



DSE 7000

SERVICE MANUAL

Last revision: December, 1992

TABLE OF CONTENTS:

Page	Topic
3	Inside the computer tower
3	To open the case
3	About handling computer boards
3	What's inside
4	To remove the DSP, MEMORY BOARDS, DISK CONTROLLER
4	To remove the system board
4	To remove modules or drives in drive bay
5	To add or replace memory cards
5	Adding additional memory card(s)
6	DSE Memory configuration software
7	Elementary problem solving
7	First things first
7	Observe the software loading
8	Computer CMOS setup
9	Instructions for using the test programs
11	Troubleshooting Flowchart
16	Miscellaneous information
17	Assembly Drawings
17	DSE 7000 Computer Tower
17	Computer Drive Bay
18	DSP and Control Section
19	Subassemblies / Spare part list
19	The complete DSE 7000
20	Parts inside the tower
20	The Controller
22	DSP Board
24	15 Volt Module
25	Audio I/O Module
28	16 MB Memory Board
29	64 MB Memory Board
29	TC Time Chase Option
31	Supplements
31	A. Audio Memory Installation
33	B. Remote Control Possibilities
34	C. Remote Controller Error Codes
36	D. Time Code Chase Option
44	E. Product Modifications, Extension Cables
46	F. Purchased Items
47	H. Setting of Jumpers

Page	Topic
50ff	Block Diagrammes DSE 7000 Parallel Audio Bus Controller Audio I/O Module 16/64 Mb Memory Card DSP Card
56ff	Schematics (optional)

Inside the Computer Tower

To open the case:

1. Unsnap the rear cover.
2. Remove six (6) screws with a 1/4"/6mm hex socket driver.
3. Slide the cover back and off.

About handling computer boards:

Computer boards are subject to damage by static. For safety, wear a grounded bracelet. Store boards only in a purpose - designed antistatic bag.

What's inside:

Stand the case upright.

The POWER SUPPLY box is mounted in the upper left.

The DRIVE BAY is mounted in the upper right. It contains, from top to bottom:

AIOM (Audio Input/Output Module)

Power Module, powers the AIOM

TC-Chase option connector module (if option is installed)

3 1/2" FD (floppy disk drive)

HD (hard disk) behind plastic cover

CMOS BATTERY. Black box, tie-wrapped to inner left side of tower. This is a lead acid battery which is recharged whenever the computer is on.

SYSTEM BOARD, the very large PC board mounted on the back of the frame. This is the computer board for all computer functions.

The System Board contains the CPU, BIOS ROM, and computer RAM.

The following cards plug into the system board, from top to bottom:

TC-option: TC-reader with stacked TC-synchronizer (if option is installed)

HD/FD/SCSI Controller (HD is a SCSI device)

Combined VGA monitor driver / serial & parallel I/O card

DSP Card (audio Digital Signal Processing)

Memory Card No. 1 (audio memory)

Memory Card No. 2 (optional)

Memory Card No. 3 (optional)

Memory Card No. 4 (optional)

To remove the DSP, MEMORY BOARDS, DISK CONTROLLER:

1. First, and very important:

Make a very accurate sketch of the location of the boards, and all cables that are connected to them. Mark the cables with a felt-tip marker or the like.

2. The cable connectors are usually secured onto the sockets with hot melt adhesive. Carefully remove this hot melt adhesive with your fingers or pliers. Unplug all connectors from their sockets.
3. Remove the card retaining strap on the right side.
4. Remove the retaining screw on the left side, and carefully lift out the board.

To remove the system board:

1. First, and very important:

Make a very accurate sketch of all cables and where they are connected. Mark the cables with a felt-tip marker or the like.

There are two power cables leading from the power supply to the system board. Both have the same connector. Be sure to mark these cables carefully to avoid reversing them.

2. Remove all plug-in boards: Disk Controller, DSP Card, Memory Cards, Monitor driver card, serial I/O card.
3. Remove fan bracket and fan.
4. Remove two retaining screws.
5. Slide the system board down on its plastic guides, and remove it.

To remove modules or drives in drive bay:

This refers to AIOM (Audio In/Out Module), Power Module, TC-option connector module, Floppy Drive, Hard Disk

1. First, and very important:

Make a very accurate sketch of all cables. Mark the cables with a felt-tip marker or the like.

The ribbon cable to the floppy drive has two connectors. The connector on the end, nearest to the twisted cable section, plugs into the FD. The other connector is unused.

2. If necessary, remove plastic covers. Push out from the inside. They are held in place with hot melt adhesive.
3. Remove connectors.
4. Loosen screws for all nearby modules and drives. Remove screws for module or drive being removed.
5. Slide out the front.

To add or replace memory cards:

The DSE 7000 holds one to four memory cards. Each 16M Card provides 4.4 track minutes of audio. As 64 is four times 16, a 64M Card gives you 17.6 track minutes of audio.

Memory cards can be added in the field. The process includes:

- setting the DIP switches on the memory card to the required position
- installing the card
- re-installing the DSE Operating System

Memory cards are numbered from 1 to 4, beginning with the card adjacent to the DSP card.

Adding additional memory card(s):

1. Set the configuration switch (SW1) on the additional memory card(s) according to the following table:

DIP switch no.		1	2	3	4	5	6	7	8
1. 64M card	1. 16M card	ON	ON	ON	ON	ON	ON	ON	ON
	2. 16M card	ON	ON	ON	off	off	off	off	ON
	3. 16M card	ON	ON	ON	ON	off	off	off	ON
	4. 16M card	ON	ON	ON	off	ON	off	off	ON
2. 64M card	5. 16M card	ON	ON	ON	ON	ON	off	off	ON
	6. 16M card	ON	ON	ON	off	off	ON	off	ON
	7. 16M card	ON	ON	ON	ON	off	ON	off	ON
	8. 16M card	ON	ON	ON	off	ON	ON	off	ON
3. 64M card	9. 16M card	ON	ON	ON	ON	ON	ON	off	ON
	10. 16M card	ON	ON	ON	off	off	off	ON	ON
	11. 16M card	ON	ON	ON	ON	off	off	ON	ON
	12. 16M card	ON	ON	ON	off	ON	off	ON	ON
4. 64M card	13. 16M card	ON	ON	ON	ON	ON	off	ON	ON
	14. 16M card	ON	ON	ON	off	off	ON	ON	ON
	15. 16M card	ON	ON	ON	ON	off	ON	ON	ON
	16. 16M card	ON	ON	ON	off	ON	ON	ON	ON

The switch is set by depressing the switch lever towards the side of the switch body marked "ON" or "OFF", as required. Be careful, as some of these switches can be confusing. Some have red color indicators that are visible when "OFF". In any case "ON" means that the switch contact is closed.

2. Install the card in the computer tower per the instructions above.
3. Plug the next available ribbon cable connector into the newly installed Memory Card(s).

DSE Memory configuration software:

Automatic configuration is done as a part of re-installing the DSE Operating System.

If the number of memory cards are changed, you can reconfigure the system automatically for the new number of cards by reinstalling the DSE Operating System. Use the latest DSE Operating System Installation/Update diskette.

Alternatively, the system can be forced to auto-configure without reloading the DSE Operating System, as follows:

1. Go to DOS:

If the CONTROLLER is plugged in: Power up the computer. From the JOB CONTROLLER, press ALT+F10.

If the CONTROLLER is unplugged: Power up the computer. The DSE OPERATING SYSTEM will load the JOB CONTROLLER, fail to access the CONTROLLER, so return to DOS.

2. Type:

```
CD\DOS <CR>  
DPGETCFG >>C:\DSE\SYS\EXE\DSE_ENV.DAT <CR>
```

3. The program will run. As it determines the configuration, you will see several messages as it searches memory. When it completes, it will display a message indicating the amount of audio memory that it found. It will automatically update the DSE configuration data.

4. Wait for prompt:

```
C:\DOS>
```

Type:

```
CD\DSE\SYS\EXE <CR>
```

5. Wait for prompt:

```
C:\DSE\SYS\EXE>
```

6. If the CONTROLLER is plugged in, type:

```
EXEXEC <CR>
```

If the CONTROLLER is not plugged in, power down. Plug in the CONTROLLER, and power up.

ELEMENTARY PROBLEM SOLVING:

First things first:

1. Disconnect power.
2. Check the cable between the controller and the computer tower.
Check the cables between the monitor and the computer tower.
Check the cable between the keyboard and the computer tower.
Check all cables within the computer tower.
3. Re-try the system.
4. Watch the controller go through its power-up self tests: All lights on. Tape counter moves through sequence from 0000 to FFFF.

If that does not happen:

Observe the software loading:

On power-up, the various software programs load in a specific order. Observe this process on the monitor to help determine if there may be corrupted software or hardware problem.

1. BIOS loading. Observe the following appear on the screen when the system is powered up:

GD5320 VGA BIOS Version 3.08
Copyright (c) Cirrus Logic Inc. 1987-1991
Copyright (c) Award Software Inc. 1984-1988.
All Rights Reserved

AMI MK-II AT BIOS (C)1990 American Megatrends Inc.
03712KB OK, 64KB CACHE MEMORY
VIDEO BIOS SHADOW RAM ENABLED

Press If you want to run SETUP or DIAGS

Adaptec AD-1520 BIOS
Version 1.3
Copyright 1990, Adaptec, Inc.
All Rights Reserved

2. System Configuration screen:

System Configuration (C) Copyright 1985-1990, American Megatrends	
Main Processor : 80386	Base Memory Size : 640 KB
Numeric Processor: None	Ext. Memory Size : 0 KB
Floppy Drive A: : 1.44 MB, 3 ½"	Hard Disk C: Type: None
Floppy Drive B: : None	Hard Disk D: Type: None
Display Type : VGA or EGA	Serial Port(s) : 3F8
Rom-BIOS Date : 04/09/90	Parallel Port(s) : 378

3. MS DOS loading
MS DOS Version 5.0
4. DSE Job Controller
DSE Job Controller screen

If the software loading is not successful:

1. Open the computer tower. Note the instructions at the inner side of the Computer Tower.
2. Carefully check that all cables are fully seated in their connectors.
3. Check to see that the cards that plug into the system board (disk controller, DSP, memory cards) are fully seated into the sockets on the system board.
4. Re-try the system.

If **BIOS** or **RAM TEST** shows an error:

RAM test counts up from 00000KB to 03712KB. If screen indicates 03712KB OK, the RAM is OK.

If not, there is a defect in the computer system board. Exchange it.

If **BIOS** and **RAM TEST** OK, but **System Configuration** screen shows an error, run:

Computer CMOS Setup:

1. Press RESET button on computer tower.
2. Look for prompt:
Press If you want to run SETUP or DIAGS
Press
3. Look for prompt:

EXIT FOR BOOT
RUN CMOS SETUP
RUN DIAGNOSTICS

Move cursor to CMOS SETUP. Press <ENTER>.

4. Look for CMOS SETUP screen. Set the options to the following:

Date (mn/day/year)	: (set to current date)
Time (hour/min/sec)	: (set to current time)
Floppy drive A	: 1.44 MB, 3 1/2
Floppy drive B	: Not installed
Hard disk C: type	: Not installed
Hard disk D: type	: Not installed
Primary display	: VGA or EGA
Keyboard	: Installed
Video BIOS shadow	: Enabled
256KB memory reloc	: Disabled
32-bit memory card	: Not installed

5. When all options are set as above, press <ESC>, then Y.

If BIOS, RAM TEST, System Configuration OK; DOS does not load:

If the screen does not indicate "MS DOS Version 5.0", DOS on the hard disk may have been corrupted. The CPU is probably OK.

Re-load DOS using the DSE DOS load diskette. If DOS still does not load, there is probably a hardware problem with the hard disk or HD/FD controller card.

If BIOS, RAM TEST, System Configuration, DOS OK; Job ontroller does not load:

The DSE Operating System on the hard disk may have be been corrupted. Re-load DSE Operating System.

If BIOS, RAM TEST, System Configuration, DOS OK; Job Controller loads, but then exits to DOS:

The Job Controller had probably failed to communicate with the Controller. If this happens, the problem is most likely in the cable between the Controller and Computer Tower, in the Controller itself, or in the Communications Card.

INSTRUCTIONS FOR USING THE TEST PROGRAMS:

The following test programs are available on the diskette on the last page of this Service Manual:

- | | |
|--------------------|------------------------|
| 0. ROM diagnostics | tests PC |
| 1. HWPCDSP | tests DSP card |
| 2. HWTIDSP | tests DSP card |
| 3. HWPCM16 | tests 16MB memory card |
| 4. HWPCM64 | tests 64MB memory card |
| 5. HWTIMECD | tests TC-reader card |
| 6. PROCMM | tests control panel |

Following is a description of the various test files:

0. ROM Diagnostics:

Test of CPU and RAM

Performed by the BIOS every time the computer is reset (see above). An error message on the screen will indicate a problem.

Test of screen, keyboard, floppy drive, ports

1. Press RESET button on computer tower.
2. Look for prompt:

Press If you want to run SETUP or DIAGS

Press .

3. Look for prompt:

EXIT FOR BOOT
RUN CMOS SETUP
RUN DIAGNOSTICS

Move cursor to RUN DIAGNOSTICS. Press <ENTER> .

4. Follow instructions on DIAGNOSTICS screen to conduct each test.

Notes: Hard disk diagnostics

The computer's hard disk diagnostics cannot test a SCSI hard disk.

Notes: Floppy disk diagnostics

Use a blank disk for these diagnostics. All files on the disk will be destroyed.

1.+ 2.DSP card:

There are two test programs for the DSP card:

"HWPCDSP" which is a quick test
"HWTIDSP" which takes about five minutes

Just type in the name and run the desired program. In general when you get "PASSED" the card is good; when you get a "FAILED" it is bad.

Yet one area of the DSP card is not tested by these programs:

The FIFO which acts as an interface to the PAB (Parallel Audio Bus). But you can figure out this fault easily (see troubleshooting flowchart).

3.+ 4. Memory cards:

If you suppose a failure located in the audio memory (eg. [partly] corrupted audio during playback) then run "HWPCM16" (for 16MB cards, for 64MB cards run "HWPCM64"). The machine will tell you how much memory there is and will walk through from zero to the end. Again, if you get "PASSED", the card will be good.

DO NOT FORGET TO SET THE DIP SWITCHES CORRECTLY IF YOU ADD OR REMOVE OR EXCHANGE MEMORY BOARD(S)!

5. Alpermann + Velte TC-reader card:

If your DSE is equipped with the TC-Chase option then you can check whether the TC is read correctly. Connect a TC source to the DSE and run "HWTIMECD". You shall see the incoming timecode.

"8" tells you VITC,
"4" tells you LTC.

6. Control panel:

You can test the control panel with a terminal emulation program such as "PROCOMM". Unfortunately you have to disassemble the control panel and make a jump between test connector JP4/pin13 and GROUND (should be at JP4/pin15). Secondly you have to break the "RESET" line from the DSE mainframe. This is pin 13 of the 15 pole female sub-D connector. Be careful because the silkscreen and drawings show wrong pin numbers!

If you have completed these preparations you can start "PROCOMM" and then plug in the 15 way connector into the control panel. The DSE 386PC will now be a terminal and the processor in the control panel will be the main processor. The monitor will show you a menu, which tests can be run and which keys have to be depressed.

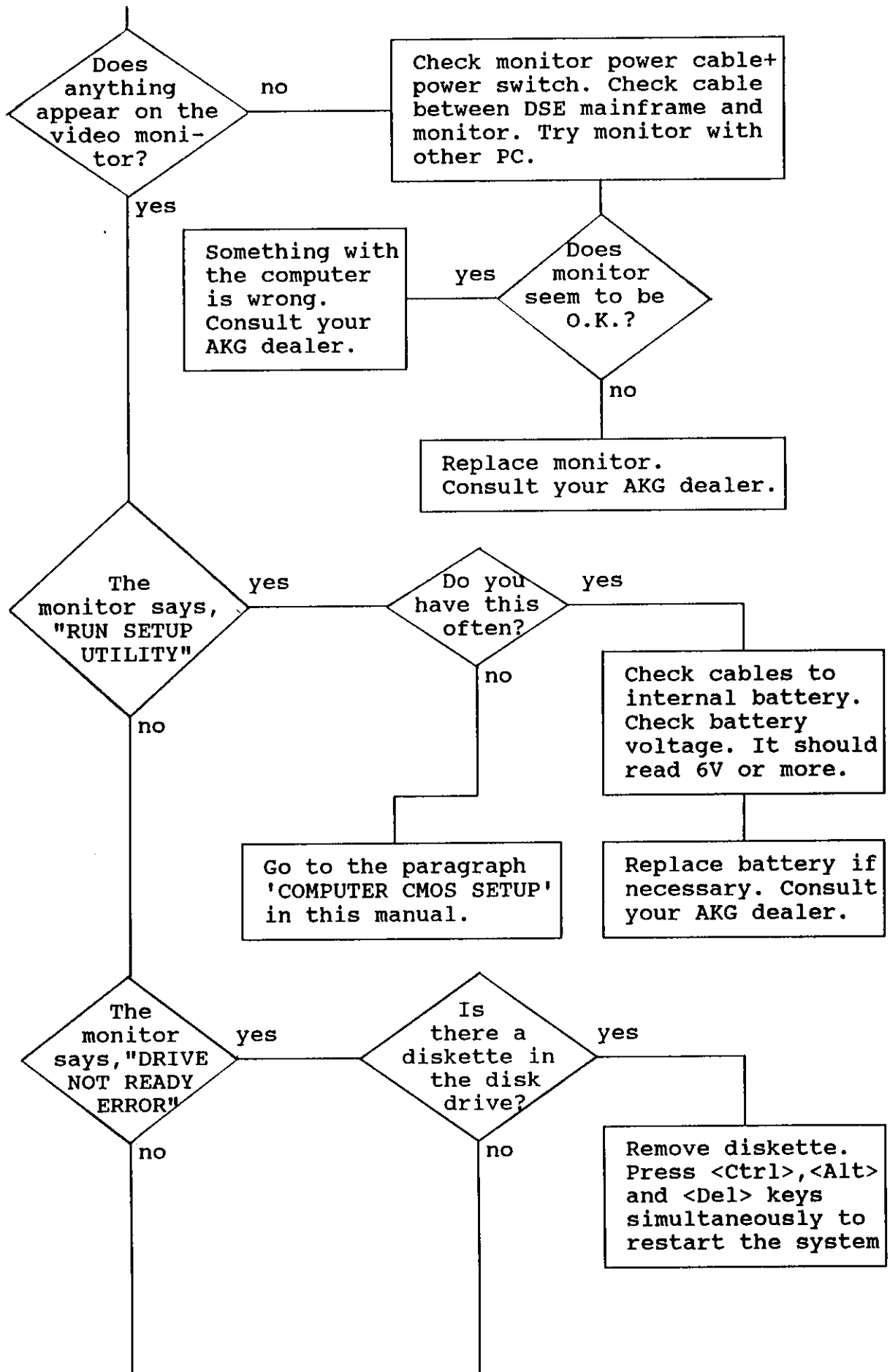
When you reassemble the control panel **DO NOT FORGET TO REMOVE THE JUMPER JP4/13 TO GND! Also REINSTALL THE "RESET" LINE OF THE COMMUNICATIONS CABLE!**

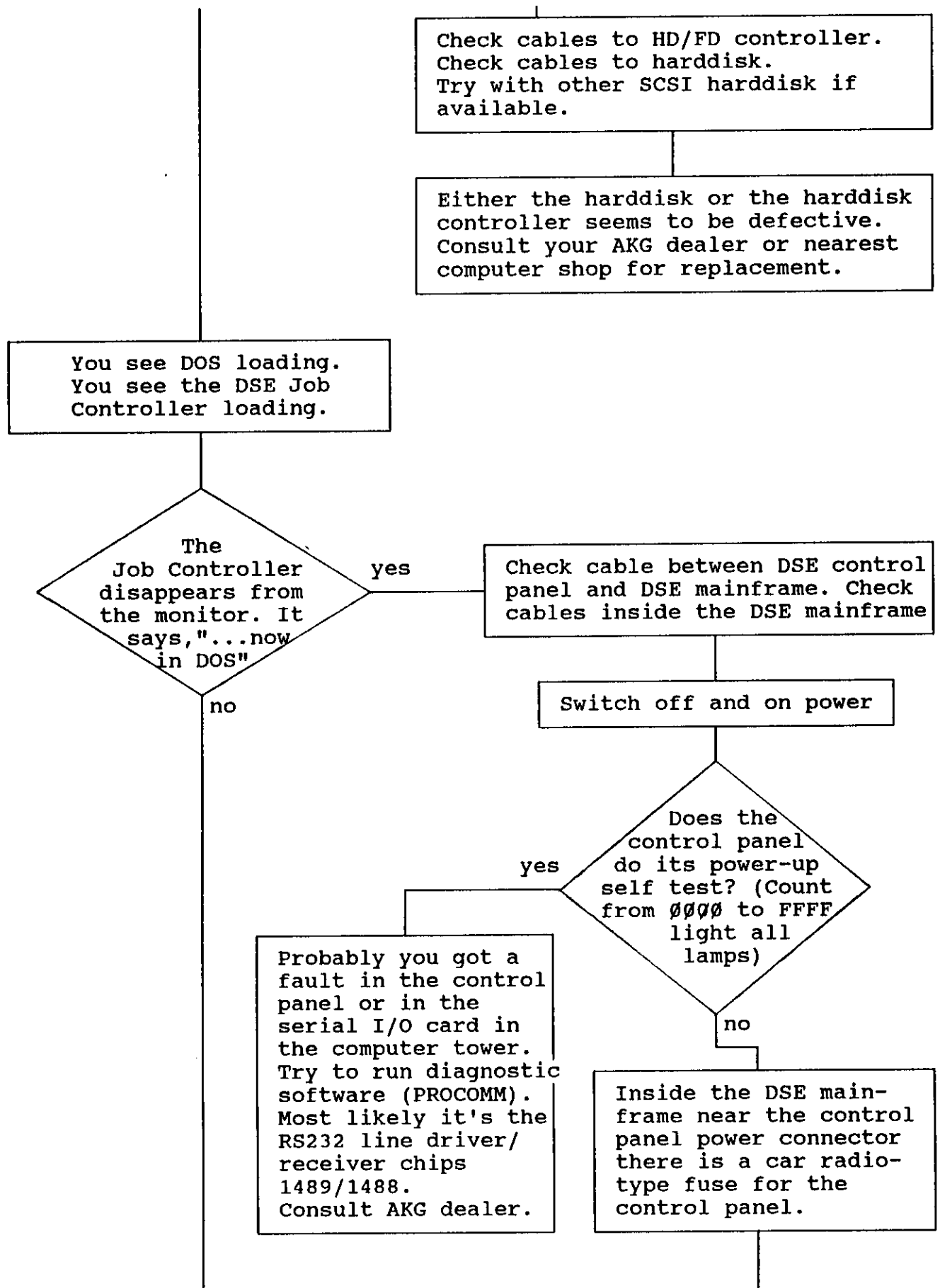
Be careful that no keys get stuck when the control panel is screwed together!

Troubleshooting Flowchart

Before you do any troubleshooting that goes deep inside of your DSE and how it works be sure that all cables (outside and inside) are seated correctly. Also check if the monitor power switch is on and whether the keyboard is locked or not. You may refer to the module block diagrams in this manual.

You switch on the power

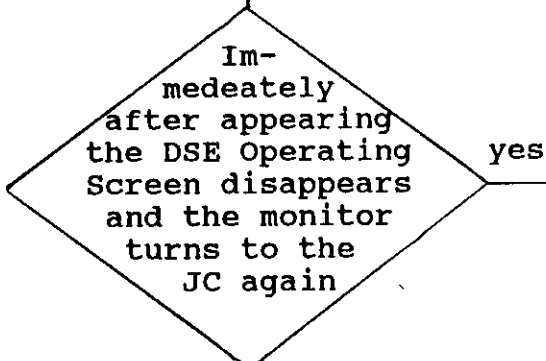




At the Job Controller screen the monitor says, 'CONTACTING CONTROLLER. PLEASE WAIT'. 'DOWNLOADING PROGRAM TO CONTROLLER. PLEASE WAIT'. 'FINISHED DOWNLOADING. YOU MAY BEGIN'

Check fuse and replace with same type (3A slow blow, 6x32 mm) if necessary.

You start a new production or want to edit an old production.

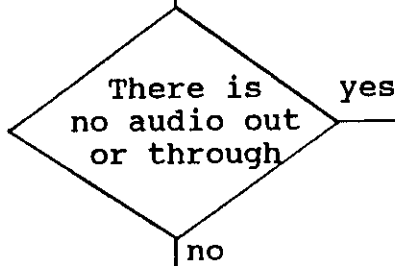


Your problem lies either

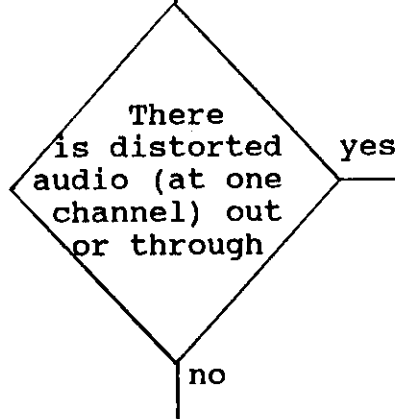
- in the power module or
- in the control circuitry of the I/O module or
- in the DSP card's FIFO or
- in the cables between these

Consult your AKG dealer.

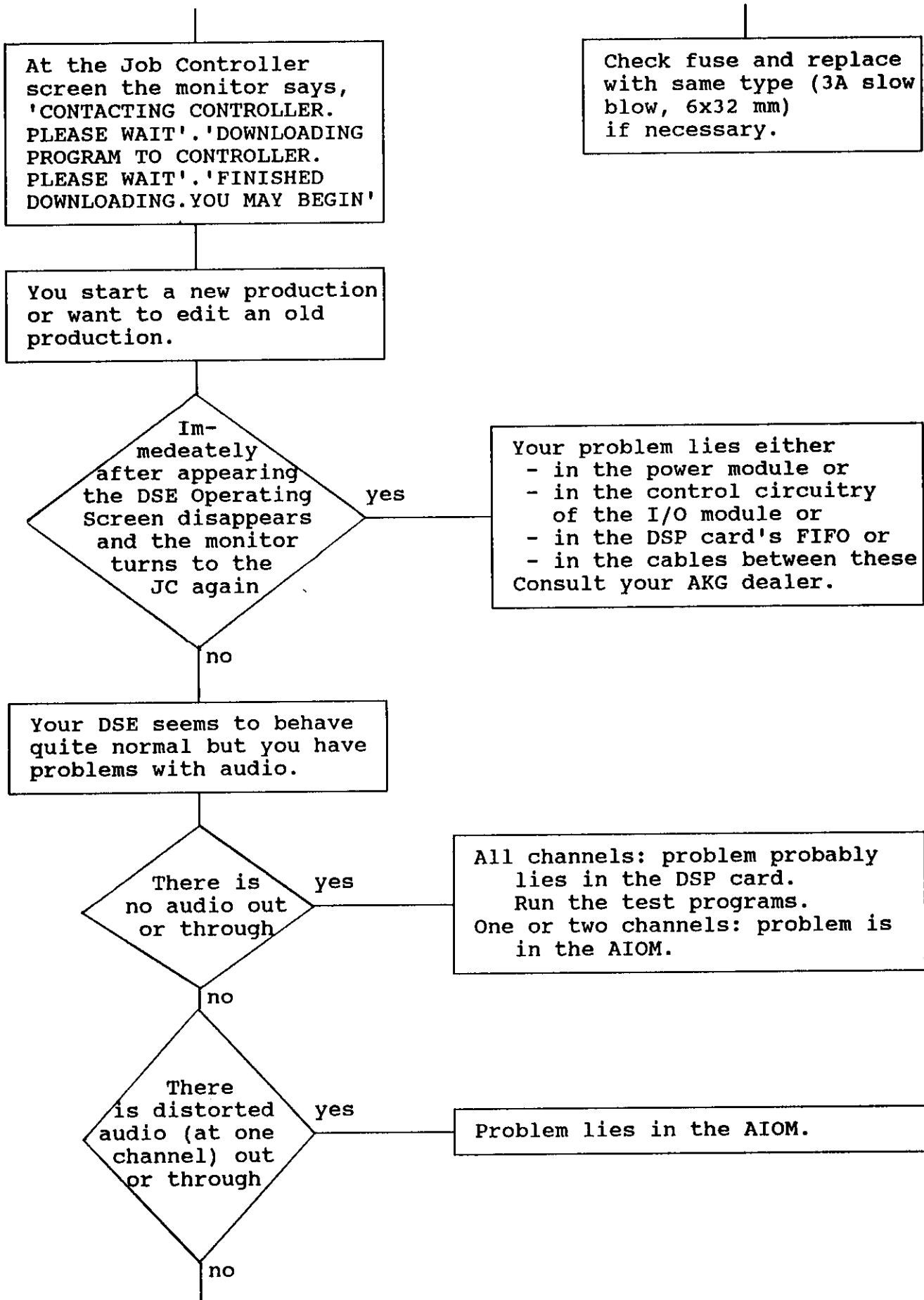
Your DSE seems to behave quite normal but you have problems with audio.

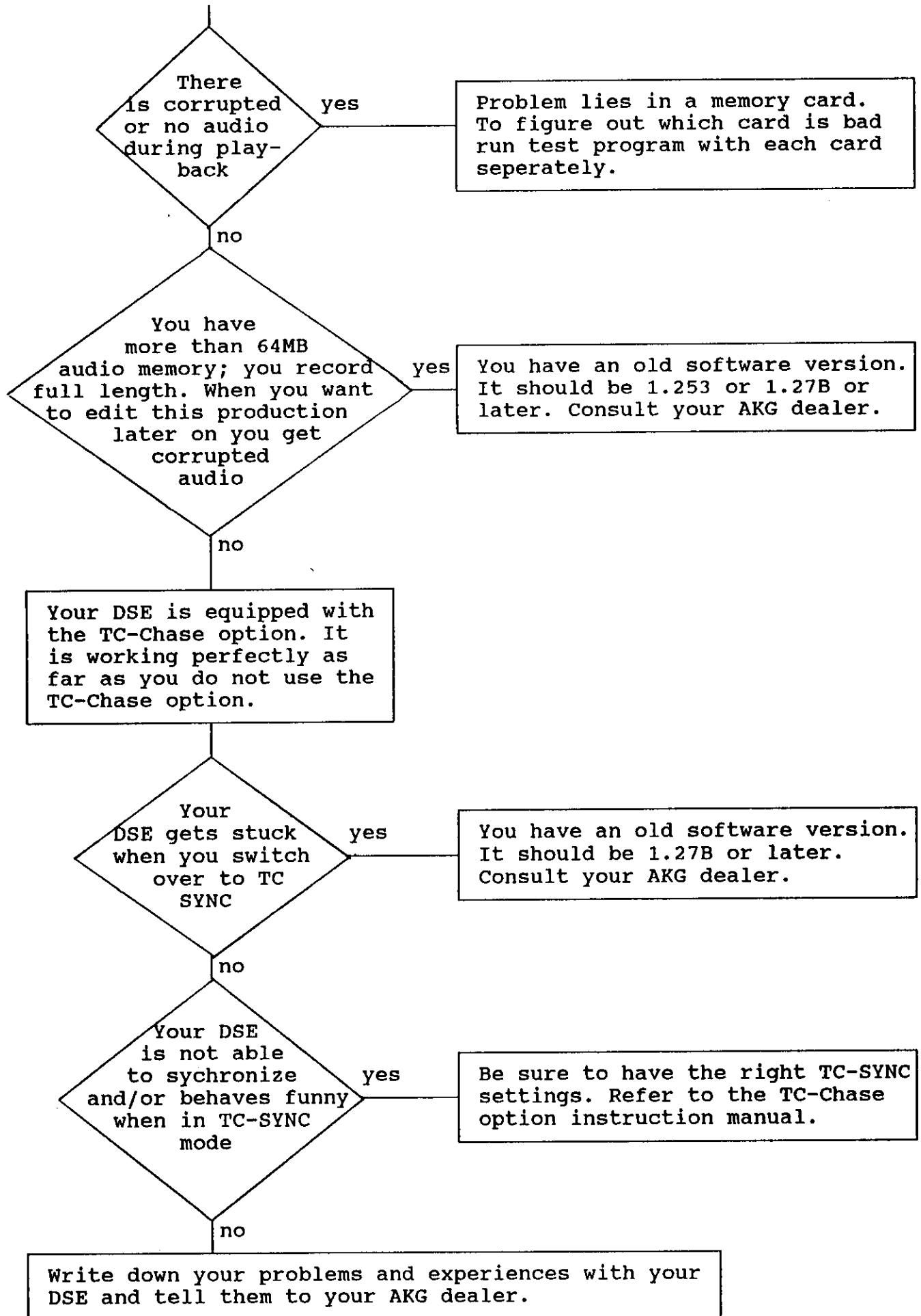


All channels: problem probably lies in the DSP card. Run the test programs. One or two channels: problem is in the AIOM.



Problem lies in the AIOM.





MISCELLANEOUS INFORMATION

For removing various stubborn connectors from their sockets (include DSP Bus and PAB cables, two wired PC power supply cables), the hot melt glue can be peeled with fingers or pliers, or just pull connector off with firm touch.

The following items may in case of emergency be obtained from a local source. They are standardized components and will work in your DSE 7000 without problem .

FD drive (any 3.5" HD 1.44M drive)

Power supply (tower style, without external power switch, must be a universal voltage type)

HD/FD controller (a SCSI controller is needed)

VGA / I/O Card

Standard computer keyboard.

System board and hard disk are not freely substitutable. Do not make any attempts to replace them against components of other type or brand. Even in case of urgent need try to get the original items from an AKG dealer or directly via AKG Service Dept.

Popping off the drive bay covers is easy by pushing out from inside. Note that they are glued in place).

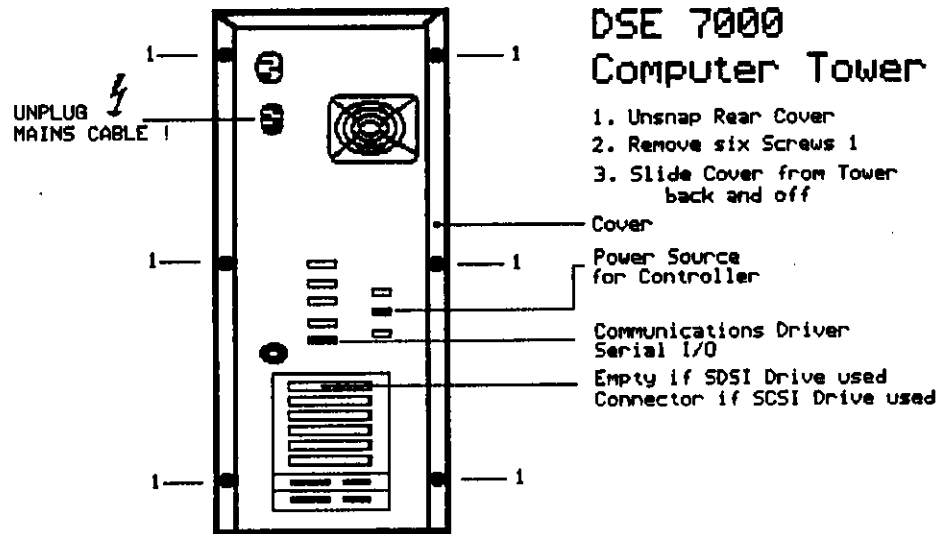
It is recommended to keep the shipping cartons for proper packing in case that the DSE 7000 has to be shipped. A set of cartons is available as "shipping kit" but at relatively high costs.

When storing boards keep them safely in anti-static bags. Remember general rules for working with components sensitive to electrostatic charges.

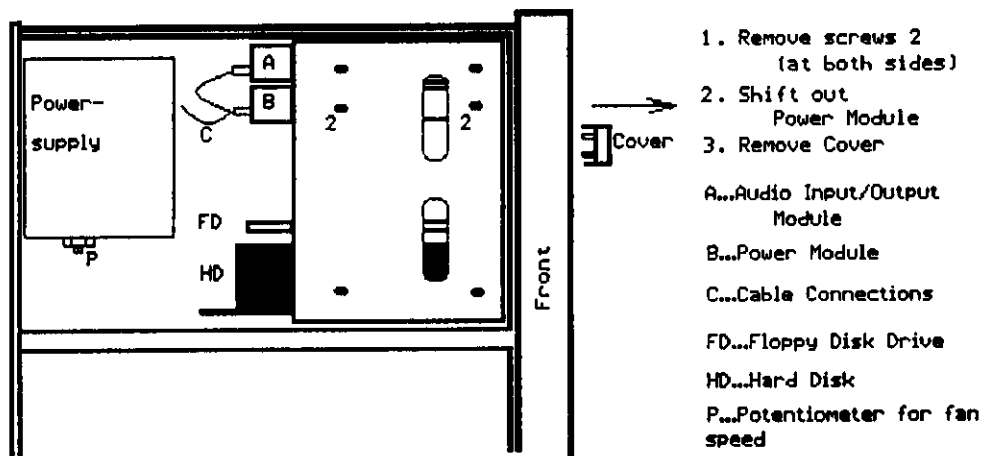
The SCSI cable and PAB (parallel audio bus) cable are not interchangeable although they look alike and would fit.

Note that the floppy drive is installed to last connector of cable end (furthest from controller card end, one with twisted cable section).

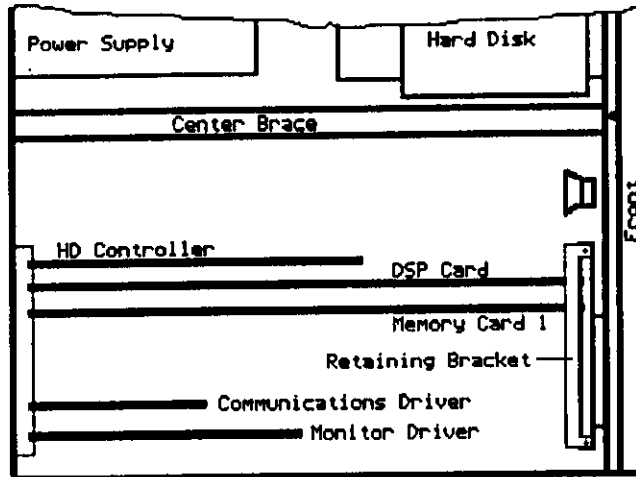
For removing AIOM or anything in drive bays loosen all screws for nearby modules and drives.



DSE 7000 Inside the Tower's Drive Bay

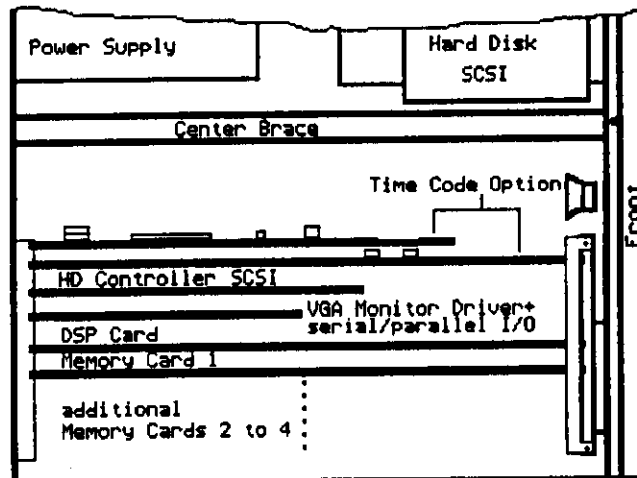


DSE 7000 DSP and Control Section



The sketch shows the configuration used in former production and without a TC Chase Option installed

DSE 7000 DSP and Control Section



This drawing shows the recent configuration plus installed TC Chase option board

PART LISTS:

Remarks: Value/Dim. = value, dimension or characteristics of part. Pos.Nbr. = Location number on PC.board.
Quant. = Quantity used per complete assembly. Order Number = AKG Service part number

1. The Complete DSE 7000, 2530Z0001

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
Controller, compl.			1	2530M0101
DSP-Board			1	2530M0501
15 Volt Module			1	2530M0601
Audio I/O Module			1	2530M0801
Memory Board	16MB		1...4	2531Z0001
Memory Board	64MB		1...4	2532Z0001
TC Chase Option			1	2534Z0001
CPU Motherboard ,	386		1	0029E0001
Memory Chip	1MB		4	0029E0012
Monitor	VGA		1	0029E0010
Monitor	EGA	no longer used	(1)	0029E0002
Graphics Card	EGA	no longer used	(1)	0029E0003
VGA + Super I/O Card			1	0029E0011
Keyboard			1	0029E0004
Floppy Drive	31/2"		1	0029E0006
Hard Disk Controller	SCSI		1	0029E0009
Hard Disk Controller	ESDI	no longer used	(1)	008201512
Parall./Serial I/O		no longer used	(1)	0029E0005
Hard Disk	215MB		1	2533Z0003
		new order number:		0029E0007
Hard Disk	676MB		1	2533Z0004
		new order number:		0029E0008
PC - Power Supply	5V		1	0027E0030
DSE Software			1	2530C01..
Mains Cord			1	2262K0002
Tower Housing			1	9999N0447
Cable Controller-> PC			1	2492K0028
Cable Monitor-> PC			1	
Cable Extension Kit *)			1	2536Z0001
<u>consists of the following 10 meter cables:</u>				
Cable Keyboard-> PC			1	2447K0002
Cable Monitor-> PC			1	2496K0001
Cable Controller-> PC			1	2497K0001
<hr/>				
Shipping Kit (Packing M'tl.)	Tower		1	101200001
Shipping Kit (Packing M'tl.)	Controller		1	101210001
Shipping Kit (Packing M'tl.)	Monitor		1	101220001

*) Further information on extension cables see Supplement E

2. Parts inside the DSE 7000 Tower

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
Fan			1	0027E0031
Fan Holder			1	2530Z2101
Buffer Battery			1	0026E0014
Cable-> Controller	Power		1	2492K0004
Cable-> HD	20 pole		1	2492K0007
Cable-> HD	34 pole		1	2492K0010
Cable-> FD			1	2492K0013
Cable, Audio Bus			1	2492K0016
Cabel, AIOM	Power		1	2592K0019
Cable-> Controller	Data		1	2492K0022
Cable, DSP Bus			1	2492K0025
Cable, SCSI			1	2492K0031
Fuse	3,15A slowblow		1	0012E0027
Phillips Screw	4-40x3/16" flat head for card guides		4	0095N0014

3. Controller, 2530M0101

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
IC 27256, programmed		U8	1	2530C23..
Housing, bottom plate			1	2530Z0101
Housing, top plate			1	2530Z0201
Led Lens			6	2530Z1701
Key protector			2	2530Z1801
Dust Cover			1	2530Z2701
Hand rest			1	2530M1201
Rubber foot			4	0095N0003
Fader knob	black		2	0040E0599
Fader knob	white		8	0040E0600
Screw	2-56x1/4"		4	0095N0002
Toothed washer	J 2,2		4	6797D2201
Screw	8-32x1/4"		4	0095N0012
Screw	6-32x1/4"		13	0095N0004
Toothed washer	A 4,3		7	6797D4300
Toothed washer	A 3,2		13	6797D3200
Hex keps nut, for feet and handrest	8-32		7	0095N0001
Encoder-cable			1	2492K0001
Insulation plate f. mixer			1	2530Z2801
Knob for scrubwheel			1	2530Z1601
Screw	6-32x1/4"		2	0095N0004
Ribbon cable holder			1	9999N0478
Lens Kit			1	2530M1301
<u>consists of:</u>				
Lens, small	clear		41	0040E0601
Lens, large	yellow		1	0040E0602
Lens, large	green		1	0040E0603
Lens, large	red		1	0040E0604
Lens, large	clear		3	0040E0605
Label Set for lenses			1	4681S0001

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
Controller Board, compl.			1	2530M0301
<u>consists of:</u>				
Capacitor	22pF	C1,2	2	0031E2204
Capacitor	100 μ F	C3,4,6,76	4	0038E1019
Capacitor	4,7 μ F	C5,7,10,32,34,35,38,62, C64,66,68,69,71...75,80	18	0036E4703
Capacitor	22 μ F	C21,22,24,26,27,29,30	7	0037E2205
Capacitor	100nF	C8,9,11...20,23,25,28,31, C33,36,37,39,40,44,46,48, C50,52,53,61,63,65,67,70, C81...99	51	0035E1027
Resistor	100 Ohms	R1...8	8	0003E1020
Resistor	68kOhms	R9	1	0005E6806
Resistor	4,7kOhms	R20	1	0004E4702
Resistor	3,3kOhms	R21...23	3	0004E3306
Resistor	240 Ohms	R24	1	0003E2400
Resistor	1,37kOhms	R25	1	0004E1301
Resistor	1kOhms	R32...34,38,39,43	6	0004E1004
Resistor	2,7MOhms	R35...37,40...42	6	0007E2702
Resistor	3,3MOhms	R101	1	0007E3300
Resistor Network	9x10kOhms	RN1...6	6	0005E1016
Jumper		TP1...5	5	0018E0211
Integrated Circuit	HD64180	U1	1	0015E4251
Integrated Circuit	1489	U5	1	0015E4272
Integrated Circuit	1488	U6	1	0015E4273
Integrated Circuit	6264	U7	1	0015E4072
Integrated Circuit	74LS154	U9	1	0015E4271
Integrated Circuit	74LS10	U10	1	0015E4007
Integrated Circuit	74AS04	U11	1	0015E4125
Integrated Circuit	74AS32	U12	1	0015E4180
Integrated Circuit	74HC240	U17,18	2	0015E4268
Integrated Circuit	74HCT273	U21,23,33,37,43,71	6	0015E4269
Integrated Circuit	74HCT139	U22	1	0015E4144
Integrated Circuit	UDN-2981A	U24	1	0015E4291
Integrated Circuit	ULN-2803A	U25,32,36	3	0015E1125
Integrated Circuit	74LS163	U2	1	0015E4036
Integrated Circuit	74HCT08	U13	1	0015E4266
Integrated Circuit	74HCT138	U30	1	0015E4267
Integrated Circuit	74HCU04	U31	1	0015E4145
Integrated Circuit	74HCT04	U60	1	0015E4264
Integrated Circuit	UDN-2944W	U34,38	2	0015E4265
Integrated Circuit	74HCT74	U3	1	0015E4262
Integrated Circuit	74HCT123	U35	1	0015E4263
Integrated Circuit	HD46508PA-1	U39	1	0015E7015
Integrated Circuit	78L05	U41	1	0015E1102
Integrated Circuit	HCTL-20004	U42	1	0015E4245
Integrated Circuit	LM555	U44	1	0015E4260
Integrated Circuit	ICL76604	U45,46	2	0015E4261
Integrated Circuit	LM430T-5	U47	1	0015E1019
Integrated Circuit	LM317T	U48	1	0015E1100
Integrated Circuit	4N35	U49...54	6	0015E1087
Integrated Circuit	74HCT240	U61	1	0015E4250
IC Distance Socket	14 pole	U26...29	4	0013E0156
IC Socket	64 pole RM1,77	U1	1	0013E0163

continued on next page!

continued:

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
IC Socket	40 pole	U39	1	0013E0098
IC Socket	28 pole	U7,8	2	0013E0092
IC Socket	24 pole	U9	1	0013E0059
IC Socket	20 pole	U17,18,21,23,33,37, U43,71,61	9	0013E0060
IC Socket	18 pole	U24,25,32,36	4	0013E0109
IC Socket	16 pole	U2,22,30,35,42	5	0013E0058
IC Socket	14 pole	U3,5,6,10...13,31,60	9	0013E0057
IC Socket	8 pole	U44...46	3	0013E0056
IC Socket	6 pole	U49...54	6	0013E0101
Diode	1N4148	D1...3,47...52,58...63	15	0014E0017
Diode	1N40007	D4...46,53...57,64...67	52	0014E0121
Multipin Connector	20 pole	JP3	25	0018E2004
Multipin Connector	16 pole	JP4	1	0018E1605
Relay	SPST	K1...6	6	0024E0025
Heatsink	for TO-220	U47...48	2	0013E0165
Insulation washer	for TO-220	U47...48	2	0013E0166
Insulation bushing	for TO-220	U47...48	2	0013E0110
X-tal	12,288 MHz	X1	1	0011E0024
Screw Lock	4-40UNC	P1,2	2	0019E0111
Scrubwheel holder			1	2530Z1901
Screw	6-32x1/4"		2	0095N0004
Toothed washer	A 3,2		2	6797D3200
Switch, small		SW1...10,16...27, 29...46,0	41	0040E0147
Switch, large		SW11...15,28,	6	0040E0148
Lamp T-1Bi-Pin, Type E	5V/60mA	LP 1-46,0	47	0011E5012
Optical shaft encoder			1	0021E0585
Fader	10k X1SV10011P	RV10...19	10	0021E0052
LED	14pin,7 segment, red	U26-29	4	0014E0130
Connector	15pin	P1	1	0018E1504
Connector	37pin	P2	1	0018E3702
Phillips screw	4-40x1/2" pan head		6	0095N0017
Self locking nut	4-40		6	0095N0007

4. DSP - Board, 2530M0501

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
Capacitor	100nF	C1,2,4,5,7...20,22...36 C38...48,50...71	66	0035E1027
Capacitor	6,8 μ F	C3,6,21,37,49	5	0036E6808
Resistor	15,8 Ohms	R1,2	2	0002E1500
Resistor Network	9x10kOhms	RN1...4,7...14,16...24	21	0005E1017
Resistor Network	9x1kOhms	RN5,15	2	0004E1014
Resistor Network	9x2,2kOhms	RN6	1	0004E2208
Integrated Circuit	74LS14	U1	1	0015E4040
Integrated Circuit	74F109	U2	1	0015E4274
Integrated Circuit	74F37	U3	1	0015E4275
Integrated Circuit	74ALS996	U4,38,44,53	4	0015E4259
Integrated Circuit	74FCT573	U5,29,37,51,52,64	6	0015E4290

continued on next page!

continued:

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
Integrated Circuit, progr.	GAL20V8A-10LP	U6,8	2	2530C02..
Integrated Circuit	74FCT543	U7,13,15,19	4	0015E4276
Integrated Circuit	74F543	U30,63,68,72	4	0015E4278
Integrated Circuit, progr.	GAL16V8A-10LP	U9	1	2530C03..
Integrated Circuit	TMM2088	U10,18,42,43,55,65	6	0015E4280
Integrated Circuit	74ALS2233	U11,12,23,24	4	0015E4281
Integrated Circuit	7130	U14,26	2	0015E4282
Integrated Circuit	74FCT841	U16,25	2	0015E4283
Integrated Circuit, progr.	GAL16V8A-10LP	U17,56	2	2530C04..
Integrated Circuit	74ACT623	U20...22,57...59,66,67	8	0015E4284
Integrated Circuit, progr.	GAL16V8A-15LP	U27	1	2530C05..
Integrated Circuit	74FCT574	U28,54	2	0015E4197
Integrated Circuit, progr.	GAL20V8A-10LP	U31	1	2530C06..
Integrated Circuit	TMS320C25FNL	U32,36	2	0015E4285
Integrated Circuit	74AS04	U33	1	0015E4125
Integrated Circuit	74AS32	U34	1	0015E4180
Integrated Circuit, progr.	GAL16V8A-10LP	U35	1	2530C07..
Integrated Circuit, progr.	GAL20V8A-10LP	U39	1	2530C08..
Integrated Circuit, progr.	PALC22V10-20PC	U40	1	2530C09..
Integrated Circuit	74FCT574ATP	U41	1	0015E4287
Integrated Circuit, progr.	GAL16V8A-15LP	U45	1	2530C10..
Integrated Circuit, progr.	GAL20V8A-10LP	U46	1	2530C11..
Integrated Circuit, progr.	GAL16V8A-10LP	U47	1	2530C12..
Integrated Circuit	74ACT00	U48	1	0015E4288
Integrated Circuit	US-887 40.000MHz	U49	1	0015E4289
Integrated Circuit, progr.	GAL16V8A-15LP	U50	1	2530C13..
Integrated Circuit, progr.	GAL16V8A-15LP	U60	1	2530C14..
Integrated Circuit, progr.	PALC22V10-20PC	U61	1	2530C15..
Integrated Circuit	74F38	U62	1	0015E4292
Integrated Circuit, progr.	GAL16V8A-15LP	U69	1	2530C16..
Integrated Circuit, progr.	GAL20V8A-15LP	U70	1	2530C17..
Integrated Circuit	74F14	U71	1	0015E4293
IC Socket	20 pole	U9,17,56,27,35,45,47 U50,60,69	10	0013E0060
IC Socket	24 pole	U6,8,31,39,40,46,61,70	8	0013E0116
IC Socket	28 pole	U10,18,42,43,55,65	6	0013E0124
IC Socket	48 pole	U14,26	2	0013E0162
IC Socket	28 pole	U11,12,23,24	4	0013E00092
IC Socket	68 pole	U32,36 U30,63,68,72	2	0013E0164
IC Socket	24 pole+100nF	U7,13,15,16,19,25	10	0013E0160
IC Socket	20 pole+100nF	U20...22,41,51,52 U57...59,66,67	11	0013E0159
IC Socket	14 pole+100nF	U3,48,62	3	0013E0157
Phillips Screw	4-40x3/8"		2	0095N0017
Self locking nut	4-40		2	0095N0007
Connector		J1,J2	2	0018E5090
Multipin Connector	6x3pole	JP1	1	0018E2004
Multipin Connector	3pole	JP2	1	0018E2004

5. 15 Volt Module, 2530M0601

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
Board, completely assembled			1	2530M0701
Capacitor	2,2 μ F/25V	C1,2,4,7	4	0036E2200
Capacitor	10nF/50V	C3	1	0034E1024
Capacitor	1nF/50V	C5,8,100,101	4	0033E1023
Capacitor	4,7nF/50V	C6	1	0033E4715
Capacitor	6800 μ F/6,3V	C9	1	0039E6800
Capacitor	1000 μ F/35V	C10,11,12,13	4	0039E1006
Capacitor	1,5nF	C16	1	0033E1504
Resistor	28kOhms	R1	1	0005E2801
Resistor	51 Ohms	R2,6,7,9	4	0002E5100
Resistor	2,2kOhms	R3	1	0004E2202
Resistor	100 Ohms	R4	1	0003E1009
Trimmer resistor	10kOhms	R5	1	0021E0587
Resistor	51 Ohms, 0,5W	R8	1	0002E5101
Resistor	4,7kOhms	R10,11	2	0004E4702
Resistor	27 Ohms	R13	1	0002E2700
Resistor	5,1kOhms, 0,5W	R MOD1	2	0004E5103
Diode	HER 103		1	0014E0132
Transistor	MTP N05 E	Q3,4	2	0010E0136
Transistor	BC 337-40	Q5	1	0010E0098
Integrated Circuit	RC4558	U1	1	0015E1015
Integrated Circuit	UC3825N	U2	1	0015E1132
Integrated Circuit	74HC123	U3	1	0015E4141
Coil	15 μ H 0,6A	L1,2	2	0023E0074
Coil	20 μ H 6A	L3	1	0023E0075
Transformer	SC-8909-D	T1	1	0022E0028
Fuse	5A fast	F1	1	0012E0026
Fuse holder			1	0013E0169
IC Socket	8 pole		1	0013E0056
IC Socket	16 pole		2	0013E0058
Multipin Connector	4 pole	ST1	1	0018E0417
Multipin Connector	6 pole	ST2	1	0018E0613
Heatsink	for TO220		1	0013E0087
Press in - Nut	KF2-M3		2	0987N3007
Screw	M3x8		2	7985D3005
Spring washer	A 3		2	0137D0301
Front panel			1	2530Z1101
Phillips Screw	4-40x3/16"		18	0095N0014
Front screw			4	2530Z3001
Self locking nut	4-40		4	0095N0007
Phillips Screw	6-32x1/4"		5	0095N0020
Toothed washer	J4,3		4	6797D4301

6. Audio I/O - Module, 2530M0801

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
Connector board, complete			1	2530M0901
Input board, complete			1	2530M1001
Output board, complet			1	2530M1101
Front panel			1	2530Z0601
Front screw			12	2530Z3001
Phillips Screw	4-40x3/16", flat head		18	0095N0014
Phillips Screw	4-40x3/16", pan head		10	0095N0016
<u>Parts for Connector board (2530M0901):</u>				
XLR Connector	Y3FPC female	J1,J4	2	0017E0337
XLR Connector	Y3MPC male	J2,3,5,6	4	0016E0361
Multipin Connector	2x2pole	J7,9	2	0018E0416
Multipin Connector	4x2pole	JP8,10	2	0018E20811
<u>Parts for Input board (2530M1001):</u>				
Capacitor	220pF	C1,21,56,73	4	0035E2205
Capacitor	27pF	C2,20,57,72	4	0031E2700
Capacitor	22 μ F	C3,59	2	0037E2210
Capacitor	100nF	C4,5,10...13,16,18,19, C 23...25,27,28,34...36, C38,40,41,45...47, C50...53,55,58,60...66, C75...78,80,81,83,84, C87...89,91...93,95, C96,98,100	54	0035E1027
Capacitor	4,7 μ F	C6...9,14,15,17,31,37,39, C43,44,48,49,54,67,68,70 C71,86,90,94,97,99	24	0036E4708
Capacitor	1,8nF	C22,74	2	0033E1803
Capacitor	22 μ F	C26,79	2	0037E2205
Capacitor	22nF	C29,30,69,82	4	0034E2204
Capacitor	4,7nF	C32	1	0033E4714
Capacitor	10nF	C33	1	0034E1023
Capacitor	1nF	C42,85	2	0033E1022
Resistor	2kOhms	R1,20,32,34,35,42 R53,67,79,81,82,85	12	0004E2008
Resistor	20kOhms	R2,17...19,21,37, R38,49,54,68,92,	11	0005E2005
Resistor	10kOhms	R3,22,27...29,41, R46,55,69,74...76, R84,89	14	0005E1015
Resistor	1kOhms	R4,5,30,56,57,77	6	0004E1013
Resistor	7,5kOhms	R6,58	2	0004E7502
Resistor	10 Ohms	R7,59	2	0002E1010
Resistor	1,24kOhms	R8,13,60,65	4	0004E1208
Resistor	750 Ohms	R9,12,61,64	4	0003E7502
Resistor	5,9kOhms	R10,11,62,63	4	0004E5900
Resistor	150 Ohms	R14,66	2	0003E1512
Resistor	7,15kOhms	R15	1	0004E7100
Resistor	121 Ohms	R16	1	0003E1204

continued on next page!

continued:

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
Resistor	13kOhms	R23,70	2	0005E1302
Resistor	3,65kOhms	R24,71	2	0004E3604
Resistor	332kOhms	R25,31,72,78	4	0006E3309
Resistor	40,2kOhms	R26,39,40,73	4	0005E4001
Resistor	33,2kOhms	R33,80	2	0005E3310
Resistor	26,7kOhms	R36,83	2	0005E2601
Resistor	3,01kOhms	R43,86	2	0004E3005
Resistor	1,5kOhms	R44,45,87,88	4	0004E1511
Resistor	100 Ohms	R47,48,90,91	4	0003E1019
Resistor	2,55kOhms	R50	1	0004E2500
Resistor	365 Ohms	R51	1	0003E3602
Resistor	511 Ohms	R52,93	2	0003E5102
Resistor Network	10kOhms	RN1,2	2	0005E1018
Trimmer Resistor	10kOhms	RV1,4	2	0021E0587
Trimmer Resistor	100 Ohms	RV2,6	2	0021E0586
Transistor	2N5771	Q1,3	2	0010E0133
Transistor	SD 210	Q2	1	0010E0134
Diode	1N4148	D1,2,7...9,12...15	9	0014E0017
Diode	1N4004	D3...6	4	0014E0121
Diode	1N6263	D10,11,16,17	4	0014E0131
Integrated Circuit	LPF	U1,20	2	0020E0031
Integrated Circuit	LM7915CT	U2	2	0015E1036
Integrated Circuit	LM7815	U3	1	0015E1046
Integrated Circuit	NE5532AN	U4,5,26,27	4	0015E1071
Integrated Circuit	CA3019	U6,22	2	0015E1070
Integrated Circuit	LF353	U7,15,16,32,33	5	0015E1096
Integrated Circuit	MAT-01GH	U8,28	2	0015E1123
Integrated Circuit	LT1011	U9,29	2	0015E1126
Integrated Circuit	MM5437	U10	1	0015E1127
Integrated Circuit	LM78L05	U11	1	0015E1130
Integrated Circuit	74HCT374	U12,13,24,36	4	0015E4248
Integrated Circuit	SD5000	U14,31	2	0015E1121
Integrated Circuit	PCM64P	U17,34	2	0015E1120
Integrated Circuit	DM2503	U18,19,23,35	4	0015E1064
Integrated Circuit	LM317LZ	U21	1	0015E1119
Integrated Circuit	74HCT02	U25,30	2	0015E4246
IC Socket	42 pole		2	0013E0161
IC Socket	8 pole		1	0013E0060
IC Socket	20 pole		4	0013E0058
IC Socket	16 pole		6	0013E0057
IC Socket	14 pole		2	0013E0056
EMI-Filter	BNX002-01	M1	1	0020E0030
Socket	4 pole	J1,2	2	0018E0414
Connector	5569-NA1	J3	1	0018E0613
Socket	2x20 pole	J4	1	0018E4002
DIP-Switch	2 pole	SW1,2	2	0040E0149
Jumper	RM2,54	TP1...3	3	0018E0211
Phillips Screw	4-40x7/16" pan head	U2,3	2	0095N0019
Self locking nut	4-40	U2,3	2	0095N0007
Insulating washer	for TO-220	U2,3	2	0013E0166
Insulating bushing	for TO-220	U2,3	2	0013E0110
Heat sink	for TO-220	U2,3	2	0013E0165

continued on next page!

continued

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
Parts for Output Board (2530M1101):				
Capacitor	100nF	C1...6,10,12,16...22,24 C26...30,32...40,43...45 C48,49,54,56,57,61,62, C66...73,75,77...80,83,84, C88...94,97,103,105,106, C110,111	59	0035E1027
Capacitor	820pF	C7,51,64,108	4	0032E8206
Capacitor	2,2nF	C8,23,50,52,63,65,107,109	8	0033E2212
Capacitor	22μF	C9,53,76,98	4	0037E2205
Capacitor	27pF	C13...15,58...60	6	0031E2700
Capacitor	22nF	C31,41,81,95	4	0034E2204
Capacitor	680pF	C47,87,	2	0032E6802
Capacitor	4,7μF	C25,42,46,74,82,85,86,96, 10 C101,102	10	0036E4708
Capacitor	6,8μF	C100 (104)	1	0035E6808
Resistor	2kOhms	R1	1	0004E2008
Resistor	1,82kOhms	R2,14,22,35	4	0004E1811
Resistor	2,43kOhms	R3,4,15,16,23,24,36,37	8	0004E2405
Resistor	100 Ohms	R5...7,19...21	6	0003E1019
Resistor	3,09kOhms	R8,12,25,30	4	0004E3006
Resistor	100 Ohms	R9,10,17,18,27,28,38,39	8	0003E1009
Resistor	10kOhms	R.....	4	0005E1015
Resistor	365 Ohms	R34(31)	1	0003E3602
Resistor	121 Ohms	R33(32)	2	0003E1204
Resistor Network	10kOhms	RN1,3,4,5	4	0005E1017
Resistor Network	3,3kOhms	RN2	1	0004E3307
Integrated Circuit	74HCT273	U1	1	0015E4269
Integrated Circuit	XTAL OSC 8,192MHZ	U2	1	0015E1118
Integrated Circuit	DS1231	U4	1	0015E1124
Integrated Circuit	NE5532AN	U5,11,18,19,22, U29,33,34	8	0015E1071
Integrated Circuit, programmed	GAN16V8A-10LP	U6	8	2530C18..
Integrated Circuit	74ALS161	U7,14,21	3	0015E4258
Integrated Circuit	74ALS996	U8	1	0015E4259
Integrated Circuit	SAA722ON	U9,26	2	0015E1128
Integrated Circuit	TDA1541	U10,27	2	0015E1129
Integrated Circuit	LF353	U12,28	2	0015E1096
Integrated Circuit	74HCT373	U13	1	0015E4256
Integrated Circuit, programmed	GAL20V8A-25QP	U15	1	2530C19..
Integrated Circuit, programmed	GAL20V8A-25QP	U16	1	2530C20..
Integrated Circuit, programmed	GAL20V8A-25QP	U17	1	2530C21..
Integrated Circuit, programmed	N82S129N	U20	1	2530C22..
Integrated Circuit	74ALS175	U23,24	2	0015E4255
Integrated Circuit	74LS597	U25,30...32	4	0015E4249
Integrated Circuit	LM337M	U36	1	0015E1122
IC Socket	8 pole	U4,5,11,12,18,19,22, U28,29,33,34	11	0013E0056
IC Socket	16 pole	U7,14,20,21,23...25 U30...32	10	0013E0058
IC Socket	20 pole	U1,6,13,	3	0013E0060
IC Socket	24 pole	U8,15...17	4	0013E0116
IC Socket	24 pole	U9,26,	2	0013E0059

continued on next page!

continued

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
IC Socket	28 pole	U10,27	2	0013E0092
Heatsink			1	2530Z1201
Multipin Connector	4x2 pole	J1,2	2	0018E0810
Multipin Connector	25x2 pole	J3	1	0018E5008
Multipin Connector	20x2 pole	J4	1	0018E4003
Jumper	2 pole	JMP1,2,3,5,6	5	0018E0210
Phillips Screw	4-40x7/16" pan head		2	0095N0019
Self locking nut	4-40		2	0095N0007
Insulating washer	for TO-220	U36	1	0013E0166
Insulating bushing	for TO-220	U36	1	0013E0110

8. 16 MB Memory Board 2531M0101

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
Capacitor	6,8 μ F	C9...11,24...27, 50,51,54...57,75,76, 80...82,103,104	20	0036E6808
Capacitor	220 nF	C1...8,12...23, 28...39,40...49,52,53 58...63,66,77...79, 91,100...102	84	0035E2210
Resistor Network	9x4k7	RN5	1	0004E4711
Resistor Network	8x330ohms	RN6...13	8	0002E3304
Integrated Circuit	74F652	U2, U6	2	0015E4195
Integrated Circuit	74F37	U4	1	0015E4294
Integrated Circuit	74F08	U8	1	0015E4295
Integrated Circuit, programmed	PALL6R4-15CN	U5	1	2532C01..
Integrated Circuit, programmed	PAL16R6BCN	U1	1	2532C02..
Integrated Circuit, programmed	PAL16R6BCN	U7	1	2532C08..
Integrated Circuit, programmed	PAL16R6BCN	U3	1	2532C09..
Integrated Circuit, programmed	GAL16V8A-25QP	U15..19	5	2532C03..
Integrated Circuit, programmed	GAL6001-30P	U10	1	2532C04..
Integrated Circuit, programmed	GAL6001-30P	U11	1	2532C05..
Integrated Circuit, programmed	GAL20V8A-15LP	U12	1	2532C06..
Integrated Circuit, programmed	GAL6001-30P	U9	1	2532C07..
Integrated Circuit, programmed	GAL16V8A-15LP	U13	1	2532C10..
Integrated Circuit, programmed	GAL16V8A-10LP	U14	1	2532C11..
Integrated Circuit, programmed	GAL16V8A-25QP	U20	1	2532C12..
Integrated Circuit	TC511000Z 1Mx1DRAM	Z1...128	128	0015E4297
IC Socket	20 pole.300mil	U13...20	8	0013E0060
IC Socket	24 pole.300mil	U9...12	4	0013E0168
IC Socket	24 pole. +100nF	U2, U6	2	0013E0160
IC Socket	20 pole. +100nF	U1,3,5,7	4	0013E0159
IC Socket	14 pole. +100nF	U4, U8	2	0013E0157
Multipin Connector	25x2pole	J1	1	0018E5008
Multipin Connector	10x2pole	J2,3,4	3	0018E2004
Multipin Connector	2x2 pole	JP1,JP2	2	0018E0416
Jumper	2 pole	JP1,JP2	2	0018E0210
DIP Switch	8 pole	SW1	1	0040E0116
Mounting bracket			1	9999N0477
Phillips screw	4-40x3/8"		2	0095N0017
Self locking nut	4-40		2	0095N0007

9. 64 MB Memory Board 2532M0101

Item	Value/Dim.	Pos.Nbr.	Quant.	Order Number
Capacitor	6,8 μ F	C9...11,24...27, 50,51,54...57,75,76, 80...82,103,104	20	0036E6808
Capacitor	220 nF	C1...8,12...23, 28...39,40...49,52,53 58...63,66,77...79, 91,100...102	84	0035E2210
Resistor Network	9x4k7	RN5	1	0004E4711
Resistor Network	9x33Ohms	RN6...13	8	0002E3304
Integrated Circuit	74F652	U2, U6	2	0015E4195
Integrated Circuit	74F37	U4	1	0015E4294
Integrated Circuit	74F08	U8	1	0015E4295
Integrated Circuit, programmed	PAL16R4-15CN	U5	1	2532C01..
Integrated Circuit, programmed	PAL16R6BCN	U1	1	2532C02..
Integrated Circuit, programmed	PAL16R6BCN	U7	1	2532C08..
Integrated Circuit, programmed	PAL16R6BCN	U3	1	2532C09..
Integrated Circuit, programmed	GAL16V8A-25QP	U15...19	5	2532C03..
Integrated Circuit, programmed	GAL6001-30P	U10	1	2532C04..
Integrated Circuit, programmed	GAL6001-30PP	U11	1	2532C05..
Integrated Circuit, programmed	GAL20V8A-15LPP	U12	1	2532C06..
Integrated Circuit, programmed	GAL6001-30P	U9	1	2532C07..
Integrated Circuit, programmed	GAL16V8A-15LP	U13	1	2532C10..
Integrated Circuit, programmed	GAL16V8A-10LP	U14	1	2532C11..
Integrated Circuit, programmed	GAL16V8A-25QP	U20	1	2532C12..
Integrated Circuit	TCS11000Z 4Mx1DRAM	Z1...128	128	0015E4298
IC Socket	20 pole.300mil	U13...20	8	0013E0060
IC Socket	24 pole.300mil	U9...12	4	0013E0168
IC Socket	24 pole. +100nF	U2, U6	2	0013E0160
IC Socket	20 pole. +100nF	U1,3,5,7	4	0013E0159
IC Socket	14 pole. +100nF	U4, U8	2	0013E0157
Multipin Connector	25x2pole	J1	1	0018E5008
Multipin Connector	10x2pole	J2,3,4	3	0018E2004
Multipin Connector	2x2 pole	JP1,JP2	2	0018E0416
Jumper	2 pole	JP1,JP2	2	0018E0210
DIP Switch	8 pole	SW1	1	0040E0116
Mounting bracket			1	9999N0477
Phillips screw	4-40x3/8"		2	0095N0017
Self locking nut	4-40		2	0095N0007

10. TC Chase Option, 2534Z0001

SMPTE Board		1	2534M0101
SMPTE Module		1	2534M0201
Cable, SMPTE-> AIOM		1	2492K0020
Cable, SMPTE/Audio Bus		1	2492K0017
Phillips Screw	6-32 hex head	4	0095N0018

SMPTE Board (2534M0101) consists of:

Main Board	PCL3/AKG1	1	9999N0462
SMPTE Sub Board		1	2534M0301
Screw	M2,5x5	12	7985D2505
Toothed Washer	A2,2	12	6797D2201
Spacer	13mm, M2,5	6	9999N0474

SMPTE Sub-Board (2534M0301) consists of:

Capacitor	100pF	C1	1	0032E1013
Capacitor	1 μ F	C2	1	0036E1013
Capacitor	47 μ F	C3...8	6	0037E4707
Capacitor	100nF	CS1...16	16	0035E1026
Capacitor	33pF	C9	1	0031E3302
Trimmer resistor	25kOhms	R1,2	2	0021E0051
Diode	1N4148	D1,2	2	0014E0017
Integrated Circuit	AD7846JN	U1	1	0015E1113
Integrated Circuit	AD586LQ	U2	1	0015E1114
Integrated Circuit	74LS624J	U3	1	0015E1115
Integrated Circuit	74LS14	U4	1	0015E4040
Integrated Circuit	74LS169	U5,6	2	0015E4086
Integrated Circuit	74LS125	U7	1	0015E4031
Integrated Circuit	74ALS574	U8	1	0015E1116
Integrated Circuit	74ALS541	U9	1	0015E4201
Integrated Circuit	74LS32	U10	1	0015E4100
Integrated Circuit	74ALS109	U11	1	0015E4181
Integrated Circuit	7815	U12	1	0015E1046
Integrated Circuit	7915	U13	1	0015E1036
IC Socket	8 pole	U2	1	0013E0056
IC Socket	14 pole	U3,4,7,10	4	0013E0126
IC Socket	16 pole	U5,6,11	3	0013E0127
IC Socket	20 pole	U8,9	2	0013E0123
IC Socket	28 pole	U1	1	0013E0092
IC Socket	16 pole, 15,1 mm high	IC23	1	0013E0152
IC Socket	20 pole, 15,1 mm high	IC25,26	2	0013E0153
IC Socket	40 pole, 15,1 mm high	IC1	1	0013E0154
Multipin Connector	50 pole	J3	1	0018E5006
Multipin Connector		J2	2	0018E0210
Jumper			8/20	0018E2004
Molex Connector	6 pole	J1	1	0018E0613
Solder tag			6	4149N6057
Connector	SMB-75	VITC	1	0016E0258
Telephone Jack	4/4	LTC	1	0017E0407
EMI Filter	BNX 002-01	M1	1	0020E0030
Press-in Nut	KF2-M3		2	0987N3007
Screw	M3x5		2	7985D3009
Insulating washer	3,2		2	0125D0321
Screw	M2,5x12		2	7985D2506
Nut	M2,5		2	0934D2500
Insulating washer	2,7		2	0125D0271

SMPTE Module (2534M0201) consists of:

Front Panel SMPTE			1	2534Z0101
Socket	SUB MIN D 9pole		2	0017E0900
Screw lock	4-40UNC		2	0019E0111
XLR Socket	Y3F		1	0017E0336
Cable	5754 MOD 4-4		1	0110E0133
BNC Jack	75 Ohms		2	0016E0259
Termination Resistor	75 Ohms		1	0017E0105
Socket	SMB-75		1	0017E0224
Coax-Cable	RG179/U 75 Ohms		0,85m	0110E0134
Front screw			4	2530Z3001
Phillips Screw	4-40x3/16", flat head		12	0095N0014
Self locking nut	4-40		2	0095N0007