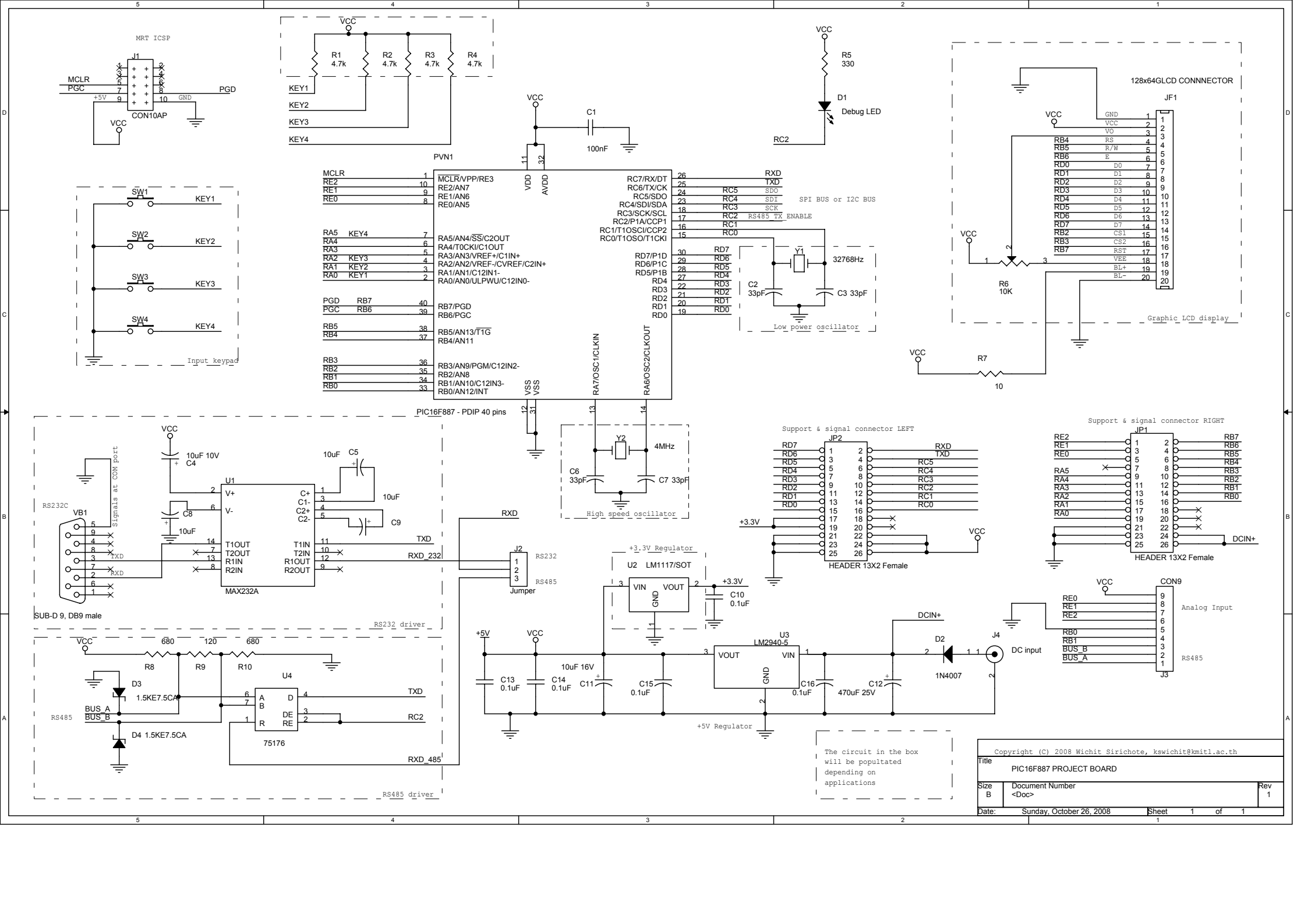
MRT ICSP
J1
CON10AP
MCLR
PGC
PGD
+5V
GND
VCC
R1 4.7k
R2 4.7k
R3 4.7k
R4 4.7k
KEY1
KEY2
KEY3
KEY4
C1
100nF
R5 330
D1
Debug LED
RC2
128x64GLCD CONNNECTOR
JF1
GND
VCC
VO
RB4 RS
RB5 R/W
RB6 E
RD0 D0
RD1 D1
RD2 D2
RD3 D3
RD4 D4
RD5 D5
RD6 D6
RD7 D7
RB2 CS1
RB3 CS2
RB7 RST
VEE
BL+
BL-
R6 10K
Graphic LCD display
R7 10
SW1
SW2
SW3
SW4
Input keypad
PVN1
MCLR/VPP/RE3
RE2/AN7
RE1/AN6
RE0/AN5
RA5/AN4/SS/C2OUT
RA4/T0CKI/C1OUT
RA3/AN3/VREF+/C1IN+
RA2/AN2/VREF-/CVREF/C2IN+
RA1/AN1/C12IN1-
RA0/AN0/ULPWU/C12IN0-
RB7/PGD
RB6/PGC
RB5/AN13/T1G
RB4/AN11
RB3/AN9/PGM/C12IN2-
RB2/AN8
RB1/AN10/C12IN3-
RB0/AN12/INT
RC7/RX/DT
RC6/TX/CK
RC5/SDO
RC4/SDI/SDA
RC3/SCK/SCL
RC2/P1A/CCP1
RC1/T1OSCI/CCP2
RC0/T1OSO/T1CKI
RD7/P1D
RD6/P1C
RD5/P1B
RD4
RD3
RD2
RD1
RD0
VDD
AVDD
VSS
VSS
RA7/OSC1/CLKIN
RA6/OSC2/CLKOUT
SPI BUS or I2C BUS
RS485_TX_ENABLE
Y1
32768Hz
C2 33pF
C3 33pF
Low power oscillator
PIC16F887 - PDIP 40 pins
Y2
4MHz
C6 33pF
C7 33pF
High speed oscillator
Support & signal connector LEFT
JP2
HEADER 13X2 Female
Support & signal connector RIGHT
JP1
HEADER 13X2 Female
DCIN+
RS232C
VB1
SUB-D 9, DB9 male
Signals at COM port
TXD
RXD
U1
MAX232A
V+
V-
C+
C1-
C2+
C2-
T1OUT
T2OUT
R1IN
R2IN
T1IN
T2IN
R1OUT
R2OUT
C4 10uF 10V
C5 10uF
C8 10uF
C9 10uF
RXD_232
RS232 driver
J2
Jumper
RS232
RS485
+3.3V Regulator
U2 LM1117/SOT
VIN
VOUT
GND
+3.3V
C10 0.1uF
U3
LM2940-5
C11 10uF 16V
C12 470uF 25V
C13 0.1uF
C14 0.1uF
C15 0.1uF
C16 0.1uF
+5V Regulator
D2
1N4007
J4
DC input
CON9
Analog Input
J3
RS485
R8 680
R9 120
R10 680
U4
75176
D3 1.5KE7.5CA
D4 1.5KE7.5CA
BUS_A
BUS_B
RXD_485
RS485 driver
The circuit in the box will be populated depending on applications
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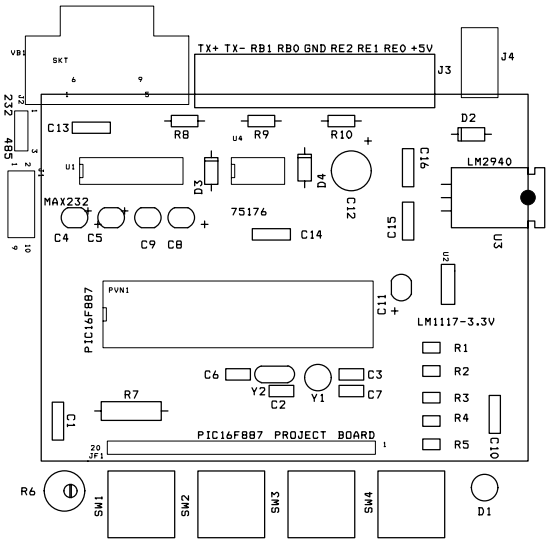
Title
PIC16F887 PROJECT BOARD
Size B
Document Number <Doc>
Rev 1
Date: Sunday, October 26, 2008
Sheet 1 of 1

PIC16F887 PROJECT BOARD Revised: Sunday, October 26, 2008
Revision: 1

Bill Of Materials November 8,2008 10:35:05 Page1

Item	Quantity	Reference	Part
1	1	C1	100nF
2	4	C2,C3,C6,C7	33pF
3	1	C4	10uF 10V
4	3	C5,C8,C9	10uF
5	3	C10,C13,C14	0.1uF
6	1	C11	10uF 16V
7	1	C12	470uF 25V
8	2	C15,C16	0.1uF
9	1	D1	Debug LED
10	1	D2	1N4007
11	2	D4,D3	1.5KE7.5CA
12	1	JF1	128x64GLCD CONNNECTOR
13	2	JP1,JP2	HEADER 13X2 Female
14	1	J1	CON10AP
15	1	J2	Jumper
16	1	J3	CON9
17	1	J4	DC input
18	1	PVN1	PIC16F887 - PDIP 40 pins
19	4	R1,R2,R3,R4	4.7k
20	1	R5	330
21	1	R6	10K
22	1	R7	10
23	2	R8,R10	680
24	1	R9	120
25	4	SW1,SW2,SW3,SW4	SW PUSHBUTTON
26	1	U1	MAX232A
27	1	U2	LM1117/SOT
28	1	U3	LM2940-5
29	1	U4	75176
30	1	VB1	SUB-D 9, DB9 male
31	1	Y1	32768Hz
32	1	Y2	4MHz


TX+ TX- RB1 RB0 GND RE2 RE1 RE0 +5V
J3
J4
SKT
232
485
C13
R8
R9
R10
D2
U4
U1
D3
D4
C12
C16
LM2940
U3
MAX232
75176
C4
C5
C9
C8
C14
C15
PVN1
PIC16F887
C11
LM1117-3.3V
R1
R2
R3
R4
R5
C6
C3
C7
Y2
C2
Y1
R7
C1
C10
PIC16F887 PROJECT BOARD
JP1
R6
SW1
SW2
SW3
SW4
D1