

HITACH BASIC MASTER LEVEL3 / MB-S1

VFO Interface for MP-1802 / MP-1870

Designed by Sasaji 2022 Rev. 0.1.2

Parts list

Parts Number	Parts Name	Qty.	Description
C1~C2	Ceramic Capacitor	2	0.1uF
C4	Electrolytic Capacitor	1	100uF, 10V~
C5, C7	Ceramic Capacitor	2	0.01uF
C6	Ceramic Capacitor	1	3300pF
C8	Electrolytic Capacitor	1	22uF, 10V~
C9, C10	Ceramic Capacitor	2	22pF
R1, R3, R5, R11, R12	Carbon Resistor	5	1KΩ, 1/4W~
R2, R9	Carbon Resistor	2	4.7KΩ, 1/4W~
R4	Carbon Resistor	1	1MΩ, 1/4W~
R6	Carbon Resistor	1	470Ω, 1/4W~
R7	Carbon Resistor	1	15KΩ, 1/4W~
R8	Carbon Resistor	1	33KΩ, 1/4W~
R10	Carbon Resistor	1	100KΩ, 1/4W~
U1	TTL Logic IC	1	74LS06, DIP14
U2	VFO IC	1	SED9420C or SED9420CAC DIP24, 600mil
Y1	Crystal Oscillator	1	16MHz
D1	LED	1	Power Lamp 3mmΦ~
SW1	Power Switch	1	SPDT SS12D10 etc.
J1	BOX Header	1	25pins x2rows 2.54mm pitch straight
J2	BOX Header	1	17pins x2rows 2.54mm pitch straight
J3, J4	Jumper	2	Pinheader 2pin x2rows 2.54mmpitch straight
J5	DC Jack	1	Barrel Jack 2.1mmΦ PJ-102 etc.
J6	Power Connector	1	EI connector male 4pins L angled (3.5inch FDD)

Optional Parts

C3	Ceramic Capacitor	1	0.1uF
U3	CMOS Logic IC	1	74HC4066 or 4066(*1), DIP14
J8	Jumper	1	Pinheader 3pins x1row 2.54mm pitch straight

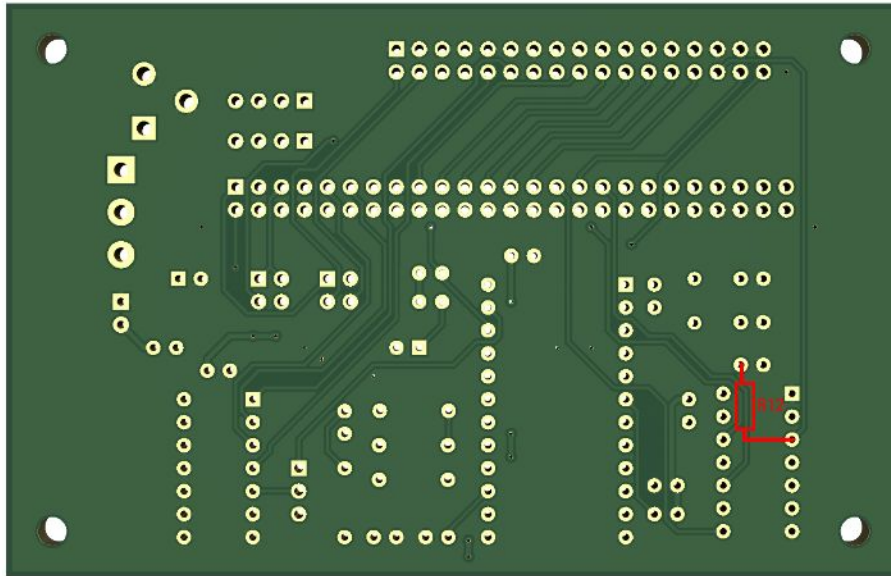
J7		1	Connect to 4 cables
*	FDD Connector	1	EIconnector female 4pins straight Connect from J7

(*1) See “About optional functions” section.

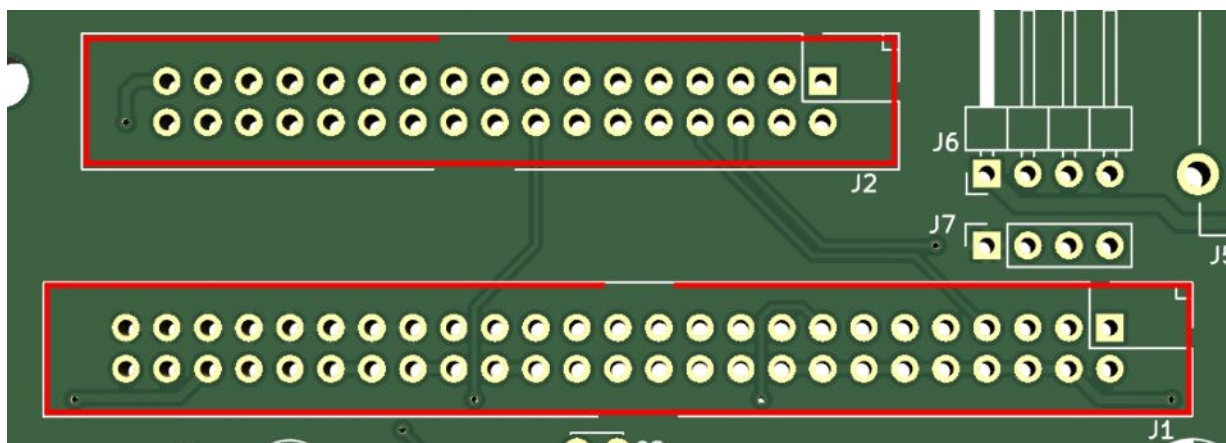
Precautions for assembly

* This board has some problems.

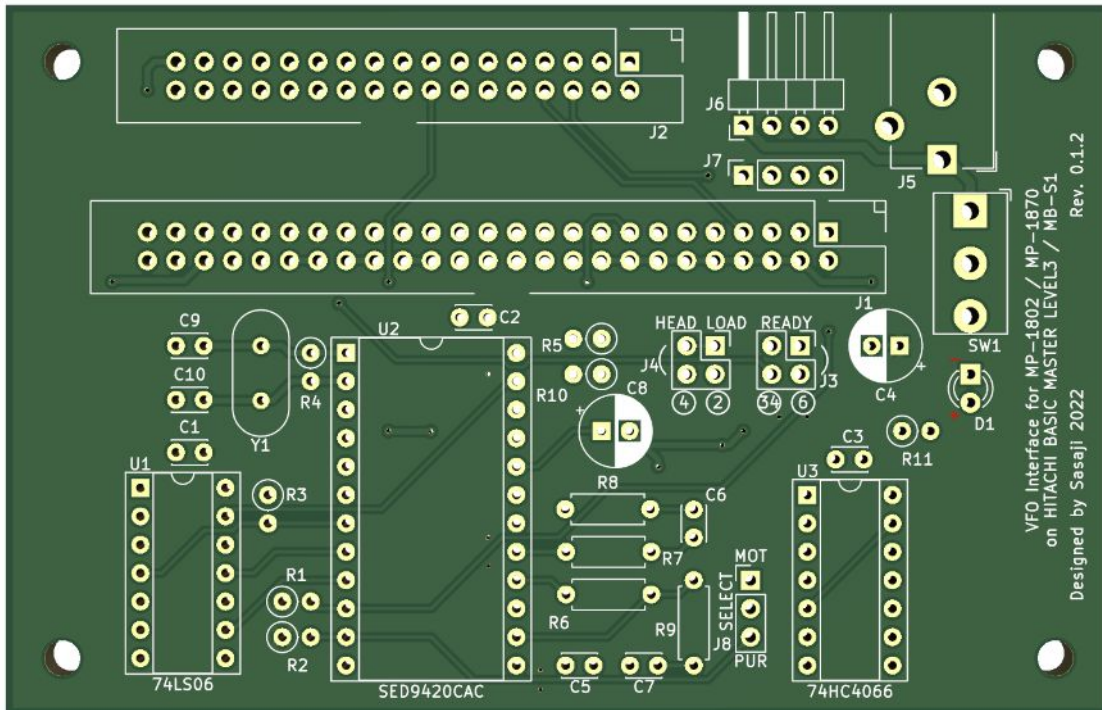
Connect resistor R12 between pin 3 of U1 and Vcc.



The notch of the BOX header is on the upper side.



The anode (+) of the LED D1 is the lower side and the cathode (-) is the upper side.



About optional functions

a) About U3

The 74HC4066 (U3) connects the DRIVE SELECT signal to the FDD while the MOTOR signal is ON.

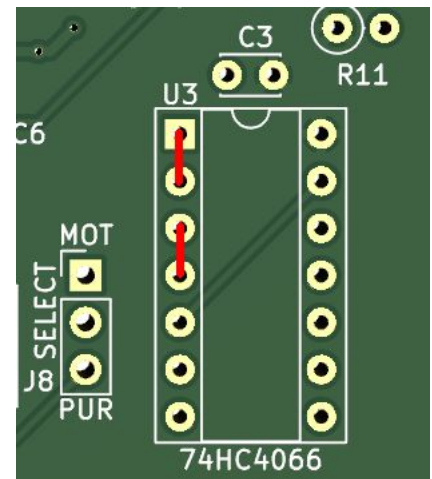
You can omit this feature if always connect it.

If omit U3:

- Short to 1-2 and 3-4 on U3.
- C3 and J8 are unnecessary.
- J8 becomes meaningless as a jumper.

[Attention] If the physical FDD pull-up resistance value is low, drive select may not function properly.

In this case, short the pin on the connecting the physical FDD (drive 0 is pin 3-4, drive 1 is pin 1-2).



b) About J7

J7 is a power output for connecting to the FDD emulator (GOTEK). It works in conjunction with the power switch on this board.

pin1:+5V pin2,3:GND pin4:N/C [attention] not connected to +12V

No Warranty

We are not responsible for any damage caused by this board.

Use this board at your own risk.

Web Site

[GitHub\(https://github.com/bml3mk5/MP1802Gotek\)](https://github.com/bml3mk5/MP1802Gotek)

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