How to use the uPD78 EEPROM (ICP) microcontroller programmer (Practice training)

Explore RENAULT PP-T40 cluster (see Figure 1) SAGEM produced

Figure 1

• Connect the dashboard to uPD78 EEPROM programmer. Check hardware connection before attach serial port cable and power connection wires (see Figures 5, 6, 7)
• Attach serial port cable and connect power supply source to uPD78 EEPROM programmer (see user manual e78prog.pdf)
• Start uPD78.exe control program

• Now you should see in message window "uPD780973 Programmer VER-1.0 detected!"

• Follow next steps (see Figure 2, 3, 4):
1 > Click "DEVICE" button
2 > Select device uPD780973 * INSIDE 78F0974 MCU with same EEPROM access and address location area
Now you should see in message window "uPD780973 selected"
3 > Click "EEPROM" button on Read Sequence docking side
4 > Click "START" button and waiting when operation complete
5 > Click "EDITOR" button to start dump editor

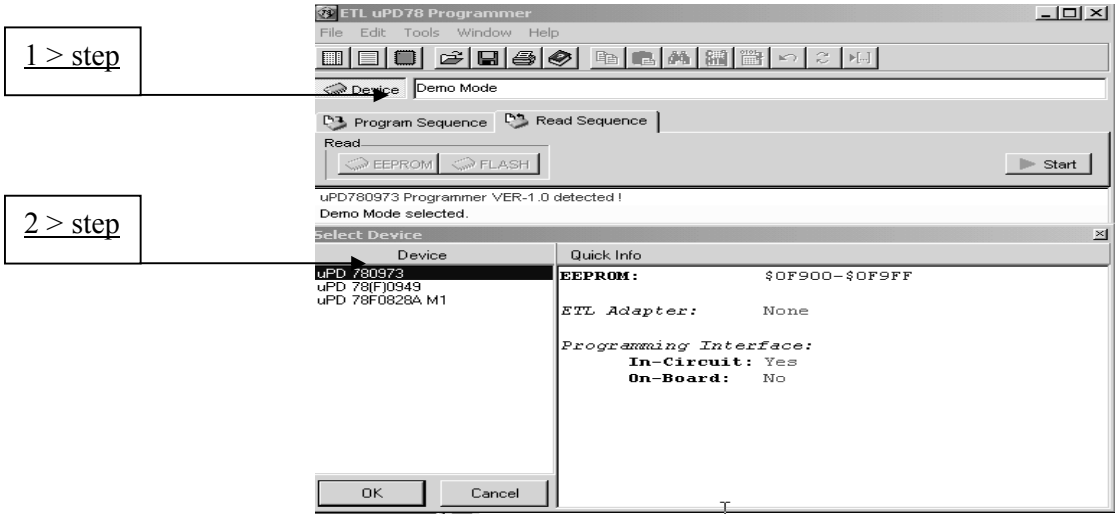

Figure 2

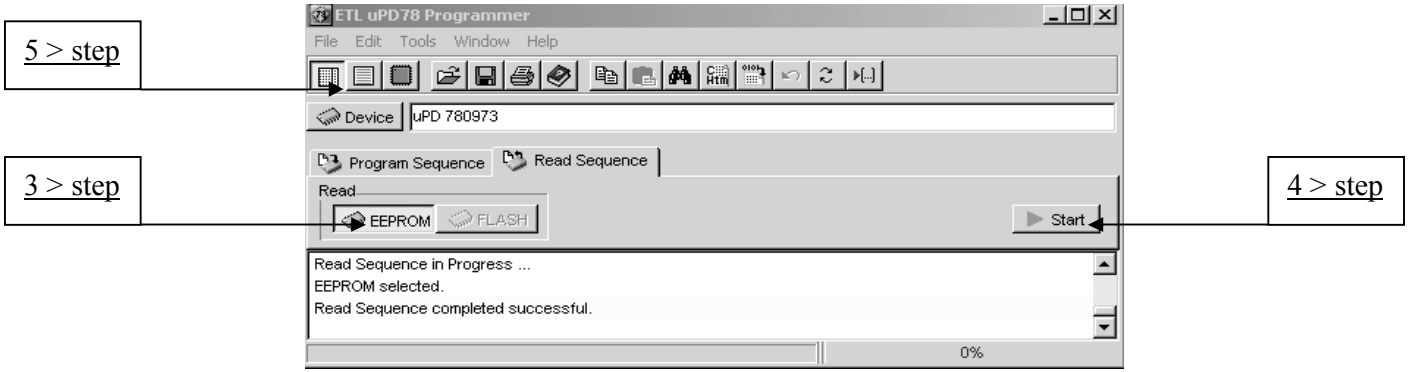

Figure 3

Now you should see result into dump editor :

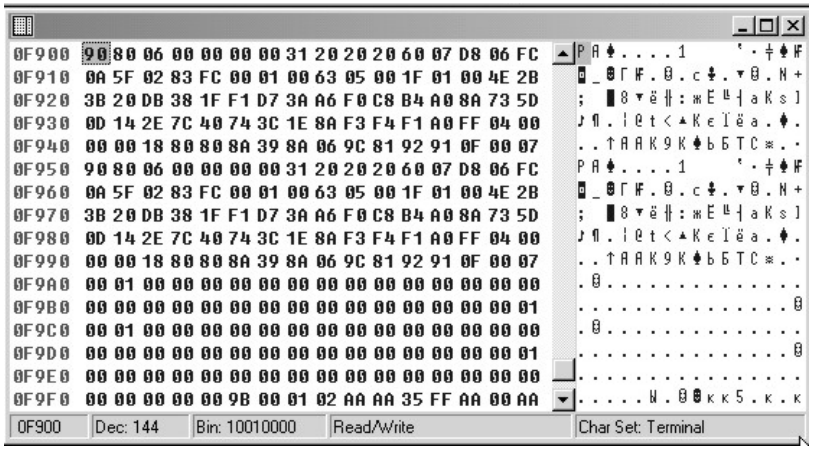

Figure 4

NOTE* Don't connect power supply source to explored dashboard when working in ICP mode /connect 14 ICP wires from uPD78 programmer connector only/! After finish work, disconnect ICP wires and connect power supply source to dashboard and check result (see Figure 7)

Pin №38 MCU 78F0974 must be desolder from explored cluster (lift) before start ICP communication. Make sure that this pin №38 TIO2/P43 don't contact with explored board and contacted with communication pin №12 uPD78 programmer only before start any operation!!!

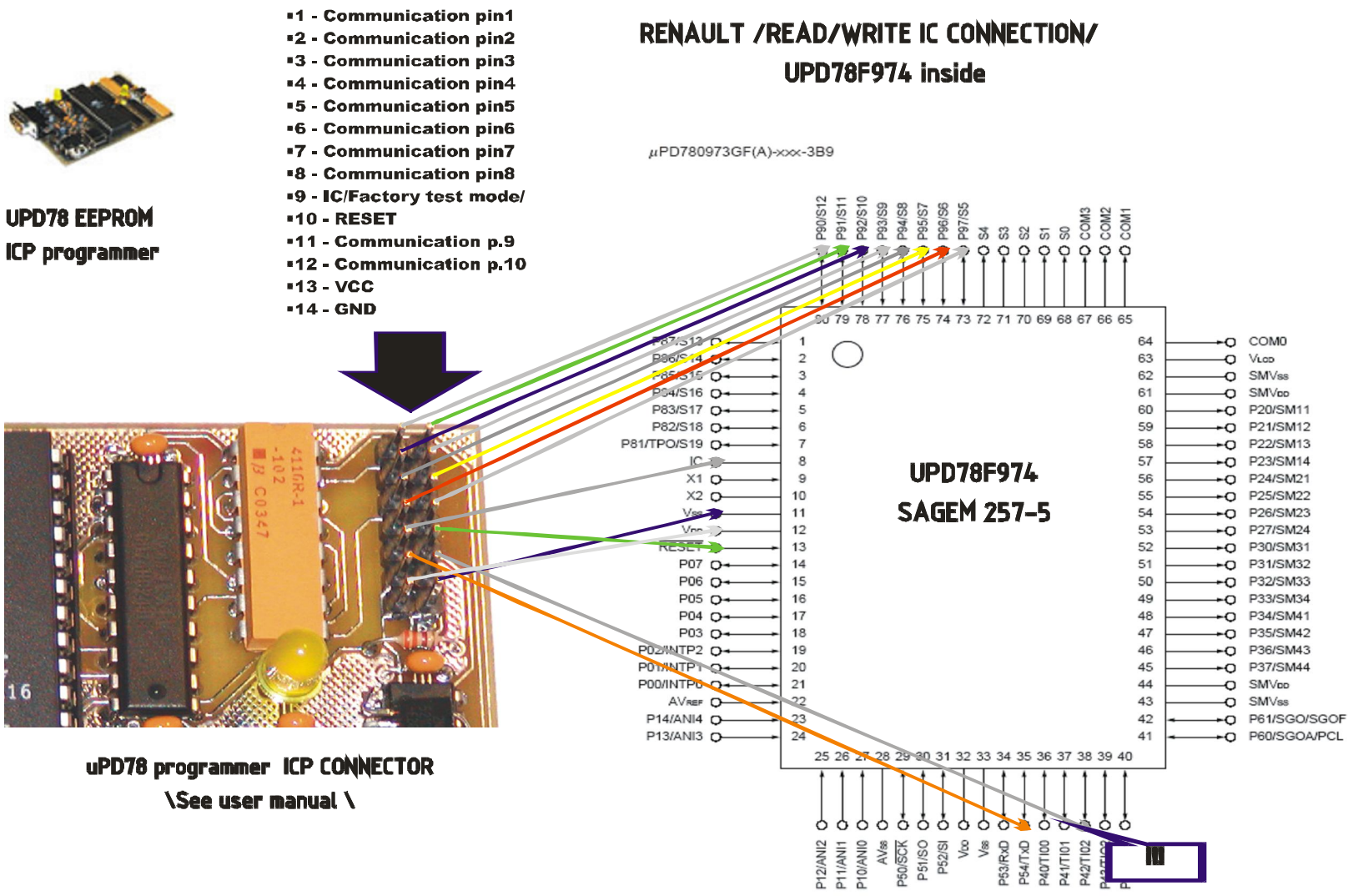
RENAULT /READ/WRITE IC CONNECTION/
UPD78F974 inside
UPD78 EEPROM
ICP programmer
▪1 - Communication pin1
▪2 - Communication pin2
▪3 - Communication pin3
▪4 - Communication pin4
▪5 - Communication pin5
▪6 - Communication pin6
▪7 - Communication pin7
▪8 - Communication pin8
▪9 - IC/Factory test mode/
▪10 - RESET
▪11 - Communication p.9
▪12 - Communication p.10
▪13 - VCC
▪14 - GND
μPD780973GF(A)-xxx-3B9
UPD78F974
SAGEM 257-5
uPD78 programmer ICP CONNECTOR
\See user manual \

Figure 5

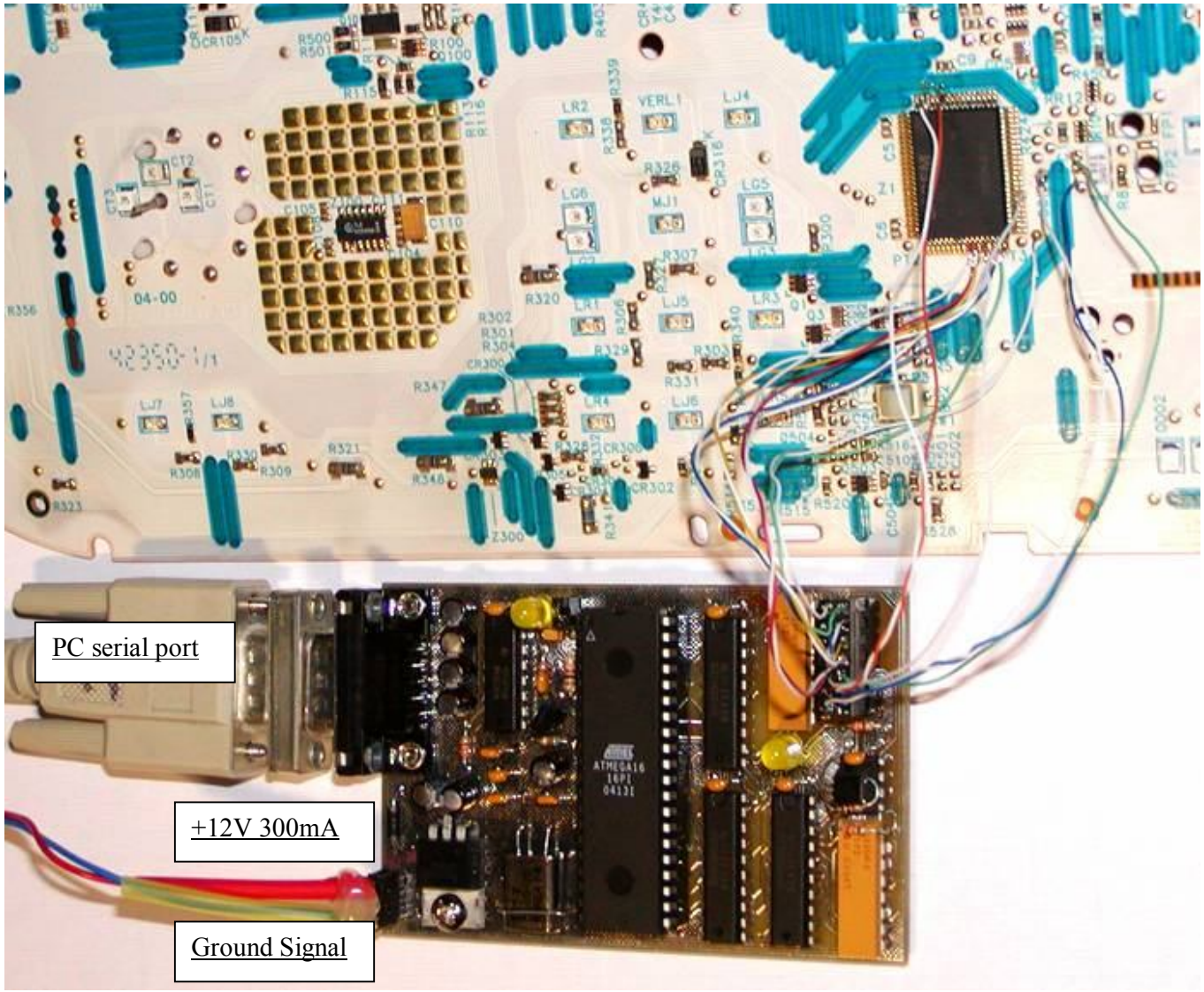

Figure 6

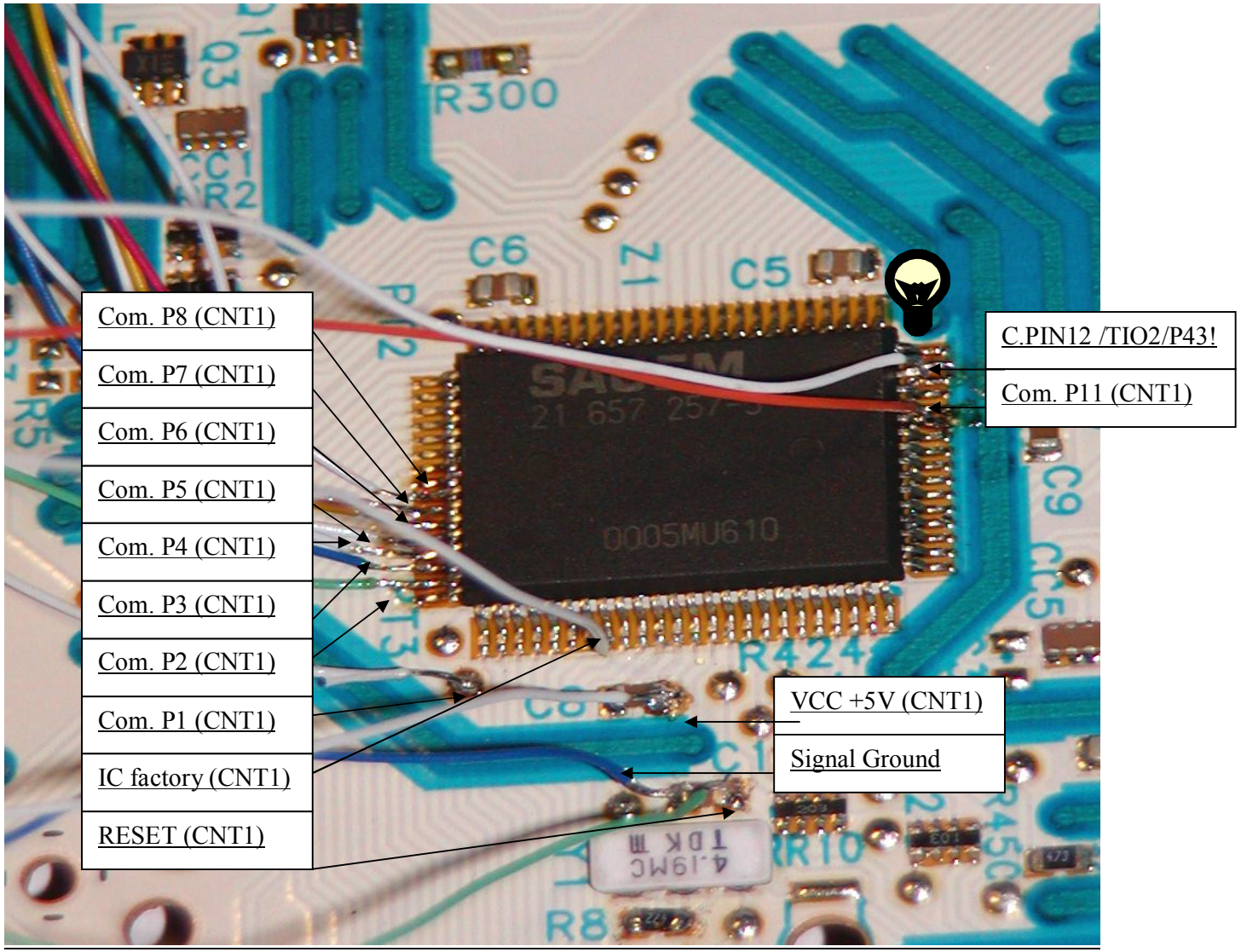
Com. P8 (CNT1)
Com. P7 (CNT1)
Com. P6 (CNT1)
Com. P5 (CNT1)
Com. P4 (CNT1)
Com. P3 (CNT1)
Com. P2 (CNT1)
Com. P1 (CNT1)
IC factory (CNT1)
RESET (CNT1)
C.PIN12 /TIO2/P43!
Com. P11 (CNT1)
VCC +5V (CNT1)
Signal Ground

Figure 7

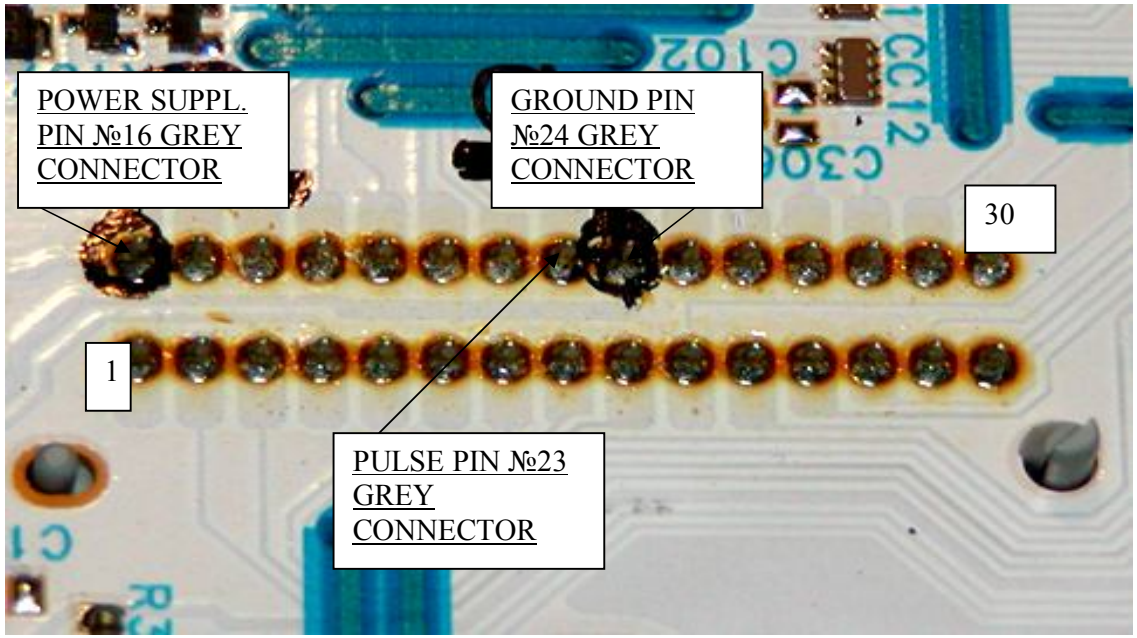

Figure 8

Attention! Read e78prog.pdf users manual before start this work

Warning:

If EEPROM memory data written with incorrect contents (check sum error) you should see on display instead of miles indication error messages. To restore normal operate write correct data contents into EEPROM location

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