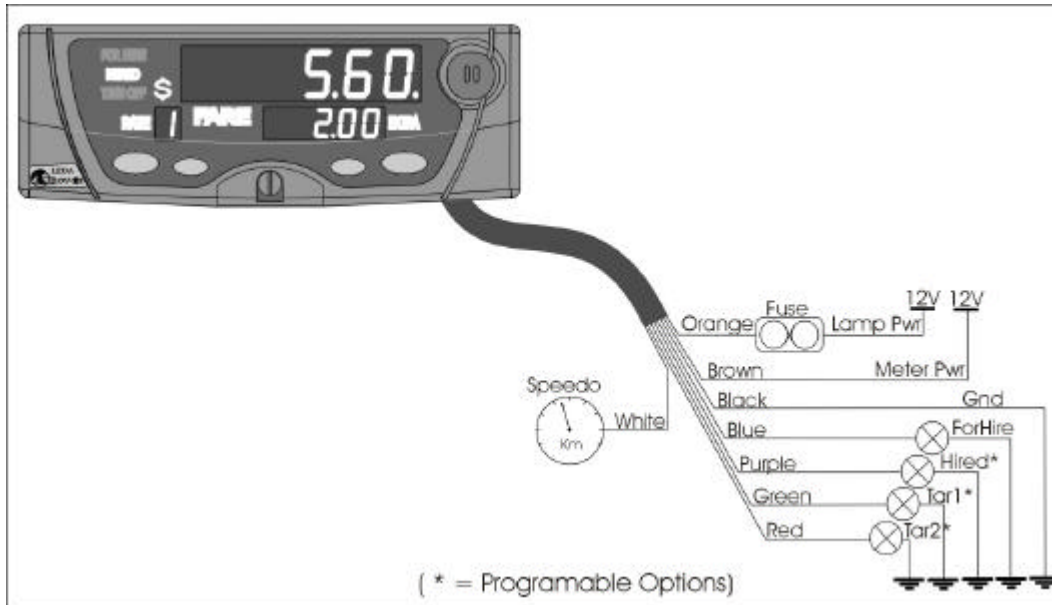


# Novax LEDA Taximeter

## Manual

### FITTING INSTRUCTIONS.



Before attempting to install the meter. Get the position right! Hold it in the car and find the best possible position, keep the following in mind:

1. The meter must be clearly visible to all passengers. LED displays can be difficult to read in high ambient light conditions, (and blindingly bright at night).
2. Mount the meter where it is not likely to be damaged by passengers or their luggage. Also keep it away from ashtrays.
3. It must be close enough to be operated from the driver's seat.
4. The sealing screw must be readily accessible.
5. The meter must be clear to slide on and off the backplate.

Once the position is known. Slide the meter off the backplate and put the meter to one side. You won't need it until the job is almost done.

The meter backplate can be fastened in place by small flat head screws using the existing holes. Mount directly to the vehicle dash panel or to a suitable bracket in order to achieve optimum positioning.

For most installations the single 8 way loom supplied is adequate to allow connections to be made in the engine compartment or under the dashboard. The loom is colour coded as follows: Black=gnd, Brown=12v meter power, Orange=12v Lamp power, Blue=For-Hire, White=Speedo signal, three additional lamp drives connect via the Green, Red, and purple wires. For electronic speedo systems simply crimp the white wire terminal to the appropriate connection in the vehicle wiring loom (speedo signal wire).

Should the installation require access to the data plug, memory card, swipe-reader etc. then a "break-out box" is required.

Note:

- 1 Although the meter is protected by internal overload devices, the lamp circuit is protected only by the external fuse in the loom (3 Amp). It is also a good idea to

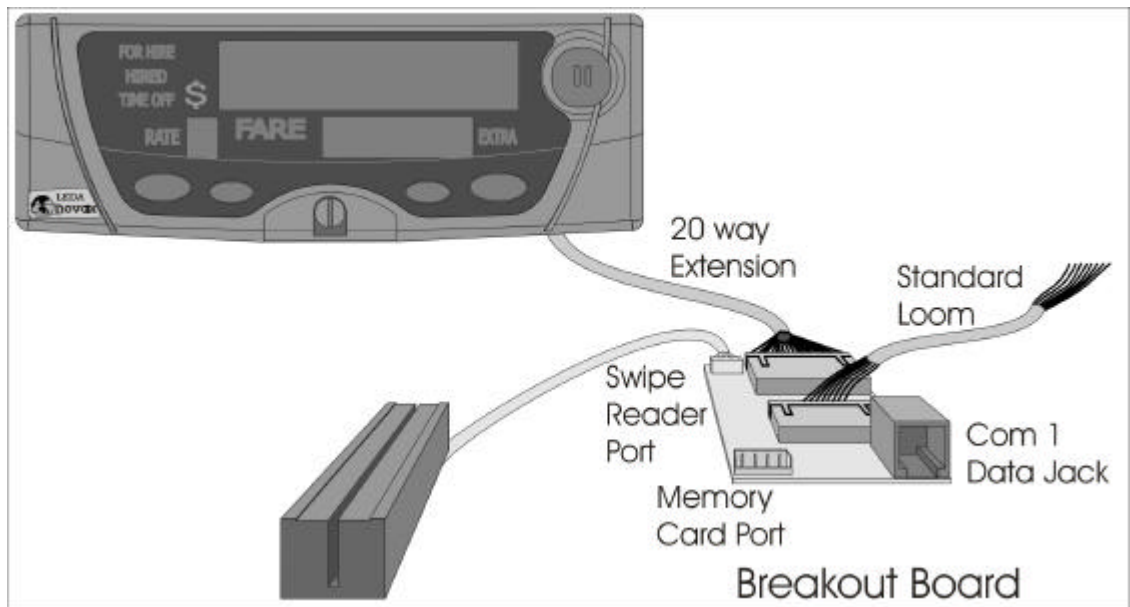
fit an additional fuse at the battery terminal, if the power feed is to be connected directly to the battery, ensure this fuse is removed until all connections have been made, to avoid damage in the event of accidental shorting.

- 2 The lamp drive circuits are controlled by conventional +12v switching, switching +12v power to the light(s).

If the aux o/ps have other purposes than tariff lights ensure the circuit is not likely to exceed 3 amps, or if it is required to switch other vehicle circuits, it is recommended that external relays (with spike suppression diodes) be used in order to protect the meter circuit board from damage.

### Data Interface.

For installations requiring data interface, printer, swipe reader or a memory card. A "Breakout Board" is required. This can be supplied with a 1.5 metre cable or a 0.5 metre cable to suit installation requirements. The Breakout board acts as an extension lead between the meter and the original loom. This allows the swipe reader, memory card and printer to be positioned close to the driver, not necessarily next to the meter.



### Sensor Installation.

#### 1. Electrical Speedo System.

A sensor unit is not required for these installations. The crimp terminal on the white wire in the loom allows direct connection to the car's speedo-signal wire.

#### 2. Transmission Drive Sensor Unit.

Where this system is required, a sensor unit with the appropriate fittings can be supplied. Simply remove the speedo-cable at the gearbox and fit the sensor unit in-line. Ensure the speedo-cable is free to turn and nothing binds up. Ensure that the wiring is clear of moving parts and exhaust pipes, Tie any loose wiring to the car body (or the speedo cable). The "quick-connect" terminals fitted to the blue and uninsulated sensor wires connect to the appropriate 12v and ground terminals of the meter loom. The white sensor wire connects to the crimp terminal on the white wire in the meter loom.

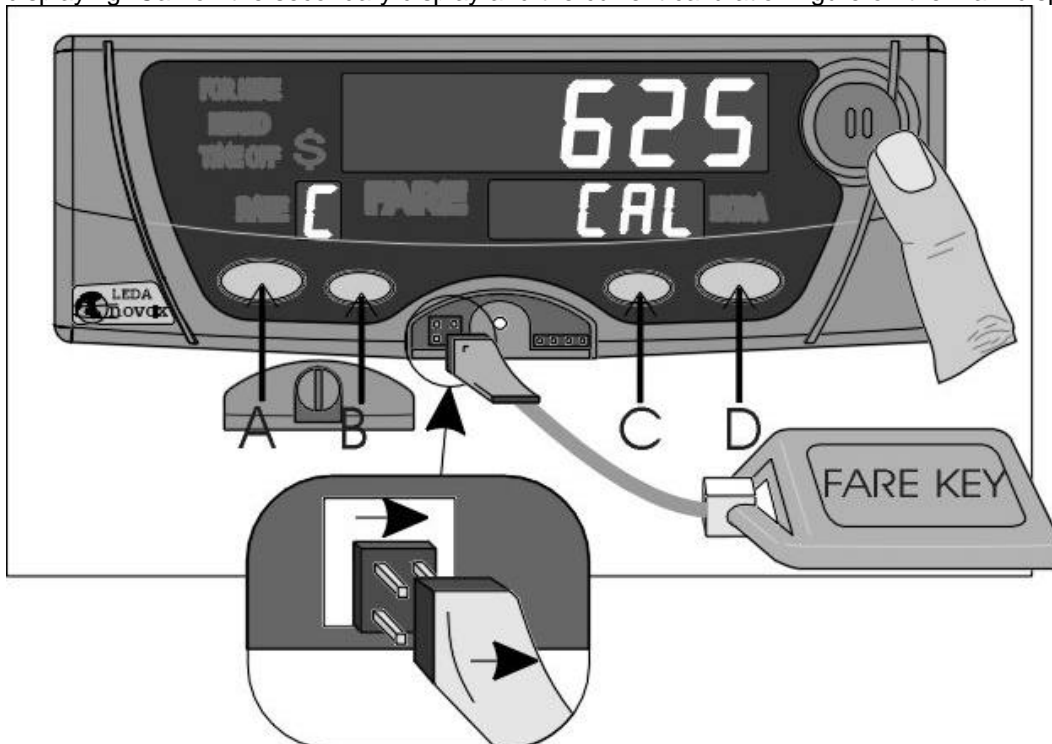
**Calibration**

When installation is complete and operational, it must be calibrated to the vehicle in which it is installed. When dispatched the meter is set for a calibration figure of 625 ie: 625 revolutions of the speedo cable per kilometre travelled. This usually requires some adjustment, and requires the "Fare key" to access this function.

Unscrew the meter's sealing screw, lift the access plate and insert the "Fare key" to the connector under the plate.

With the fare key in place access can be gained to a number of functions. The meter must be in the "Off" mode.

To access the "Calibration" mode press the "Operate button. The meter should respond by displaying "Cal" on the secondary display and the current calibration figure on the main display.



To calibrate the meter to the vehicle it is first necessary to count the speedo pulses over a measured distance on the road. For convenience we talk in terms of a measured kilometre, and the number of pulses counted over that distance.

To count Speedo pulses hit the button "A" on the front panel, this resets the display to zero, "cnt" (short for count) appears on the secondary display, every pulse received from the sensor will now be counted and displayed. Drive the vehicle for a short distance in order to confirm correct operation and satisfactory pick-up of speedo pulses. Note that alternate pushes of the button "A" freeze, and restart the counting of pulses. Now drive over the measured kilometre, starting the count at the beginning and freezing the count at the 1,000 metre mark (1km) on the road.

With the exact calibration displayed, hit the "Operate" button in order to store this number in memory ("stor" now appears on the secondary display). The meter will return to its normal state after a short delay.

Before storing the new calibration figure it is possible to make fine adjustments if required, using buttons "B" and "C" to decrement and increment the displayed figure.

To prevent unauthorised alterations to the calibration figure, this function can ONLY be accessed if the Fare key is in place.

Check operation, remove the "Fare key" then replace the access plate. Replace the sealing screw and make sure that the holes in the screw will allow the wire seal to pass neatly through the sealing tab.

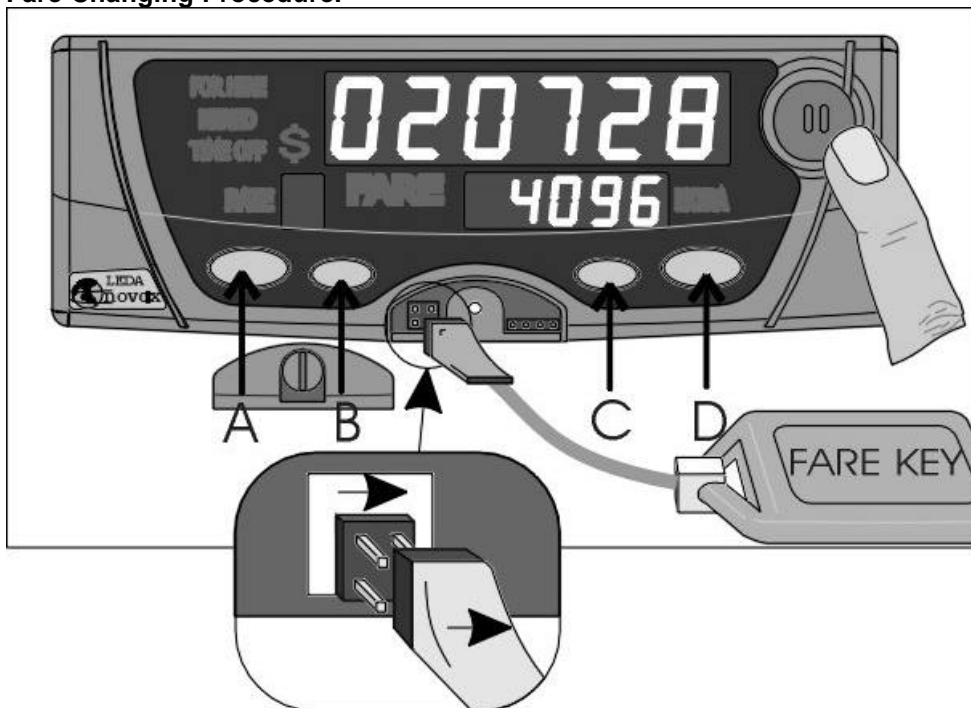
The Calibration Registration number is advanced each time the meter is reprogrammed and the date of the event is stored.

FARE CHANGING.

The fare schedule is held in a non-volatile memory chip in the meter. To change the fare schedule requires that this chip be reprogrammed.

Remove the meters sealing screw, and lift the access plate.

To reprogram the fare schedule a Fare Key is required. This contains a master copy of the Fare Schedule. Simply plug the key into the meter connector as shown below. Get it the right way round!! Naturally the Fare Key must contain the required Fare Schedule. This is programmed by your supplier. Your Fare Schedule is assigned a Four Digit Code Number, which you should know and a date from which the fare schedule is effective. Provided the schedule date is 'historic' (compared to the meter's internal clock) the schedule will be effective immediately. Otherwise the new schedule will be held in memory until the date arrives, at which time the pending schedule will be copied automatically to become the 'active' schedule.

**Fare Changing Procedure.**

Insert Fare key to the connector as shown; make sure it makes contact with the correct pins on the connector. It must also be the correct way up, **the arrow drawn on the key must be in line with the arrow adjacent, on the circuit board.**

Hit button "A". The display should now show the correct Code number and the validity date for the schedule. If this is correct, hit the "Operate" button to initiate reprogramming, otherwise hit button "D" to abort reprogramming. The reprogramming process takes a few seconds during which time the Programming appears on the display.

Once complete withdraw the Fare Key, the new schedule can now be checked. (ref. Schedule Display section of the operators' manual)

Each Fare key is good for a preset number of Fare Changes. Once this expires the Key becomes invalid and must be returned to the supplier. The charge for the Fare key usage is thus based on the number of meters to be Fare Changed. When ordering a Fare key this quantity needs to be specified. After each usage, the meter displays how many shots are left in the key.

The Fare Schedule Registration number within the meter is advanced each time the meter is reprogrammed and the date of the event is recorded. Note this event may not coincide with fare key programming if the implementation date is in the future.

If the meter fails to respond to the Farekey; check the key is mating with the correct pins, disconnect power momentarily (with the key in position) then re apply power. If the meter still

fails to acknowledge the key and goes directly to For Hire or Off then the key is likely to have expired i.e. zero shots left. This could be verified by trying a known good Fare key. Alternatively, the Fare key is not authorised for use on that particular meter.

*Special-purpose Keys.*

These are identical to 'Fare keys', which plug in to the meter's 'fare key' connector and are used to update various files within the meter. For example, Calendar Table (dates and times for penal rates and daylight saving dates), Printer text (headers and footers for receipts etc.), Card Issuer Table (periodical update tables for acceptable payment cards issuers). Detection of the programmer card is automatic when button 'C' is pushed on the meter (the meter must be 'off'). Meters fitted with "memory card" facilities can use "Programmer Cards" for this purpose, which prevents the need to break the tamper-seal.

Installation Guide.

There are a number of differences to watch out for:

To drive the Roof Lights, you need to connect the orange wire to 12v as well as the brown (meter power) wire.

Roof Lights are now programmable (a function of the Fare key). Most fare keys will need to be reprogrammed if light outputs are required. Unless otherwise instructed fare keys will be set up for: purple = Hired, green = Hired 1, Red = T2.

Early Fare keys may be incompatible with the Leda. If the meter does not "see" the Fare key it will need reprogramming.

Fare schedules are now date-stamped. Meters can be programmed in advance of the scheduled date. The new rate will remain "pending" until the date arrives.

The set-up and calibration features can only be accessed with a Fare key in place, the "Calibrate switch" has been done away with. Provided dealers look after the fare keys this should prevent unauthorised tampering. Look after your old fare keys, or better still return them to us where they belong. If they fall into the wrong hands you could open the door to "pirate operators".

The Fare key now unlocks the meter's set-up functions. Remember; if the fare key's ID is displayed, hitting the "operate" button will use up one "shot". If this is not the intention use button 'D' to abort programming, then access the required function.

Note also that the "Calibrate mode button functions are a bit different: Button 'A' starts and stops the cal. Count and the "Operate" button saves the new figure returning the meter to "Off".