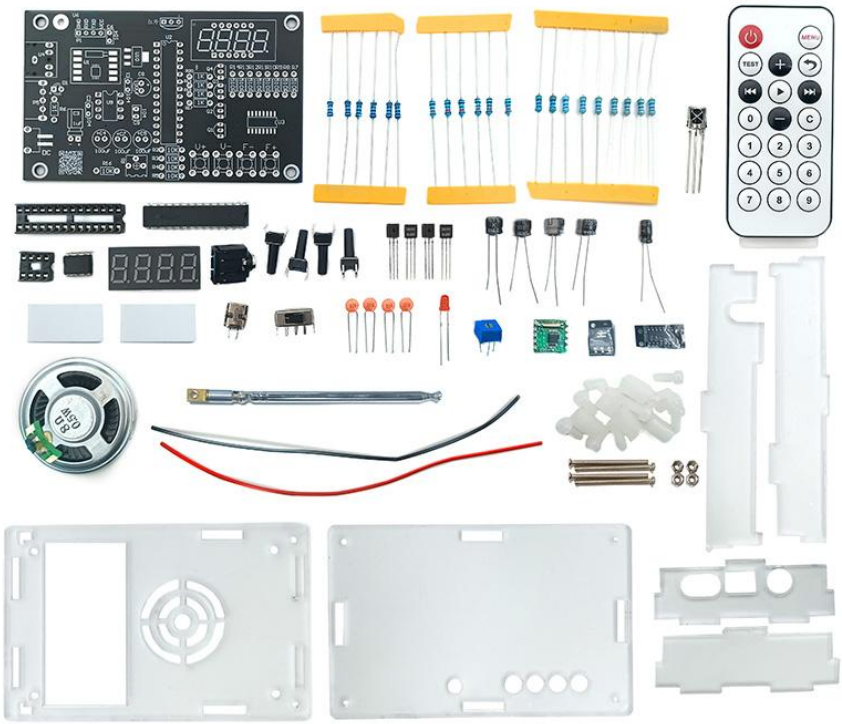
FM MULTIFUNCTIONAL FM RADIO V6.0 WELDING GRAPHIC TUTORIAL

1. VARIOUS COMPONENT SILK SCREEN MARKINGS ARE PRINTED ON THE PCB BOARD, PLEASE REFER TO THE SILK SCREEN MARKINGS FOR WELDING.
2. RESISTANCE IS NOT DIRECTIONAL, BUT HAS DIFFERENT NEGATIVE VALUES. PLEASE PAY ATTENTION TO DISTINGUISHING THEM WHEN WELDING.
3. LONG LEGS WITH FEET ARE POSITIVE (+), WHILE SHORT LEGS ARE NEGATIVE (-); PAY ATTENTION TO THE SILK SCREEN DIRECTION ON THE CORRESPONDING PCB BOARD DURING WELDING;
4. WHEN CONNECTING THE POWER CORD TO THE TERMINAL BLOCK, PAY ATTENTION TO DISTINGUISHING THE POSITIVE AND NEGATIVE POLES AND DO NOT CONNECT THEM IN REVERSE.
5. THE WELDING SEQUENCE IS FROM LOW TO HIGH, FROM SMALL TO LARGE, AND FROM INSIDE TO OUTSIDE.
6. THE SOLDERING TEMPERATURE WITH A SOLDERING IRON IS 320 ° -380 ° C, AND THE SOLDERING TIME IS ABOUT 3-5 SECONDS. DO NOT SOLDER FOR A LONG TIME!
TO AVOID DAMAGING THE CIRCUIT BOARD GROUND WIRE THROUGH SOLDERING.
7. THE CIRCUIT BOARD LABEL VCC IS POSITIVE AND GND IS NEGATIVE.
8. PAY ATTENTION TO STATIC ELECTRICITY AND PRODUCT POWER SUPPLY SIZE TO AVOID BURNING OUT CIRCUITS AND COMPONENTS.

PRODUCT PARTS DIAGRAM

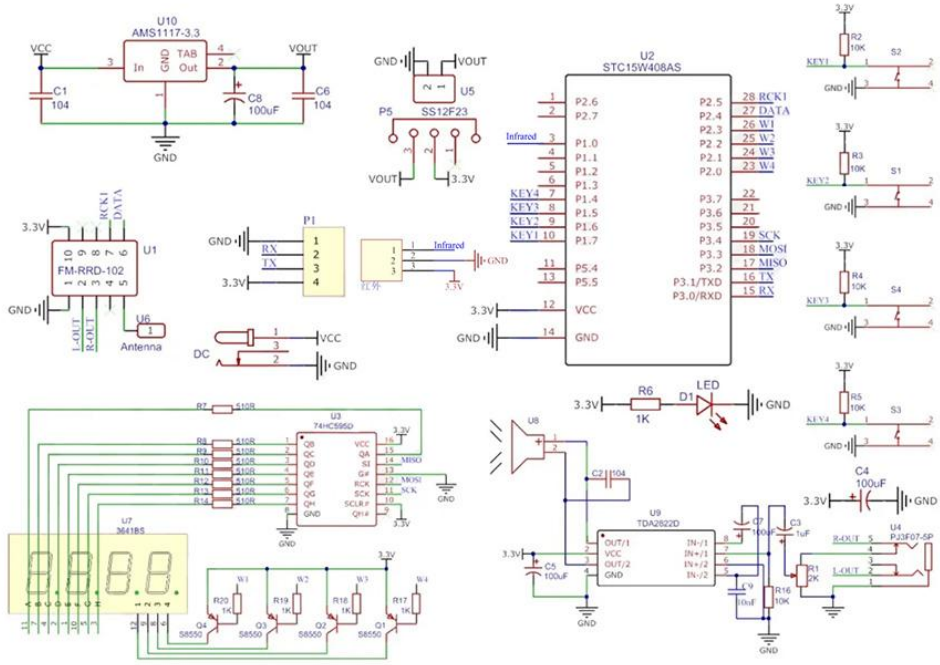


PRODUCT PARTS LIST

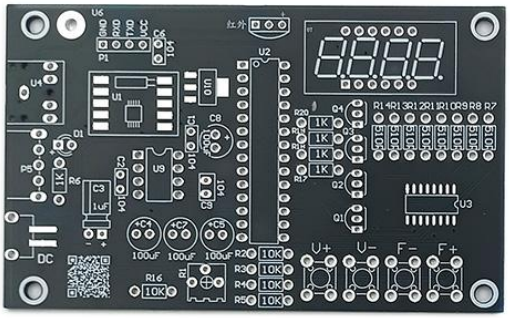
FM Multi-function FM Radio V6.0 upgraded version				
component name		component parameters	silkscreen position	uantit
4-digit digital tube		Red	U7	1
SMD chip		74HC595D	U3	1
Inline Resistors		10K Five rings: brown-black-black-red-brown	R16, R2, R3, R5, R4	5
		1K Five rings: brown-black, black-black, brown-black	R17, R18, R19, R6, R20	5
		510R five rings: green brown black black brown	R13, R14, R7, R8, R9, R10, R11, R12	8
Toggle switch		Horizontal	P5	1
Microswitches		Vertical	S4, S1, S2, S3	4
Power connector		2P android micro	DC	1
Trolley antenna		radio tie rod antenna	U6	1
round head screws + nuts		M2*6mm	Fixed antenna	1
headphone socket		3.5mm	U4	1
Microcontroller		STC15W408AS	U2	1
Dual Audio Amplifier		TDA2822M	U9	1

Inline Electrolytic Capacitors		100UF	C4, C5, C7, C8	4
		1UF	C3	1
Triode, inline		S8550	Q3, Q2, Q4, Q1	4
Horns		8R (large magnetic)	U8	1
Receiver module		RDA5807M	U1	1
precision potentiometers		200K(204)	R1	1
Ceramic Capacitors		104	C1, C2, C6, C9	4
Light Emitting Diode		RED	D1	1
voltage regulator chip		AMS1117	U10	1
IC Block		8P	U9	1
		28P (narrow body)	U2	1
Red and black side-by-side		2P	/	1
Double-sided adhesive			/	2
Circuit boards		PCBs	/	1
By keycaps			S4, S1, S2, S3	4
Battery box		2 cell battery pack	/	1
Power cord		Android micro USB	/	1
Infrared receiver head			/	1
Remote control			/	1
Enclosure		One set	/	1

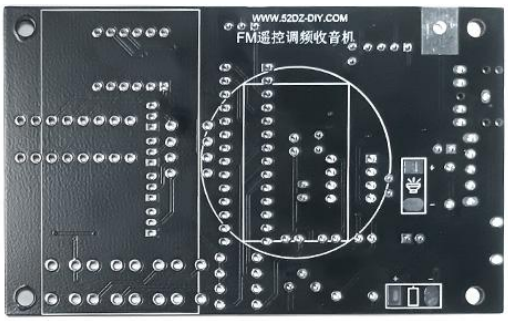
PRODUCT SCHEMATIC DISPLAY



ORIGINAL PCB BOARD DISPLAY

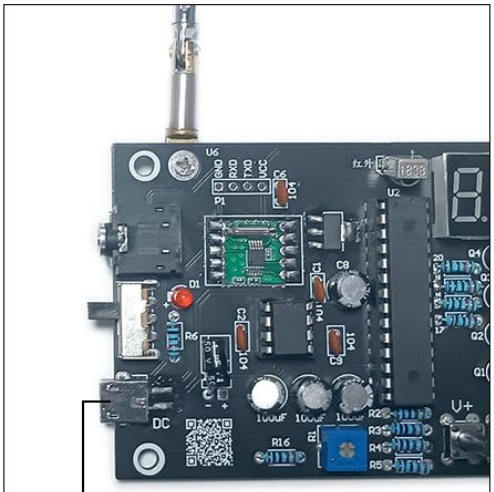


(FRONT)



(ON THE OPPOSITE SIDE)

TWO TYPES OF POWER SUPPLY PARAMETERS



DATA CABLE -
DC5V POWER SUPPLY

TWO NO. 5 BATTERIES-
3V POWER SUPPLY

PRODUCT NAME: FM MULTIFUNCTIONAL FM RADIO V6.0 UPGRADE KIT

SUPPLY VOLTAGE: DC5V (DC POWER SUPPLY)/3V (TWO NO. 5 BATTERIES)

PLEASE NOTE THAT ONLY ONE POWER SUPPLY METHOD CAN BE SELECTED

TWO POWER SOURCES CANNOT BE USED TOGETHER

WELDING TUTORIAL

1.WELDING SURFACE MOUNT CHIPS, VOLTAGE STABILIZING CHIPS, AND SOUND RECEIVING MODULES

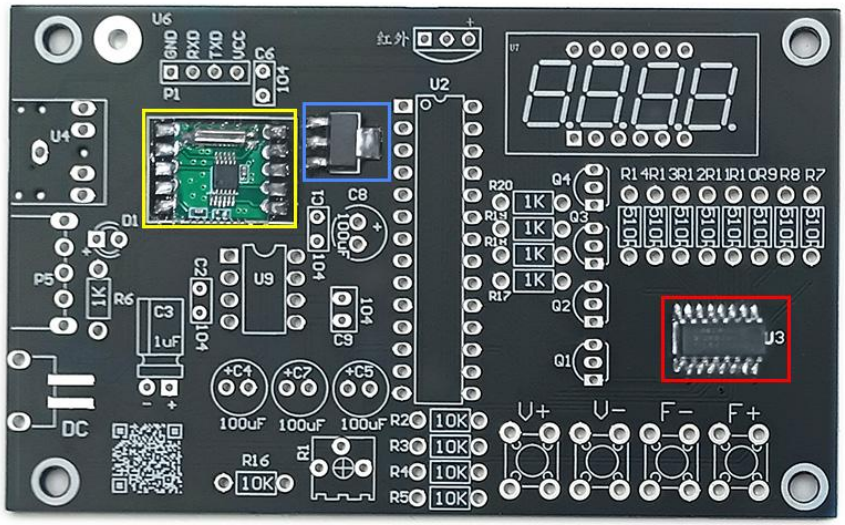
THE DOT POSITION OF THE SURFACE MOUNT CHIP CORRESPONDS TO THE CONCAVE POSITION OF THE HALF CIRCLE ON THE BOARD, AND THE VOLTAGE REGULATOR CHIP CORRESPONDS TO THE SILK SCREEN PATTERN. FINALLY, THE CORRESPONDING SILK SCREEN NUMERICAL POSITION ON THE BOARD CAN BE WELDED;

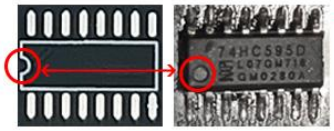
SCREEN PRINTING POSITION;

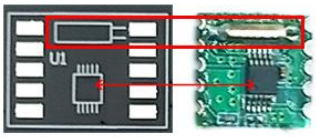
SURFACE MOUNT CHIP 74HC595D: U3 (MARKED IN RED)

VOLTAGE REGULATOR CHIP AMS11117:U10 (BLUE LABEL)

RADIO MODULE RDA5807M: U1 (HIGHLIGHTED IN YELLOW)

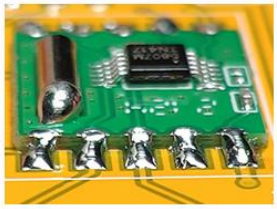






Tip: Surface mount chip
The soldering feet cannot
Appearing with continuous soldering
Or leakage welding situation;

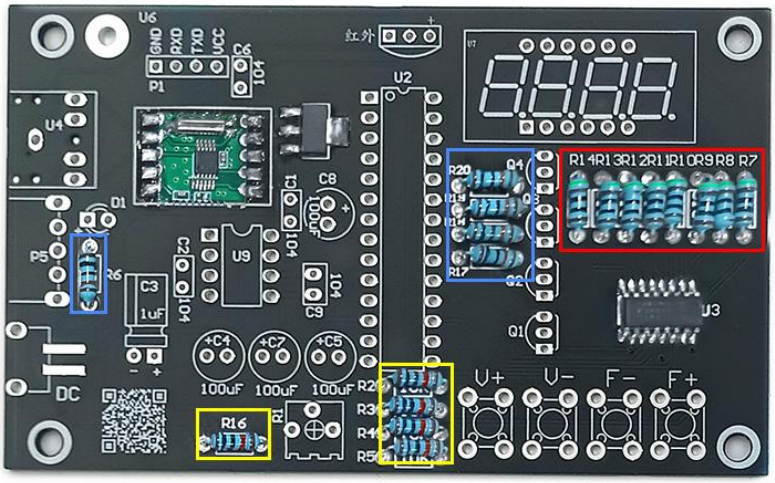
Refer to the image on the right
Conduct an inspection ⟶



2. WELDING DIRECT INSERTION RESISTOR THE DIRECT IN-

SERTION RESISTOR CAN BE WELDED TO THE SILK SCREEN POSITION ON THE CORRESPONDING BOARD;

SCREEN PRINTING POSITION;
RESISTANCE 10K FIVE RINGS: BROWN BLACK BLACK RED BROWN FOUR RINGS: BROWN BLACK ORANGE GOLD: R16, R2, R3, R5, R4 (HIGHLIGHTED IN YELLOW)
RESISTANCE 1K FIVE RINGS: BROWN BLACK BROWN BROWN FOUR RINGS: BLACK BROWN ORANGE GOLD: R17, R18, R19, R6, R20 (MARKED IN BLUE)
RESISTANCE 510R FIVE RINGS: GREEN BROWN BLACK BROWN FOUR RINGS: GREEN BROWN BROWN GOLD: R13, R14, R7, R8, R9, R10, R11, R12 (MARKED IN RED)



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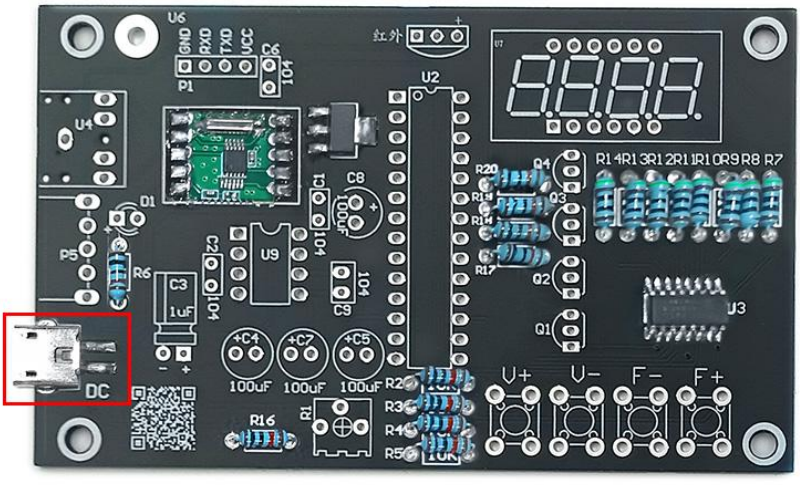
3. WELDING POWER INTERFACE THE POWER INTERFACE CAN BE WELDED TO THE SILK SCREEN POSITION ON THE CORRESPONDING BOARD;

SCREEN PRINTING POSITION;
POWER INTERFACE 2P ANDROID MICRO: DC (MARKED IN RED)



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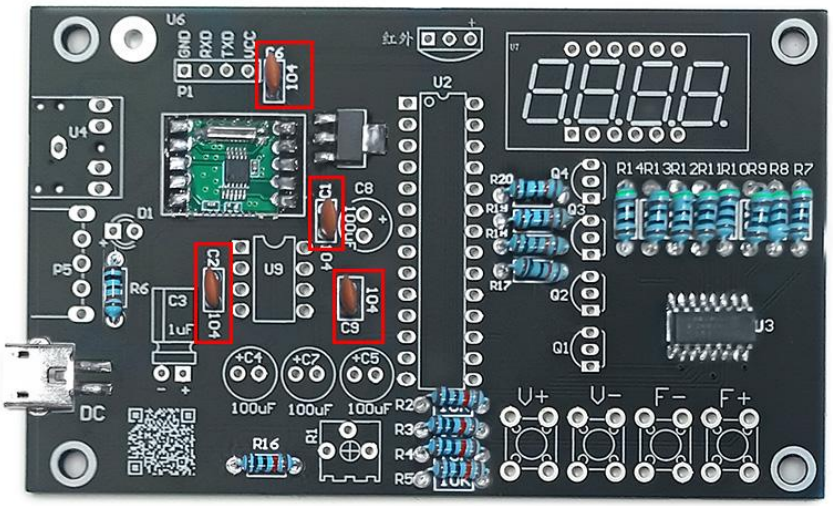
4. WELDING CERAMIC CAPACITORS THE PORCELAIN CAPACITOR CAN BE WELDED TO THE SILK SCREEN POSITION ON THE CORRESPONDING BOARD;

SCREEN PRINTING POSITION;
CERAMIC CAPACITOR 104: C1, C2, C6, C9 (MARKED IN RED)



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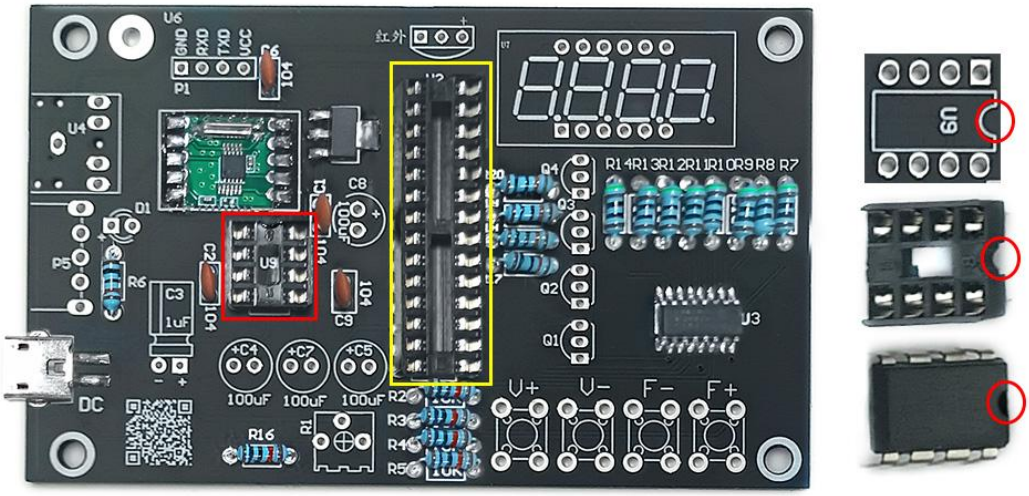
5. WELDING IC SOCKET THE SEMI-CIRCULAR CONCAVE POSITION OF THE CHIP HOLDER CAN BE WELDED TO THE CORRESPONDING SEMI-CIRCULAR POSITION ON THE BOARD;

SCREEN PRINTING POSITION;
IC SOCKET 8P: U9 (MARKED IN RED)
IC SOCKET 28P (NARROW BODY): U2 (YELLOW LABEL)



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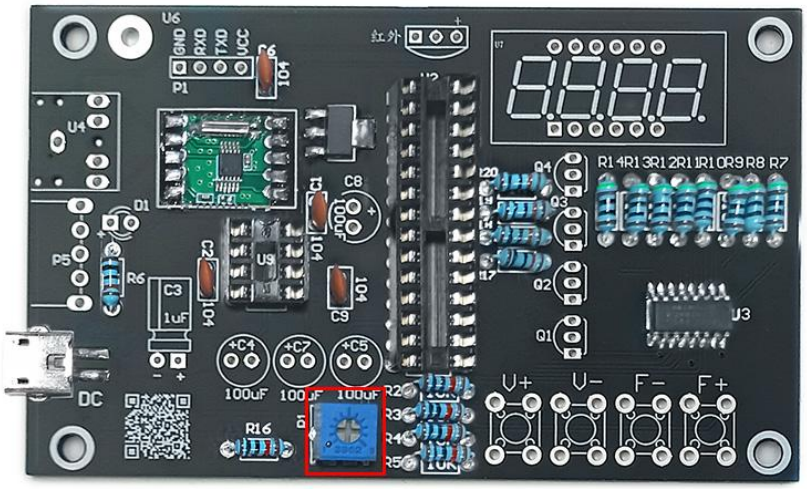
6. WELDING POTENTIOMETER THE POTENTIOMETER CAN BE WELDED TO THE SILK SCREEN POSITION ON THE CORRESPONDING BOARD;

SCREEN PRINTING POSITION;
POTENTIOMETER 200K (204): R1 (MARKED IN RED)



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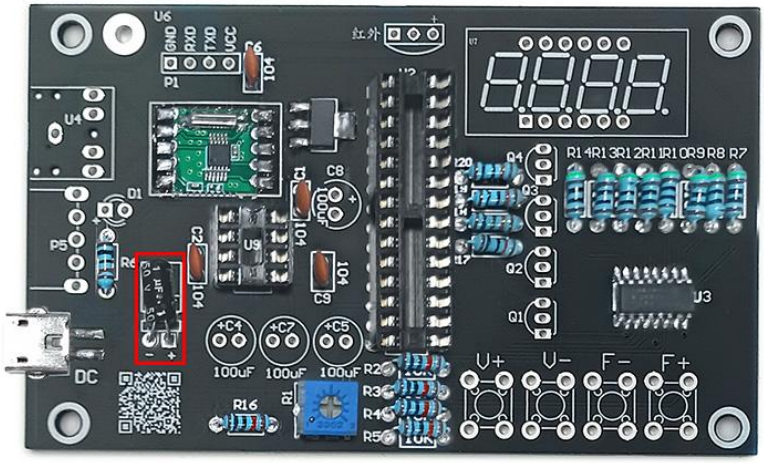
7. WELDING ELECTROLYTIC CAPACITORS THE LONG LEG OF THE ELECTROLYTIC CAPACITOR IS POSITIVE, THE SHORT LEG IS NEGATIVE, AND THE GRAY BAR IS NEGATIVE. THE CORRESPONDING POSITIVE AND NEGATIVE POLES (SHADED AREA IS NEGATIVE) ON THE BOARD CAN BE WELDED TOGETHER **NOTE: AFTER WELDING, THE LEGS OF THE ELECTROLYTIC CAPACITOR COMPONENT CAN BE BENT 90 DEGREES;**

SCREEN PRINTING POSITION;
ELECTROLYTIC CAPACITOR 1UF: C3 (MARKED IN RED)



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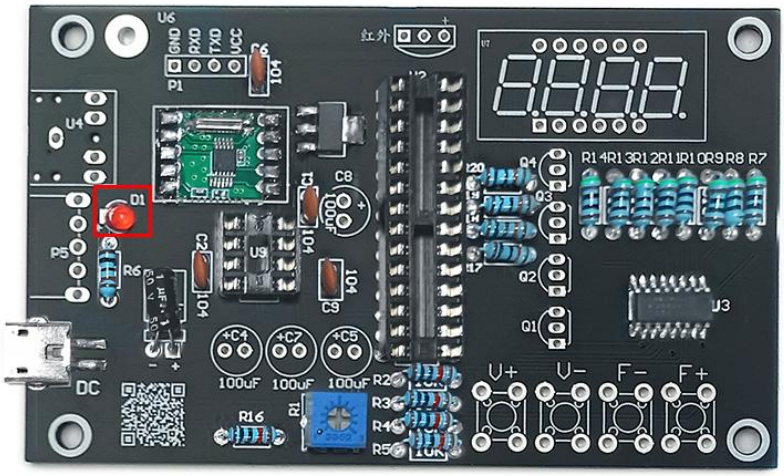
8. WELDING LED BEADS THE LONG LEG OF THE LED BEAD IS POSITIVE, AND THE SHORT LEG IS NEGATIVE. SIMPLY WELD THE CORRESPONDING ICON AND SILK SCREEN POSITION ON THE BOARD;

SCREEN PRINTING POSITION;
LED BEAD 3MM RED: D1 (MARKED IN RED)



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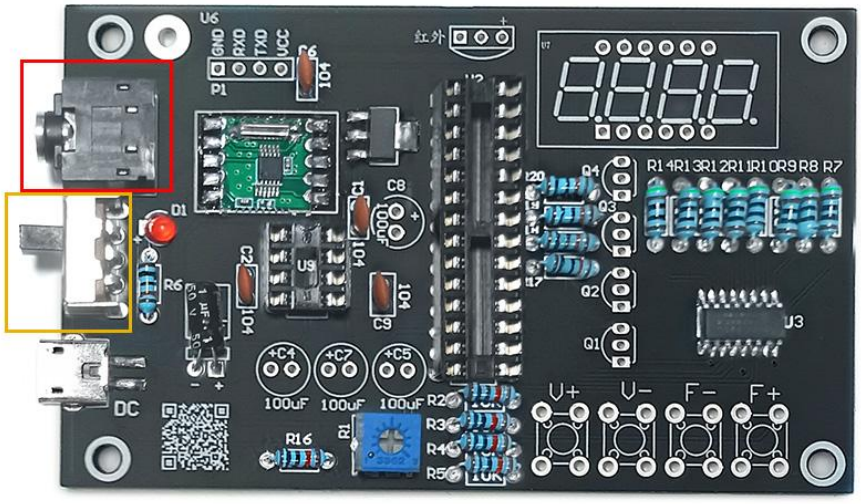
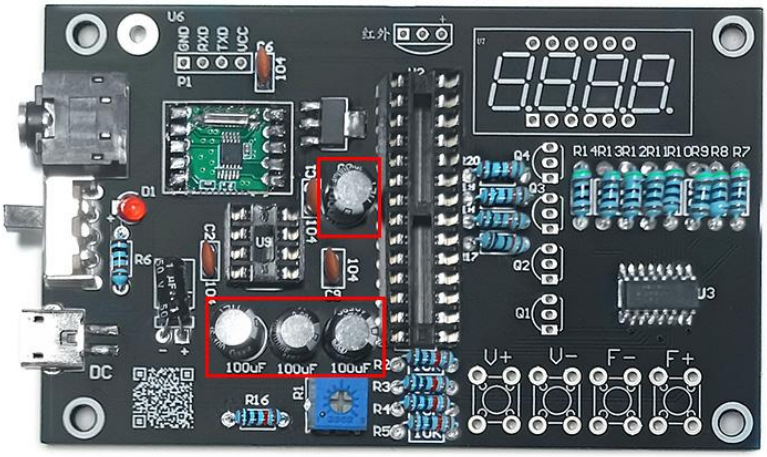
9. WELD THE HEADPHONE SOCKET AND TOGGLE THE SWITCH THE HEADPHONE SOCKET AND TOGGLE SWITCH CAN BE WELDED TO THE SILK SCREEN POSITION ON THE CORRESPONDING BOARD;

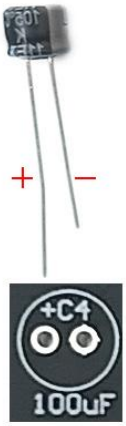
SCREEN PRINTING POSITION;
HEADPHONE SOCKET 3.5MM: U4 (MARKED IN RED)
HORIZONTAL TOGGLE SWITCH: P5 (HIGHLIGHTED IN YELLOW)



10.WELDING ELECTROLYTIC CAPACITORS THE LONG LEG OF THE ELECTROLYTIC CAPACITOR IS POSITIVE, THE SHORT LEG IS NEGATIVE, AND THE GRAY BAR IS NEGATIVE. THE CORRESPONDING POSITIVE AND NEGATIVE POLES (SHADED AREA IS NEGATIVE) ON THE BOARD CAN BE WELDED TOGETHER;

SCREEN PRINTING POSITION;
ELECTROLYTIC CAPACITOR 100UF: C4, C5, C7, C8 (MARKED IN RED)





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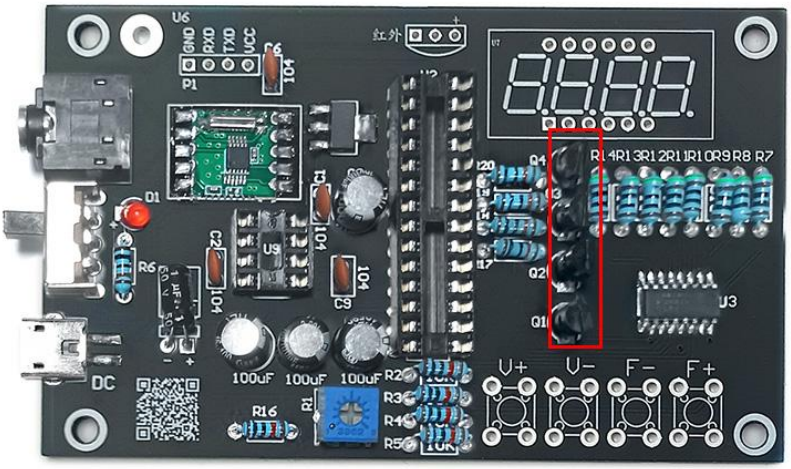
11. WELDING TRANSISTOR THE HALF CIRCLE DIRECTION OF THE TRANSISTOR CAN BE WELDED TO THE SILK SCREEN POSITION ON THE CORRESPONDING BOARD;

SCREEN PRINTING POSITION;
TRANSISTOR S8550: Q3, Q2, Q4, Q1 (MARKED IN RED)



WELD THE HALF CIRCLE DIRECTION OF THE TRANSISTOR TO THE SILK SCREEN POSITION ON THE CORRESPONDING BOARD;

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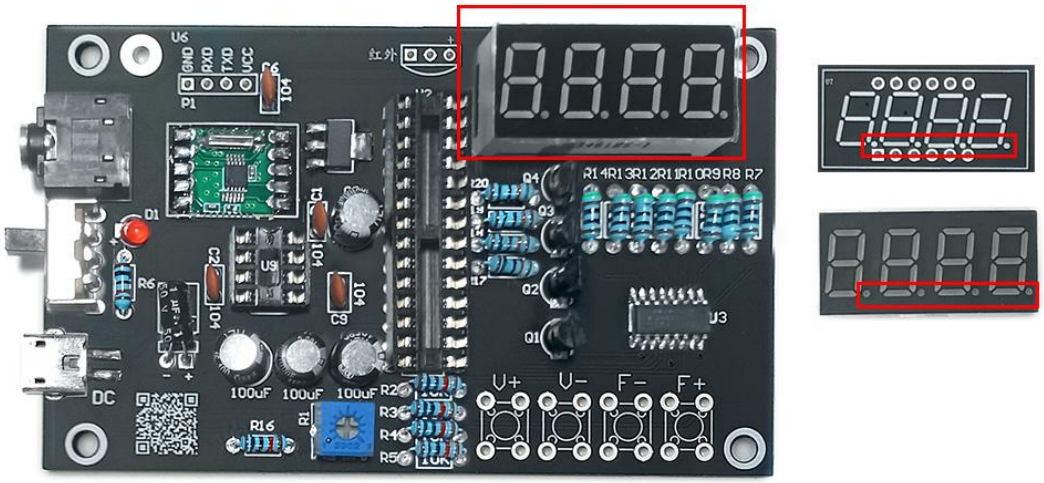
12. WELDING 4-DIGIT DIGITAL TUBE THE DECIMAL POINT POSITION OF THE 4-DIGIT DIGITAL DISPLAY CORRESPONDS TO THE SCREEN PRINTING POSITION OF THE DECIMAL POINT ON THE BOARD, WHICH CAN BE WELDED TOGETHER;

SCREEN PRINTING POSITION;
4-DIGIT DIGITAL TUBE RED: U7 (MARKED IN RED)



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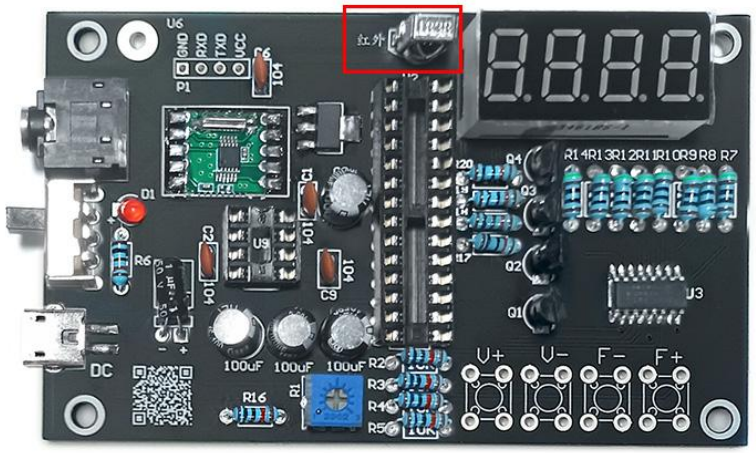
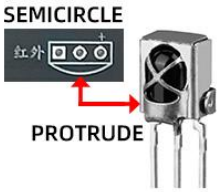
13. WELDING INFRARED RECEIVER HEAD THE INFRARED RECEIVER HEAD CAN BE WELDED TO THE SILK SCREEN POSITION CORRESPONDING TO THE ICON ON THE BOARD;

SCREEN PRINTING POSITION;
INFRARED RECEIVER HEAD: INFRARED (MARKED IN RED)





INFRARED RECEIVER HEAD
PROTRUDING POSITION
CORRESPONDING BOARD
HALF CIRCLE ICON
SCREEN PRINTING POSITION
WELDING IS SUFFICIENT

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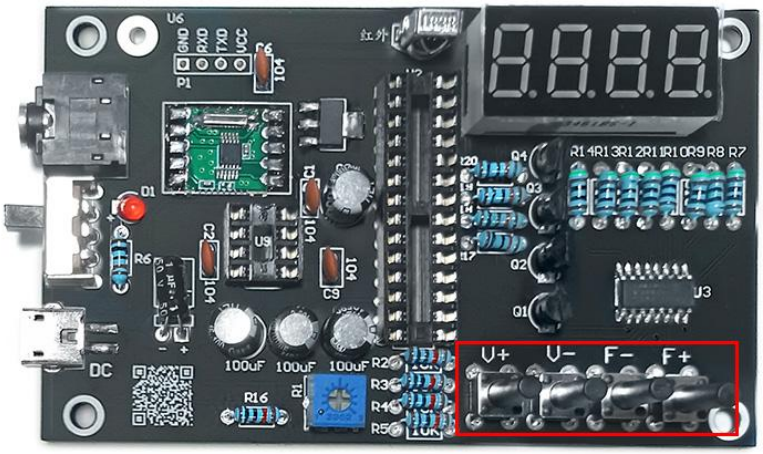
14. WELDING MICRO SWITCH THE MICROSWITCH CAN BE WELDED TO THE SILK SCREEN POSITION ON THE CORRESPONDING BOARD;

SCREEN PRINTING POSITION;
MICRO SWITCH VERTICAL: S4, S1, S2, S3 (MARKED IN RED)



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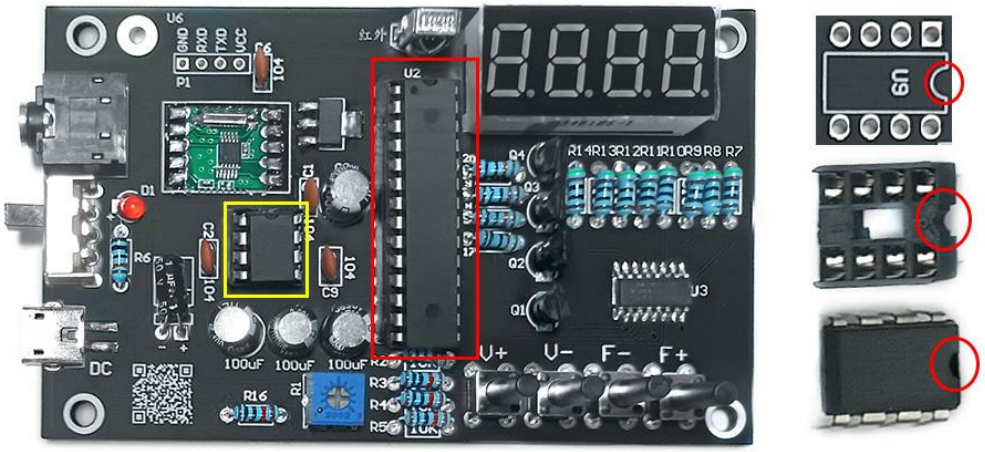
15. INSTALL THE CHIP THE SEMI-CIRCULAR MARK OR RECESSED POSITION OF THE CHIP CAN BE INSTALLED AT THE SEMI-CIRCULAR POSITION ON THE BOARD (CHIP HOLDER);

SCREEN PRINTING POSITION;
CHIP STC15W408AS: U2 (HIGHLIGHTED IN YELLOW)
CHIP TDA2822M: U9 (MARKED IN RED)

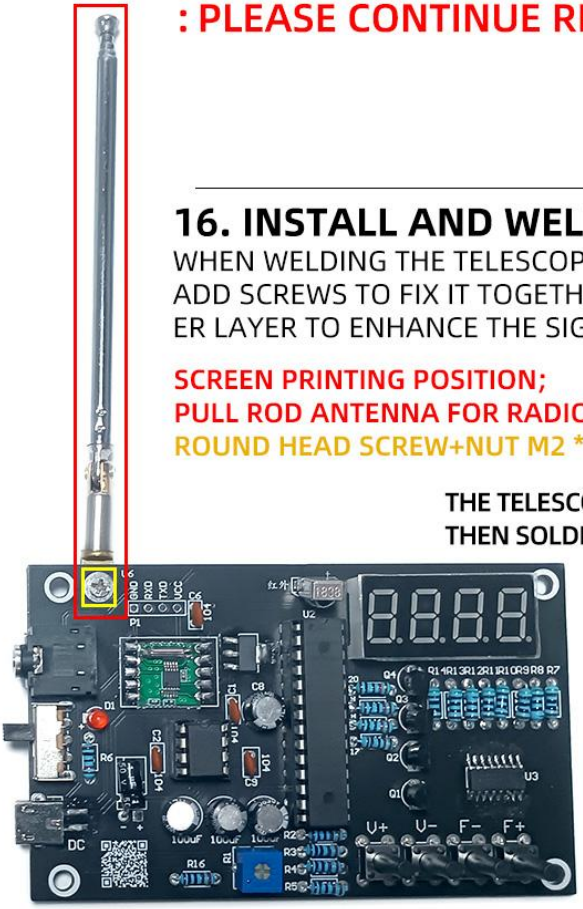


: PLEASE CONTINUE READING THE TUTORIAL

16. INSTALL AND WELD THE ROD ANTENNA

WHEN WELDING THE TELESCOPIC ANTENNA, IT IS NECESSARY TO ADD SCREWS TO FIX IT TOGETHER AND THEN WELD AND FIX ANOTHER LAYER TO ENHANCE THE SIGNAL RECEPTION OF THE ANTENNA;

SCREEN PRINTING POSITION;
PULL ROD ANTENNA FOR RADIO: U6 (MARKED IN RED)
ROUND HEAD SCREW+NUT M2 * 6MM (HIGHLIGHTED IN YELLOW)



THE TELESCOPIC ANTENNA IS INSTALLED ON THE BACK THEN SOLDER AND FIX IT IN PLACE

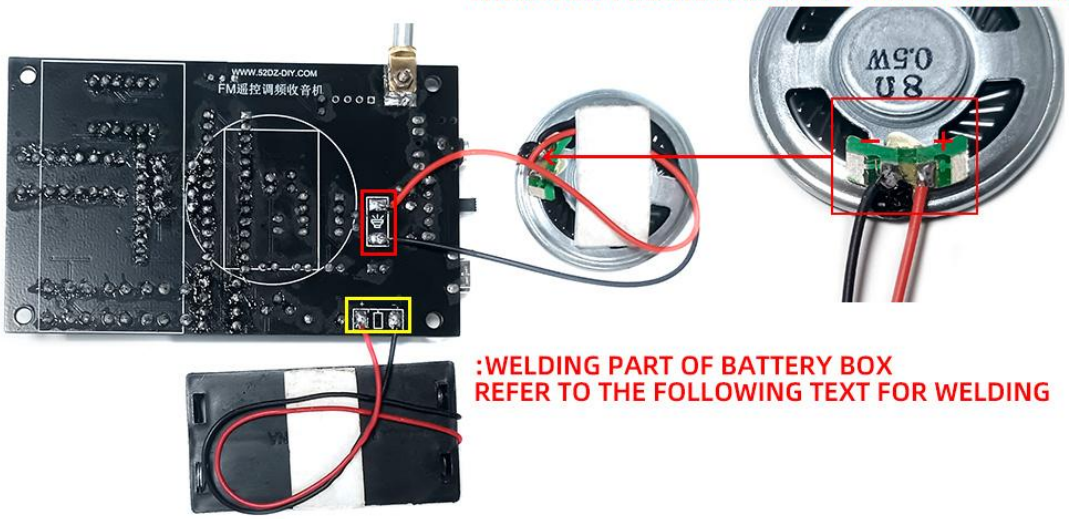
NOTE: DEFINITELY WE NEED TO TIN IT WELDING FIXATION FRONT AND BACK EVERYONE NEEDS IT

17. WELD AND ASSEMBLE THE HORN WITH THE RED AND BLACK WIRES, AND THEN WELD THE OTHER END OF THE RED AND BLACK WIRES TO THE WELDING POINT OF THE HORN ICON ON THE BACK

NOTE THAT THE RED LINE OF THE RED AND BLACK WIRES IS POSITIVE AND THE BLACK LINE IS NEGATIVE. SIMPLY WELD THE POSITIVE AND NEGATIVE POLE ICONS ON THE BACK OF THE HORN AND BOARD, AND FINALLY USE DOUBLE-SIDED TAPE TO ORGANIZE AND FIX THE WIRES;

ON THE BOARD
THE HORN ICON IS: →
(PAY ATTENTION TO THE POSITIVE AND NEGATIVE POLES)

PAY ATTENTION TO THE HORN
THERE ARE POSITIVE AND NEGATIVE ELECTRODES



:WELDING PART OF BATTERY BOX
REFER TO THE FOLLOWING TEXT FOR WELDING

18. WELD THE OTHER END OF THE RED AND BLACK WIRES OF THE BATTERY BOX TO THE WELDING POINT ON THE BACK OF THE BATTERY BOX ICON

NOTE THAT THE RED LINE ON THE BATTERY BOX IS POSITIVE AND THE BLACK LINE IS NEGATIVE. SIMPLY WELD THE POSITIVE AND NEGATIVE POLE ICONS ON THE BACK OF THE BATTERY BOX AND BOARD, AND FINALLY USE DOUBLE-SIDED TAPE TO ORGANIZE AND FIX THE WIRES;

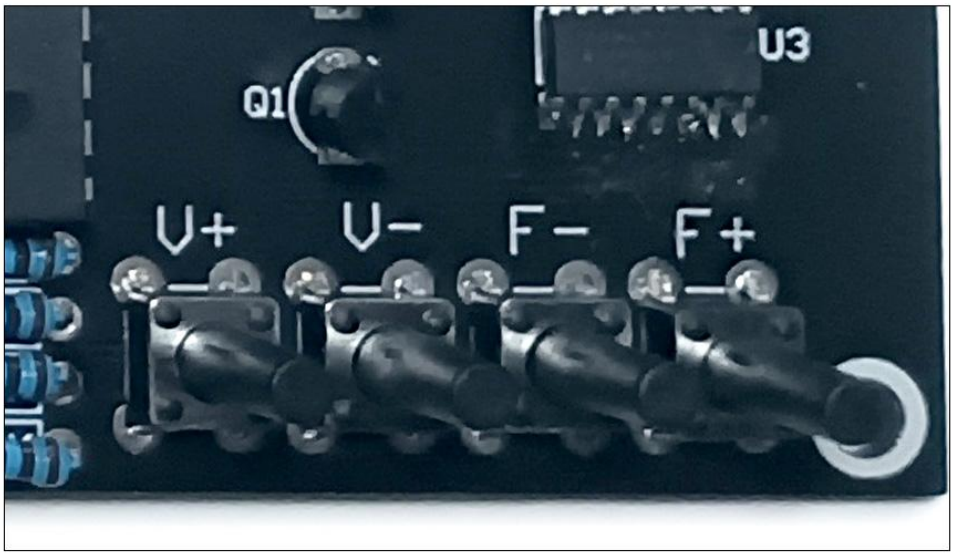
THE BATTERY BOX ICON ON THE BOARD IS: →
(PAY ATTENTION TO THE POSITIVE AND NEGATIVE SIGNS)

19. FIX THE BATTERY BOX AND SPEAKER IN PLACE BEHIND THE BOARD USING DOUBLE-SIDED TAPE

THE BATTERY BOX IS FIXED INSIDE THE RECTANGULAR FRAME AT THE VERY SIDE, AND THE SPEAKER IS FIXED INSIDE THE CIRCULAR FRAME IN THE MIDDLE. THE RED AND BLACK WIRES CAN BE ARRANGED TO AVOID LEAK-AGE AS MUCH AS POSSIBLE;

AFTER FIXING THE BATTERY BOX AND SPEAKER, INSTALL THE BATTERY AND THEN TURN ON THE SWITCH TO USE IT;

BUTTON USAGE METHOD



V+: VOLUME INCREASE V -: VOLUME DECREASE

F-: FREQUENCY DECREASE F+: FREQUENCY INCREASE

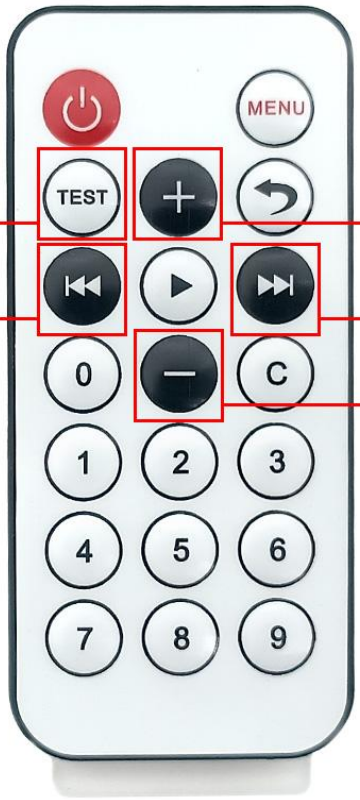
USAGE OF POTENTIOMETER

IF THERE IS NOISE ON THE RADIO, ROTATE THE POTENTIOMETER CLOCKWISE TO REDUCE THE VOLUME AND MINIMIZE THE NOISE. ROTATE COUNTERCLOCKWISE TO INCREASE THE VOLUME AND MINIMIZE THE NOISE

REMOTE CONTROL USAGE METHOD

CHANNEL SEARCH

AUTOMATIC CHANNEL SEARCH FUNCTION,
SIGNAL ABOVE 40 IS REQUIRED
ONLY THE PLATFORM CAN BE SEARCHED



VOLUME+

FM PLUS

FM REDUCTION

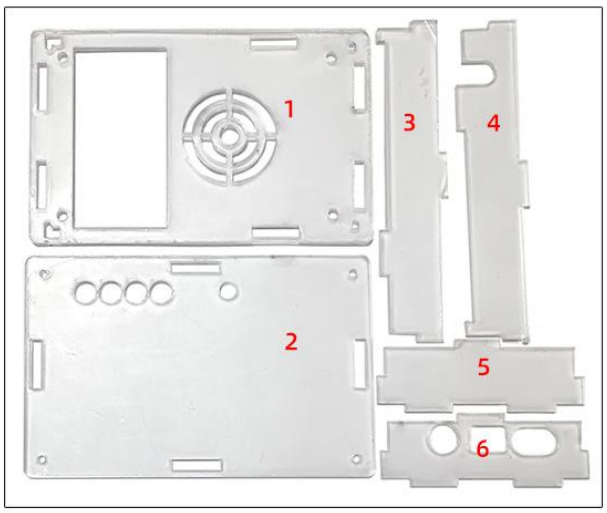
VOLUME-

FM MULTIFUNCTIONAL FM RADIO V6.0 INSTALLATION SHELL GRAPHIC TUTORIAL

PRODUCT PARTS PREPARATION

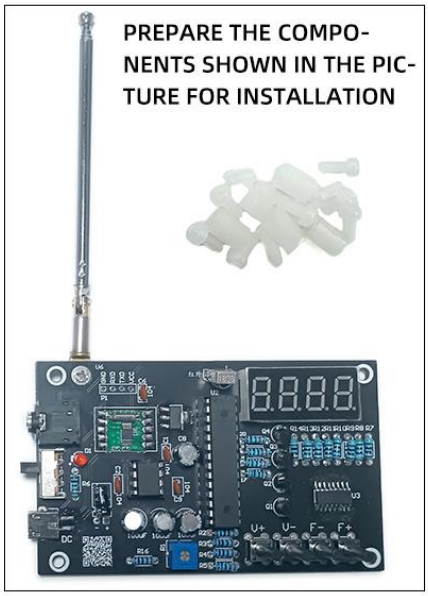
SHELL INSTALLATION TUTORIAL

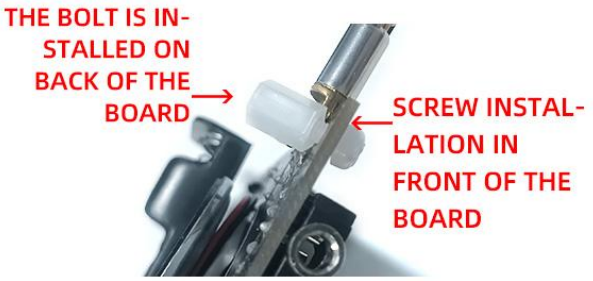
1. CLASSIFY AND SORT THE SHELLS FOR EASY INSTALLATION GUIDANCE IN THE FUTURE THE PROTECTIVE FILM ON THE OUTER SHELL IS NOT REMOVED FOR CLARITY IN THE TUTORIAL, BUT NEEDS TO BE REMOVED DURING ACTUAL INSTALLATION;

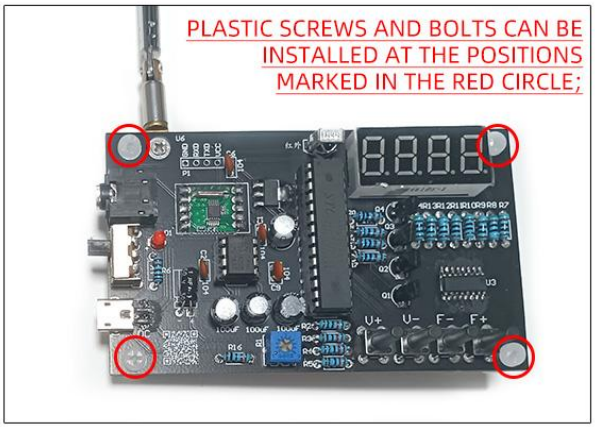


2. PREPARE THE RADIO AND PLASTIC SCREWS AND STUDS

INSTALL PLASTIC SCREWS AND PLASTIC STUDS ON THE FOUR CORNERS OF THE RADIO (DETAILED INSTALLATION AS SHOWN IN THE FOLLOWING FIGURE)

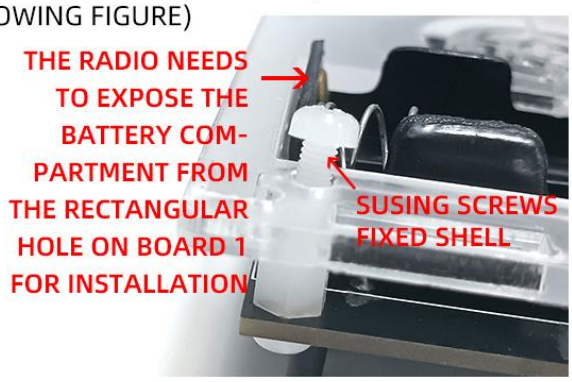


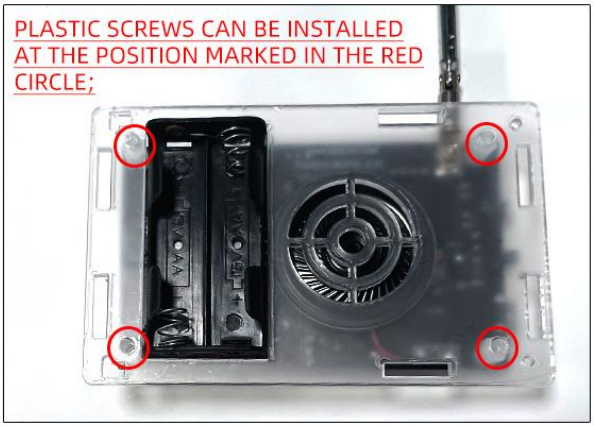




3. PREPARE BOARD 1, RADIO, AND PLASTIC SCREWS

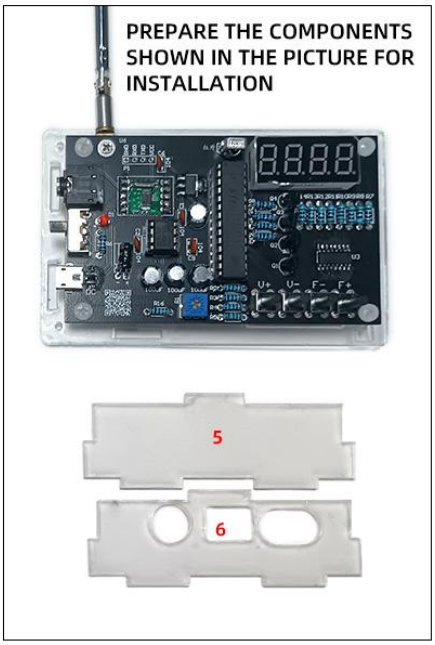
INSTALL THE RADIO ON BOARD 1 WITH PLASTIC SCREWS (DETAILED INSTALLATION AS SHOWN IN THE FOLLOWING FIGURE)

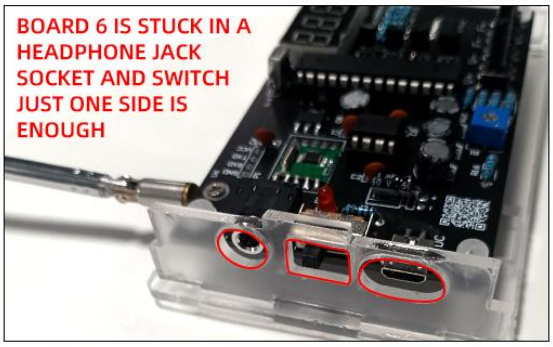




4. PREPARE BOARD 5 AND BOARD 6 WITH THE RADIO

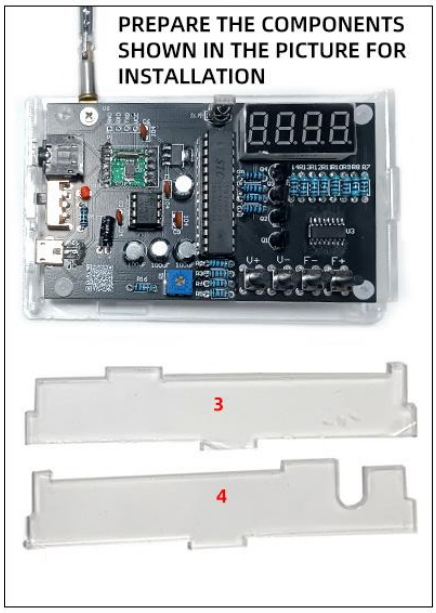
INSERT BOARD 6 INTO THE POSITION WHERE THE RADIO HAS A SWITCH AND HEADPHONE JACK, AND BOARD 5 INTO THE OTHER SIDE (DETAILED INSTALLATION AS SHOWN IN THE FOLLOWING FIGURE)

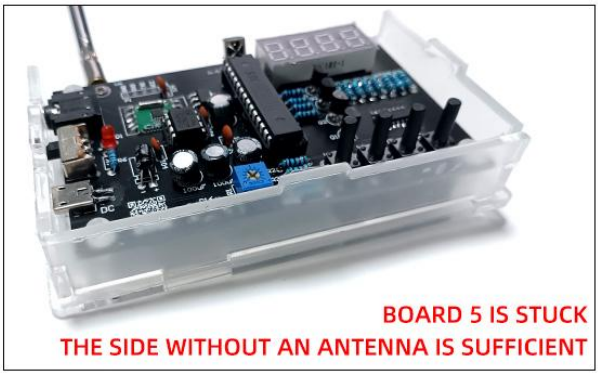


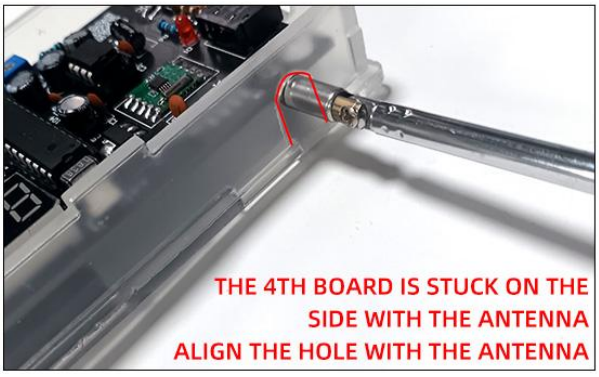


5. PREPARE BOARD 3 AND BOARD 4 WITH THE RADIO

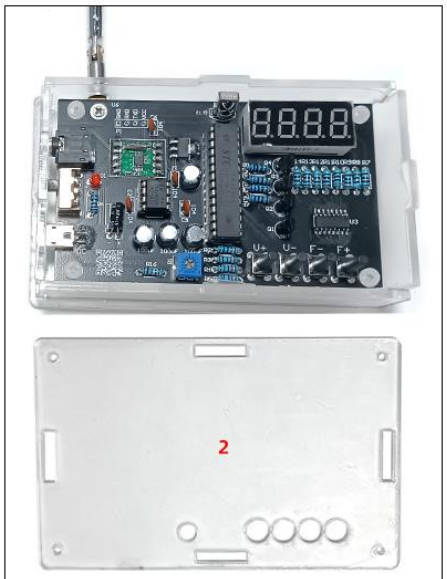
INSERT BOARD 3 INTO THE POSITION WHERE THE RADIO DOES NOT HAVE AN ANTENNA, AND BOARD 5 INTO THE SIDE WITH AN ANTENNA (DETAILED INSTALLATION IS SHOWN IN THE FOLLOWING FIGURE)



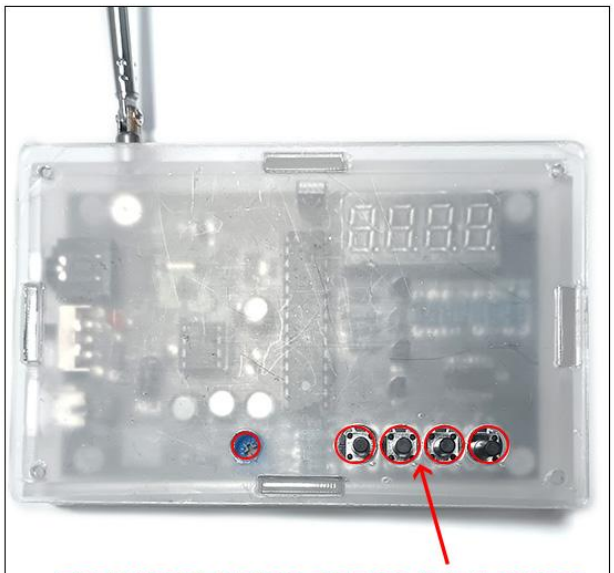




6. PREPARE BOARD 2 AND RADIO INSERT BOARD 2 ONTO THE TOP OF THE RADIO, AND THE RADIO CASING WILL BE INSTALLED. SIMPLY FIX IT WITH SCREWS AT THE BACK (DETAILED INSTALLATION IS SHOWN IN THE FOLLOWING FIGURE)



PREPARE THE COMPONENTS SHOWN IN THE PICTURE FOR INSTALLATION



THE CIRCULAR HOLE OF BOARD 5 NEEDS TO BE STUCK ON THE BUTTON

7. PREPARE LONG SCREWS AND NUTS WITH THE RADIO

SECURE THE RADIO TO THE CASING WITH LONG SCREWS (DETAILED INSTALLATION AS SHOWN IN THE FOLLOWING FIGURE)

PREPARE THE COMPONENTS SHOWN IN THE PICTURE FOR INSTALLATION

THREAD THE SCREW THROUGH THE SMALL HOLE ON THE SHELL TO THE BOTTOM (NOTE THAT THE SCREW IS POSITIONED ON THE FRONT)

THE NUT CAN BE FIXED AT THE BOTTOM OF THE SHELL AND TIGHTENED

RADIO INSTALLATION COMPLETED