BCD_A BCD_A 5 A VDD 16 VCC C1 100nF GND
BCD_B BCD_B 3 B
BCD_C BCD_C 2 C
BCD_D BCD_D 4 D
LD LD 1 LD
BI 6 PH GND
BI 7 BI
8 GND

U1
MC14543BD

9 R1 1k A
10 R2 1k B
11 R3 1k C
12 R4 1k D
13 R5 1k E
15 R6 1k F
14 R7 1k G

a b c d e f g

GND

DS1
A 16 a DIG1 DIG2 a 11 A
B 15 b   b 10 B
C 3 c   c 8 C
D 2 d   d 6 D
E 1 e   e 5 E
F 18 f   f 12 F
G 17 g   g 7 G
DP 4 DP1   DP2 9 DP
A1 14 A1   A2 13 A2
DC56-51PBWA/A

DS2
A 16 a DIG1 DIG2 a 11 A
B 15 b   b 10 B
C 3 c   c 8 C
D 2 d   d 6 D
E 1 e   e 5 E
F 18 f   f 12 F
G 17 g   g 7 G
DP 4 DP1   DP2 9 DP
A3 14 A1   A2 13 A4
DC56-51PBWA/A

DISP0 Q1 A1
MMUN2211LT1 GND

DISP1 Q2 A2
MMUN2211LT1 GND

DISP2 Q3 A3
MMUN2211LT1 GND

DISP3 Q4 A4
MMUN2211LT1 GND

DECIMAL R8 1k DP

Title

Size Number Revision
A4
Date: 16/02/2012 Sheet of
File: C:\Simon\..\7 Segment Display.SchDoc Drawn By:
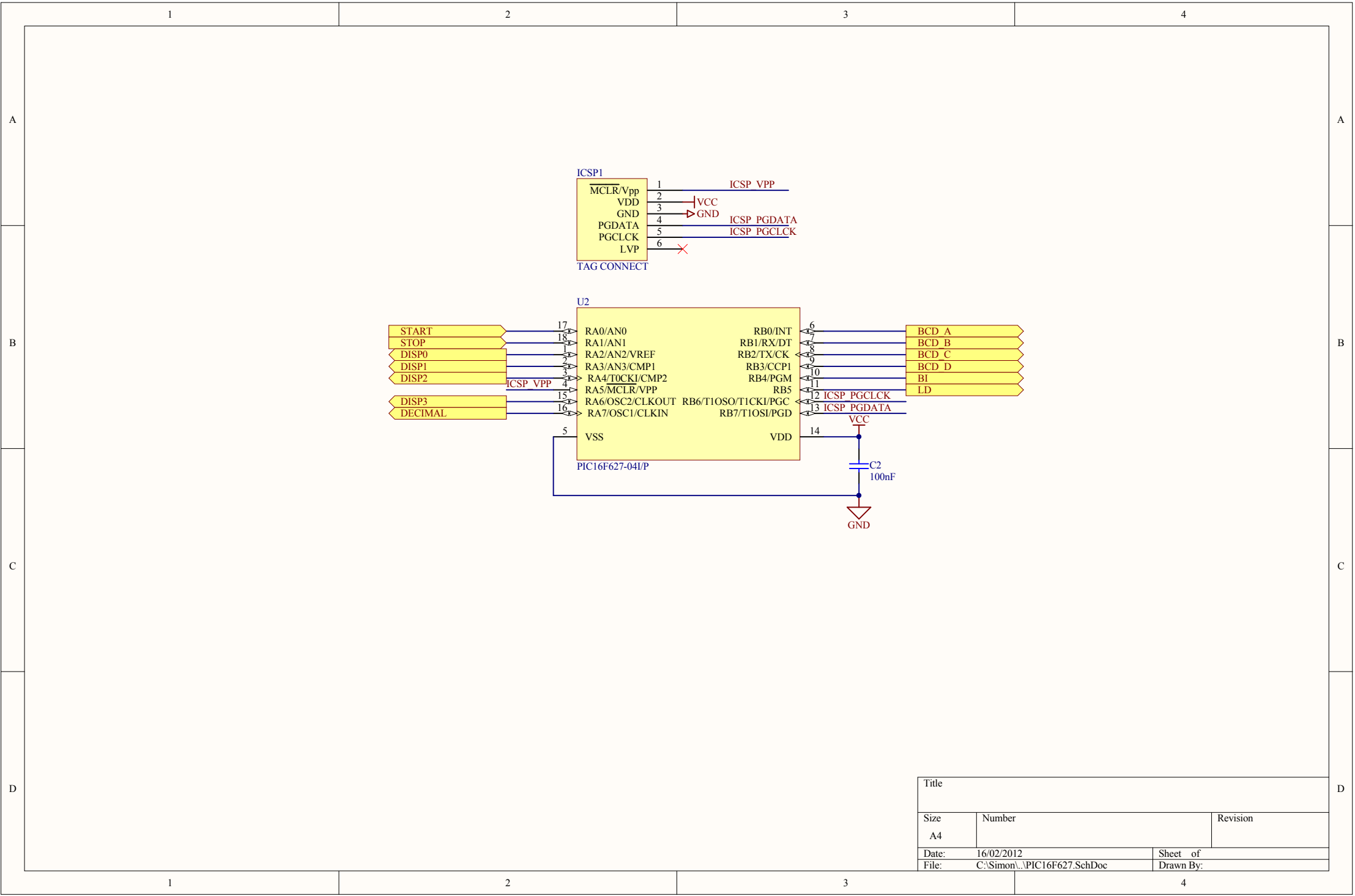
A

U_PSU
PSU.SchDoc

U_PIC16F627
PIC16F627.SchDoc

U_7 Segment Display
7 Segment Display.SchDoc

P1

VIN

1
2
3
4

Header 4

GND

BUTTON 1
BUTTON 2

GND

GND

R9
R10
R11
R12

10k
10k
10k
10k

START (VIN)

STOP

START

STOP

BCD_A
BCD_B
BCD_C
BCD_D

LD
BI
DECIMAL

DISP0
DISP1
DISP2
DISP3

BCD_A
BCD_B
BCD_C
BCD_D

LD
BI
DECIMAL

DISP0
DISP1
DISP2
DISP3

B

C

D

Title

Size
A4

Number

Revision

Date: 16/02/2012
File: C:\Simon\..\Barun Module.SchDoc

Sheet   of
Drawn By:

ICSP1

MCLR/Vpp	1		ICSP_VPP
VDD	2	VCC	
GND	3	GND	
PGDATA	4		ICSP_PGDATA
PGCLCK	5		ICSP_PGCLCK
LVP	6	✕	

TAG CONNECT

U2

START	17	RA0/AN0	RB0/INT	6	BCD_A	
STOP	18	RA1/AN1	RB1/RX/DT	7	BCD_B	
DISP0	1	RA2/AN2/VREF	RB2/TX/CK	8	BCD_C	
DISP1	2	RA3/AN3/CMP1	RB3/CCP1	9	BCD_D	
DISP2	3	RA4/T0CKI/CMP2	RB4/PGM	10	BI	
ICSP_VPP	4	RA5/MCLR/VPP	RB5	11	LD	
DISP3	15	RA6/OSC2/CLKOUT	RB6/T1OSO/T1CKI/PGC	12	ICSP_PGCLCK	
DECIMAL	16	RA7/OSC1/CLKIN	RB7/T1OSI/PGD	13	ICSP_PGDATA	
	5	VSS	VDD	14		

PIC16F627-04I/P

VCC

C2
100nF

GND

Title

Size	Number		Revision
A4			

Date: 16/02/2012 Sheet of
File: C:\Simon\..\PIC16F627.SchDoc Drawn By:
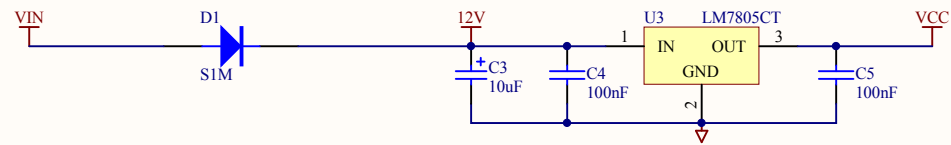
VIN

D1

12V

U3   LM7805CT

VCC

S1M

IN   OUT

1

3

+ C3
10uF

C4
100nF

GND

2

C5
100nF

THE COFFEE BARUN
AWESOME MODULE U000

MIN_START
STOP
GND
12V

Bill of Materials

Source Data From:	**Barun module.PrjPcb**	
Project:	**Barun module.PrjPcb**	
Variant:	**None**	
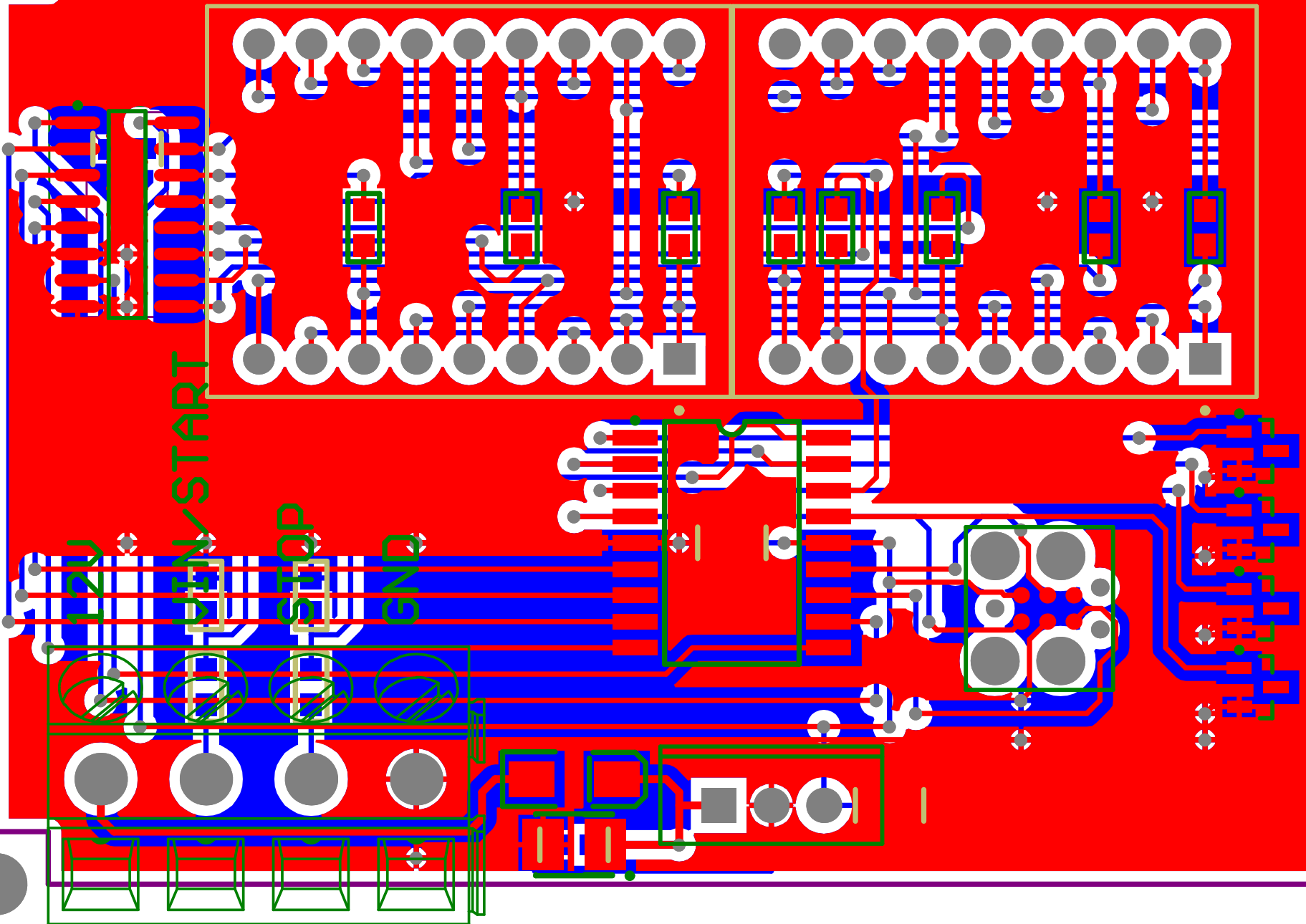
Creation Date: 16/02/2012   1:21:30 PM

Print Date: 40955   40955.55663

Footprint	Comment	LibRef	Designator	Description	Quantity
CAP (3D) - 0603	100nF	CAP, CAP SMD 0603 100nF	C1, C4, C5	CAPACITOR SMD 0603	3
CAP (3D) - 0603	Cap	Cap	C2	Capacitor	1
TAG B CASE	10uF	Cap Pol	C3	CAPACITOR POLARISED TAG B CASE	1
DO-214AC	S1M	DIODE	D1	DIODE, POWER	1
K-18 (3D)	DC56-51PBWA/A	HDSP-521A	DS1, DS2	14.22 mm 2-Digit General Purpose Blue 7 Segment Display	2
ICSP - TAG CONNECT	TAG CONNECT	ICSP - TAG CONNECT	ICSP1		1
4 x 5.08mm	Header 4	Header 4	P1	Header, 4-Pin	1
SOT23-3L	MMUN2211LT1	NPN DIGITAL TRANSISTOR	Q1, Q2, Q3, Q4	MMUN2211LT1	4
RES (3D) - 0603	1k	RES SMD 0603 1k	R1, R2, R3, R4, R5, R6, R7, R8	RESISTOR SMD 0603 1k	8
RES (3D) - 0603	10k	RES SMD 0603 10k	R9, R10, R11, R12	RESISTOR SMD 0603 10k	4
751B-05_N	MC14543BD	MC14543BD	U1	BCD-to-7-Segment Latch/Decoder/Driver Liquid Crystals	1
SOIC-18	PIC16F627-04I/P	PIC16F627-04I/P	U2	FLASH-Based 8-Bit CMOS Microcontrolle 1K (x14-Bit words) FLASH, 224 Bytes RA 4 MHz, 18-Pin PDIP, 3.0 to 5.5V Supply Range, Industrial Temperature	1
TO-220	LM7805CT	MC7805ACT	U3	3-Terminal Positive Fixed Voltage Regulator	1
					29

Approved	Notes	