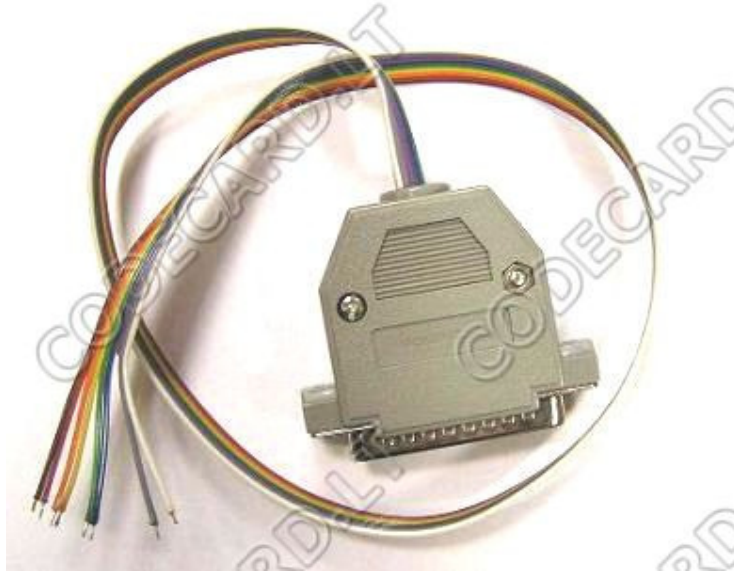
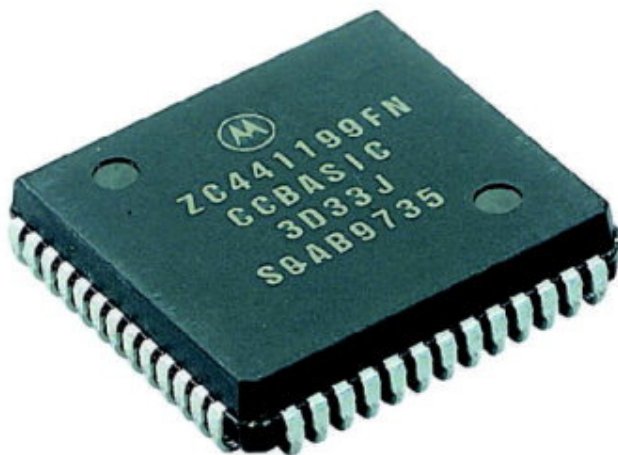


S4.4 CarProg Motorola HC05 Programmer manual

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.

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- 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.

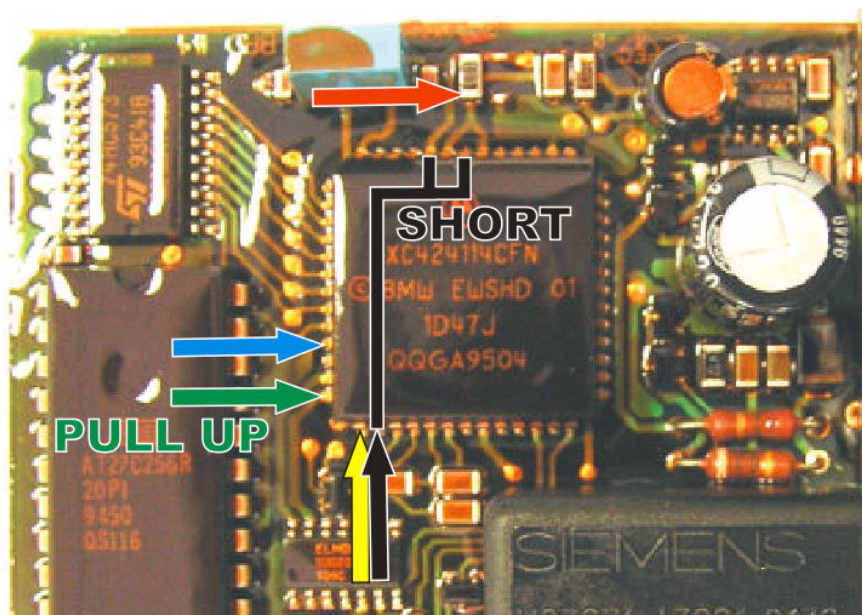
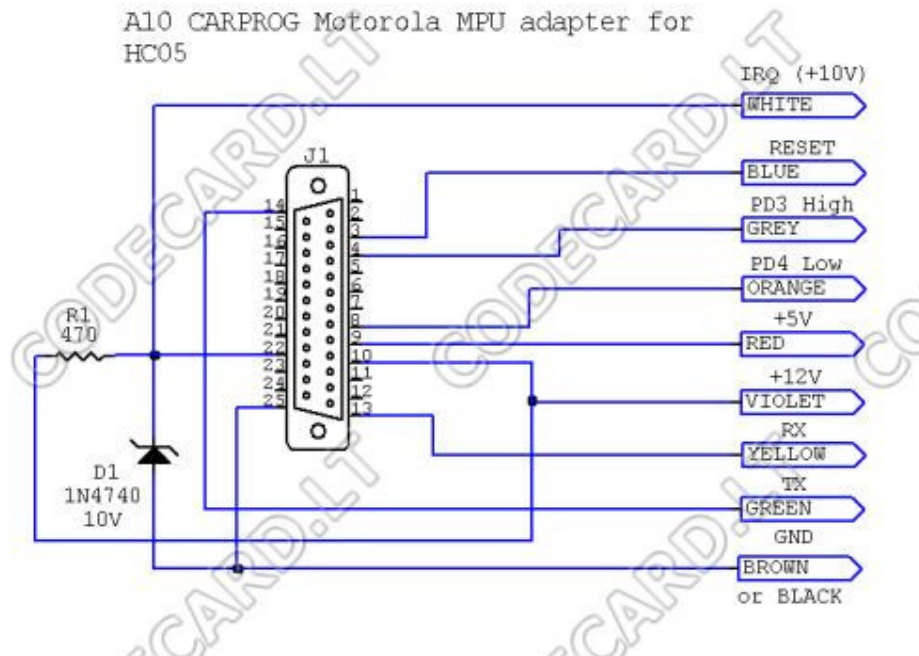


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How to connect CarProg programmer:

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);

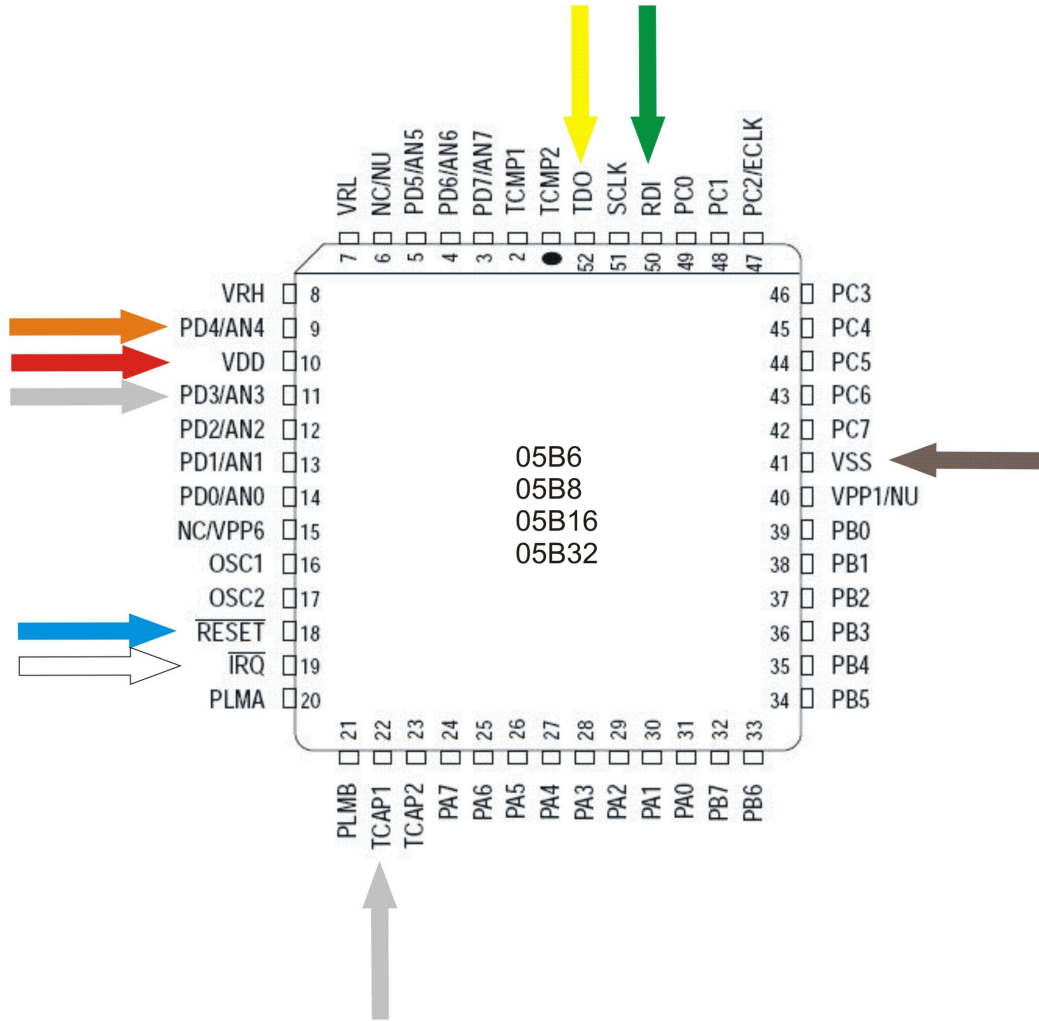
RED – switched +5V;

VIOLET - switched +12V;

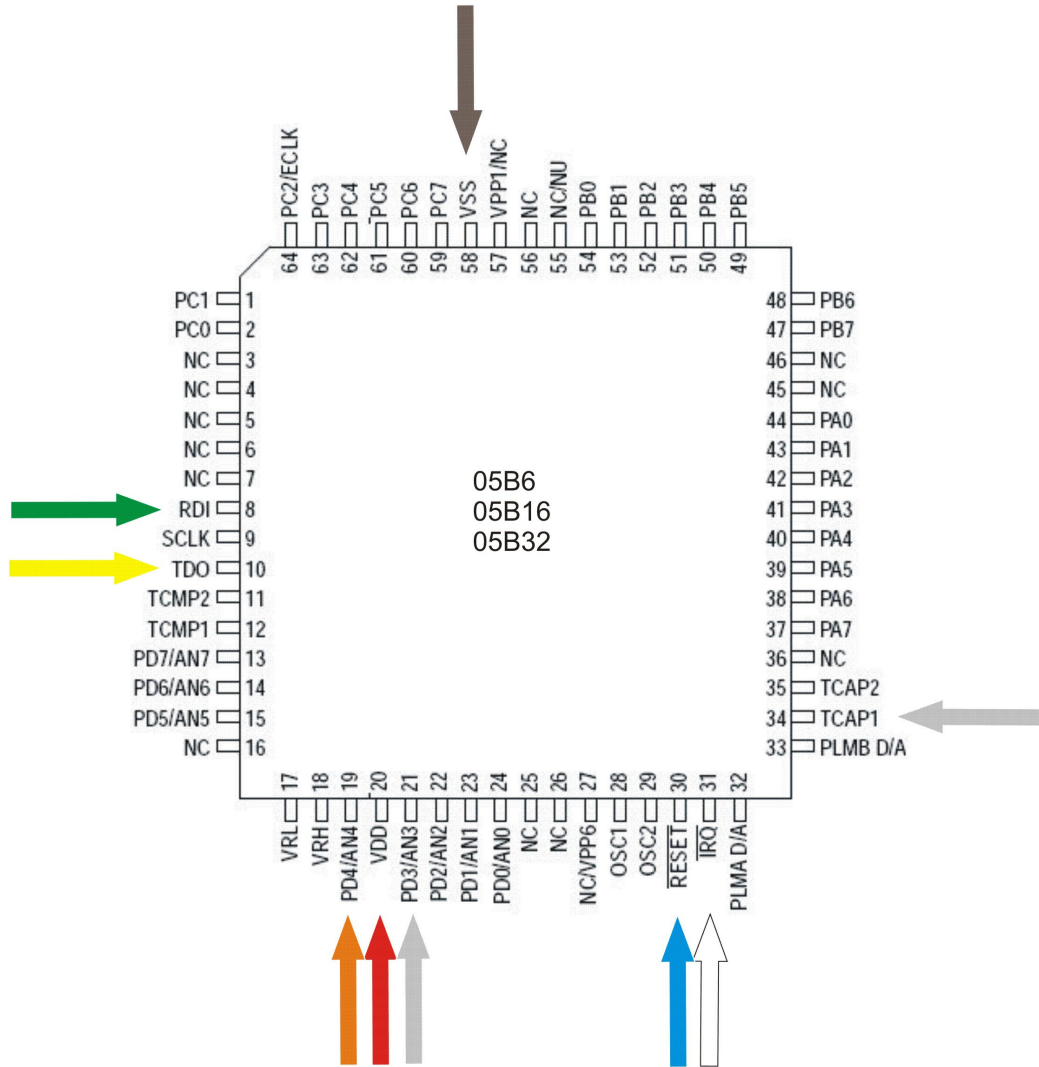
	Yellow TX From MPU	Green RX To MPU	Orange LOW	Blue RESET	Grey	White Vpp
05B6 05B8 05B16 05B32 05P3 705P3 05E6 05H12	Impulse 3.3-5V 	Impulse 3.3-5V 	0 V 		+5V 	+9-10 V 
705B16 05X32 705X32	Impulse +5V 	Impulse +5V 	+5V 		+5V 	+9-10 V 

1. MC68HC05B6, MC68HC05B8, MC68HC05B16, MC68HC05B32

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MPU
MC68HC05B6

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

MPU
MC68HC05B8

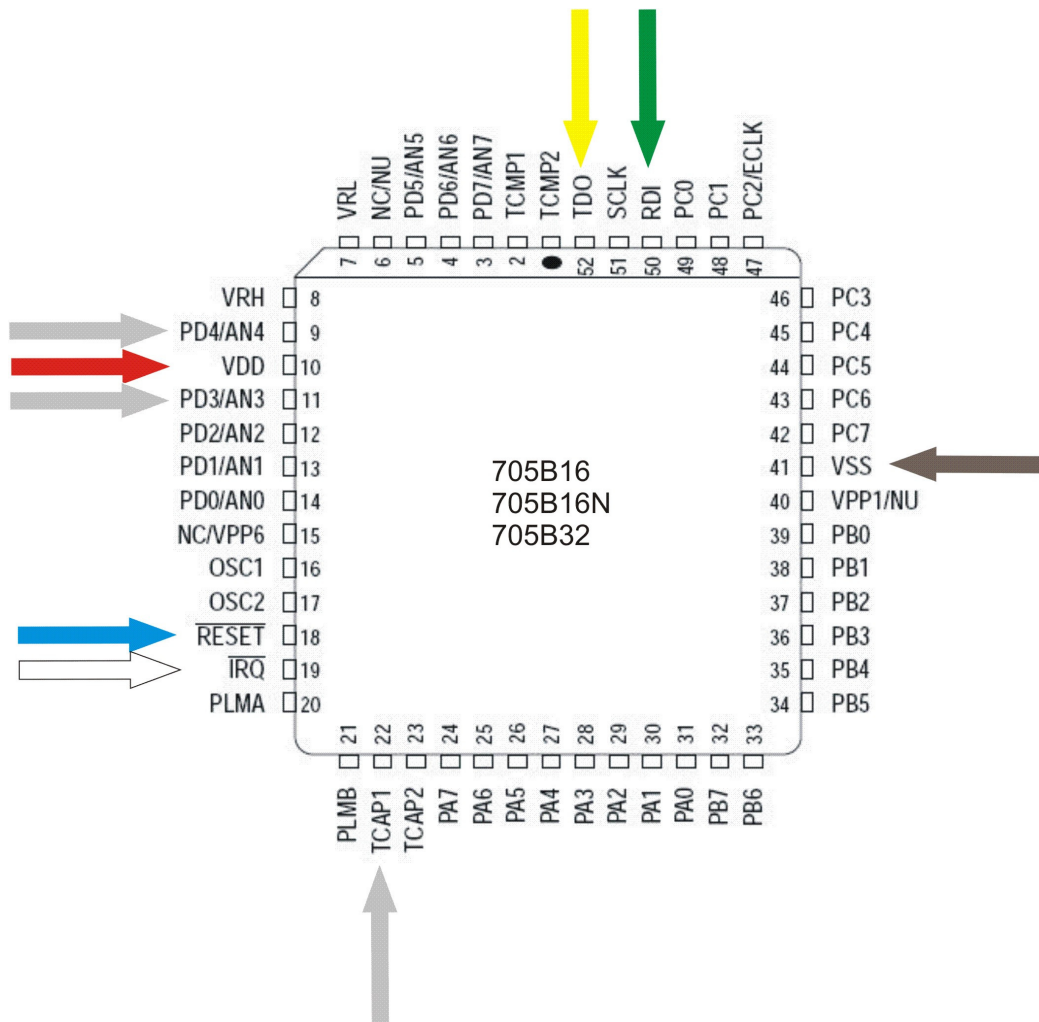
Mask Set
0B83T
3D33J
0D54J

MPU
MC68HC05B16

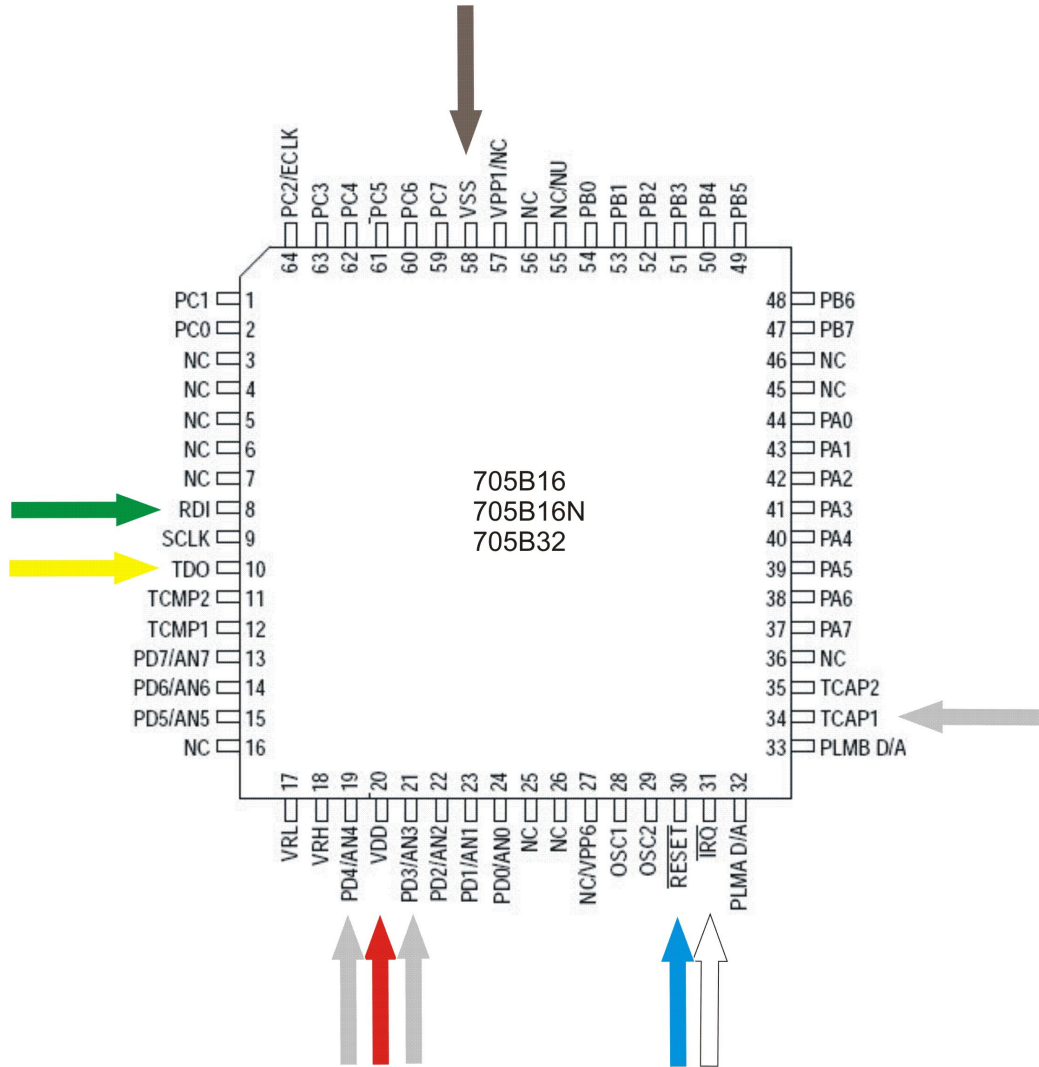
Mask Set
0D20J,
1D20J,
2D20J,
3D20J

0D60J
 0F62J
 1G28F
 1G35N,
 2G35N

2. MC68HC705B16, MC68HC705B16N, MC68HC705B32



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MPU
MC68HC705B16

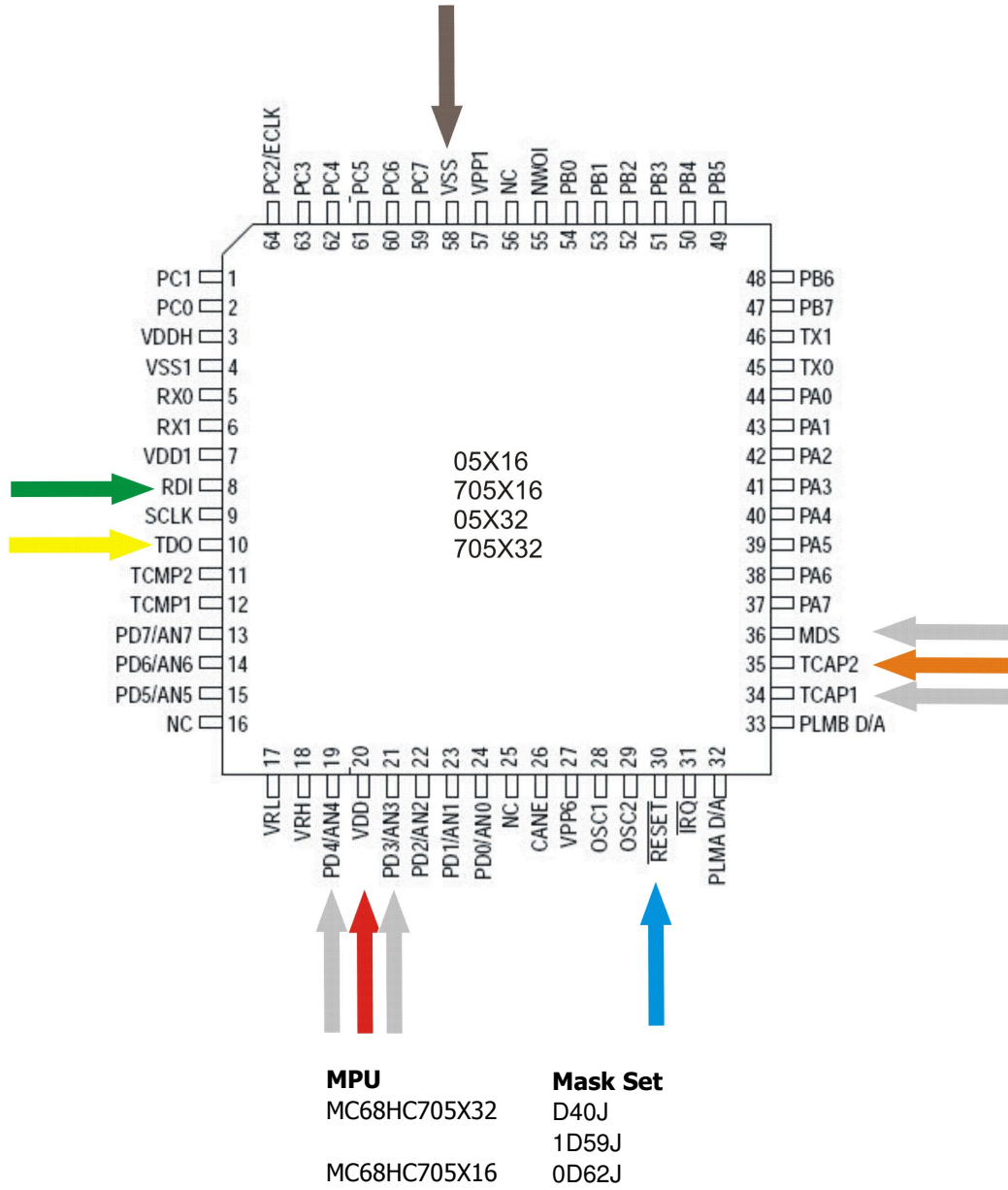
Mask Set
0D28J
F56K

MPU
MC68HC705B32

Mask Set
G41V
3G96A
K20C
D40J
D59J

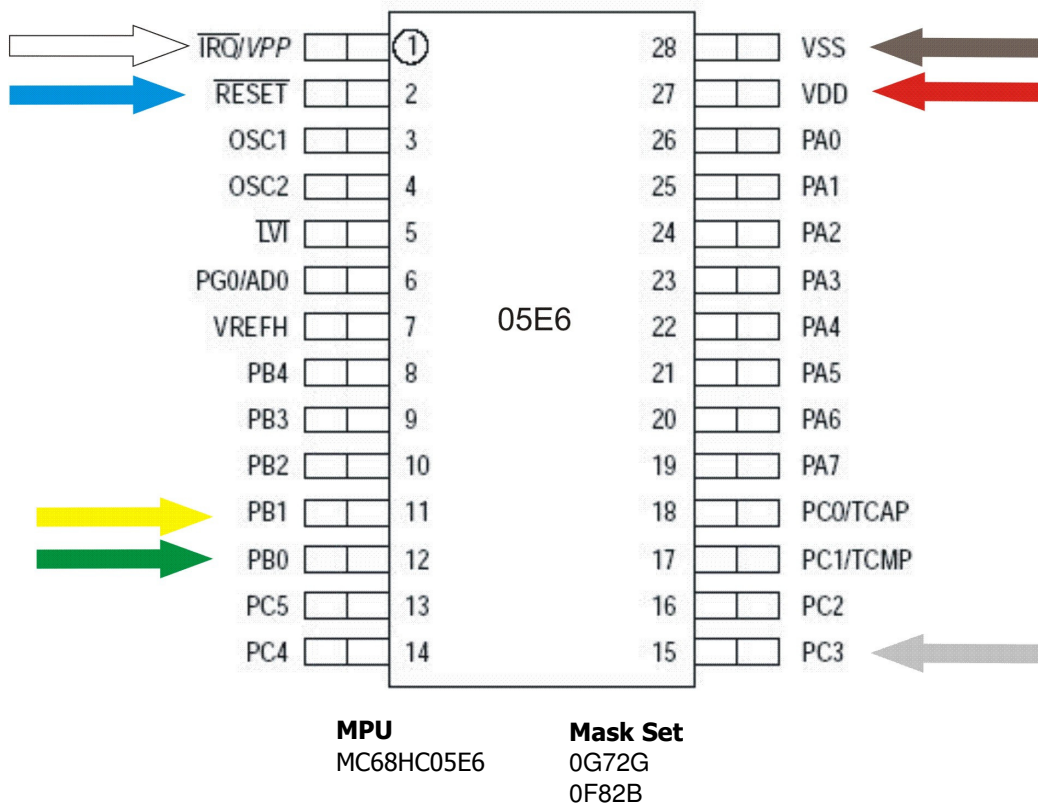
3. MC68HC05X16, MC68HC05X32, MC68HC705X32

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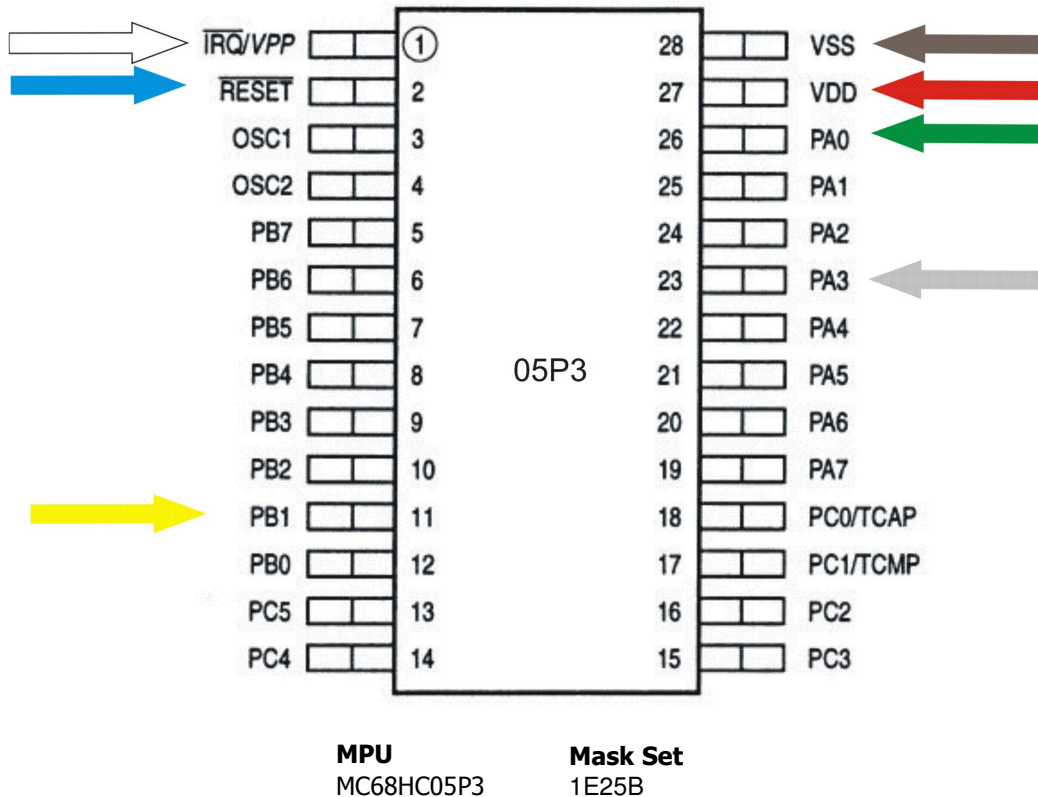
3. MC68HC05E6

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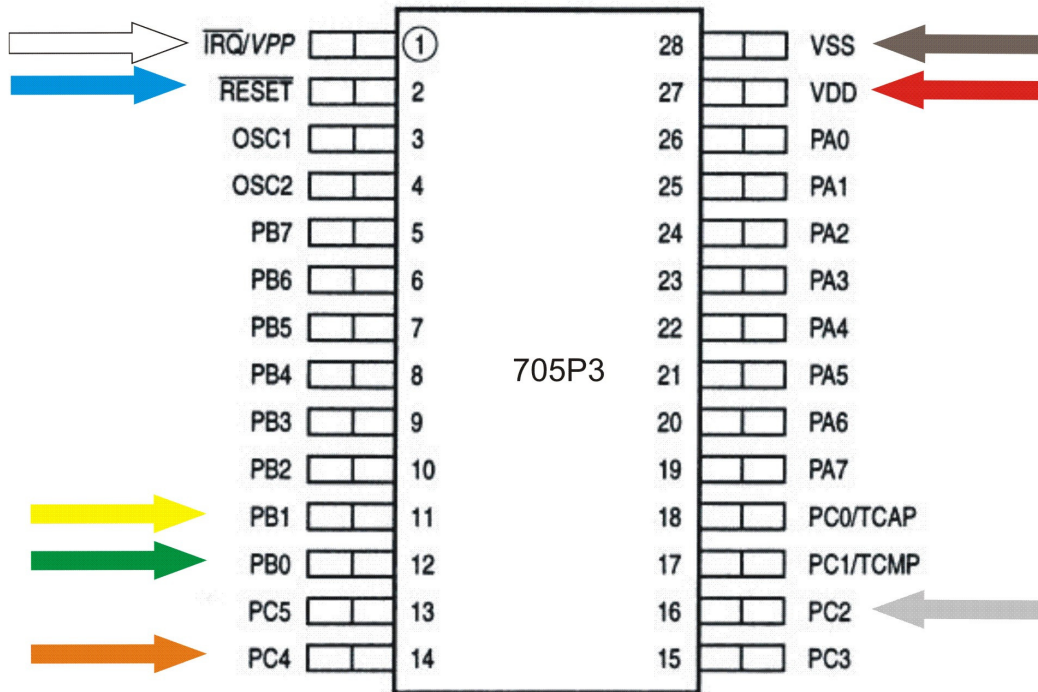
5. MC68HC05P3

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6. MC68HC705P3

CARPROG

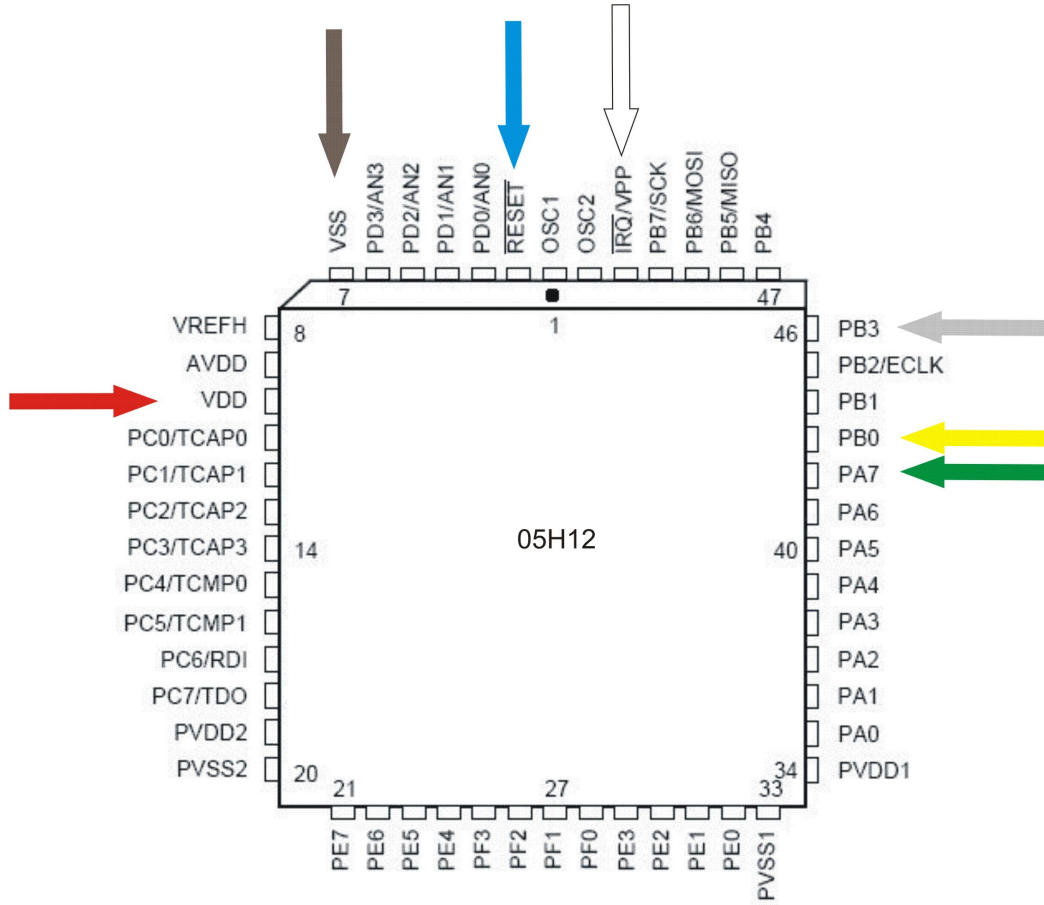


MPU
MC68HC705P3

Mask Set
1F75B

7. MC68HC05H12

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MPU
MC68HC05H12

Mask Set
0H57A