

### Connections

Make the necessary connections in accordance with the wiring diagram below. <u>NOTE</u> that there are two alternative connection systems. The system used will depend on whether the vehicle is equipped with a master switch for the electrical system or not. The latter alternative is the most common.

**Before** commencing to fit a Halda Road Computer or Halda Rally Computer e you must check that your Halda Computer runs on the same voltage as the car's electrical system. A label on the power unit states whether your Halda Computer is designed for a 12 V or 24 V system with negative earth.

**The red wire** supplies the electronic circuitry with current from the positive terminal of the battery. Connect it to one of the car fuses that is always live.

**The green** wire supplies the control panel display with current. Connect it to a fuse that is live only when the ignition is switched on.

Connect **the black wire** to a suitable earthing point. In the alternative with a master switch for the electrical system, connect the black wire to the **ne**gative terminal of the battery.

Designation	Catalogue No.	Туре
Fuse F1	444 003	1 A quick-
Backup battery	452 000	IEC 6LF22 9 V alkaline

#### Mounting

Two versions of the Halda Road Computer and Halda Rally Computer e are available. One for cars with a mechanical speedometer and drive cable and one for cars with an electronic speedometer and electric leads. The latter version requires a circuit board to be fitted in the power unit before it is mounted in place. See page 3.

Pulse generators with different connecting threads, square drivers and snap-on couplings are available for different car makes and models. Check that you have the right mounting kit before starting to install your Halda computer.

Fit the control panel with its adjustable brackets where the displays can be easily read and where the various keys and buttons are within easy reach. Give a thought to the danger of injury in an accident when deciding where to mount the control panel. A suitable place to mount the power unit is out of the way under the vehicle instrument panel. How-

ever, the sliding cover on the unit should be **acces**sible for changing the battery and operating the switch.

## Installation on cars with mechanical speedometer



Disconnect the speedometer cable (5) from the speedometer (1). Using a suitable square drive (3), mount the pulse generator (2) on to the speedometer in place of the speedometer cable.

If the space behind the speedometer is limited, an extension cable (4) with square drive can be fitted between the speedometer and the pulse generator. *See* Table 1 for suitable extension cables.

Connect the speedometer cable (5) to the pulse generator.

Connect the pulse generator lead (6) to the pulse generator. Note that the pulse generator connector (7) is not symmetrical. Fit the connector so that its black shoulder (8) enters the space (9) at the side of the other connector. Installation on cars with mechanical speedometer.

- 1. Speedometer
- 2. Pulse generator
- 3. Square drive
- 4. Extension cable (extra accessory)
- 5. Speedometer cable
- 6. Pulse generator lead
- 7. Pulse generator connector
- 8. Shoulder
- 9. Space for connector shoulder
- 10. Nut
- 11. Power unit
- 72. Ribbon cable (for connection to control panel)
- 13. Ribbon cable connector
- 14. Fuse
- 15. Backup battery
- 16. Switch

Note that the contacts in the pulse generator connector are mounted on ceramic insulating material which does not withstanding.

When the two connectors are fitted firmly together, the nut (10) can be tightened fingertight.

Plug the pulse generator lead into the matching socket on the short side of the power unit (11). Connect the ribbon cable (12), which runs between the control panel and the power unit, to the con-

nector (13) underneath the sliding cover on the power unit. Fit the backup battery in place.

Turn the switch (16) to the On position and your Halda Road Computer or Halda Rally Computer e is ready for calibration.

### Installation on cars with electronic speedometer



Begin by mounting a circuit board (1) in the power unit (2).

Unscrew the end plate (3) on the short side of the power unit where the row of sockets are located. Remove the panel (4) and sliding cover (5).

Remove the three short-circuiting jumpers (6) and slide the circuit board (1) into the slot so that the previously short-circuited pins make contact with the new circuit board. Fit the power unit panel (4), sliding cover (5) and a new end plate (3) in place.

Mount the power unit (2) in the car and connect the ribbon cable (7) to the connector (8) underneath the sliding cover. Fit a backup battery (10) in place.

Installation on cars with an electronic speedometer. Parts marked with an asterisk\*) are included in the electronic speedometer mounting kit.

- 1. Circuit board \*)
- 2. Power unit
- 3. End plate \*)
- 4. Panel
- 5. Sliding cover
- 6. Short-circuiting jumpers
- 7. Ribbon cable
- 8. Ribbon cable connector
- 9. Fuse
- 10. Backup battery
- 11. Pulse generator connector
- 12. Connector sleeve \*)
- 13. Shoulder
- 14. Space for connector shoulder
- 15. Splicing clamp \*)
- 16. Switch

Connect the pulse generator connector (11) to the connector sleeve (12). Note that the pulse generator connector (11) is not symmetrical. Fit the connector so that its black shoulder (13) enters the space (14) at the side of the connector in the connecting sleeve.

When the two connectors are fitted firmly together, the nut (10) can be tightened finger-tight.



Good contact between the pulse generator wires and the speedometer wires is easily obtained by means of the splicing clamps.

One brown wire and one white wire extend from the connecting sleeve. Refer to electronic **speedo**meter table for connection for your car. Using two splicing clamps (15), connect these wires to the speedometer wires. To ensure reliable connection, the cross-section area of the speedometer wires should not be less than 0.3 mm<sup>2</sup>, which corresponds to a diameter of 0.6 mm and an outside diameter, including insulation, of about 1.6 mm.

Position the unstripped wires between the clamps and close the clamps with a pair of pliers. Snap the cover in place.

Turn the switch (16) to the On position and your Halda Road Computer or Halda Rally Computer e is ready for calibration.

# **Guarantee and service**

### Guarantee

Garphyttan Haldex AB allows a guarantee of one full year on manufacturing defects.

The defective product shall be immediately returned to the dealer, who will forward it to Garphyttan Haldex AB for repair or replacement with a new unit.

Costs of transportation to be paid by the customer.

### Service

A Halda Road Computer or Halda Rally Computer e does not normally require service of any kind.

The backup battery normally requires changing once a year.

In the event of any fault you should take your Halda Road Computer or Halda Rally Computer e to a service workshop authorized by Halda or return it to Garphyttan Haldex AB, Box 250, S-301 04 Halmstad, Sweden.

### **Dealer:**