# SCHMIDT MODEL G5 TAXIMETER

# INSTALLATION INSTRUCTIONS

**Version 5, 18 July 2017**

## Contents

Figure 1: G5 Interface Box Wiring Diagram

# 1. Wiring
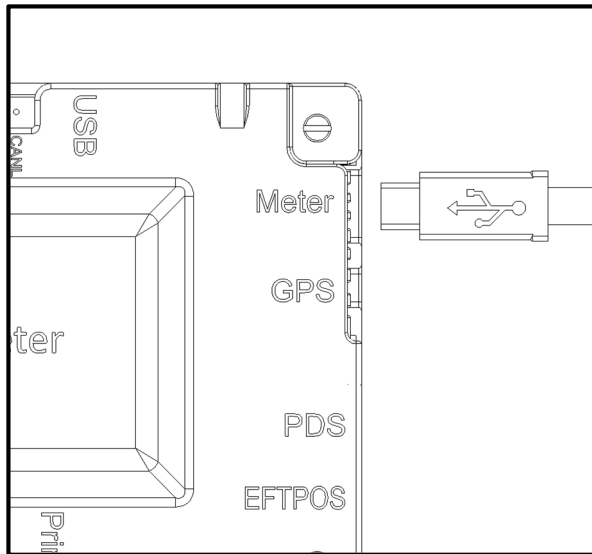
*Meter Port and USB-C Cable*



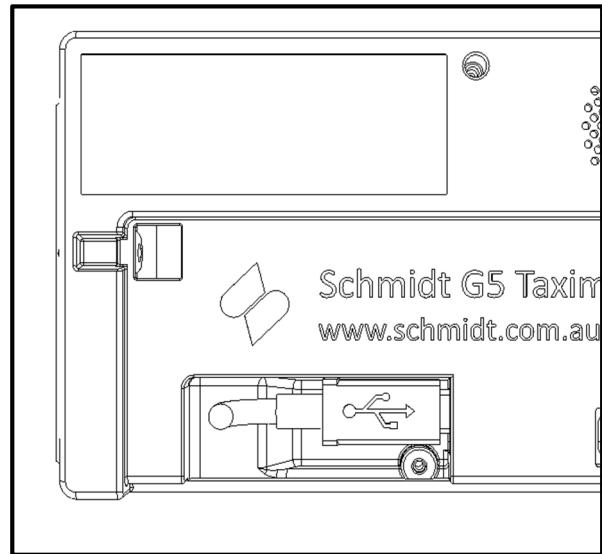Figure 2: USB-C Cable Connecting to the G5 Interface Box



Figure 3: USB-C Cable Connecting to the G5 Taximeter Display Unit

Vehicle wiring is connected to the G5 Interface Box, not directly to the G5 Taximeter Display Unit. The USB-C cable connects the G5 Taximeter Display Unit to the Interface Box.

## *Important:*

***Lightly spray both USB-C sockets with Electrical Contact Cleaner Lubricant. You can use RF Chemical Technology "Electrical Contact Cleaner Lubricant" distributed by Richard Foot Pty ltd, 14/2/ Apollo St, Warriewood, NSW 2102 which is available through Altronics. Alternatively, Servisol Electrical Clean and Lube (product code NA1012) is available through Jaycar outlets.***

***The USB-C Cable must be plugged with the USB logo facing the correct direction. The correct orientation can be seen in figures 2 and 3 above.***

*Power*
Connect a twisted two wire pair (with a 5 AMP fuse in line on the positive wire) from the battery to +**12v** and **Gnd** on the G5 Interface Box. Note: The G5 Interface Box provides two common +12V terminals and 3 common GND terminals.

*Roof light*
The main roof light circuit (otherwise known as the vacant light or hail light) connects to the terminal on the G5 Interface Box marked **Vac**.

*Tariff lights*
Tariff lights connect to terminals **T1**, **T2** and **T3** on the G5 Interface Box. *(Where applicable)*

*Ground*

The ground wire from the roof light connects to a **Gnd** terminal on the G5 Interface Box.

*Distance Wire*

The speed pulse wire connects to the **Spd** terminal on the G5 Interface Box.

*Computer dispatcher system*

The output to the computer dispatcher system is connected to the **Disp** terminal on the G5 Interface Box. *(The Disp output is high when the taximeter is engaged)*

*Printer*

The G5 Interface Box connects with the thermal printer using a RJ45 port.

*EFTPOS*

The G5 Interface Box connects to the EFTPOS terminal using a designated RJ12 port.

*GPS*

The G5 Interface Box connects with the GPS system using a designated RJ12 port.

*3G Communications Module*

The G5 Interface Box connects with the 3G Communications Module using the USB port.

*Internal Fuse*

Inside the G5 Interface Box is a 5 AMP M205 fuse. This fuse is a final safeguard in case the fuse under the bonnet is bypassed.

*Passenger Detection System (PDS)*

The main module of the Passenger Detection System (if installed) connects with the G5 Interface Box using a designated RJ12 port.


## 2. Installing the GPS Unit

- The GPS Unit is positioned in the middle of the dashboard.
- Fix the GPS unit in position using double sided tape.
- Feed cable through to the foot well in which the G5 Interface Box is mounted.
- Plug the cable into the GPS port on the G5 Interface Box.


## 3. Installing the 3G Communications Module

- The 3G Communications Module is positioned on the edge of the windscreen.
- Fix the 3G Communications Module in position using double sided tape.
- Feed cable through to the foot well in which the Interface Box is mounted.
- Plug the cable into the USB port on the G5 Interface Box. Secure the cable using the special clip, if provided.

# 4. Installing the Bracket and Mounting the Taximeter

The G5 is supplied with a universal mounting kit that will allow it to be mounted in a variety of locations.

With each kit you will receive the following:

a.      1 x straight bracket
b.      2 x identical L shaped plastic brackets
c.      1 x M3 20mm slot head screw
d.      2 x G5 sealing screw
e.      4 x mounting screws

## Step 1.  Assemble the Mounting Kit.



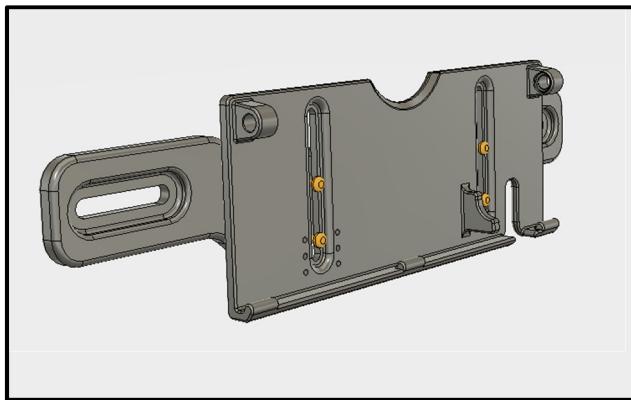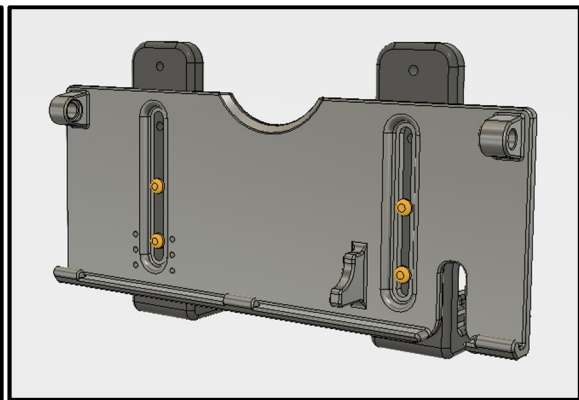Figure 4: G5 Mounting Panel Connected with a Straight Bracket



Figure 5: G5 Mounting Panel Connected with a L Bracket

- Remove the Mounting Panel from the G5 Taximeter if it is attached.
- Place four screws through the slit in the Mounting Panel and into the straight bracket as shown in figure 4. Alternatively place two screws through the slit in the Mounting Panel and into each of the L brackets as shown in figure 5.

## Step 2. Attach the G5 Taximeter Display Unit to the Mounting Kit
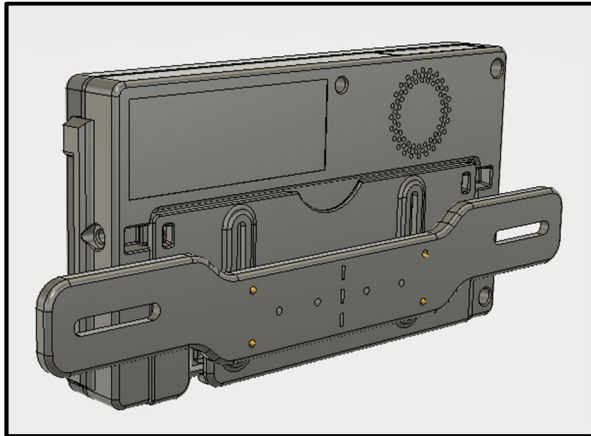


Figure 6: G5 Taximeter Display Unit Mounted using Straight Bracket
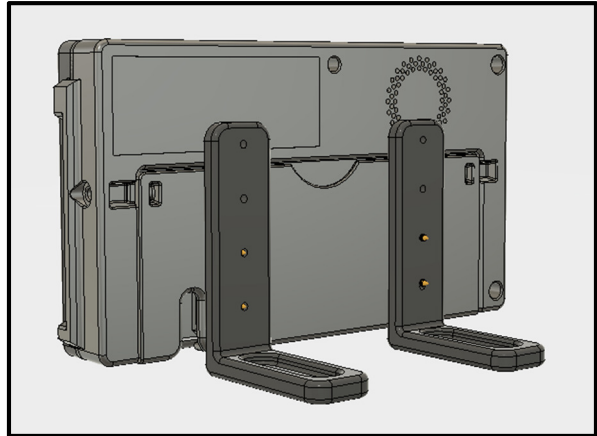


Figure 7: G5 Taximeter Display Unit Mounted using two L Brackets

- Ensure the G5 USB-C cable is plugged into the back of the G5 Taximeter Display Unit.
- Attach the back panel to the G5 Taximeter Display Unit. The USB-C cable is fed through the slot in the Mounting Panel

## Step 3. Seal the G5 Taximeter Display Unit



Figure 10: Attach the Sealing Cover



Figure 11: Seal the G5 Taximeter Display Unit

- Insert the M3 x 20mm slot head screw into the right side of the G5 Taximeter Display Unit.

**If Manual Calibration or Passenger Detection System setup is required, they must be done before sealing the G5 Taximeter Display Unit.**

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- Insert the Sealing Cover followed by the sealing screw into the left side of the taximeter.
- Align the holes in the sealing screw to the holes in the sealing side cover. Pass a sealing wire through the holes and apply a manual seal if this is required.
- Use mounting screws to attach the brackets to the car.

## Step 4. Seal the G5 Taximeter Interface Box.
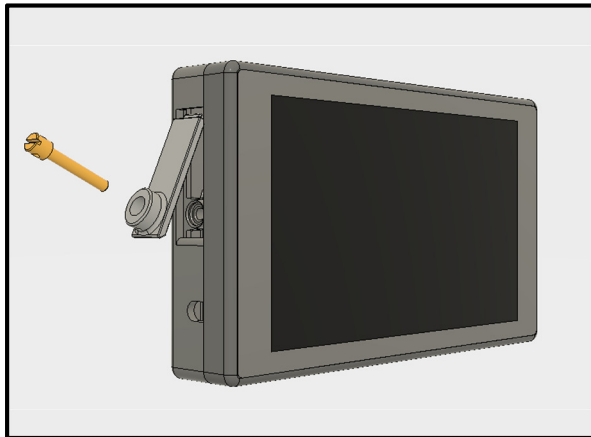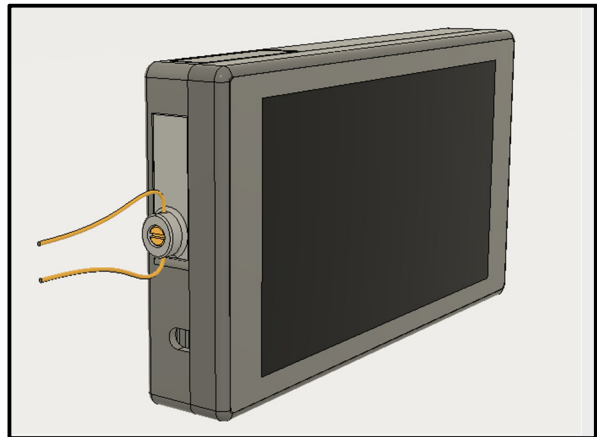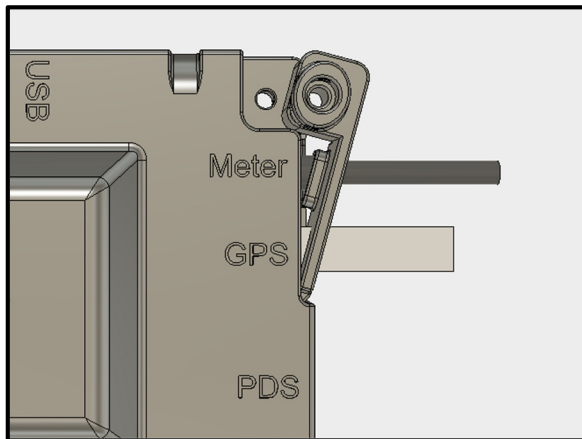
*Figure 10: Attach the sealing cover*
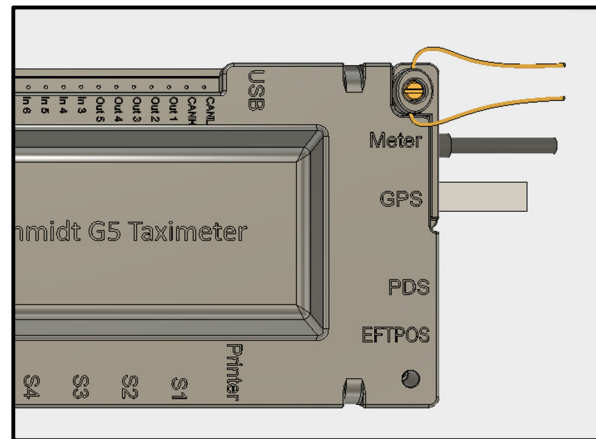
*Figure 11: Seal the interface box*

- Ensure that the USB-C cable and the GPS are connected to the G5 Taximeter Interface Box.
- Attach the G5 Taximeter Interface Box sealing cover.
- Insert the sealing screw aligning the holes of the screw to the holes of the sealing cover. Pass a sealing wire through the holes and apply a manual seal if this is required.

## 5. Clearing the G5 Taximeter Memory

- Remove the G5 Taximeter Display Unit sealing cover. This reveals the USB port.
- Insert the G5 Dealer Dongle into the USB Port.
- Tap Settings and wait for the Dealer Dongle to be validated. (You must have communications for this step).
- Tap Clear Memory.
- Tap *Yes* to continue.
- Remove the G5 Dealer Dongle from the USB port.

This procedure will clear all the running totals including:

- Last Fare Main Data
- Last Fare More Data
- Current Shift Main Data
- Current Shift More Data
- Meter Totals Main Data

- Meter Totals More Data
- All shift Job data.

The taximeter's calibration, current time and current date will not be affected.

## 6. Manually Calibrating the G5 Taximeter

- Remove the G5 Taximeter Display Unit sealing cover. This reveals the USB port.
- Insert the G5 Dealer Dongle into the USB Port.
- Tap Settings and wait for the Dealer Dongle to be validated. (You must have communications for this step).
- Tap Manual Calibration.
- At the start of a 1 km length of road, tap *Press To Reset,* this will reset the pulse counter to 0.
- Drive the vehicle over the 1km length of road. The pulse counter will increment with each speedometer pulse.
- At the completion of the 1km drive, set the *calibration pulses per KM* to the pulse counter value using the number pad. You may need to use the delete arrow to remove the old calibration value.
- Tap the tick to store the new calibration value.
- Remove the G5 Dealer Dongle from the USB port.

## 7. Setting up the 3G Communications Port and Printer Port

- In order to function correctly both the 3G Communications port and Printer port need to be configured correctly.
- Remove the G5 Taximeter Display Unit sealing cover. This reveals the USB port.
- Insert the G5 Dealer Dongle into the USB Port.
- Tap Settings and hold for a few seconds. (This is called a long hold. You do not require communications for this step).
- Scroll to the bottom of the list of Settings.
- Tap the APN button to set-up or edit the APN and Dialling Code for 3G Communications.
- In Australia ensure that the APN is set to **om2mOPTUS** and that the Dialling Code is set to **\*99\*\*\*1#**
- If you edit the APN or Dialling Code ensure that you do not add extra spaces before or after your entries as this will invalidate the entries.
- In other countries, you will need to check the APN and Dialling Code with your local dealer.
- Tap the PRINTER button to set-up or edit the printer port.
- Ensure that the PORT NUMBER is set to **3**
- Ensure that the BAUD RATE is set to **38400**
- Tap the down arrow in the centre of the top line of the display, to return to the Menu screen.

## 8. Assigning the G5 Taximeter to an Operator

The G5 Taximeter must be assigned to an Operator. If the Operator is an existing customer who is already registered on the G5 Server, the Taximeter may be assigned to that Operator by a Dealer. If the Operator is not registered on the G5 Server, the Dealer needs to create an account for that Operator.

1. Creating a new Operator account on the G5 Server as follows. You will need the **Operator's full name, address, phone, ABN and <u>valid</u> email address**. You will also need the **Registration Number** of the taxi into which the Taximeter is to be installed.
    a. Log into the G5 Website using your Dealer log-in
    b. Click on **Create or Manage Operator Companies.** For convenience, we consider every Operator to be an "Operator Company", whether the Operator is a company or not.
    c. Click on **Create New Operator Company**
    d. Complete the details for the New Operator Company:
        i. The **Operator Account** is a name you assign to this Operator Company
        ii. Enter the ABN and Full Company Name, which may simply be the Operators proper name.
        iii. Set the **Default Zone** correctly. If in doubt, please ask us.
        iv. Enter the **Data Retention Days.**
        v. Enter the required Contact Details. **Be sure to accurately enter a Valid Email Address as a password will be sent to that email address. Any email address may only be used for a single account on the G5 Server.**
        vi. Click on the **Save** button when finished.
2. On the **Dashboard**, under **Taximeter Management**, click on **Taximeter Set-up.**
3. Click on the **Serial No**. of the Taximeter you wish to assign to an Operator.
4. Select the correct **Jurisdiction, Tariff Set and Zone**. If in doubt, please ask us.
5. Enter the **ABN** of the desired Operator Company and click the **Locate** button.
6. The name of the **Zone and Operator Company** should appear in the box labelled **Operator**.
7. Select the required **Taximeter Configuration.** (This is explained below).
8. Select the **Vehicle Type** and enter the **Vehicle Rego**.
9. Unless otherwise required set the following:
    a. PDS Status:              Inactive
    b. Duress Alarm Status:     Inactive
    c. Calibration Mode:        Automatic
    d. Operate Taxi Fares:      Enabled
    e. Audio:                   Enabled
10. Select the appropriate setting for the **Sold/Hired Indicator.**
11. Click on **Save** when finished.

# 9. Create or Modify Taximeter Configuration

Once an Operator Company has been created, the Dealer may **Create or Modify a Taximeter Configuration** for that Operator Company. This Configuration sets basic parameters for the way in which the taximeter will operate. The procedure is as follows:

1. Click on **Create or Modify Taximeter Configuration.**
2. If Taximeter Configurations have already been created for this Jurisdiction, they will be listed in the table. If you want to modify one of those configurations, simply click on the name of the Taximeter Configuration you want to modify.
3. If a new Taximeter Configuration is required, set the filter boxes to indicate the desired **Jurisdiction, Zone and Operator**. Then click on **Create New Taximeter Configuration.**
4. When the **Taximeter Configuration** screen opens, the available fields may be edited. An explanation of these fields is as follows:
   a. Make the **Configuration Name** meaningful so it reflects what you want to do.
   b. In the **Apply Discount Percentage** field you can insert a value by which all parameters on all tariffs will be discounted. For example, if you insert "10%", all fares will be discounted by 10%.
   c. The **Vacant Time Threshold** is the value at which the vacant time between jobs will be highlighted with a RED background colour, on the **Jobs List**.
   d. The **Vacant Kms Threshold** is the value at which the vacant kms between jobs will be highlighted in RED background colour, on the **Jobs List.**
   e. The **Night Shift Start Time and Night Shift End Time** are used to define the difference between night shifts and day shifts. Any shift started between these two times will be considered a Night Shift. Any shift started outside of these times will be considered a Day Shift.
   f. **Print Shift Report Automatically** enables the Operator to select whether or not a Shift Report is automatically printed on the miniature thermal printer at the end of every shift.
   g. If **Mandate End of Shift Capture** is selected, drivers will be required to enter data into the G5 Taximeter at the end of every shift. That data will be uploaded to the G5 Server. If this option is not selected, drivers will not be required to enter any end of shift data.
   h. If **Truncate Shift Report** is selected, the Shift Report is printed without indicating the end of shift taximeter totals.
   i. The **Driver Authentication Mode,** enables the Operator to determine whether or not drivers are required to log onto the taximeter before starting fares. If **Open** is selected, anyone can log onto the taximeter at any time. If **PIN** is selected, drivers are required to enter a PIN before being able to start a shift and take taxi fares. This is the recommended setting. The **Card** option is reserved for future use.
   j. The **End of Shift Data Entry** section enables an Operator to specify how the driver's pay-in is to be calculated.
   k. The **Operator Revenue Cap** may be set to a **Fixed** value if required.
   l. The **Operator Revenue Percentage** may be set to a **Fixed Percentage** of the Total Shift Money, if required.
   m. The **Operator Fuel Percentage** may be set to nominate the percentage of fuel costs to be borne by the Operator.

n.  If any of the **Fuel** items are set to "No", the driver will not be prompted to enter data for those items. If any of these items are set to "Variable" the driver will be prompted to enter a value.

o.  If the driver is required to enter **Expenses** or **Non-cash** items these fields should be set to "Variable".

p.  In the **Non-cash Payments** table, the Operator can nominate that Drivers enter the non-cash items in up to 6 different categories. The Operator can give these categories any name which is useful, e.g. EFTPOS, Dockets, Subsidy Scheme, etc.

q.  When the **Save** button is clicked this Taximeter Configuration will be saved on the G5 Server. The Operator may create an unlimited number of Taximeter Configurations, and he/she may select which Taximeter Configuration is applicable to which Taximeter at any time.

# 10. Create or Modify Driver Users

Any registered Operator may create or modify Driver Users by logging into his/her Operator Account. The details are self-explanatory. Further information may be found in the G5 Website Manual.

# 11. Post Installation Checklist

1.  Turn the taximeter on and check that the display starts up. If not, check the wiring to the Interface Box +12V and GND terminals. Also check that the USB-C cable has been inserted correctly into both the Display Unit and Interface Box.

2.  On the Menu screen, tap the roof light button on and off and check that the main roof light turns on and off. You should also hear the feint click of a relay inside the Interface Box whenever you tap the roof light button on or off. If the roof light does not change state when tapping the roof light button, check the roof light circuits. Also check that the USB-C cable has been inserted into the Display Unit and Interface Box correctly.

3.  Tap Memory, scroll to Meter Info, scroll to Pulse Counter (#7) and move the car a few metres. The Pulse counter should increase. There will be roughly 2.5 to 5 pulses per metre of vehicle movement. If you do not see pulses accumulating in the Pulse Counter display, check the connection of the speedometer pulse wire to the Interface Box.

4.  Check that at least one of the GPS circles on the bottom of the screen are filled with black. This indicates that there is GPS reception. The car will need to be outdoors and it may take up to 5 minutes to receive reception after turning the taximeter on. If you do not detect GPS reception after 5 minutes, check that the GPS Unit cable is plugged correctly into the Interface Box.

5.  With GPS reception, start a shift using any available test driver. Start a fare, move the taxi a few metres to add some distance pulses, end the fare and print a receipt. The receipt will include the origin and destination suburb of the trip. Check that the suburb on the receipt is correct to confirm that the GPS is working. This also confirms that the printer is working.

6. Tap the Tariff display. If you can only select the tariffs programmed for that time of day, the Tariff selection is working,

7. Log onto the website and see if the shift started during test #5 above has been logged on the Shifts page of the web portal.
   - Click on My Shifts in the black panel at the top of the PC screen.
   - Click on the Shift ID associated with the vehicle ID for the vehicle being tested.

   If the Shift appears in the web portal, then 3G Communications is operational. Check that the shift has the correct:
   - Start time
   - Driver ID
   - Vehicle ID
   - Meter Serial Number

   If you cannot see evidence that 3G Communications is working correctly, you may need to check or edit the APN or Dialling Code. Refer to Section 7, above.

8. Check that the following items in Meter Info are correct:
   - Time and Date check (#1, 2 & 3)
   - Calibration Mode (#4): Typically the default setting is AUTO
   - Calibration (#5). The calibrations can be preset by arrangement. You can change it using the G5 Dealer Dongle provided, if necessary.
   - Vehicle Rego (#8)
   - Meter Serial No (#9) Check that this is the same number as the top of the taximeter screen.
   - Fare Structure Name check (#13)
   - Firmware version check (#20)

9. Check that the Printer is working correctly. If it is not working correctly, you may need to check or edit the PRINTER PORT or BAUD RATE. Refer to Section 7, above.

## 12. Technical Assistance

If you have any questions regarding installation of the G5 Taximeter please contact our Technical Department on:

Phone: **+61 3 9546 6990** or **1300 132 422**

Fax: +61 3 9546 3993

Email: tech@schmidt.com.au or info@schmidt.com.au