POWER_SUPPLY

VBAT
5V
SW1
U1
LT1117-5.0
IN   OUT
GND
CN1
Alkaline
9V
550mAh
C3
10uF X 16V
C2
10uF X 16V

MICROCONTROLLER

5V
U6
ATMEGA328P-PU

Pin	Signal	Pin	Signal

VCC — 7
AVCC — 20
AREF — 21
GND — 8*2
PB6 — 9
PB7 — 10

PB0 — 14 — GPIO_LED
PB1 — 15 — GPIO_BUZZER_AC+
PB2 — 16 — GPIO_BUZZER_AC-
PC0 — 23 — ADC_C4_EXPLOSIVE_1
PC1 — 24 — ADC_C4_EXPLOSIVE_2
PC2 — 25 — ADC_C4_EXPLOSIVE_3
PC3 — 26
PC4 — 27 — LCD_I2C_SDA
PC5 — 28 — LCD_I2C_SCL
PD0 — 2 — KEYPAD_ROW_1
PD1 — 3
PD2 — 4 — KEYPAD_ROW_3
PD3 — 5 — KEYPAD_ROW_4
PD4 — 6 — KEYPAD_COL_1
PD5 — 11 — KEYPAD_COL_2
PD6 — 12 — KEYPAD_COL_3
PD7 — 13 — KEYPAD_ROW_2

C14 100nF
C17 100nF
C4 22pF
C5 22pF
Y1 16 MHz

5V
CN2
ICSP

MCU_ICSP_MOSI
2 1
4 3
6 5

MCU_ICSP_MISO — 18
MCU_ICSP_SCLK — 19
MCU_ICSP_RESET — 1
MCU_ICSP_MOSI — 17

PB4
PB5
PC6/RESET
PB3

R6
0R (1%)

LCD_BACKLIGHT_BRIGHTNESS

RED_LED

5V
R7
100R (5%)
LED4
RED
GPIO_LED
R3
100R (5%)
Q3
SQ2310
R5
10k (5%)

BUZZER

GPIO_BUZZER_AC+
R4
100R (5%)
LS1
Piezo
GPIO_BUZZER_AC-

LCD_DISPLAY

5V
5V
DS1
16x2 LCD Display
VDD
V0
VSS
A
RS R/W E DB0 DB1 DB2 DB3 DB4 DB5 DB6 DB7
K
RV1
10k
Q1
BC817
R18
1k (5%)
LCD_BACKLIGHT_BRIGHTNESS

5V 5V 5V
U4
PCF8574DW
VCC — 16
P0 P1 P2 — 4 5 6
P4 P5 P6 P7 — 9 10 11 12
GND — 8
INT — 13
A0 — 1
A1 — 2
A2 — 3
P3 — 7
SDA — 15
SCL — 14

5V 5V 5V 5V
R20 10k (5%)
R25 10k (5%)
R24 10k (5%)
R23 10k (5%)

R22 10k (5%)
R21 10k (5%)
C1 100nF

LCD_I2C_SDA
LCD_I2C_SCL

KEYPAD

KEYPAD_ROW_1 — R1 — 1 2 3
KEYPAD_ROW_2 — R2 — 4 5 6
KEYPAD_ROW_3 — R3 — 7 8 9
KEYPAD_ROW_4 — R4 — * 0 #
C1 C2 C3
KEYPAD_COL_1
KEYPAD_COL_2
KEYPAD_COL_3

C4_SHELLS_DETECTION

5V
R14 22k (5%) — YELLOW WIRE — CN5-2
R15 47k (5%) — BLACK WIRE — CN4-2
R16 100k (5%) — RED WIRE — CN4-1

ADC_C4_EXPLOSIVE_1 — R17 1k (5%)
ADC_C4_EXPLOSIVE_2 — R27 1k (5%)
ADC_C4_EXPLOSIVE_3 — R28 1k (5%)

R2 10k (5%)
R12 10k (5%)
R13 10k (5%)

C4 SHELL   C4 SHELL   C4 SHELL

DESIGN BY:

Tiago Silva

github.com/TiagoPaulaSilva/CS-GO-s-C4

open hardware

PROJECT TITLE: CS GO's C4

SHEET TITLE:

SHEET: 1/1

DATE: 07/01/2023 13:16

REV.: 1.7