MethaMeasure User Guide

(MAN001 For use in UK Community Pharmacy environments)

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1 Description

The MethaMeasure System is composed of the MethaMeasure software (installed on a computer) and a liquid pump, intended to accurately dispense doses of a liquid drug (Methadone) from a stock container (2.5 or 5l).

The system is shown in Figure 1 – a computer on the right, printer on the left, and a double pump cabinet. The double pump cabinet is an option for regular methadone on one side, and sugar free methadone on the other side. Selection of regular or sugar free is configured for each patient, all other functionality is identical. The pump is a rotary peristaltic pump, driven by a stepper motor for accurate control of rotation, and hence metering of the fluid in the tubing fitted into the pump. Silicone tubing of a known Internal Diameter (ID) of 4.8mm (for 1mg/ml) can be replaced by the user when the tubing is worn.

The side compartments of the cabinet have the stock container, and these compartments are locked to prevent access to the Methadone. The dispensing container (usually a cup but could be a bottle for advance dispensing) is placed below the outlet tube in the central compartment.

Methadone is a controlled drug, requiring accurate control and records of dispensing. The accurate measurement of dispensing is the medical device function, and the subject of this technical documentation. The software on the computer enforces a daily calibration procedure, where a known volume is dispensed, and the user must measure and report on this volume. Once calibrated, the software can dispense accurate volumes. Management of the drug stock, patients and prescriptions are not medical device functions, and these functions of the software are out of scope.

Figure 1. The MethaMeasure System with a Small Double UK Standard Pump (MMUKP02).

2 Intended Use

The MethaMeasure system device is intended for use by an authorised and qualified health care professional to accurately dispense a liquid drug that must be controlled (requirement by pharmaceutical regulations). Only the accurate dispensing is within the scope of this intended use.

2.1 User training requirements

The MethaMeasure system does not require any special skills to operate. Training is provided to staff within the pharmacy by MethaMeasure engineers during installation. Staff that may be trained include Pharmacists, Pharmacy technicians, and competent others that are involved with using the MethaMeasure system.

3 Contraindications

There are no contraindications to the use of MethaMeasure

4 Warnings

1. The user must report any serious incident that has occurred in relation to the medical device to the manufacturer and the relevant Competent Authority having jurisdiction in their locale.
2. The user must install tubing correctly, refer to section 21.10
3. Only use tubing supplied by MethaMeasure Ltd in the pump.
4. The user must clean the device: refer to section 21.6. Water used to clean the device can be warm, but should be no hotter than water used for hand washing. Do not use boiling water.

5 Symbols

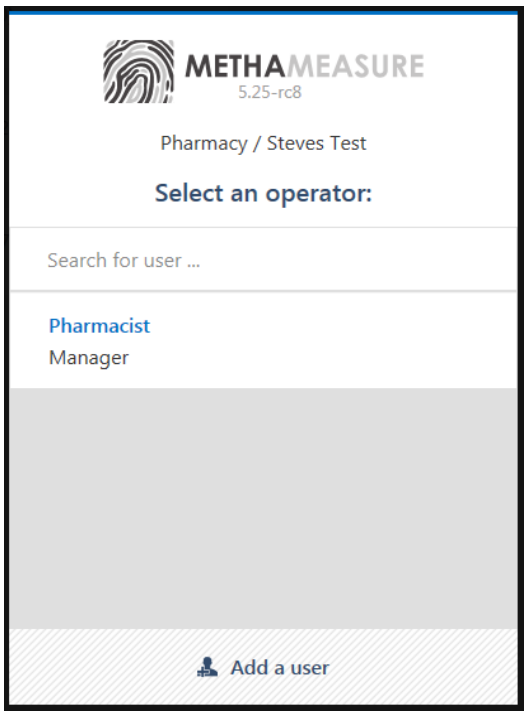
	Manufacturer
	Authorised representative in the European Community/ Union
	Serial Number
	Medical Device
	Unique Device Identifier
	Consult instructions for use
	Software version
	Caution

6 Logging In

1. Double click on the MethaMeasure Icon on the Desktop

2. Select the responsible Pharmacist name to login and enter the password.

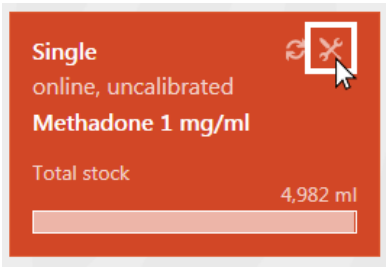
OR add a new Pharmacist by clicking '**Add a user'**



7 Setup the Pump(s)

Once the Main MethaMeasure window appears remove any bottles of cleaning fluid from the machine.

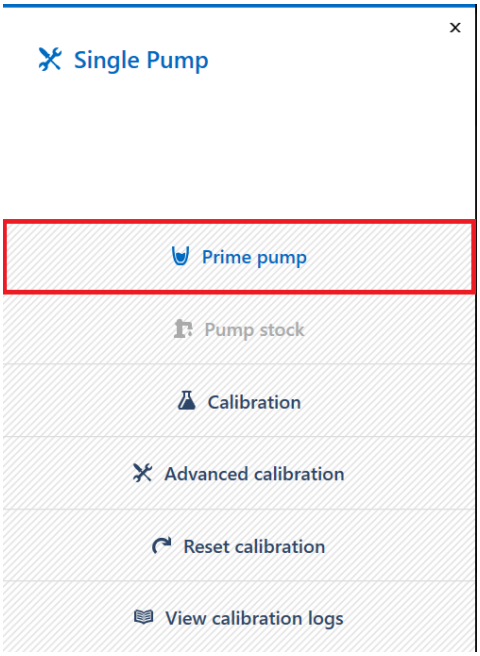
1. Turn the Pump ON and place a measure or cup under the dispensing nozzle. Then click the "options" button on the pump status box



2. Click 'Prime Pump' until all excess water is removed from the tubes. **Once** should be enough.

3. Insert the Methadone bottle into the pump and make sure the tube is correctly positioned. Then prime the pump **once** again into same container. The tube will be filled with Methadone

*** **Throw away this water/methadone mix** ***



4. Place the glass measure under the dispensing nozzle and click 'Prime Pump' one last time to check there are no air bubbles in the tube.
*** **Pour this methadone back into stock.** ***

For a double pump repeat this on the left side using 'Prime Pump' for Pump 2

You have now primed the pump

8 Calibrate the Pump

Click the "Calibration" button

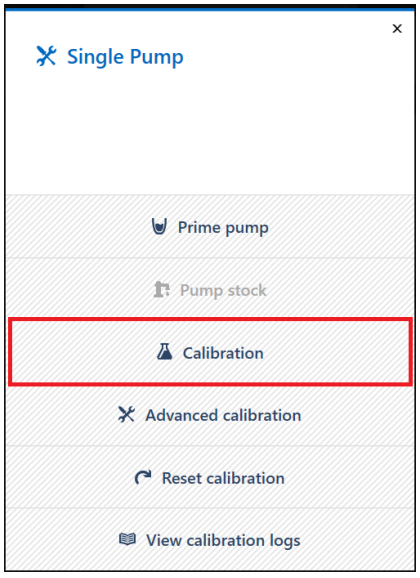
1. The machine will ask to dispense 100ml, this should be dispensed into the glass measure used for MethaMeasure

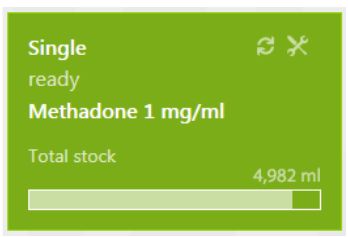
2. The machine will then ask the user to "Check Volume", Enter the volume dispensed into the glass measure into the box and click **next**. Return this methadone to stock.

3. The machine will repeat the dose if the amount is NOT 100ml.
Once the 100ml is OK the machine will move onto the 50ml and 10ml doses.

4. When you have finished calibration close the calibration menu to continue to the main window.
The pump you have just calibrated will turn GREEN.

The pump is now ready for dispensing.





9 Tips for Pump Calibration

Calibrating the pump accurately to a glass measure is an important step, if the pump is not accurately calibrated the dose given to a patient is likely to be incorrect. Whilst an inaccuracy of 0.5-1%is unlikely to cause a patient any harm it will cause a large discrepancy in the running balance over a high number of patients. Some tips for calibration include

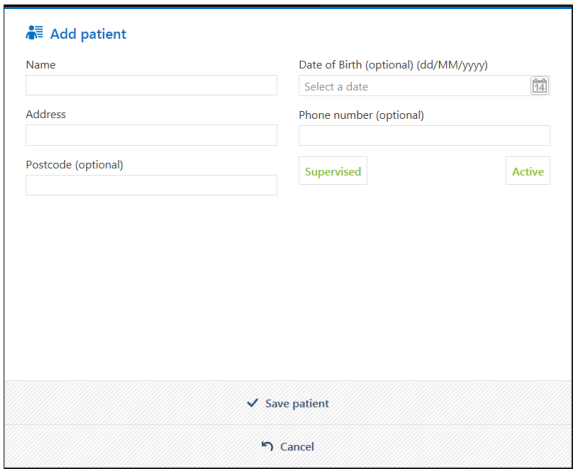
- Use a good quality glass measure, we recommend a cylindrical measure from Jaytec with an accuracy of +/- 0.1-0.5ml. These can be obtained at a cost from MethaMeasure. Please call for pricing. However, anything with the quality assurance stamp and glass should be suitable. We do NOT recommend plastic.
- Below is a table of recommended tube sizes and glassware sizes based on Methadone Strength. Please contact us before using anything other than 1mg/ml in our pumps.

Methadone Strength	Recommended Tube Size	Glassware Size/Accuracy
10mg/ml	14 – 1.6mm ID	10ml/0.1ml
5mg/ml	14 – 1.6mm ID	10ml/0.1ml
1mg/ml	25 – 4.8mm ID	100ml/0.5ml

- Use the glass measure in the priming process so it is "wet" before you start the calibration. It must be carefully drained after priming however it will help keep the measure consistent through the calibration process
- Use just one measure for the calibration and the same measure every day if you can.
- Carefully drain as much Methadone after calibration back into the stock bottle as possible – if you leave, for example, 1-2ml in the bottom of the measure and dispense 50ml on top – it will look like 51-52ml.
- Hold the measure at an angle whilst the calibration dose is being dispensed
- Do not allow the nozzle to become fully immersed in the Methadone whilst the dose is being dispensed – this will lead to some methadone being left on the dispensing tube which will make the measured dose inaccurate and also cause drips.
- Read the bottom of the meniscus on a flat and level surface
- Make sure the pump is fully primed, with zero air bubbles in the tubes, before starting calibration. A common mistake we see is people not priming the tube, meaning the calibration has to fill the pump first which results in 85ml or so being dispensed during the first calibration.

10 Add a new Patient

1. Click on "Add Patient" Icon (plus symbol) at the top left of the screen
2. Fill in the form with the patient details shown on the prescription.
3. Choose if the patient is Supervised, or not
4. Click '**Save Patient'**

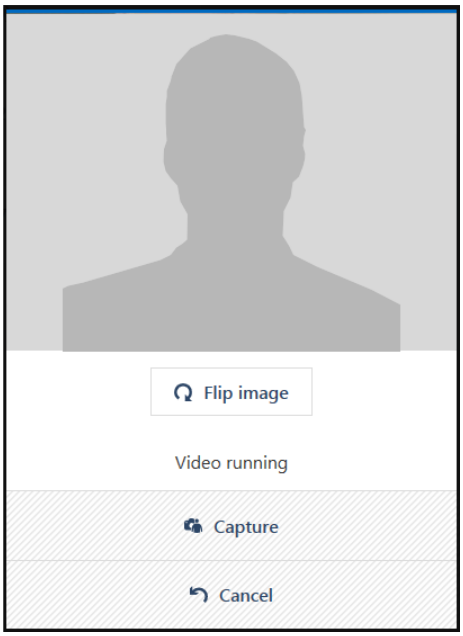


11 Change Patient Details

1. Select the patient you want to change.
2. Click **'Edit details'**
3. Make any changes required and click **'Save Patient'**

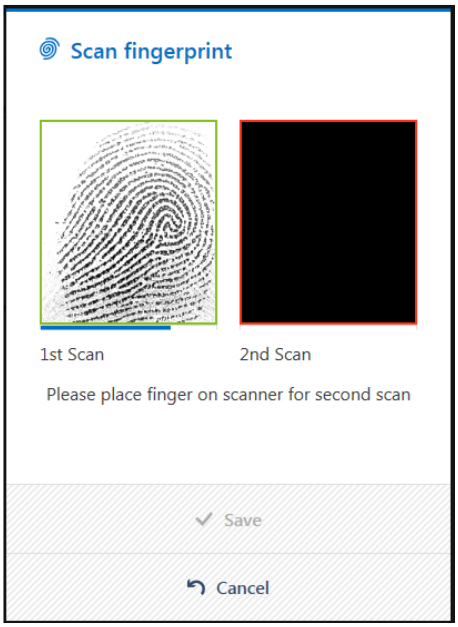
12 How to take Patients Photograph

1. Select the patient you want to add a Picture for
2. Click '**Edit Image'**
3. Make sure the patient can been seen clearly in the image
4. Click '**Capture'** to take the image
5. Click '**Save**



13 How to Capture a Patient Fingerprint

1. Select the patient you want to add a Fingerprint
2. Select '**Edit fingerprint'** on the menu to the right
3. Ask the patient to place their finger on the sensor until the capture is successful.
4. Ask patient to remove their finger and then to place it back on the sensor.
5. Click '**Save**



14 Adding a prescription

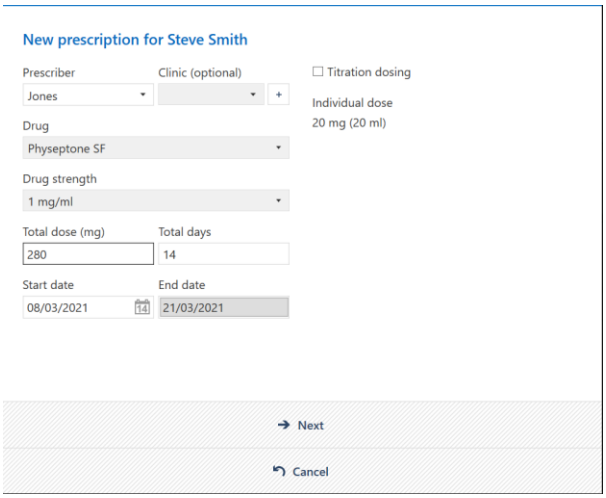
1. Select the patient you wish to add a script for

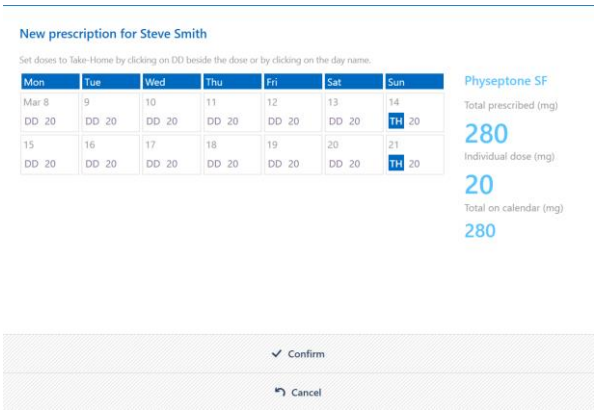
2. Click the '**Add Prescription'** button on the right of the patient profile

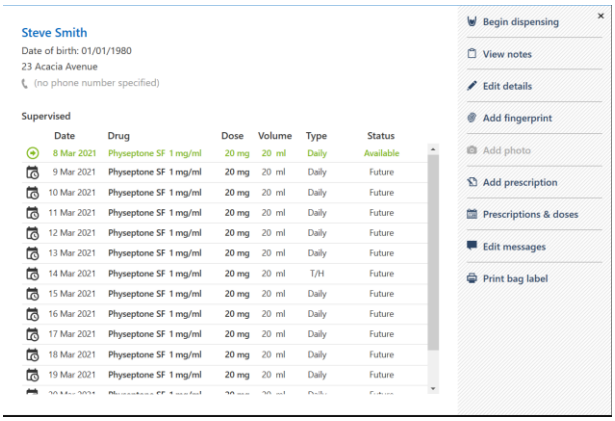
3. Enter the information as it appears on the Prescription paying careful attention to the start date and click '**Next'**

4. Select which days the patient collects in the pharmacy (DD) and what days are Take Home doses (TH) by clicking on the relevant days.

5. To save this prescription click '**Confirm**

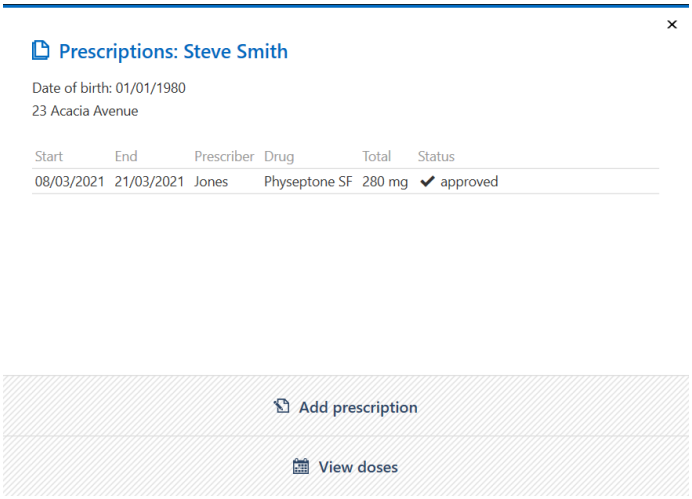






15 How to change a prescription (mid-prescription)

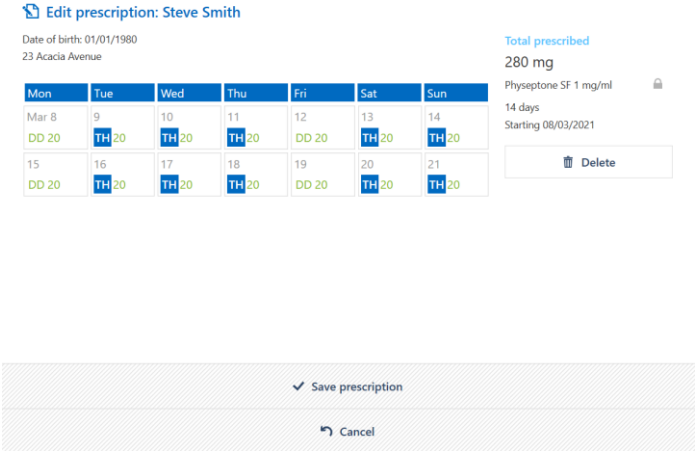
1. Select the patient that you want to change the prescription for.
2. Click '**Prescriptions & doses'** on the menu to the right.
3. Select the Prescription you wish to edit
4. Click '**Cancel'** on the right of the screen
5. Click '**Add Prescription'** at the bottom of the screen.
6. Enter new prescription as shown (see adding a prescription).



16 How to delete a prescription

1. Select the patient that you want to change the prescription for.
2. Click '**Prescriptions & doses'** on the menu to the right.
3. Select the Prescription you wish to edit
4. Click '**Delete'** on the right of the screen

* You can now go back and re enter the prescription as above

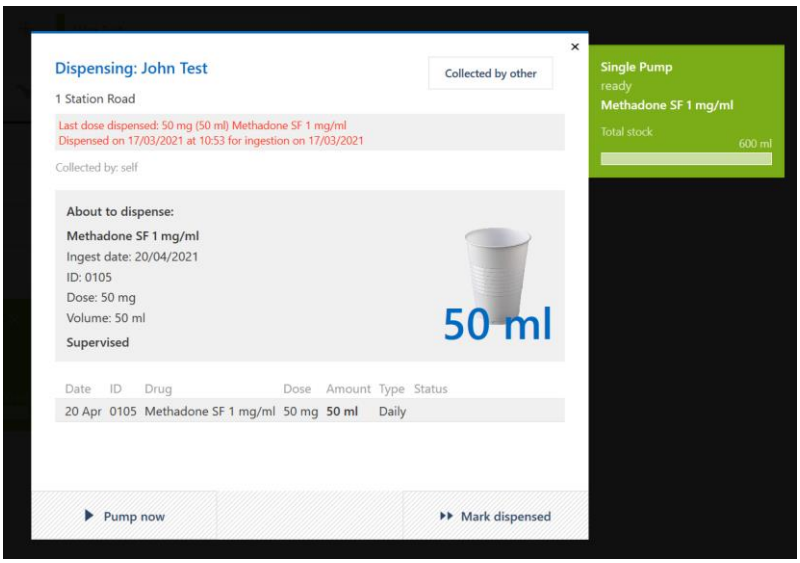


17 Dispensing a Patient

To dispense a dose for a patient, click on the patients name and choose "Begin dispensing".

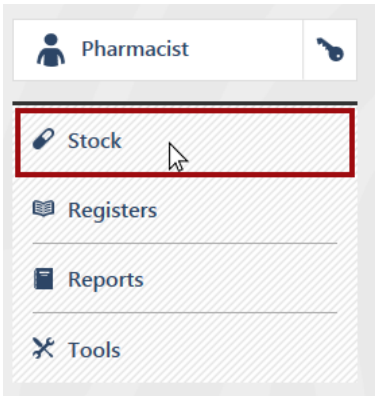
The details can be checked against the prescription, click "Pump now" to dispense the dose using the pump, print a label and make the entry in the CD register.

"Mark dispensed" can be used to label the dose and make an entry on the CD register for the dose if it the pump is not available and the dose has been hand measured or the drug you are dispensing is not allocated to a pump.



18 Managing Stock

All methadone stock is managed by clicking the '**Stock'** button on the main screen.

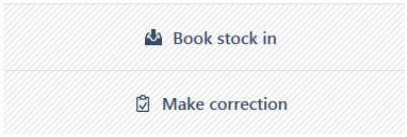


1. Select 'Store Stock' and select which drug you wish to manage

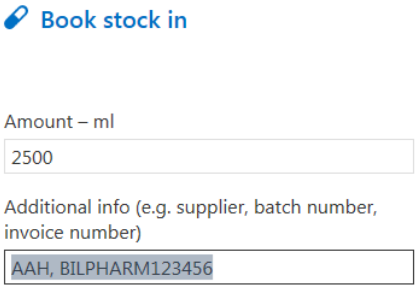
2. This will now show you all the stock information about that drug.

19 Entering Stock

1. Click '**Book stock in'**



2. Enter the amount of stock you have received and any other information you wish to record and click '**Save'**

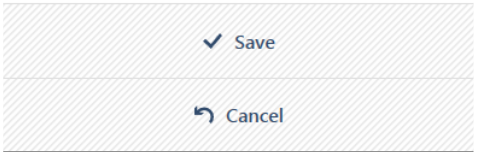


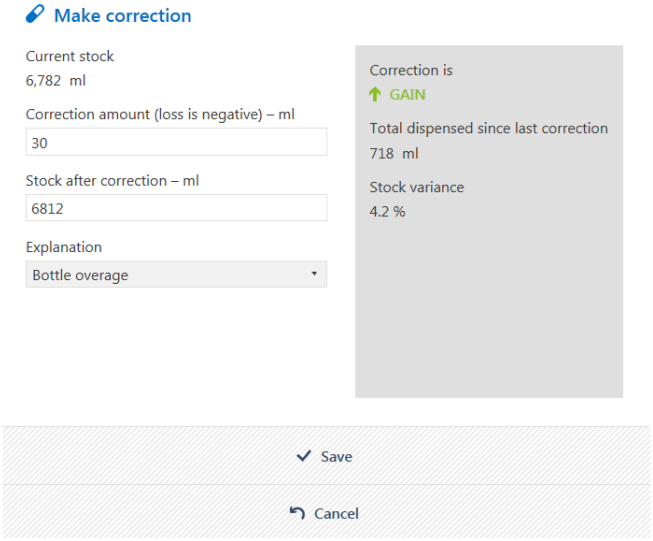
20 Making Corrections

1. Select '**Make Correction'**

2. Type the amount that you wish to correct
* Enter '40' for an Overage or '-40' for reducing stock

3. Select the reason for the correction from the dropdown menu





4. Click '**Save'**

Record Spillages
*See making Corrections

21 Important Information

If you have problems with the machine please look through this list. If you still have problems you can contact our help desk on:

0800 027 0671 Option 1

The helpline is open from **08:45 to approximately 18:00 Monday to Saturday**. Out of hours service is available on a Sunday.

Request Help button

If your request is *non urgent* you can send a quick message to the help desk by clicking on the support button at the top right of the MethaMeasure screen

21.1 View / Print previous Registers

1. Click '**Registers'** on the main menu
2. Select which drug you wish to view
3. Chose the date you wish to view at the top of the screen
4. Click '**Print Day'**

21.2 If the pump runs out of Methadone while dispensing a dose (i.e the tubes have air bubbles in them)

1. Firstly return the methadone in the cup to the stock bottle
2. Refill the Methadone bottle with a bottle from the CD cabinet
3. Click **'Prescriptions & Doses'**
4. Click the **'View Doses'** Button at the bottom of the screen
5. Select the dose you wish to undo **click 'Return Selected Dose'**

Select the reason for returning the dose from the drop down menu

6. Click **'Return Selected doses(s)'** button
7. Press **Esc** key until you are back at the patient screen
8. Click the '**Prime'** button to refill the tube with Methadone.

***Return any methadone to stock**

9. Select the patient and re dispense

21.3 Return doses to stock (if patient has been dispensed by not collected)

1. Click patient name.
2. **Click 'Prescriptions & Doses'**
3. Click the **'View Doses'** Button at the bottom of the screen
4. Select the dose you wish to undo **click 'Return Selected Dose'**

5. Select the reason for returning the dose from the drop down menu
6. Click **'Return Selected doses(s)'** button

21.4 Correcting errors on the register

If errors are identified on the register they can only be corrected via '**Manual Correction'** under the '**Stock'** menu.

21.5 Close Down Procedure

After Dispensing has finished the methadone pump needs to be cleaned out and the register(s) checked.

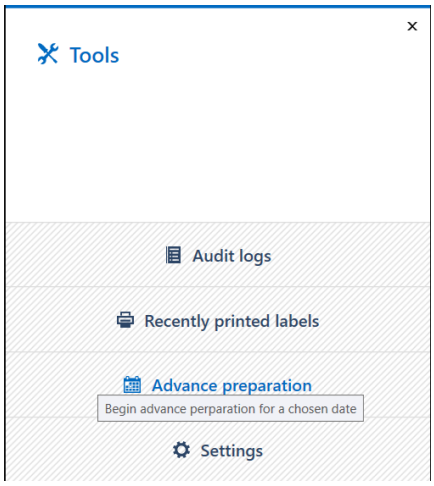
21.6 Cleaning the Pump

1. Remove any bottles of Methadone from the machine.
2. Place a measure or cup under the nozzle, Click Options on the pump status screen and then click **'Prime Pump'** until all the Methadone is removed from the tubes. – Pour this Methadone back into stock and return the Methadone to CD Cabinet
3. Insert cleaning fluid bottle into the pump and make sure the tube is correctly positioned.
Place a measure or cup under the nozzle.
4. Click 'Prime Pump' until you can see water in the tube. Click Prime Pump until the tube is clean. Once a week we recommend a diluted Milton solution is used to flush through the system as a disinfectant. Please do not leave the Milton Solution in the pump – use the prime feature to wash the Milton solution through the pump and then refill with fresh water
**For a double pump repeat this for the other side*
****Leave this water in the tube overnight**
5. Turn the pump OFF

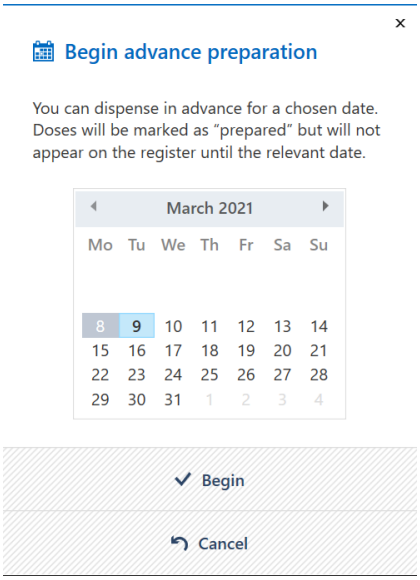
You have now cleaned out the pump

21.7 Advanced Preparation

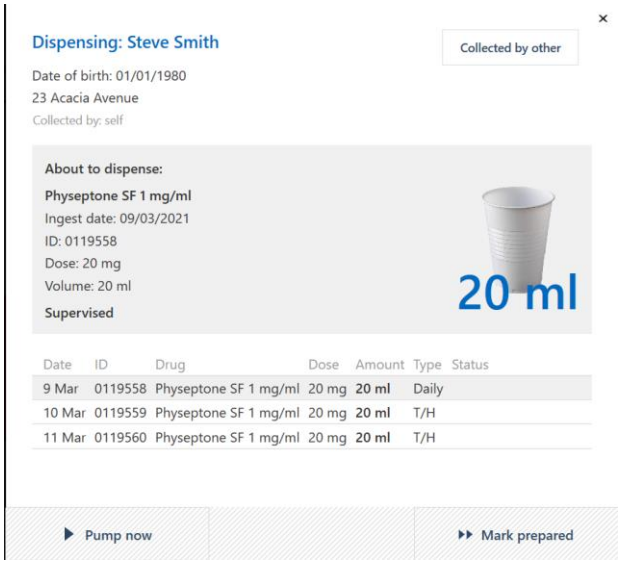
Advance preparation can be used to make up doses in advance for a patient. When doses are made up in advance they should be securely stored in the CD cabinet.



Click on **Tools – Advance Preparation**. If you do not have this option and would like to use Advance Preparation please call support on 0800 027 0671



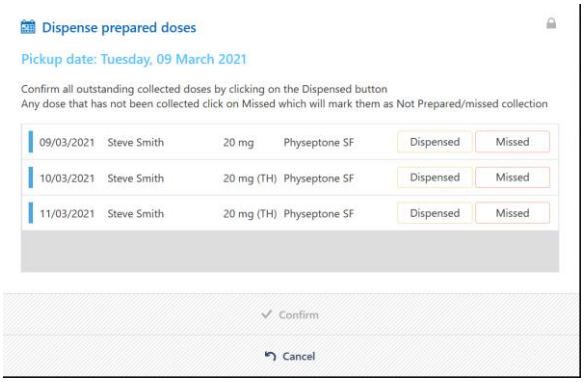
Choose a **date** you wish to advance prepare for and click **Begin**. A Red Banner at the top of the main screen shows which date you are advance preparing for.



Click on a patient you wish to advance prepare for. The software will skip the patient profile screen and move straight to the dispensing screen. The dose can be dispensed using **Pump now**. If you use Mark Prepared the system will mark the dose as prepared but will not measure the dose.

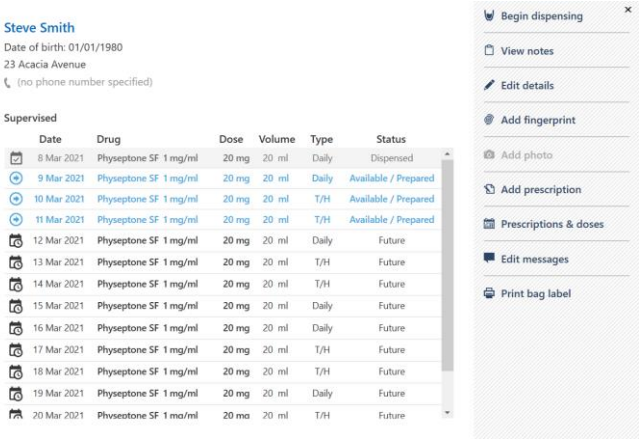
When all the doses are prepared click **Finish** at the top of the screen in the Red Banner.

When the software is started up on the day you have advanced prepared for, a blue band will be displayed across the top of the screen. The blue bar indicates that doses are already prepared for today. Click Review doses to see the doses that have been prepared.



All prepared doses for patients can be dispensed or marked as missed (un-prepare dose) through this menu. Patients can be dispensed individually through this menu.

A patient can be marked as dispensed through the usual method. Click on a patient's name, the patient profile screen will be displayed. Next to today's dose it will display as available (prepared).



Click Begin Dispensing, Mark dispensed will record the dose on the register, it can then be handed to the patient as normal.

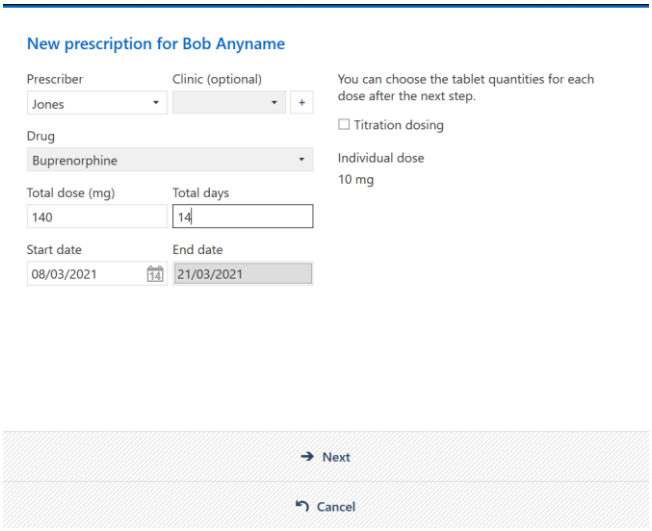
Once all advanced prepared doses have been marked as dispensed the blue bar will be hidden.

It is recommended to check the register to make sure doses have been recorded as expected.

21.8 Tablet Dispensing

MethaMeasure can be used to record the dispensing of tablets (And also to help with ID checks). Tablets are handling in a similar way to Methadone. Stock is monitored through the stock menu and registers are accessed through the register menu. If you need help with adding Tablets as drugs to MethaMeasure please contact the help desk.

Add a prescription in the usual way, choosing the tablet name as the drug and entering the **total dose** in mg to be given. In this case 140mg over 14 days, click **Next** and choose the take home days, Click **Confirm**



Choose the quantities of each tablet strength to be given to the patient. This mechanism allows a patient to be given multiple of each tablet strength in order to get to their required dose. In this case, 0x0.4mg, 1x2mg and 1x8mg, however, it could be 0x 0.4mg and 5x2mg and 0x 8mg's if there were no 8mg tablets in stock. Click **Next** when finished.

Dispense the tablet patient as normal, when **begin dispensing** is clicked the dispensing screen will be displayed. A list of each strength of tablet will be displayed. It is very important to dispense the tablets **exactly** as prescribed on the system otherwise stock checks will not be correct. Click **Mark Dispensed** to record the patient as dispensed.

21.9 Shutdown Procedure

1. Close MethaMeasure by clicking the ' X ' in the top right

2. A box will pop up asking you to review today's register.

3. Click **'View Registers'**

4. Check that the register entries are correct and that all collections and non collections are registered correctly. And click **'Continue Review'** button

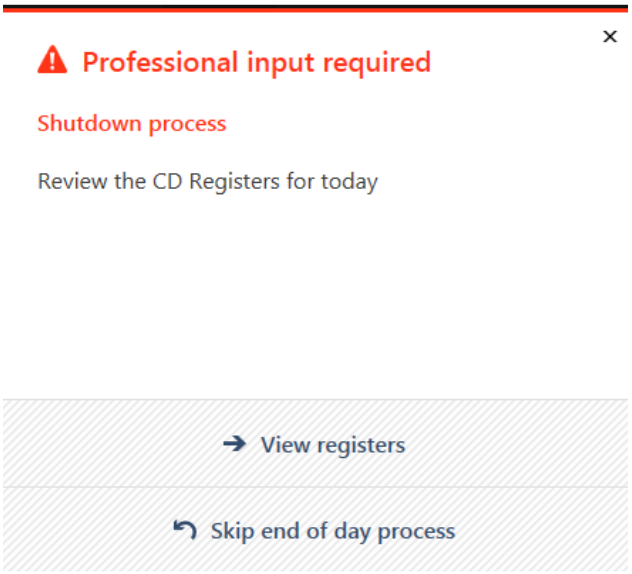
**If you have a double pump click on the other drug register to be checked.*

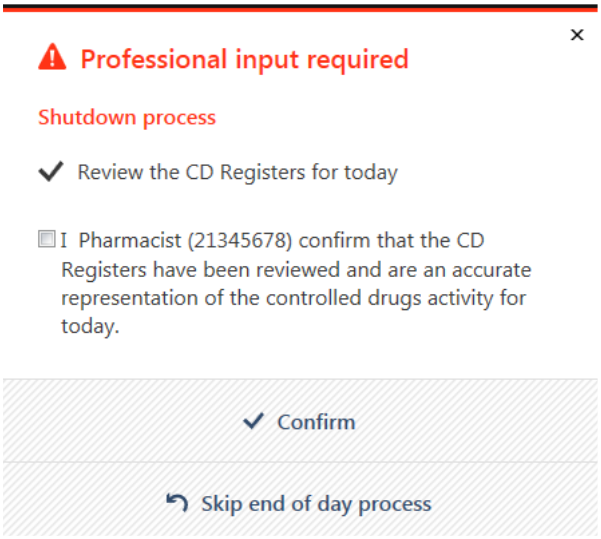
6. Once the registers are checked click the **'Complete'** button.

7. Check the box next to the final confirmation that the registers have been checked and are accurate.

8. Click the **'Confirm'** button

9. If you choose to skip this process, an entry is made on the register to say the entries have not been checked.





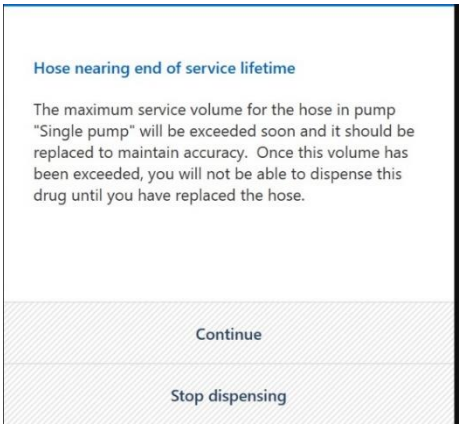
DO NOT turn off the computer
The backup will launch automatically after the shop is closed.
The PC will turn off automatically

21.10 Changing the tube/ service volume

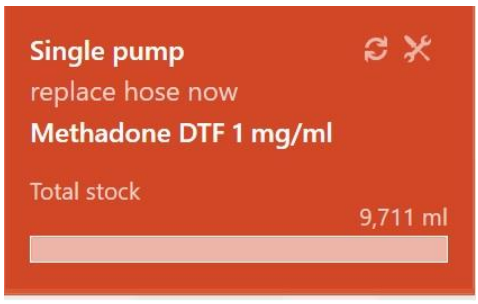
The silicone tube used in the MethaMeasure peristaltic pump is a wearing component and must be replaced at appropriate intervals. Depending on the tube in use on your pump and the volume of Methadone dispensed by the system this may require changing every 3 months or it may last considerably longer. As the tube comes to the end of its service life the MethaMeasure software will alert you to this by changing the colour of the pump controller and displaying a message in the pump status. If you do not have a spare tube on site, please call us on 0800 027 0671 and we will send you an appropriate tube. This is included in your rental of MethaMeasure.

As the tube nears the end of its life, the status will change to "Ready, Change hose"

A warning will be displayed depending on the remaining hose/tube life



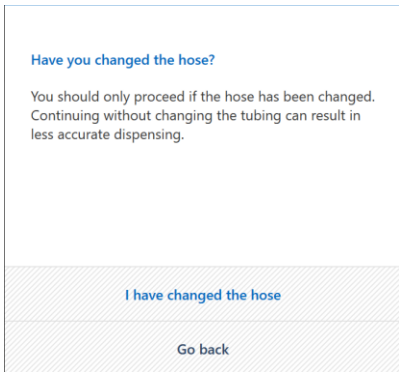
If the warning is ignored, the system will eventually stop dispensing once it has reached a predetermined volume.

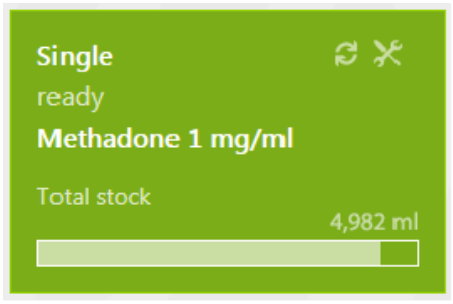


To change the tube, first use the prime button to empty the Methadone from the system. Then change the tube, please see separate document, "MethaMeasure UK

Tubing Change MAN002" available from our website www.methameasure.co.uk under the support button if required.

Once the tube has been changed click the pump options menu and prime the pump. Then click the pump servicing menu and click "Reset service volume", the system will ask the user to confirm they have changed the hose. The user will then be taken through the calibration process (see section 6 page 5 for priming and calibration instructions). Once calibration is complete the system can be used again.





22 Keyboard Shortcut table

MethaMeasure has several keyboard shortcuts to allow the software to be used without the mouse for many common tasks. Hovering over a button will prompt MethaMeasure to display a tooltip and also the keyboard shortcut if one is available. A summary is listed below.

Shortcut	Action
General Shortcuts	
Esc Key	**Will move back a level in menus, or if on the main screen select the search box or clear the search box**
Enter Key	**Will move forwards a level as a positive menu action with a direction to dispense to the patient. Eg. Enter from the patient profile will move to the dispensing screen and Enter again will dispense the patient via the pump (if available)**
Search Box	**Searching can be by first name or surname in any order, once there is a single result on the main screen Enter will open the patient profile.**
From the Main Screen	
Ctrl+F9	**Opens the Stock Menu**
Ctrl+F10	**Opens the Register Menu**
Ctrl+F11	**Opens the Reports Menu**
Ctrl+F12	**Opens the Tools Menu**
Ctrl+N	**Add New patient**
Ctrl+U	**User menu/logout**
Ctrl+P	**Start fingerprint recognition**
Ctrl+F	**Select Search box**
From within a Patient Profile	
Ctrl+N	**View Notes**
Ctrl+E	**Edit Details**
Ctrl+F	**Add Fingerprint**
Ctrl+I	**Add Photograph**
Ctrl+A	**Add Prescription**
Ctrl+P	**Open Prescriptions and Doses**
Ctrl+M	**View Patient Messages (if enabled)**
Ctrl+L	**Print Bag Label**

23 If you no longer require your MethaMeasure system

If you no longer need or want to use MethaMeasure in your Pharmacy you should contact the help desk on 0800 027 0671 or your sales representative. We require 1 month notice on the rental as per the customer contract, once you have contacted the help desk or sales representative, we will make arrangements to collect the system from your premises. An engineer will visit on a mutually suitable date. You are welcome to use the system up to this date. Once the engineer has arrived to collect the system they will make sure you have a suitable CD register and dispensing arrangements before removing the system. We will then confirm that MethaMeasure is connected to a CDRx account (www.cdregister.co.uk) which will provide you with access to all the registers that have been created on MethaMeasure. (In some cases, this may be completed after the collection has taken place where there is a large amount of data to upload). The engineer will then disconnect the laptop, pump, label printer and any other accessories. They will discard the tube from the pump and then clean the area where the system has been located. Any equipment provided by MethaMeasure will then be removed from the site. In some cases, cabling that has been installed through the ceiling may be left for potential future use where the removal would be destructive or extremely time consuming. Under no circumstances should the system be disposed of by the customer.

REVISION HISTORY

Rev	CR #	Approval / Effective Date	Description of Change	Originator
0	CR-2023-07	3 October 2023	Release documentation	C Cave
01	CR-2023-08	7 December 2023	Added pump servicing information	C Cave
02	CR-2024-03	14 June 2024	Added intended use, symbols, and warnings. Reformatted	C Cave
03	CR 2025-08	09 Jul 2025	Addition of warning for water to be of a reasonable temperature. Addition of symbols, MM address, Advena details and UKCA/ CE mark to page 1.	C Cave
04	CR 2025-018	10 December 2025	Change from EC Rep to EU Authorised Representative Symbol as per EN ISO 15223-1:2021/A1:2025	C Cave

05	CR 2026-013	07 Oct 2026	Section 2 updated intended use statement and added user training requirements. Section 5 add caution symbol. Section 23 Added information on how to end MethaMeasure usage and details on how the system is returned to MethaMeasure. Updated document name to move the document number to the start of the name.	C Cave