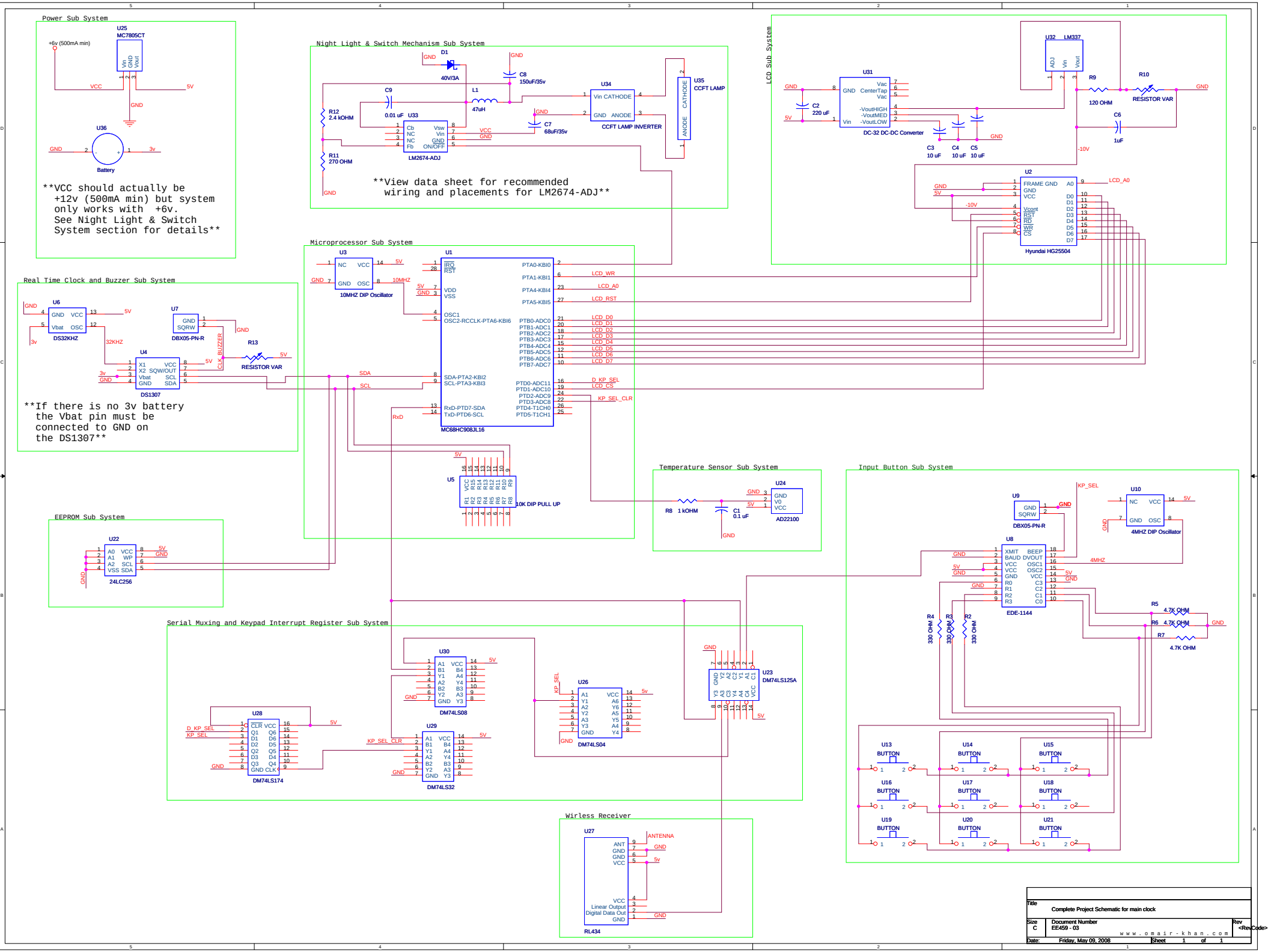
Power Sub System
U25
MC7805CT
+6v (500mA min)
Vin GND Vout
VCC
5V
GND
U36
Battery
VCC should actually be +12v (500mA min) but system only works with +6v. See Night Light & Switch System section for details
Night Light & Switch Mechanism Sub System
D1
40V/3A
C8
150uF/35v
C9
0.01 uF
L1
47uH
R12
2.4 kOHM
R11
270 OHM
U33
LM2674-ADJ
Cb NC NC Fb
Vsw Vin GND ON/OFF
C7
68uF/35v
U34
CCFT LAMP INVERTER
Vin CATHODE
GND ANODE
U35
CCFT LAMP
CATHODE ANODE
View data sheet for recommended wiring and placements for LM2674-ADJ
LCD Sub System
U31
DC-32 DC-DC Converter
GND CenterTap Vac
Vac -VoutHIGH -VoutMED -VoutLOW
Vin
C2
220 uF
C3
10 uF
C4
10 uF
C5
10 uF
U32
LM337
ADJ Vin Vout
R9
120 OHM
R10
RESISTOR VAR
C6
1uF
-10V
U2
Hyundai HG25504
FRAME GND GND VCC
Vcont RST RD WR CS
A0 D0 D1 D2 D3 D4 D5 D6 D7
LCD_A0
Microprocessor Sub System
U3
10MHZ DIP Oscillator
NC VCC GND OSC
10MHZ
U1
MC68HC908JL16
IRQ RST
VDD VSS
OSC1 OSC2-RCCLK-PTA6-KBI6
SDA-PTA2-KBI2 SCL-PTA3-KBI3
RxD-PTD7-SDA TxD-PTD6-SCL
PTA0-KBI0 PTA1-KBI1 PTA4-KBI4 PTA5-KBI5
PTB0-ADC0 PTB1-ADC1 PTB2-ADC2 PTB3-ADC3 PTB4-ADC4 PTB5-ADC5 PTB6-ADC6 PTB7-ADC7
PTD0-ADC11 PTD1-ADC10 PTD2-ADC9 PTD3-ADC8 PTD4-T1CH0 PTD5-T1CH1
LCD_WR
LCD_A0
LCD_RST
LCD_D0 LCD_D1 LCD_D2 LCD_D3 LCD_D4 LCD_D5 LCD_D6 LCD_D7
D_KP_SEL
LCD_CS
KP_SEL_CLR
SDA
SCL
RxD
U5
10K DIP PULL UP
Real Time Clock and Buzzer Sub System
U6
DS32KHZ
GND VCC Vbat OSC
32KHZ
U7
DBX05-PN-R
GND SQRW
BUZZER
R13
RESISTOR VAR
U4
DS1307
X1 X2 Vbat GND
VCC SQW/OUT SCL SDA
If there is no 3v battery the Vbat pin must be connected to GND on the DS1307
EEPROM Sub System
U22
24LC256
A0 A1 A2 VSS
VCC WP SCL SDA
Temperature Sensor Sub System
R8 1 kOHM
C1
0.1 uF
U24
AD22100
GND V0 VCC
Input Button Sub System
U9
DBX05-PN-R
GND SQRW
U10
4MHZ DIP Oscillator
NC VCC GND OSC
U8
EDE-1144
XMIT BAUD VCC VCC GND R0 R1 R2 R3
BEEP DVOUT OSC1 OSC2 VCC C3 C2 C1 C0
KP_SEL
4MHZ
R4 330 OHM
R3 330 OHM
R2 330 OHM
R5 4.7K OHM
R6 4.7K OHM
R7 4.7K OHM
U13 U14 U15 U16 U17 U18 U19 U20 U21
BUTTON
Serial Muxing and Keypad Interrupt Register Sub System
U30
DM74LS08
A1 B1 Y1 A2 B2 Y2 GND
VCC B4 A4 Y4 B3 A3 Y3
U26
DM74LS04
A1 Y1 A2 Y2 A3 Y3 GND
VCC A6 Y6 A5 Y5 A4 Y4
U23
DM74LS125A
U28
DM74LS174
CLR Q1 D1 D2 Q2 D3 Q3 GND
VCC Q6 D6 D5 Q5 D4 Q4 CLK
D_KP_SEL
KP_SEL
U29
DM74LS32
A1 B1 Y1 A2 B2 Y2 GND
VCC B4 A4 Y4 B3 A3 Y3
KP_SEL_CLR
Wirless Receiver
U27
RL434
ANT GND GND VCC
VCC Linear Output Digital Data Out GND
ANTENNA
Title
Complete Project Schematic for main clock
Size C
Document Number EE459 - 03
www.omair-khan.com
Rev <RevCode>
Date: Friday, May 09, 2008
Sheet 1 of 1