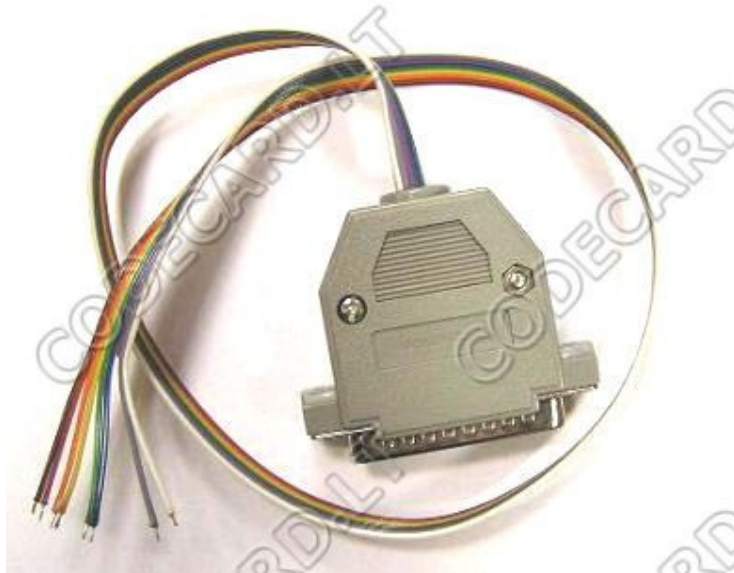
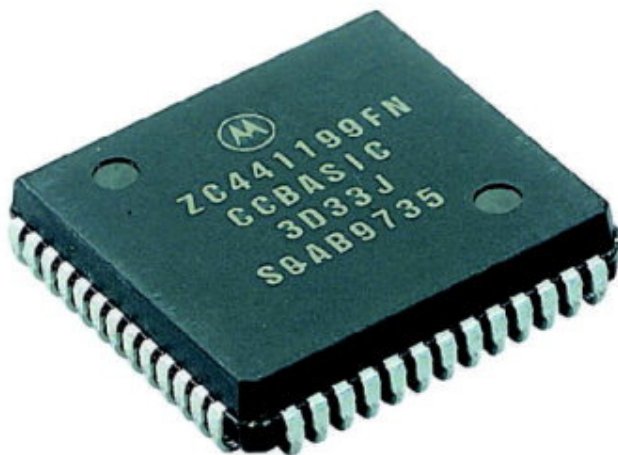


## S4.4 CarProg Motorola HC05 Programmer manual

For Motorola MPU MC68HC11 series programming use A10 cable.



**You can recognize Motorola (Freescale) MPU by maskset:**



This MPU maskset is 3D33J.

- First digit "3" is mask series number, in practice can be 0, 1, 2, 3, 4 or 5, but for programming is not important.

# CARPROG

- Second 4 symbols is always letter + digit + digit + letter: this is processor maskset or encrypted processor type. All processor marking can be custom made, like "FORD S2234234" or SC2323454 but always you can find maskset on Motorola or Freescale processors. This MPU is MC68HC05B8 – because maskset is 3D33J

**Before programming always select right processor type according maskset.**

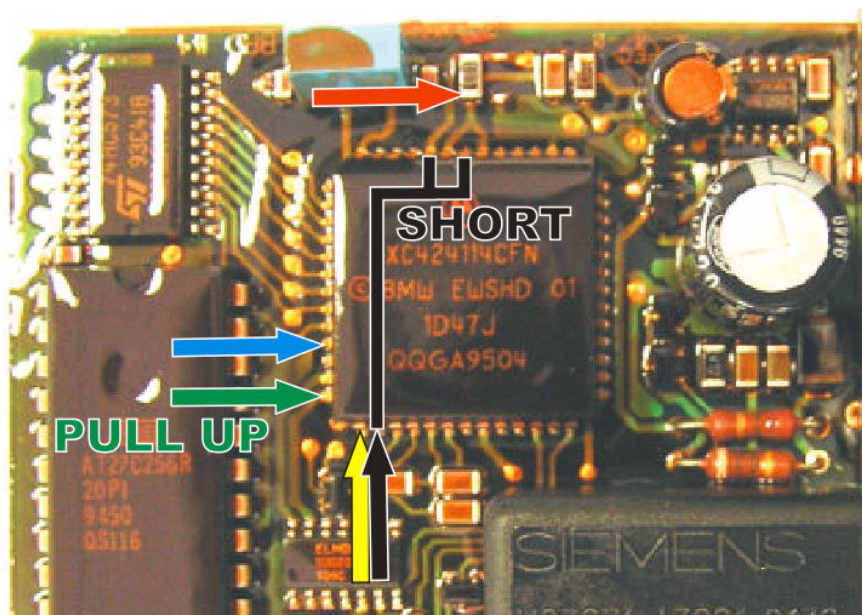
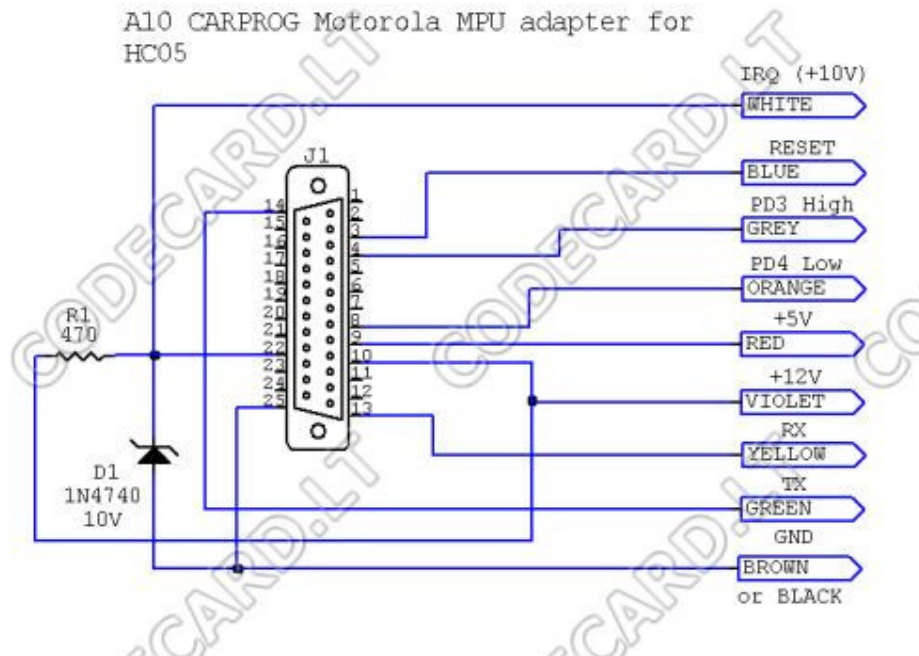


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## How to connect CarProg programmer:

For HC05 programming use A10 cable 7 color wires:

- YELLOW** – communication signal from MPU;
- GREEN** – communication signal to MPU;
- BLUE** – Reset signal to MPU;
- ORANGE** – MODB signal to MPU, low level;
- BROWN** – GND (ground);
- RED** – switched +5V;
- VIOLET** - switched +12V;



**Troubleshooting:**

CarProg ERROR messages:

- **Communication error** - no communication between CarProg and Motorola processor - check MPU type, try to select quartz frequency manually.

To understand better onboard MPU programming problems, you can use table with right programming signals and voltages, described in table.

**If you can't read or write MPU with CarProg, check:**

- did you was select right MPU type;
- did quartz resonator Q is the same in circuit board and in CarProg options;
- did all programming signals have right form and voltage;

A10 cable has 8 color wires:

**YELLOW** – communication signal from MPU;

**GREEN** – communication signal to MPU;

**BLUE** – Reset signal to MPU;













**ORANGE** – PD4 signal to MPU, normally low level, but can by high;

**GREY** – PD3 signal to MPU, normally high level;

**BROWN** – GND (ground);

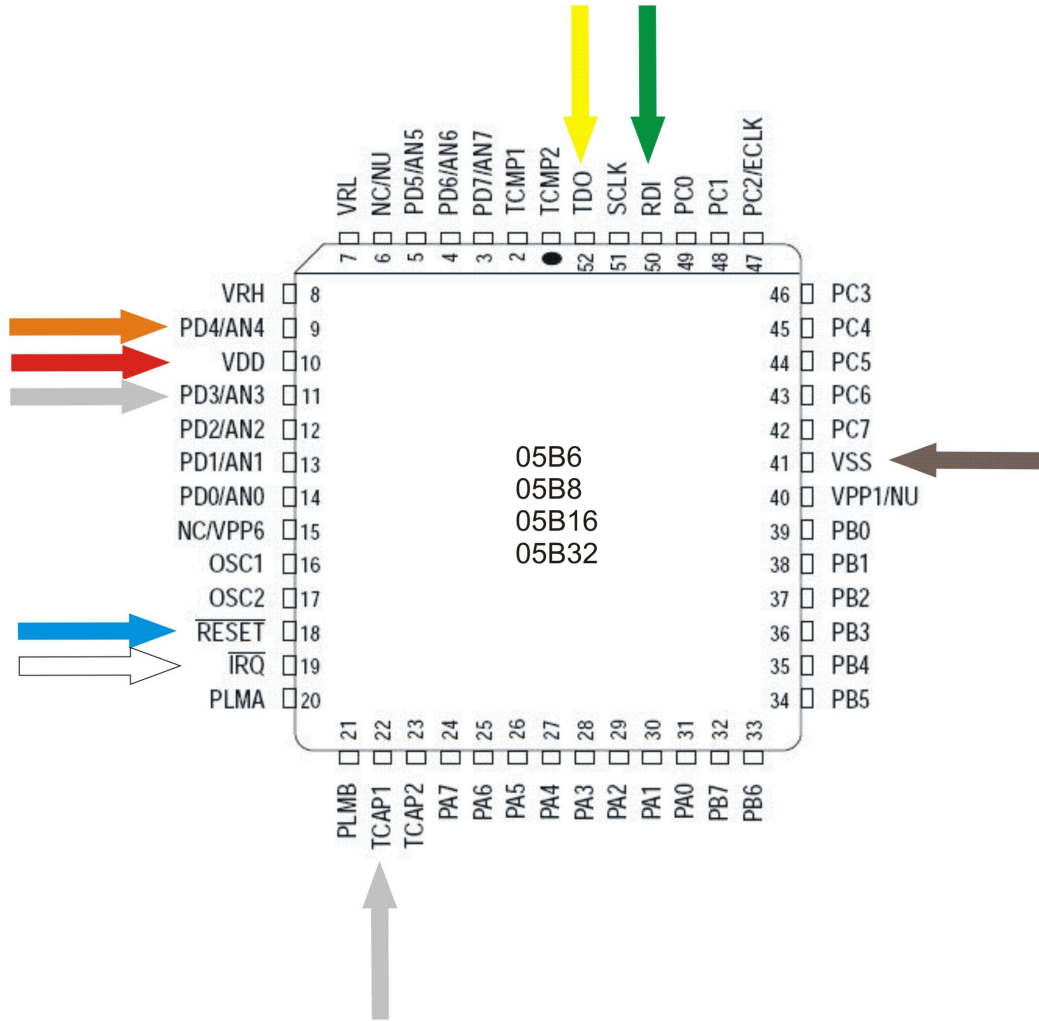
**RED** – switched +5V;

**VIOLET** - switched +12V;

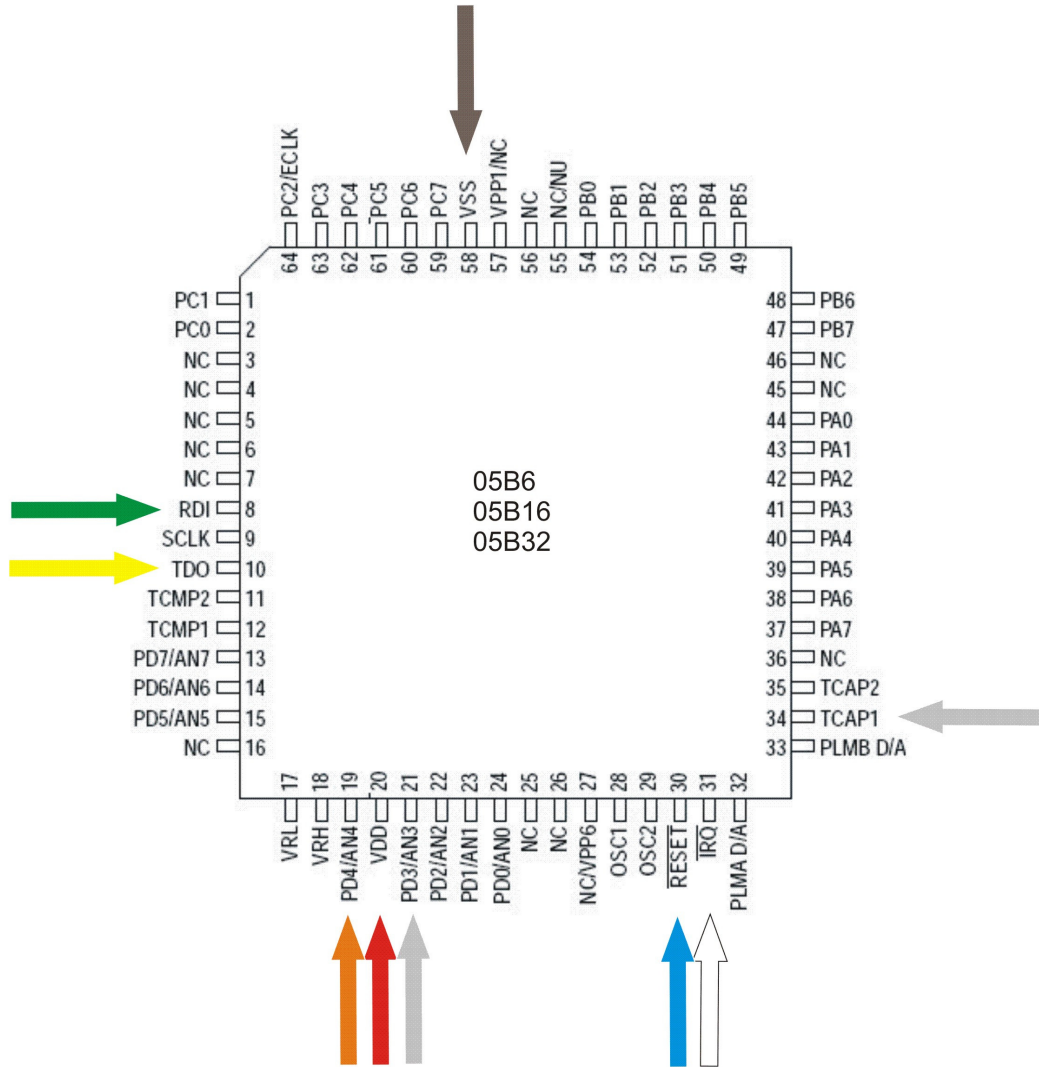
	<b>Yellow TX From MPU</b>	<b>Green RX To MPU</b>	<b>Orange LOW</b>	<b>Blue RESET</b>	<b>Grey</b>	<b>White Vpp</b>
<b>05B6</b> <b>05B8</b> <b>05B16</b> <b>05B32</b> <b>05P3</b> <b>705P3</b> <b>05E6</b> <b>05H12</b>	<b>Impulse 3.3-5V</b> 	<b>Impulse 3.3-5V</b> 	<b>0 V</b> 		<b>+5V</b> 	<b>+9-10 V</b> 
<b>705B16</b> <b>05X32</b> <b>705X32</b>	<b>Impulse +5V</b> 	<b>Impulse +5V</b> 	<b>+5V</b> 		<b>+5V</b> 	<b>+9-10 V</b> 

**1. MC68HC05B6, MC68HC05B8, MC68HC05B16, MC68HC05B32**

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**MPU**  
MC68HC05B6

**Mask Set**  
0B91T  
1C14H,  
2C14H  
0F10V  
1E50H

**MPU**  
MC68HC05B8

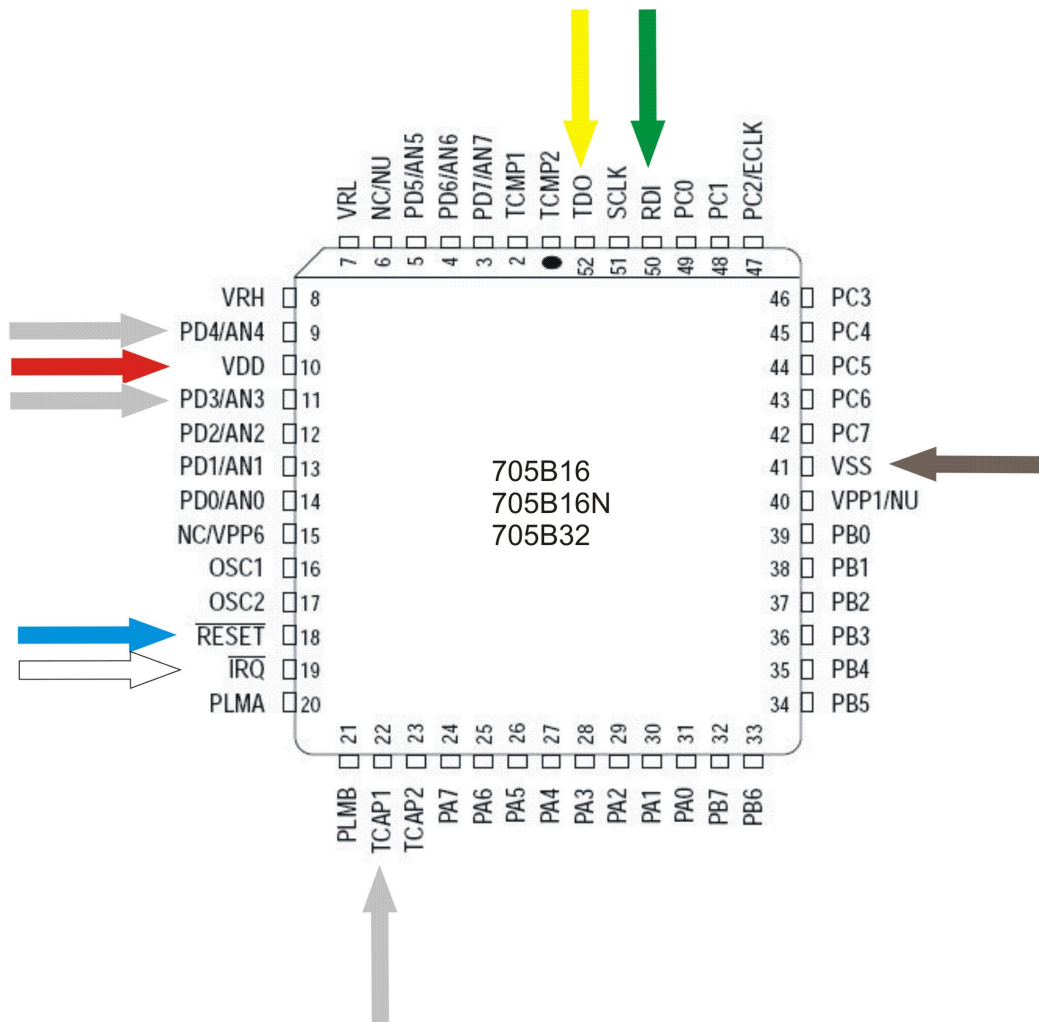
**Mask Set**  
0B83T  
3D33J  
0D54J

**MPU**  
MC68HC05B16

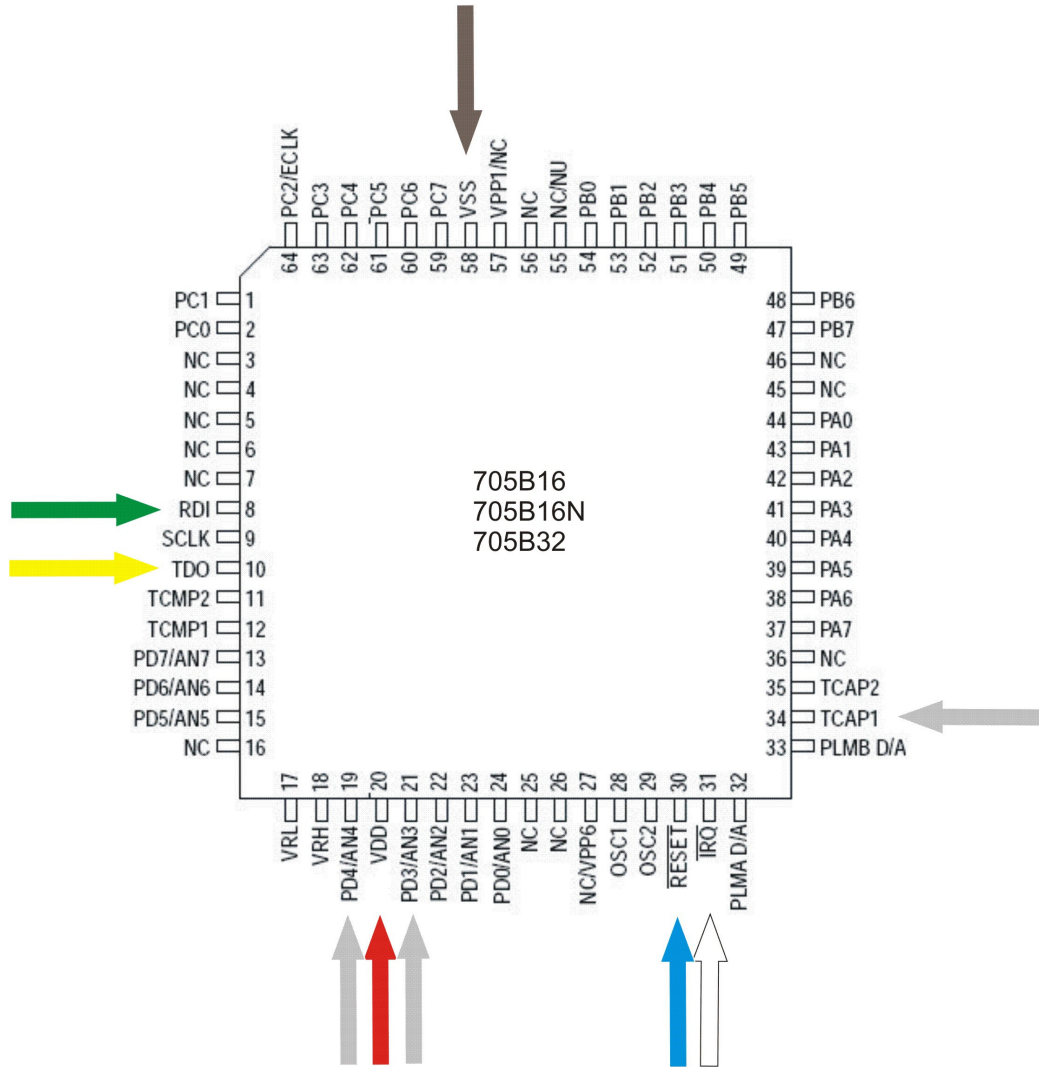
**Mask Set**  
0D20J,  
1D20J,  
2D20J,  
3D20J

0D60J  
 0F62J  
 1G28F  
 1G35N,  
 2G35N

**2. MC68HC705B16, MC68HC705B16N, MC68HC705B32**



# CARPROG



**MPU**  
MC68HC705B16

**Mask Set**  
0D28J  
F56K

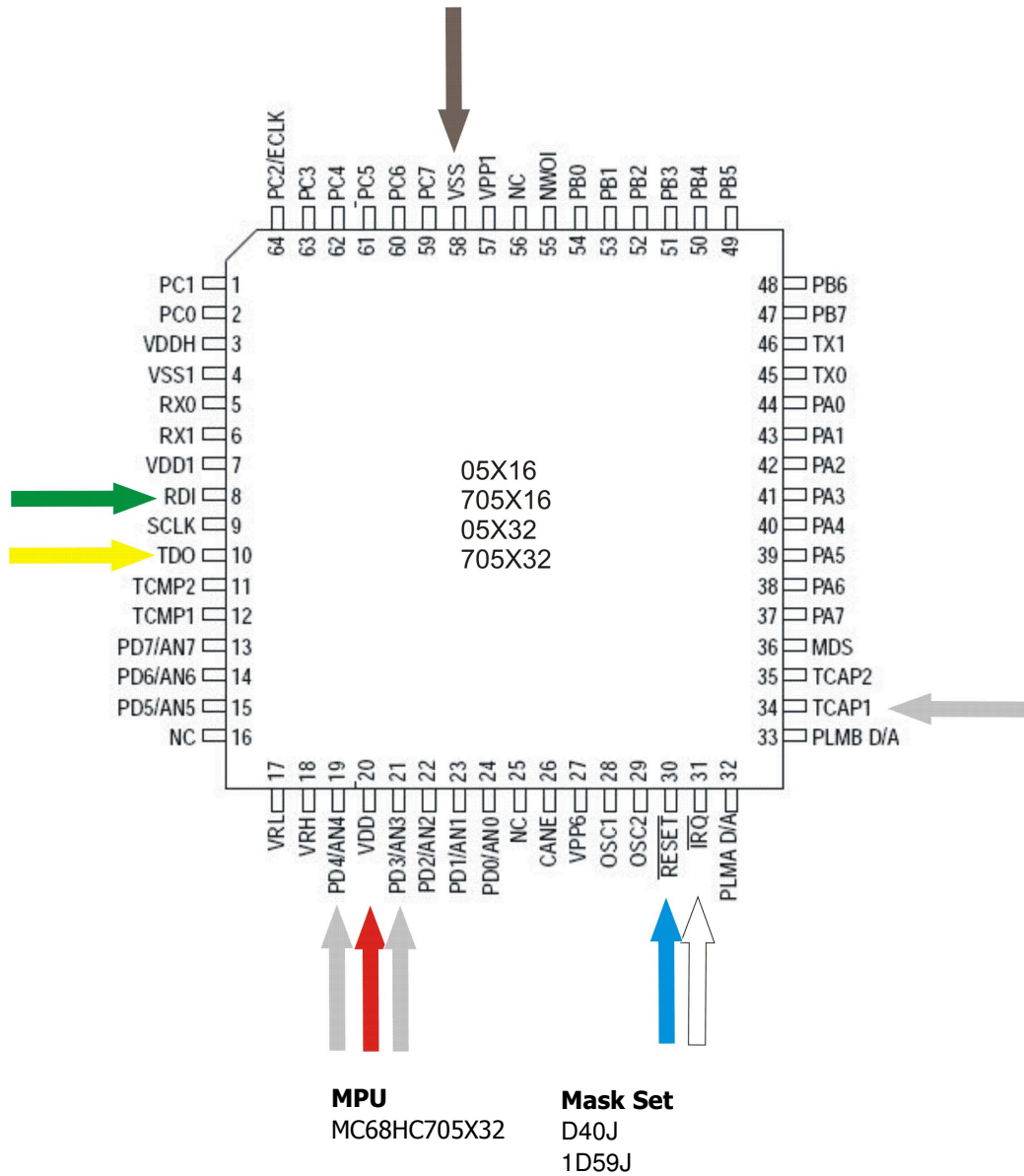
**MPU**  
MC68HC705B32

**Mask Set**  
G41V  
3G96A  
K20C  
D40J  
D59J

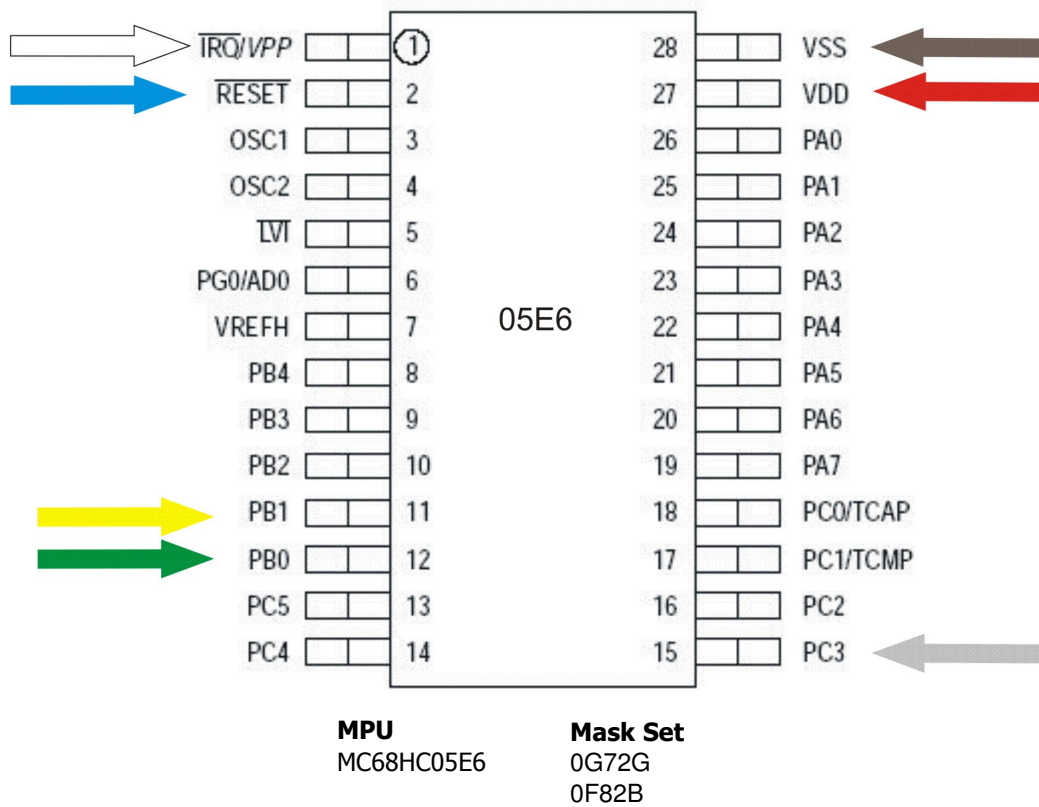
### 3. MC68HC05X16, MC68HC05X32, MC68HC705X32



# CARPROG

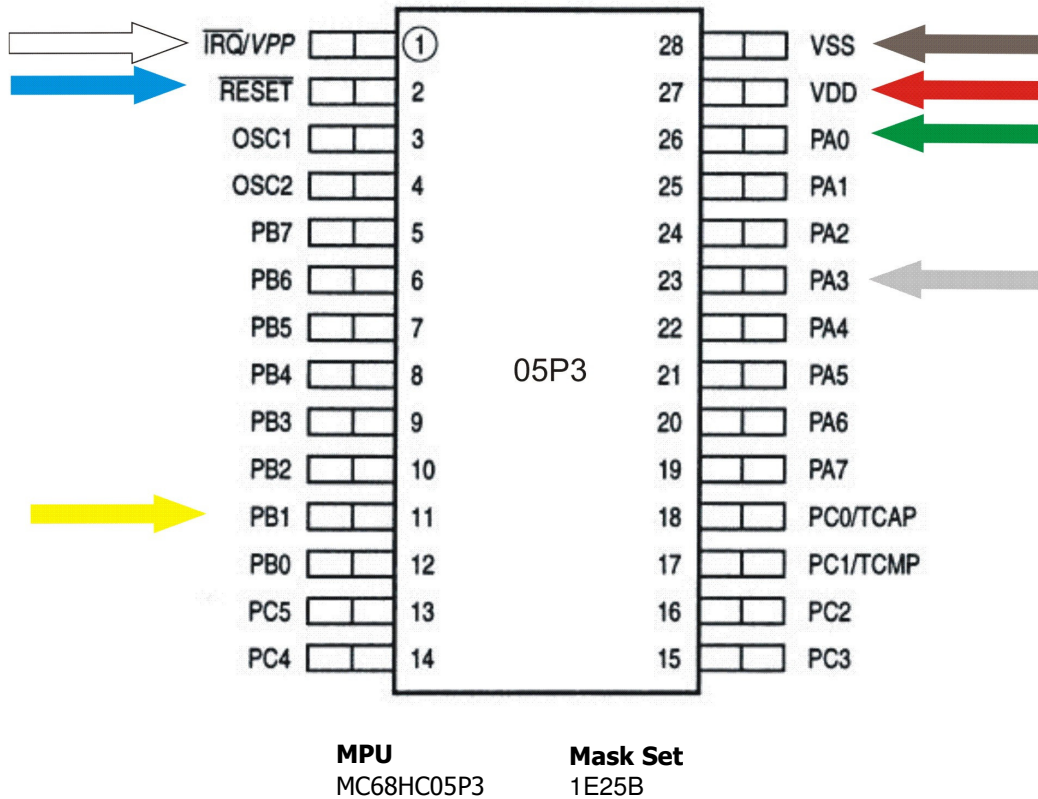


### 3. MC68HC05E6



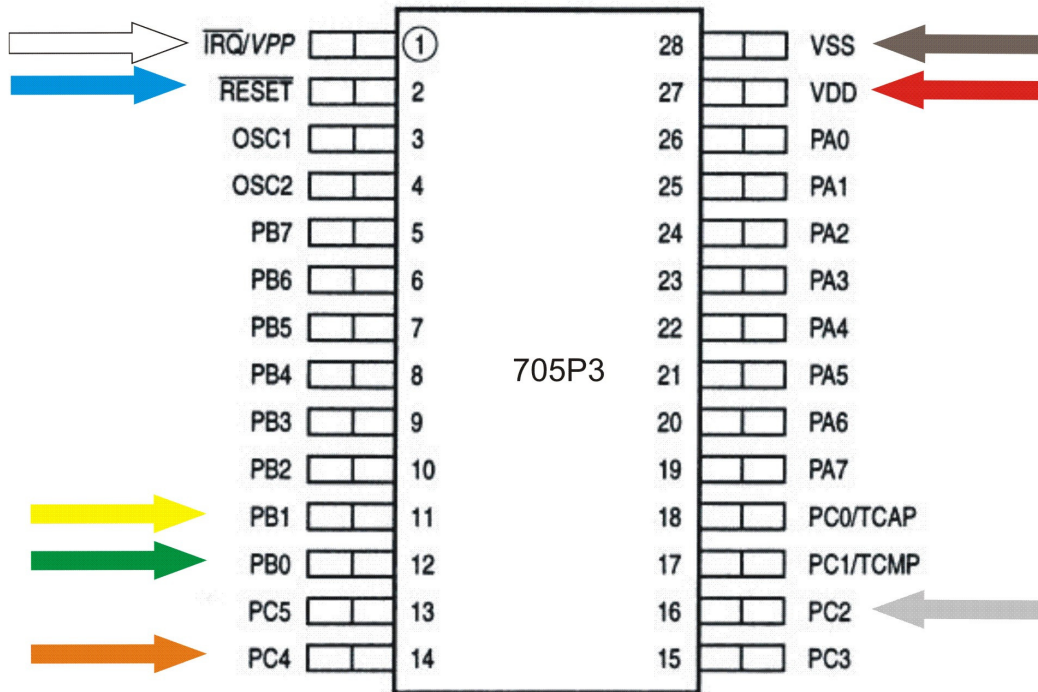
## 5. MC68HC05P3

# CARPROG



## 6. MC68HC705P3

# CARPROG

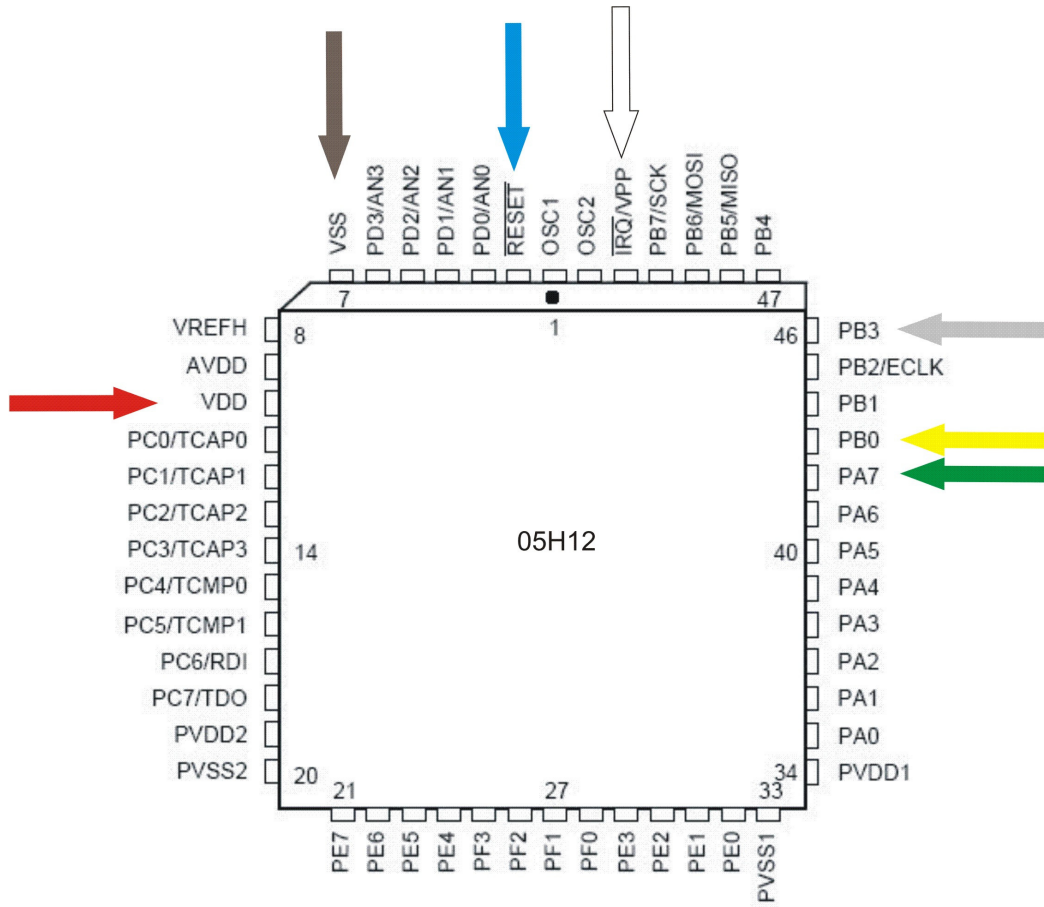


**MPU**  
MC68HC705P3

**Mask Set**  
1F75B

## 7. MC68HC05H12

# CARPROG



**MPU**                      **Mask Set**  
 MC68HC05H12              0H57A