

MINIBADGE

BUILD GUIDES

DESIGNED BY

JUPITER

BUILD GUIDE FOR BADGE

PEOPLE BADGES

DIFFICULTY

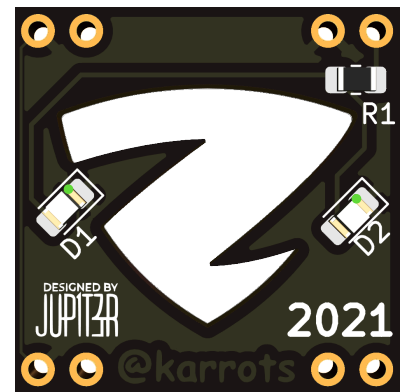
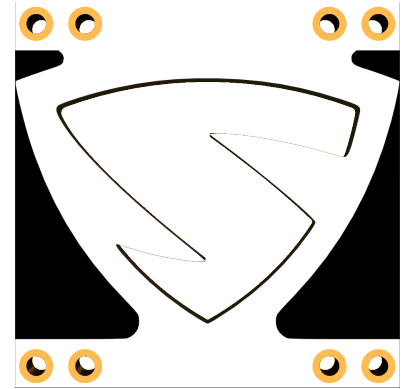
INTERMMEDIATE

LEDS

Two LEDs are mounted near the center of the badge. Marked D1 and D2. The LEDs are small, and are oriented with the GREEN DOT toward the TOP of the board as shown to the right.

RESISTOR

There is a single resistor for this minibadge, it is small but can be soldered in either orientation.



BUILD GUIDE FOR BADGE

TIN FOIL HAT TALKS

DIFFICULTY

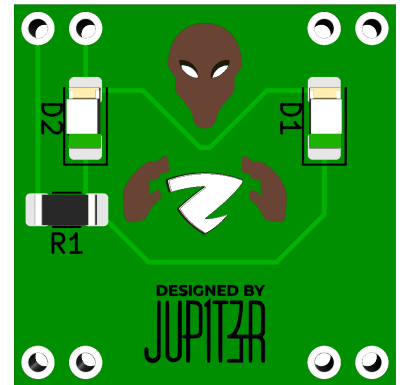
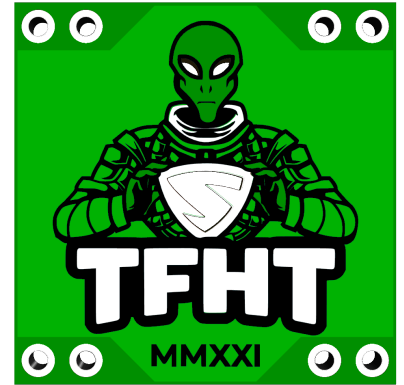
SIMPLE

LED

Two LEDs are mounted on the badge. Marked D1 and D2. The LEDs are small, and are oriented with the GREEN DOT toward the BOTTOM of the board as shown to the right.

RESISTOR

There is a single resistor for this minibadge, it is small but can be soldered in either orientation.



BUILD GUIDE FOR BADGE PRIVATE LTE

DIFFICULTY

INTERMEDIATE

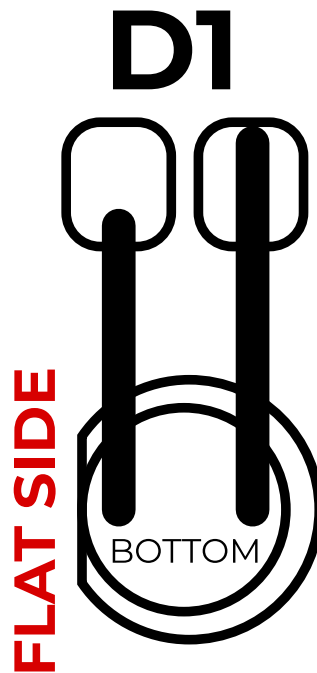
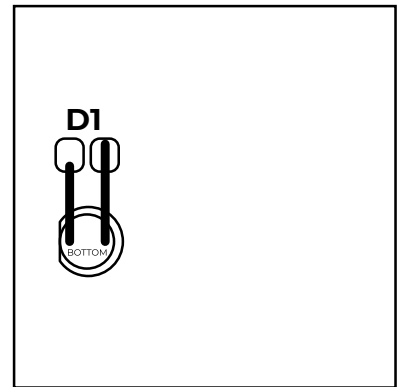
LED

Single through-hole LED is soldered with the LED pressed through the large hole. The LED leads are bent over and trimmed to make contact with the D1 contacts. Ensure you trim them to the right length. LED orientation should match the upside-down layout shown to the right.

It is CRITICAL that you do not reverse this LED, it will blow it up.

RESISTOR

There is a single resistor for this minibadge, it is small but can be soldered in either orientation.



BUILD GUIDE FOR BADGE

RFID/NFC BADGE

DIFFICULTY

INTERMEDIATE

LED

Two LEDs are mounted on the badge. Marked D1 and D2. The LEDs are small, and are oriented with the GREEN DOT toward the TOP of the board as shown to the right.

RESISTOR

There is a single resistor for this minibadge, it is small but can be soldered in either orientation.

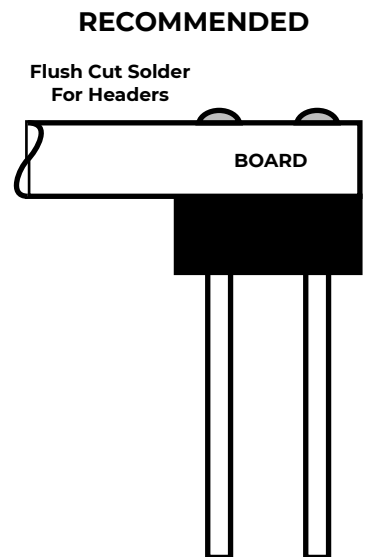
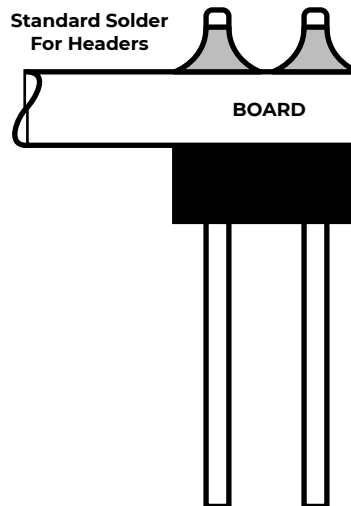
HEADERS

In order to not interfere with the RFID Sticker that goes on the front, I highly recommend that you TRIM the headers to be FLUSH with the top of the board, and solder them so that just a small blob of rounded solder is on the top.

STICKER

The sticker provided (MAY NOT BE INCLUDED IN EVERY ONE) is an NFC Tag that can be programmed and read by any NFC Tag Reader.

It is to be centered on the top of the Minibadge. The headers will get in the way unless you flush-cut the headers.



BUILD GUIDE FOR BADGE HACK IN THE BOX

DIFFICULTY

ADVANCED

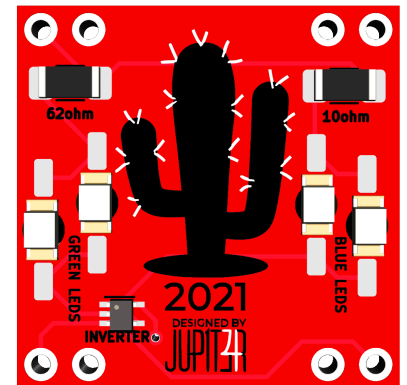
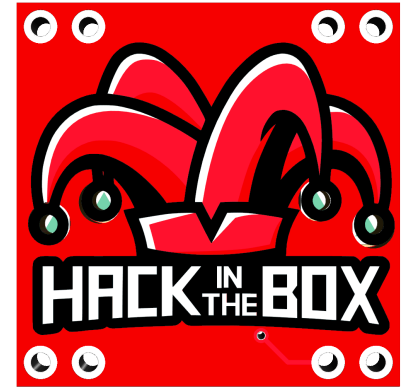
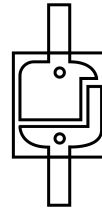
LEDS

LED's are easy to solder, but have a tendency to bounce around a little. They mount with the BUBBLE part in the drilled hole. The back of the LED should look like the figure on the right when the badge is facing up.

LEDs come in **BLUE** and **GREEN** pairs.

LED ORIENTATION

THIS END
TO TOP



INVERTER

The inverter for this badge is the most challenging part. It is best soldered with a Hot Air Rework Station and the use of Solder Paste.

Use the tip of a pair of tweezers to dab a very small amount of solder paste on each contact on the board. (5 contacts). Carefully place the inverter in the proper orientation over the paste, and begin heating it with rework station. We recommend that once it starts to melt that you add a dab of flux to help with the melting process.

Use the Hot Air Rework Station **at 190 degrees C** to slowly melt the solder paste.

RESISTORS

There are two resistors, and they will be GREEN and BLUE in the package. Please mount them on the proper side. They do not have a polarity and can be mounted in either direction.

BUILD GUIDE FOR BADGE

RED TEAM

DIFFICULTY

SIMPLE

LEDS

Three LEDs are mounted on the badge. Marked D1, D2, and D3. The LEDs are small, and are oriented with the GREEN DOT toward the BOTTOM and LEFT of the board as shown to the right.

RESISTORS

There is a single resistor for this minibadge, it is small but can be soldered in either orientation.

JUMPER

The JUMPER must be used for the badge to work properly. It is in place to allow you to select BLINKING or SOLID powered LEDs.

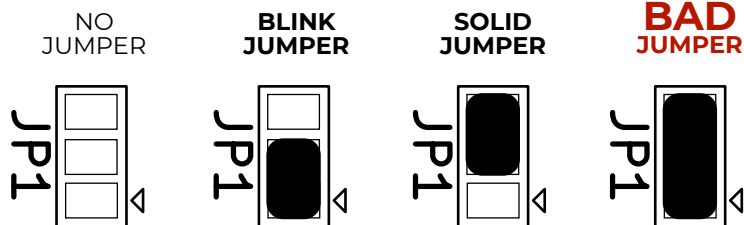
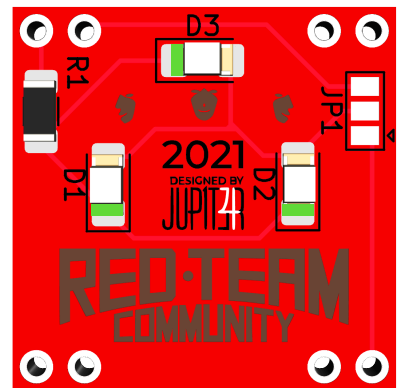
It is IMPORTANT to **NOT BRIDGE ALL 3 JUMPER PADS**. This will cause issues with your entire badge causing a SHORT.

BLINKING BADGE

To Configure the Badge to BLINK with the internal CLOCK, solder the middle and bottom Jumper together.

NO BLINKING

To configure the badge to be SOLID ON, solder the middle and top jumper pads together.



BUILD GUIDE FOR BADGE

HACKER CHALLENGE

DIFFICULTY

MODERATE

LED

Two LEDs are mounted on the front of the badge. Marked D3 and D3. One LED is mounted on the back of the board marked D1. LEDs on the front are oriented with the GREEN mark to the LEFT side

It is recommended that you place the BLUE LED on the top, and the ORANGE LED on the bottom on the front.

The LED on the back is oriented with the GREEN near the top. The LED may have green on both sides and the side with TWO legs goes toward the top.

RESISTOR

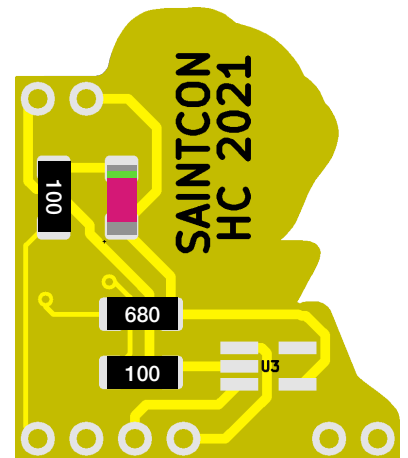
There are THREE resistors for this Minibadge. They can go either direction, but should be placed as shown on the RIGHT side. Please do not mix up the values.

EPROM

The EPROM chip is very small, and can only fit one-way on the board. We recommend using solder paste and a Rework Iron for placement, but this can also be soldered by hand.

When soldering, be sure to check under a microscope to see that none of the pins are bridged with solder.

EPROM **Programming** can be done at the **Hackers Challenge Booth** after it has been soldered to the board.



BUILD GUIDE FOR BADGE SCAVENGER HUNT

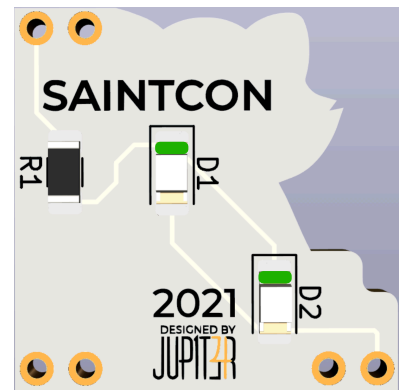
DIFFICULTY
SIMPLE

LED

Two LEDs are mounted on the badge. Marked D1 and D2. The LEDs are small, and are oriented with the GREEN DOT toward the TOP of the board as shown to the right.

RESISTOR

There is a single resistor for this minibadge, it is small but can be soldered in either orientation.



BUILD GUIDE FOR BADGE

THE VAULT

DIFFICULTY

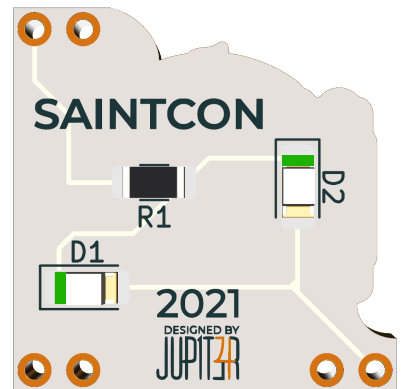
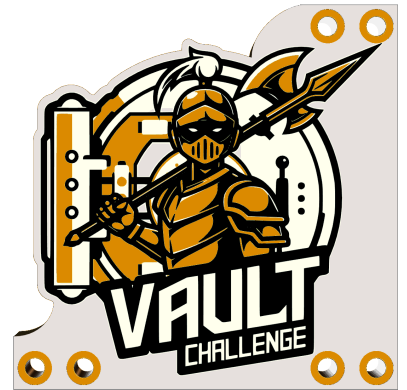
SIMPLE

LED

Two LEDs are mounted on the badge. Marked D1 and D2. The LEDs are small, and are oriented with the GREEN DOT toward the TOP of the board as shown to the right.

RESISTOR

There is a single resistor for this minibadge, it is small but can be soldered in either orientation.



BUILD GUIDE FOR BADGE STORE BADGE

DIFFICULTY
SIMPLE

LED

Two LEDs are mounted on the badge. Marked D1 and D2. The LEDs are small, and are oriented with the GREEN DOT toward the RIGHT of the board as shown to the right.

RESISTOR

There is a single resistor for this minibadge, it is small but can be soldered in either orientation.

JUMPER

The JUMPER must be used for the badge to work properly. It is in place to allow you to select BLINKING or SOLID powered LEDs.

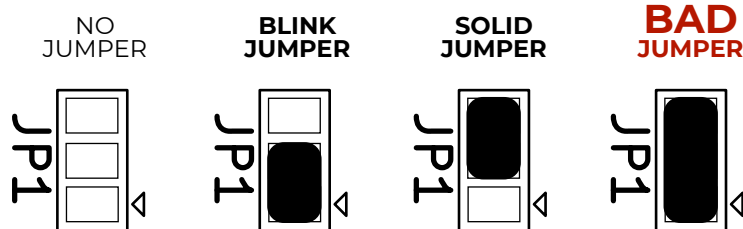
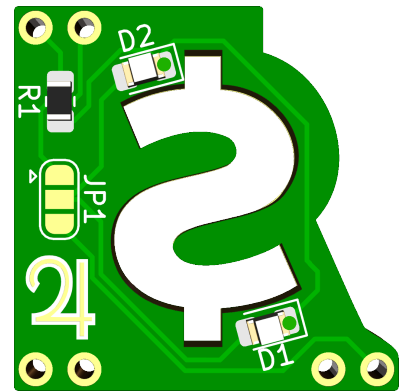
It is IMPORTANT to **NOT BRIDGE ALL 3 JUMPER PADS**. This will cause issues with your entire badge causing a SHORT.

BLINKING BADGE

To Configure the Badge to BLINK with the internal CLOCK, solder the middle and bottom Jumper together.

NO BLINKING

To configure the badge to be SOLID ON, solder the middle and top jumper pads together.



BUILD GUIDE FOR BADGE

RADIATION BADGE

DIFFICULTY
SIMPLE

LED

There are 3 LEDs that mount with the light emitting side toward the board. The LEDs have a TRIANGLE cutout on them that needs to be matched to the same shape on the board. These LEDs are relatively easy to solder.

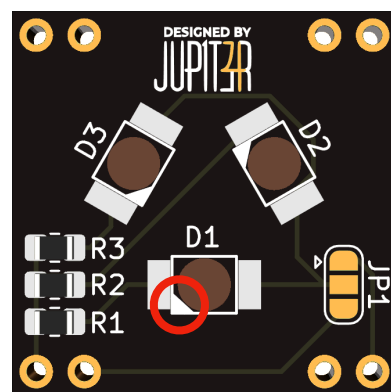
RESISTOR

There are 3 of the same resistors for this minibadge. They can go on in any order, and any orientation whereas they are all the same. They are slightly small, so place them carefully.

JUMPER

The JUMPER must be used for the badge to work properly. It is in place to allow you to select BLINKING or SOLID powered LEDs.

It is IMPORTANT to **NOT BRIDGE ALL 3 JUMPER PADS**. This will cause issues with your entire badge causing a SHORT.

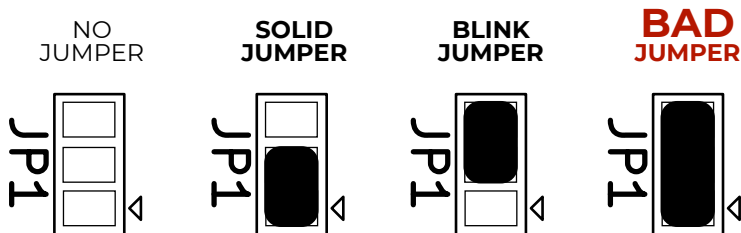


BLINKING BADGE

To Configure the Badge to BLINK with the internal CLOCK, solder the middle and top Jumper together.

NO BLINKING

To configure the badge to be SOLID ON, solder the middle and bottom jumper pads together.



BUILD GUIDE FOR BADGE

GADSEN FLAG

DIFFICULTY

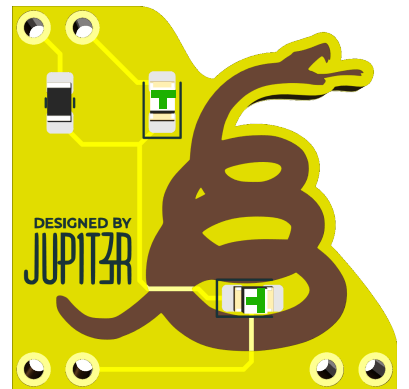
SIMPLE

LED

Two LEDs are mounted on the badge. LEDs are marked with a GREEN indicator and should be placed on the badge with the green side DOWN and LEFT (see image to the right)

RESISTOR

There is a single resistor for this minibadge, it is small but can be soldered in either orientation.



BUILD GUIDE FOR BADGE

MATRIX BADGE

DIFFICULTY

INTERMEDIATE

LED

There are FOUR LEDs on this badge. 2 RED, and 2 Blue. They should be clearly marked with a Blue and Red Marker. They need to be placed on the badge in the right orientation, and right order for them to function properly.

LED Orientation for the GREEN Indicator should match the image on the RIGHT.

RED LEDs, the Green Indicator faces DOWN

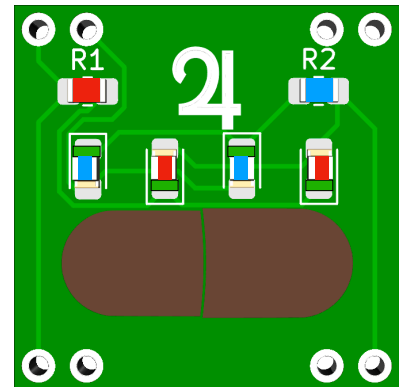
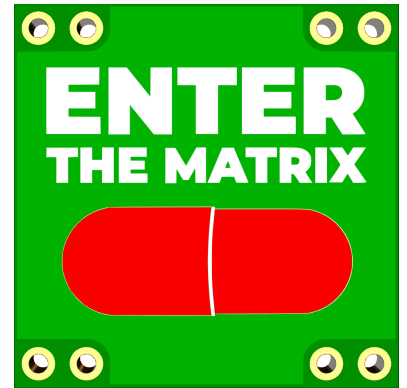
BLUE LEDs the Green Indicator faces UP

RESISTOR

There are two resistors on this badge, one for RED LEDs and one for the BLUE LEDs. They need to be matched on the badge as indicated on the RIGHT.

CLOCK REQUIRED

For this badge to function properly, it is necessary to have it connected with a badge with the Clock Pin enabled.



BUILD GUIDE FOR BADGE USA FLAG

DIFFICULTY

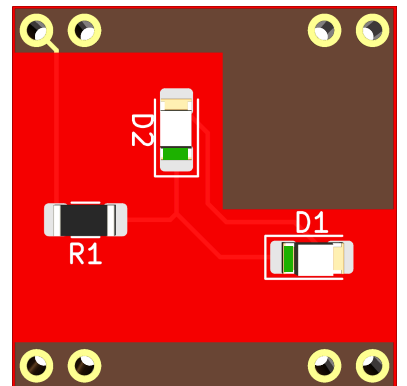
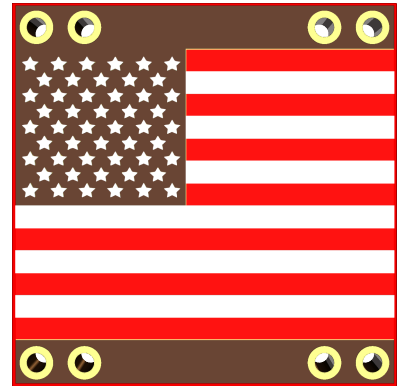
SIMPLE

LED

Two LEDs are mounted on the badge. LEDs are marked with a GREEN indicator and should be placed on the badge with the green side DOWN and LEFT (see image to the right)

RESISTOR

There is a single resistor for this minibadge, it is small but can be soldered in either orientation.



BUILD GUIDE FOR BADGE COMPUNET

DIFFICULTY
SIMPLE

LED

Two LEDs are mounted on the badge. Marked D1 and D2. The LEDs are small, and are oriented with the GREEN DOT toward the TOP of the board as shown to the right.

RESISTOR

There is a single resistor for this minibadge, it is small but can be soldered in either orientation.

