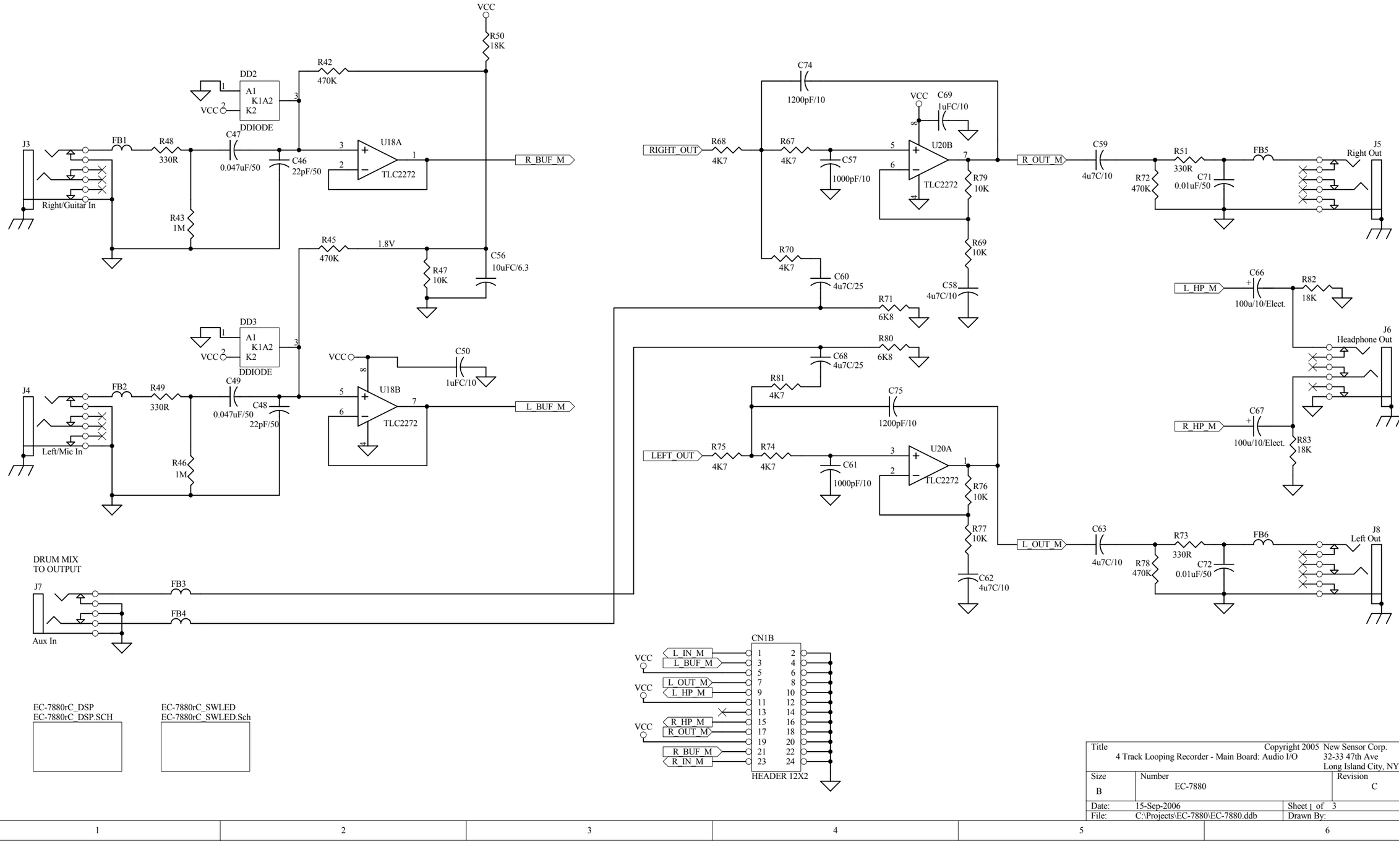

VCC
R50
18K
R42
470K
DD2
A1
K1A2
K2
DDIODE
C47
0.047uF/50
C46
22pF/50
U18A
TLC2272
J3
FB1
R48
330R
Right/Guitar In
R43
1M
R_BUF_M
R45
470K
1.8V
R47
10K
C56
10uFC/6.3
DD3
A1
K1A2
K2
DDIODE
C49
0.047uF/50
C48
22pF/50
U18B
TLC2272
C50
1uFC/10
J4
FB2
R49
330R
Left/Mic In
R46
1M
L_BUF_M
DRUM MIX
TO OUTPUT
J7
FB3
FB4
Aux In
EC-7880rC_DSP
EC-7880rC_DSP.SCH
EC-7880rC_SWLED
EC-7880rC_SWLED.Sch
C74
1200pF/10
VCC
C69
1uFC/10
RIGHT_OUT
R68
4K7
R67
4K7
C57
1000pF/10
U20B
TLC2272
R79
10K
R_OUT_M
C59
4u7C/10
R51
330R
C71
0.01uF/50
FB5
J5
Right Out
R72
470K
R69
10K
R70
4K7
C60
4u7C/25
C58
4u7C/10
R71
6K8
L_HP_M
C66
100u/10/Elect.
R82
18K
J6
Headphone Out
R80
6K8
C68
4u7C/25
R81
4K7
C75
1200pF/10
C67
100u/10/Elect.
R_HP_M
R83
18K
LEFT_OUT
R75
4K7
R74
4K7
C61
1000pF/10
U20A
TLC2272
R76
10K
R77
10K
C62
4u7C/10
L_OUT_M
C63
4u7C/10
R73
330R
C72
0.01uF/50
FB6
J8
Left Out
R78
470K
CN1B
L_IN_M
L_BUF_M
L_OUT_M
L_HP_M
R_HP_M
R_OUT_M
R_BUF_M
R_IN_M
HEADER 12X2
Title
4 Track Looping Recorder - Main Board: Audio I/O
Copyright 2005 New Sensor Corp.
32-33 47th Ave
Long Island City, NY 11101
Size
B
Number
EC-7880
Revision
C
Date: 15-Sep-2006
Sheet 1 of 3
File: C:\Projects\EC-7880\EC-7880.ddb
Drawn By:

U5 (7805) NEEDS HEAT SINK FOR MAX DISSIPATION OF 2W

U4 (LM1117-3.3) NEEDS TOP SIDE COPPER AREA OF 0.5 SQin
U6 (LM1117-1.25) NEEDS TOP SIDE COPPER AREA OF 0.1 SQin

COAXIAL POWER JACK 9V 350mA

REVERSAL PROTECTION

U5 7805 — C1 10u/25/Elect. — C26 10uF/C10

U4 LM1117MP-3.3CT — C25 100u/10/Elect. — 300mA MAX — 3.3V

U6 LM1117MP-ADJ — C55 100u/10/Elect. — 170mA MAX — 1.25V

J1 — FB8 — D50 SS23 — C54 0.1uF/50 — FB9 — 9V/500mA — C79 1000pF/50

U21 LM1117MP-3.3CT — C76 10uF/C10 — C77 10uF/C10 — 300mA MAX — 3.3V

U12 BF531SBST

VC3 — C28 1uF/C10 — C27 1uF/C10 — C29 1uF/C10 — C30 1uF/C10 — VINT

H1 — C2 22pF/10 — Y1 16.9344MHz — C12 22pF/10

NRESET — R17 3K — LRCK — R52 3K3

VC3 — U9 VDD OUT VSS — MN31821K — 1 NRESET

AUDIO CODEC

U2 PCM3010

R_IN_M — C51 1uF/C10
L_IN_M — C4 1uF/C10

VINL VINR VREF1 VREF2 — VCOM VOUTL VOUTR — LEFT_OUT RIGHT_OUT

C6 10uF/C10 — C7 10uF/C10 — C11 10uF/C10 — C10 10uF/C10 — C9 10uF/C10

VCC AGND DEMP0 DEMP1 FMT0 FMT1 TEST — VDD DGND — NRESET MCLK — ADCDAT

LRCK BCK DACDAT — DIN DOUT

Connect Audio GND to DSP GND Plane at U2, the codec.

R60 10K — R59 10K — R61 10K — R62 10K

CN2B — HEADER 12X2 — PF9 PF8 PF7 NPSCS PMUX NLPCS MISO MOSI SPCK TFS RFS

CN4 — SPCK MOSI MISO NBROMCS NPCCS NRESET MDTX MDRX — Download/Debug Port

U19 BOOT ROM 256Kb, SPI — 25C256 — C31 47uF/25 — R64 3K3 — R65 3K3 — R18 3K3

MDRX — MDTX

FOOTSWITCH IO — J2 — FB7 — Footswitch — D19 MMBZ4229BLT1 — Q5 MMBT3906 — Q3 MMBT3904 — R10 68R — R9 3K3 — R16 10K — Q4 MMBT3906 — R63 330 — FSIN — FSOUT

J10 MIDI IN — R13 220R — DD1 K2 K1A2 A1 — DDIODE — U8 PC900 IN+ IN- VCC OUT GND — C3 47uF/10 — R15 3K3 — MDRX

J11 MIDI OUT — R11 220R — R12 220R — Q1 MMBT3904 — R23 3K3 — Q2 MMBT3904 — R14 3K3 — MDTX

THROUGH HOLES (CLOSE TO IC PINS)

H1 — H4 — H5 — H4 AND H5 TO BE BROUGHT TO LARGE THROUGH HOLE FOR SCOPE TEST POINT — H6 — H7 — H8 H9 H10 H11 H12 H13 H14 H15 H16 H17 H18 H19 H20 H21 H22

U15 128Mb SDRAM — K4S281632B-TCL1H

U13 USB — TUSIN9603-28M — NOTE: USB TERMINATION COMPONENTS (22R, 22pF) PLACED NEAR USBN9603

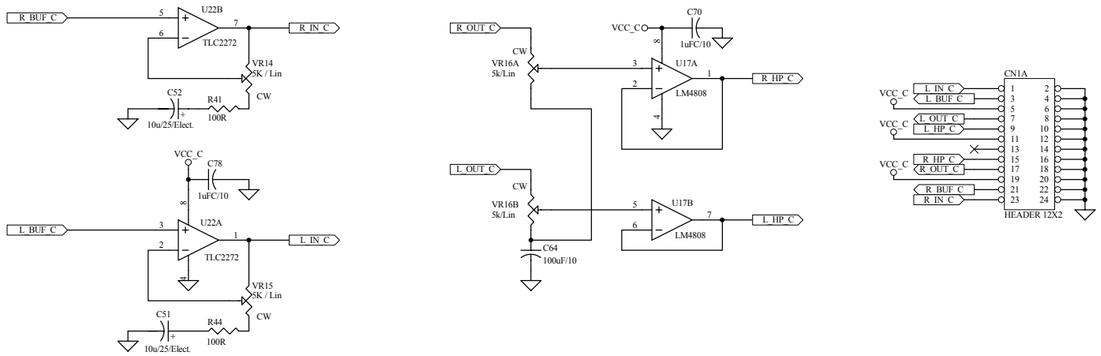
U16 74AHC32

CF CARD CONNECTOR — CN3 — COMPACTFLASH

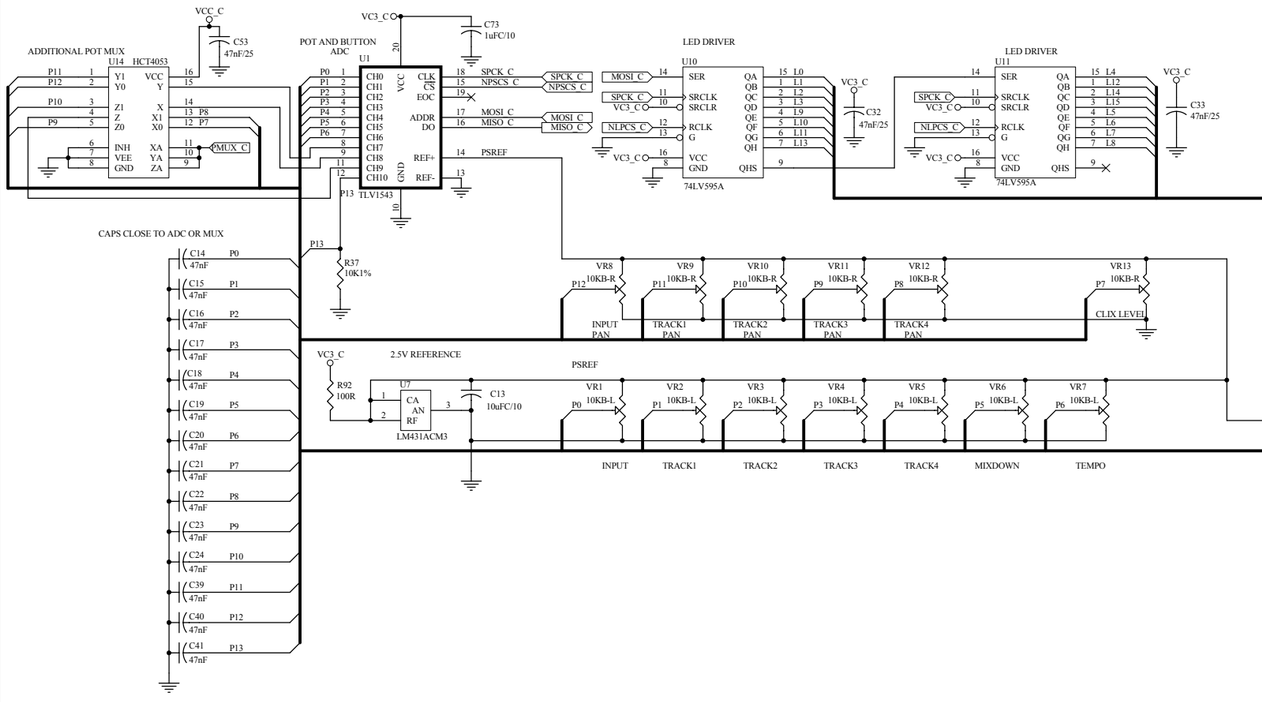
USB SLAVE PORT — USB CONNECTOR (SQUARE 'B' TYPE) — J9 — USB-B — CHASSIS

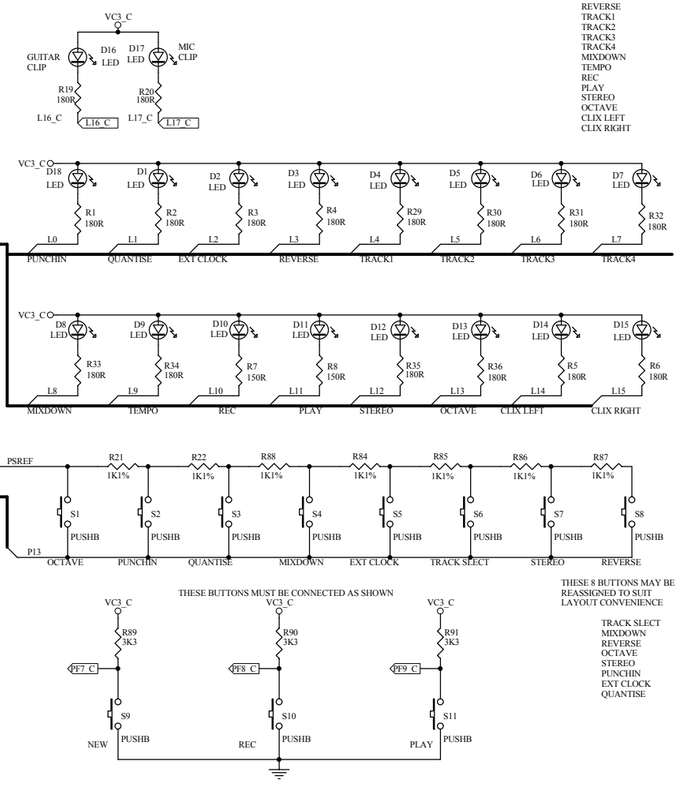
Title	4 Track Recorder - Main Board: DSP, Data and Power	Copyright 2005 New Sensor Corp. 32-33 47th Ave Long Island City, NY 11101	
Size: Orcad D	Number: EC-7880		Revision: C
Date:	15-Sep-2006	Sheet 2 of	3
File:	C:\Projects\EC-7880\EC-7880.ddb	Drawn By:	

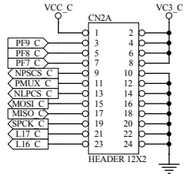
Analog Circuitry



Digital Circuitry







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Title	4 Track Looping Recorder - Control Board: Switches, LEDs & Pots	
Size: C	Number: EC-7880	Revision: C
Date: 15-Sep-2006	Sheet 3 of 3	
File: C:\Projects\EC-7880\EC-7880.ddb	Drawn By:	

3 Pine Ave
Long Island City, NY 11101