POWER_SUPPLY

VBAT
5V
3.3V
SW1
U1 LT1117-5.0
IN OUT GND
U3 LT1117-3.3
IN OUT GND
CN1 Alkaline 9V 550mAh
C2 10uF x 16V
C3 10uF x 16V

MICROCONTROLLER

3.3V
U6 ATMEGA328P-AU
C14 100nF
C17 100nF
3.3V
C15 100nF
Y1 16 MHz
C16 100nF
3.3V
CN2 ICSP

Pin	Signal		Pin	Signal
4*2	VCC	PB0	12	GPIO_LED
18	AVCC	PB1	13	GPIO_BUZZER
20	AREF	PB2	14	GPIO_CHG_STATUS
		PC0	23	
		PC1	24	
3*3	GND	PC2	25	
		PC3	26	
		PC4	27	LCD_I2C_SDA
7	PB6	PC5	28	LCD_I2C_SCL
		PD0	30	KEYPAD_ROW_1
		PD1	31	
8	PB7	PD2	32	KEYPAD_ROW_3
		PD3	1	KEYPAD_ROW_4
		PD4	2	KEYPAD_COL_1
		PD5	9	KEYPAD_COL_2
16	PB4	PD6	10	KEYPAD_COL_3
17	PB5	PD7	11	KEYPAD_ROW_2
29	PC6/RESET	ADC6	19	ADC_BATTERY_VOLTAGE
15	PB3	ADC7	22	

MCU_ICSP_MISO
MCU_ICSP_SCLK
MCU_ICSP_RESET
MCU_ICSP_MOSI

RED_LED

3.3V
LED4 RED
GPIO_LED
R3 100R (5%)
Q3 SQ2310
R5 10k (5%)

BUZZER

VBAT
LS1 3V
GPIO_BUZZER
R4 100R (5%)
Q5 SQ2310
R6 10k (5%)

LCD_DISPLAY

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

3.3V 3.3V 3.3V
U4 PCF8574DW
C1 100nF
R22 10k (5%)
R21 10k (5%)

Pin	Signal		Pin	Signal
16	VCC	P0 P1 P2		
		P4 P5 P6 P7		
8	GND	INT	13	
15	SDA	A0	1	
14	SCL	A1	2	
		A2	3	
		P3	7	LCD_LED_BACKLIGHT

LCD_I2C_SDA
LCD_I2C_SCL

3.3V 3.3V 3.3V 3.3V 3.3V
R20 10k (5%)
R25 10k (5%)
R24 10k (5%)
R23 10k (5%)
R1 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

C4_SHELLS_DETECTION

3.3V
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%) 1.64V
ADC_C4_EXPLOSIVE_2 R27 1k (5%) 1.05V
ADC_C4_EXPLOSIVE_3 R28 1k (5%) 0.59V

R2 10k (5%)
R12 10k (5%)
R13 10k (5%)
C4 SHELL C4 SHELL C4 SHELL