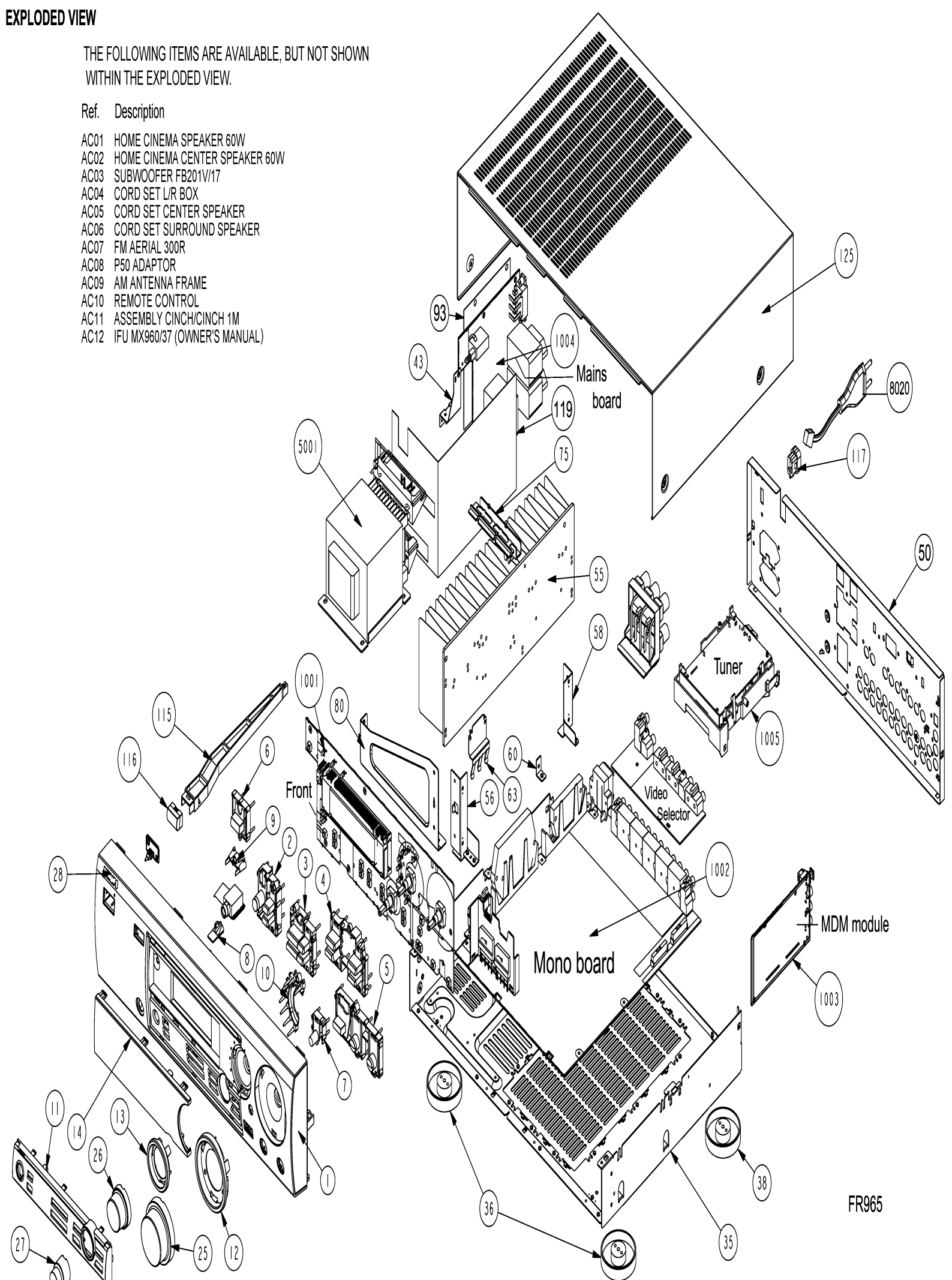


EXPLODED VIEW

THE FOLLOWING ITEMS ARE AVAILABLE, BUT NOT SHOWN WITHIN THE EXPLODED VIEW.

Ref. Description

- AC01 HOME CINEMA SPEAKER 60W
- AC02 HOME CINEMA CENTER SPEAKER 60W
- AC03 SUBWOOFER FB201V/17
- AC04 CORD SET L/R BOX
- AC05 CORD SET CENTER SPEAKER
- AC06 CORD SET SURROUND SPEAKER
- AC07 FM AERIAL 300R
- AC08 P50 ADAPTOR
- AC09 AM ANTENNA FRAME
- AC10 REMOTE CONTROL
- AC11 ASSEMBLY CINCH/CINCH 1M
- AC12 IFU MX960/37 (OWNER'S MANUAL)



FR965

SCALE 0.250

Note: Only the parts mentioned in this list are normal service parts.

GENERAL INFORMATION

Manual 1962 Covering the FR963DHT (FR963/17), FR965DHT (FR965/17), MX955DHT (MX955D/37), MX960DHT (MX960D/37), and MX970DHT (MX970D/37) Digital A/V Surround Receivers

Display Product View

SYSTEM INFORMATION

Receiver	Front speaker	Center Box	Surround Box	Subwoofer
MX 960D/37 includes :				
FR965/17	2 x Home Cinema Speaker 60W	Home Cinema Center Speaker 50W	2 x Home Cinema Speaker 60W	FB201V/17
MX 955D/37 includes :				
FR965/17	2 x Home Cinema Speaker 60W	Home Cinema Center Speaker 50W	2 x Home Cinema Speaker 60W	SW090/17 3139 118 78670
MX 970D/37 includes :				
FR963/17	MX970FS/17 9965 000 11850	MX970CS/17 9965 000 11852	MX970RS/17 9965 000 11854	FB201V/17

Location Of Printed Circuit Boards

Display Circuit Board Location Guide

Specifications

Display System Specifications

Service Tools

Audio Signals Test Disc 1.....4822 397 30184

AVAILABLE ESD PROTECTION EQUIPMENT :

Anti-static table mat large 1200x650x1.25mm	4822 466 10953
Small 600x650x1.25mm	4822 466 10958
Anti-static wristband	4822 395 10223
Connection box (3 press stud connections, 1M)	4822 320 11307

Extendible cable (2m, 2M , to connect wristband to connection box)	4822 320 11305
Connecting cable (3m, 2M , to connect table mat to connection box)	4822 320 11306
Earth cable (1M , to connect any product to mat or to connection box)	4822 320 11308
KIT ESD3 (combining all 6 prior products - small table mat)	4822 310 10671
Wristband tester	4822 344 13999

Measurement Setups

Display Tuner FM Setup

Display Tuner AM Setup

Safety/ESD Warning Notices:

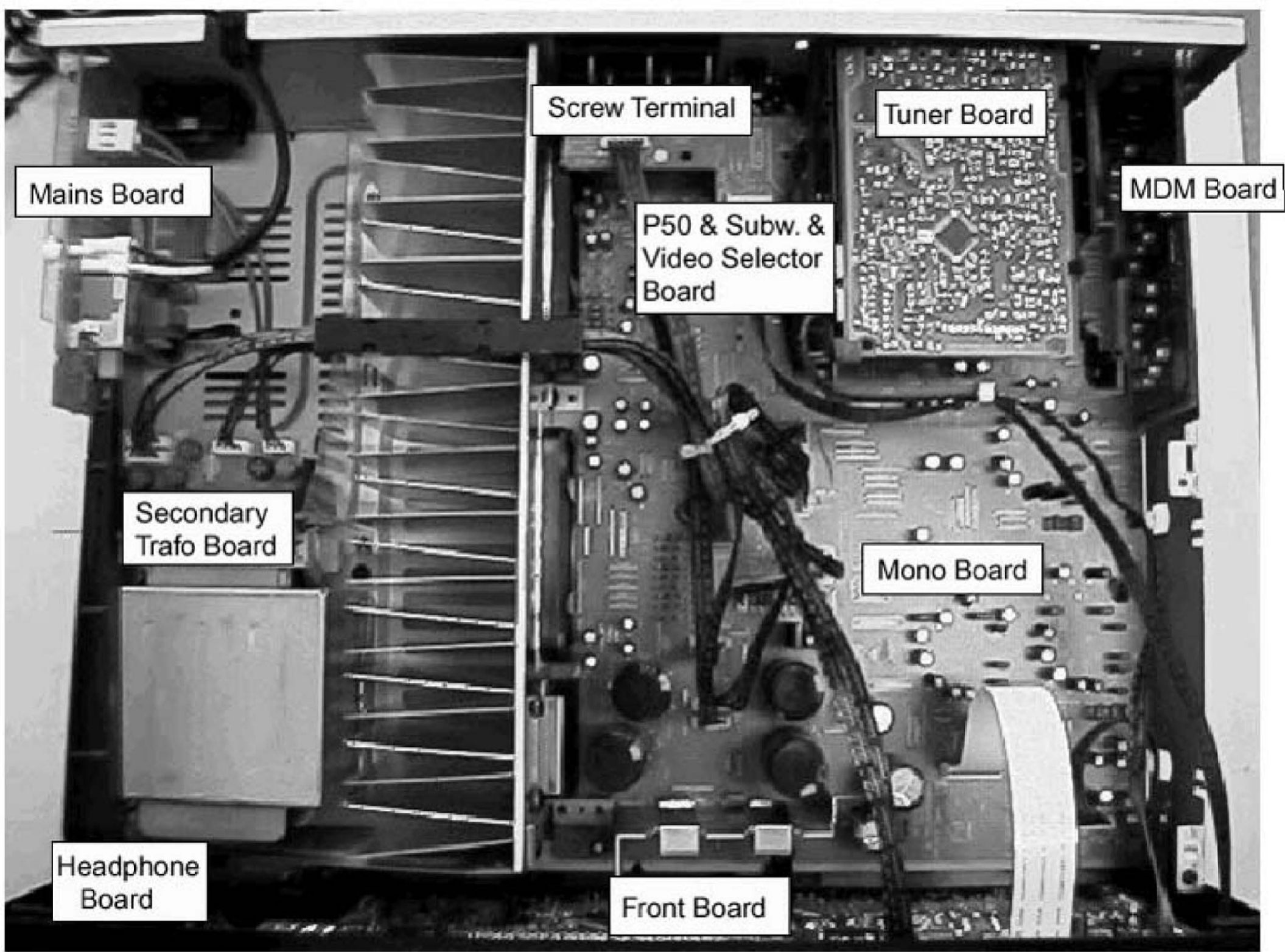
Display Safety/ESD Warning Notices

Handling Chip Type (SMD) Components

Display Chip Handling Guide

Abbreviations

Display Abbreviation List



Mains Board

Screw Terminal

Tuner Board

MDM Board

P50 & Subw. &
Video Selector
Board

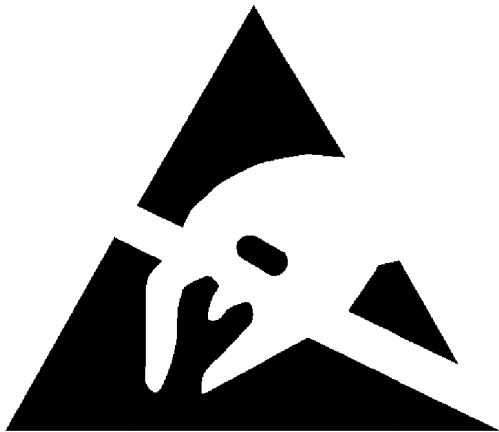
Secondary
Trafo Board

Mono Board

Headphone
Board

Front Board

ESD



WARNING


All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected with the same potential as the mass of the set via a wristband with resistance. Keep components and tools at this potential.

SAFETY



Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

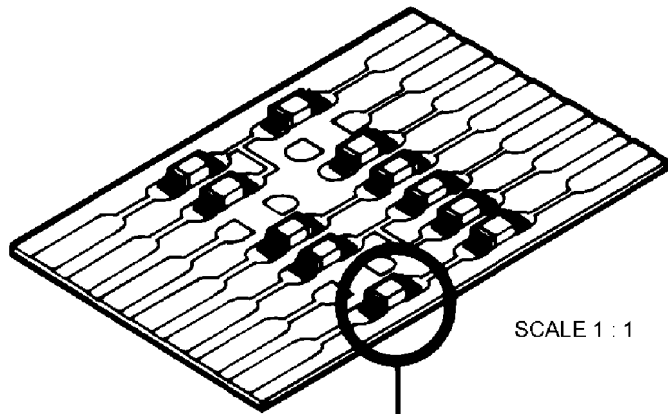
Safety components are marked by the symbol 

**CLASS 1
LASER PRODUCT**

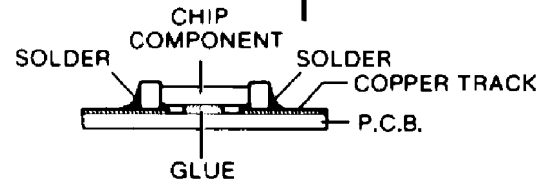
**DANGER: Invisible laser radiation when open.
AVOID DIRECT EXPOSURE TO BEAM.**

HANDLING CHIP COMPONENTS

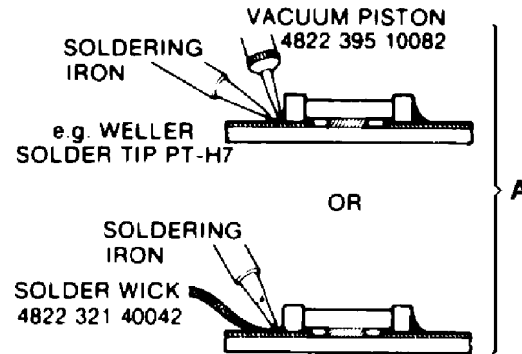
GENERAL



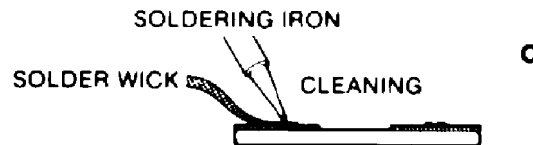
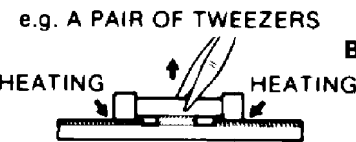
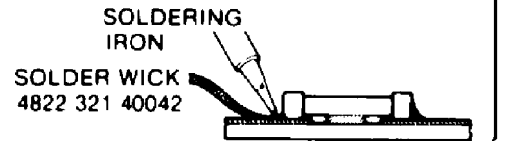
SCALE 1:1



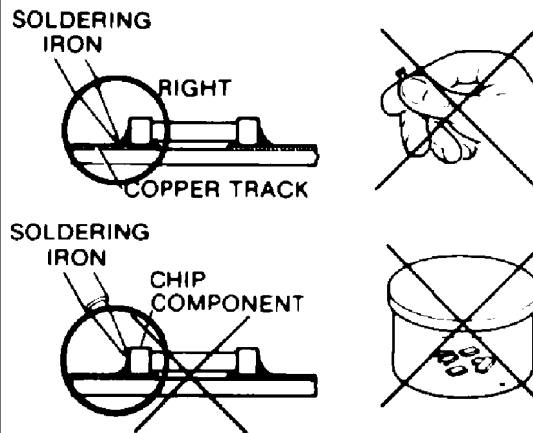
DISMOUNTING



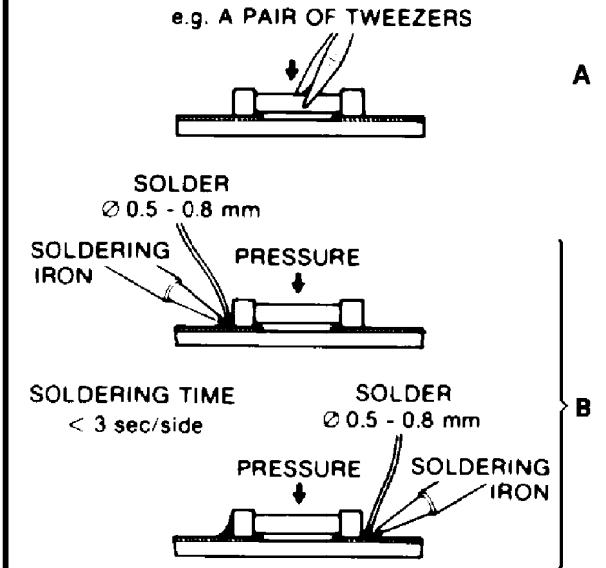
OR



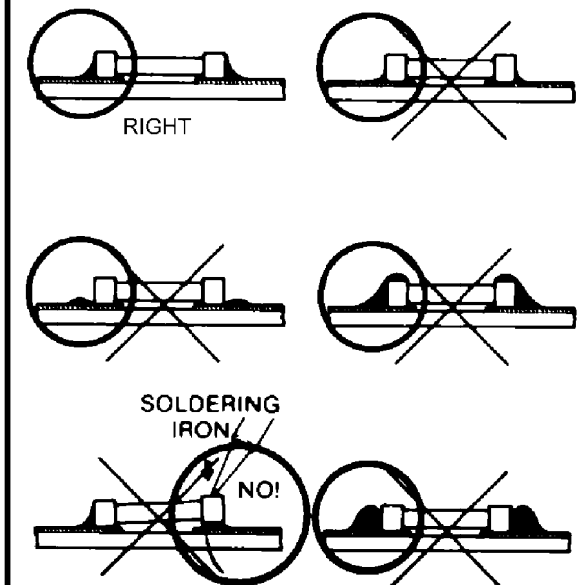
PRECAUTIONS



MOUNTING

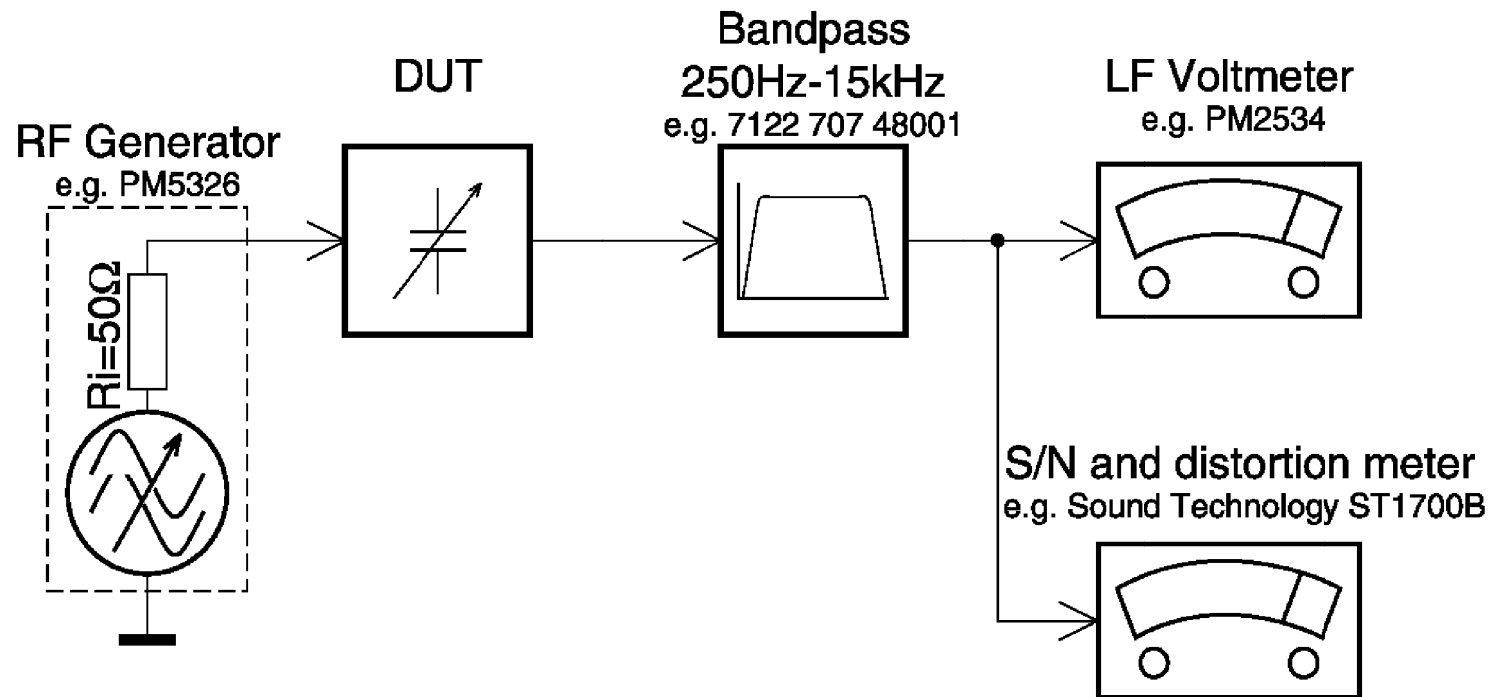


EXAMPLES



MEASUREMENT SETUP

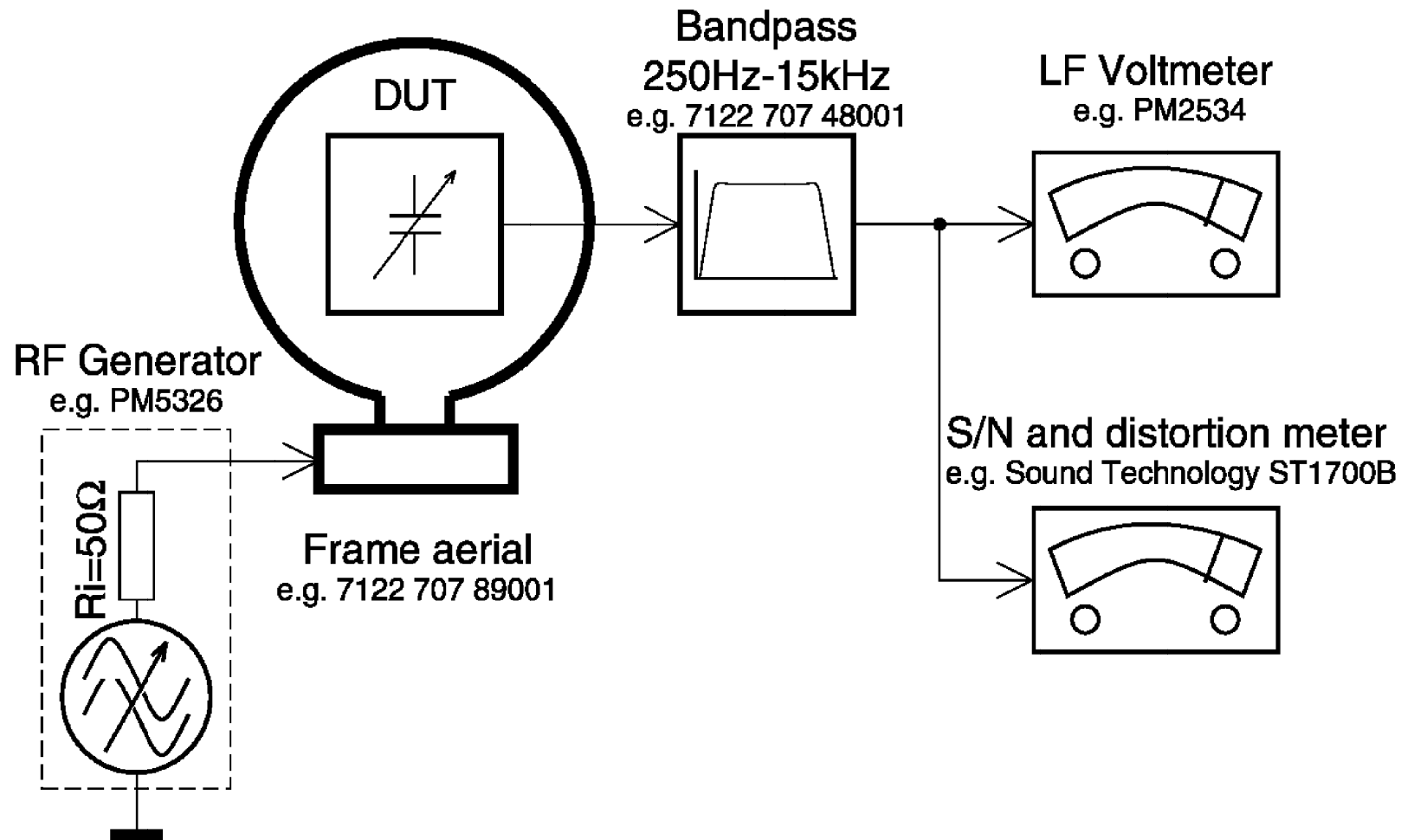
Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilot tone (19kHz, 38kHz).

MEASUREMENT SETUP

Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage. Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

SPECIFICATION FR965 /17

General

Mains voltage	: 120V
Mains frequency	: 60Hz
Power consumption	: ≤ 2W at stby
Dimension. wxhxd	: 435x138x350 mm
Remote control	: Multibrand/Universal

Amplifier

Output power	
Stereo mode (L+R)	: 2x50W FTC (40Hz-20kHz, 0,7%THD, 6Ω)

Surround mode	
L + R	: 2x60W (1kHz, 0,7%THD, 6Ω)
Center	: 60W (1kHz, 0,7%THD, 6Ω)
Surround Left+Right	: 2x60W (1kHz, 0,7%THD, 6Ω)

Distortion (5W)	
1kHz	: ≤ 0,05%
40Hz - 20kHz	: ≤ 0,2%

Headphone	: 6,3mm stereo jack with switch
Output level	: 3V EMF, 60Ω

Crosstalk between source	—1kHz	: ≤ -65dB
(1W)	250Hz – 10kHz	: ≤ -60dB

Crosstalk between channels	-1kHz	: ≤ -55dB
(1W)	250Hz – 10kHz	: ≤ -50dB

Frequency response	: ≤ 10Hz – ≥ 30kHz (-1dB)
--------------------	---------------------------

Power stage protection	: Shortcircuit
	: DC (Vout ≥ 10V) for ±1sec
Temperature	: Transformer (≥ 140° Celcius)
	: Heatsink (≥ 140° Celcius)

Audio Selector

Analog Input sensitivity	
Phono	: 5mV impedance 47kΩ/220pf
CD	: 250mV impedance ≥ 47kΩ
CDR/TAPE	: 250mV impedance ≥ 47kΩ
VCR	: 250mV impedance ≥ 47kΩ
TV	: 250mV impedance ≥ 47kΩ
SAT	: 250mV impedance ≥ 47kΩ
6 CH/DVD	: 250mV impedance ≥ 47kΩ

Output level	
CDR/TAPE	: 250mV impedance ≤ 1kΩ
VCR	: 250mV impedance ≤ 1kΩ

Output level (variable)	
Subwoofer pre-out	: 800mV impedance ≤ 1kΩ
Center pre-out	: 800mV impedance ≤ 1kΩ

Digital Selector

Input	: 2 x cinch
	: 1 x optical
Output	: 1 x cinch

Video Selector - CVBS

Input sensitivity	
DVD/VCR/TV	: 1 Vpp impedance 75Ω
Output level	
Monitor/VCR	: 1 Vpp impedance 75Ω
Frequency response	: ≤ 50Hz → ≥ 6MHz

Tone controle

Loudness	
(volume ≤ -30dB Ref: 1kHz=0dB)	: 100Hz +6 dB
	: 10kHz +2,5 dB

Tone control (Ref: 1kHz=0dB)	
	: Bass 100Hz -9dB → +9dB
	: Treble 10kHz -9dB → +9dB

DSC settings		100Hz	1kHz	10kHz
Personal	dB	0	0	0
Movie	dB	+ 4	+2	+4
Speech	dB	- 4	+1	- 2
Music	dB	+ 4	- 1	+2
Multimedia	dB	+ 7	+3	+6

Multi Channel Decoder - MDM98

MPEG5.1 / MPEG 7.1 (7.1 downmix to 5.1)
Dolby Digital (AC-3)
Linear PCM
Automatic audio/data type detection (AC-3,MPEG-2,PCM)
Dolby Pro Logic
MPEG-2 dual mono channel selection I/II
MPEG-2 dual stereo channel selection I/II
3D Surround (422/423) (522/523)
Virtual MPEG Digital (522/523)
Digital Bass Management
Parallel Stereo Downmix
Four Stereo (224)
Volume Control
Noise Generator (test tone)
Surround mode selector
Delay Center and Surround Left , Surround Right

Tuner - (ECO5)

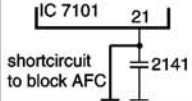
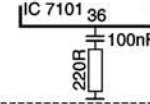
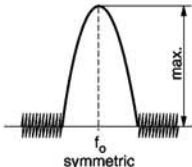
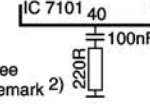
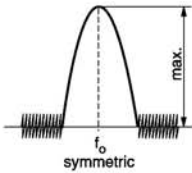
FM	
Tuning range	: 87.5 – 108MHz
Grid	: 100kHz
IF frequency	: 10.7MHz ±25kHz
Aerial input	: 300 Ω clickfit
Sensitivity at 26dB S/N	: ≤ 2μV
Selectivity at 300kHz	: ≥ 55dB
Image rejection	: ≥ 48dB
Distortion at RF=1mV,dev.75kHz	: ≤ 0,9%
-3dB Limiting point	: ≤ 2μV
Crosstalk at RF=1mV,dev.40kHz	: ≥ 27dB

MW	
Tuning range	: 530 - 1700kHz
Grid	: 10kHz
IF frequency	: 450kHz ±1kHz
Aerial input	: Frame aerial
Sensitivity at 26dB S/N	: ≤ 3,5mV/m
Selectivity at 9kHz bandwidth	: ≥ 18dB
IF rejection	: ≥ 64dB
Image rejection	: ≥ 28dB
Distortion at RF=50mV,m=80%	: ≤ 3%

ABBREVIATIONS

A		P	
ac 0VA	AC 0 Voltage	p gnd	P50 ground
ac 10VB	AC 10 Voltage	p p50	Cinema link P50 code
ac 110VB	AC 110 Voltage	S	
ac 120VB	AC 120 Voltage	s gnd	Surround ground
ac gnd	AC ground	sofac scl	Sofac I ² C clock
ac h1	AC high voltage 1	sofac1 sda1	Sofac 1 I ² C data1
ac h2	AC high voltage 2	sofac2 sda2	Sofac 2 I ² C data2
ac l1	AC low voltage 1	ss ce	Source selector chipenable
ac l2	AC low voltage 2	ss clk	Source selector clock
ac1	AC voltage 1	ss data	Source selector data
ac2	AC voltage 2	surr pre-out	Surround pre-out
ac3	AC voltage 3	T	
amp lr on	Amplifier Left - Right On	tu clk	Tuner clock
amp mute c s	Amplifier mute center surround	tu da	Tuner data
amp mute c s sub	Amplifier mute center surround subwoofer	tu en	Tuner enable
amp mute lr	Amplifier mute Left - Right	tu gnd	Tuner ground
amp pd	Amplifier power down	tu l	Tuner Left
amp prot	Amplifier protection	tu r	Tuner Right
amp s on	Amplifier surround On	tu rds	Tuner RDS
amp stby	Amplifier Standby	tu stereo	Tuner stereo
av gnd	Audio ground	V	
av l	Audio Left	v gnd	Video ground
av r	Audio Right	v scl	Video I ² C clock
A/V	Audio/Video	v sda	Video I ² C data
F		v sig	Video signal
f1	Filament 1	v sub sur	Video subwoofer surround
f2	Filament 2	G	
fmute	Fast mute	gnd d	Ground digital
G		gnd s	Ground signal
H		L	
hp gnd	Headphone ground	ls c	Loudspeaker Center
hp l	Headphone Left	ls gnd	Loudspeaker ground
hp on	Headphone On	ls l	Loudspeaker Left
hp r	Headphone Right	ls r	Loudspeaker Right
hst	Heatsink temperature	M	
L		mdm	<u>M</u> ulti channel <u>D</u> ecoding <u>M</u> odule
ls c	Loudspeaker Center	mdm c out	— Center out
ls gnd	Loudspeaker ground	mdm gnd	— ground
ls l	Loudspeaker Left	mdm l dmix	— Downmix Left
ls r	Loudspeaker Right	mdm l in	— Left in
M		mdm l out	— Left out
mdm	<u>M</u> ulti channel <u>D</u> ecoding <u>M</u> odule	mdm r dmix	— Downmix Right
mdm c out	— Center out	mdm r in	— Right in
mdm gnd	— ground	mdm r out	— Right out
mdm l dmix	— Downmix Left	mdm req	— request
mdm l in	— Left in	mdm rst	— reset
mdm l out	— Left out	mdm scl	— I ² C clock
mdm r dmix	— Downmix Right	mdm sda	— I ² C data
mdm r in	— Right in	mdm sl out	— surround Left out
mdm r out	— Right out	mdm sr out	— surround Right out
mdm req	— request	mdm sub out	— subwoofer out
mdm rst	— reset	mfd	Mains failure detection
mdm scl	— I ² C clock		
mdm sda	— I ² C data		
mdm sl out	— surround Left out		
mdm sr out	— surround Right out		
mdm sub out	— subwoofer out		
mfd	Mains failure detection		

TUNER ADJUSTMENT TABLE (ECO5 FM/MW- and FM/MW/LW - versions with AM-frame aerial)

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
VARICAP ALIGNMENT						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)			108MHz	5130	◇ 1	8V ±0.2V
			87.5MHz (65.81MHz)	check		4.3V ±0.5V (1.2V ±0.5V)
MW FM/AM-version, 10kHz grid 530 - 1700kHz			1700kHz	5123		8V ±0.2V
			530kHz	check		1.1V ±0.4V
FM/MW-version, 9kHz grid 531 - 1602kHz			1602kHz	5123		6.9V ±0.2V
			531kHz	check		1.1V ±0.4V
LW 153 - 279kHz			279kHz	5122		8V ±0.2V
			153kHz	check		1.1V ±0.4V
MW FM/MW/LW- version, 9kHz grid 531 - 1602kHz			1602kHz	5123	8V ±0.2V	
			531kHz	check	1.1V ±0.4V	
FM IF						
FM	10.7MHz, 50mV continuous wave	◇ F		5119	◇ 2	0 ± 3 mV DC
FM RF						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	108MHz	◇ A	108MHz	2155	◇ 4	MAX
	87.5MHz (65.81MHz)	mod=1kHz $\Delta f = \pm 22.5\text{kHz}$	87.5MHz (65.81MHz)	5131		
VCO						
FM	98MHz, 1mV continuous wave	◇ A	98MHz	3142	◇ 3	152kHz ±1kHz ¹⁾
AM IF						
MW	450kHz connect pin 6 of IC 7101 (AM Osc.) with short wire to ground (pin 4)	◇ C		5111	◇ 4	
				5112		
AM AFC MW		◇ C		5114	◇ 2	0 ± 2 mV DC
AM RF ³⁾						
MW ⁴⁾ FM/MW/LW- and FM/MW-version (9kHz grid) 531 - 1602kHz	1494kHz	◇ B	1494kHz	2106	◇ 4	
	558kHz		558kHz	5102		
LW	198kHz		198kHz	5103		
MW FM/AM-version, 10kHz grid 530 - 1700kHz	1500kHz		$\Delta f = \pm 30\text{kHz}$ V_{RF} as low as possible	1500kHz		
	560kHz	560kHz	5102			

Use service test program. By selecting the TUNER TEST test frequencies will be stored as preset frequencies automatically.

ECO5, discr. coil, 090797

¹⁾ If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)

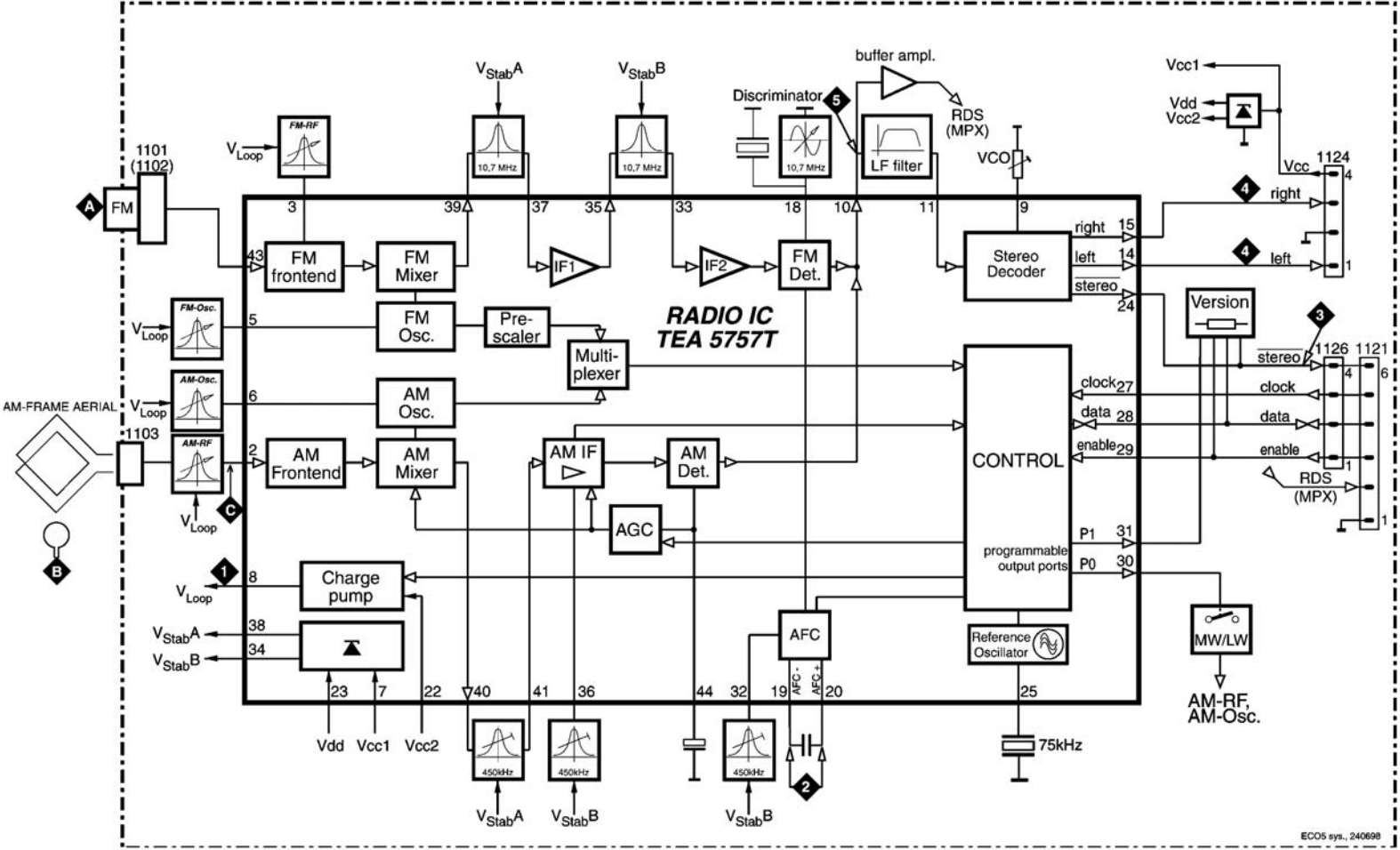
²⁾ RC network serves for damping the IF-filter while adjusting the other one.

³⁾ For AM RF adjustments the original frame antenna has to be used !

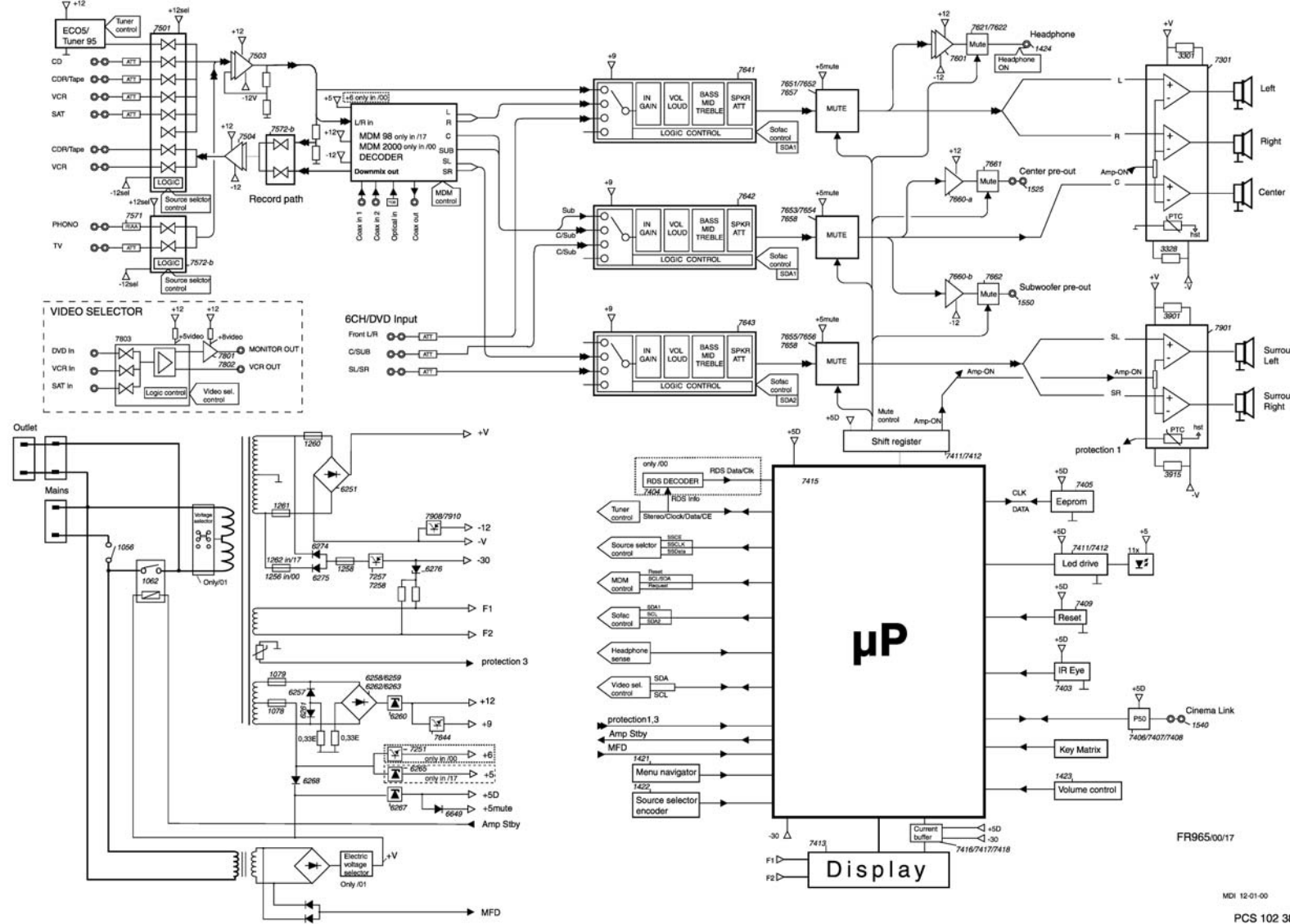
⁴⁾ MW has to be aligned before LW.

TUNER BOARD

ECO 5 systems



BLOCKDIAGRAM

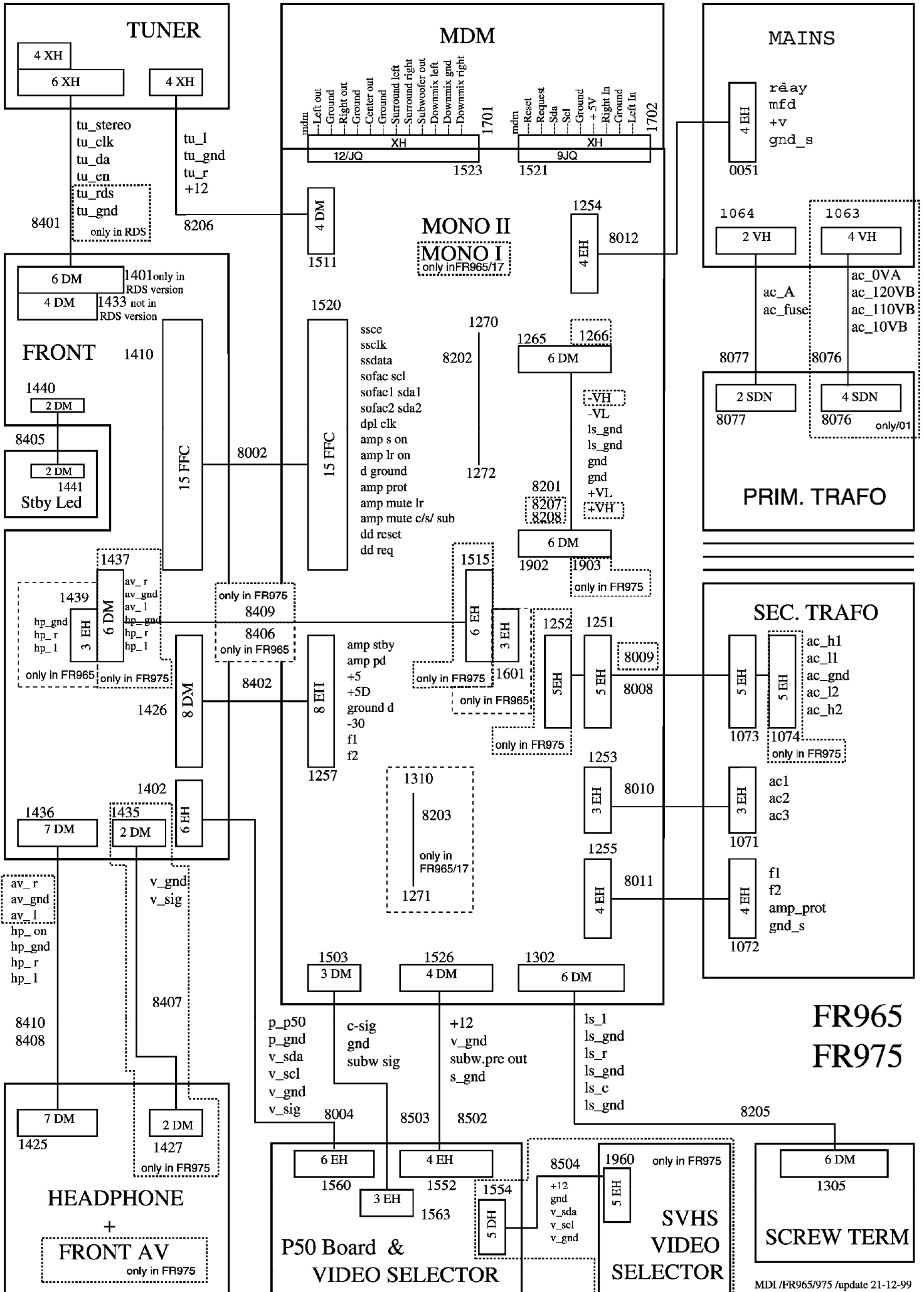


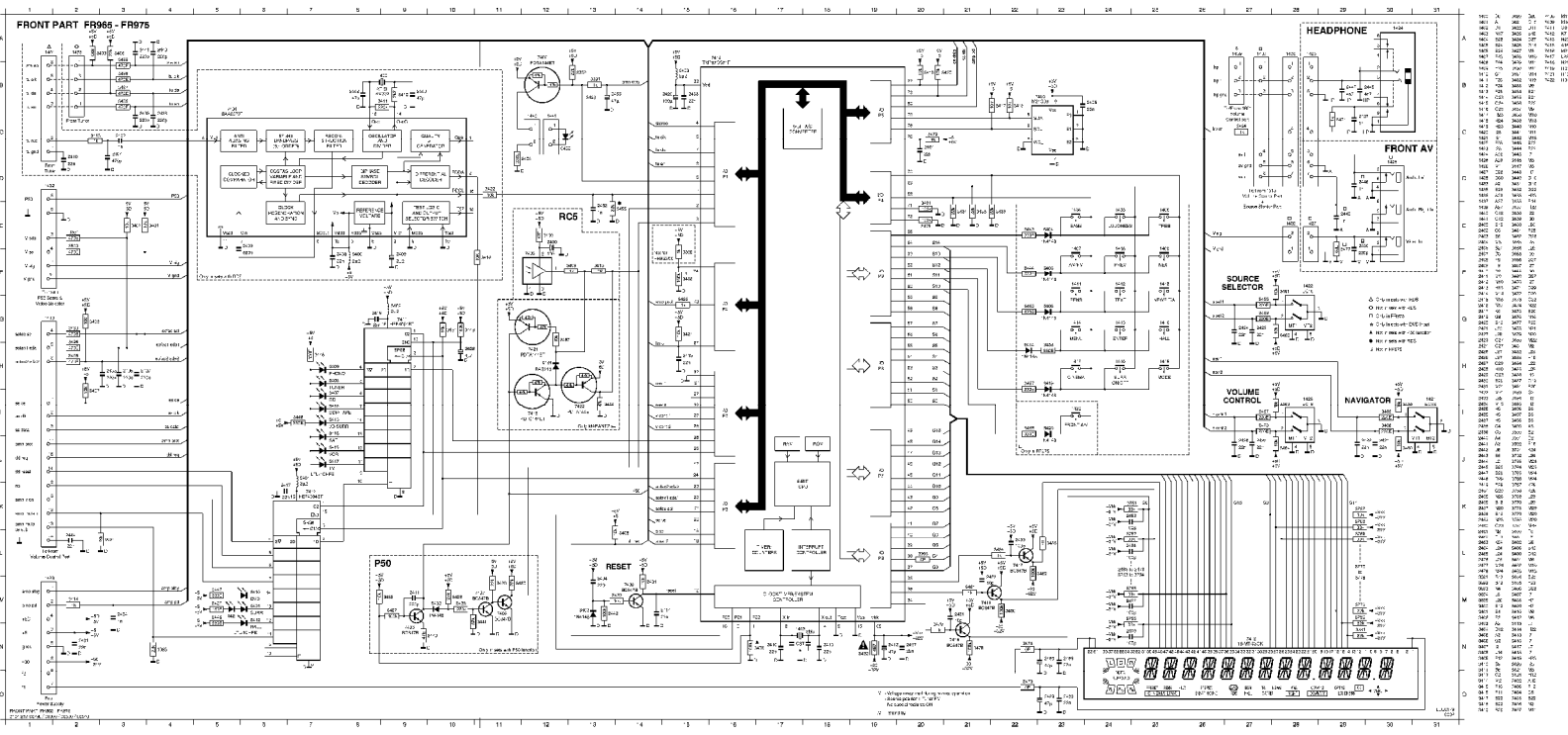
FR965/00/17

MDI 12-01-00

PCS 102 381

WIRING DIAGRAM





BLOCK-DIAGRAM

Note: No Schematic is provided here as this Circuit Board Assembly is considered to be a "non-repairable / replace only" type assembly. Individual parts are limited, refer to the PCB Overlay.

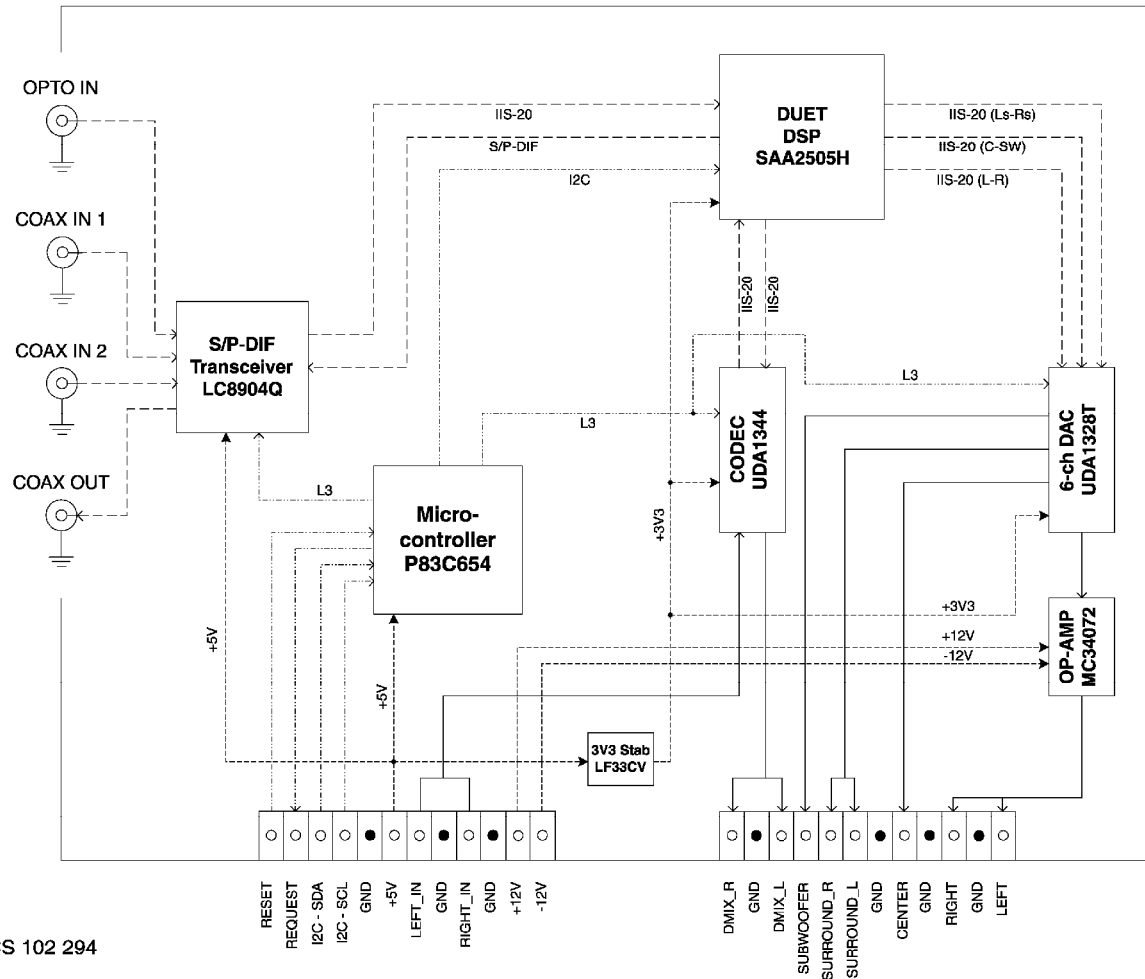
MULTI-CHANNEL DECODING MODULE '98

Signals

- Control (dashed arrow)
- Digital Audio (dashed arrow)
- Analog Audio (solid arrow)
- Supply (dashed arrow)

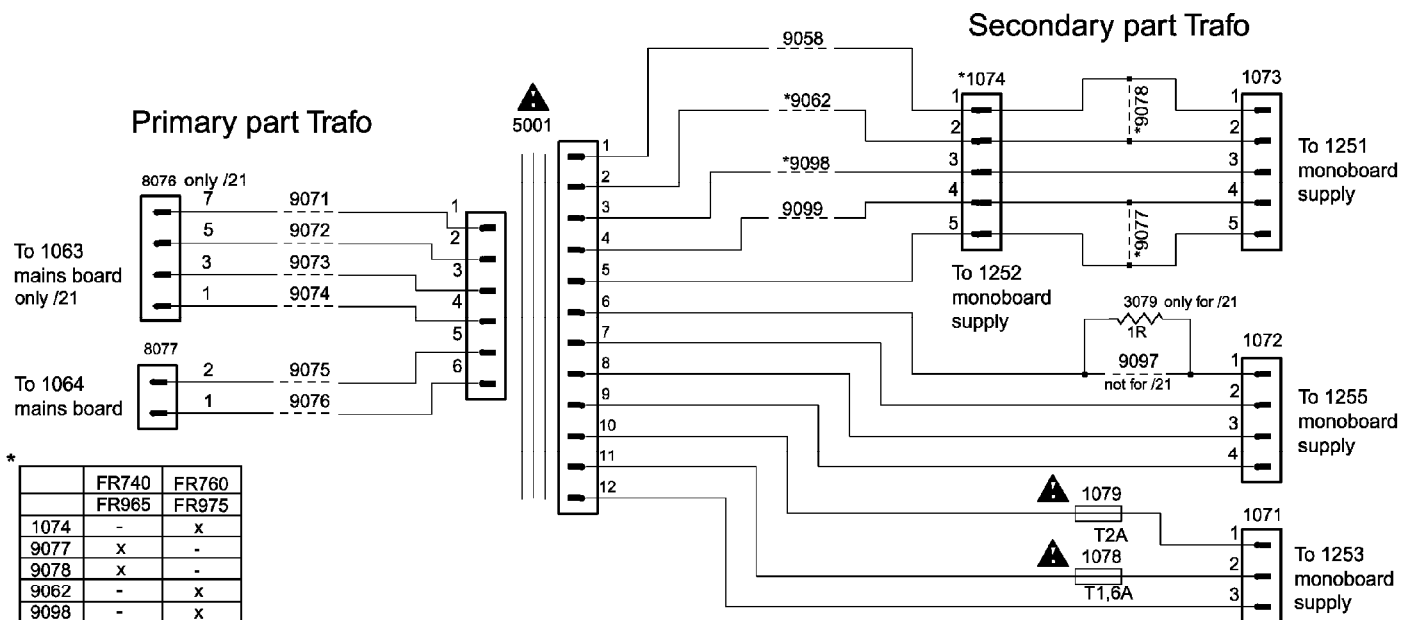
Terms

- DUET: Philips Dual Core DSP
- DSP: Digital Signal Processor
- DAC: Digital to Analog Converter
- ADC: Analog to Digital Converter
- CODEC: Combined ADC and DAC
- S/P-DIF: Sony/Philips Digital Interface Transceiver: Transmitter/Receiver
- IIS-20: Inter-IC Sound (20 bit)
- I2C: Inter-IC Communication
- L3 : 3-line Communication
- OP-AMP: Operational Amplifier
- Stab: Stabiliser
- DMIX: Downmix
- OPTO: Optical Connector
- COAX: Cinch Connector



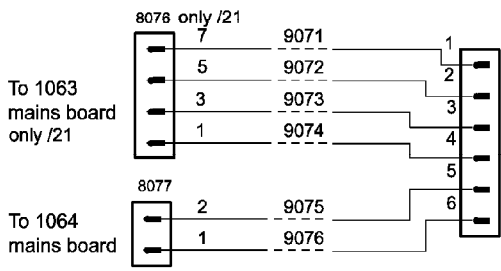
PCS 102 294

MAINS TRAF0 PART



Primary part Trafo

Secondary part Trafo

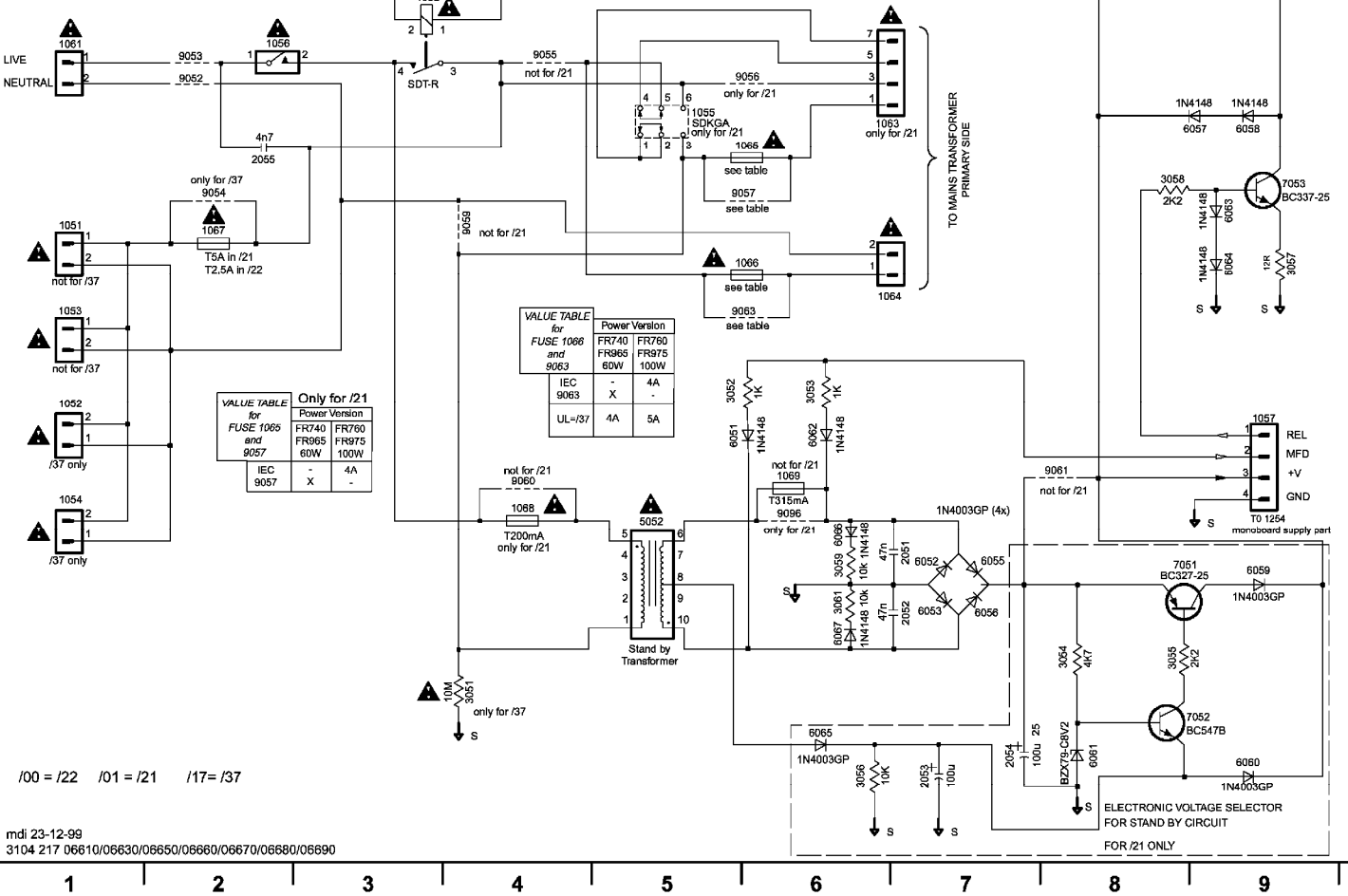


*

	FR740	FR760
	FR965	FR975
1074	-	x
9077	x	-
9078	x	-
9062	-	x
9098	-	x

/00 = /22 /01= /21 /17= /37

MAINS BOARD CIRCUIT DIAGRAM



VALUE TABLE for FUSE 1066 and 9057

IEC	Power Version	
	FR740 60W	FR760 FR975 100W
9057	X	4A

Only for /21

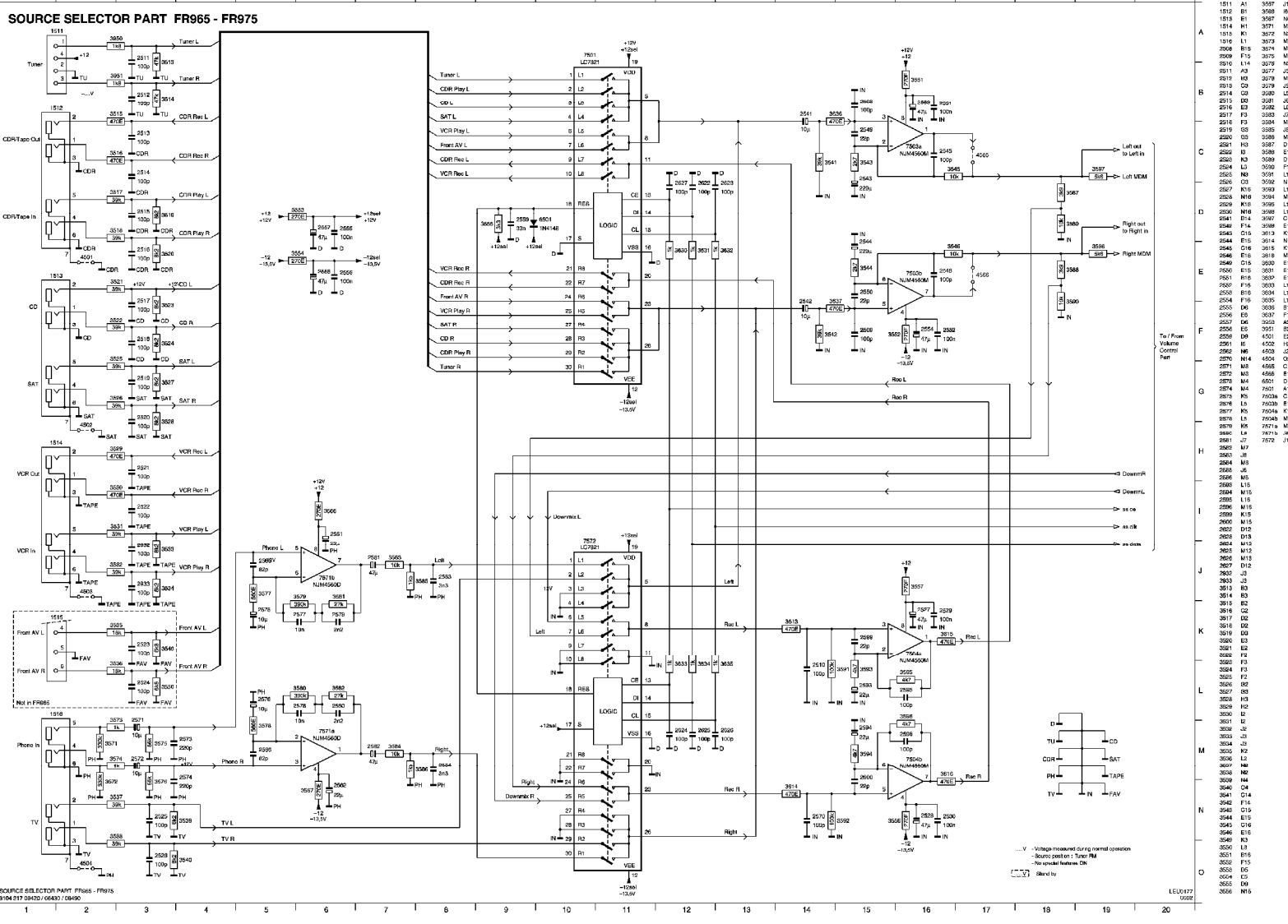
VALUE TABLE for FUSE 1066 and 9063

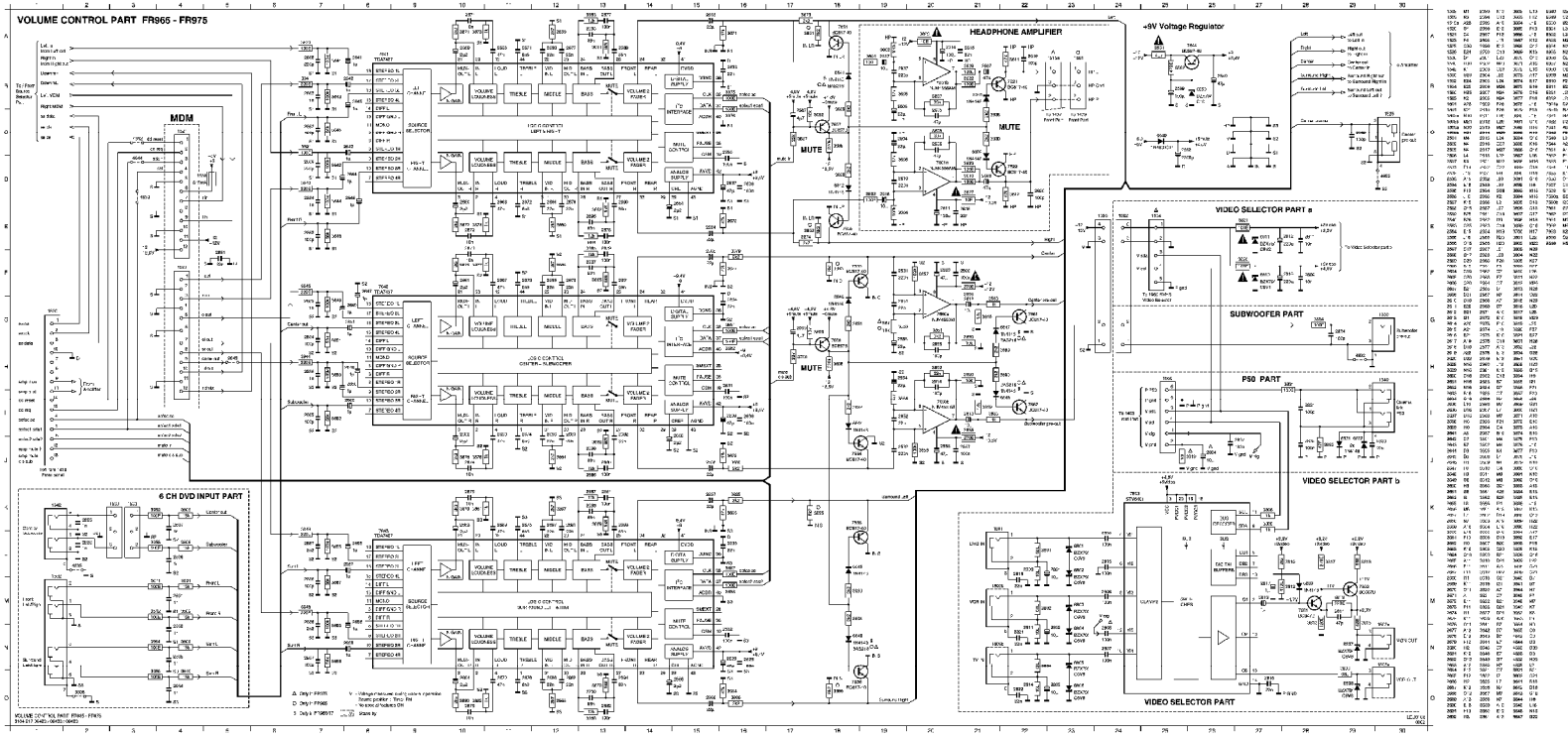
IEC	Power Version	
	FR740 60W	FR760 FR975 100W
9063	X	4A
UL=/37	4A	5A

/00 = /22 /01 = /21 /17= /37

mdi 23-12-99
3104 217 06610/06630/06650/06660/06670/06680/06690

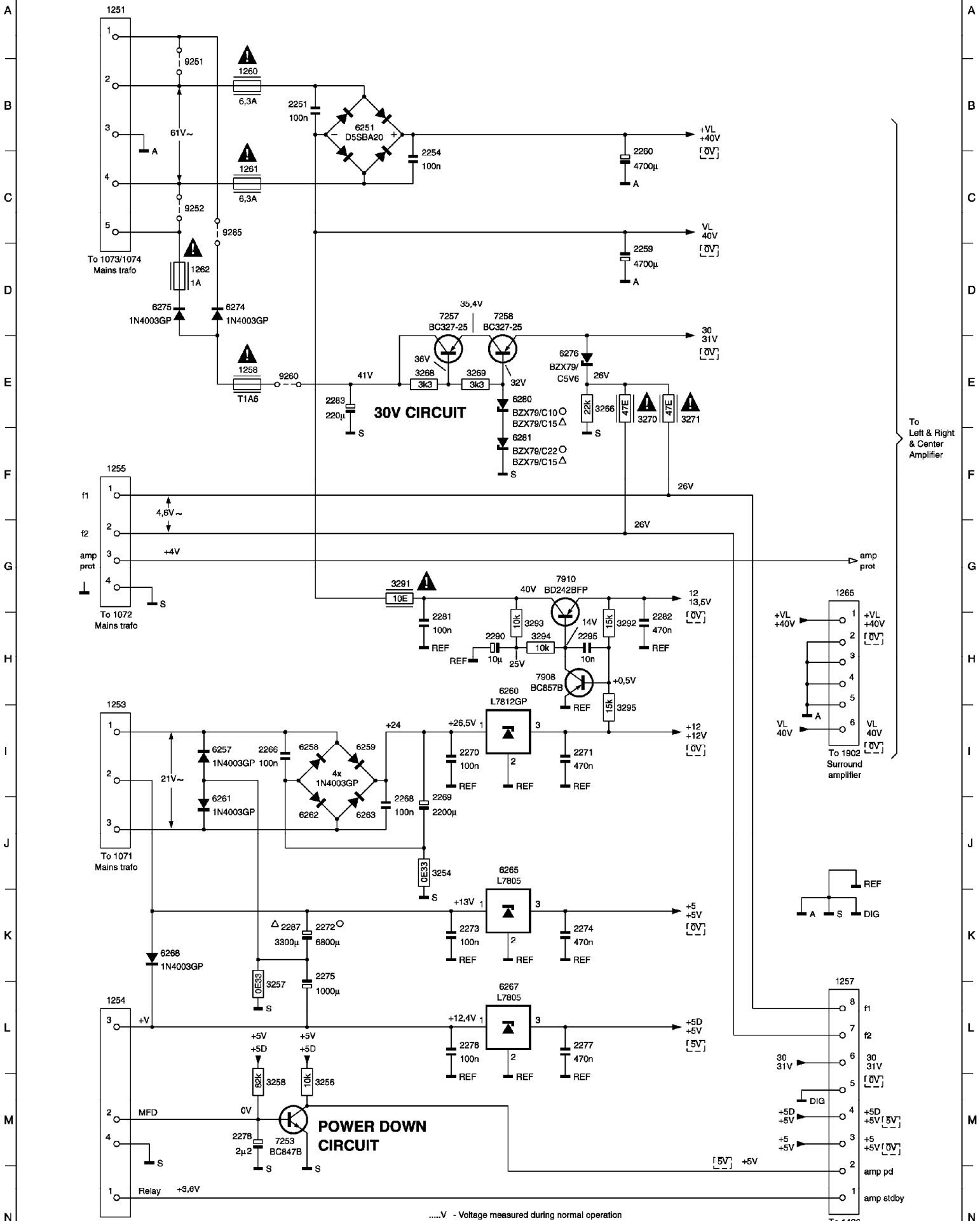
- 9051 D9
- 1051 B1
- 1052 D1
- 1053 C1
- 1054 D1
- 1055 B5
- 1056 A2
- 1057 D6
- 1061 A1
- 1062 A3
- 1063 B6
- 1064 C6
- 1065 B8
- 1066 C6
- 1067 B2
- 1068 D4
- 1069 D6
- 2051 E7
- 2052 E7
- 2053 F7
- 2054 F7
- 2055 B2
- 3051 F4
- 3052 C6
- 3053 C8
- 3054 E8
- 3055 E8
- 3056 F6
- 3057 C9
- 3058 B8
- 3059 E8
- 3061 E5
- 5051 A2
- 5052 D5
- 6052 E7
- 6053 E6
- 6055 E7
- 6056 E7
- 6057 B9
- 6058 B9
- 6059 E9
- 6060 F9
- 6061 F8
- 6062 D6
- 6063 B9
- 6064 C9
- 6065 F6
- 6066 D8
- 6067 E7
- 7051 E8
- 7052 F8
- 7053 B9
- 9051 A2
- 9052 A2
- 9053 A2
- 9054 B2
- 9055 A4
- 9056 A6
- 9057 B5
- 9059 B4
- 9060 D4
- 9061 D8
- 9063 C6
- 9064 A5
- 9065 B1
- 9066 B1
- 9067 E2
- 9068 E2
- 9069 F2
- 9069 F2
- 9096 D6



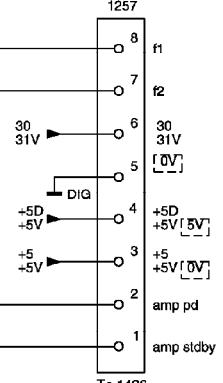
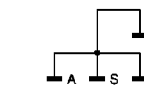
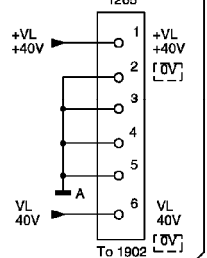


1251	A1	1260	B3	2259	D7	2271	I6	2277	L8	2290	H5	3266	E7	3292	H7	6258	I3	6265	J6	6280	E6	7910	G6
1253	I1	1261	C3	2260	C7	2272	K4	2278	M3	2295	H6	3268	E5	3293	H6	6259	I4	6267	L8	6281	F8	9251	B2
1254	L1	1262	D2	2266	I3	2273	K5	2281	H5	3254	J5	3269	E5	3294	H6	6260	H6	6268	K2	7253	M3	9252	C2
1255	F1	1265	G9	2268	J4	2274	K6	2282	H7	3256	M4	3270	E7	3295	I7	6261	J3	6274	D3	7257	D5	9260	E3
1257	L9	2251	B3	2269	J5	2275	K4	2283	E4	3257	L3	3271	E8	6251	B4	6262	J3	6275	D2	7258	D6	9285	C3
1258	E3	2254	C5	2270	I5	2276	L5	2287	K3	3258	M3	3291	G4	6257	I3	6263	J4	6276	E6	7908	H6		

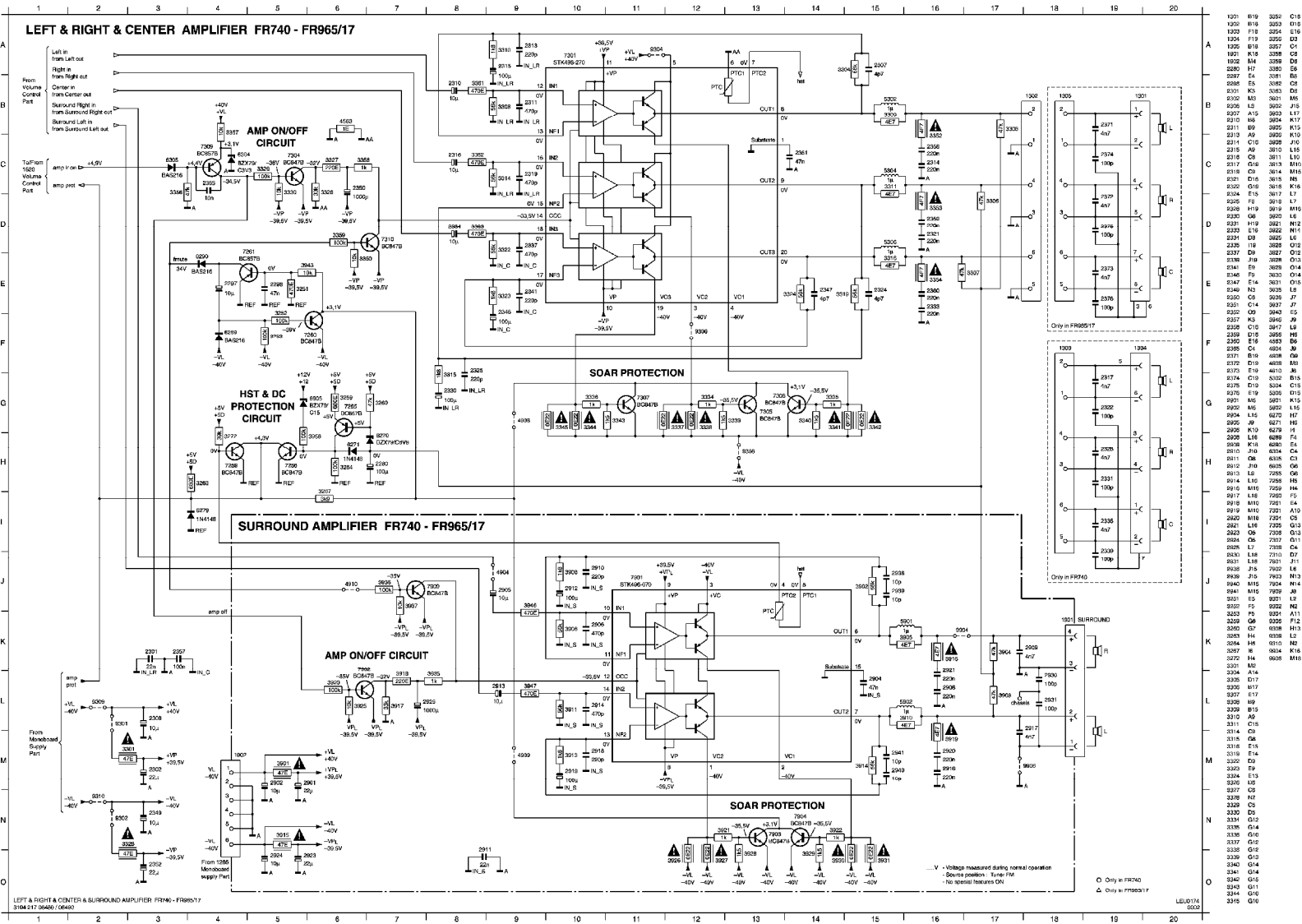
MONOBOARD SUPPLY FR740 - FR965/17



To Left & Right & Center Amplifier



.....V - Voltage measured during normal operation
 - Source position : Tuner FM
 - No special features ON
 Δ Only FR740
 ○ Only FR965/17

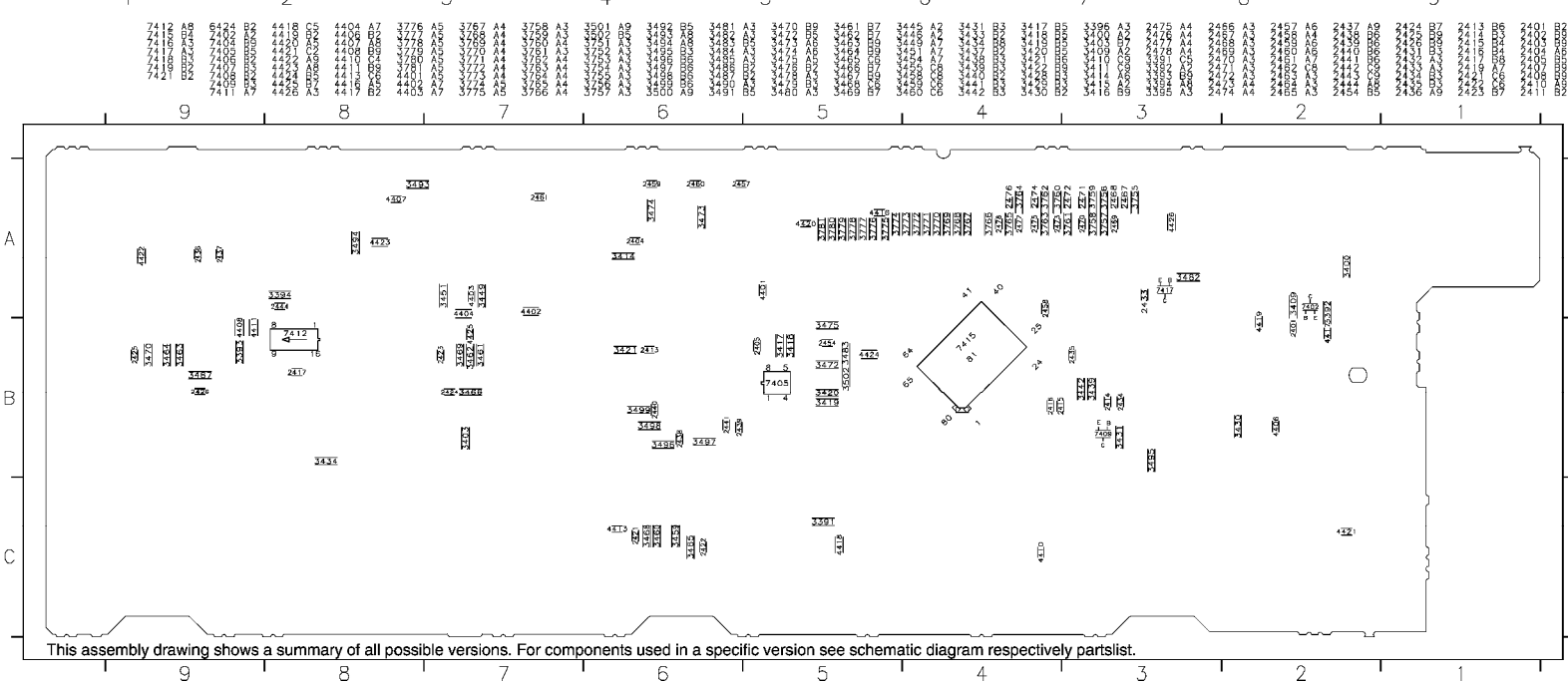
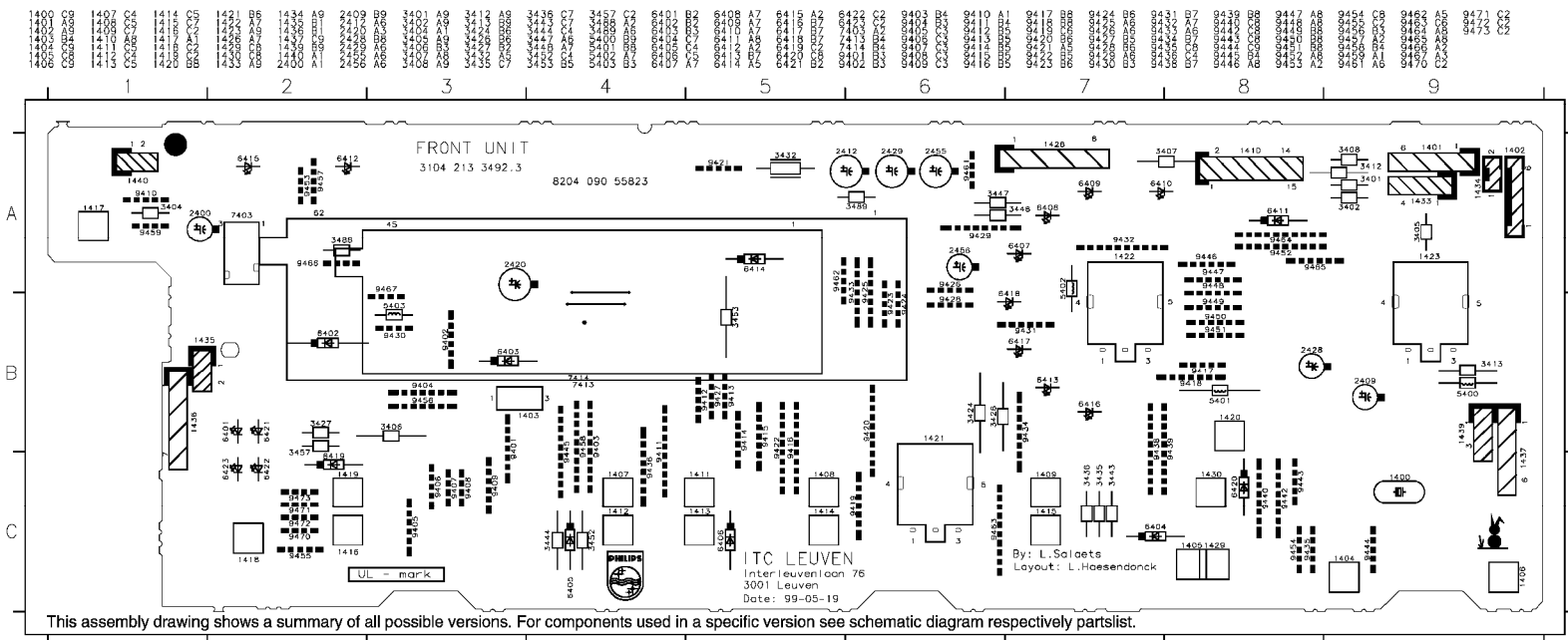


1201	B19	3252	C18
1202	B19	3253	O18
1203	F18	3254	E16
1204	F19	3255	O2
1205	B18	3257	C4
1206	M4	3258	O8
1207	H7	3259	O8
1208	H7	3260	O8
1209	E5	3261	O8
1210	K5	3262	O8
1211	M3	3263	M5
1212	L2	3264	J15
1213	B6	3265	K17
1214	B9	3266	K10
1215	A9	3267	K10
1216	C10	3268	O10
1217	A9	3269	L15
1218	C8	3270	L10
1219	D16	3271	M10
1220	C8	3272	M6
1221	D16	3273	M6
1222	D16	3274	M6
1223	D16	3275	M6
1224	E15	3276	L7
1225	F8	3277	L7
1226	F19	3278	M16
1227	G6	3279	L6
1228	F19	3280	L12
1229	D9	3281	O12
1230	F19	3282	O12
1231	F19	3283	O12
1232	F19	3284	O12
1233	F19	3285	O12
1234	F19	3286	O12
1235	F19	3287	O12
1236	F19	3288	O12
1237	F19	3289	O12
1238	F19	3290	O12
1239	F19	3291	O12
1240	F19	3292	O12
1241	F19	3293	O12
1242	F19	3294	O12
1243	F19	3295	O12
1244	F19	3296	O12
1245	F19	3297	O12
1246	F19	3298	O12
1247	F19	3299	O12
1248	F19	3300	O12
1249	F19	3301	O12
1250	F19	3302	O12
1251	F19	3303	O12
1252	F19	3304	O12
1253	F19	3305	O12
1254	F19	3306	O12
1255	F19	3307	O12
1256	F19	3308	O12
1257	F19	3309	O12
1258	F19	3310	O12
1259	F19	3311	O12
1260	F19	3312	O12
1261	F19	3313	O12
1262	F19	3314	O12
1263	F19	3315	O12
1264	F19	3316	O12
1265	F19	3317	O12
1266	F19	3318	O12
1267	F19	3319	O12
1268	F19	3320	O12
1269	F19	3321	O12
1270	F19	3322	O12
1271	F19	3323	O12
1272	F19	3324	O12
1273	F19	3325	O12
1274	F19	3326	O12
1275	F19	3327	O12
1276	F19	3328	O12
1277	F19	3329	O12
1278	F19	3330	O12
1279	F19	3331	O12
1280	F19	3332	O12
1281	F19	3333	O12
1282	F19	3334	O12
1283	F19	3335	O12
1284	F19	3336	O12
1285	F19	3337	O12
1286	F19	3338	O12
1287	F19	3339	O12
1288	F19	3340	O12
1289	F19	3341	O12
1290	F19	3342	O12
1291	F19	3343	O12
1292	F19	3344	O12
1293	F19	3345	O12
1294	F19	3346	O12
1295	F19	3347	O12
1296	F19	3348	O12
1297	F19	3349	O12
1298	F19	3350	O12
1299	F19	3351	O12
1300	F19	3352	O12

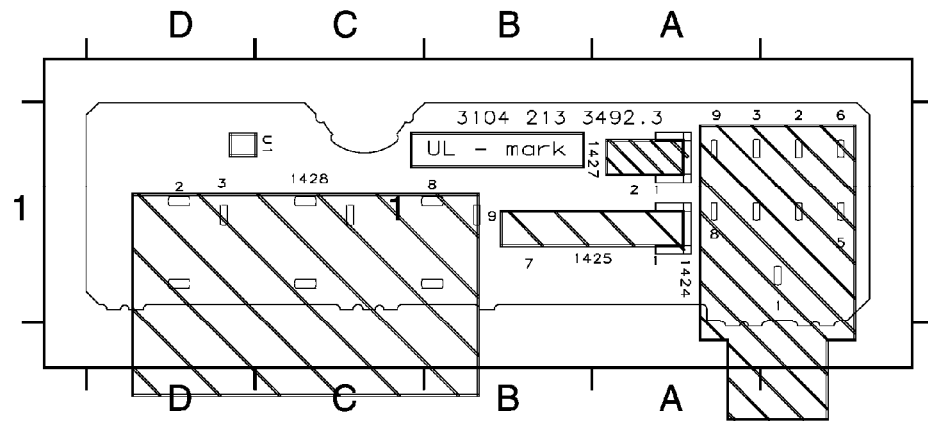
LEFT & RIGHT & CENTER & SURROUND AMPLIFIER FR740 - FR965/17
STK4648-070

LEU0174
0002

FRONT BOARD - COMPONENT & COPPER SIDE VIEW

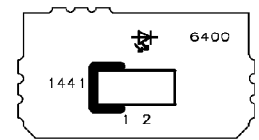


HEADPHONE BOARD - COMPONENT VIEW

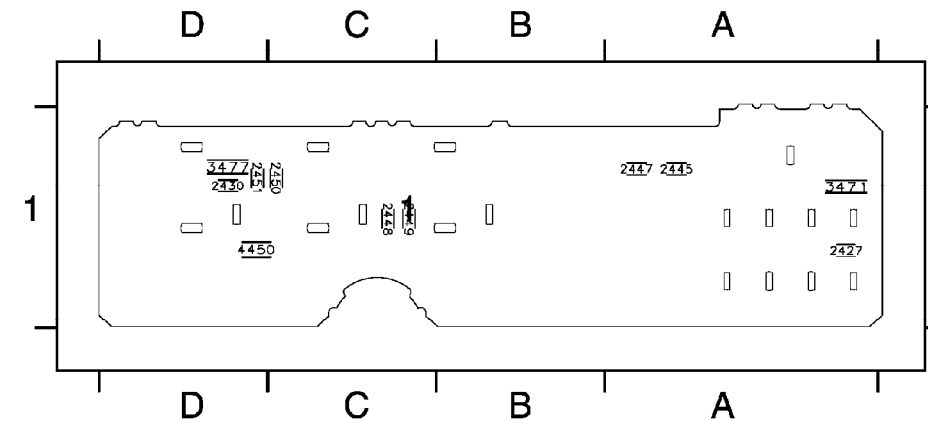


- U1 C1
- 1424 A1
- 1425 A1
- 1427 A1
- 1428 C1

LED BOARD - COMPONENT VIEW



HEADPHONE BOARD - COPPER SIDE VIEW

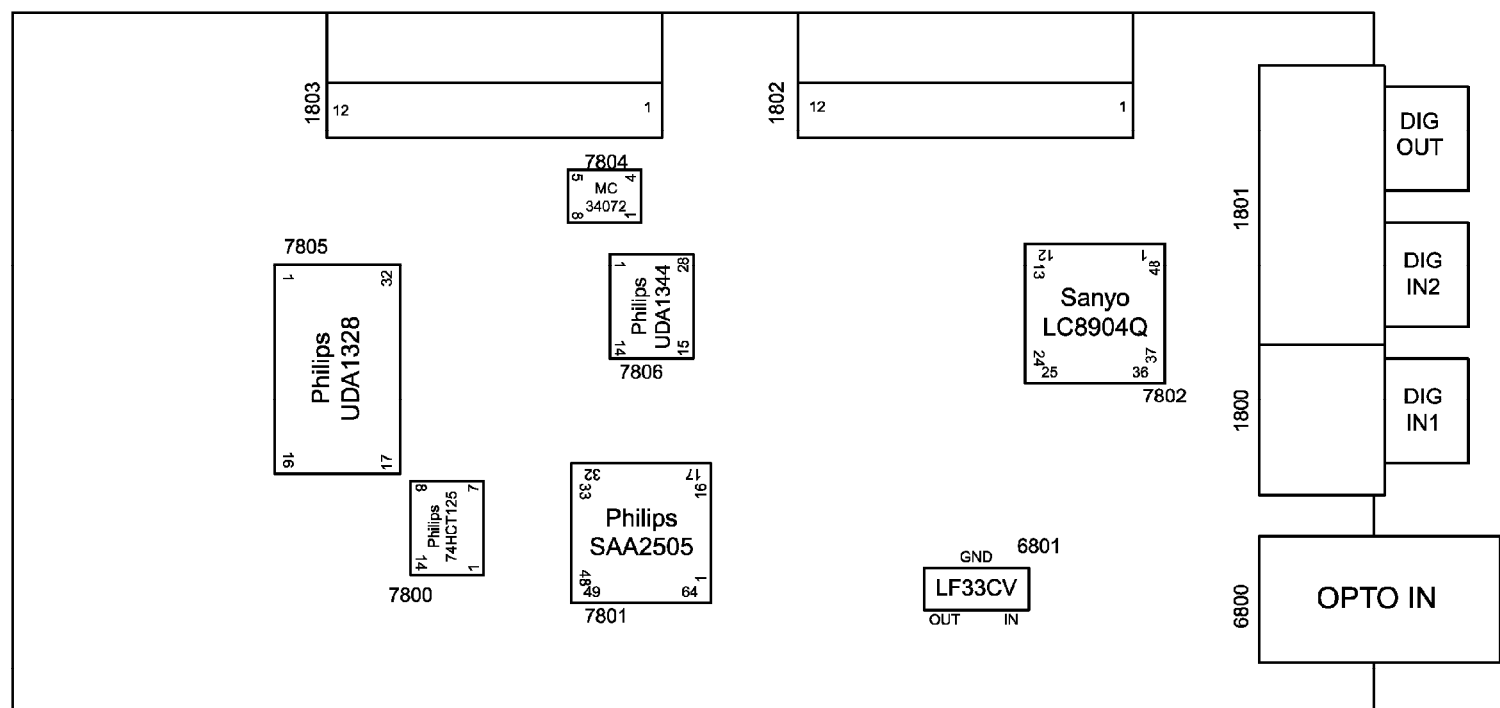


- 2427 A1
- 2430 D1
- 2445 A1
- 2447 A1
- 2448 C1
- 2449 C1
- 2450 C1
- 2451 D1
- 3471 A1
- 3477 D1
- 4450 D1

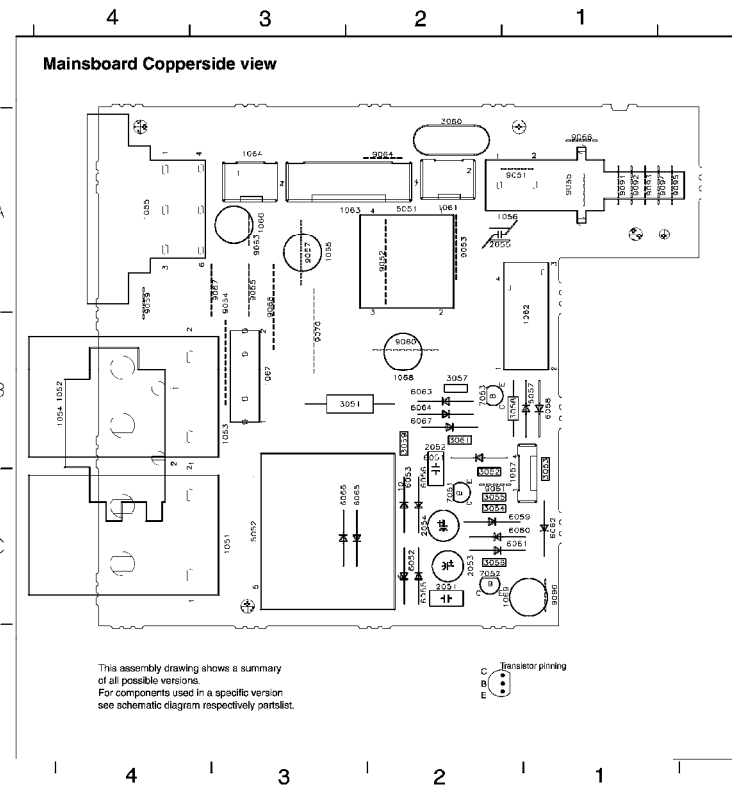
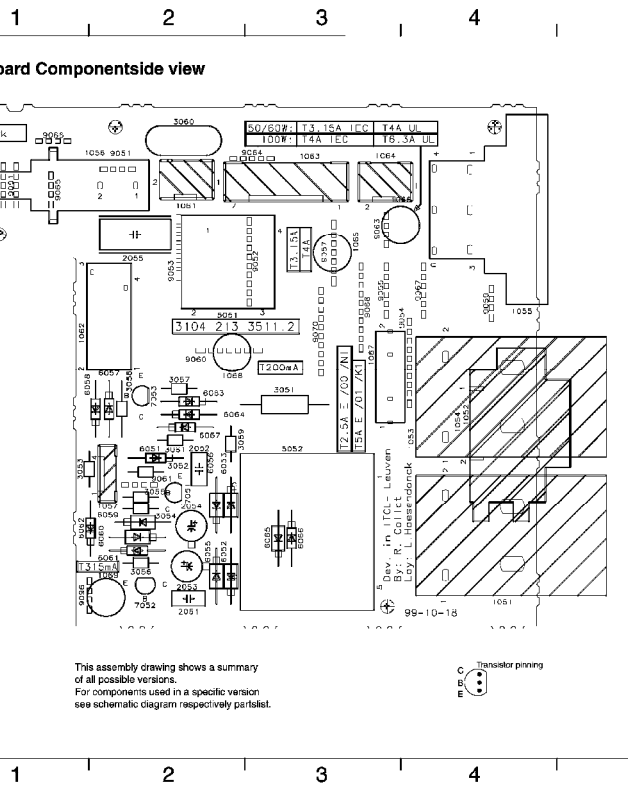
ELECTRICAL PARTSLIST - MDM MODULE

1003	3104 217 05750	MDM Module
1800	4822 267 31729	Connector
1801	4822 267 31448	Connector
6800	4822 218 11487	GP1F32R
6801	4822 209 16978	LF33CV

Note: Only the parts mentioned in this list are normal service parts.



MAINS BOARD - COMPONENTSIDE VIEW & COPPERSIDE VIEW



- | | |
|------|----|
| 1051 | C4 |
| 1052 | B4 |
| 1053 | B4 |
| 1054 | B4 |
| 1055 | A4 |
| 1056 | A2 |
| 1057 | C2 |
| 1061 | A2 |
| 1062 | A2 |
| 1063 | A1 |
| 1064 | A3 |
| 1065 | A3 |
| 1066 | A3 |
| 1067 | B2 |
| 1068 | B2 |
| 1069 | C2 |
| 2051 | C2 |
| 2052 | H2 |
| 2053 | C2 |
| 2054 | C2 |
| 2055 | C2 |
| 3021 | B3 |
| 3022 | B3 |
| 3052 | B2 |
| 3053 | B2 |
| 3054 | C2 |
| 3055 | C2 |
| 3056 | B2 |
| 3057 | B2 |
| 3058 | B2 |
| 3059 | B2 |
| 3060 | A2 |
| 3061 | B2 |
| 5051 | A2 |
| 5052 | C2 |
| 6061 | C2 |
| 6062 | C2 |
| 6063 | C2 |
| 6064 | C2 |
| 6065 | C2 |
| 6066 | C2 |
| 6067 | C2 |
| 6068 | C2 |
| 6069 | C2 |
| 6070 | C2 |
| 6071 | C2 |
| 6072 | C2 |
| 6073 | C2 |
| 6074 | C2 |
| 6075 | C2 |
| 6076 | C2 |
| 6077 | C2 |
| 6078 | C2 |
| 6079 | C2 |
| 6080 | C2 |
| 6081 | C2 |
| 6082 | C2 |
| 6083 | C2 |
| 6084 | B2 |
| 6085 | C2 |
| 6086 | C2 |
| 6087 | C2 |
| 6088 | C2 |
| 6089 | C2 |
| 6090 | C2 |
| 6091 | A2 |
| 6092 | A3 |
| 6093 | A2 |
| 6094 | B4 |
| 6095 | B4 |
| 6096 | A3 |
| 6097 | A3 |
| 6098 | B2 |
| 6099 | C2 |
| 6100 | C2 |
| 6101 | C2 |
| 6102 | C2 |
| 6103 | C2 |
| 6104 | C2 |
| 6105 | C2 |
| 6106 | C2 |
| 6107 | C2 |
| 6108 | C2 |
| 6109 | C2 |
| 6110 | C2 |
| 6111 | C2 |
| 6112 | C2 |
| 6113 | C2 |
| 6114 | C2 |
| 6115 | C2 |
| 6116 | C2 |
| 6117 | C2 |
| 6118 | C2 |
| 6119 | C2 |
| 6120 | C2 |
| 6121 | C2 |
| 6122 | C2 |
| 6123 | C2 |
| 6124 | C2 |
| 6125 | C2 |
| 6126 | C2 |
| 6127 | C2 |
| 6128 | C2 |
| 6129 | C2 |
| 6130 | C2 |
| 6131 | C2 |
| 6132 | C2 |
| 6133 | C2 |
| 6134 | C2 |
| 6135 | C2 |
| 6136 | C2 |
| 6137 | C2 |
| 6138 | C2 |
| 6139 | C2 |
| 6140 | C2 |
| 6141 | C2 |
| 6142 | C2 |
| 6143 | C2 |
| 6144 | C2 |
| 6145 | C2 |
| 6146 | C2 |
| 6147 | C2 |
| 6148 | C2 |
| 6149 | C2 |
| 6150 | C2 |
| 6151 | C2 |
| 6152 | C2 |
| 6153 | C2 |
| 6154 | C2 |
| 6155 | C2 |
| 6156 | C2 |

This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partlist.

This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partlist.



Copperside view

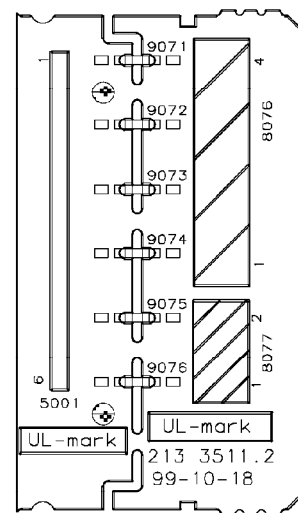
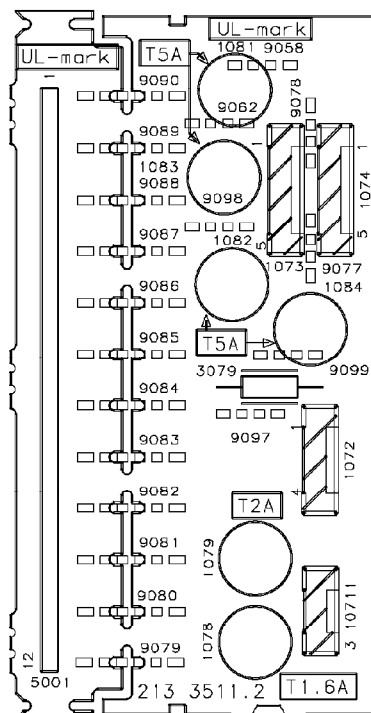
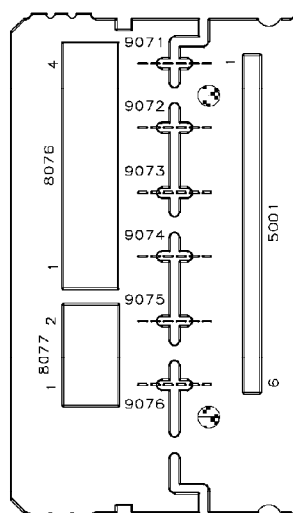
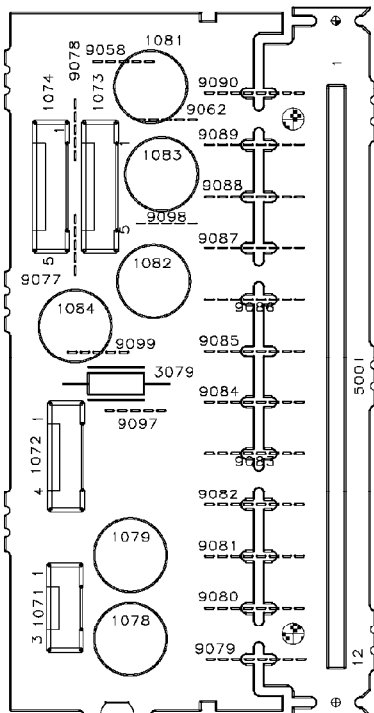
Interconnection Board
Transformer secondary

Interconnection Board
Transformer primary

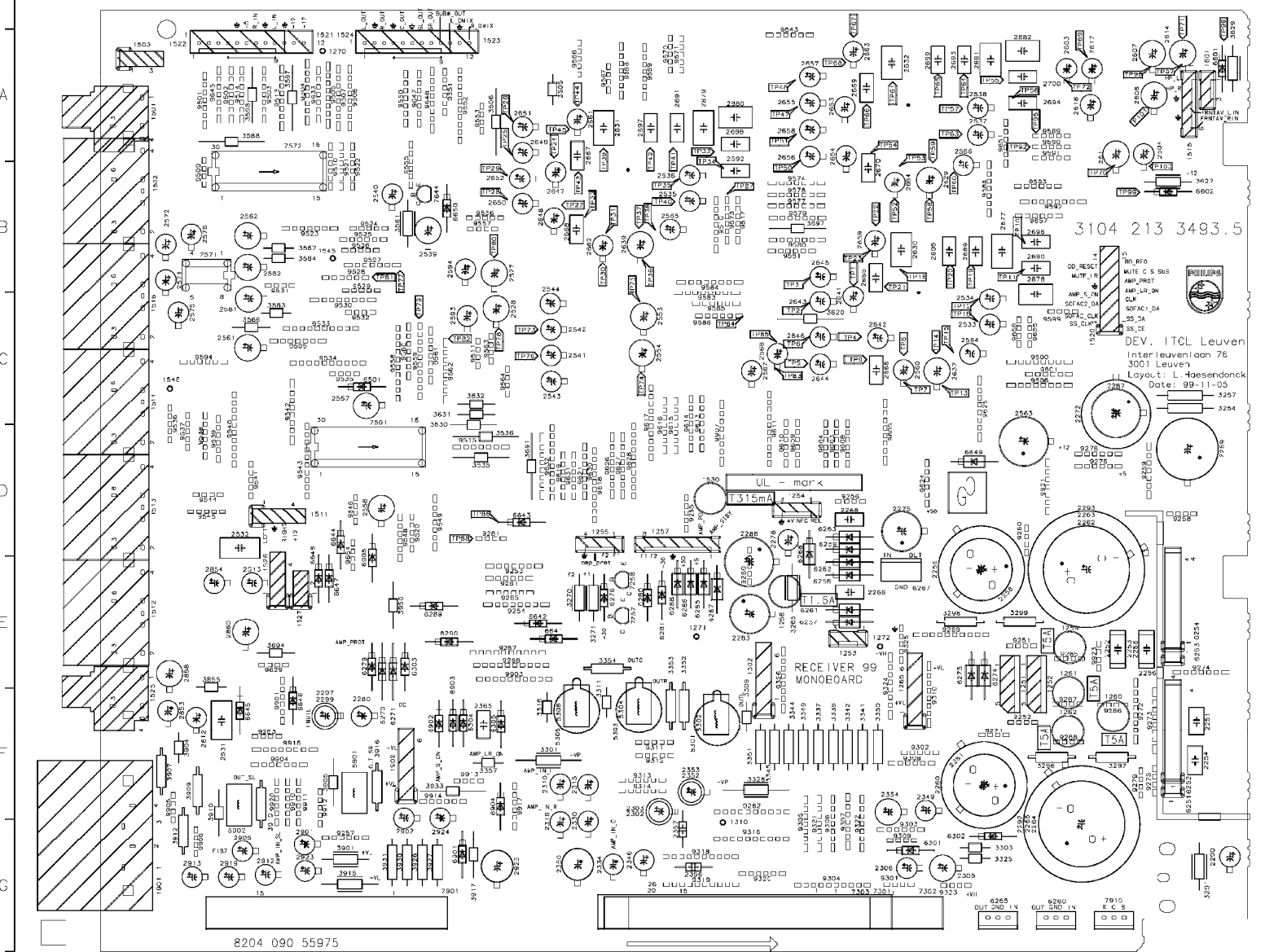
Componentside view

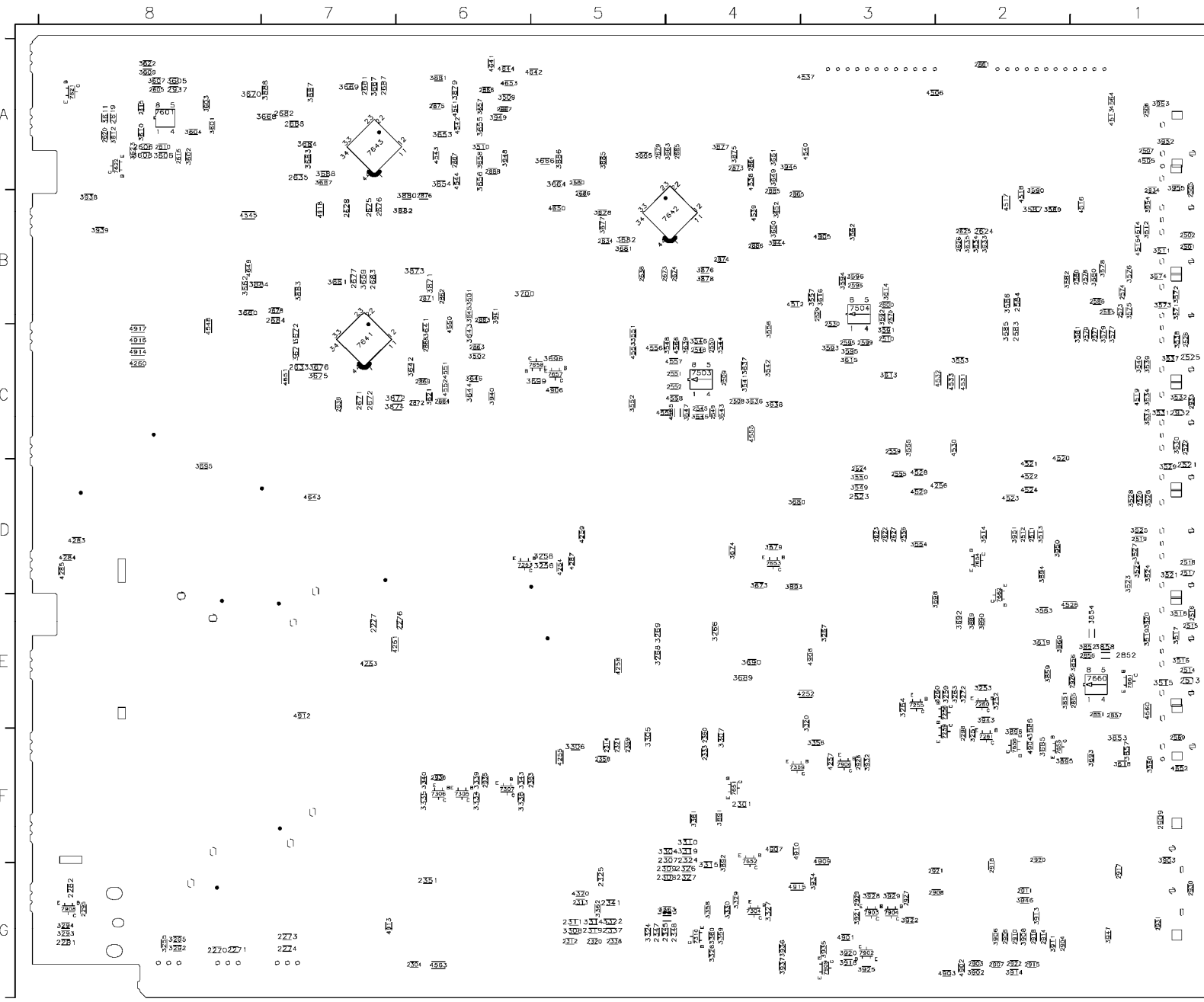
Interconnection Board
Transformer secondary

Interconnection Board
Transformer primary

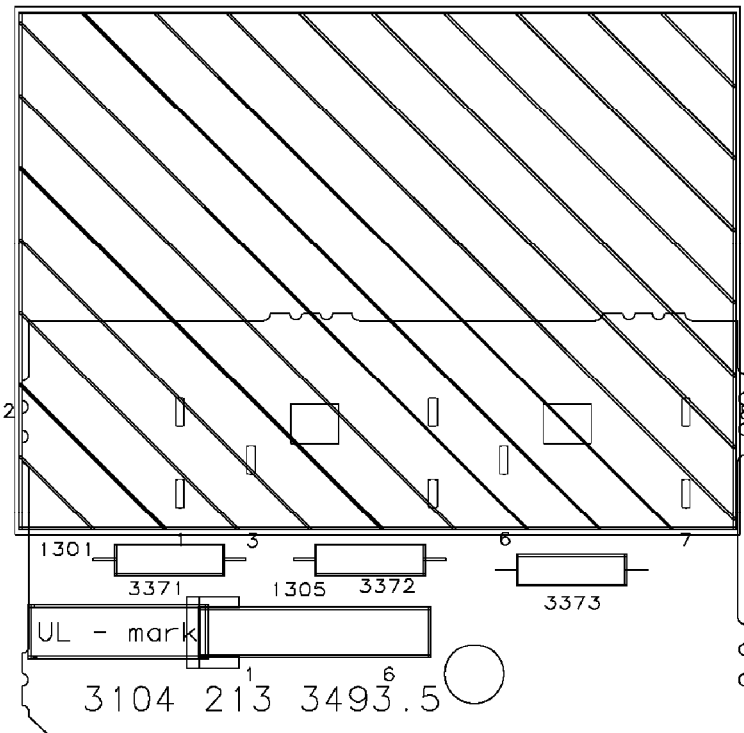


1 2 3 4 5 6 7 8 9

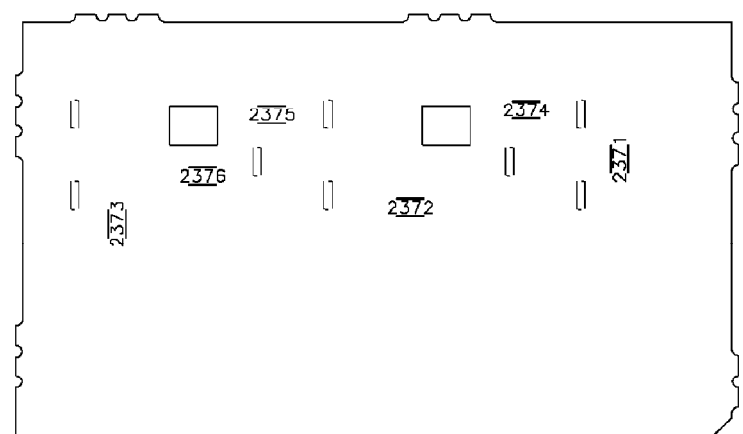




CLICK FIT SPEAKER BOARD COMPONENT VIEW



CLICK FIT SPEAKER BOARD COPPER SIDE VIEW



Service and Quality
Service Publications Dept.
One Philips Drive
P.O. Box 14810
Knoxville, TN 37914

Parts List

REFER TO SAFETY GUIDELINES

SAFETY NOTICE: ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING

7644	Transistor, BC337	4822	130	40855
7651	Transistor, BC817-40	4822	130	42615
7652	Transistor, BC817-40	4822	130	42615
7653	Transistor, BC817-40	4822	130	42615
7654	Transistor, BC817-40	4822	130	42615
7655	Transistor, BC817-40	4822	130	42615
7656	Transistor, BC817-40	4822	130	42615
7657	Transistor, BC856B	4822	130	60373
7658	Transistor, BC856B	4822	130	60373
7660	IC, NJM4560M	4822	209	83357
7661	Transistor, BC817-40	4822	130	42615
7662	Transistor, BC817-40	4822	130	42615
7801	Transistor, BC847B	4822	130	60511
S 7802	Transistor, BC557B	4822	130	44568
7803	IC, STV6401	4822	209	16886
7901	IC, STK496-070	4822	209	17385
7902	Transistor, BC847B	4822	130	60511
7903	Transistor, BC847B	4822	130	60511
7904	Transistor, BC847B	4822	130	60511
7908	Transistor, BC856B	4822	130	60373
7909	Transistor, BC847B	4822	130	60511
7910	Transistor, BD242BFP	9322	139	22687

EXPLODED VIEW PARTS

	EXPLODED VIEW PARTS			
1	FRONT CABINET ASM. FR965/17	3104	217	52930
2	BUTTON HINGE ASM. SURROUND	4822	410	12442
3	BUTTONS HINGE TUNER	4822	410	12435
4	BUTTON HINGE ASM. MENU	4822	410	12443
5	BUTTONS HINGE BASS TREBLE	4822	410	12436
6	BUTTONS EASY LINK	4822	410	12437
8	LIGHT GUIDE SURROUND	4822	380	10274
9	LIGHT GUIDE VIRTUAL/HALL	3104	214	38460
10	LIGHT GUIDE SELECTOR	4822	380	10277
11	ORN. PLATE ASM. FR960/01/17	3104	217	52450
12	RING KNOB, VOLUME	3104	217	52130
13	RING KNOB, SOURCE SELECTOR	3104	217	52140
14	WINDOW DISPLAY ASM. FR960/01/17	3104	217	52260
25	KNOB, VOLUME (BL)	4822	410	12438
26	KNOB, SOURCE SELECTOR	4822	410	12439
27	KNOB, MENU NAV (BL)	4822	410	12441
28	BADGE, PHILIPS	4822	459	10887
36	LEG, SILVER	4822	691	10773
38	LEG, SILVER	4822	691	10773
115	POWER ROD	4822	535	10638
116	POWER CAP.	4822	462	11176
117	BUSH	4822	532	60948
125	COVERPLATE	4822	442	01817
1001	FRONT DISPLAY PANEL	0000	0--	-- --
1002	MONO BOARD ASSEMBLY	0000	0--	-- --
1003	MULTI CHANNEL DECODING	3104	217	05750
1004	MAINS BOARD ASSEMBLY	0000	0--	-- --
1005	EC05 TUNER PANEL	0000	0--	-- --
S 5001	TRANSFORMER, FR965/17 5 X 50W	3104	218	31000
8002	FLEXIBLE FOIL, 15P 220MM	4822	320	12706
S 8020	MAINS CORD UL	3139	118	77230
AC01	HOME CINEMA SPEAKER 60W	3104	219	04220
AC02	HOME CINEMA CENTER SPEAKER 60W	3104	219	04200
AC03	SUBWOOFER FB201V/17	3104	219	03730
AC04	CORD SET, L/R BOX	4822	320	12719
AC05	CORD SET, CENTER SPEAKER	4822	320	12721
AC06	CORD SET, SURROUND SPEAKER	4822	320	12722
AC07	FM AERIAL, 300 Ohm	4822	320	11094
AC08	P50 ADAPTOR	4822	263	21206
AC09	AM ANTENNA FRAME	4822	303	50082
AC10	REMOTE CONTROL	3104	219	03770
AC11	ASSEMBLY CINCH/CINCH 1M	4822	321	61452
AC12	IFU MX960/37 (OWNER'S MANUAL)	3104	215	36260

S = Safety Part Be sure to use exact replacement part.