

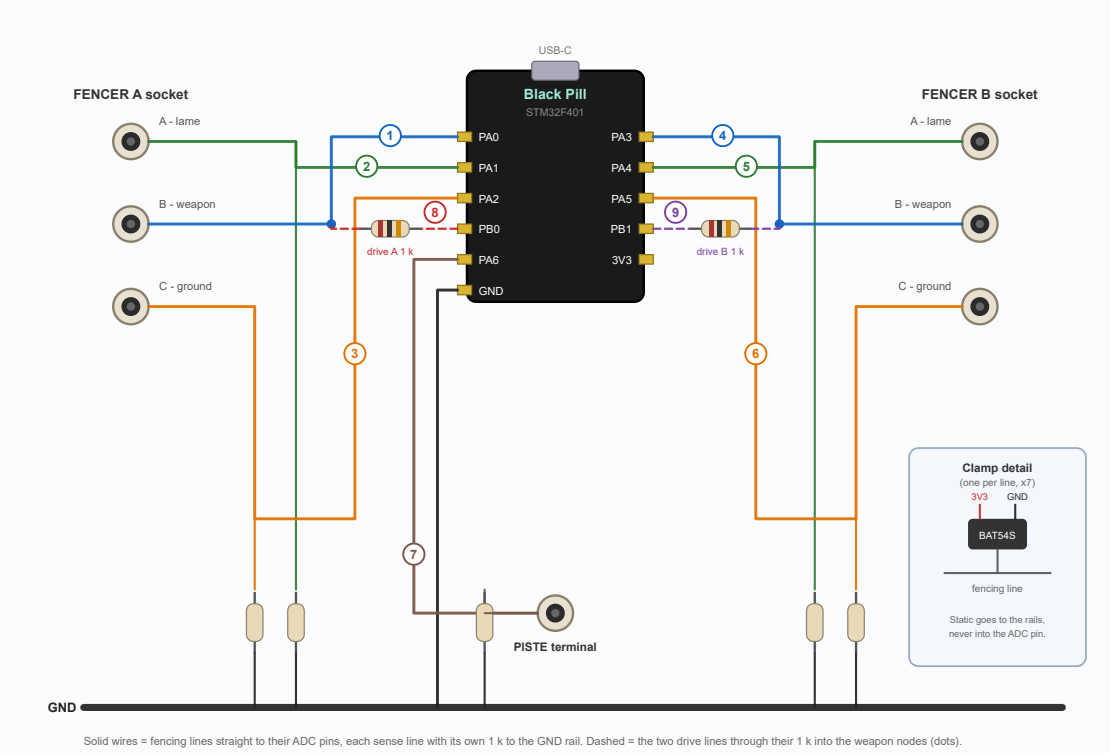
Three weapon fencing scoring box

STM32F401 front end

Pictorial wiring diagram

Doc 13 Rev A 2026-08-30

Sheet 1 of 2: the fencing front end. Solid coloured wires run each line straight to its ADC pin; every sense line also hangs a 1 k resistor to ground, and the two dashed drive lines feed the weapon nodes through their own 1 k from PB0 / PB1.



#	From	To	Wire
1	Fencer A socket, B (weapon) line	PA0 directly	blue
2	Fencer A socket, A (lame) line	PA1 directly, plus its own 1 k down to GND	green
3	Fencer A socket, C (ground) line	PA2 directly, plus 1 k to GND	orange
4	Fencer B socket, B line	PA3 directly	blue
5	Fencer B socket, A line	PA4 directly, plus 1 k to GND	green
6	Fencer B socket, C line	PA5 directly, plus 1 k to GND	orange
7	Piste terminal	PA6 directly, plus 1 k to GND	brown
8	PB0 (drive A)	through 1 k to the PA0 node	red, dashed
9	PB1 (drive B)	through 1 k to the PA3 node	purple, dashed
-	One BAT54S per fencing line (7 total)	middle pin on the line, ends to 3V3 and GND	see inset

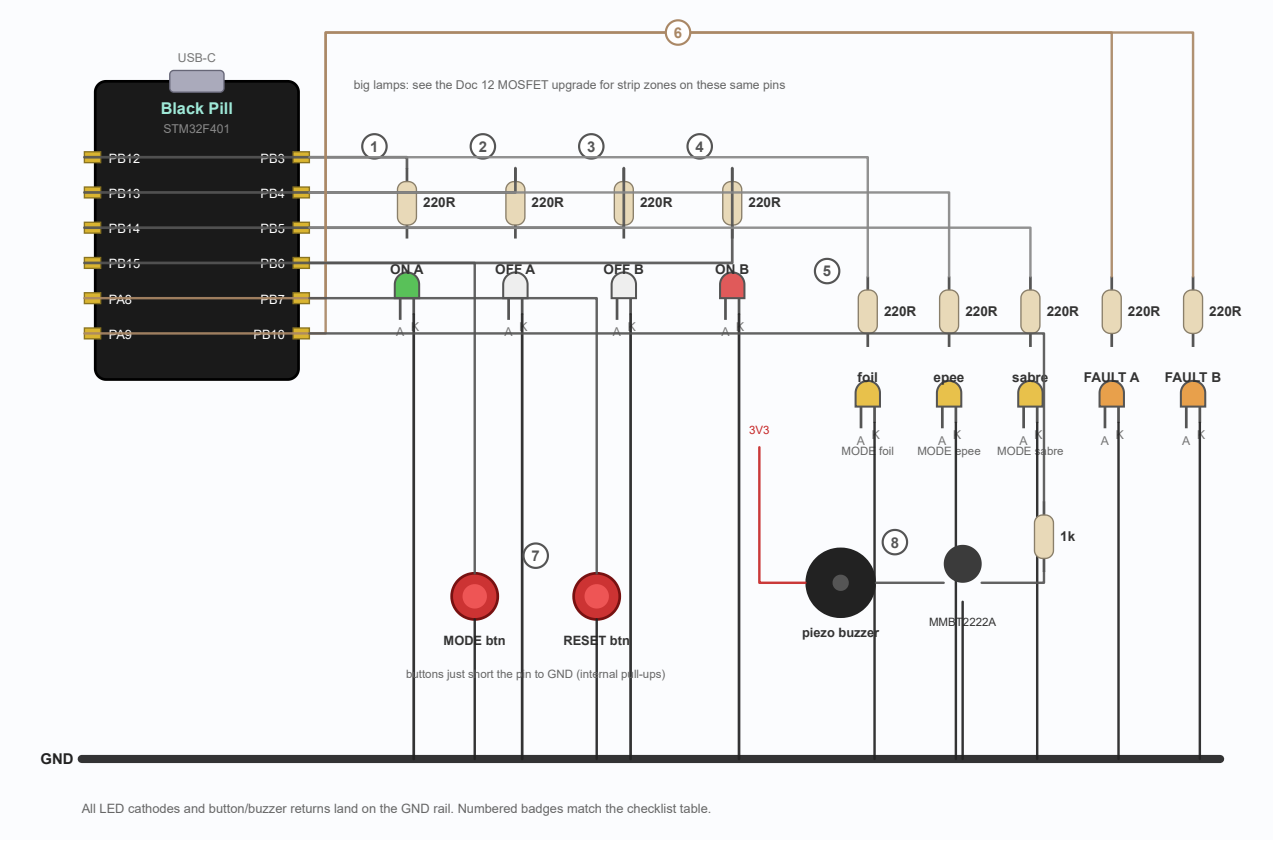
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Sheet 2 of 2: indicators and controls. Everything here is simple: pin, resistor, LED, ground - the only two subtleties are the buttons (no resistor, the chip's internal pull-ups do it) and the buzzer's little transistor.



#	Chain	What it is
1	PB12 → 220 R → green LED → GND	ON target A
2	PB13 → 220 R → white LED → GND	OFF target A
3	PB14 → 220 R → white LED → GND	OFF target B
4	PB15 → 220 R → red LED → GND	ON target B (Doc 12 puts MOSFET strip zones on these same four pins)
5	PB3 / PB4 / PB5 → 220 R → yellow LEDs → GND	Mode: foil / epee / sabre
6	PA8 / PA9 → 220 R → LEDs → GND	Fault A / Fault B
7	PB6 and PB7 each to one button, other side to GND	Mode + reset; pins use internal pull-ups, no resistor needed
8	PB10 → 1 k → MMBT2222A base; buzzer between 3V3 and collector; emitter to GND	Buzzer never loads the pin directly