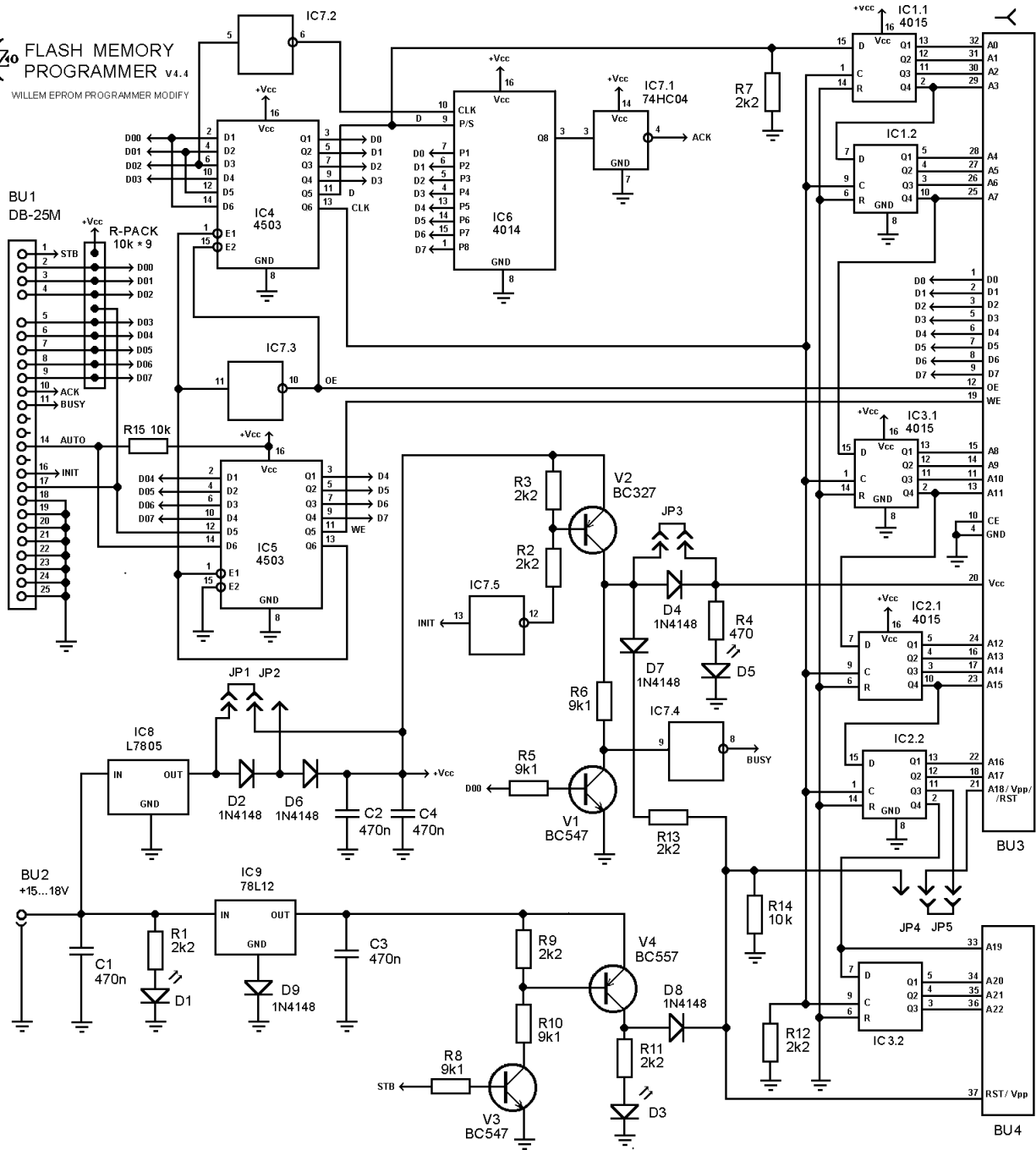
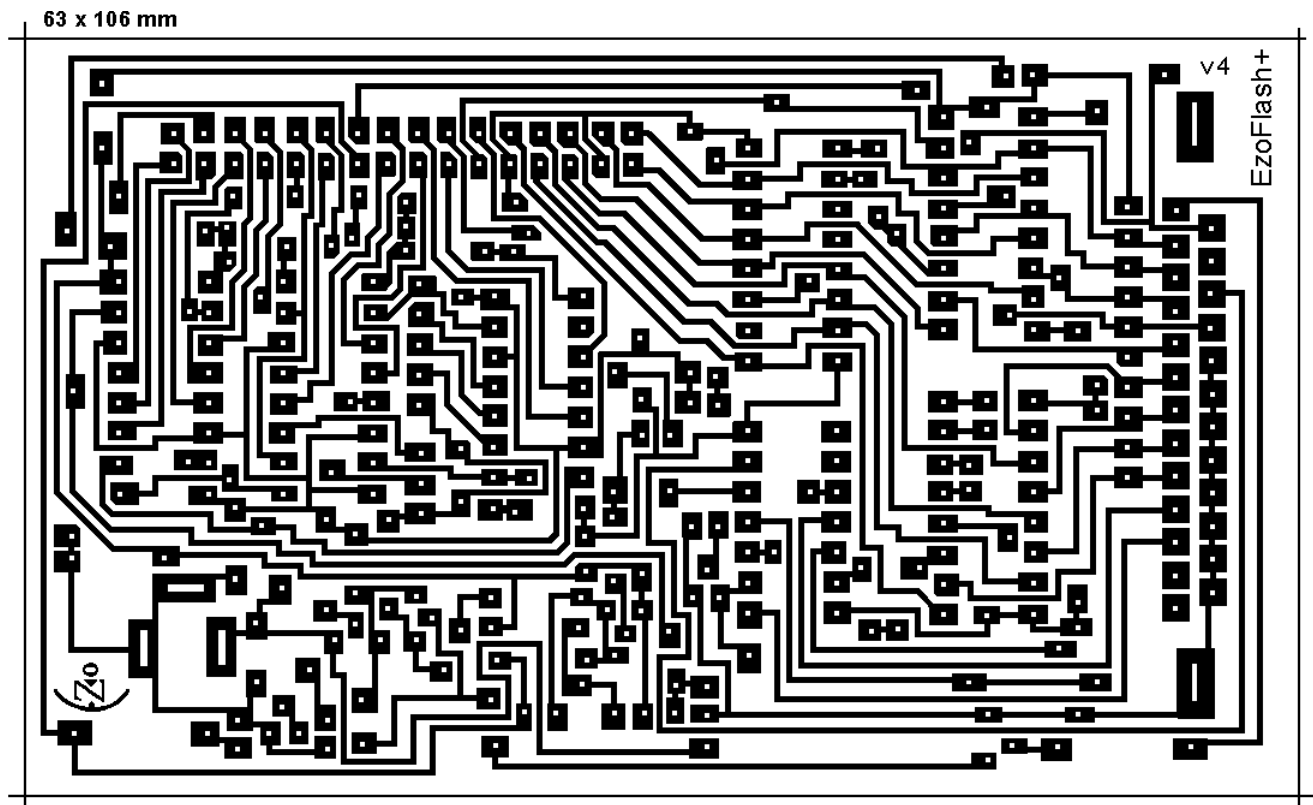
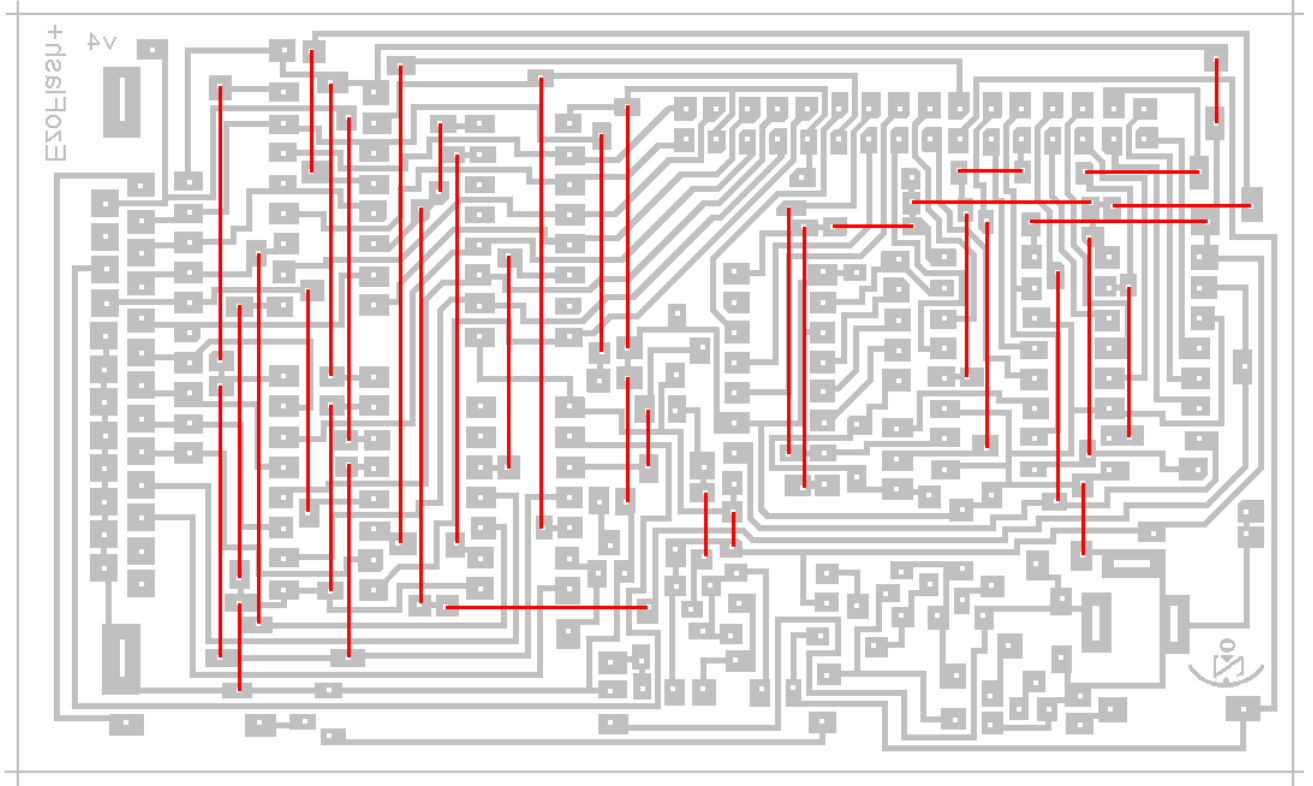


# FLASH MEMORY PROGRAMMER V4.4

WILLEM EPROM PROGRAMMER MODIFY







#### EZoFlash+ (v4.4) programmer. Part list

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IC1..IC3 - 4015  
IC4..IC5 - 4503  
IC6 - 4014  
IC7 - 74HC04  
IC8 - L7805  
IC9 - 78L12  
V2 - BC327  
V4 - BC557  
V1, V3 - BC547  
D1 - LED, green, 3mm diameter  
D3 - LED, yellow, 3mm diameter  
D5 - LED, red, 3mm diameter  
D2, D4, D6..D9 - 1N4148 or KD522  
C1..C4 - 470n  
R1..R3, R7, R9, R11..R13 – 2k2  
R4 - 470  
R5..R6, R8, R10 - 9k1 or 10k  
R14, R15 - 10k  
R-PACK – 10k x 9  
BU1 - D-Sub 25 poles male connector with angled solder pins  
BU2 - Chassis connector 2.5mm for PCB  
BU3 - Strip connector socket, division 2.54 , 2x16  
BU4 - Strip connector socket, division 2.54 , 1x5  
JP1..JP3 – Straight pin header, division 2.54, 1x6 (one pin is removed) / Jumper , division 2.54 (2pcs)  
JP4..JP5 – Straight pin header, division 2.54, 1x3 / Jumper, division 2.54 (1pc)

#### EZoFlash+ versions.

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EZoFlash 3 – test sample, non-public (limited trial users)

EZoFlash 4 – same functionality.

- Added diod and jumper to reduce flash voltage to +3.0V
- Changed Vpp/Reset management on pin37 (D7,D8,JP4).
- Changed 78L05 to L7805. High Vin, erase or write action on some flash types may cause thermal overload protection on ezoflash3 regulator 78L05.

EZoFlash 4v2

- Added resistor R14 10k. Voltage may increase >5V on RST/Vpp pin in standby mode due to high impedance (no load for line V4,D8 )
- Programmer PCB design modified.

EZoFlash 4v3

- Transistor V2 BC557 replaced with BC327. The change required for EPROM 27C.. and DC2DC adapters use. BC327 has I<sub>cmax</sub>=500mA, BC557- 100mA. No changes in PCB design.

EZoFlash 4v4

- Pull-up resistors added in D0..D7, AUTO and SELIN lines
- Programmer PCB design modified