## RESISTOR VALUES

R47 is a 0-ohm resistor, so it's just a jumper. Solder a wire in that spot.

R2 is labeled with a value of 470 ohm, but it is better to solder a resistor with a Little les value. 330 ohm or 270 ohms. (a resistor of 330 ohm is included in the kit instead).

R46 is labeled as 680 ohms but may have to be adjusted depending on some specific mounting circumstances.

If you experiment video troubles you can adjust the value of R2 and R47 installing a 1K potentiometer in R2 position and a 5K pot in R47.

Too low a value of R2 will result in a shaky display, while too high a value will result in garbled characters.

Too low a value of R47 will show a vertical bar in front of some inverted characters.

Use the following program to be able to adjust the pots:

*10 FOR N = 0 TO 255*

*20 PRINT CHR$(N);” “;*

*30 NEXT N*

Run the program and try to adjust the pots. When you find the correct values, you can measure the resistance and to change both pots with resistors.

## JUMPERS and DIP SWITCH

### S4 JUMPER (S23A BEHAVIOR).

This jumper allows you to select the function of pin S23A of the expansion connector.

For better compatibility with ZX81 peripherals put this jumper in position 2-3, while for maximum compatibility with ZX80 peripherals remove the jumper.

### JP2 JUMPER (VIDEO MODE)

Position 2-3 will display black characters on a white background, while position 1-2 will display white characters on a black background.

### SW2 (DIP SWITCH)

Let’s select the active ROM.

Switch 1 will select ZX80/81 mode.

In the following table you can see the ROMs preinstalled:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#ROM** | **BIN** | **DESCRIPTION** | **ADDR** | **MODE** |
| 0 | 000 | zx80 | 0000 | ZX80 |
| 1 | 001 | aszmic (z80 assembler os) | 2000 | ZX81 |
| 2 | 010 | aszmic (z80 assembler os) | 4000 | ZX80 |
| 3 | 011 | zx81.edition1 | 6000 | ZX81 |
| 4 | 100 | zx81.edition2 | 8000 | ZX80 |
| 5 | 101 | zx81.edition2 | A000 | ZX81 |
| 6 | 110 | zx81.edition3 | C000 | ZX80 |
| 7 | 111 | zx81.edition3 | E000 | ZX81 |