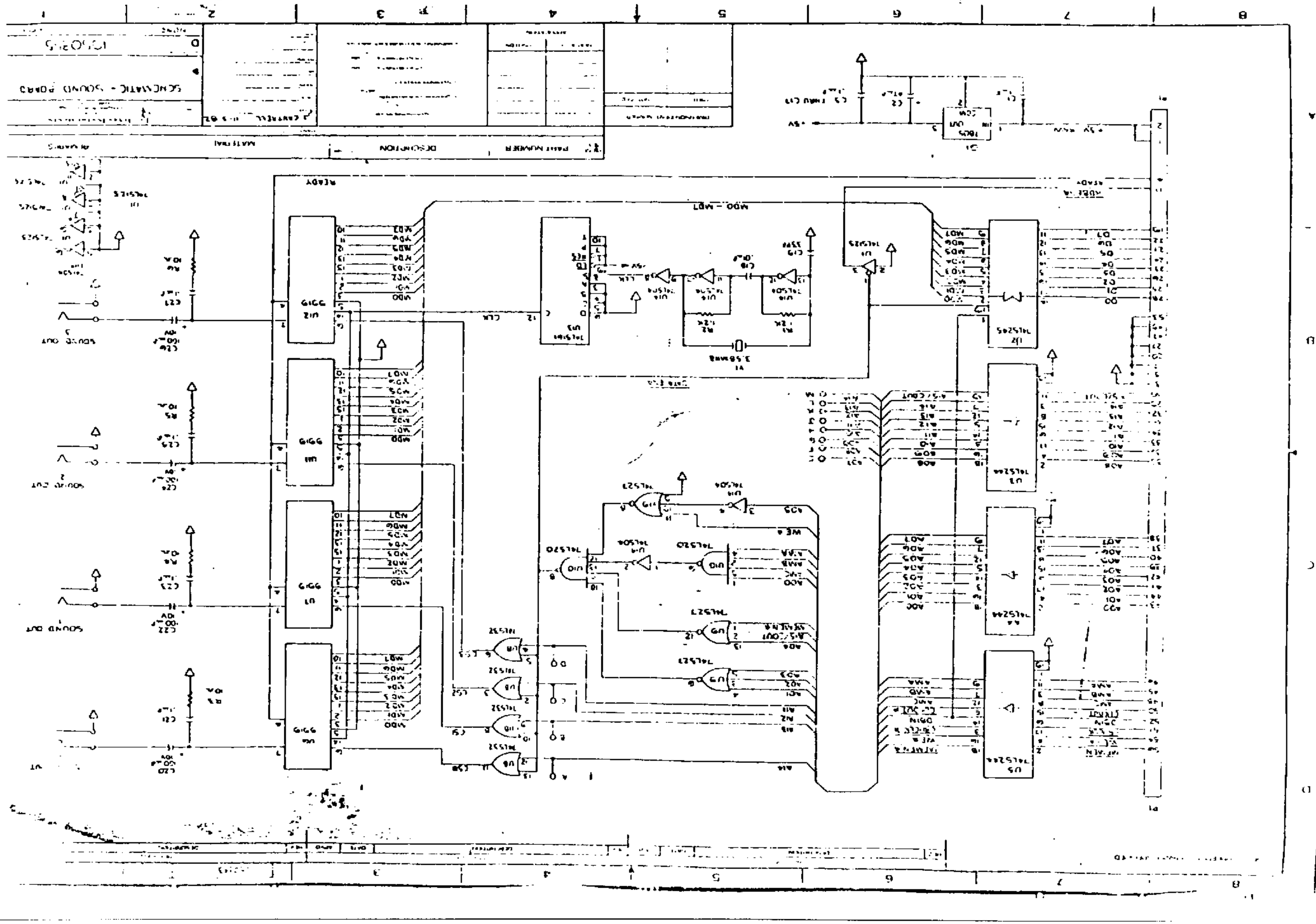
FORTH Parts List

U1	74LS125
U2	74LS245N
U3,U4,U5	74LS244N
U6,U7,U11,U12	SN76494N (TMS9919)
U8	74LS32N
U9	74LS27N
U10	74LS20N
U13	74LS161A
U14	74LS04N/BCB
Q1	7805
C1,C3-C17,C21,C23,C25,C27	.1 mfd @35v
C2,C20,C22,C24,C26	47 mfd @35v
C18	.01 mfd @35v
C19	33 pf @35v
R1,R2	1.2 K ohms
R3-R6	10 ohms
R Mixer * 6	390 ohms
1-PCB	1050354-1 (TI)
CLAM SHELL SET	(TI)
J1-J4	RCA PC/JACKS
EDGE CARD CONNECTOR	TI #L2111121-30

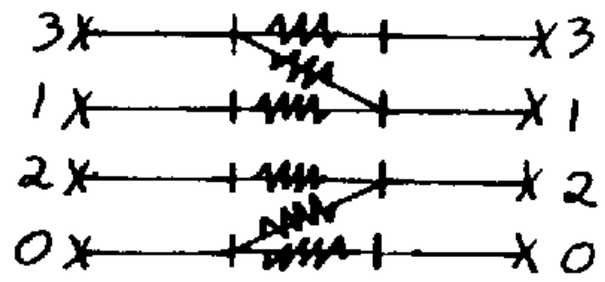
OPTIONAL:

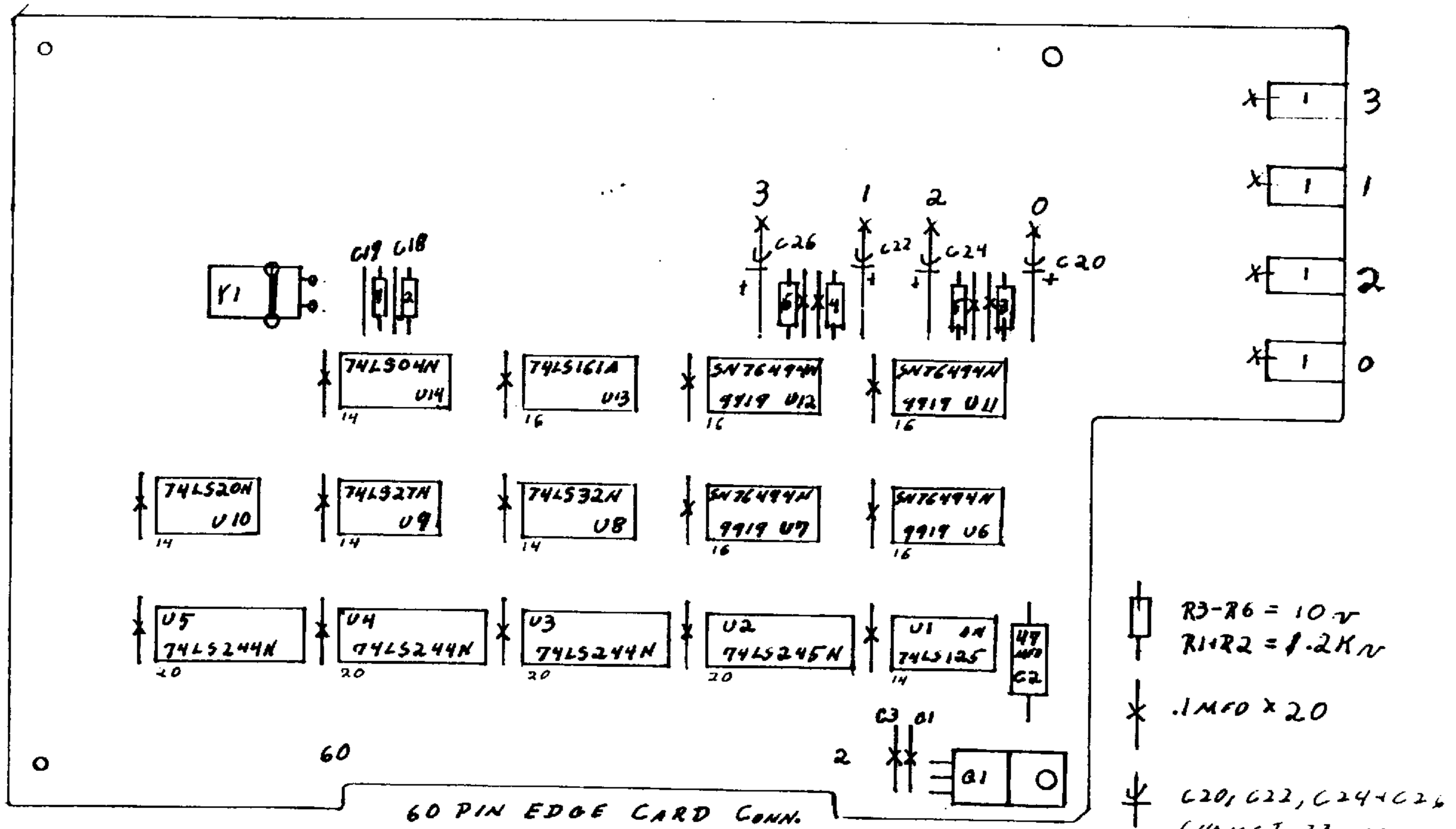
IC SOCKETS:

4ea	20-PIN
5ea	16-PIN
5ea	14-PIN
3ea	NUT & BOLT



STEREO MIXER
6-390N
USE OUTPUT
#1+2





ForTI Card on a 9640?
From Delphi's Message Base

The following information is taken from the message base on Delphi. It contains information about how the ForTI twelve voice music card's hardware appears on the 9640. I do not know of anyone who is successfully using a ForTI on the 9640. Can anyone out there help?

Like the speech synthesizer, the ForTI card is located at page >BC. It is not fully decoded, and therefore could respond at pages >3C, >7C, and >FC as well. Here is the ForTI address bus mapping:

Address bit	Source	Selects	Address	Sound Chips Selected
AME.A	NC	X	>8400	ALL
AMD.A	NC	X	>8402	2-4
AMC.A	Mapper	1	>8404	1,3,4
AMB.A	''	1	>8406	3,4
AMA.A	''	1	>8408	1,2,4
A0	''	1	>840A	2,4
A1	''	0	>840C	1,4
A2	''	0	>840E	4
A3	9995	0	>8410	1-3
A4	''	0	>8412	2,3
A5	''	1	>8414	1,3
A6	''	X	>8416	3
A7	''	X	>8418	1,2
A8	''	X	>841A	2
A9	''	X	>841C	1
A10	''	X	>841E	None
A11	''	CE4	active LOW sound chip 4 enable	
A12	''	CE3	'' '' '' '' 3 ''	
A13	''	CE2	'' '' '' '' 2 ''	
A14	''	CE1	'' '' '' '' 1 ''	
A15	''	0		

On the 99/4A, writing to >8400 will load data into all ForTI sound chips as well as the console sound chip. Writing to any ForTI sound chip will also write to the console sound chip, I think. The only way to write to the console sound chip without writing to the ForTI sound chips is by using address >841E. Note that the states of A6-A10 do not matter, such that >8400, >8420, >8440, >8460, etc., are all equivalent ways of accessing ALL sound chips, and so forth.

Jeff White

P.S.: When I put >BC at >8004 in the GPL mapper, the system stops.