Alfa Romeo

Select the model:

Model 145/146 old version

Model 145/146 new version

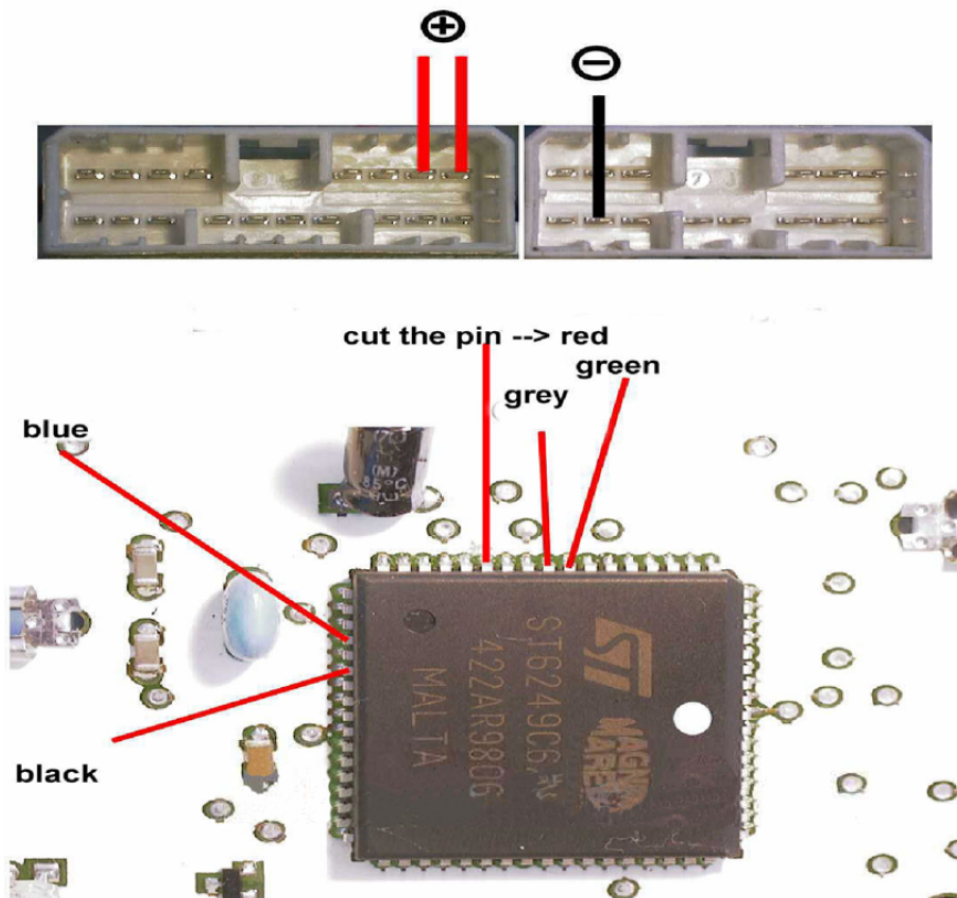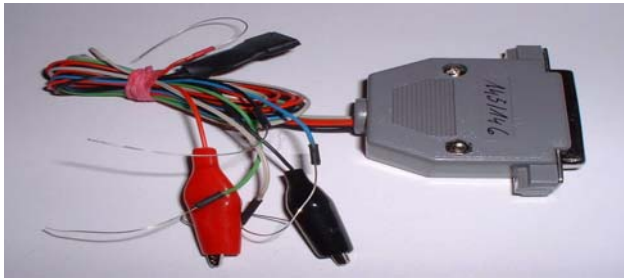Model 156

Model 164 Delco

Model 166

Model Spider & GTV

Model 145/146 old version

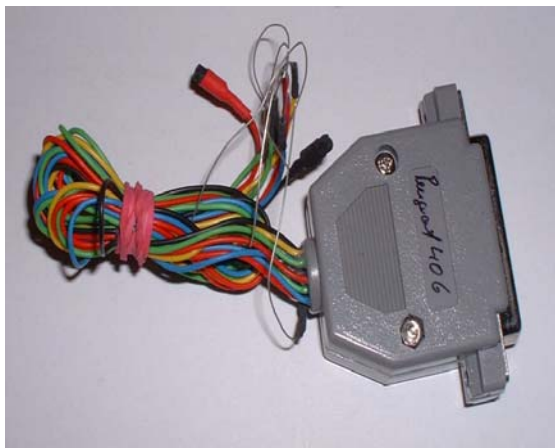Use the Alfa 145/146/Twingo-cable:

- Remove the cluster and open it.

- Look for the 68 pin prozessor by Magneti-Marelli.

- Connect the cables as shown in the picture.

- Select the menu **ALFA – 145 - old.**

- The Tacho Universal displays the old value.

- Enter the new value.

- Verify the new value with **OK**.

- Connect pin 57 (red cable) of the processor back to the circuit board.

Model 145/146 new version

Actually not possible for processors marked with 68HC705!

Use the Peugeot 406 cable:

The blue cable comes from the 4 cables that belong together, the green from the 2 data cables that belong together. The green marked pins haver to be connected together.

- Remove the cluster and open it

- Connect the cables as shown in the picture.

- Select the menu **ALFA – 145 - new**.

- The Tacho Universal displays the old value.

- Enter the new value.

- Verify the new value with **OK**.

⊕   ⊖

lift

lift + blue

join

lift

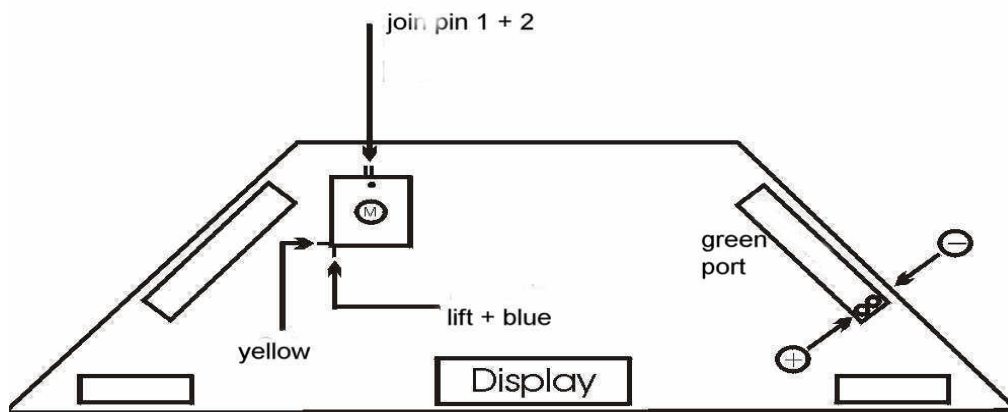green data
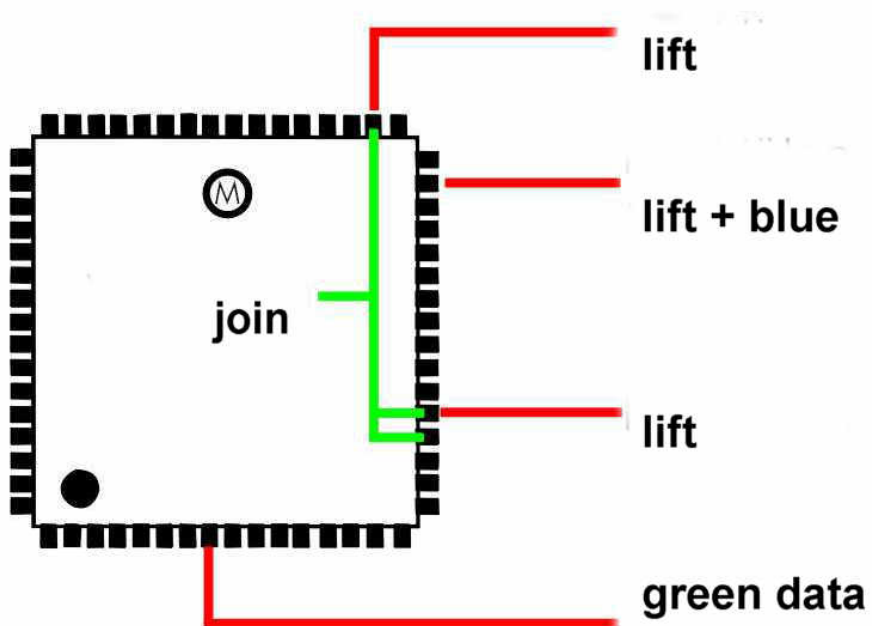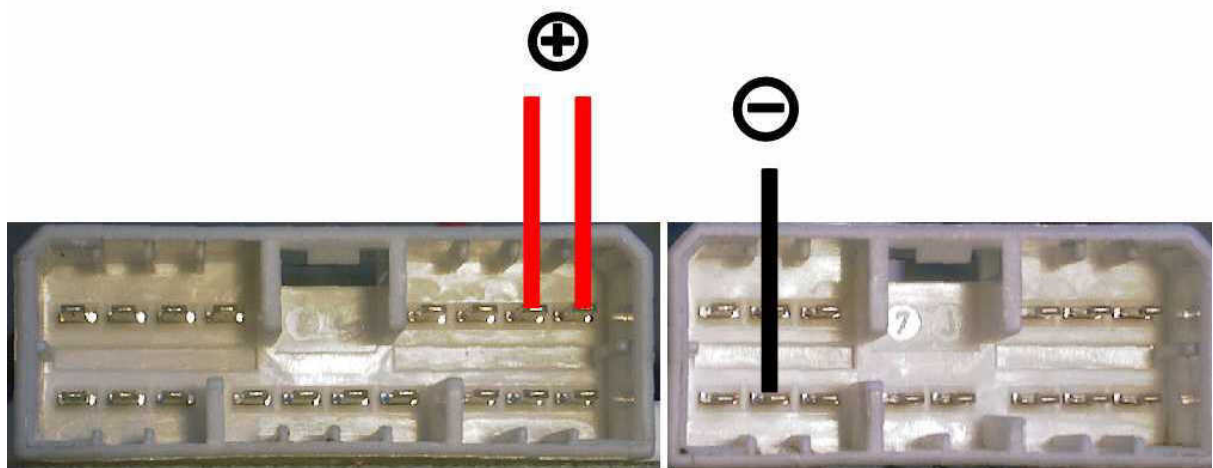
Model 156

Use the Alfa 156 cable:
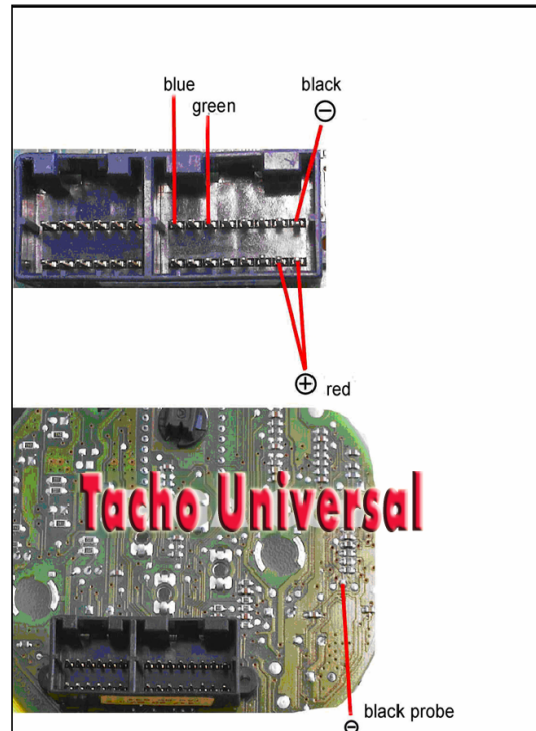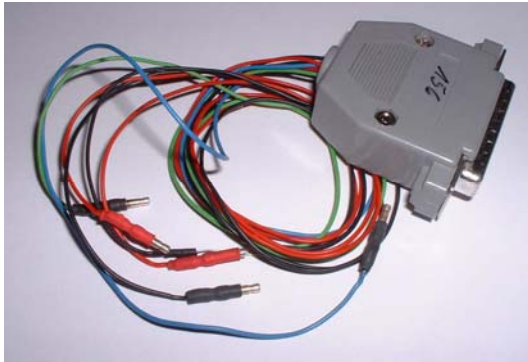
- Remove the cluster and open it.

- Connect the cables as shown in the picture.

- Select the menu **ALFA – 156**.

- The Tacho Universal displays the old value.

- Enter the new value.

- Verify the new value with **OK**.

Note:
If the handheld stays very long at 'MOMENT' when writing (over 2 minutes) please restart. Remove the programming plug from the handheld. Go to the Alfa 156 menu. Put the plug in the handheld and press as fast as possible 'OK'. When the handheld has read the old value, remove the programming plug again. Enter the new value, put the plug back in and press immediately 'OK'`.

Model 164 Delco

Use the Scorpio cable:

- Remove the cluster and open it.
- Remove the complete circuit board. (somewhere on the board you can see the manufacturer. If it is „Magneti Marelli" you have to send us the instrument).
- Connect the cables as shown in the picture.
- Join pin 1 + 2.
- Select the menu **ALFA – 164 Delco**
- The Tacho Universal shows you the old value. If it is not correct, you may also have to lift the pin for the yellow cable.
- Enter the new value.
- Verify the new value with **OK**.

Model 166
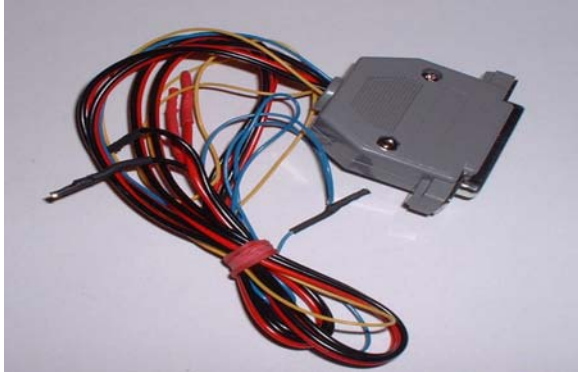
Use the Alfa 166 cable:

- Remove the cluster and open it.
- Connect the cables as shown in the picture.

- Select the menu **ALFA – 166**.
- The Tacho Universal displays the old value.
- Enter the new value.
- Verify the new value with **OK**.

Model Spider & GTV

Use the Spider/GTV cable:

- Clean the processor.

- Disconnect pin 22 of the ZC422 187 CFN processor.

- Lift pin 10 of the IC HCT14A .

- Put the GTV plug onto the processor. Watch the pin 1 mark!

- Connect the power supply (red= +, black= -).

- Join the GTV plug to the handheld.

- Select the menu **ALFA – Spider/GTV**

- Enter the new value. The old value is not displayed (????????).

- When the handheld displays „Reset" press the red button on the plug for less than 1 second.

- After programming join pin 22 + 23.

- Re-connect pin 10.

Power supply Alfa Spider green port :

```
                                        +  -
                                        |  |
   O O O O                    O O O O
   O O O        O O O O       O O O
```

```
              8 ▢▢ 7
                HCT14A
             14 ▢▢ 1
```

```
      7      1      47
   8                  46
          (M)
       ZC422 187CFN
   20                 34
      21         33
```