



No.	Name	Description	Quantity
1	PCB board	203 x 50 x 1.6mm Gold plating	1
2	VFD tube spacer	Laser cut	12
3	Plastic spacer	Φ5mm x 11mm for support IR receiver	1
4	Plastic spacer	Φ5mm x 3mm for support light sensor	2
5	Rubber sleeve	Φ7mm x 9mm for cover light sensor	1
6	IR remote controller	NCH	1
7	Power adapter	DC 5V 1.5A	1
8	Top and bottom plate	Laser cut	2
9	Wooden frame		1
10	Copper spacer	M3 x 18mm female-female for support top and bottom plate	4
11	Copper spacer	M3 x 5mm female-female for support PCB board	5
12	Philips screw	M3 x 4mm for fix PCB board	5
13	Hexagon socket head screw	M3 x 5mm for fix PCB board	5
14	Hexagon socket head screw	M3 x 8mm for fix top and bottom plate	8

Electronic Components

No.	Name	Description	Designator	Footprint	Qty	Value
1	STC15F2K56S2	Programmed	MCU	SKDIP28	1	
2	TD62783APG	IC	U1, U2, U3, U4, U5, U6	DIP18	6	
3	74HC595N	IC	U7, U8, U9, U10, U11, U12	DIP16	6	
4	LPD8806D	IC	U13	DIP16	1	
5	MC34063	IC	U16, U17	DIP8	2	
6	DS3231Module	RTC Module	U15	DIP8	1	
7	IR Receiver		U14	HS0038	1	
8	IRFU5305	P-Channel Power MOSFET	Q1	TO-251	1	
9	IRLU024	N-Channel Power MOSFET	Q2	TO-251	1	
10	BS250	P-Channel Power MOSFET	Q6	TO-92	1	BS250
11	Capacitor		C8, C10	C-102	2	330pF
12	Capacitor		C1, C2, C3, C4, C5, C6, C12, C14, C15, C16	C-102	10	0.1uF
13	Polarized Capacitor		C11	C-4x6	1	10uF/25v
14	Polarized Capacitor		C13	C-6.3x8	1	100uF/35v
15	Polarized Capacitor		C7, C9, C17	C-6.3x8	3	220uF/16V
16	Battery Socket		Battery	CR1220	1	
17	Battery		Battery	CR1220	1	
18	FUSE		F1	F3.6x10	1	250V-1.5A
19	Buzzer		Buzzer	BUZZER9mm	1	
20	Power Socket		DC5V	DC-003	1	
21	Headset Socket		GPS, Temp	PJ-313	2	
22	Ambient Light Sensor		ALS	5mm	1	
23	PNP Transistor		Q3, Q5	TO-92	2	C9015C
24	NPN Transistor		Q4, Q7	TO-92	2	C9014C
25	Resistor		R28, R31	1/4W	2	0.24
26	Resistor		R5	1/8W	1	10
27	Resistor		R11, R14, R17, R20, R23, R26	1/8W	6	120
28	Resistor		R9, R10, R12, R13, R15, R16, R18, R19, R21, R22, R24, R25, R30	1/8W	13	200
29	Resistor		R1, R3, R4	1/8W	3	1K
30	Resistor		R2	1/8W	1	4.7K
31	Resistor		R8, R27, R32	1/8W	3	10K
32	Resistor		R6, R7	1/8W	2	20K
33	Resistor		R29	1/8W	1	100K
34	Inductance		L1, L2	L-5x12	2	100uH
35	Diode		D2		1	1N4007
36	Schottky Diode		D1, D3		2	1N5819
37	LEDs		LED1, LED2, LED3, LED4, LED5, LED6	5mmRGB	6	
38	VFD tubes		IV1, IV2, IV3, IV4, IV5, IV6	IV11	6	

Designer
E-mail:
Website:

Yan Zeyuan. China
yanzeyuan@qq.com
www.nixieclock.org