by the chemical supplier.
- Never mix dairy chemicals; it is extremely dangerous.

### Wash Routine

- The wash routine ensures that the Micro Milk Meter is washed effectively. There are three phases; flooding, emptying and cycling.
  - Emptying - Ensures that the milk meter is emptied even if very pure water is being used for the rinse.
  - Cycling - Replicates the normal operation of filling and emptying the milk meter using the sensors to measure the liquid level.
  - Flooding - Ensures that all the inner surfaces of the milk meter are flushed with the wash liquid.
- At the end of the wash routine there is a forced emptying and a purge of the milk pipe to the cluster to ensure that the milk meter is always empty before milking.





## MICRO MILK METER OPERATION: 16

### The Wash Routine - From Micro Milk Meter Control Box

The Micro Milk Meter can be individually set into the wash routine at each milking point from the Micro Milk Meter control box.

NB - Please read page 15 regarding the wash routine requirements before undertaking the wash routine.

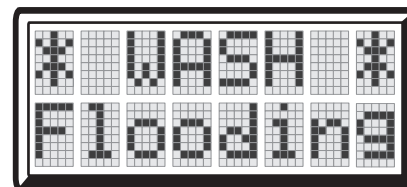
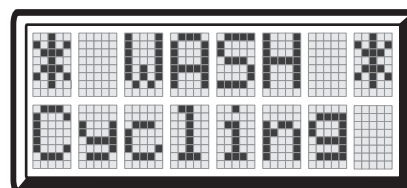
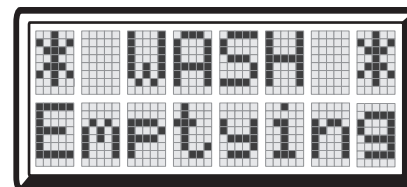
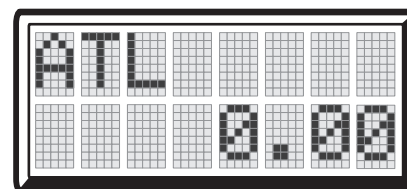
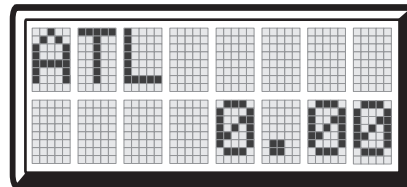
### The Wash Routine Procedure - Wash Mode

- Lower the cluster manually by pressing the HAND and DOWN keys simultaneously.
- Place the cluster shells into the wash jetters.
- When all of the clusters are seated correctly into the jetters, start each individual milk meter into the wash routine.
- Press the WASH key to put each individual milk meter into wash mode.

NB - The wash routine for each individual milk meter does not have a time limit and has to be manually exited.

- Press the WASH key to exit each individual milk meter from wash mode.

NB - All wash circulation must have finished prior to wash mode being exited.



## The Micro Wash Control

The Micro Wash Control is the electronic display which allows the whole milk meter system to be put into wash or milking modes.

It can be used stand-alone or in conjunction with the MicroMarque3S Memory Control.

The keys and display are shown in the illustration below:



### Micro Wash Control Features:

- Wash mode.
- Idle mode.
- Milking mode.
- User set wash time.
- Displays countdown wash timer.



## MICRO MILK METER OPERATION: 18A

### The Wash Routine - From Micro Wash Control

The Micro Milk Meter system can be set into the wash routine from the Micro Wash Control.

NB - Please read page 15 regarding the wash routine requirements before undertaking the wash routine.

### The Wash Routine Procedure - Wash Mode

- Lower the cluster by pressing the **HAND** and **DOWN** keys simultaneously and place the cluster shells into the wash jetters.
- When all of the clusters are seated correctly into the jetters, start the wash routine.
- Press the **WASH** key to put the milk meter system into the wash mode.

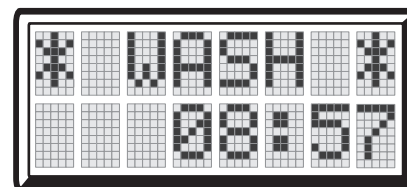
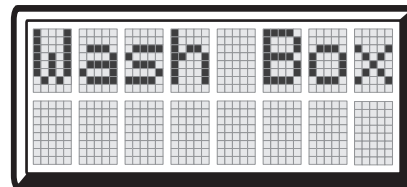
The wash routine will run for a preset time set by the installing dealer; for information on setting up the wash routine run-time please see the Micro Milk Meter Installation manual and the Micro Wash Control section.

- Once the wash routine has finished, the Micro Wash Control will automatically switch the milk meter system into IDLE mode.

NB - Idle mode turns all solenoids off and puts the system into standby.

- Press the **CROSS** key to manually exit from the wash routine and go into idle mode.

NB - All wash circulation must have finished prior to the wash routine being exited.

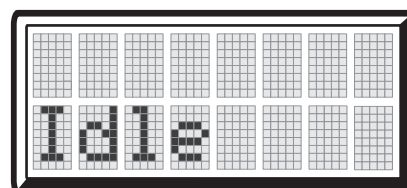


### Idle Mode

Idle mode turns all solenoids off and puts the system into standby.

- Press the **CROSS** key to put the milk meter system into idle mode.

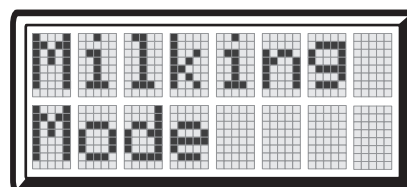
NB - To go into either wash mode or milking mode you must be in idle mode; you cannot go straight from wash mode into milking mode or from milking mode to wash mode.



### Milking Mode (also see Cumulative Milk Yield on Page 18B)

Milking mode causes the shut-off valve to close, pulls the milk meter plunger down, the ACR output to turn on and the clusters to be pulled up ready for milking.

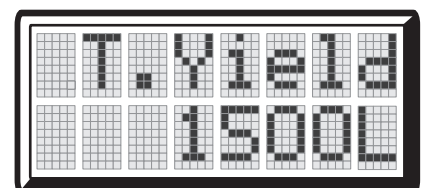
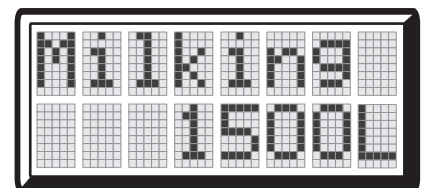
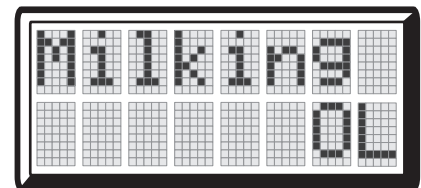
- Press the **MILKING** key to put the parlour into milking mode.
- To exit from milking mode press the **CROSS** key and this puts the system into idle mode.



## Cumulative Milk Yield for Stand-Alone Systems (for software version v2.05.00 Wash Box and V2.16.00 Micro Milk Meter display or above)

Cumulative milk yield allows the comparison of the milk meter total yields with bulk tank readings. Therefore, providing an easy way for the accuracy of the milk meter system to be assessed on stand-alone systems.

- Press the **MILKING** key to put the parlour into milking mode.
  
- The Wash Box will show **Milking 0L**.
  
- As the milking progresses, the total will automatically increment.
  
- Once the milking has finished, the total number of litres that the cows have yielded is displayed (i.e. 1500L equals 1500 litres).
  
- If the Wash Box is not in Milking Mode, press the **UP** key to display the total milk yield.
  
- The milk total can be set to zero either automatically or manually. The automatic zeroing of the milk yield occurs each time the Wash Box enters Milking Mode and therefore will only total the yield for one milking at a time.
- To automatically reset the milk yield total, the Auto Yield function should be set to Yes.
- The Auto Yield function is found in the Wash Box setup routine (see the Micro Milk Meter Installation Manual).
- Alternatively, to manually clear the milk yield total, hold down the **TICK** key and press the **UP** key.



## Setting Up The Micro Milk Meter System

Before it can be used, the Micro Milk Meter System must be setup. This is outlined in the following pages.

### The Parlour Type Setting (Post V2.14 Software)

This setting selects the type of parlour the milk meter control is being installed on. The setting allows for doubled-up (via LHS and RHS settings), swingover and rotary parlours.

NB - Control address should be setup even if stand-alone to enable cumulative milk yield function.

#### To Select the Address:

Press and hold the HAND, TICK, FLAG and UP arrow keys:

Release the keys:

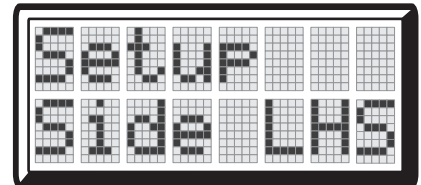
How select the parlour type by using the UP and DOWN keys:

NB - For doubled-up parlours, use LHS for milk meter controls on the left-hand side and RHS for the right-hand side respectively.

With the correct parlour type selected press the TICK key to store the data:

The Control Address Setting is now displayed.

NB - Only available with Micro Milk Meter software version 2.14.00 or above.



### The Control Address Setting

This setting is the unique control address. Each milk meter control must have a unique address number.

**Pre V2.14 Software:** For doubled-up parlours, each side is numbered separately. The left side is numbered from 001 for the first stall and the right side from 065 for the first stall. All other parlour types should have the stall number entered in this setting.

**V2.14 Software or above:** For all parlour types, each stall should have the same number as its stall number and the parlour type setting (the previous setting) should be set accordingly.

#### To Select the Address:

Press and hold the HAND, TICK, FLAG and UP arrow keys:

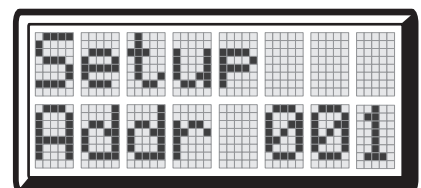
Release the keys:

Now select the unique control address by using the UP and DOWN arrow keys:

NB If the TICK key is held down with the UP or DOWN arrow keys the numbers increment or decrement by 10:

With the correct address selected press the TICK key to store the data:

The Micro Setting is now displayed.



### The Micro Setting

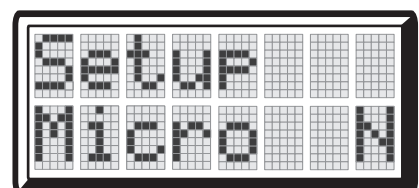
The Micro setting is a simple ON/OFF function. When enabled the meter will expect communications from an ATL Micro control, Enable this setting if the Milk Meter is connected to a Micro control.

#### To Alter the Micro value:

Select either Y or N by using the UP and DOWN arrow keys:

Press the TICK key to store the data:

The Drop value Setting is now displayed.



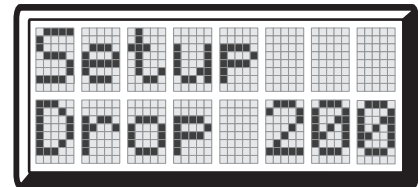
## Setting Up The Micro Milk Meter System Continued

### The Drop Value Setting

The drop value is the calibration setting for the milk meter 'dump' value. It is the meter chamber volume in millilitres. It can be changed to take up any minor variations in chamber size, trigger point or milk conductivity value. For more information on this setup function please see page 12.

**Factory Defaults:** Cow = 200ml, goat = 55ml and sheep = 55ml

Press the TICK key to store the data. The ACR setting is now displayed.



### Automatic Cluster Removal Setting

The ACR setting does not come into operation until after the first two minutes of the milking have elapsed. Then, if the flow rate reaches or drops below this value, the end-of-milking procedure is initiated. The setting is in millilitres per minute. If the cow is being over milked this value should be raised, if under-milked, it should be lowered.

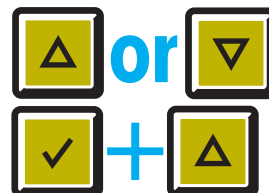
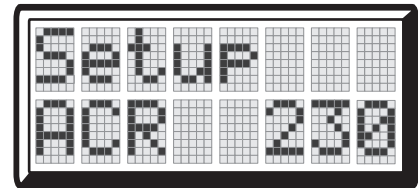
**To Alter the ACR Setting:**

Select by using the UP and DOWN arrow keys:

NB If the TICK key is held down with the UP or DOWN arrow keys the numbers increment or decrement by 10:

With the correct setting selected press the TICK key to store the data:

The ACR hold off setting is now displayed.



**Factory Defaults:** Cow = 230ml/min, goat = 180ml/min and sheep = 180ml/min

### The ACR Hold Off Setting

The ACR hold off setting lets the user specify the length of time before the ACR becomes active after the start of milking. The range is from 30 to 250 seconds.

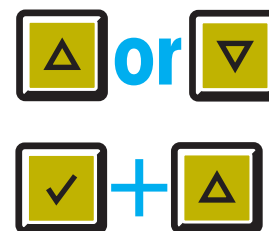
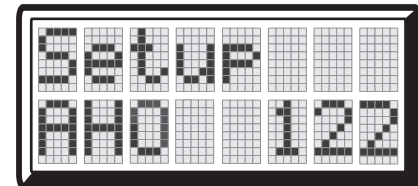
**To Alter the ACR Hold Off Setting:**

Select by using the UP and DOWN arrow keys:

NB If the TICK key is held down with the UP or DOWN arrow keys the numbers increment or decrement by 10:

With the correct setting selected press the TICK key to store the data:

The vacuum delay setting is now displayed.



**Factory Defaults:** Cow = 122 seconds, goats = 30 seconds and sheep = 61 seconds

### The Vacuum Delay Setting

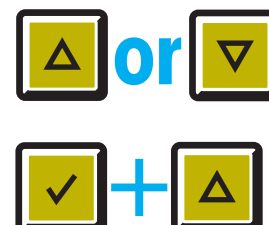
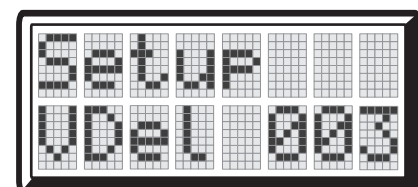
This setting allows a delay to be set between the operation of the shut-off valve closing to shut off the vacuum and the ACR operating. It can be set to 0, 1, 2, 3, or 4 seconds of delay and defaults to 3 seconds. It should be set to a value that ensures that as the shut-off valve operates at the end of milking, the vacuum decays to a point when the cluster is just about to fall before the ACR operates. If the cluster is pulled up too early, the value needs to be increased and if the cluster drops from the udder, the value needs to be decreased.

**To Set the VDEL:**

Select the VDEL value by using the UP and DOWN arrow keys:

When the correct value has been selected press the TICK key to store the data:

The purge setting is now displayed.





# MICRO MILK METER OPERATION: 21

## Setting Up The Micro Milk Meter System Continued

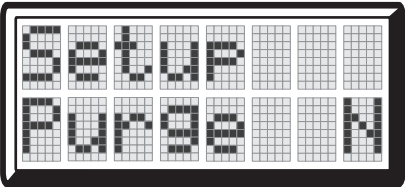
### The Purge Setting

The purge setting is a simple ON/OFF function. When the ACR operates and the ram pulls the cluster, setting purge ON makes the shut-off valve momentarily open to allow a blast of air to enter the line and purge any milk residues through the milk line.

#### To Alter the PURG value:

Select either Y or N by using the UP and DOWN arrow keys:

Press the TICK key to store the data, the key delay setting is shown.



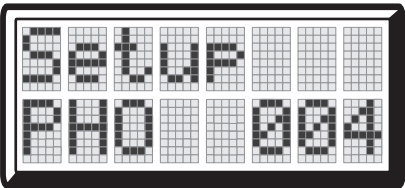
### The Purge Hold Off Setting

This setting is only displayed if the purge setting is ON. It allows a delay to be set between the ACR operating and the purge activating. It is for installations with flushing systems. It can be set to between 4 and 30 seconds.

#### To Alter the Purge Hold Off value:

Select the PHO value by using the UP and DOWN arrow keys:

Press the TICK key to store the data.



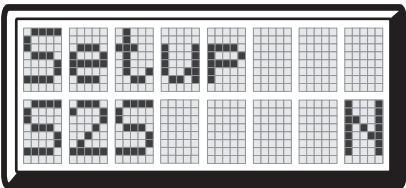
### The Swing to Start Setting

This setting will only be displayed if the Micro setting is ON. It should only be used on MicroMarque3S systems using version 3 communications or MicroMarque4 systems. It is not required otherwise.

#### To Alter the Swing to Start Setting:

Select either Y or N by using the UP and DOWN arrow keys:

Press the TICK key to store the setting.







# MICRO MILK METER OPERATION: 22

## Setting Up The Micro Milk Meter System Continued

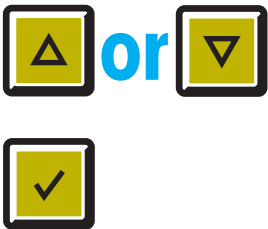
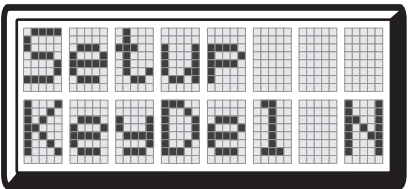
### The Key Delay Enable Setting

The key delay enable setting lets the user specify a length of time for a key to be pressed before it will activate. This setting is recommended for parlours where the cows can flick their tails to hit the control key pad.

#### To Alter the Key Delay Enable value:

Select either Y or N by using the UP and DOWN arrow keys:

Press the TICK key to store the data.



### The Key Delay Value Setting

If the Key Delay Enable is set to Y then the next setting displayed is the key delay value. This is the length of delay until a key press is considered valid.

#### To Alter the Key Delay Value:

Select by using the UP and DOWN arrow keys:

NB If the TICK key is held down with the UP or DOWN arrow keys the numbers increment or decrement by 10:

With the correct address selected press the TICK key to store the data:

The setting is now saved and the setup routine will exit.

