1) set up of ESP-12F

a) Programming mode ckt (jig)

V_{cc} — 10K — RSt
V_{cc} — 10K — Enable

0 — 10KΩ — V_{cc}
2 — 10KΩ — V_{cc}
15 — 10KΩ — Gnd.
— Gnd

V_{cc} — Vcc   Gnd — Gnd
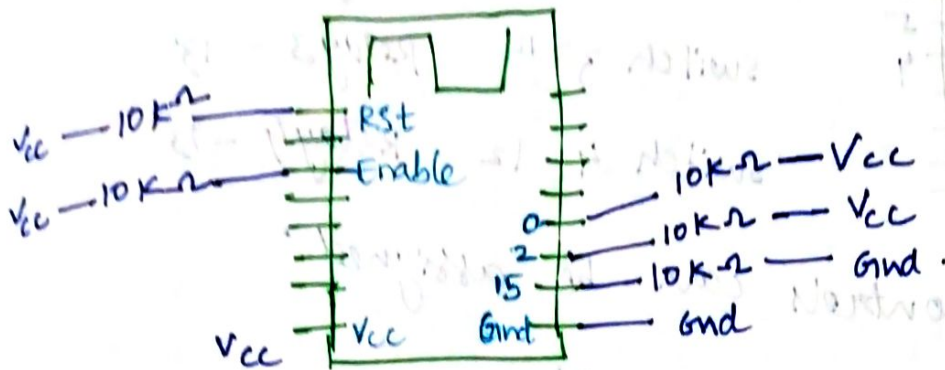
$V_{cc} = 3.3V$ only

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2) Programmer circuit.

DTR — 100nF — [o] — Gnd (Reset)

[o] — Gnd (Flash)

V_{cc} — 10KΩ — RSt
V_{cc} — 10KSt — Enable

0 — 10KΩ — V_{cc}
2 — 10KΩ — V_{cc}
15 — —ᴧᴧᴧ— 10KΩ — Gnd.
— Gnd

V_{cc} Gnd — Gnd
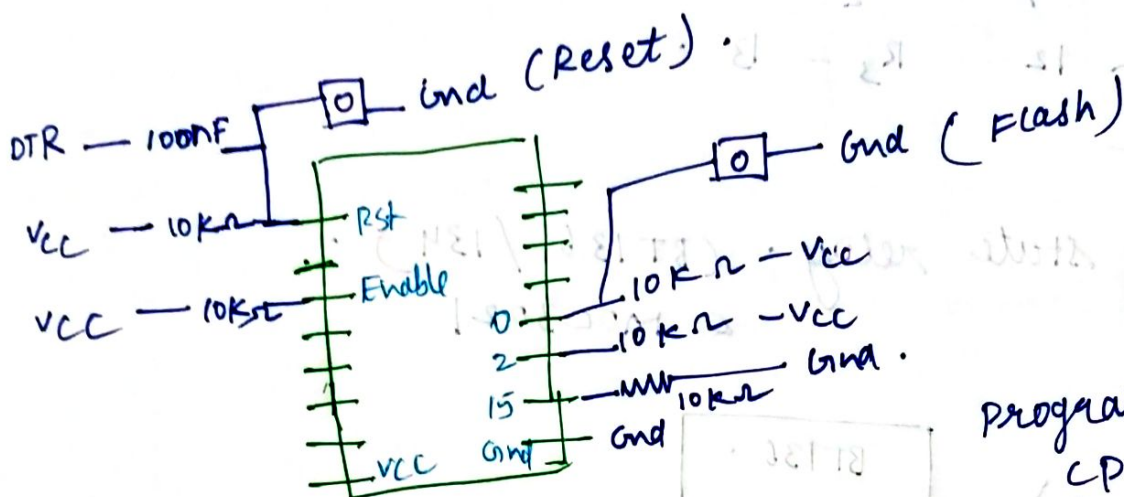
programmer CP202.

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③ Internet and manual; (using Relay)

BC547

330Ω
Relay — ᴧᴧᴧ — Gnd.

Nc—   −ve of Relay → AC supply.
       −ve ᴧᴧᴧ
       +ve of Relay

switch — ᴧᴧᴧ — +vcc (3.3V for esp12)
10KΩ

+ve switch

— Gnd.

+ve.
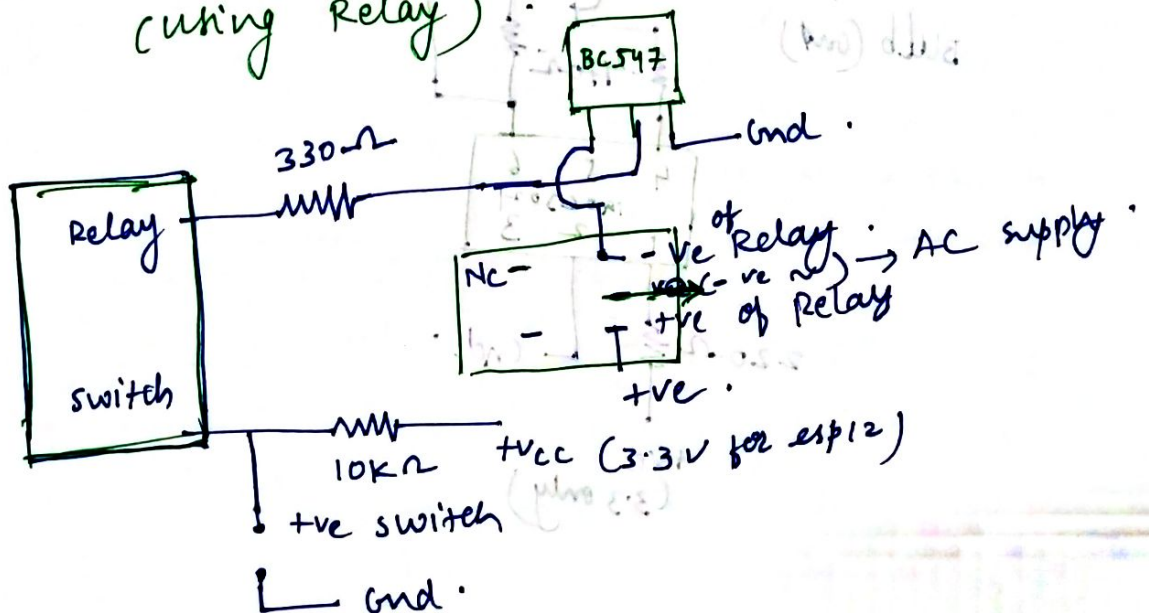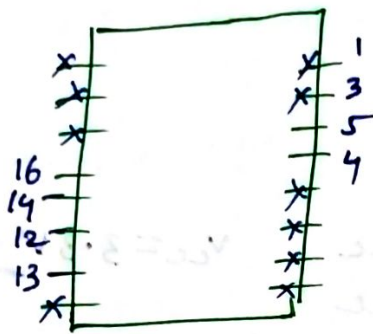
* works:

switch 1 — 16   Relay 1 — 4

switch 2 — 14   Relay 2 — 5

switch 3 — 12   Relay 3 — 13

switch 4 — 12   Relay 4 — 13

* only 3 controls can be assigned.

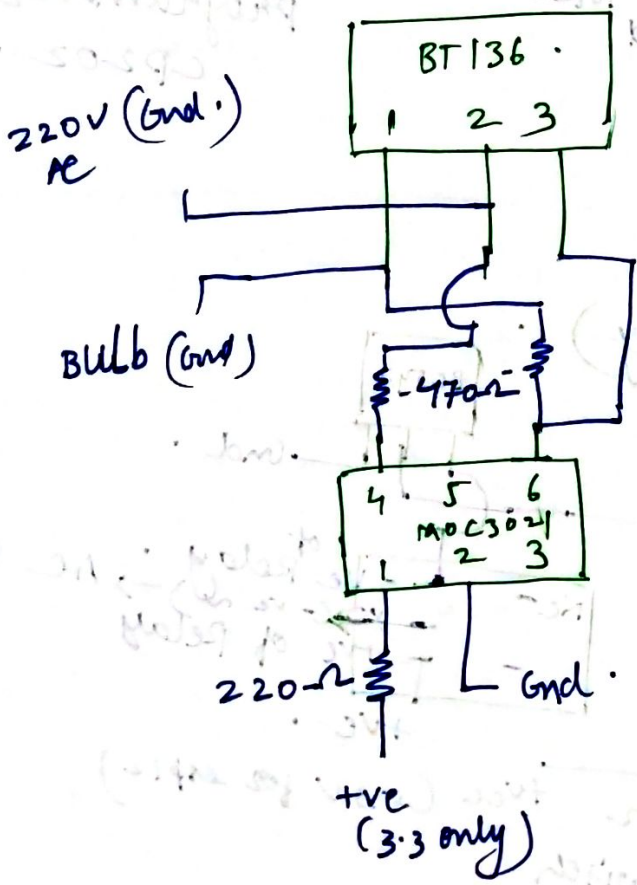also work for below combinations.

$S1 - 14$ $R_1 - 16$

$S_2 - 4$ $R_2 - 5$

$S_3 - 12$ $R_3 - 13$

S_4

solid state relay. (BT 136 / 134).
& MOC 3021

BT 136 .
1   2 3

220V (Gnd.)
AC

BULB (Gnd)

-470Ω

4 5 6
MOC3021
1 2 3

220Ω   Gnd.

+ve
(3.3 only)

single channel:

PCB available.

① Relay (BT136) to .16

② switch to .14 pin
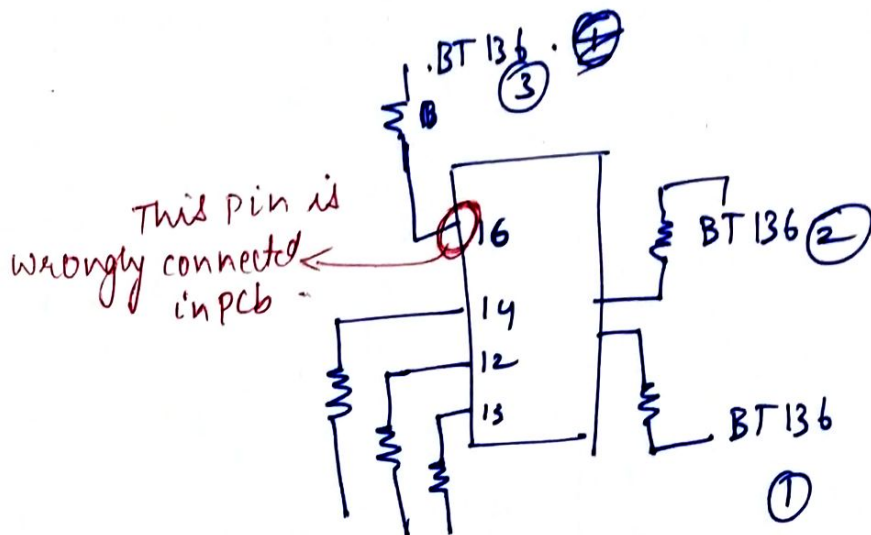
* moc3021 under Hilink while soildering.

Three channel:

① Relay 1 - 14

S_1 - 13

② R_2 - 5

S_2 - 12

③ R_3 - 16

S_3 - 14 .

This pin is wrongly connected in pcb -

.BT 136. ④

③

16 — BT 136 ②

14

12

13 — BT 136 ①

* 220V for BT136 & moc3021 Gnd connection is absent in pcb.

* should make these 2 corrections.

combinations for Mode mcu + Triac / Relay.

S_1 - D_0 S_4 D_3

R_1 - D_4 R_4 D_7

S_2 - D_1 * It can work for All 4 channels.
R_2 - D_5 esp works only for 3 channels.

S_3 - D_2

R_3 - D_6