MilKris‘ CMWS for the DCS AH-64D Apache

DISCLAIMER: I’m not a professional maker! It’s not perfect, but it works and I’m fine with the result. Here and there, some filing, drilling, and gluing might be necessary...

This is my **CMWS (Common Missile Warning System) Control Panel** build for the DCS AH-64D Apache.

The panel is driven by by **DCS BIOS (Skunkworks)** an **Arduino Mega** and a **1.3” OLED display** . The Mega is required because the Uno simply doesn’t have enough RAM to run my code reliably - save yourself the headache and go straight to the Mega.

The **Threat Sector Index** is implemented with discrete LEDs for proper “something wants to kill you from that direction” vibes.

Total cost: ~50€ depending on what you already have in your parts bin.

Difficulty: Medium – you should know how to flash code to an Arduino using the Arduino DIE and setting up DCS BIOS. If you have no idea **how to set up DCS BIOS** or **upload code to an Arduino**, make sure to check out the excellent tutorial by Hornet’s Nest!

If that still feels too fiddly, feel free to contact me on Reddit - I can offer a pre-flashed Arduino as an alternative.

As with my other projects, I’ve included **extra STL files for builders without a laser engraver**, so you can simply 3D-print the labels instead.

There is also an **alternate Threat Sector Index version with a hole mask**. It’s not quite as pretty as the laser-engraved version, but it absolutely does the job.

If you’d prefer a proper laser-engraved Threat Sector Index, I can send you one - just contact me on Reddit.

This guide is intentionally kept short. There’s not much magic here beyond the pin mapping and wiring.
If you want to see the full process, just check out the timelapse build video

PSA from Command:

If this thing blew your mind and made your simpit jealous, maybe drop a little “thanks” in the jar. Projects like this don’t grow on trees; they’re handcrafted in basements powered by caffeine, copium, and pure autism.

https://www.paypal.com/donate/?hosted_button_id=XG6RA9RWPM84Y

I'm looking forward to your feedback — and of course, feel free to share pictures of your own TEDAC!

Yours,
MilKris

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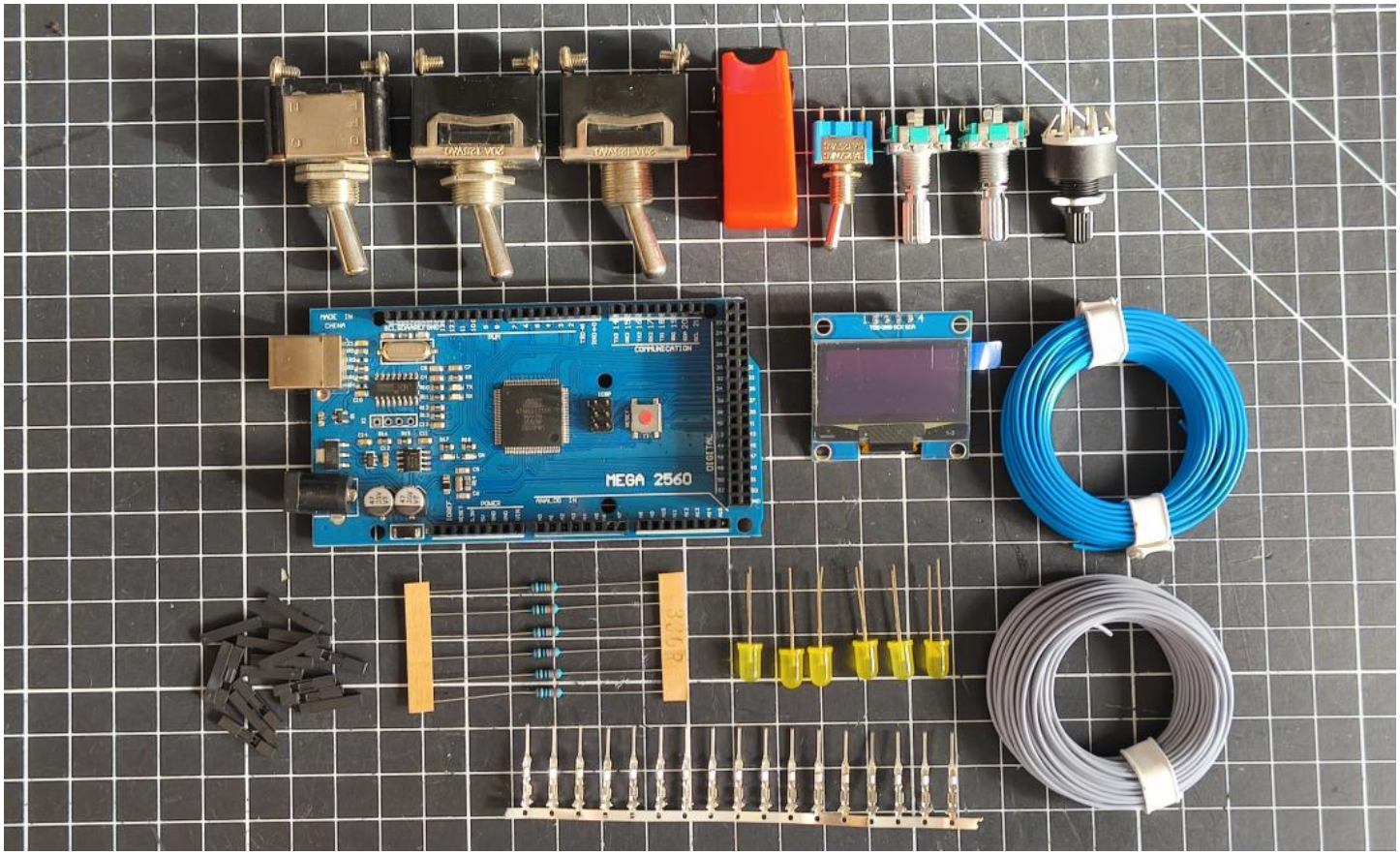
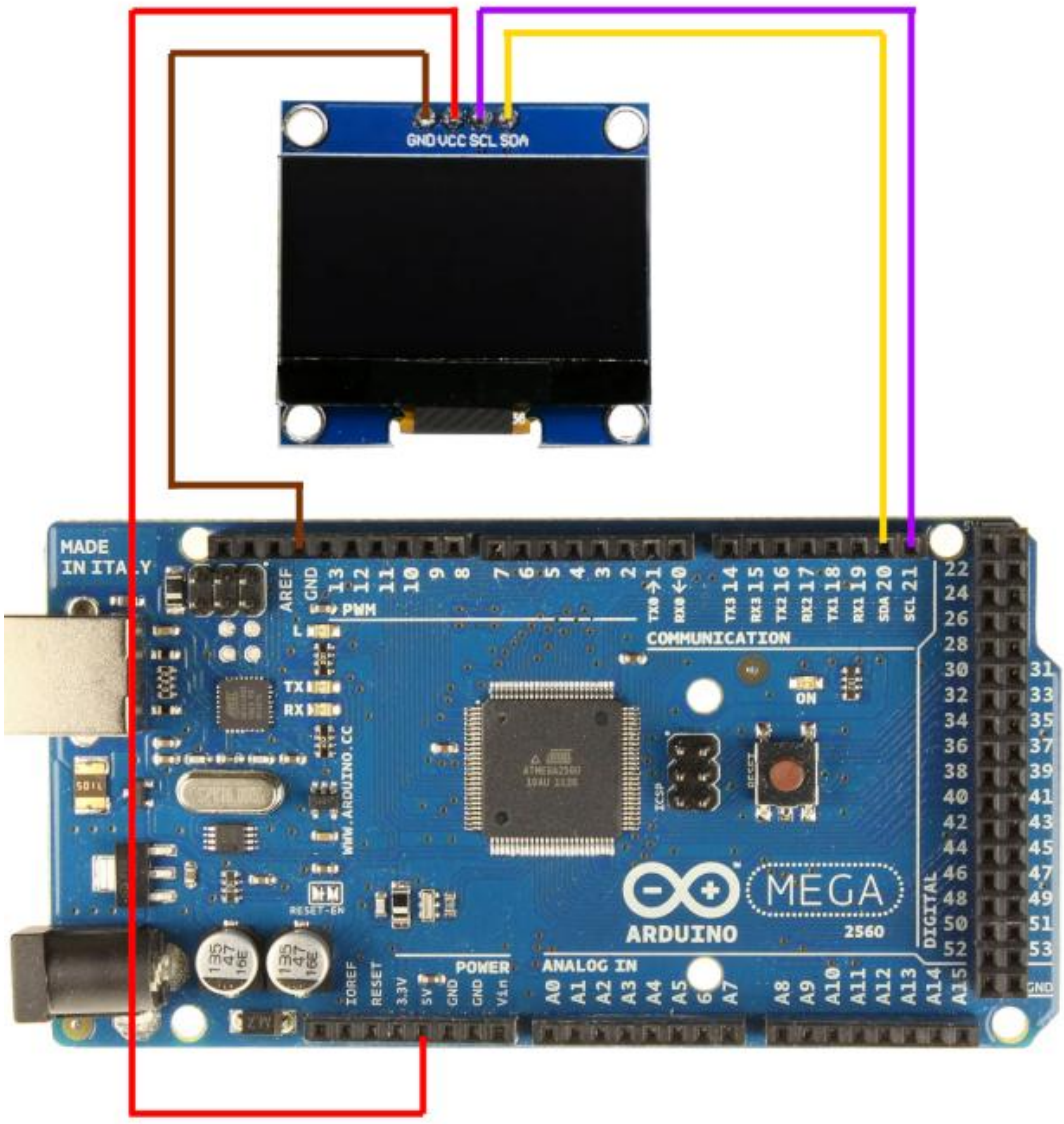
Additional Apache projects such as the TEDAC, KDU, MPDs, IHADSS, EUFD and others are available on my GitHub.

Part list:



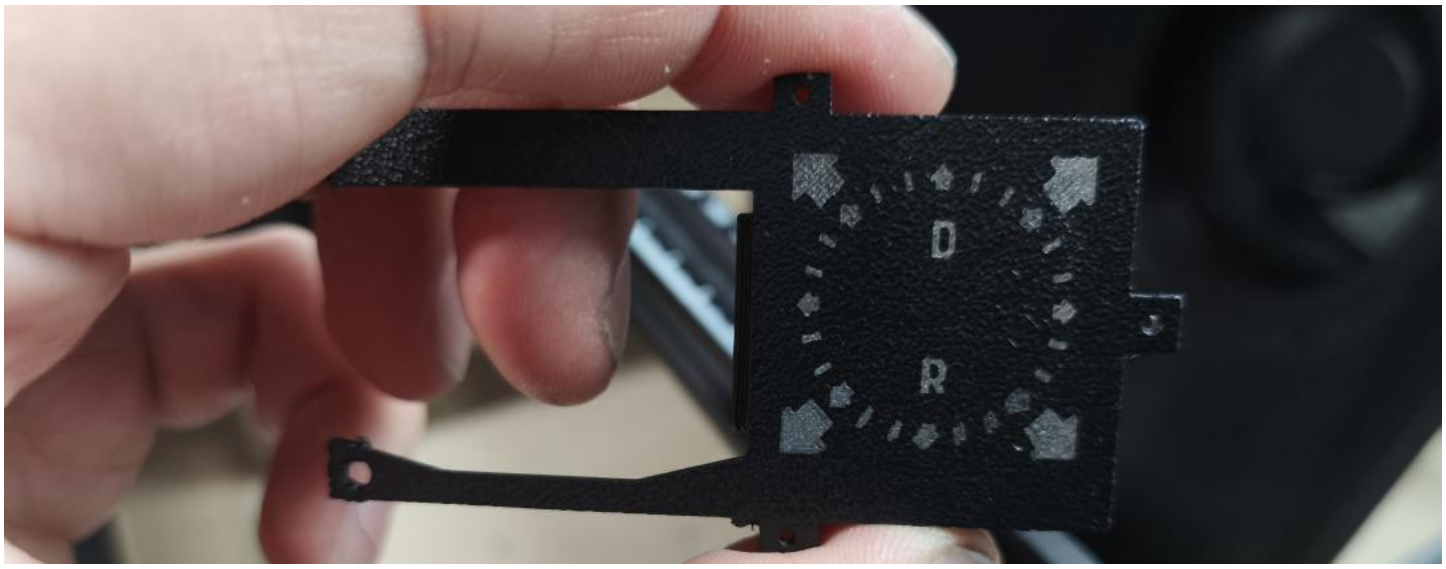
1× Arduino Mega 2560
1× 1.3" OLED Display 128×64 (SH1106, I2C)
6× 5 mm yellow LEDs
6× 330 Ω resistors
2× 360° rotary encoder (EC11 type)
3× 12 mm ON-OFF toggle switch (one with red safety cover)
1× 6 mm ON-OFF toggle switch
1× 16 mm rotary switch, 2-pole, 3-position
11× wood screws 2×6 mm
6× heat-set inserts M3×4×4.5 mm
15× M3 screws (length 5–12 mm depending on part thickness)
2.54 mm Dupont connectors (female)
AWG26 wire (≈ 0.14 mm²)
1× piece of green transparent acrylic glass — 56×31×3 mm

PIN Layout:

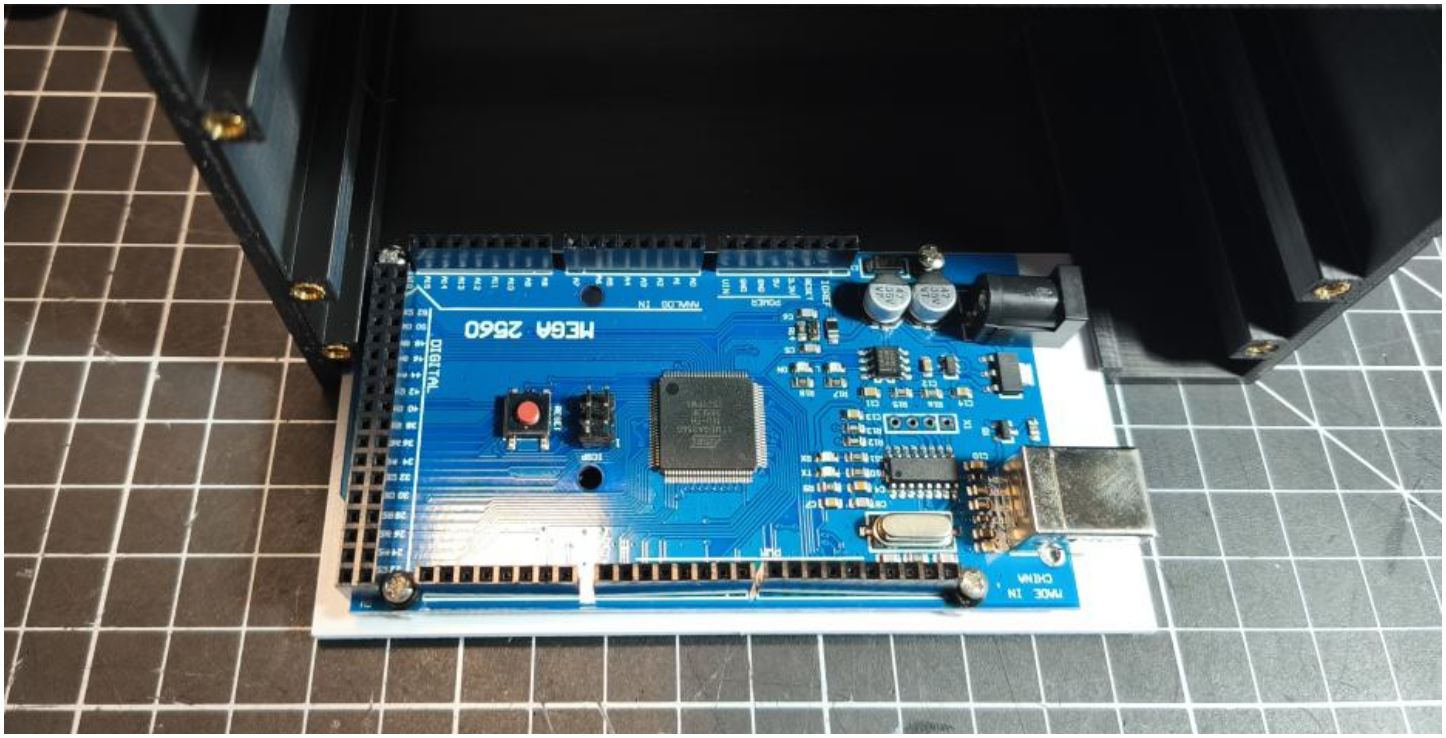



```
DISPLAY (I2C)
20  SDA
21  SCL

LED OUTPUTS
22  CMWS R BRT
23  CMWS D BRT
24  FWD RIGHT
25  AFT RIGHT
26  AFT LEFT
27  FWD LEFT

SWITCHES (2-POS → GND)
30  ARM
31  BYPASS
32  JETT
33  MODE

SWITCH (3-POS)
34  PWR A
35  PWR B

ROTARY ENCODER
36  LAMP A
37  LAMP B
38  VOL A
39  VOL B
```

A few tips and hints

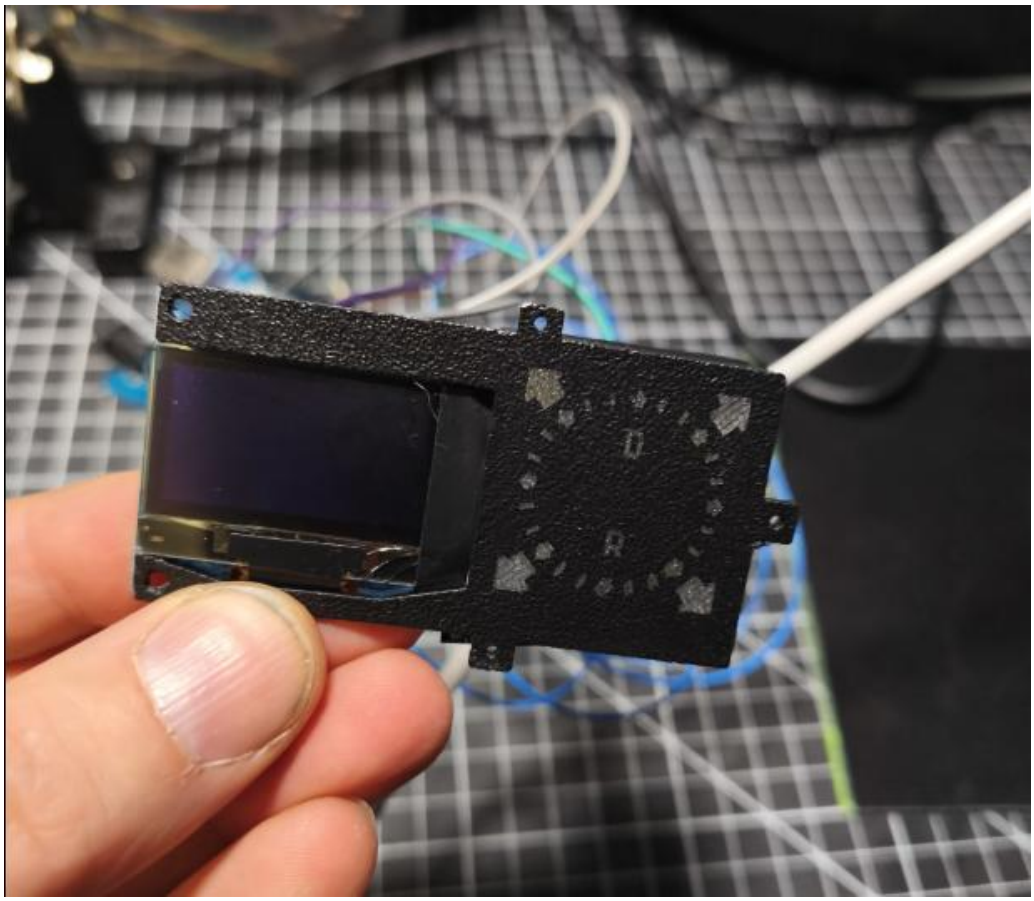


If you want to print the Threat Sector Cage laser engraver, you should use transparent filament for best results. If you're printing the hole mask instead, use black filament.



The Arduino is inserted using the sled

Installing the OLED Screen



The screen is simply placed into the "CMWS-Sector_Light_Cage" and then screwed into place. First, of course, insert the green acrylic/plex glass.