platemeters®

pasture measurement made easy

F200 and F300
Platemeter User Manual

Welcome ...

Thank you for choosing an F200 or F300 Platemeter.

The electronic rising platemeter provides farmers with an easy, accurate and reliable way to measure and record pasture health and share that information.

Further information about
assembling and using your platemeter contact us at:

🌐 **www.platemeters.co.nz** | ✉ **info@platemeters.co.nz** | 📞 **0800 577 505**

Ⓕ **facebook.com/platemeters**

📍 **Platemeters Limited, 275 Cameron Road, Tauranga 3110, New Zealand**

Contents

1 - Assembling the Platemeter

Your Platemeter will come pre-assembled and only requires two steps to be ready for use:

1. Attach the lower handle to the grooved rod by screwing the two parts together.
2. Attach the plastic plate to the bottom of the slide tube by screwing to the thread at the base of the slide tube.

Note: Under no circumstances should you apply any type of oil, or lubrication to the platemeter. It is a dry bearing system and any lubricant may damage the platemeter and may void your warranty.

1.1 Your Platemeter

Upper Handle

Lower Handle

Grooved Rod

Electronic Counter

Slide Tube

Rising Plate
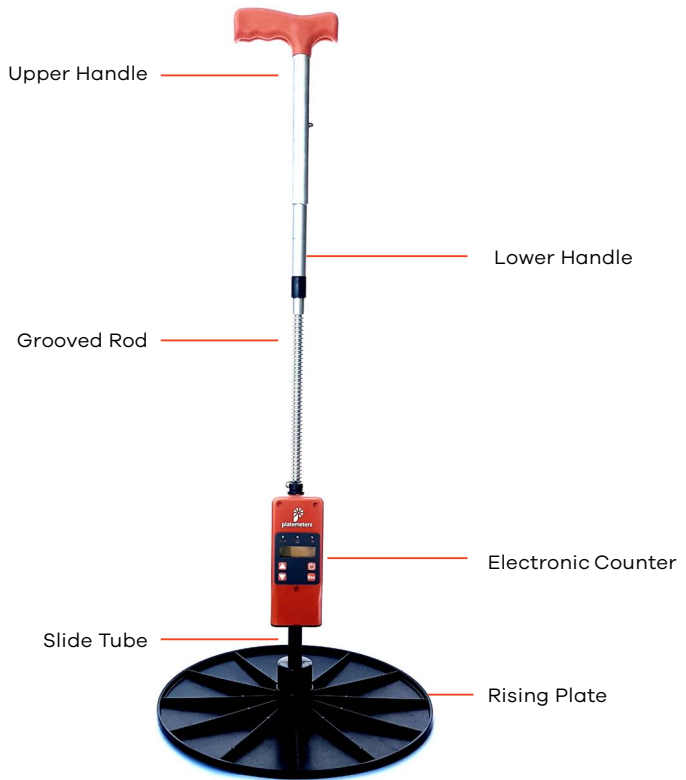
2 - Platemeter Parts

The F200 and F300 Platemeters are designed with breakaway components, meaning if damaged in an accident the parts are cost effective and easy to replace and in most cases the part can be replaced by the user.

If your Platemeter is damaged or you require a part, please refer to the below diagram to identify the correct part. If you need to replace or repair components for the potentiometer, membrane or within the counter you'll need to send your Platemeter or the counter to us for assessment.

Electronic Counter   Upper Handle   Lower Handle   Grooved Rod

Slide Tube   USB Charger Cable   Rising Plate   Bracket and Screws

Visit platemeters.co.nz/collections/parts-for-sale to purchase replacement parts and contact us using the details at the bottom of the page if your Platemeter requires servicing or you'd like to send it to us for assessment.

3 - Retrofitting the Platemeter Counter

The Platemeters electronic counter can be attached to most AgHub, Jenquip, Tru-Test, and FarmWorks and other manual plate meters with little to or no modification. To purchase retrofitting kits or counters and view our 'How To' instructional videos visit www.platemeters.co.nz.

Follow the instructions below to attach your platemeter counter. It must be correctly attached and aligned to ensure smooth operation.

1. Remove all existing electronic counters from the shaft.

2. Check that a cog is attached to the small shank on the back of the counter.

3. If the cog isn't attached, heat the cog in a hot cup of water prior to pressing onto the shaft - don't use excessive pressure as this may damage the cog.

4. Lay the counter face down on a flat surface so that the cog is to your left.

5. Turn the cog on the counter anti-clockwise (to the left) until it stops.

6. Hold the Platemeter with the handle to the left. The hole in the slide tube where the cog fits should face toward you.

7. Make sure the grooved rod is fully closed to the bottom end of the black slide tube. If you have difficulty keeping the plate closed, you can put tape around the large washer and the bulb of the slide tube.

8. Place the slide tube with the grooved rod inserted onto the back of the counter, fitting the cog into the slit of the tube, the cog should be situated in the middle of the hole in the slide tube.

9. Place the plastic bracket onto the slide tube, aligning the raised ridge in the bracket with the hole in the slide tube and the screw holes on back of the counter.

10. Place a screw and washer in each side of the bracket and half-tighten; making sure that the cog meets the middle of the grooved rod and tighten the four screws.

11. Check the counter is correctly attached by turning the grooved rod it to make sure it moves easily in all positions. If it sticks then either the slide tube or grooved rod may be damaged, bent or corroded and may need replacing, or it's not correctly aligned.

12. Attach the plastic plate by screwing on to the bulb of the slide tube and place the Platemeter in an upright position on a hard surface to check the plate closes fully.

4 - Caring for your Platemeter

Avoid getting the counter wet

The counter is in a robust case which is splash proof. However, as it's an electronic device avoid getting the counter saturated. Immersion in water will result in the circuitry getting wet and damaged, reducing the life of your Platemeter.

Keep the shaft clean

A build-up of dirt will affect the accuracy of the Platemeter because the shaft will not run smoothly, and more force is required to take a reading.

Clean the shaft with a poly pad or similar

Do not use lubricant as this will build up inside the black outer shaft.

Power Off

Remember to check the counter is switched off between cover walks, and ensure you turn the power off when you have finished your walk. The switch is easily left on which will waste the battery.

5 - Battery Life and Charging

5.1 Recharging the battery

The Platemeter should always be switched OFF during recharging.

The rechargeable battery should give years of service before needing to be replaced. If it does need replacing, the instructions on how to do this are in **Replacing the Rechargeable Battery** section.

Attach the charger that was supplied with your Platemeter to the small socket on the side of the counter and turn the wall socket on. The battery will take 5 hours to recharge. No damage will occur to the Platemeter if the charger is left on beyond this time.

F200 - the display will show **Ch** and decimal points will scroll along the bottom of the display, when charged the display will show **FULL**. The battery is now charged.

F300 - the display will show - **300** this is time in minutes (5 hours). The display will count down to '0', after which the display will show **FULL** and the unit will give 3 beeps. The battery is now charged.

CAUTION: Do not use any charger other than the one supplied with the Platemeter. This will void the product warranty.

5.2 Replacing the battery

The battery can be recharged hundreds of times, but eventually the time between charges will shorten and if this happens, a replacement battery should be fitted.
Before you replace the battery make sure the unit is switched off.

- Remove the counter from the black tube and loosen the screw in the middle of the counter back.
- Pull out the battery retainer clip from the bottom of the counter.
- Remove the battery and gently remove the battery snap. To avoid damage to the battery snap it is recommended you use a screwdriver to flip off the battery clip as damage can occur to the internal connections if grasped by fingers and pulled off.
- Replace the battery with the same type and specification as the one that came with your counter.
- Press the battery snap firmly onto the new battery and insert back into the battery retainer.
- Replace the battery retainer into the counter taking care not to catch the wires in the side wall of the counter.
- Tighten the central screw on the back and refit to the black tube.
- Charge the battery for at least 16 hours before initial use. Make sure the counter is re-calibrated before you commence your next walk.

Alternatively, you can send the Platemeter us and we'll supply and replace the battery. Please contact us beforehand so we can give you an estimated cost and instructions for packaging the unit.

6 - Calibrating your Platemeter

To ensure the Platemeter accurately measures the compressed height of pasture, the counter must be calibrated. This requires setting a base level of zero so measurements can be benchmarked against this. If the counter does not return to zero after each 'plonk' it will not record the measurement and the counter won't beep.

If the counter is removed from the black tube or receives a severe knock it may jump a groove on the steel shaft, which will put the counter out of calibration and it will need to be recalibrated. You'll need a small flat blade screwdriver that will fit into the slot of the silver shaft at the back of the counter.

How to calibrate:

- Ensure the unit is switched off plate is fully down on a firm flat surface and the .

- Hold down the **COUNT** button while switching the unit on. The display will change to **CAL** briefly and display a colon ':' followed by a number. Let's assume you see ': **5**' when you switch on.

- The colon signifies that it is in fine calibration mode.

- Use a flat blade screwdriver and turn the silver shaft within the cog, clockwise (looking at the display) until the display reads '0'. NB: The cog and steel shaft must remain stationary.

- Once the counter reads zero, move the counter up the full length of the shaft The colon will disappear once it passes 9 and enter 'clicks' mode. At full height the display should read '50', which is 50 half centimetres.

- The counter is now calibrated.

- Switch off when you have finished, and then back on again without pressing any buttons.

Test the zero calibration by raising and lowering the plate several times. A beep should sound and the kgDM/ha is displayed on the LCD screen as the plate falls. If it doesn't, repeat the steps above and retest.

If the calibration fails to hold then check the black saddle is screwed down firmly, and the platemeter doesn't twist easily on the steel shaft. Otherwise the potentiometer, which the cog drives may be faulty and will need replacing. This can happen with excessive wear and by dust and dirt getting into the dry bearing of the potentiometer.

Important: Be careful not to over-wind the metal cog fitting and this can damage the unit. Use a firm but gentle amount of force to wind the fitting anti-clockwise.

For more information about calibrating your platemeter and "How To" videos visit www.platemeters.co.nz.

7 - Things to do before you start your walk

The F200 and F300 Platemeters can be used immediately out of the box, but you P-Plus installed on your computer before you need can enter or load data from your first walk.

If P-Plus is not installed, refer to the section below. When P-Plus software is installed on your computer, you'll need to setup your farm by creating:

- a property
- paddocks
- equations
- define the walk order.

- Ensure you are not using the demonstration farm.
- Start Up / Self-Test – see section a.3.
- Enter or choose your equation. See Section 10.

8 - P-Plus Instalation

This section outlines the basic instructions for installing P-Plus on your computer. For more detailed information about using P-Plus, please visit our website www.platemeters.co.nz Alternativly help can be found in P-Plus by pressing the F1 key on your keyboard at any point. This will bring up help relative to the P-Plus window you have open at the time.

8.1 Download Link

To download P-Plus visit:
platemeters.co.nz/pages/p-plus-pasture-software.

When you select the link, you will be taken to a drop box page with a blue download button. Click the blue button and select **'Direct Download'.**

You can see the status as it downloads, most likely on the toolbar at the bottom of your screen (depending on how your computer is set up) – pplus.exe.

If you select this once it is finished your screen may go black with a message saying "Do you want to allow this app from an unknown publisher to make changes to your device?". Select Yes.

You will then be taken through the installation setup, including agreement to the Terms and Conditions.

Once this is done, you can access P-Plus from the icon on your desktop.

8.1.1 Moving P-Plus and your farm data to a new computer

On the old computer
- You will need a USB memory stick to put the backup on.
- Backup your farm data. Go to Help and Backup for details on how to do this.

- Browse to your USB memory stick so it becomes your selected backup location.
- Backup your farm data.

On the new computer
- Install P-Plus and request a new licence by contacting us.
- Make a new farm with the same name as the old computer
- Select Farm and Restore, Use the TOP browse only and browse to the USB Memory stick
- Find the backup file
- Select the backup file and then select OK in Restore
- This will put your farm data into P-Plus
- Check the data is ok
- Wait for new licence key to arrive to activate your P-Plus licence. This may take up to 48 hours.

8.1.2 How to Run P-Plus with the Pasture Cover Module

Once the installation is complete, go to your desktop and double click on your P-Plus Icon to start the program.

Alternatively, from the windows task bar click on the Start menu, select All Programs then from the P-Plus Program Group, select P-Plus.

On opening P-Plus the window in the image below will appear. This is simply a warning window advising the number of days left in the trial licence to evaluate your P-Plus software.

This screen will disappear when you have registered P-Plus correctly.

Please click on OK to close the screen. If you are upgrading from a licenced copy of P-Plus the warning window may not appear.

8.1.3 How to Licence P-Plus Software

This screen will automatically appear after OK button is pressed on the 30-day trial period screen.

This is an older function of the software and no longer needs to be filled out. Instead of completing this, please email info@platemeters.co.nz with:

- Your Computer ID – this can be found on the first screen when you open P-plus, or navigate to Help, About.
- The Platemeter ID – this is a code found on either the top of the counter, or at the bottom, where the battery retainer is.
- Licence name – this is the name of the owner or purchaser of the software licence.
- Farm Name
- Phone number

8.1.4 Entering Your Licence Key

Once the Licence Details have been received and processed by Platemeters, a P-Plus Licence key will be emailed back to you with some basic instructions on how to activate your licence.

8.1.5 Re – Licensing

P-Plus may need to be re-licensed on a replacement computer or in the event of significant changes being made to your computer. In either case P-Plus may become unlicensed.

This will require the generation and issue of a new licence file. In this case contact Platemeters.

9 - Operating the Electronic Counter

The Platemeter is switched On and Off using the toggle switch at the back of the unit. Off is in the 'up' position. When the unit is off there are no numbers displayed on the LCD screen.

9.1 F200 Front Display Buttons

The various functions of the F200 are accessed by the two buttons on the front of the unit, labelled 'Avg/Reset' and 'Count/Formula'. The wordings in bold type are the primary functions. These are activated by a short press of the button. The secondary functions 'Reset' and 'Formula' are activated by holding the button down until the function operates.

When the unit is first switched on the display will show the model number, the current formula in use and finally the calculated kgDM/ha based on that formula, and any readings in memory. Pressing the "Avg" button will briefly display the Average pasture height.

This is often referred to as "clicks" (measured in 0.5cm) and will be displayed to one decimal place (i.e. 0.0 or 12.4). Note: 1 click= 0.5cm
The number of readings is displayed when 'Count' button is pressed. The display will show a 'c' on the left side and the count on the right. The display will return to normal after 2 seconds.

All readings can be cleared (reset) by holding down the "Reset" button for approximately 2 seconds, then the display will change to "0".

9.2 F300 Front Display Buttons

The various functions of the F300 are accessed by the four Buttons on the front of the unit labelled

- Disp/Enter
- Avg/Reset
- Count/Menu and the
- Up/Down arrow buttons

The wordings in bold type are the primary functions. These are activated by a short press of the button. The secondary functions in normal type are activated by holding the button down until the function operates

- Disp/Enter - shows the current paddock number selected (1 – 100).
- Up/Down arrows - used to scroll back and forth in some options.
- Count - the number of readings is displayed. The display will show a 'c' on the left side and the count on the right. Holding the button down will take you to a menu of other options described in sections 9 and 11.
- Avg/Reset - Pressing this button briefly for 'Avg' will display the average height of your readings in clicks (0.5cm). Holding it down for 'Reset" will save the average height to memory and reset all data ready for the next paddock.

9.3 Startup / Self-test

- Switch On. The unit will beep and display 'F200' or 'F300'. It may also beep 3 times and display 'Lo' if the battery needs recharging. The current formula in use will be displayed next with the '+' part of the equation first (default 500) and then the 'x' part second (default 140). The display will then show the kgDM/ha calculation based on that formula and any readings stored in memory.
- To clear the readings, press and hold the 'Reset' button until the display shows '0.0'

There is one default plate equation and one custom (user editable) equation. The former is built into the chip and cannot be replaced or modified. This equation is typically used between April and September in New Zealand.

The counter also provides an option for selecting your own equation or those recommended by consultants, DairyNZ or Beef + Lamb. When you receive your counter, it will normally be setup for the DairyNZ recommended equation for the autumn/winter months. Please refer to Section 9 Current DairyNZ Equations for examples of the DairyNZ equations.

10 - Current DairyNZ Equations

For your convenience the following are the equations recommended by DairyNZ .

Months	Rising Platemeter Equations Dairy Pastures
Winter (April-Sept)	Platemeter Reading x 140 + 500 (Factory Default)
October	Platemeter Reading x 115 + 850
November	Platemeter Reading x 120 + 1000
December	Platemeter Reading x 140 + 1200
January	Platemeter Reading x 165 + 1250
February	Platemeter Reading x 185 + 1200
March	Platemeter Reading x 170 + 1100

These formulas are in P-Plus already and to use them for F200's, you will need to manually enter them into your Plate Meter. For F300's you will need to upload them to your Platemeter.

Equations may change without notice and are influenced by seasonal differences. If you are unsure of the current equation contact DairyNZ or your local consultant. There are also different equations suited to summer, wet and irrigated pasture that are not recorded here. Sheep and Beef pastures differ in density to dairy pastures and will therefore require different equations.

10.1 Entering Factory Default Formula
While the Platemeter is switched on, hold down the 'Formula' button. The display looks like this 'F_ _ d', press the 'Reset' button briefly for the F200, or the 'Enter' button for the F300. The display will then show (500) and then (140). The default formula has now been loaded and saved to memory.

10.2 Entering Your Own Formula

10.2.1 F200 Entering Formula

To enter your own cover equation or one that may have been recommended by a third party such as your consultant, DairyNZ or Meat & Wool please do the following:

- While the F200 is switched on, hold down the 'Formula' button. The display looks like this 'F_ _ d'.

- Press the formula button again briefly then change the 'd' (default) to 'c' (custom).

- Now press 'Reset' briefly and the display will look like this: '0_ _ _'. This is the first of two numbers you will enter. The first number is the equation 'add' number and the second the 'multiply' number. For example in the October equation above, the first number (115) is the 'multiply' number and the second (850) is the 'add' number.

- The 'add' number is 4 digits long and can range from 0 to 9999. Starting with the first digit, press the 'Formula' button to change this digit to a value from 0 to 9. Press the 'reset' button when it is correct. NB: 850 for example would be entered as (0850). The next digit will change to a zero. Repeat this process until all 4 digits have been entered. The display then changes to the 'multiply' number.

- The 'multiply' number has 3 digits and can range from 0 to 199. The first digit will appear as '0' Press the Formula button to change this digit to a value of '0' or '1'. Press the Reset button when it is correct and the next digit will appear. The last two digits can have values from '0' to '9'. Repeat this process until all digits are entered and the display returns to its normal state.

10.2.2 F300 Entering Formula

To enter your own cover equation or one that may have been recommended by a third party such as your consultant, DairyNZ or Beef + Lamb please do the following:

- While the F300 is switched on, hold down the 'Menu' button

- The display looks like this 'F_ _ d'

- Press the 'Up arrow' button once to change the 'd' (default) to 'c' (custom).

- Now press 'Enter' and the display will show the first figure of the current "add" equation and may look like this: '0_ _ _'. This is the first of two numbers you will enter.

- The first number is the equation 'add' number and the second the 'multiply' number. For example in the October equation in section 9 above, the number (115) is the 'multiply' number and the (850) is the 'add' number.

- The 'add' number is 4 digits long and has to be entered first. It and can range from 0 to 9999.

- Starting with the first digit, press the 'Up arrow' button to change this digit to a value from 0 to 9. Press the 'Enter' button when it is correct. NB: 850 for example would be entered as (0850).

- The next digit displayed, will be whatever figure is part of the old formula. Use the 'Up arrow' to change it, or press 'Enter' if it is correct.

- Repeat this process until all 4 digits have been entered.

- The display then changes to the 'multiply' number which only has 3 figures.

- The 'multiply' number can range from 0 to 255.

- The first digit will appear as '0', '1' or '2'

- Press the 'Up arrow' button to change this digit to the desired value of '0', '1' or '2'
- Press the 'Enter' button when it is correct and the next digit will appear.
- The last two digits can be any value to create a maximum number of 255.

Repeat this process until all digits are entered and press the 'Enter' button for the display to return to its normal state. Your new formula is now active and saved to memory.

11 - Using the Correct Measuring Technique

Different platemeter measuring techniques can alter pasture covers by as much as 600 kgDM/ha. This can be the difference between thinking there is adequate or even surplus pasture available and all is well, or pasture deficit and urgent action is required.

All pasture measurement techniques require calibration to convert the actual reading to dry matter. The technique that is used when walking around the farm taking the measurements needs to be the same as that used to calibrate the Platemeter. This technique is to place the plate on top of the pasture with no downward force, and then push the shaft to ground level – making sure the plate is vertical when the shaft hits the ground.

Taking measurements by holding the Platemeter 10cm or more above the top of the pasture and plunging the plate onto the pasture will give lower, incorrect readings. This is because the downward force of the plate compresses the pasture more than occurred when the calibrations were down, giving a lower average height and cover readings.

These two techniques are illustrated below: -

Incorrect Technique

The Platemeter is held above the pasture and plunged in one movement onto the pasture.

The higher the plate is held and the greater the force applied, the lower the reading will be.
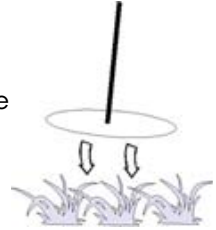
Correct Technique

Place the plate on top of the pasture with as little pressure as possible.

Push the shaft down to ground level with the shaft vertical.
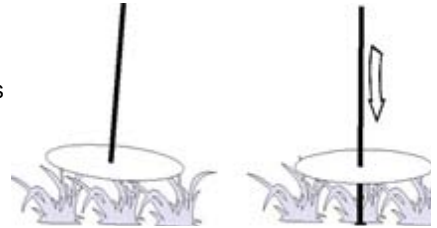
When using the correct technique, no differences have been found in the readings between the Platemeter and any of the mechanical Platemeters. However, operators using the incorrect technique will get lower readings with any Platemeter than those using the correct technique.

12 - Taking Paddock Readings or the Pasture Walk

IMPORTANT:
Please ensure that you wait for the Platemeter to beep at each plonk before lifting, otherwise the reading will not be recorded.

For F200's you can print off the Pasture Cover Walks "Cover Entry Form" from your P-Plus software program before undertaking a pasture walk. This will enable you to record each paddock height/cover for later inputting into the program. It will also provide a copy of the previous two walks (if available) for comparison.

12.1 F200 Pasture Walk

- Switch the unit on using the toggle switch at the back of the unit.
- Reset by holding the 'Reset' button until the display changes to '0'. This should be accompanied by 2 short beeps.
- Walk across the paddock taking readings every few paces. You will hear a beep every time a reading is stored. The kgDM/ha is immediately recalculated and displayed. The number of samples (plonks) to be taken should range between 20 and 40 per paddock however this will be determined by the variance existing in the cover. You will hear 3 short beeps when you have completed 29 plonks and one long beep when you reach 30.
- The recommended number of readings is 30. Plonks need to be taken on a regular basis e.g. every five paces to even out any variations; however, avoid stock camp areas, tracks or uncharacteristic areas. The greater the variability the greater the number of plonks you should take.
- If you need to negotiate an obstacle (e.g. fence or creek) switch the unit off so that no readings are taken if the plate moves. On the other side of the obstacle, switch the unit back on and continue taking readings.

- When you have completed the paddock, you can press the 'Avg' button to show the average pasture cover, although the F200 will default to kgDM/Ha.
- Write down the average height and/or the average cover.
- Repeat until you have completed every paddock.
- Switch the unit off using the toggle switch at the back.

12.2 F300 Pasture Walk

The F300 has the ability to save the recorded "average height readings" to a specific paddock number that you select on the F300. These readings can then be downloaded from the F300 (via the mini USB cable) and associated with your paddocks in your walk order (which you need to have pre-defined in your P-Plus software program).

- Switch the unit on using the toggle switch at the back of the unit.
- If you are starting the first paddock, you will need to make sure the F300 does not contain any old data.
- Press and hold the reset button until the display changes to '0'. This should be accompanied by 2 short beeps.
- Now press and hold the 'Menu' button. Press the 'arrow' button twice until you see P CL (paddock clear).
- Now press 'Enter' All recorded paddock data will be set to '0'. Including any unsaved data in memory.
- Press and hold the 'Enter' button you will see E_ _
  1. Pressing the 'arrow' button will scroll the numbers upwards. If you want to scroll back, hold the 'Count' button while briefly pressing the arrow button. The number will change to the previous paddock number. The arrow (on its own) will now scroll the numbers backwards. Stop at the number (this maybe your walk order number) you want to record and press 'Enter'.

The number is now set. You can check it at any time by pressing 'Disp'. **NOTE**: The paddock number needs to match up with the paddock walk order number you have defined in P-Plus.

- Walk across the paddock taking readings every few paces. You will hear a beep every time a reading is stored.

  The kgDM/ha is immediately recalculated and displayed. The number of samples (plonks) to be taken should range between 20 and 40 per paddock however this will be determined by the variance existing in the cover. You will hear 3 short beeps when you have completed 29 plonks and one long beep when you reach 30. This is the recommended minimum number of readings.

  Plonks need to be taken on a regular basis e.g. every five paces to even out any variations, however avoid stock camp areas, tracks or uncharacteristic areas. The greater the variability the greater the number of plonks you should take.

  If you need to negotiate an obstacle (e.g. fence or creek) switch the unit off so that no readings are taken if the plate moves. All data recorded so far is saved. On the other side of the obstacle, switch the unit back on and continue taking readings. If you make a mistake when taking readings, the F300 has an 'UNDO' feature.

- Turn the unit off and then hold down the reset button as you turn it back on. You will see the word 'Undo' on the LCD, followed by the currently select equation, and then the previous DM/kg reading will be displayed. The count will also be one less. You can then carry on taking readings from this point.

- When you have completed the paddock, hold the 'Reset' button. You will first be shown the average height of the paddock, which is then saved to memory under that paddock number. A small triangle icon will appear in the top left-hand corner, indicating that paddock now contains data.

- You will then need to select the next paddock. Repeat this process until you have completed every paddock.

12.2.1 View Saved Paddock Data

You can view the saved paddock data and paddock numbers at any time by pressing the arrow key. The display will first show the paddock number and the average height that was recorded. Pressing the arrow key again will show the next paddock with data in it. Once the last recorded paddock (thus far) is displayed the F300 will beep and return you to the normal display. However, you can escape the paddock display function at any time by pressing 'Disp'.

12.2.2 Delete Single Paddock Data

To clear the data in a single paddock, press and hold the ENTER button until you see E (n). Change the number to the desired paddock and press ENTER. Now press and hold the reset button. The display will show a "0". Press and hold the reset button again. The display will remain at 0 and the triangle icon in the top left will disappear. That paddock data has been deleted.

13 - FAQ's and Trouble Shooting

For any issues that require you to send the Platemeter in for repair, please contact us prior to sending it as we may be able to offer troubleshooting assistance over the phone.

13.1 There is no visual display

Check	Resolution
The Unit is switched on	Switch the toggle switch on back of unit
The battery is not flat	Recharge the battery using Mini USB cable
If battery is not holding charge	Replace the Battery
If you have just changed a battery you may have damaged the battery snap (clip to top of the battery)	Requires service – contact Platemeters

13.2 The counter does not "beep" when taking a reading

If it doesn't beep this means the counter does not know where the bottom is therefore does not record the "plonk".

Check	Resolution
The counter can become un-calibrated if it receives a knock and the cog jumps a notch on the metal shaft.	Zero calibrate. See section 8. If the calibration fails to hold then the potentiometer, which the cog drives through the shaft is probably faulty and will need replacing. This can occur with excessive wear often compounded by dust and dirt entering the dry bearing. You will need to send the counter to Platemeters for service and repair

Check	Resolution
Ensure the cog is not slipping on the silver shaft (potentiometer)	Replace the potentiometer and cog. Send to Platemeters for repair.
The cog has wound off.	Replace – Request a spare cog from Platemeters.
Potentiometer damaged. The potentiometer is the silver shaft that drives the cog. NB: Under no circumstances should you apply CRC or light oil to the potentiometer. It is a dry bearing and any lubricant will render the potentiometer useless.	Send to Platemeters for service and repair.
Check the metal shaft is coming right back into the base of the black tube. Ensure there is no grass or soil build-up preventing it from doing so. Also check the large washer at the bottom of the shaft is not catching on the bottom of the plate.	Clean the Platemeter and zero calibrate if required.
Check the cog is running smoothly on the shaft. If the counter is mounted too close to the metal shaft there will be quite a lot of friction when taking a reading. If the counter is mounted too far away from the metal shaft; the cog is liable to jump a notch easily	Re-assemble the Platemeter.

13.3 Cog becoming worn

Check	Resolution
Not aligned correctly on the shaft.	Re-align the cog or replace the cog Order from Platemeters.

13.4   The counter continuously beeps and eventually turns off

Check	Resolution
This is normally due to a low battery. The counter requires a given level of power to operate correctly. If the battery doesn't have sufficient power it may continuously beep to warn you. Remember if you turn the counter off for a few minutes it may recover slightly but the problem will not go away.	Recharge the battery. Battery may be due for replacement.

13.5   Cog not running freely

Check	Resolution
Metal shaft is bent.	Straighten or request a replacement part from Platemeters.
Grass or soil build-up inside the black tube.	Clean the Platemeter.
Flutes on steel shaft have become filled with grass or soil.	Clean the Platemeter.

13.6   Counter Readings do not seem accurate

Check	Resolution
The counter is like a calculator – it does not give false readings under normal circumstances.	Check the equation being used is correct and the calibration has been correctly set (zeroed). See section 9 Current DairyNZ Equations and Section 8 How to Calibrate Your Platemeter.

13.7 Battery retainer falling out

Check	Resolution
The counter screws have not been tightened sufficiently.	Make sure the center screw is re-tightened after the battery is replaced or ensure the battery retainer is properly clicked into place.

13.8 Front panel or membrane problems

Check	Resolution
Buttons not clicking or activating.	First, check that the Platemeter is calibrated – see section 6 How to Calibrate Your Platemeter. Service – membrane needs replacing. Send to Platemeters for service and repair.

13.9 How do I change the formula?

See section 10 Current Dairy Equations

If you require assistance with setting up your Platemeter or with installing P-Plus Pasture Covers software, please contact us.

14 - Servicing and Repairs

If a fault develops with your Platemeter, in the first instance call us as we may be able to troubleshoot issues over the phone. Platemeter parts are also available to purchase though our website.

If the Platemeter needs repairing, remove the counter from the shaft and send for servicing to:

Platemeters Limited
275 Cameron Road
Tauranga 3110, New Zealand

A standard service charge including return freight (in NZ) applies to all repairs. If you are outside New Zealand please contact your local distributor, or contact us if you are unsure whe this is.

Thank you.

THANKS AGAIN FOR CHOOSING TO MAKE YOUR PASTURE MANAGEMENT SIMPLE WITH THE F200 OR F300 PLATEMETER

If you need any further information or support, please contact us.

🌐 **www.platemeters.co.nz** | ✉ **info@platemeters.co.nz** | 📞 **0800 577 505**

ⓕ **facebook.com/platemeters**

📍 **Platemeters Limited, 275 Cameron Road, Tauranga 3110, New Zealand**