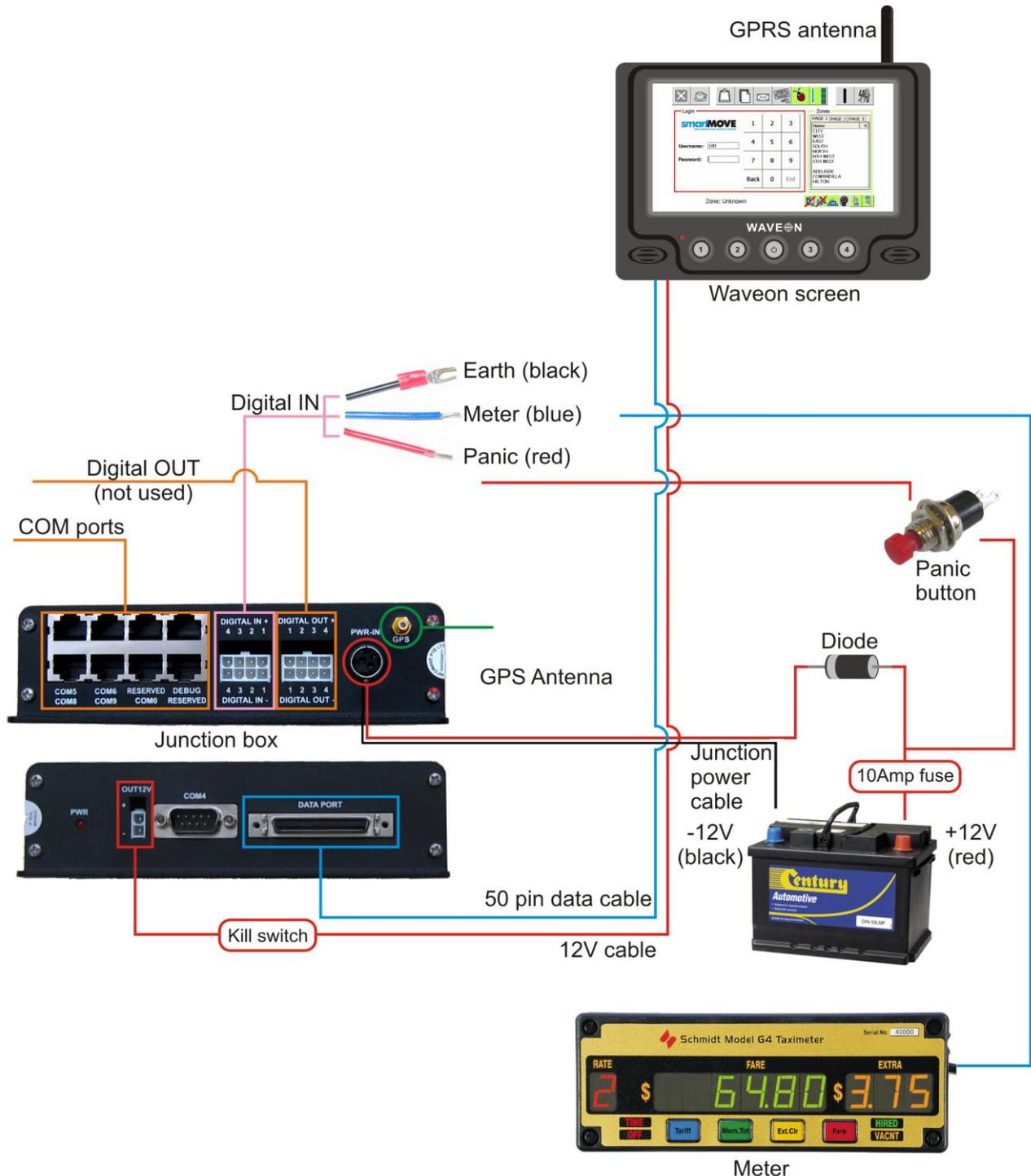


# INSTALLATION GUIDE

Version: 3.6

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# Schematic



**Figure 1: Basic Wiring Schematic**

**Note 1:** If the Fleet wishes to connect a meter to SmartMove or if an EFTPOS Terminal is already connected to the meter, please refer to Step 5 and find the appropriate meter brand.

# Equipment Checklist

The SmartMove system consists of:

Components:	
1x WaveOn screen and computer	
1x GPS (Global Positioning System) Antenna	
1x GPRS Antenna	
1x Panic Switch	
Power diode	
1 x Fuse	

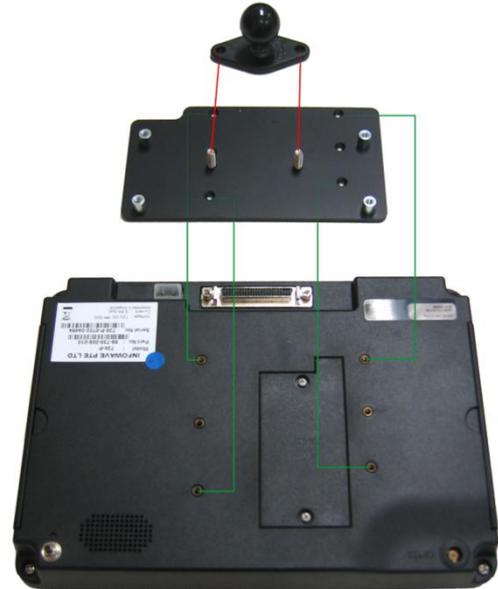
1x Junction box	
<b>Mount:</b>	
1x RAM-Mount	
2x 56mm nut and bolt (secures RAM-Mount to plate)	
1x WaveOn mounting plate	
4x Plate screws (secures mounting plate to rear of WaveOn)	
<b>Cables:</b>	
1x 12V battery lead running to the junction box	
1x 50-pin Data cable	

1x Digital IN cable	
1 X 12V Power cable running from the Junction box to the Waveon screen	
<b>Cables (if connecting to SmartMove):</b>	
1x Meter Listening Cable (not required for vehicles without meters).	
1 X RJ12-RJ12 modular line cable	
1 X RJ12-RJ45 line cable	
1 X RJ12-RS22 cable	
1 X Inline Coupler	

**Table 1: Equipment checklist**

## Step 1 Fit mounting bracket

Fit the RAM mount base to the metal plate.



Fit the plate and mount base to the back of the WaveOn.



## Step 2 Fit column mount

Holding the screen and arm against the pillar, find a suitable position to fix the RAM mount base.



Drill holes through the trim and into the pillar at your chosen location and securely fix the diamond bracket using the screws provided. Make sure the base is securely fixed. Attach the extension arm to the diamond bracket.



Fit the RAM mount extension arm loosely to the car column RAM base.

NB Don't fit the screen yet – wait until the junction box is fitted and the cables are ready to attach.

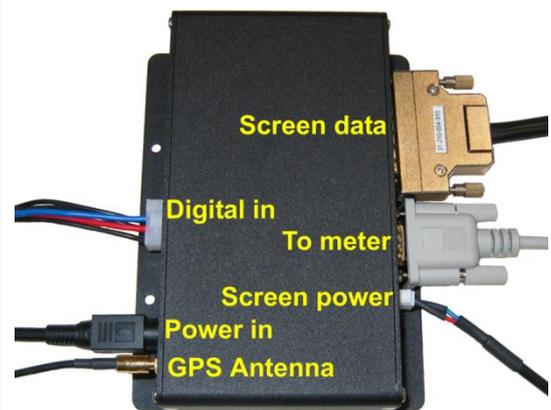


## Step 3 Position Junction box

The Junction box is generally fitted underneath the driver's seat although on some vehicles an alternate location may need to be found, possibly under the dash or in a cavity in a van (the choice of locations is limited by the length of the data cable)

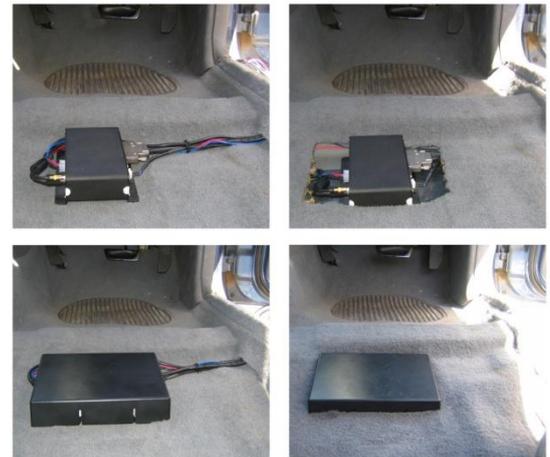
The Junction box is secured with the mounting screws directly into the floor or other bracket. Before securing the Junction box, ensure that all cables can reach and be plugged in (in all seat positions).

When laying the cables, make sure the cover can be fitted.



It is important to fit the junction box cover to prevent damage to the junction box and cable connectors. In vehicles where more clearance is needed, we recommend that you cut out a section of the floor carpet and underlay to sit the junction box even lower.

The top set of photos show the junction box mounted on the floor above the floor coverings (left) and below the floor coverings (with a section of carpet removed). The bottom set show the respective installations with covers fitted.



## Step 4 Fit cables

Fit the GPS antenna. Normally this is fitted on the dashboard or on the windscreen using a sticky pad.



Run the 50pin data cable and the 12V power cable from the junction box to the screen. Make sure there is some slack at the screen end to allow the screen position to be adjusted.

If fitting a 'kill switch' it should be fitted on the power lead between the junction box and the screen. If possible there should be continuous power to the junction box.



Connect the meter listening data cable. This runs from the junction box to the meter. If the meter is already connected to the EFTPOS terminal, disconnect the EFTPOS terminal at the meter end and re-connect using the connector on the meter listening cable. Connect to COM4 on the junction box.



Connect the digital IN cable. This connects to the panic button and the meter dome light – see below.



The panic switch can be mounted in any convenient, accessible location, generally in or near the steering column. Attach the switch to the red wire on the Digital IN cable and a 12v positive power source.



Attach the blue wire on the Digital IN cable to the meter output, so that a voltage is passed to the junction box when the meter is engaged. This is normally attached to the line used to turn the orange dome light on and off.



## Step 5 – Connecting the meter (OPTIONAL)

If fare details are to be transferred from the meter to SmartMove then the meter must be connected in the way described below. The method varies slightly depending on the type of meter.

### a) Schmidt Gx meter without EFTPOS Terminal

**Schematic**



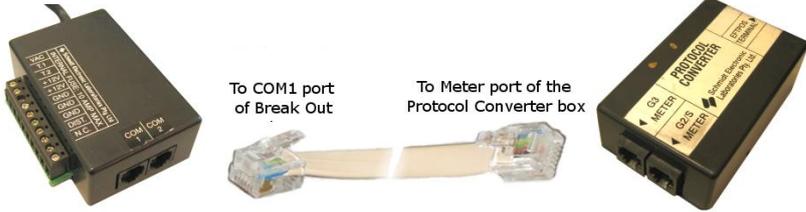
Note: black lines represent existing cables

To connect SmartMove to a Schmidt meter you will need a Protocol Converter box . This will need to be purchased from Schmidt Meters at the fleet’s expense.

Using the RJ12-RJ12 modular line cable, connect one end to the COM1 port of the Break Out box.

Connect the other end to either the G2/S meter or G3 meter port of the Protocol Converter box (depending on what series meter is used as noted below).

**Note1:** If the meter is a G2 series then use the G2/S meter port of the Protocol Converter box. If the meter is a G3 or G4 series then use the G3 meter port of the Protocol Converter box.



<p>Connect the RJ12 SmartMove lead on the loom to the EFTPOS TERMINAL port of the Protocol Converter box.</p>		
<p>Set the following vehicle properties on the fleet management website.</p>	<p>Meter Listen Meter Protocol Requires Fare Details (Account) Requires Fare Details (Non-account)</p>	<p>1 – Listen interactively (No EFTPOS) 0 – VTD compatible (COM5) 1 – Show fare screen (cannot cancel) 2 – Show fare screen (can cancel)</p>

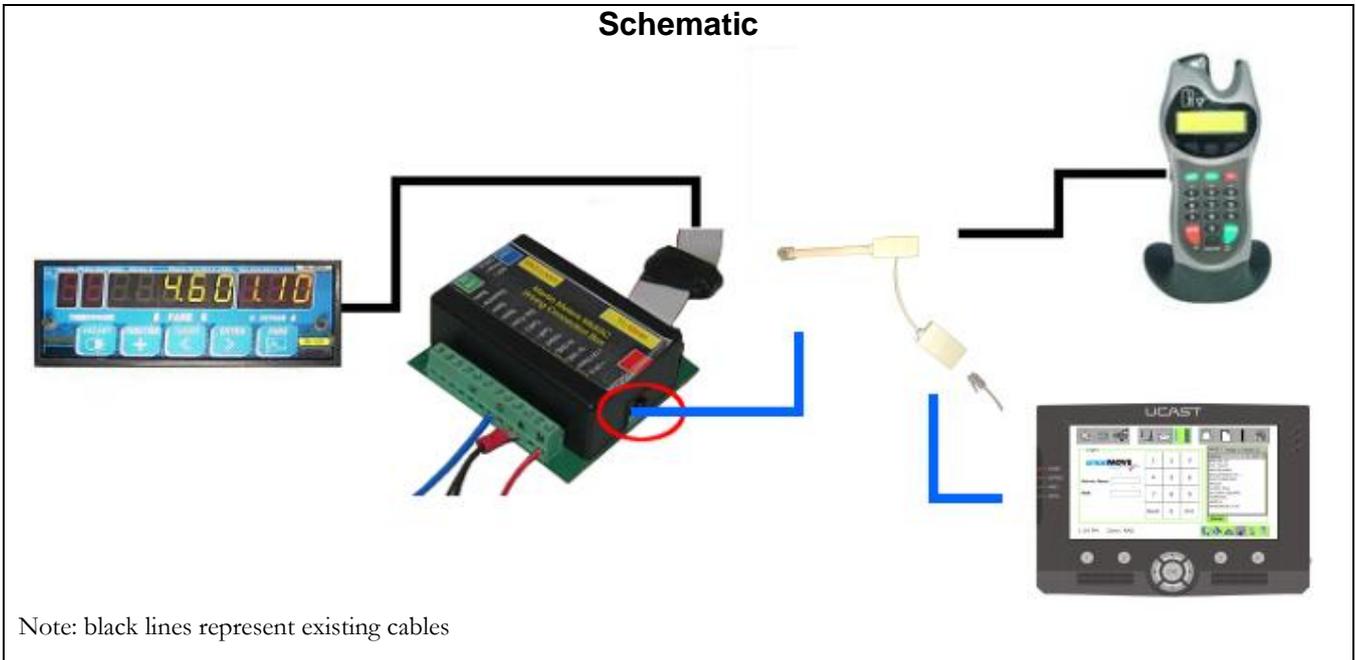
## b) Schmidt Gx meter with EFTPOS Terminal

Schematic									
<p>Note: black lines represent existing cables</p>									
<p>With the RJ12-RJ12 modular line cable connecting the Protocol Converter box to the EFTPOS terminal, disconnect the Protocol Converter box end and connect it to the free RJ12 port of the Inline Coupler of the meter Listening cable.</p>									
<p>With the short RJ12-RJ12 modular line cable connected to the other end of the Inline Coupler, connect it to the EFTPOS TERMINAL port of the Protocol Converter box.</p>									
<p>Connect the SmartMove terminal's RJ12 plug to the meter listen adapter.</p>									
<p>Set the following vehicle properties on the fleet management website.</p>	<table border="0"> <tr> <td>Meter Listen</td> <td>2 – Listen passively (EFTPOS)</td> </tr> <tr> <td>Meter Protocol</td> <td>0 – VTD compatible (COM5)</td> </tr> <tr> <td>Requires Fare Details (Account)</td> <td>1 – Show fare screen (cannot cancel)</td> </tr> <tr> <td>Requires Fare Details (Non-account)</td> <td>2 – Show fare screen (can cancel)</td> </tr> </table>	Meter Listen	2 – Listen passively (EFTPOS)	Meter Protocol	0 – VTD compatible (COM5)	Requires Fare Details (Account)	1 – Show fare screen (cannot cancel)	Requires Fare Details (Non-account)	2 – Show fare screen (can cancel)
Meter Listen	2 – Listen passively (EFTPOS)								
Meter Protocol	0 – VTD compatible (COM5)								
Requires Fare Details (Account)	1 – Show fare screen (cannot cancel)								
Requires Fare Details (Non-account)	2 – Show fare screen (can cancel)								

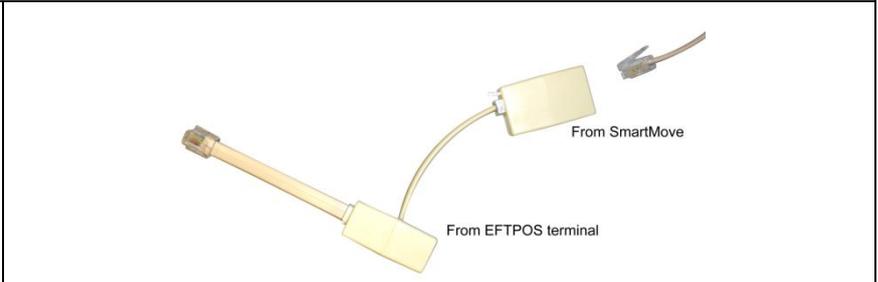
### c) Martin Mlx meter without EFTPOS Terminal

Schematic		
<p>Note: black lines represent existing cables</p>		
<p>Connect the RJ12 Meter Cable to COM1 of the meter breakout box..</p>		
<p>Set the following vehicle properties on the fleet management website.</p>	<p>Meter Listen Meter Protocol Requires Fare Details (Account) Requires Fare Details (Non-account)</p>	<p>1 – Listen interactively (No EFTPOS) 0 – VTD compatible (COM5) 1 – Show fare screen (cannot cancel) 2 – Show fare screen (can cancel)</p>

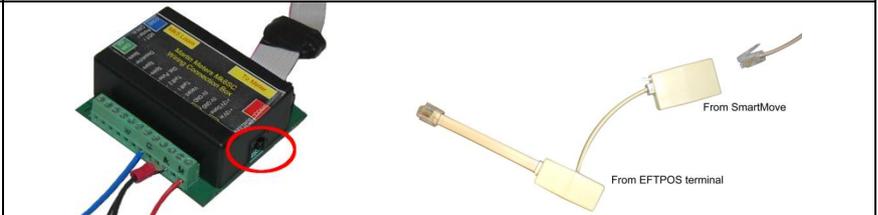
## d) Martin Mlx meter with EFTPOS Terminal



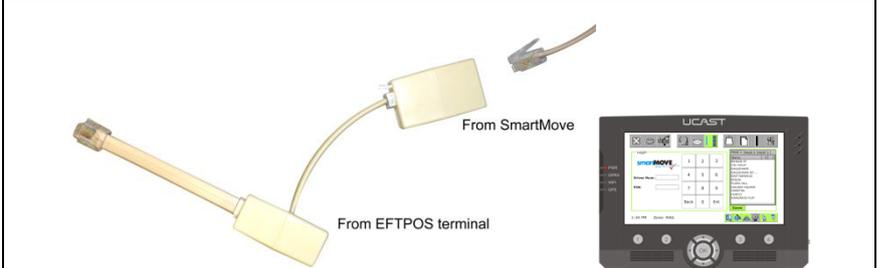
With the RJ12-RJ12 modular line cable connecting the Break Out box to the EFTPOS terminal, disconnect the Break Out box end and connect it to the free RJ12 port of the Inline Coupler of the Meter Listening cable.



With the short RJ12-RJ12 modular line cable connected to the other end of the Inline Coupler, connect it to the COM1 port of the Break Out box.



Connect the SmartMove terminal's RJ12 meter connection to the joiner on the Meter Listen Adapter

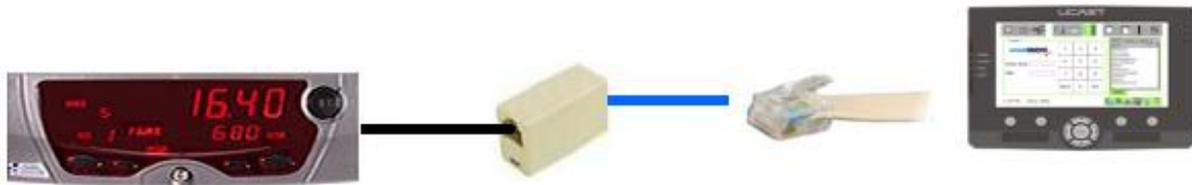


Set the following vehicle properties on the fleet management website

Meter Listen	2 – Listen passively (EFTPOS)
Meter Protocol	0 – VTD compatible (COM5)
Requires Fare Details (Account)	1 – Show fare screen (cannot cancel)
Requires Fare Details (Non-account)	2 – Show fare screen (can cancel)

## e) Novax Leda meter without EFTPOS Terminal

### Schematic



Note: black lines represent existing cables

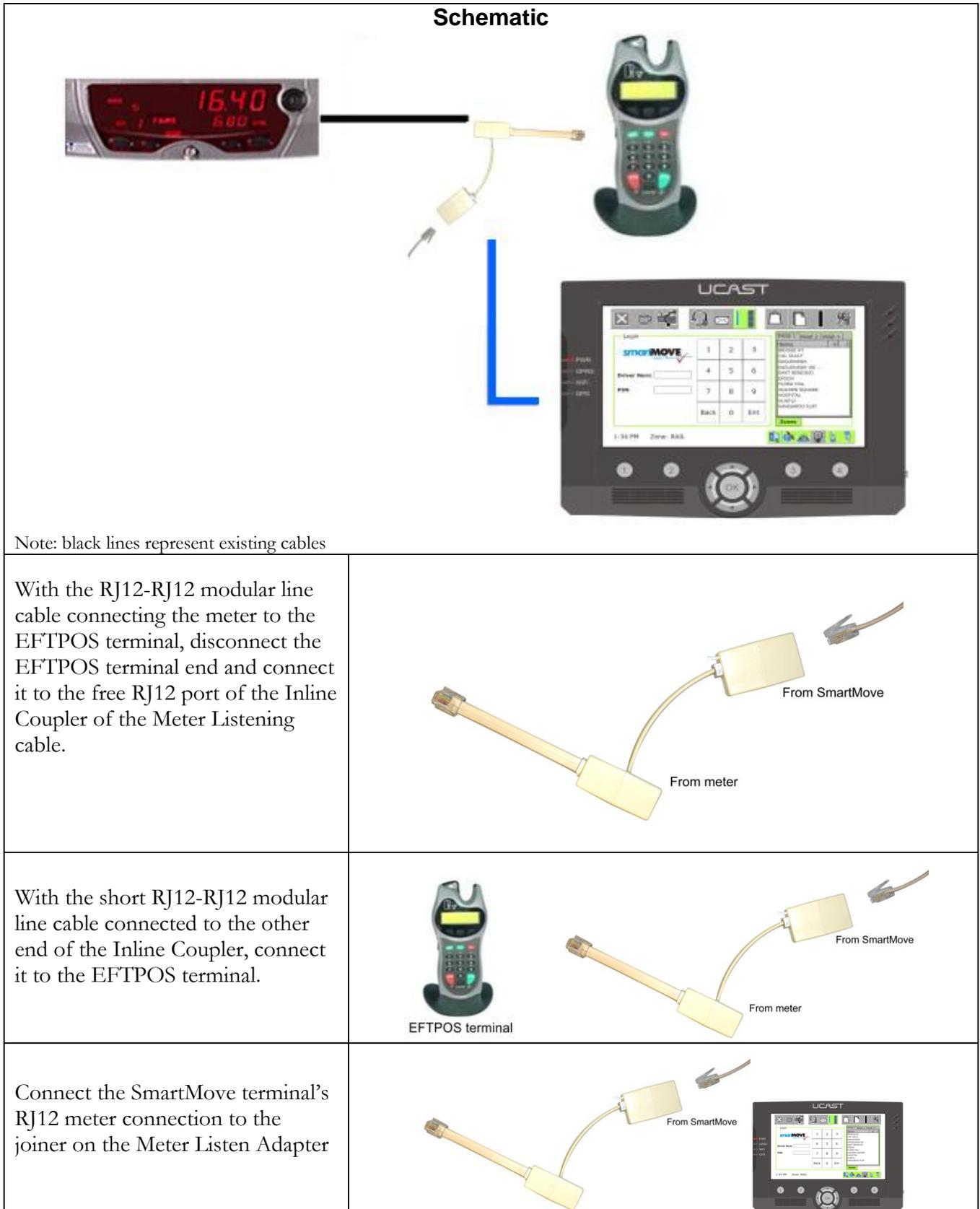
Connect the RJ12 Meter Cable to one port of the Inline Coupler. Connect the RJ12 cable from the meter to the other port of the Inline Coupler.



Set the following vehicle properties

Meter Listen	1 – Listen actively (EFTPOS)
Meter Protocol	0 – VTD compatible (COM5)
Requires Fare Details (Account)	1 – Show fare screen (cannot cancel)
Requires Fare Details (Non-account)	2 – Show fare screen (can cancel)

## f) Novax Leda meter with EFTPOS Terminal



Set the following vehicle properties on the fleet management website	Meter Listen	2 – Listen passively (EFTPOS)
	Meter Protocol	0 – VTD compatible (COM5)
	Requires Fare Details (Account)	1 – Show fare screen (cannot cancel)
	Requires Fare Details (Non-account)	2 – Show fare screen (can cancel)

## Step 6 Fit GPRS (mobile phone) antenna

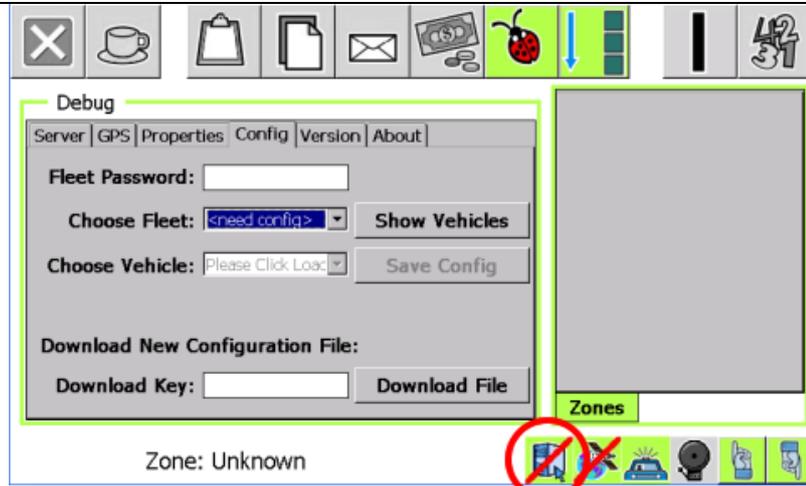
<p>If supplied with a windscreen type antenna, stick the antenna to the top of the windscreen (driver's side) and run the cable down the A-Pillar.</p>	
<p>If supplied with larger roof type antenna, mount it to the center of the roof and run the cable down the pillar to the junction box. This installation will achieve maximum gain. Alternatively, the antenna can be mounted to the roof rack.</p> <p>If supplied with the smaller roof type antenna, mount it under the dome and run the cable down the pillar to the junction box.</p>	

## Step 7 Connect screen and power

<p>Attach the 50-pin data cable and 12V power cable to the screen.</p>	
<p>Fit the screen.</p>	
<p>Connect the 12V battery lead to the junction box. The red wire should be attached to +12V and the black wire to -12V. A low amp fuse (eg 10 amp) should be wired in to the power cable to prevent damage to the junction box in case of any problems with the wiring. Fit a switch in a convenient position if there is a possibility the vehicle will be off the road for more than a day. Preferably wire separately from the radio to prevent possible interference.</p>	
<p>Check power is supplied to junction box and screen (lights should be on). The startup screen will appear in around 30 seconds and the SmartMove login screen should appear in about a 2 minutes. You may need to switch the screen on using the centre button.</p>	

## Step 8 Configure SmartMove

If the panel where the vehicle is configured is not being displayed, tap the Server button (circled in the screenshot below) and then tap the Config tab. This will likely already be displayed.



Tap in the Download Key text box so a cursor is displayed in the text box and a number pad is displayed on the right. Use the number pad to enter the download key for the fleet.



If you don't know the download key for the fleet, please contact SmartMove support.

YOUR DOWNLOAD KEY IS \_\_\_\_\_

After the download key has been entered, tap the Download File button. Wait until 'File Downloaded Successfully' is displayed. You will now be able to select the fleet.

**File Downloaded Successfully**

**Download New Configuration File:**

**Download Key:** \*\*\*\*\*

**Download File**

Tap on the Choose Fleet drop down list box and then tap on the correct fleet to select it from those listed.

If a password is required for a fleet, tap the Fleet Password text box so that the cursor is displayed in it and enter the password using the key pad on the right. *Note: Most fleets don't use a password. If a password isn't required, then the Fleet Password text box should be left empty.*

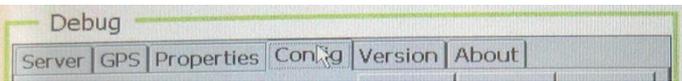
Tap the Show Vehicles button and wait until the Choose Vehicle dropdown list box changes from 'Please Click Load' to 'Please Select'.

Tap on the Choose Vehicle dropdown list to display the list of vehicles. Tap on the correct vehicle. If the vehicle is not displayed, try scrolling up or down the list.

<p>Tap the Save Config Button and wait for the Login panel to display. SmartMove is now configured for the vehicle.</p>	 <p>The screenshot shows a grey horizontal bar. On the left, it says "Choose Vehicle:" followed by a blue dropdown menu with "HC759" selected. To the right of the dropdown is a grey button with the text "Save Config".</p>
<p>Shortly afterwards the unit should show that it is connected to the server.</p>	 <p>The icon is a blue server tower with a mouse cursor pointing at the bottom right corner, set against a light green square background.</p>

See [V:\projects\CellTrack\web\\_orig\\_files\\_images\tims\\_files\SMVConfigVehicle.html](V:\projects\CellTrack\web_orig_files_images\tims_files\SMVConfigVehicle.html) and [V:\projects\CellTrack\web\\_orig\\_files\\_images\tims\\_files\SMVServerTab.html](V:\projects\CellTrack\web_orig_files_images\tims_files\SMVServerTab.html)

## Step 9 Test SmartMove

<p>Look at the properties page on the Debugging screen and check that the car is configured for digital input. If the unit is configured for analogue call SmartMove support to have it changed.</p>	
<p>With the meter switched on but not running, the car symbol at the bottom right should show one person in the car. With the meter running the symbol should show three people in the car</p> <p>If the symbols are inverted the car needs to be reconfigured in the system – call SmartMove support and ask for the meter signal to be inverted.</p> <p>If the symbol doesn't change then check that the dome light goes on and off with the meter – a new bulb might be needed. If the light is working then check that the digital input line has been wired correctly.</p> <p>NB: Not required for vehicles without meters</p>	
<p>When the car is connected to the server, hold the panic button in for a second. The panic symbol should appear at the bottom right hand corner of the screen.</p> <p>The panic must be cleared by smartMove support. Please call 0407 728 442.</p>	
<p>Check that a GPS fix is obtained within 5 minutes. If no fix is obtained, move the car into the open, then check GPS connection or junction box and the 50pin data cable on the WaveOn screen.</p>	