

Sheet1
Sheet1.Sch

Sheet7
Sheet7.Sch

Sheet13
Sheet13.Sch

Sheet2
Sheet2.Sch

Sheet8
Sheet8.Sch

Sheet14
Sheet14.Sch

Sheet3
Sheet3.Sch

Sheet9
Sheet9.Sch

Sheet4
Sheet4.Sch

Sheet10
Sheet10.Sch

Sheet5
Sheet5.Sch

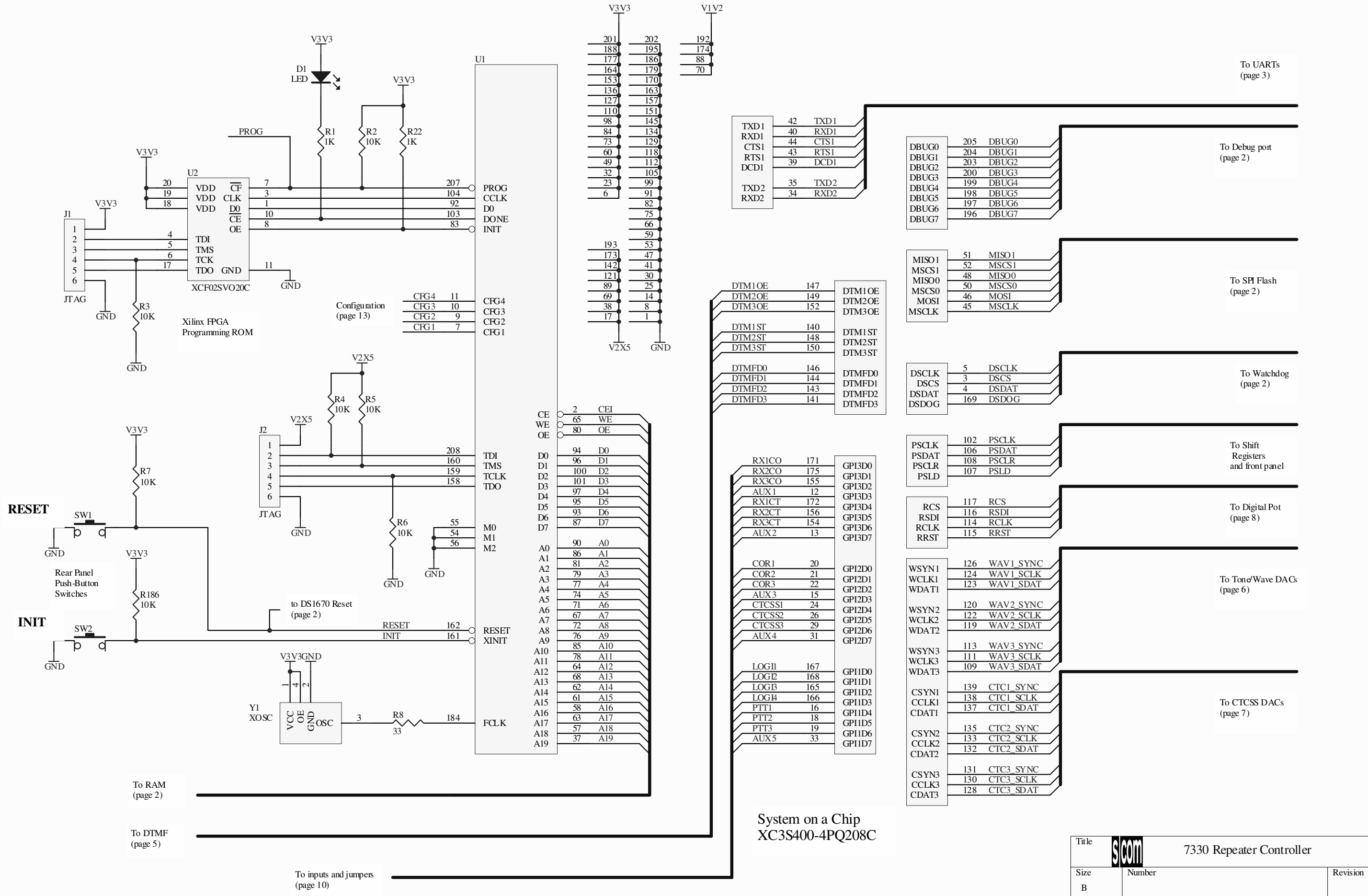
Sheet11
Sheet11.Sch

Sheet6
Sheet6.Sch

Sheet12
Sheet12.Sch

0

Title	SCOM 7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\top.Sch	Drawn By: Scott L Baker



**System on a Chip
XC3S400-4PQ208C**

To RAM
(page 2)

To DIMF
(page 5)

To inputs and jumpers
(page 10)

To UARTs
(page 3)

To Debug port
(page 2)

To SPI Flash
(page 2)

To Watchdog
(page 2)

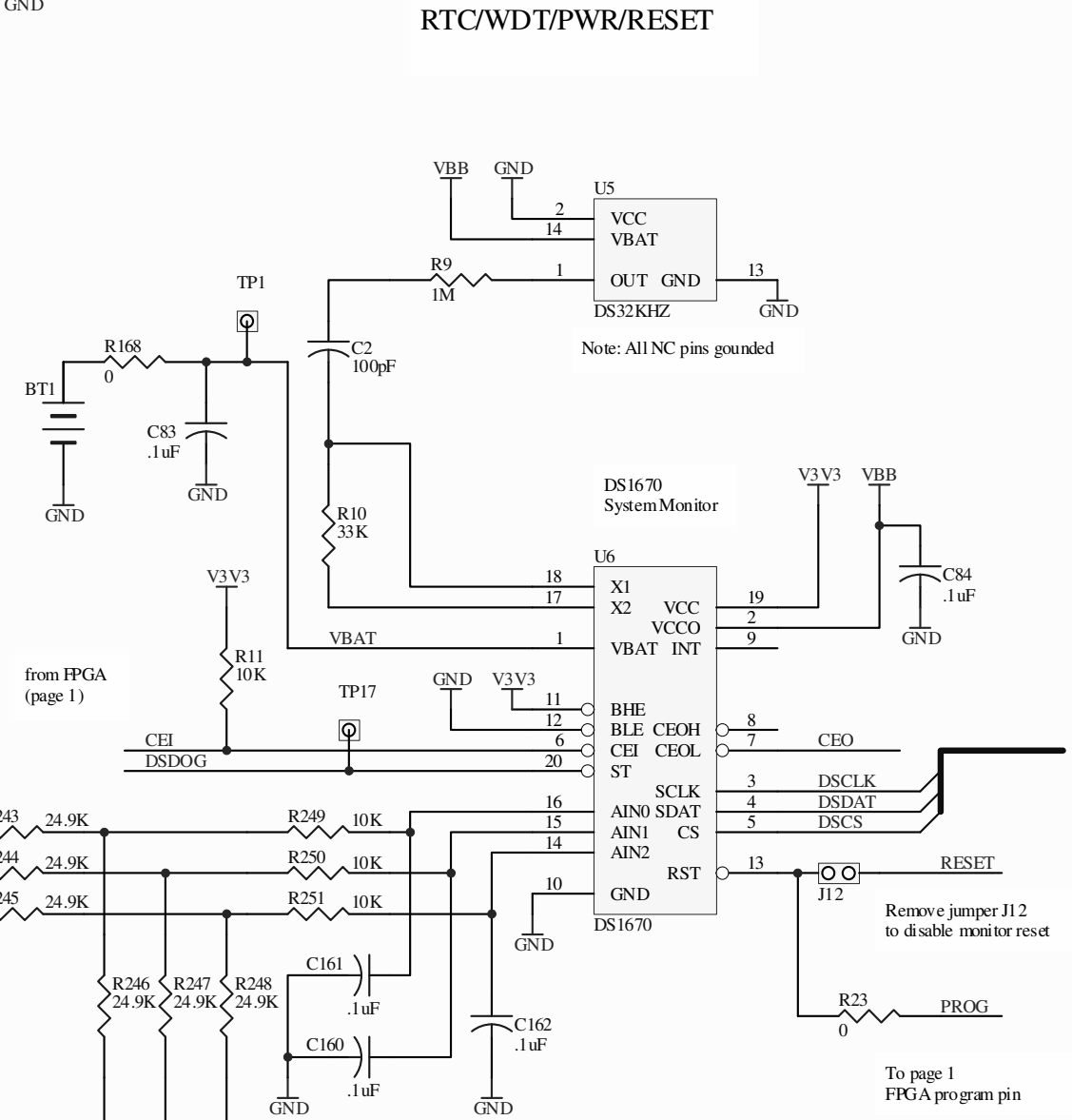
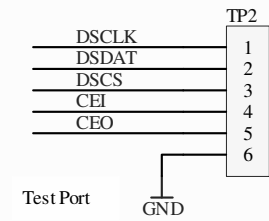
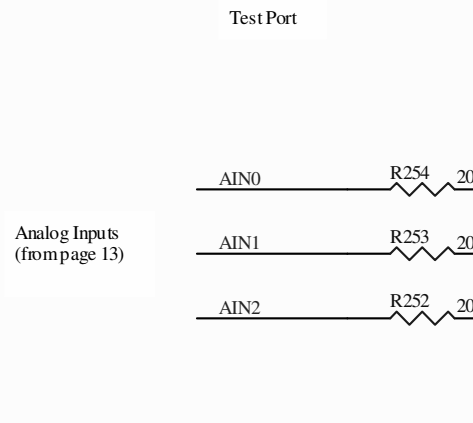
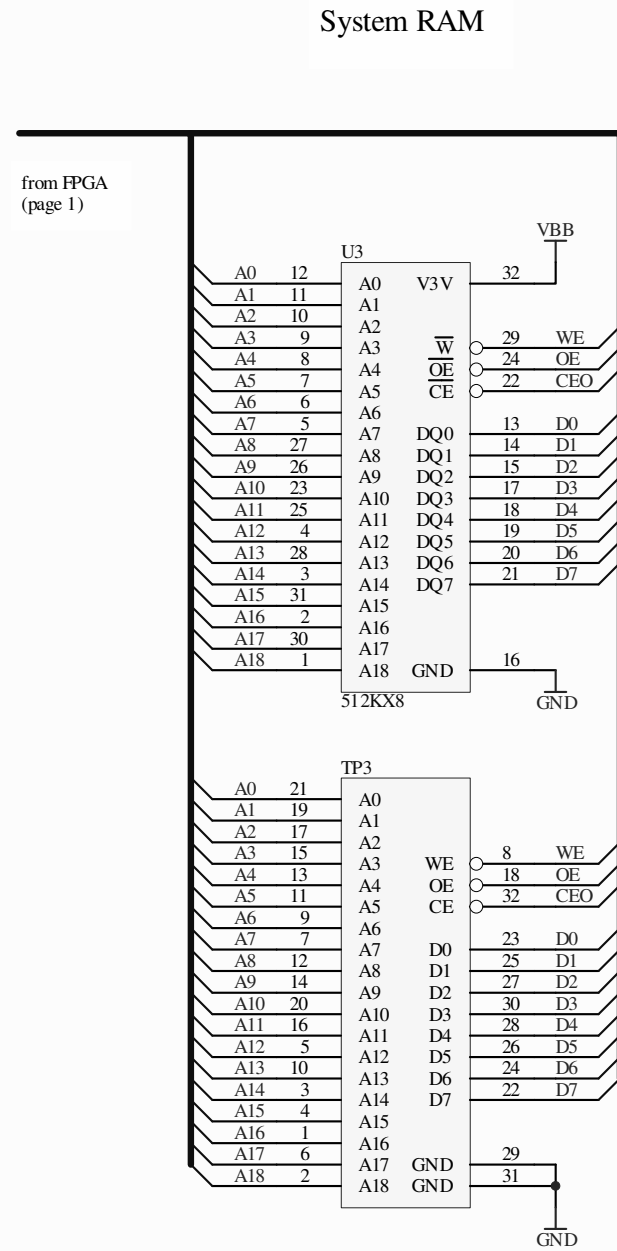
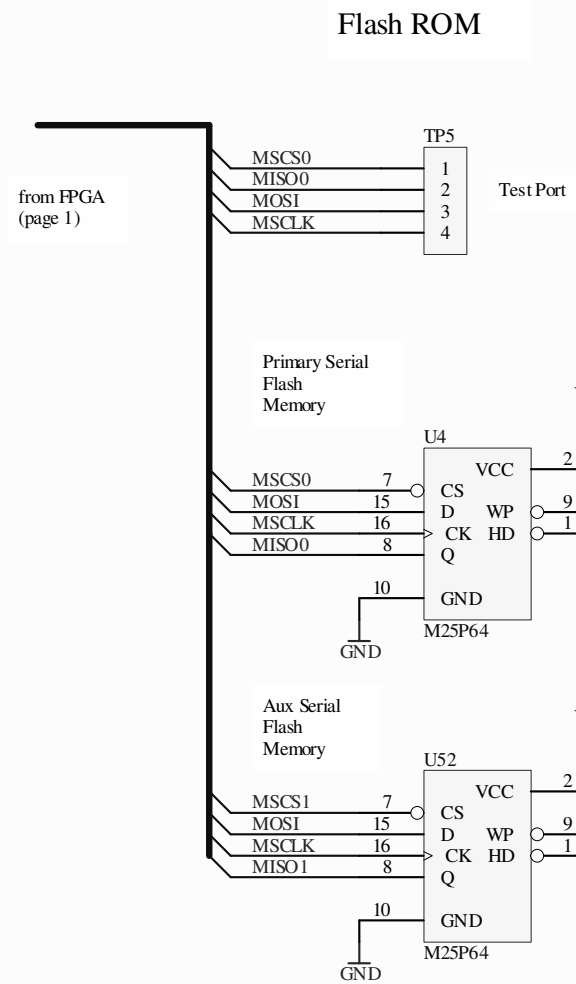
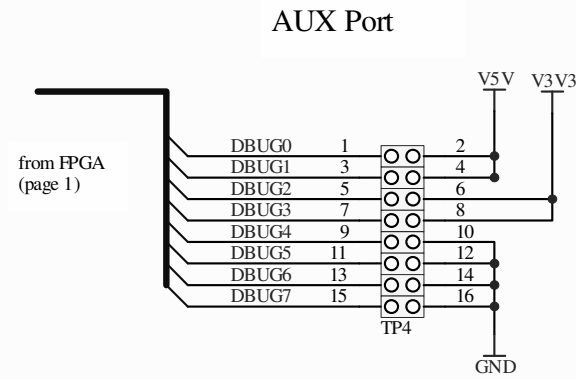
To Shift
Registers
and front panel

To Digital Pot
(page 8)

To Tone/Wave DACs
(page 6)

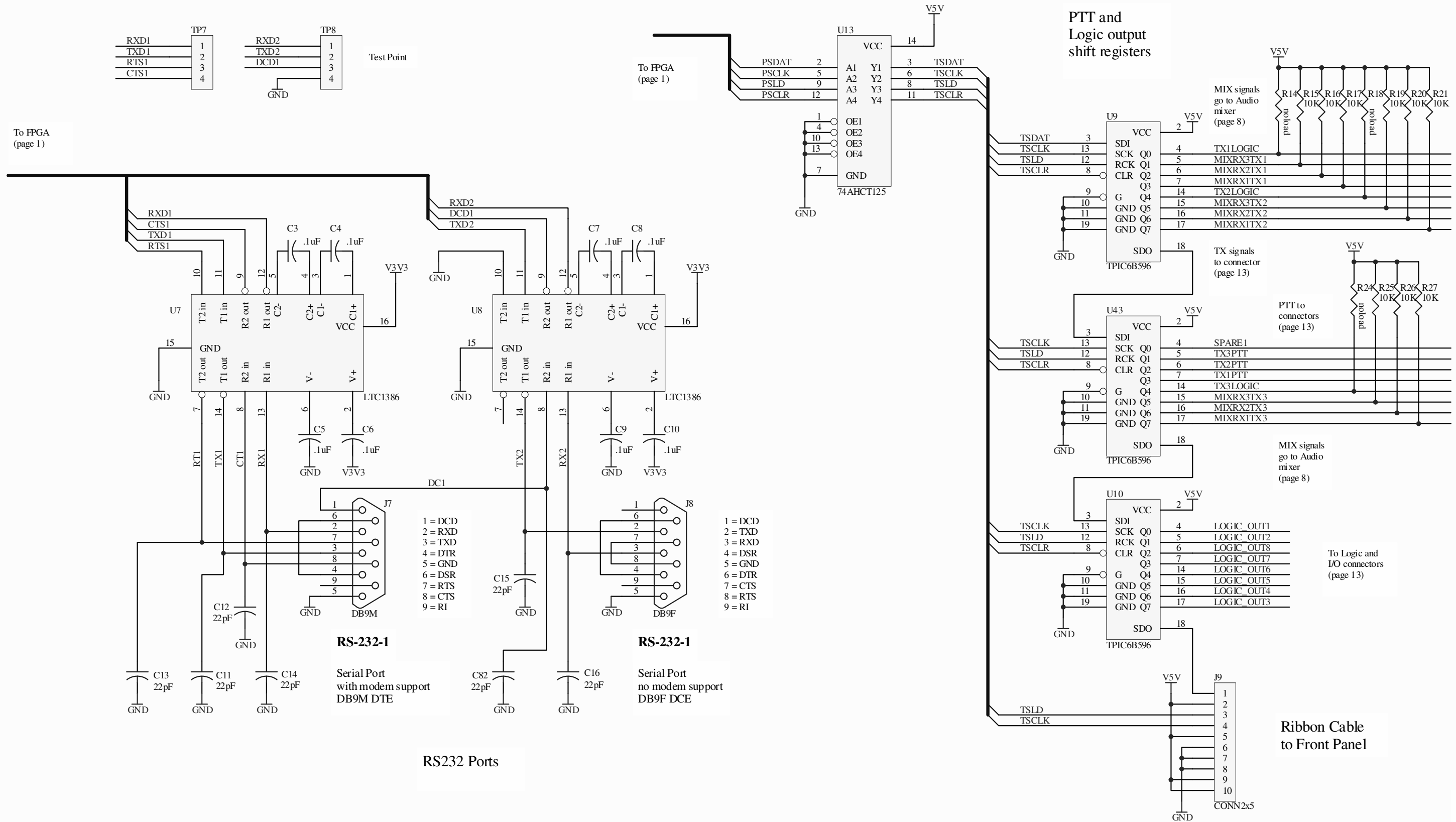
To CTCSS DACs
(page 7)

Title		scom 7330 Repeater Controller	
Size	Number	Revision	
B		1.00	
Date:	7/14/2008	Sheet	of 14
File:	C:\ecb\SCOM-7330\Sheet1.Sch	Drawn By:	Scott L Baker

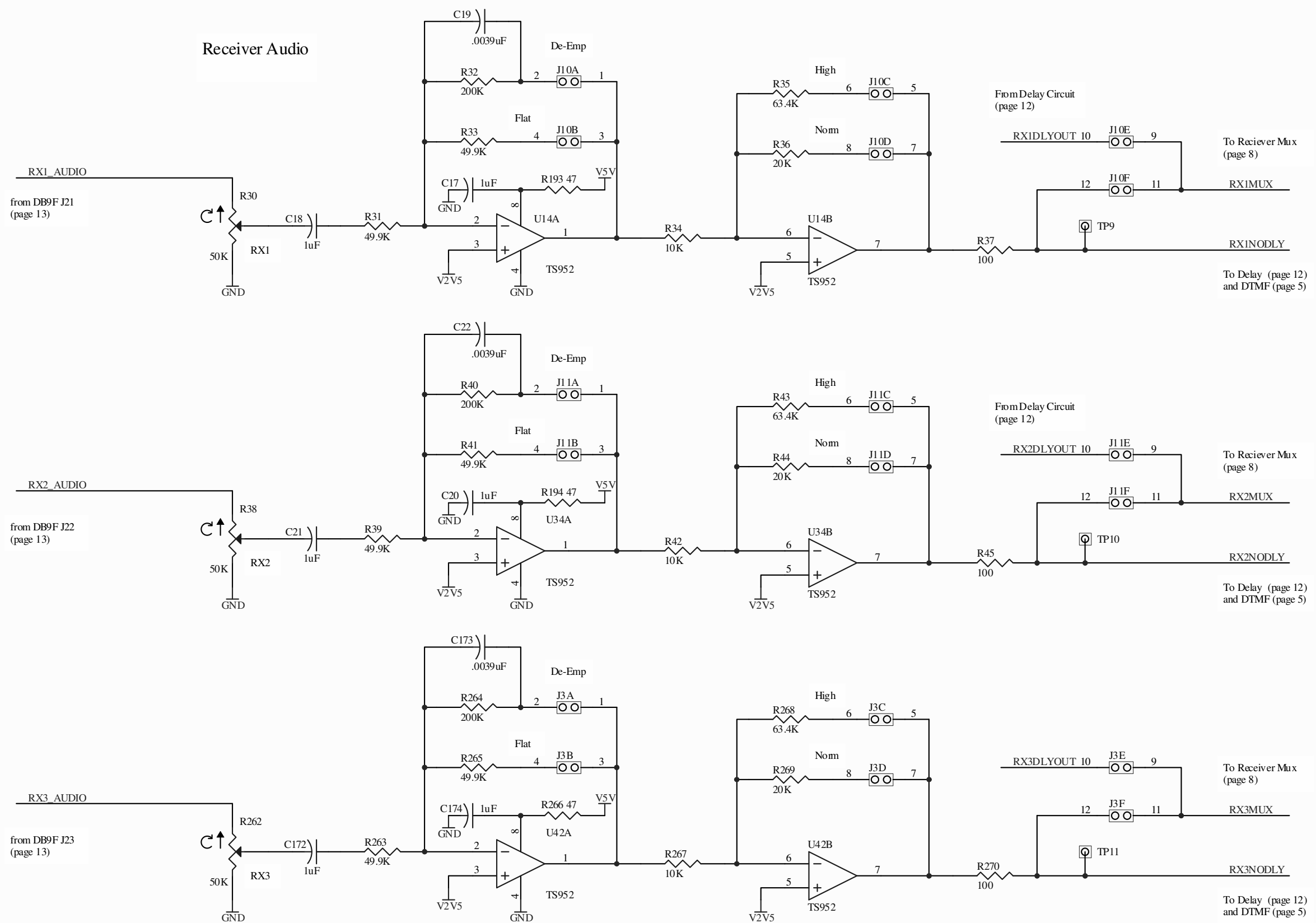


Jumpers J13, J14, J15 control the ADC range
 Jumper installed = 0-to-25V range
 Jumper removed = 0-to-5V range

Title	SCOM 7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet2.Sch	Drawn By: Scott L Baker



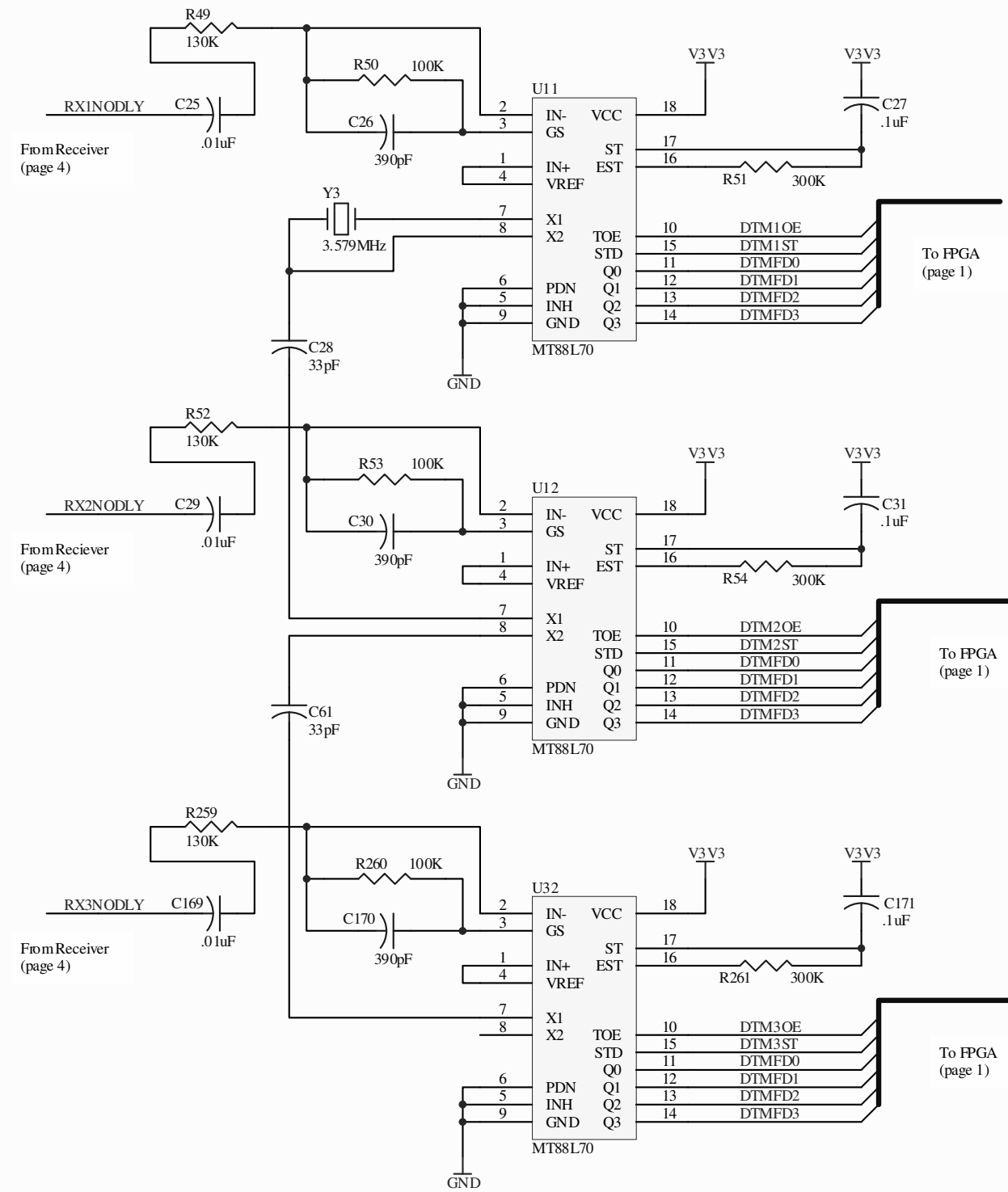
Title	SCOM 7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet3.Sch	Drawn By: Scott L Baker



Receiver Audio

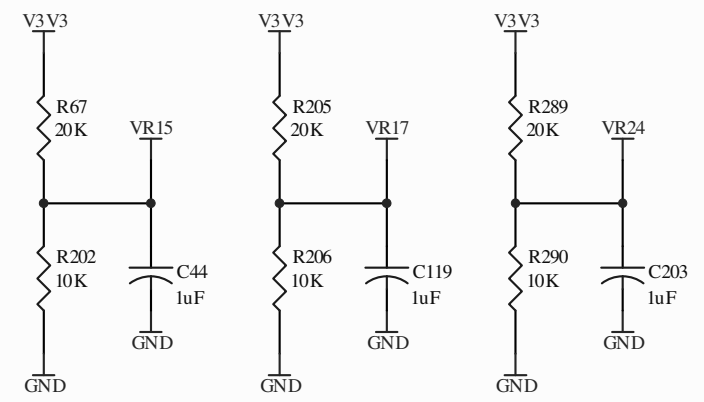
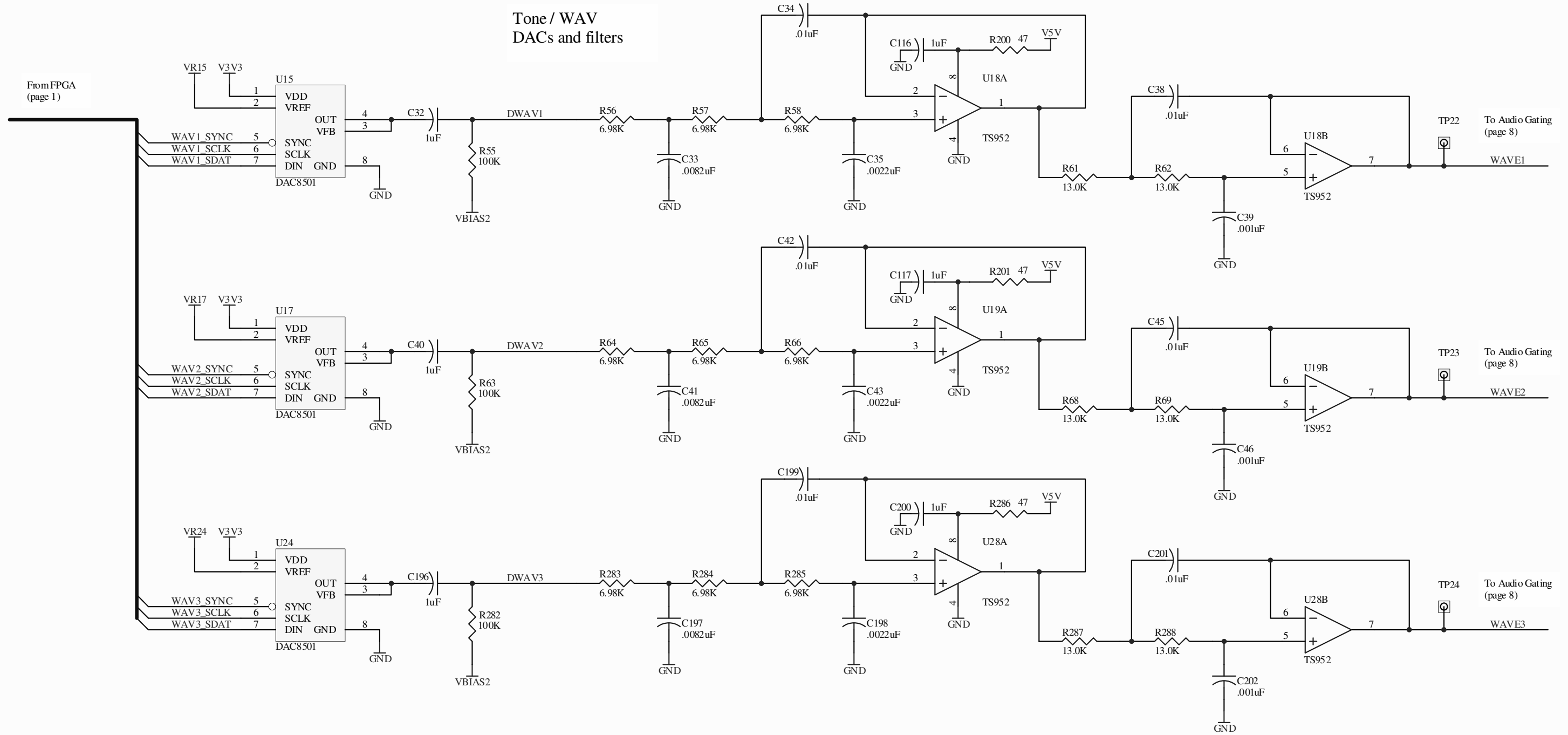
Title	SCOM 7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet4.Sch	Drawn By: Scott L Baker

DTMF Receivers



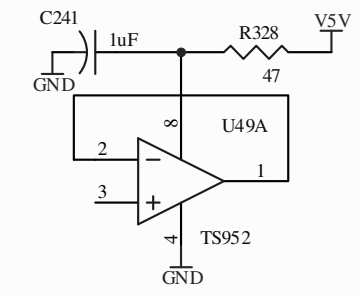
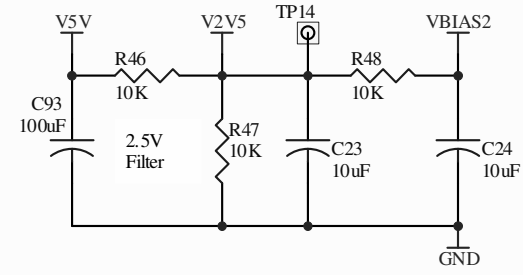
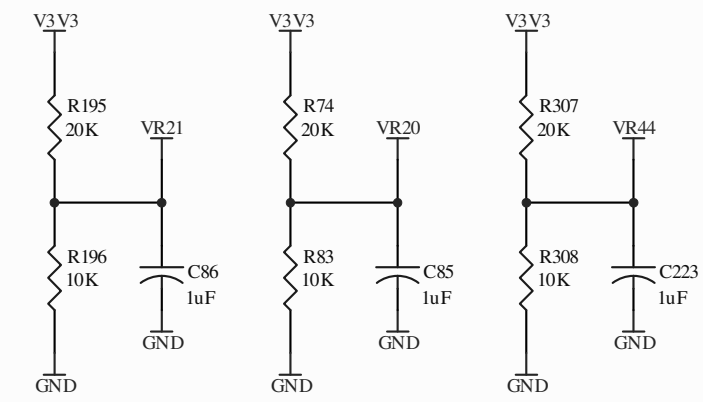
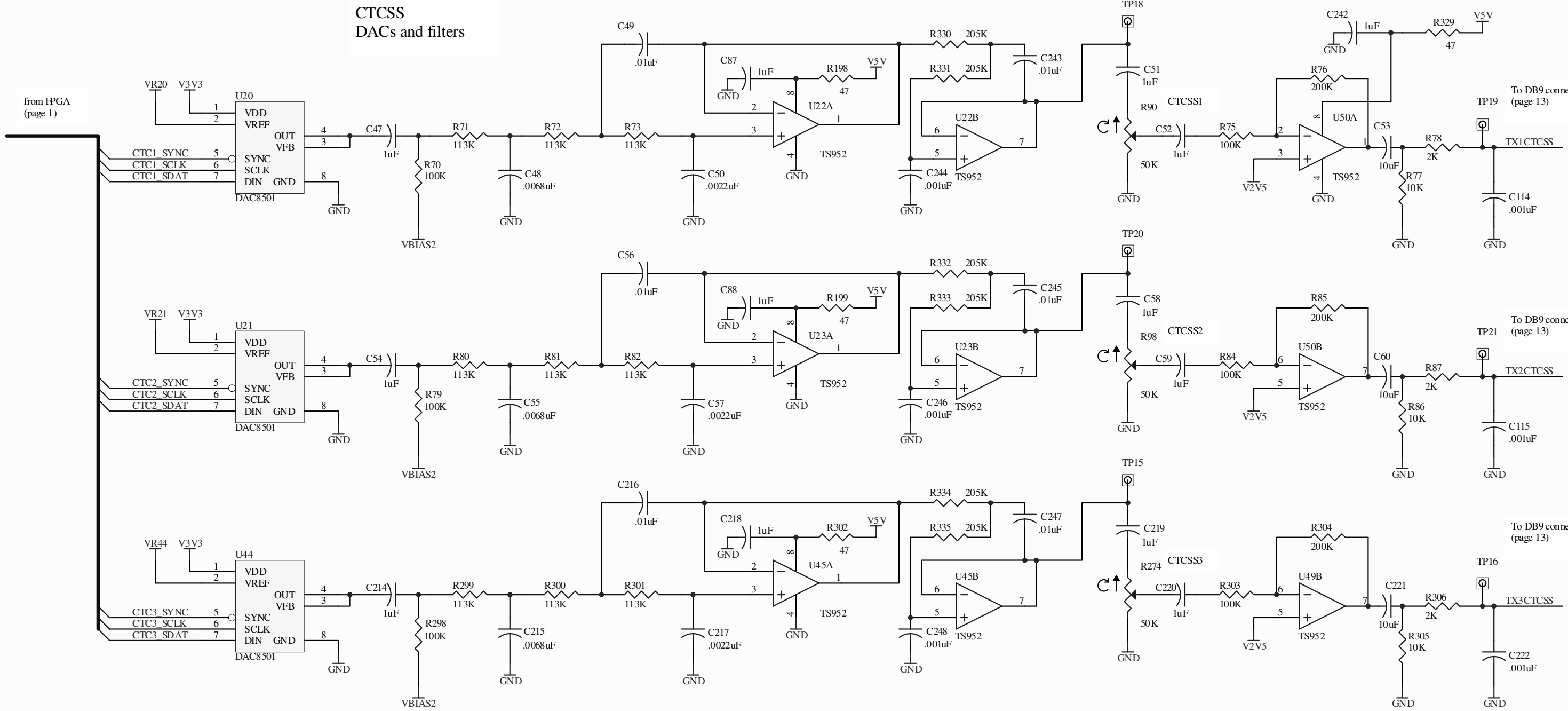
Title	7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet5.Sch	Drawn By: Scott L Baker

Tone / WAV
DACs and filters



Title	SCOM 7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet6.Sch	Drawn By: Scott L Baker

CTCSS DACs and filters



Title	SCOM 7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet7.Sch	Drawn By: Scott L Baker

A

B

C

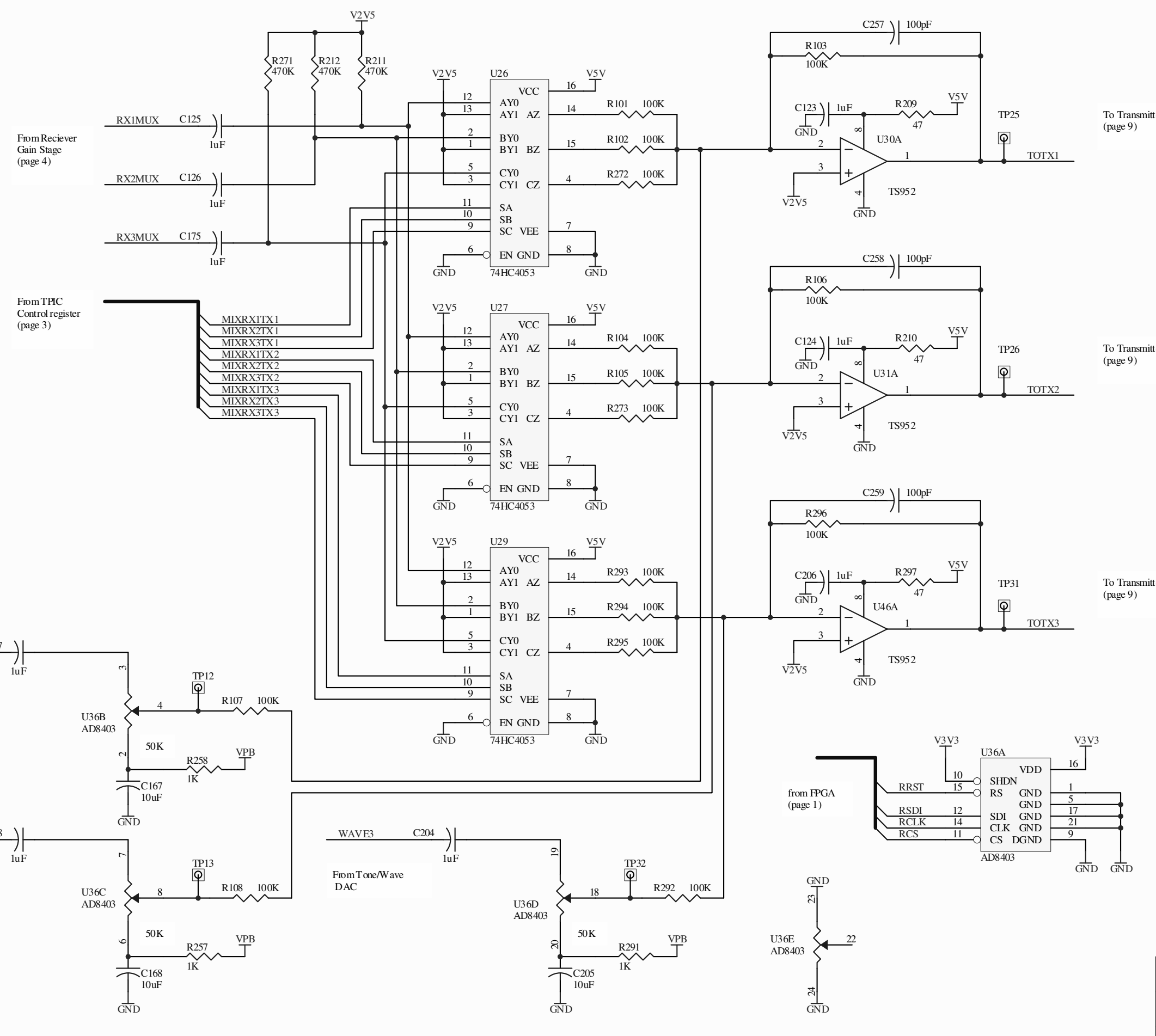
D

A

B

C

D



Audio Gating

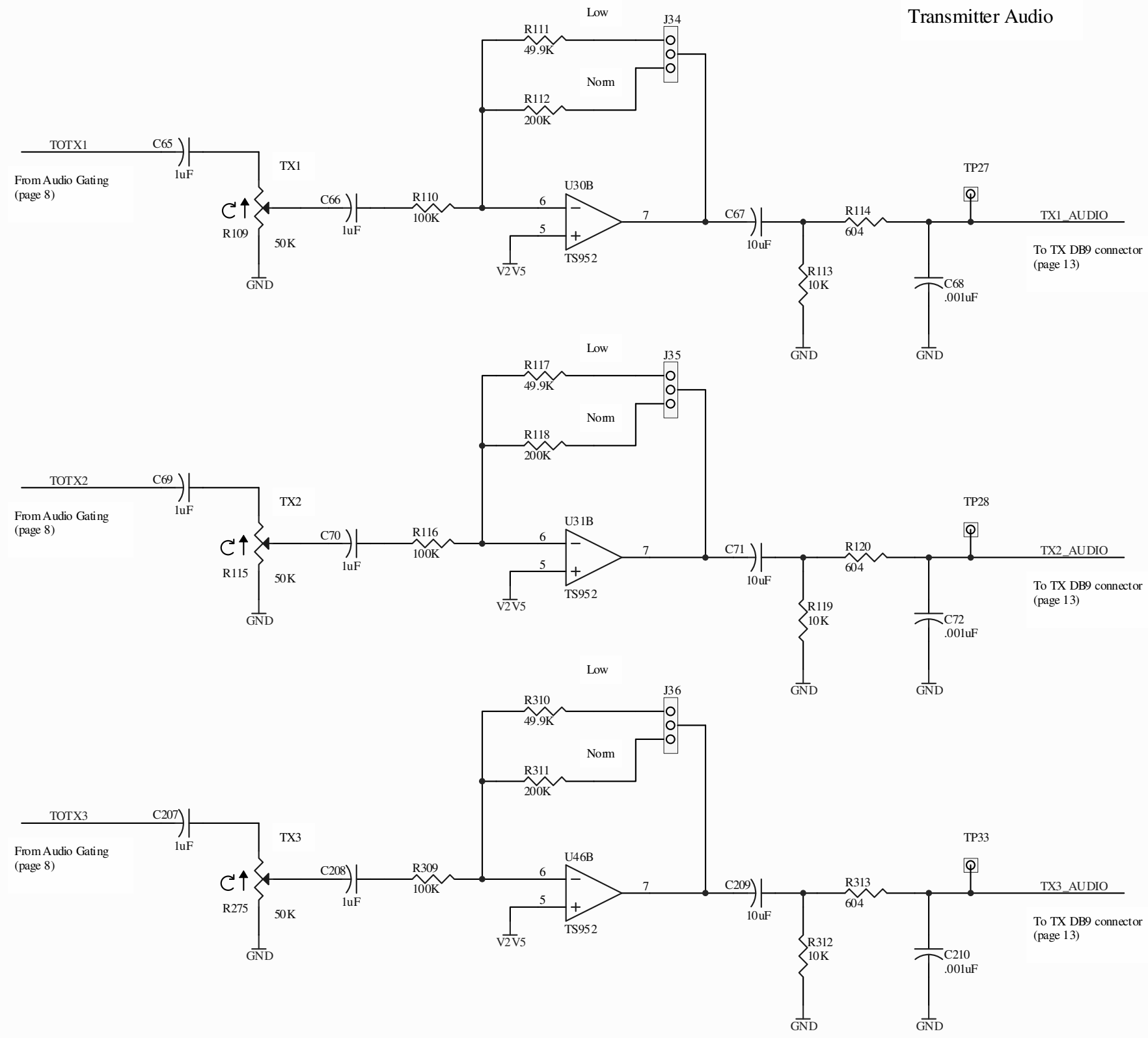
To Transmitter (page 9)

To Transmitter (page 9)

To Transmitter (page 9)

Digital Pot Bias Voltage

Title	SCOM 7330 Repeater Controller	
Size	Number	Revision 1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet8.Sch	Drawn By: Scott L Baker



Title	SCOM 7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet9.Sch	Drawn By: Scott L Baker

A

B

C

D

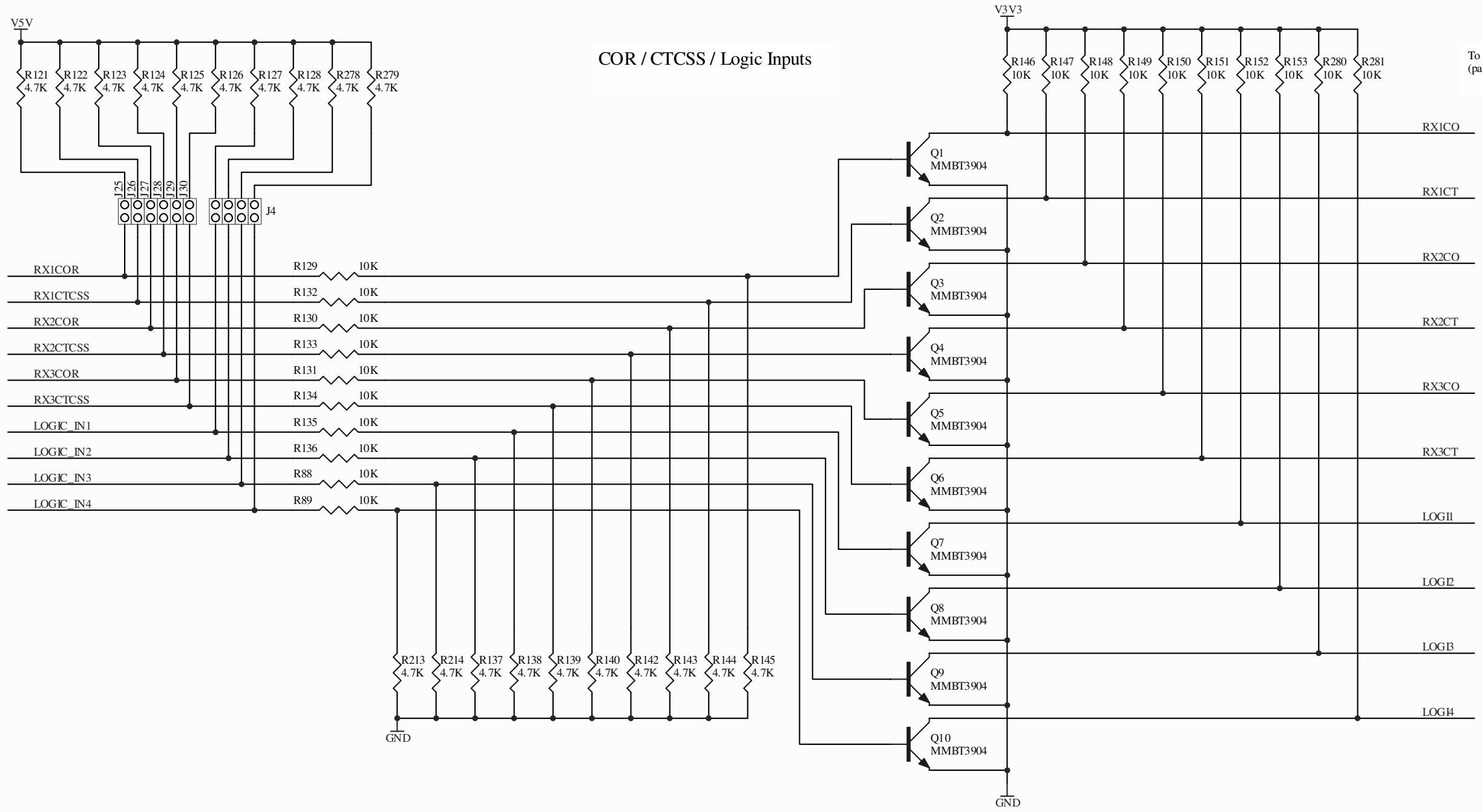
A

B

C

D

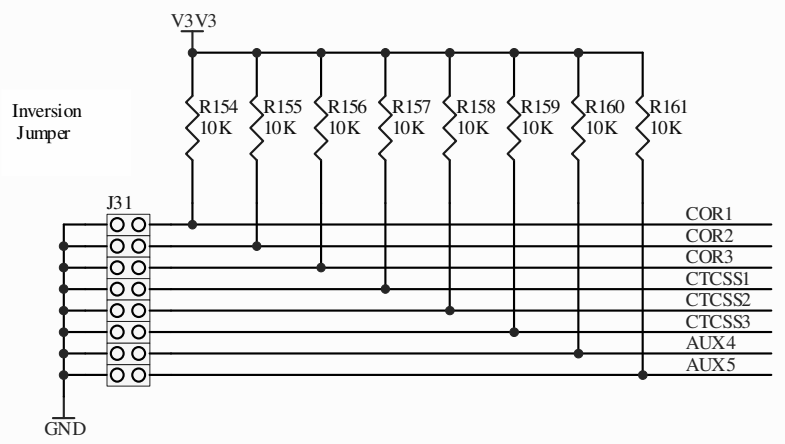
COR / CTCSS / Logic Inputs



From TX/RX DB9 (page 13)

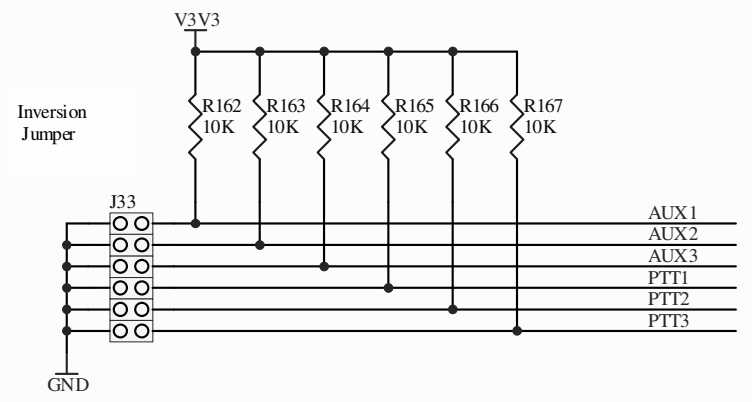
From Logic I/O DB25 (page 13)

To FPGA (page 1)



Inversion Jumper

To FPGA (page 1)



Inversion Jumper

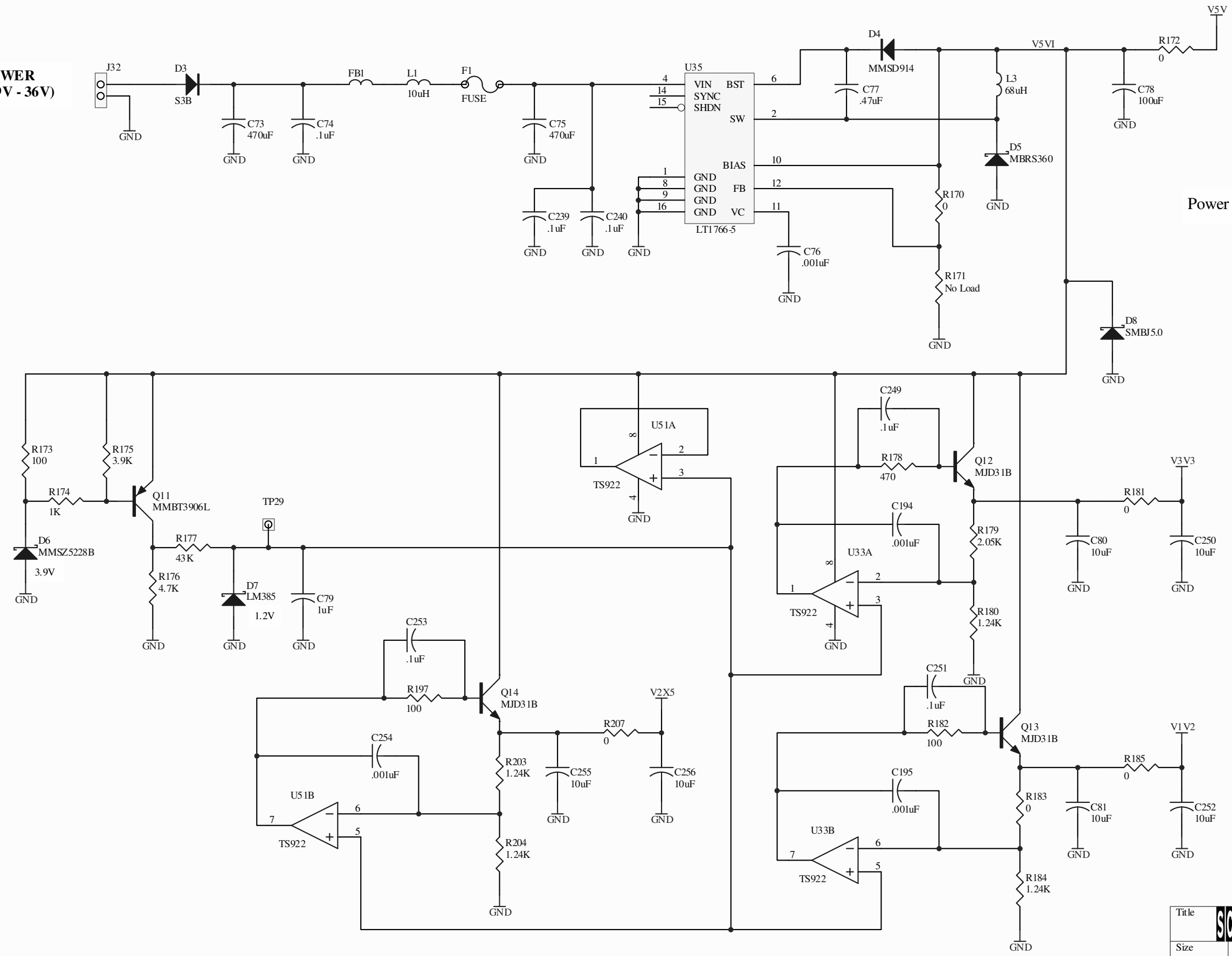
To FPGA (page 1)

Title	SCOM 7330 Repeater Controller	
Size	Number	Revision 1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet10.Sch	Drawn By: Scott L Baker

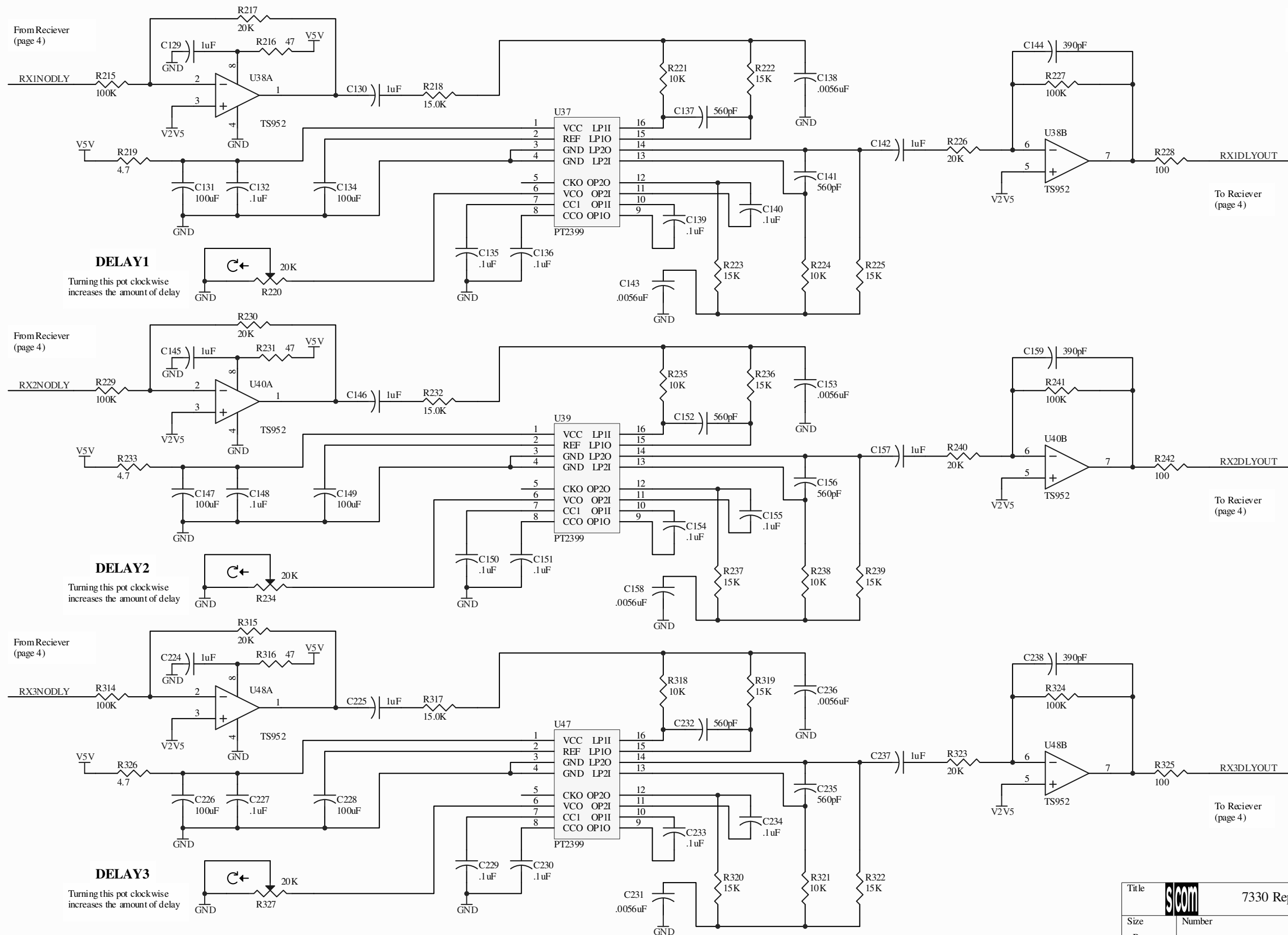
**POWER
(DC 9V - 36V)**

Power Supply

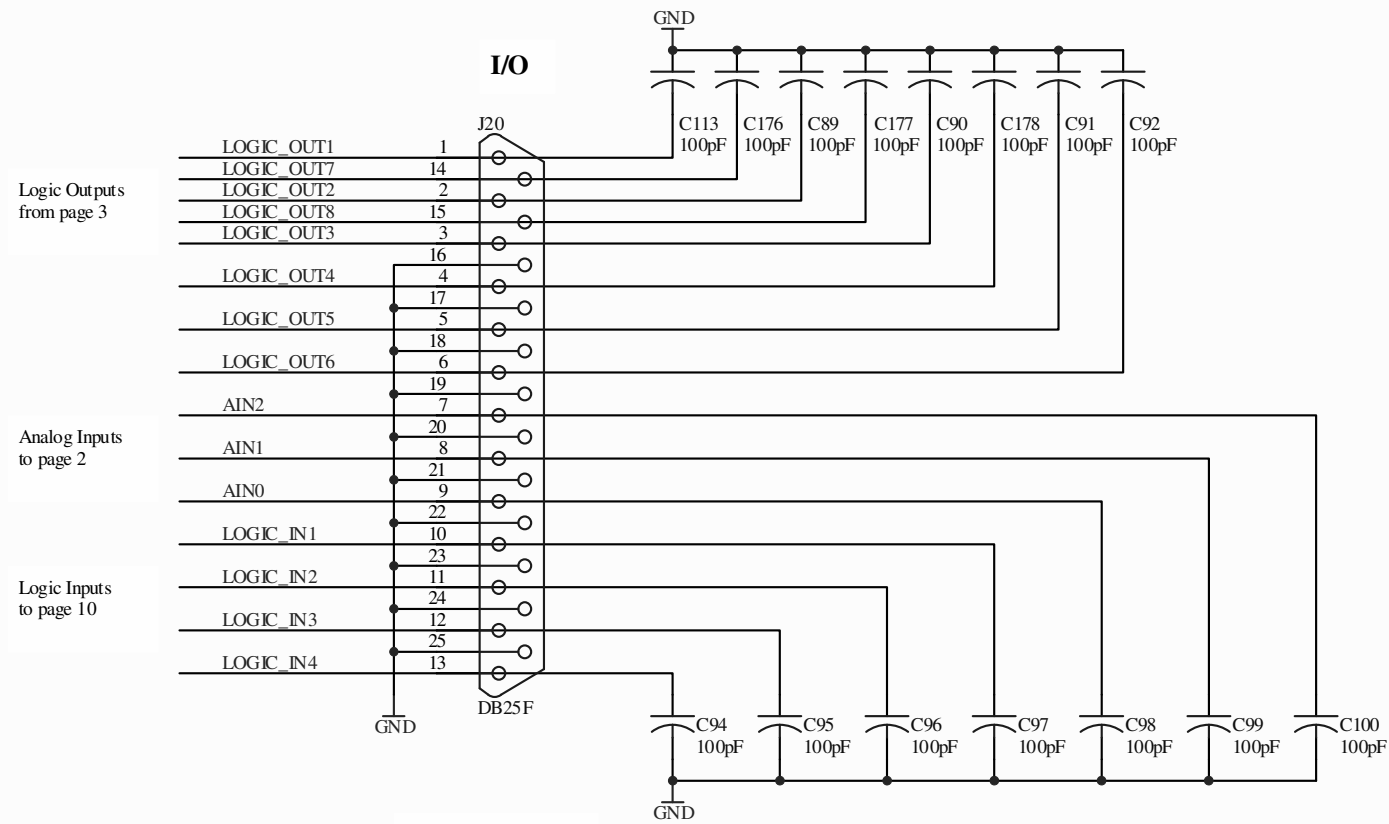
Title	SCOM 7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet11.Sch	Drawn By: Scott L Baker



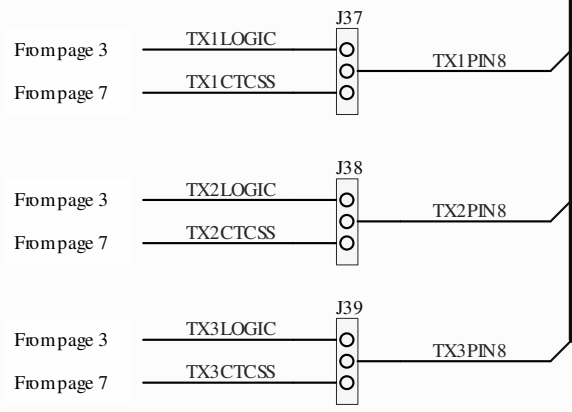
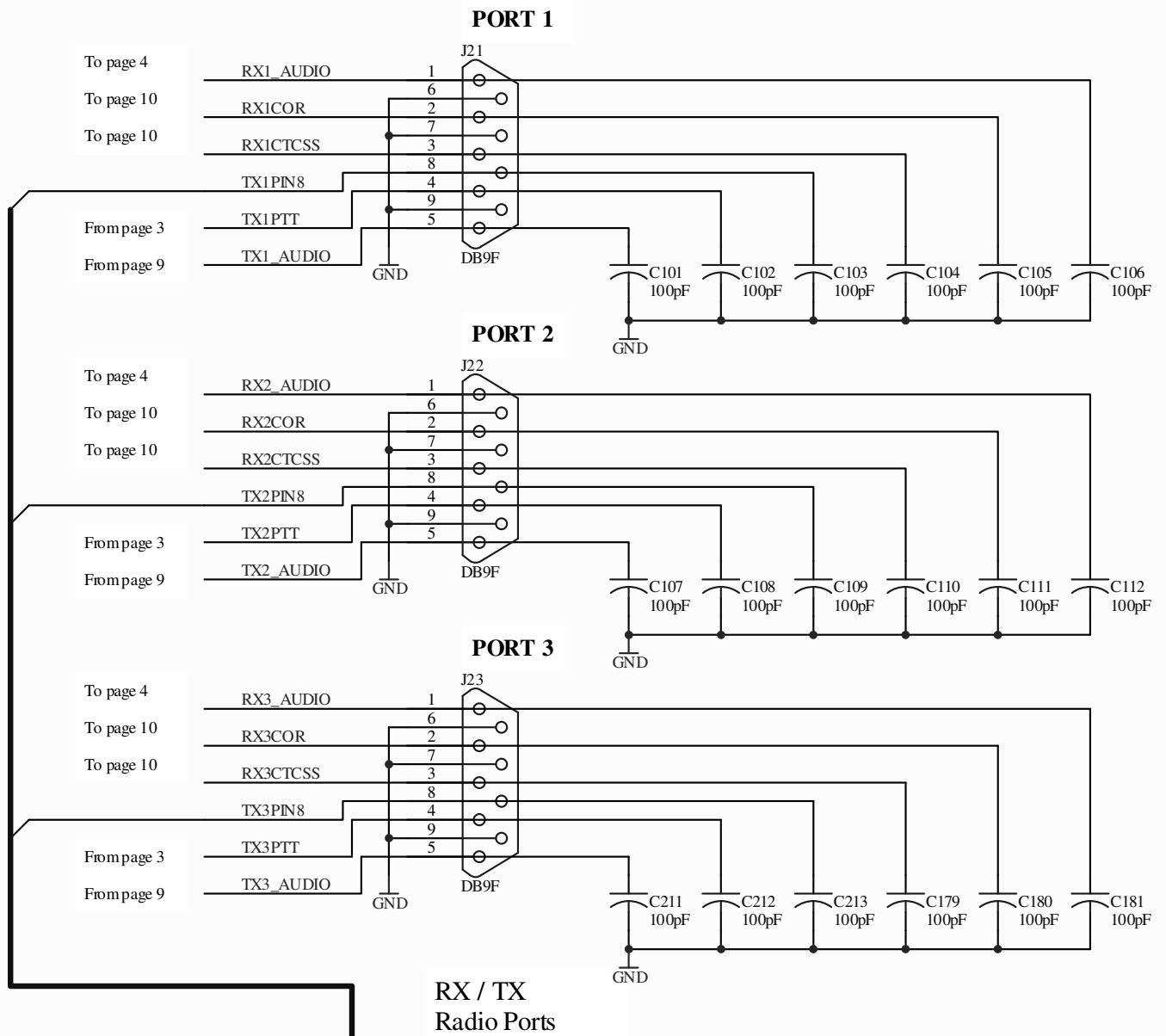
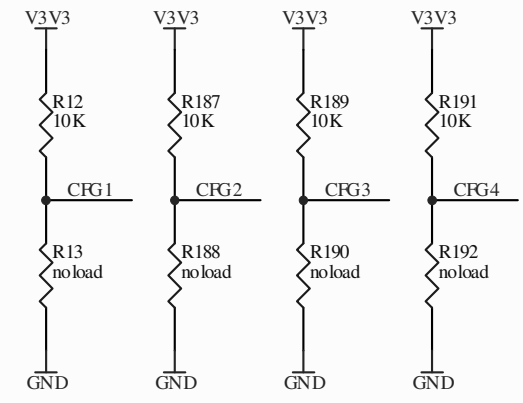
Audio Delay Circuits



Title	SCOM 7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet12.Sch	Drawn By: Scott L Baker

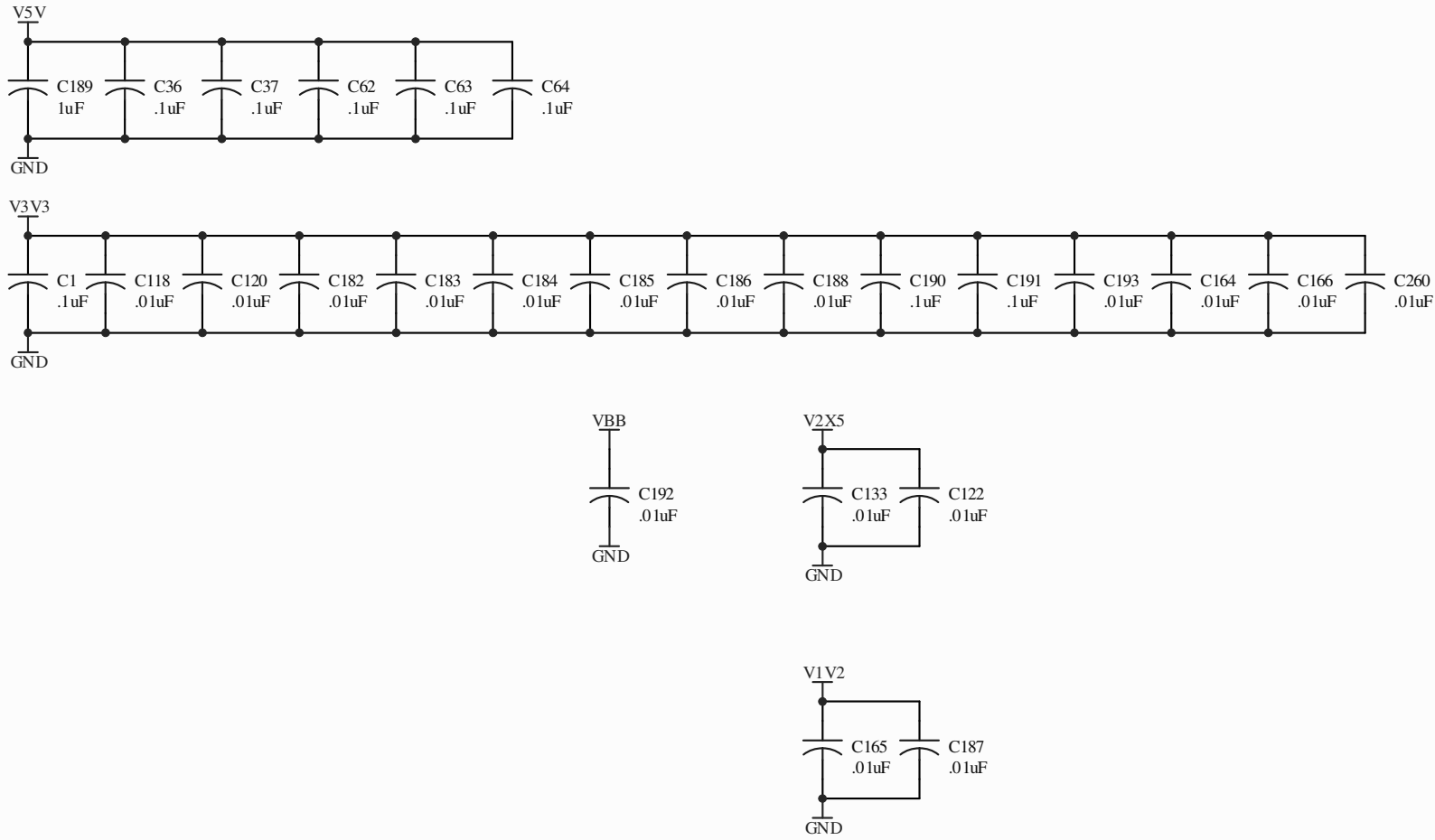


Analog and Logic I/O Connector



Title	SCOM 7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet13.Sch	Drawn By: Scott L Baker

Decoupling Caps / Misc



Title	SCOM 7330 Repeater Controller	
Size	Number	Revision
B		1.00
Date:	7/14/2008	Sheet of 14
File:	C:\ecb\SCOM-7330\Sheet14.Sch	Drawn By: Scott L Baker