PIVOTELL® 'PLUS'

Automatic Pill Dispenser

(GSM enabled)

Instructions

Note:

The dispenser is supplied unlocked.
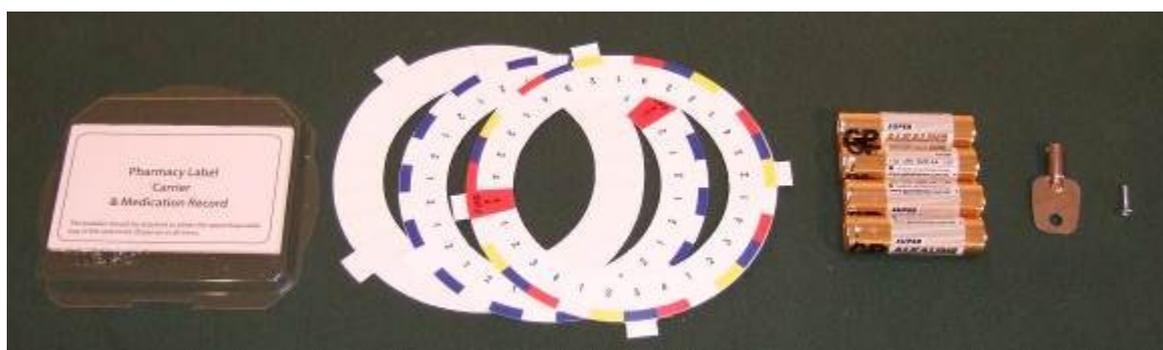**Please read the Instructions for opening the lid.**

PIVOTELL 'PLUS'
AUTOMATIC PILL DISPENSER

The box also includes:-

Pharmacy label carrier and case.
SIM card and top up card (see page 5)
Three reversible day/time discs or self adhesive discs
Batteries - 4 x AA Alkaline
Key
Battery cover securing screw (see page 11)

'PIVOTELL PLUS' AUTOMATIC PILL DISPENSER

1. INTRODUCTION

The 'Pivotell Plus' Automatic Pill Dispenser reminds the user by means of an alarm and flashing light when to take their medication. It will make the correct dose available at the correct time of day or night, whilst keeping other pills locked out of sight.
The dispenser can be programmed to send an SMS or e-mail message to a family member, friend, carer or Alarm Response Centre if medication has not been taken. It can also be programmed to report on the status of the dispenser, for example – 4 doses remaining / error message / dispenser upside down / low battery.

**Medication is dispensed from an internal tray containing 29 sections.
Maximum number of daily alarm settings - 28.
When the alarm sounds the internal tray will rotate one position. The correct dosage will come into view in the lid opening. Pills should be removed from the dispenser by tilting it and pouring the pills into the hand or suitable container. This will cancel the alarm signal and the flashing light.**

The dispenser is programmed using a computer and by accessing the web based Pivotell Administration Centre. The Administration Centre will manage the settings of the dispenser, log SMS and e-mail messages and record medication times.

The Administration Centre can also, if required, provide reports on the history of previous actual dispensing times, and the activity history of the dispenser.

Technical data:
Dimensions   **-**   Length 190mm Width 180mm Hight 56mm
Weight   -   390g excl. batteries   490g incl. batteries
Compartment volume -   Approx 10ml per compartment
Power supply   -   6V (4 x 1.5V Alkaline batteries)
Battery life   -   > 1 year

USING THE DISPENSER FOR THE FIRST TIME
Open the lid as illustrated – place an index finger in the lid opening and press in the catch with a thumb. Lift the lid.

FILLING THE DISPENSER

Time Discs
Three day / time discs are supplied which comprise:
Two printed discs for 1 up to 4 medication prompts per day (use either side) and one blank disc for more than 4 medication prompts per day. The blank discs should be completed by hand indicating the medication times.
NB:Before filling out the day/time discs, calculate which day/time you expect the refilled tray to start (particularly if a pharmacy will refill the tray) The first dose should be to the right of the red section. (i.e Dose 1 does not have to be the first dose in the morning)
Place the appropriate disc for the dosage in question on top of the tray. Secure the disc in place by bending down the four tabs – (a spot or two of glue will secure it further if preferred), or peel of the backing from the self adhesive discs and place in position with the red section centrally positioned between the compartment walls.

Medication (also see note on page 12 under 'Medication')
Remove the tray from the dispenser.
Starting from the right of the solid red section (not used) place the correct dosage in each section of the tray. *Note: if a pill is inadvertently dropped in the incorrect compartment, a pair of tweezers can be helpful to easily remove the pill.*
After filling, replace the tray in the dispenser so that the empty compartment marked by the solid red section will be visible through the lid opening–
(figure 4)

Placing the tray in the dispenser
Ensure that the tray is placed in the dispenser so that when the lid is closed the right side of the pill compartment is flush with the right side of the lid opening.
At the next alarm time the tray will rotate one section clockwise and make available the correct medication.

Spare trays
Re-usable or disposable spare trays with lids and time discs can be purchased to allow pre-filling.

Pharmacy label carrier
Complete the pharmacy label carrier / medication booklet and place inside the case, slide the case under the dispenser as shown and clip into position.
(figure 5)

PROGRAMMING THE DISPENSER WITH A COMPUTER

Pivotell Administration Centre
To programme the dispenser it is necessary to open an account in the Administration Centre.

- Enter the following address into your web browser :
  http://www.pivotell.co.uk
- Click on 'Administration Centre'. If you are a new user, click on 'New User? Click here to register' .

- Enter your name, address and contact details. Create a Username and password. (Note – this is case sensitive) Click on 'Save'.
- Return to the Administration Centre home page and enter your username and password. Click on 'Login'.

To programme a new dispenser, click on 'New Dispenser'
Programming
Enter the settings in four steps:

- Step 1 - The dispenser's phone (SIM) number and user information
- Step 2 - Dispenser settings
- Step 3 - SMS services and SIM card information.
- Step 4 - View settings

Step 1 - Phone number and user information

Pivotell will supply a prepaid 'Pay As You Go' SIM card, and 'Top Up' card from Orange or other network operator as requested by the customer

- Enter the phone number of the SIM card supplied which can be found on the reverse of the card sleeve, e.g: 447850123456.
- Enter the serial number of the dispenser (this can be found on the base of the dispenser)
- Enter the name or other identification of the dispenser user (up to 23 characters). *This name will be used in the SMS message together with the message.*
- Enter the address and contact details of the user.
- Enter name of the person who is to receive the message
- Enter the receiving mobile phone numbers (up to 3 numbers) and / or e-mail address– prefix the number with '44' and delete the initial '0' e.g: 447850123456.
  Do not 'SAVE

- Open the battery case cover.
- Insert the SIM card into the GSM module on the inside of the battery case cover.
  Note: the SIM card is positioned so that the cut off corner of the card is pointing towards the battery case cover clip.
  (see Figure 6)
- Remove the battery isolating strip from the dispenser.
- Replace the battery case cover and, if required, secure with the screw provided.
  Note – the dispenser will 'beep' when left upside down.

- Open the dispenser lid. The LCD will display a time.

- **Download the initial settings - Press button 2 for two seconds**.
  The display will move through the following sequence:
  Time: e.g **12:00**
  SMS
  RX < - - (Receiving)
- **At this point Click on 'Save' in Step 1**
  The Administration Centre will then send initial set-up data including telephone numbers to the dispenser. When this data has been received the display will show:
  RX OK
  SW-006 (may vary according to the programme version installed)
  BATLEV (Battery level e.g 1569 (indicates actual battery voltage remaining) and finally - Time e.g **15:30**

- The Administration Centre screen will change to:
  '**Step 2 – 'Dispenser Settings'**

Step 2 – Dispenser Settings

Sound: There are four different pre-programmed alarm signals available – select one. If no sound is required select 'none'.
Flashing Light: Select either 'on' or 'off'.
Server date & time: Select the current local time and date . The default is Western European time.
Daylight saving time: Select for 'Europe' for automatic adjustment to British Summer Time (BST) and Greenwich Mean Time (GMT).
Hours: The clock can display in 24 hour or 12 hour AM/PM formats. It is recommended that the 24 hr clock is chosen.

Doses/Alarms
Doses: Up to 28 doses / alarms per 24 hours can be programmed. Select the number of Doses required daily and the same number of time fields will appear to the right under 'Dosage Time'. Enter the required medication times in each field.
Note: If the user needs to take more medication at the same than can be held in one compartment of the medication tray, it is possible to set two compartments to alarm at the same time. In this case the tray will turn one step and the alarm will sound. As soon as the medication is dispensed the tray will turn again bringing the second dose into view.

Alarms:
Before
It is possible to allow access to medication up to five hours before the normal programmed alarm time. The settings can be increased in 30 minute intervals. Within this period it is possible to make the dispenser rotate and make the medication available immediately by turning the dispenser upside down <u>twice</u>.
Set to the required time or if this function is not required set at ' 00'.
Note: If the user is at all confused we recommend that this function is not activated.

If medication is taken before the normal time, the dispenser will not activate again until the following medication is due.

After:

It is possible to programme the length of time, after the programmed dosage time, that the alarm will continue to sound if the medication is not dispensed. The maximum time is 1 hour. The settings can be increased in 5 minute intervals.

The alarm will sound every 4 seconds for the first minute, and every 30 seconds thereafter until medication is taken or the 'After' limit is reached. Set to the required time.

Click on 'Save' to proceed to next step.

Step 3 - SMS services and SIM-card

SMS services

Tick the messages that you wish to be sent.

The message received will consist of **"Name"** (User Name) followed by **"Dose not taken", "Device Error" etc.**

Dose not taken: An SMS is sent if medication has not been dispensed before the end of the 'After' time.

Device error: An SMS is sent if anything has happened to the dispenser which causes a malfunction. This will include when the device is upside down at the time a dosage is due (the tray will not rotate to prevent the medication falling out.)

Device Upside Down: If the dispenser is left upside down an SMS will be sent after 10 minutes .

Doses remaining: An SMS is sent when the Dispenser tray has only 4 doses left after the insertion of a full tray and it has been reset. The default is 28 (all compartments filled). If less than 28 compartments have been filled then enter the actual number in this field.

Battery Low: An SMS is sent when the battery voltage in the dispenser is below 5,3 V. The dispenser will operate normally for several weeks after initiating this message.

SIM-card

As a cash-SIM card is used in the dispenser, the boxes **SIM-balance** and **SMS-cost** can be completed when a new card is inserted or it has been topped up.

- Enter the SIM Balance (a new SIM card will be supplied with £ 5.00 balance).
- The Administration Centre will note all received SMS messages from the dispenser and update the remaining value on the SIM-card. It is possible to monitor when the SIM-card requires topping up by checking this page.
  Note: The initial value of the SIM Card and cost per SMS will be shown on the SIM card packet
- Enter the SMS cost per two way message sent (normally £ 0.20 per two way message)
- Click on 'Save'.

STEP 4 - VIEW SETTINGS

Click on 'View Settings' to view all of the settings on one page. If you need to adjust any setting go back to Step 1, Step 2 or Step 3.
Click on 'Save' once adjustments have been made.

DOWNLOAD SETTINGS TO THE DISPENSER

Once all settings have been made and saved they must be downloaded to the dispenser:

- **Press button 2 again for two seconds**.
  The dispenser will contact the Administration Centre and exchange initial set-up data including telephone numbers. The display will move through the following sequence and download the settings from the Administration Centre:
  SMS
  TX - - > (Transmitting)
  TX OK
  RX < - - (Receiving)

> **RX OK**
> **SW-006 (**may vary according to the programme version installed)
> **BATLEV** (Battery level e.g 1569 (indicates actual battery voltage remaining)
> Time e.g **15:30**

- The dispenser is now programmed. If required the settings can be checked by pressing buttons 1 and 3 (see Manual Setting Instructions below). *Take care not to inadvertently alter the settings.*

Note: *Manual changes can be made to the dosage times and will be accepted by the dispenser. The appropriate SMS and e-mail messages will be sent. The Administration Centre should be updated as soon as possible and the dispenser re-set by pressing button 2 for two seconds.*

DISPENSER REPORTS

Dosage: The Pivotell Plus dispenser records the times that previous medication has been dispensed and will upload this data to the Administration Centre. This is recorded and shown in the report "Dosage".

Dispenser: The Administration Centre will record the complete history of messages to and from the Dispenser, this is shown in the report "Dispenser".

When you are satisfied that the dispenser has been programmed successfully, click on 'Log Out'.

INFORMATION AND INSTRUCTIONS
Instructions in PDF-format can be downloaded from the Pivotell ® website – www.pivotell.co.uk

NOTE - BATTERY REMOVAL
Please note that if the batteries are removed, the clock will revert to the time when the last re-set was done. The clock should be re-set to the correct time by pressing button 2. The Administration Centre will then be contacted and the dispenser re-set to the correct time.

MANUAL SETTING OF THE DISPENSER

Note: Settings entered manually will not be recorded by the Administration Centre. If settings are changed manually and are required permanently, they should be also changed in the Administration Centre. Go to 'Edit Dispenser', amend the settings and then 'Save'.   Reset the dispenser by pressing button 2 for two seconds.

There are two setting menus:-

Menu A:- Button 1	Menu B:- Button 3	
DOSES	BEFORE	AFTER
ALARM	SOUND	LIGHT
CLOCK	HOURS	DATE
	RECORD	TEST

Note: After completion of settings in either Menu A or B press button 1 for three seconds to restore to normal operation. If this is not done the display will automatically return to normal after 30 seconds. After completion of settings we recommend the dispenser is tested (see TEST function on page 7. following.)

Menu A (accessed through Button 1)
Set CLOCK:
Press Button 1 repeatedly until ''CLOCK'' is visible on the display.
Set the correct time by pressing Buttons 2 or 3. You can fast forward or reverse the time by pressing and holding down these buttons.
Set DOSES per day:
Press Button 1 until ''DOSES'' is visible on the display.
Adjust using Buttons 2 and 3 to the correct number of doses per day.
Set ALARM times:
Press Button 1 repeatedly until ''ALARM'' is visible on the display.
Set the 1st (1) alarm time using buttons 2 or 3.
Press Button 1 again for the 2nd (2) alarm time and repeat the procedure for all subsequent alarm times required.

MENU B (Accessed through Button 3)

BEFORE - Taking medication before the pre-set alarm time
It is possible to allow access to medication up to five hours before the normal programmed alarm time. The settings can be increased in 30 minute intervals. Within this period it is possible to make the dispenser rotate and make the medication available immediately by turning the dispenser upside down <u>twice</u>.
Set to the required time or if this function is not required set at ' 00'.
Note: If the user is at all confused we recommend that this function is not activated.
If medication is taken before the normal time, the dispenser will not activate again until the following medication is due.
To set:
Press and hold Button 3 until BEFORE is displayed.
Press Buttons 2 or 3 to set the time required (up to 5 hours)
NB: If medication is taken before the normal time, the dispenser will not activate again until the following medication is due.
AFTER
It is possible to programme the length of time, after the programmed dosage time, that the alarm will continue to sound if the medication is not dispensed. The maximum time is 1 hour. The settings can be increased in 5 minute intervals.
The alarm will sound every 4 seconds for the first minute, and every 30 seconds thereafter until medication is taken or the 'After' limit is reached.

To set: Press and hold Button 3 until BEFORE is displayed.
Press Button 1 repeatedly until 'AFTER' is displayed.
Select the required alarm duration by pressing Buttons 2 and 3 (minimum 5 minutes / maximum 1 hour)
SOUND
There are four alarm sounds available. To choose the alarm sound:
Press and hold Button 3 until BEFORE is displayed.
Press Button 1 repeatedly until '''SOUNDS''' is displayed.
Choose your preferred sound 01 02 03 or 04 by pressing Buttons 2 or 3.

Should no sound be required set at 00.

LIGHT

Press and hold Button 3 until BEFORE is displayed. Press Button 1 repeatedly until 'LIGHT' is displayed.

If the light is not required press button 2 once – '00'' will be displayed'

If the light is required press button 3 once – '01' will be displayed.

HOURS

24hr / AM-PM clock settings

The dispenser is preset to display the time as a 12 hour AM/PM display. To change this to 24 hour clock setting (recommended to avoid confusion):

Press and hold Button 3 until BEFORE is displayed.

Press Button 1 repeatedly until ''HOURS'' is displayed.

Choose AM/PM or 24hrs by pressing buttons 2 or 3.

DATE   (for automatic BST / GMT adjustment)

Press and hold Button 3 until BEFORE is displayed. Press Button 1 repeatedly until 'DATE' is displayed.

'YY' is displayed – press Buttons 2 and 3 to set the year then press 1

'MM' is displayed – press Buttons 2 and 3 to set the month then press 1

'DD' is displayed – press Button 2 and 3 to set the date then press 1

RECORD

The dispenser will record the actual times the previous 28 medications were dispensed. Press Button 3 until 'Before' is displayed. Press Button 1 until 'RECORD' is displayed – the time that the last medication was taken is displayed. Press Buttons 2 or 3 for the previous medication times to be shown.

TEST

The dispenser has an inbuilt test function.

To test the rotation and alarm sounds press Button 3 until 'Before' is displayed. Press Button 1 repeatedly until 'TEST' is displayed.

Press Button 3 again – the tray will rotate, the display will show 'MOVING' and then 'TAKE' and the alarm will sound.   Tilt the dispenser to stop the alarm. 'TEST' will then display again. Hold Button 1 down to return to the clock.

Note: If on **first use** the dispenser does not rotate and the alarm does not sound, remove a battery, replace and test again. The dispenser will then operate normally.

To test the **'BEFORE'** function, press button 3 for a few seconds.

Press Button 1 until 'TEST' is displayed.

Press Button 2. Close the lid and then turn the dispenser upside down twice. Turn back to the upright position.

The tray will rotate and the alarm will sound. Tilt the dispenser again to cancel the alarm.

LOCK

The dispenser can be locked with the key supplied. Turn the key a quarter of a turn clockwise to lock, anti-clockwise to unlock.

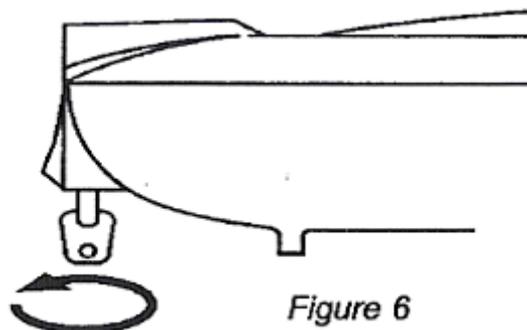Please note that the lock is a simple device intended as an additional barrier only.

Figure 6

BATTERY COVER SCREW
A screw is provided prevent inappropriate access to the batteries should this be necessary. Place the screw in the hole in the battery cover securing clip and tighten. The screw must be removed when the batteries need replacing. It should then be replaced.

EXTERNAL INTERFACE
The dispenser includes an external interface to enable connection of various existing and future support electronic devices, for example - wireless transmitters, modems, alarm sounders, alarm lights etc.
For further information please contact Pivotell Ltd

GENERAL INFORMATION

Dispenser left upside down:
If the dispenser is left upside down it will sound a warning alarm 'beep' continuously until it is placed upright.
If the dispenser is upside down at an alarm time it will not rotate the medication tray until it has been placed upright providing that the 'After' time has not passed.

If the 'After' time has passed the lid should be opened. The display will show 'ERROR'. This can be cleared by pressing button 3. The tray should be reset in the correct position for the next due dose.

Medication:
There are some pills that should not be exposed to the air and therefore should not be used in the dispenser. If in doubt please check with your pharmacist.

Pharmacy filling:
For the suggested Standard Operating Procedure for pharmacy filling of the Pivotell Mark 3 dispenser, please ask your pharmacist to contact Pivotell Ltd –
e-mail: office@pivotell.co.uk

Disposable medication trays:
Disposable medication trays are available to assist pharmacy filling. This avoids the need to purchase multiple dispensers or re-usable trays if the dispenser is filled away from the user's home. For more information please see our website –
www.pivotell.co.uk

Fault handling:
The alarm will sound continuously in the event of the dispenser failing to rotate properly. This might be caused by an obstruction between the body of the dispenser and the internal tray. In this event the display will show ''ERROR''.
Press button 3 once to cancel. Any obstruction should be removed and the dispenser reset by pressing button 2 for two seconds.

If the dispenser is upside down when the alarm occurs, the internal tray will not move until the dispenser is turned upright.

If the dispenser is upside down for all the time between the 'BEFORE' and 'AFTER' settings a warning signal will sound and 'ERROR' will be displayed. Press Button 3 once to cancel. Check the position of the internal tray to ensure that the correct medication will be available at the next alarm time.

Batteries:
Batteries (4 x AA Alkaline) are supplied with the dispenser when new. Batteries will last in normal use for at least 12 months.
Battery life can be checked using the following procedure:
1. Insert batteries in the dispenser.
2. Immediately watch the LCD display for the indication BATLEV.
3. At full charge a reading of 1600 (or more) will be shown.
4. At a reading of 1325 the battery warning indicator ''LOWBATT'' will initiate
5. At a reading of 1275 the unit will not operate.
Note: Rechargeable batteries should not be used as they have an insufficient charge to reliably operate the unit.
Remember when changing batteries to insert them to correct way around
(see figure 3 – Page 3)

Cleaning: Dispenser - wipe with a damp cloth. **Internal tray** – may be washed in warm water or in a dish washer (max. 35C)

Transport: If for any reason the dispenser is despatched by Royal Mail, courier or other carrier, it is important that **all batteries** are removed from the dispenser.

IMPORTANT
TO AVOID DAMAGING THE MECHANISM THE PILL TRAY MUST NOT BE MOVED AROUND MANUALLY WHEN INSIDE THE CASE. TO REPOSITION THE TRAY ALWAYS LIFT IT OUT AND REPLACE BY LOWERING DIRECTLY INTO THE CASE IN THE CORRECT POSITION.

Responsibility of the user:

The 'Pivotell Plus' Automatic Pill Dispenser is an aid for those having difficulty remembering to take their medication.

It is the responsibility of the user to take their medication at the appropriate time. Pivotell Ltd do not accept responsibility for any consequences resulting from the failure of the user to take their medication as prescribed.

It is the responsibility of the user or their representative:
   a. To ensure that the SIM card has sufficient value to ensure that SMS messages can be sent and received.
   b. To ensure that a signal can be sent to and received from the user's chosen mobile phone service provider.
   c. To ensure that SMS and/or e-mail messages can be received by the chosen message receiver.
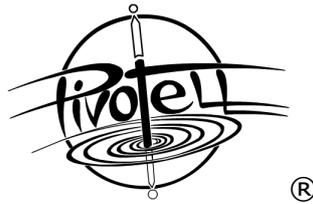
Pivotell Ltd do not accept responsibility for any consequences resulting from the failure of SMS or e-mail messages to reach the intended receiver due to communication difficulties.

Guarantee:

Pivotell Ltd guarantee the Pivotell Plus Automatic Pill Dispenser for a period of 12 months from the date of purchase. The guarantee will provide for the repair of, or at Pivotell's discretion, the replacement of the Pivotell Plus dispenser or any component thereof, other than batteries, which is identified as faulty. Products over 28 days old from the date of purchase may be replaced with a refurbished or repaired product.

This guarantee does not cover faults arising from accidents, misuse, fair wear and tear, neglect, tampering or any attempt at adjustment or repair other than through Pivotell Ltd.

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