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

VCC	7	
AVCC	20	
AREF	21	
GND	8*2	

C14 100nF   C17 100nF

C4 22pF
C5 22pF
Y1 16 MHz

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
PB6 9
PB7 10
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

CN2 ICSP
MCU_ICSP_MISO 18
MCU_ICSP_SCLK 19
MCU_ICSP_RESET 1
MCU_ICSP_MOSI 17

PB4
PB5
PC6/RESET
PB3

MCU_ICSP_MOSI

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
K
RS R/W E DB0 DB1 DB2 DB3 DB4 DB5 DB6 DB7

RV1 10k

Q1 BC817
R18 1k (5%)
LCD_BACKLIGHT_BRIGHTNESS

5V 5V 5V

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

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

LCD_I2C_SDA
LCD_I2C_SCL

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

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

NC COL2 ROW1 COL1 ROW4 COL3 ROW3 ROW2 NC

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:
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open hardware

PROJECT TITLE: CS GO's C4
SHEET TITLE:
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