

DC2026_Type1.odt

12jan26

22may26

LEVEL 1 - Teaching Badge

- This is one of two badge/boards that can be soldered at the SYNShop table! (So we can keep seats rotating quickly).
- This badge is just be a smiley face screen print with LEDs for eyes, AND THAT'S IT. Thru-hole components, coin cell battery holder, and an SAO connector.
- The badge is 1.6" in diameter.
- Turn off power by taking out the battery or sliding a piece of paper under the contact.
- People should be able to assemble it in about 20 minutes.
- Diode protection added for battery if SAO also connected. If you want to live dangerously and want slightly brighter LEDs, replace the diode with a wire. REMEMBER DO NOT use the battery with the SAO connected.

Screen Print:

- Smiley Face
- SYNShop, The Las Vegas Hackerspace
- DefCon 34 - 2026

DefCon SAO changes - 22may26

3v power. LED 1.9v 183 ohm for 6 ma

Replace D3 with 91 ohm (preserve nose), replace R1,R2 with 91 ohm. Edit sch, update PCB, BOM, User

Notes:

1. The resistors, diode, and LEDs are mounted on the front side. The coin battery holder and SAO connector are mounted on the back side.

Parts – BOM - Teaching Badge

Quan	Ref	Part #	Description	Cost/100	Extended
1	BT1	36-1059-ND	HOLDER COIN 20MM PC	0.61	0.61
2	D1,D2	732-5016-ND	LED 5mm Round T/H	0.105	0.210
1	J2	732-5394-ND	HDR VERT 6POS 2.54MM	0.43	0.405
2	R1,R2,R3	CF14JT91ROCT-ND	RES 91 OHM 5% 1/4W AXIAL	0.0174	0.0522
1	B1	490-18646-ND	LITHIUM 3V COIN 20MM	0.212	0.212
1	PCB		PCB 1/6" dia	< \$3.00	< \$3.00

Appendix – Ordering Information

LEDs

732-5016-ND	151051RS11000	LED 5mm Round T/H	0.15/ea	0.105/500
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Resistors

CF14JT91ROCT-ND	CF14JT91R0	RES 91 OHM 5% 1/4W AXIAL	0.01468/250
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Diode

1N914FS-ND	1N914	DIODE STANDARD 100V 200MA	0.035/100
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SAO Connector

732-5394-ND	CONN HEADER VERT 6POS 2.54MM	0.43/ea	0.405/50
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Battery

Battery – Coin Cell

490-18646-ND	CR2032	LITHIUM 3V COIN 20MM	0.33/ea	0.212/250	220mAh
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Holder – Coin Cell

36-1059-ND	1059	HOLDER COIN 20MM PC PIN	0.85/ea	0.61/100	
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22may26 Updates

KiCad – DC2026_Type1 Rev4

DC2026_Type1_PCB_B.pdf

DC2026_Type1_PCB_F.pdf

DC2026_Type1_SCH.pdf

DC2026_Type1_KiCad.zip

DC2026_Type1_BOM.ods

Composite_BOM_List.ods

DC2026_Type1.odt

DC2026_Type1_User.odt

Copy to Production Packages DC2026_Type1 and zip up.