
sinclair
ZX Spectrum
BLUE EDIT 1 DEF FN
RED CAPS LOCK 2 FN
MAGENTA TRUE VIDEO 3 LINE
GREEN INV. VIDEO 4 OPEN #
CYAN 5 CLOSE #
YELLOW 6 MOVE
WHITE 7 ERASE
8 POINT
GRAPHICS 9 CAT
BLACK DELETE 0 FORMAT
SIN Q <= PLOT ASN
COS W <> DRAW ACS
TAN E >= REM ATN
INT R < RUN VERIFY
RND T > RAND MERGE
STR $ Y AND RETURN [
CHR $ U OR IF]
CODE I AT INPUT IN
PEEK O ; POKE OUT
TAB P " PRINT ©
READ A STOP NEW ~
RESTORE S NOT SAVE |
DATA D STEP DIM \
SGN F TO FOR {
ABS G THEN GOTO }
SQR H ↑ GOSUB CIRCLE
VAL J - LOAD VAL $
LEN K + LIST SCREEN $
USR L = LET ATTR
ENTER
CAPS SHIFT
LN Z : COPY BEEP
EXP X £ CLEAR INK
L PRINT C ? CONT PAPER
L LIST V / CLS FLASH
BIN B * BORDER BRIGHT
IN KEY $ N , NEXT OVER
PI M . PAUSE INVERSE
SYMBOL SHIFT
BREAK SPACE

ZX Spectrum Rainbow led case

Assembly manual v1.2 – June 2018

Introduction

Thank you for ordering this piece of creativity: I designed - well, actually built - the first in a moment I wanted some distraction.
I never got so many response to a photo I uploaded before!

Thanks go to Djordje Mitic for the awesome white replica cases and semi-transparent key mats!

Power supply

The power circuit uses the 9V input of the ZX Spectrum to avoid overloading the 5V regulator.
The circuit makes sure the led brightness is independent of the input voltage.

The circuit and leds have been tested thoroughly.

-Warning-

Make sure to properly connect the supply voltage wires!
If connected wrongly the power board will get damaged and needs to be replaced.

Take care against scratches

Make sure to protect the top part of the case as it scratches easily!

Compatible ZX Spectrum boards

The Rainbow led case has been tested with:

- Standard ZX Spectrum 48K board
- Harlequin 48 rev G board

Details for these are found on the next pages.

All other boards that fit in a 'rubber key' ZX Spectrum case should be compatible.
Just make sure there are no parts of the board touching the small power supply circuit present in the top part of the Rainbow led case.
You will need to find a suitable contacts to solder the supply wires for the circuitry to.

Original ZX Spectrum 16K/48K board

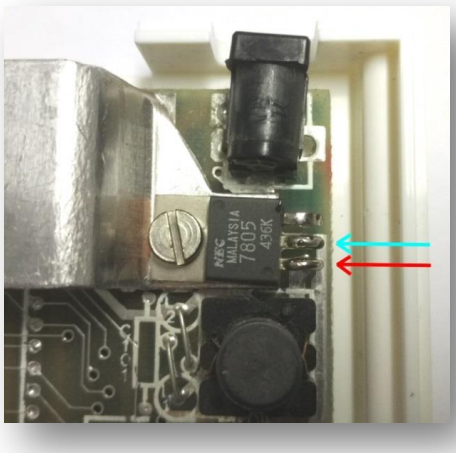

Fig 1

Fig 2

Pre-solder the pins of the 7805 voltage regulator as shown in figure 1.
Then solder the wires to the 7805 as shown in figure 2 (the blue arrow indicates the black wire connection).

Always double check if there are no short circuits!

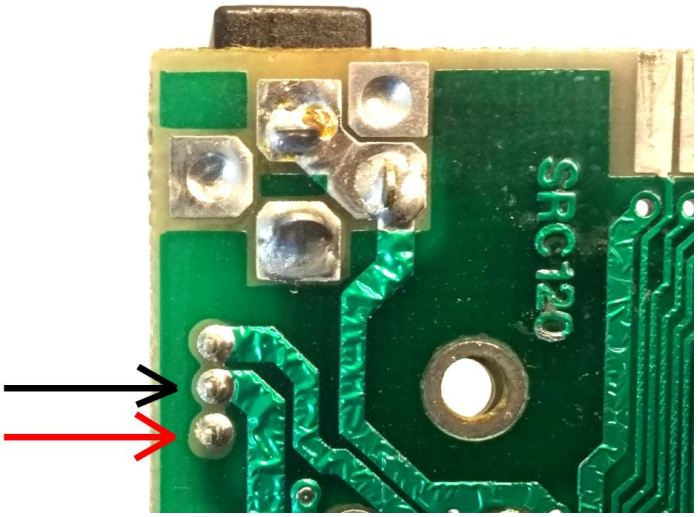

Fig 3

In case the 7805 has been replaced by e.g. a more efficient Traco Power switching voltage regulator, you won't be able to solder the wires on top of it, but instead solder them at the bottom of the board as shown in figure 3.
Then solder the two wires to the 7805 or at the bottom.

Harlequin 48 rev G ZX Spectrum clone board

The Harlequin 48 rev G board has solder pads / a pin header with the needed supply voltage as shown here:

Solder the red wire to the ‘9V’ pad / pin and solder the black wire to the ‘GND’ pad/pin.