Digital Receiver 70FR330

00G/01G/02G/05G/08G/10G

00U/01U/02U/05U/08U/10U

Service
Service
Service

Service Manual

Contents

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4822 725 23319

PHILIPS

PHILIPS

Specification

General:

Mains voltage	:	220V / 50Hz for /00, /02, /08
	:	240V / 50Hz for /05, /10
	:	230V / 50Hz for /01
	:	120V / 60Hz for /17
Battery	:	3xR6 (only for clock)
Power consumption	:	≤ 24W in stand by
	:	≈ 30W in zero load
	:	≈ 300W operating
	:	≤ 370W in maximum power
Supply out (for FC320)	:	+14V stab.
	:	+12V unstab.
	:	4,1V AC on -20V for FTD
	:	-25V for FTD

Tuner:	FM	MW	LW
Tuning range	87,5 - 108 MHz	522 - 1611 kHz (not for /17) 530 - 1700 kHz (only for /17)	148 - 284 kHz
Aerial input	75 Ω (not for /17) 300 Ω (only for /17)	Frame aerial (pos 430)	Frame aerial (pos 430)
IF	10,7 MHz ± 25 kHz	450 kHz ± 1 kHz	450 kHz ± 1 kHz
Sensitivity	4 µV (2 µV typ.)	3 mV/m (2 mV/m typ.)	6 mV/m (not guaranteed above 250 kHz)
Image rejection ratio	30 dB (40 dB typ.)	27 dB (30 dB typ.)	40 dB (43 dB typ.)
-3 dB limiting point	5 µV (2 µV typ.)		

Amplifier:

Output power	:	2 x 60W at 8Ω D=0,7% (from 63 Hz to 12,5 kHz)
	:	2 x 55W at 8Ω D=0,09% (measured at 1 kHz)
Headphone	:	6,3mm stereo jack
Power stage protection	:	AC no
	:	DC yes
	:	Temperature no
	:	Shortcircuit yes
Frequency response	:	20 Hz - 20 kHz ± 2 dB
Tone control	:	Bass from +10 dB to -10 dB ± 2 dB at 80 Hz
	:	Treble from +10 dB to -10 dB ± 2 dB at 10 kHz
Loudness	:	+8 dB at 125 Hz
	:	+5 dB at 6,3 kHz ± 1 dB
Input sensitivity	:	CD 350 mV
	:	TV 200 mV
	:	PHONO 2,5 mV
	:	TAPE 580 mV
	:	Equal. 250 mV
	:	VCR 250 mV
Output voltage	:	TAPE 250 mV
	:	Equal. 250 mV
	:	Rec out 250 mV
	:	VCR 250 mV

DISMANTLING OF POWER BOARD

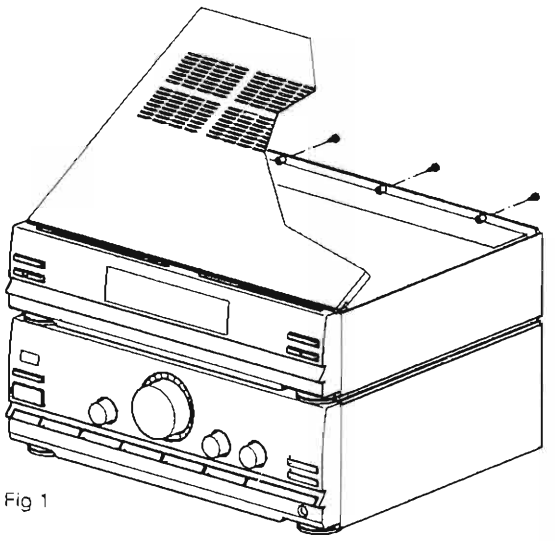

Fig 1

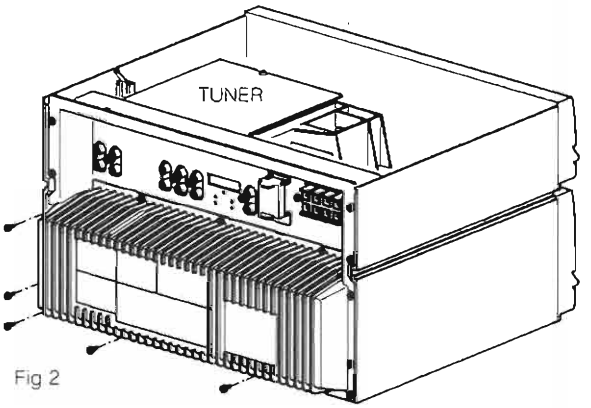

Fig 2

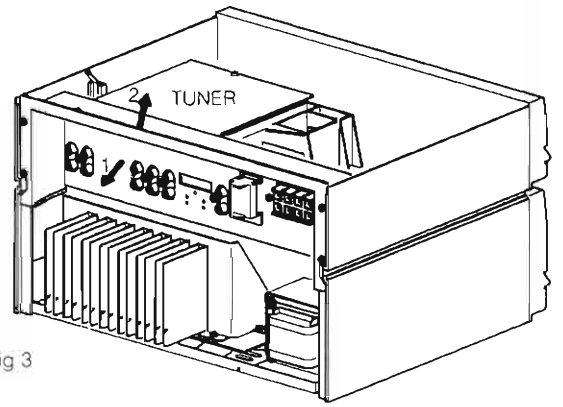

Fig 3

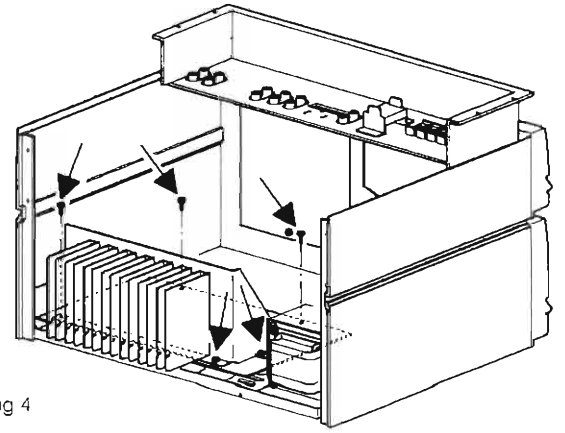

Fig 4

1) Loosen 3x Torx 10 screws (see figure 1).
2) Remove top (see figure 1).
3) Loosen 9x Torx 10 screws and 6x Torx M4x10 on rear part (see figure 2).
4) Remove Power lever (pos 417). Only snapped on power switch.
5) Bring the upper rear part in an upright position (see figure 3).
6) Loosen 5 screws (3x Torx M4x10, 2x Torx 10).

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DISMANTLING OF TUNER PANEL

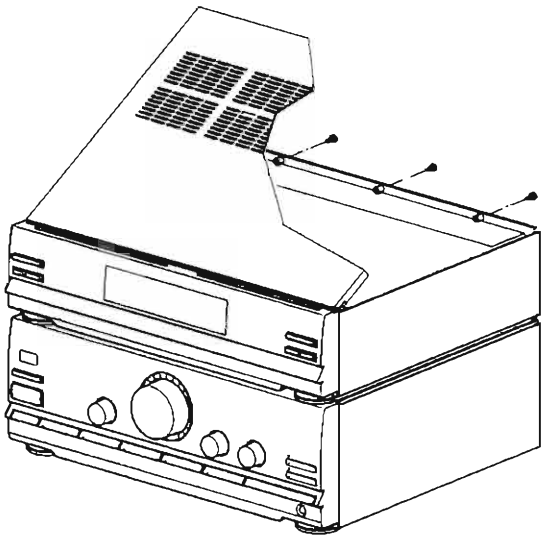

Fig.1

1) Loosen 3x Torx 10 screws (see figure 1).
2) Remove top (see figure 1).
3) Loosen 4x Torx 10 screws on aerial terminals (see figure 2).
4) Loosen 1x Torx 10 on printed circuit board (see figure 3).
5) Bend the hidden snaps (shown in fig. 2) with a small screw driver sidewards while pulling the PCB as shown in figure 3.

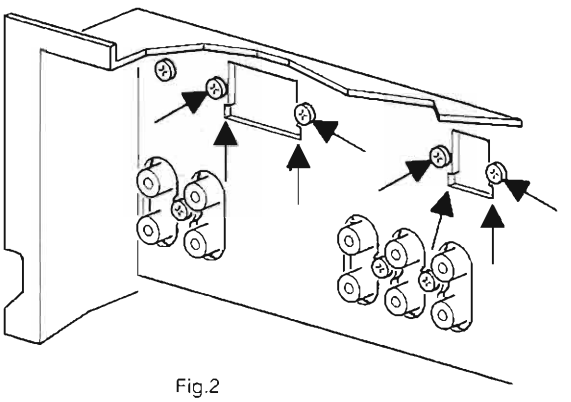

Fig.2

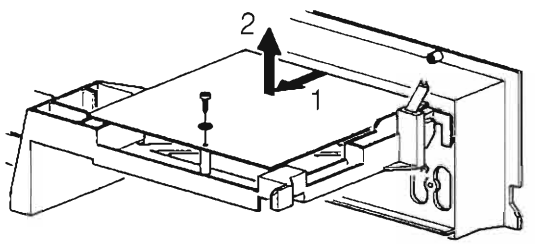

Fig.3

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T05-045

DISMANTLING OF OUTPUT PANEL

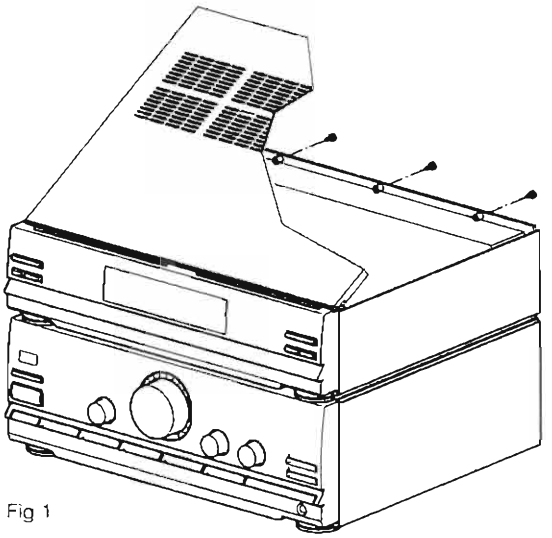

Fig 1

1) Loosen 3x Torx 10 screws (see figure 1).
2) Remove top (see figure 1).
3) Remove Power lever (pos 417). Only snapped on power switch.
4) Remove 3x Torx 10 (see figure 2).
5) Remove PCB as shown in figure 3.

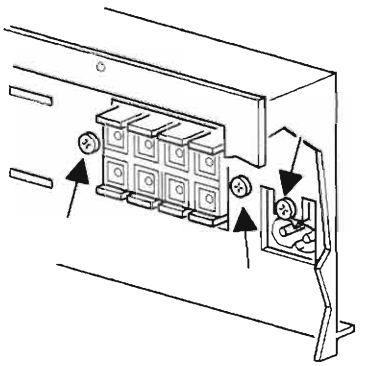

Fig 2

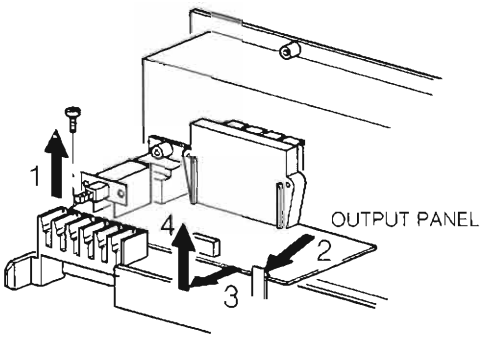

Fig 3

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DISMANTLING OF SOURCE SELECTOR

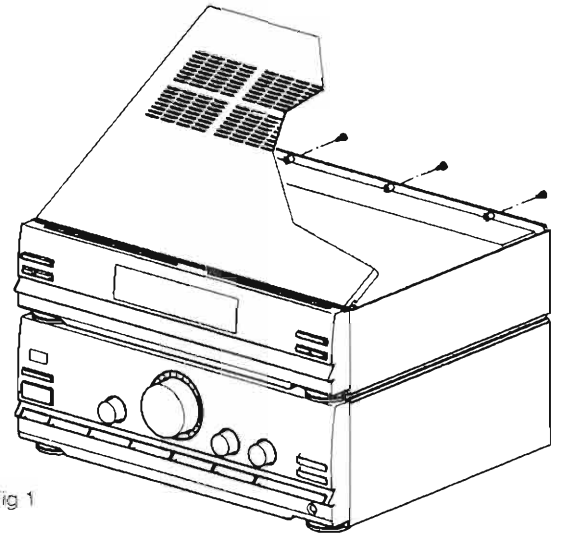

Fig 1

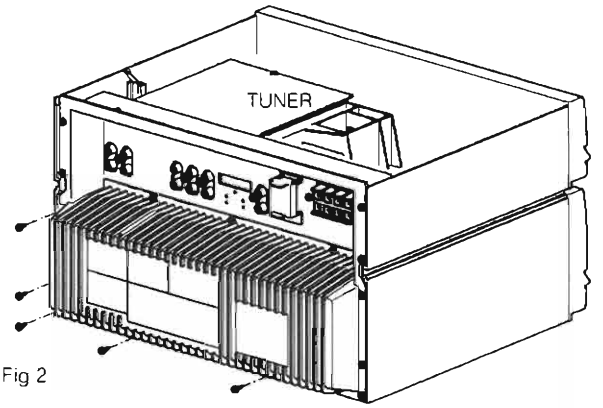

Fig 2

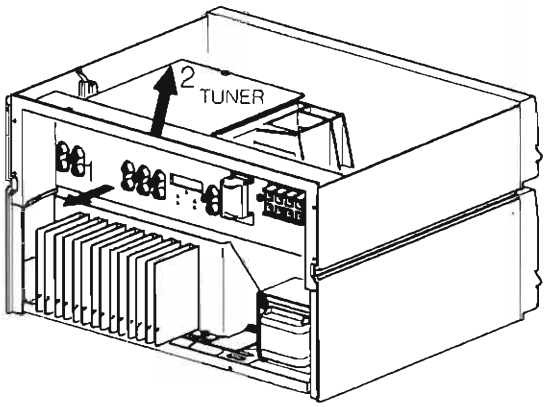

Fig 3

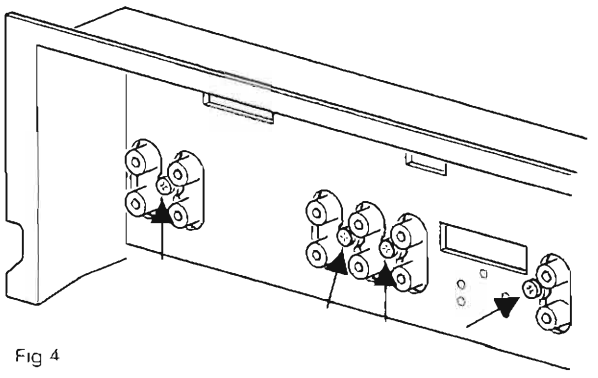

Fig 4

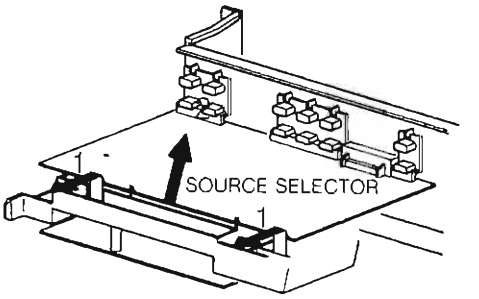

Fig 5

1) Loosen 3x Torx 10 screws (see figure 1).
2) Remove top (see figure 1).
3) Loosen 9x Torx 10 screws and 6x Torx M4x10 on rear part (see figure 2).
4) Remove Power lever (pos 417). Only snapped on power switch.
5) Bring the upper rear part in an upright position (see figure 3).
6) Loosen 5x Torx 10 screws (see figure 4). Remove equalizer bridges.
7) Loosen two snaps (see figure 5) and remove PCB.

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ACCESS TO FRONT PANELS

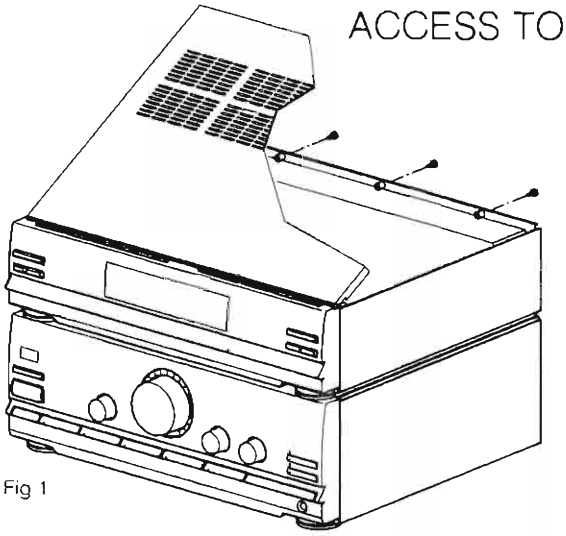


Fig 1

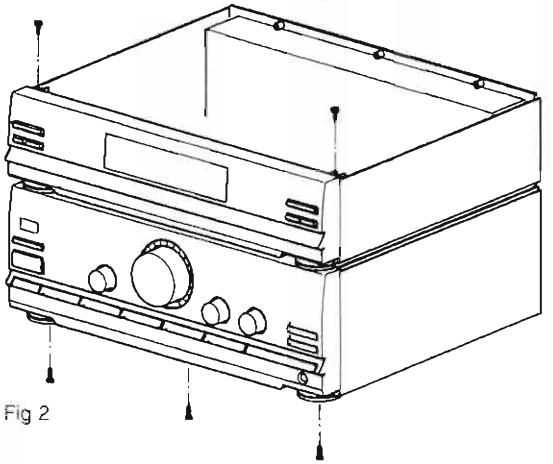


Fig 2

1) Loosen 3x Torx 10 screws (see figure 1).
2) Remove top (see figure 1).
3) Loosen 2x Torx 10 - front/side panels (see figure 2).
4) Loosen 3x Torx M4x10 on bottom (see figure 2).
5) Loosen two snaps on side panels (see figure 3).

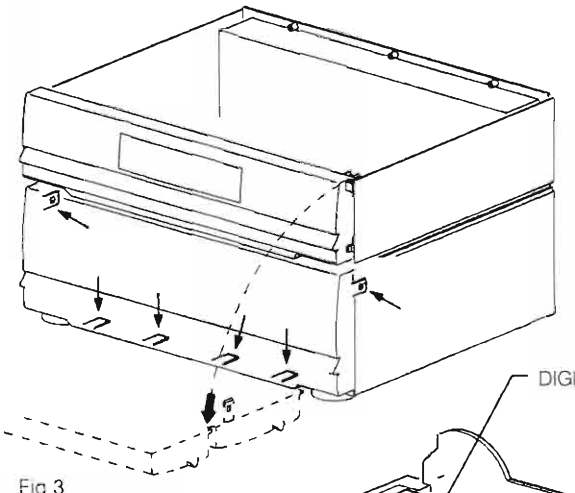
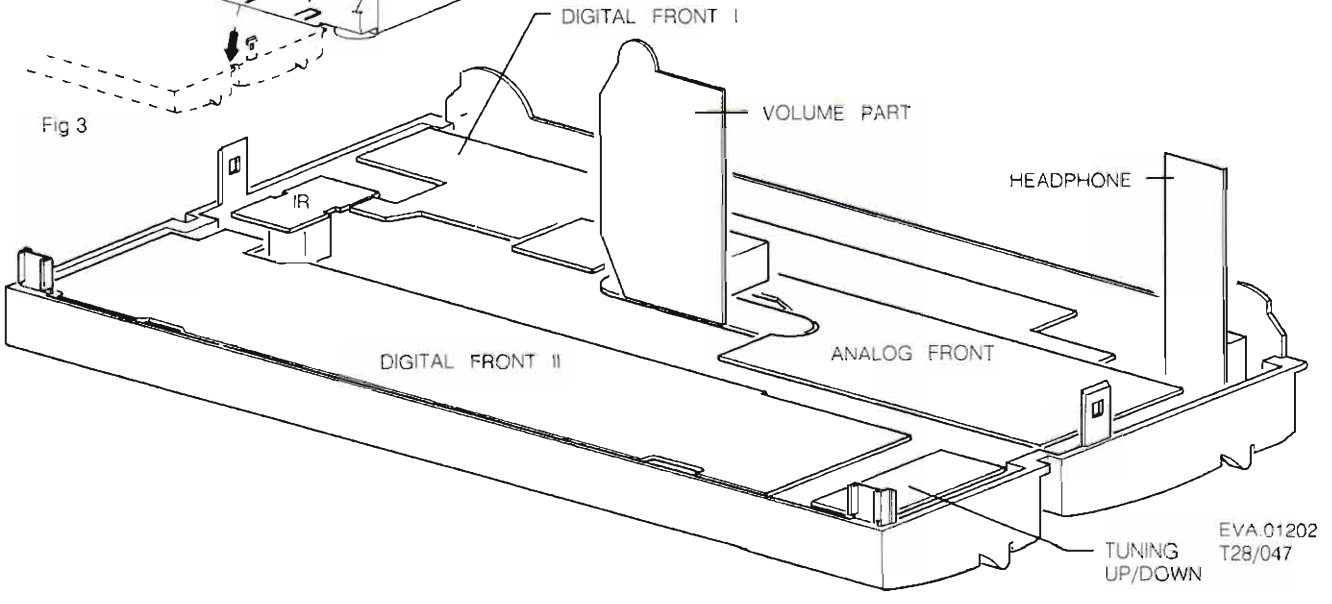
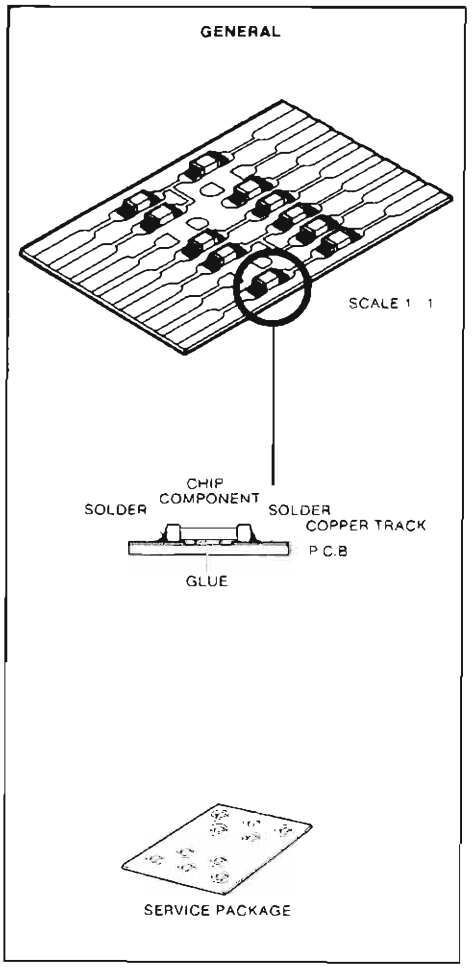
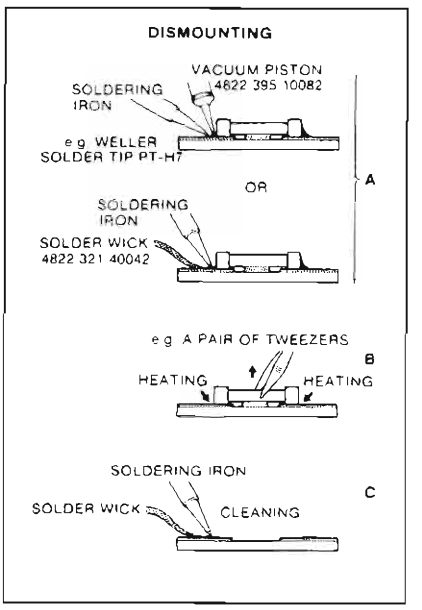
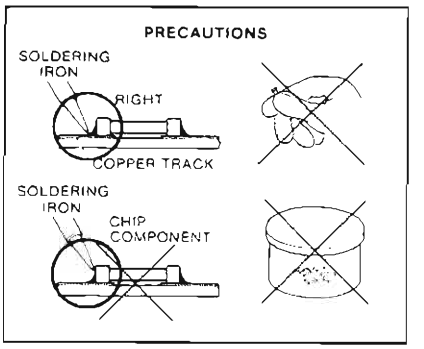


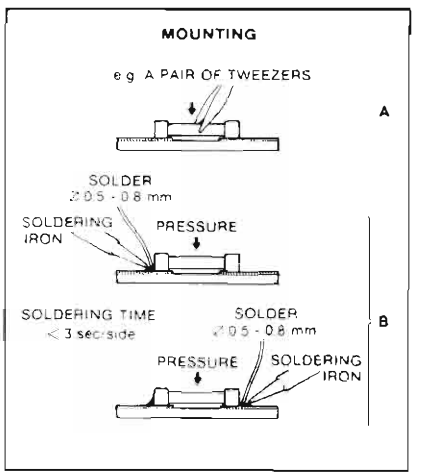
Fig 3

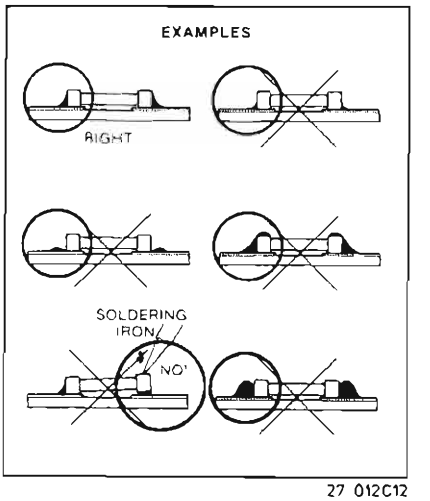












27 012C12

ESD

GB WARNING

All ICs and many other semi-conductors 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 wrist wrap with resistance. Keep components and tools also at this potential.

NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de securité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD).
Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern. Sorgen sie dafür, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind. halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un bracciaietto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

GB

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

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verandert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

NL

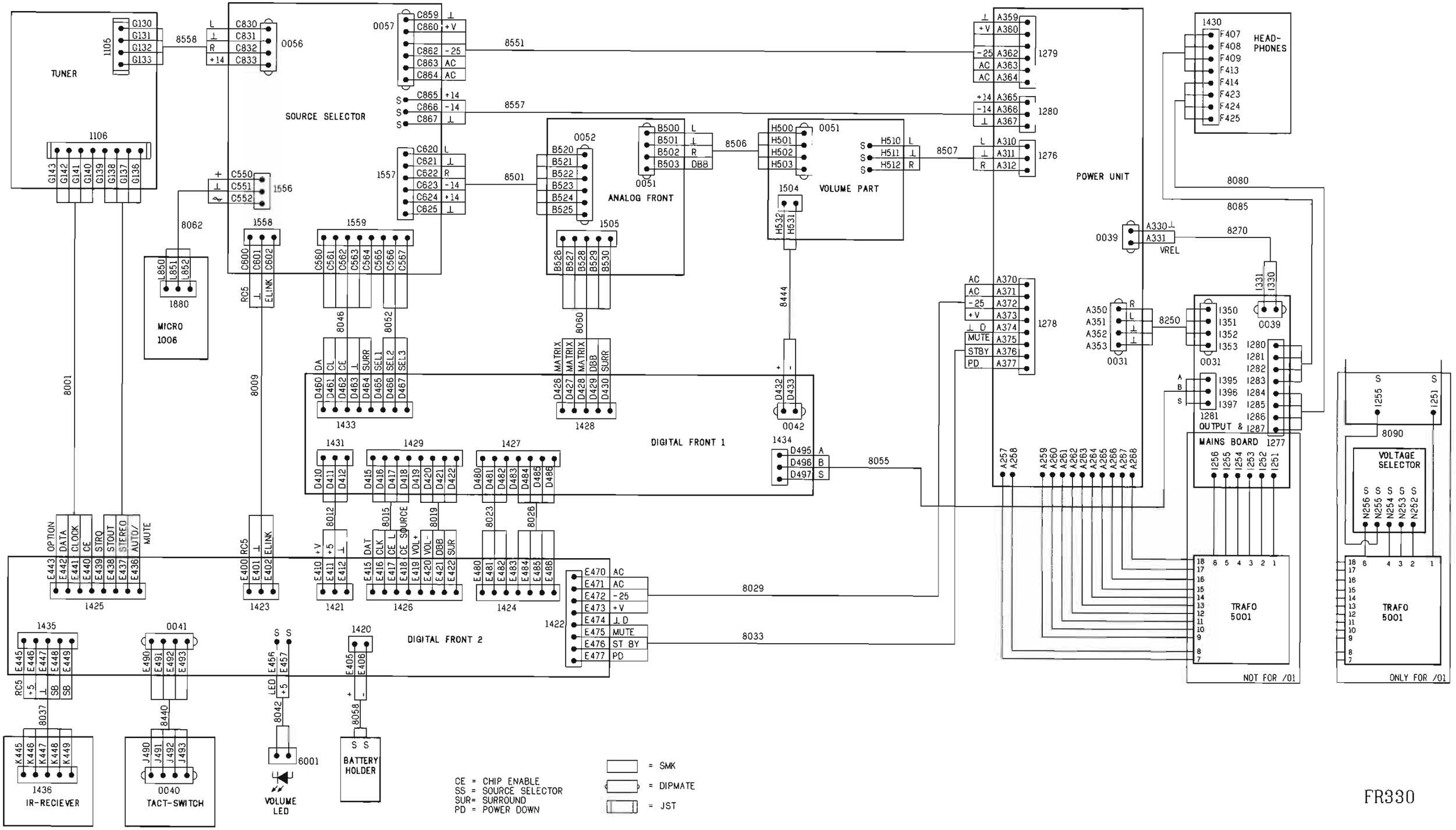
Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati.

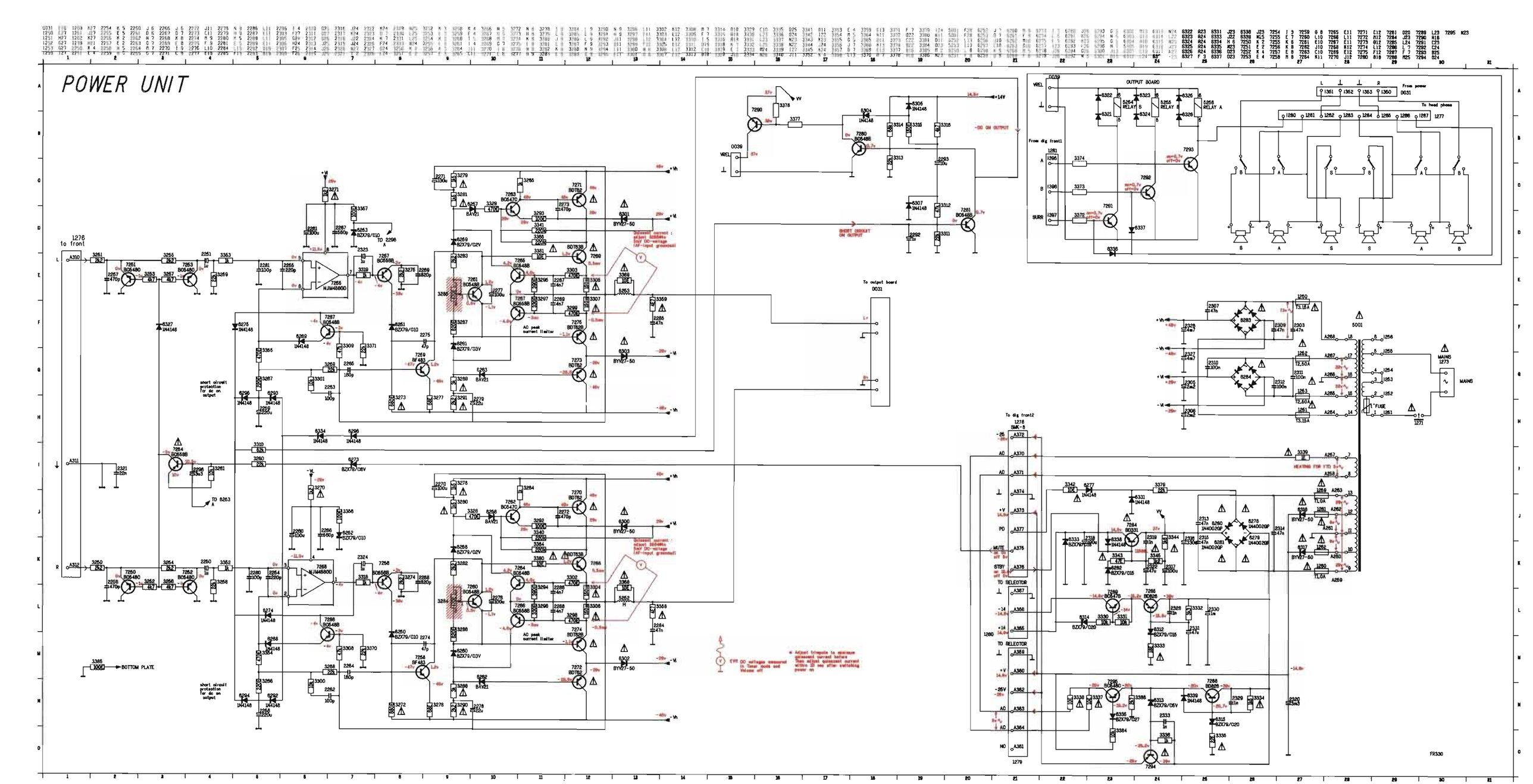
F

Les normes de securité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiees


TUNER
1105
G130
G131
G132
G133
8558
L
⊥
R
+14
C830
C831
C832
C833
0056
SOURCE SELECTOR
1106
G143 G142 G141 G140 G139 G138 G137 G136
+
⊥
≈
C550
C551
C552
1556
8062
L850 L851 L852
1880
MICRO
1006
8001
1558
C600 C601 C602
RC5 ⊥ ELINK
1559
C560 C561 C562 C563 C564 C565 C566 C567
8046
8052
8009
DA CL CE ⊥ SURR SEL1 SEL2 SEL3
D460 D461 D462 D463 D464 D465 D466 D467
1433
0057
C859 ⊥
C860 +V
C862 -25
C863 AC
C864 AC
C865 +14
C866 -14
C867 ⊥
S S S
8551
8557
1557
C620 L
C621 ⊥
C622 R
C623 -14
C624 +14
C625 ⊥
8501
0052
B520 B521 B522 B523 B524 B525
ANALOG FRONT
0051
B500 L
B501 ⊥
B502 R
B503 DBB
8506
1505
B526 B527 B528 B529 B530
8060
MATRIX MATRIX MATRIX DBB SURR
D426 D427 D428 D429 D430
1428
H500
H501
H502
H503
0051
S S S
H510 L
H511 ⊥
H512 R
8507
1504
VOLUME PART
H532 H531
8444
+ -
D432 D433
0042
1431
D410 D411 D412
1429
D415 D416 D417 D418 D419 D420 D421 D422
1427
D480 D481 D482 D483 D484 D485 D486
8012
8015
8019
8023
8026
DIGITAL FRONT 1
1434
D495 A
D496 B
D497 S
8055
⊥ A359
+V A360
-25 A362
AC A363
AC A364
1279
+14 A365
-14 A366
⊥ A367
1280
L A310
⊥ A311
R A312
1276
AC A370
AC A371
-25 A372
+V A373
⊥ D A374
MUTE A375
STBY A376
PD A377
1278
A257 A258 A259 A260 A261 A262 A263 A264 A265 A266 A267 A268
POWER UNIT
1430
F407 F408 F409 F413 F414 F423 F424 F425
HEAD-PHONES
8080
8085
0039
A330 ⊥
A331
VREL
8270
A350 A351 A352 A353
R L ⊥ ⊥
8250
0031
1331 1330
0039
1350 1351 1352 1353
0031
1280 1281 1282 1283 1284 1285 1286 1287
A B S
1395 1396 1397
1281
OUTPUT &
MAINS BOARD 1277
1256 1255 1254 1253 1252 1251
18 17 16 15 14 13 12 11 10 9 8 7
6 5 4 3 2 1
TRAFO
5001
NOT FOR /01
S S
1255 1251
8090
VOLTAGE SELECTOR
S S S S S S
N256 N255 N254 N253 N252
18 17 16 15 14 13 12 11 10 9 8 7
8 4 3 2 1
TRAFO
5001
ONLY FOR /01
OPTION DATA CLOCK CE STRO STOUT STEREO AUTO/ MUTE
E443 E442 E441 E440 E439 E438 E437 E436
1425
RC5 ⊥ ELINK
E400 E401 E402
1423
+V +5 ⊥
E410 E411 E412
1421
DAT CLK CE L CE SOURCE VOL+ VOL- DBB SUR
E415 E416 E417 E418 E419 E420 E421 E422
1426
E480 E481 E482 E483 E484 E485 E486
1424
E470 AC
E471 AC
E472 -25
E473 +V
E474 ⊥ D
E475 MUTE
E476 ST BY
E477 PD
1422
8029
8033
1435
E445 E446 E447 E448 E449
RC5 +5 ⊥ SB SB
8037
K445 K446 K447 K448 K449
1436
IR-RECIEVER
0041
E490 E491 E492 E493
8440
J490 J491 J492 J493
0040
TACT-SWITCH
S S
E456 E457
LED +5
8042
6001
VOLUME LED
1420
E405 E406
+ -
8058
S S
BATTERY HOLDER
DIGITAL FRONT 2
CE = CHIP ENABLE
SS = SOURCE SELECTOR
SUR= SURROUND
PD = POWER DOWN
= SMK
= DIPMATE
= JST

FR330

POWER UNIT

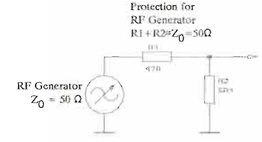

1278
to front
TO A
TO 6263
BOTTOM PLATE
short circuit protection for dc on output
AC peak current limiter
OUTPUT BOARD
RELAY B
RELAY A
From dig front1
To head phone
From power 0031
SHORT CIRCUIT ON OUTPUT
-DC ON OUTPUT
To output board 0031
To dig front2 1278 SMK-5
HEATING FOR V31
MAINS 1273
MAINS
FUSE
1271
5001
FR330

TUNER Adjustment table

Waverange	Input frequency	Input	Set tuned to	Adjust	Output	Scope / Voltmeter
VARICAP ALIGNMENT						
FM 87,5 - 108 MHz			108 MHz	5104		8V ± 50 mV
			87,5 MHz	check		2,7V ± 400 mV
AM (2-band version) 530 - 1700 kHz [1]			1700 kHz	2136		7,6V ± 100 mV
			530 kHz	check	◇1	1V ± 200 mV
LW 148 - 284 kHz			284 kHz	5105		8,4V ± 200 mV
MW (3-band version) 522 - 1611 kHz [2]			1611 kHz	2136		8,5V ± 100 mV
FM - RF [3]						
FM	87,5 MHz mod = 1 kHz Δf = 22,5 kHz	◇A	87,5 MHz	5103	◇2	max.
				5101 [4] 5102 [4]		
	108 MHz mod = 1 kHz Δf = 22,5 kHz		108 MHz	2111		
				2102 [4] 2109 [4]		
FM - IF						
FM	108 MHz Δf = 500 kHz as low as possible		108 MHz	5111		symmetrical and max. height
STEREO DECODER						
FM	98 MHz carrier 1 mV	◇A	98 MHz	3145	◇3	19 kHz ± 50 Hz
SEARCH SENSITIVITY						
FM	98 MHz carrier 12 μV	◇A	98 MHz	3114	◇4	adjust so that voltage switches from low to high
FM	98 MHz carrier 15 μV	◇A	99 MHz or 97 MHz	check		press DOWN or UP and check that set stops at 98 MHz
FM Autostore [5]	98 MHz carrier 350 μV	◇A	99 MHz or 97 MHz	check		press DOWN or UP and check that set stops at 98 MHz
AM - IF						
MW	522 kHz [6] Δf = 10 kHz as low as possible	◇B via 100nF	522 kHz	5108	◇2	symmetrical and max. height
AM - RF						
MW mod = 1 kHz 30% AM	558 kHz	◇C	558 kHz	5110	◇2	max.
	1494 kHz		1494 kHz	2151		
LW mod =1 kHz 30% AM	155 kHz		155 kHz	5116		max.
	270 kHz		270 kHz	2205		

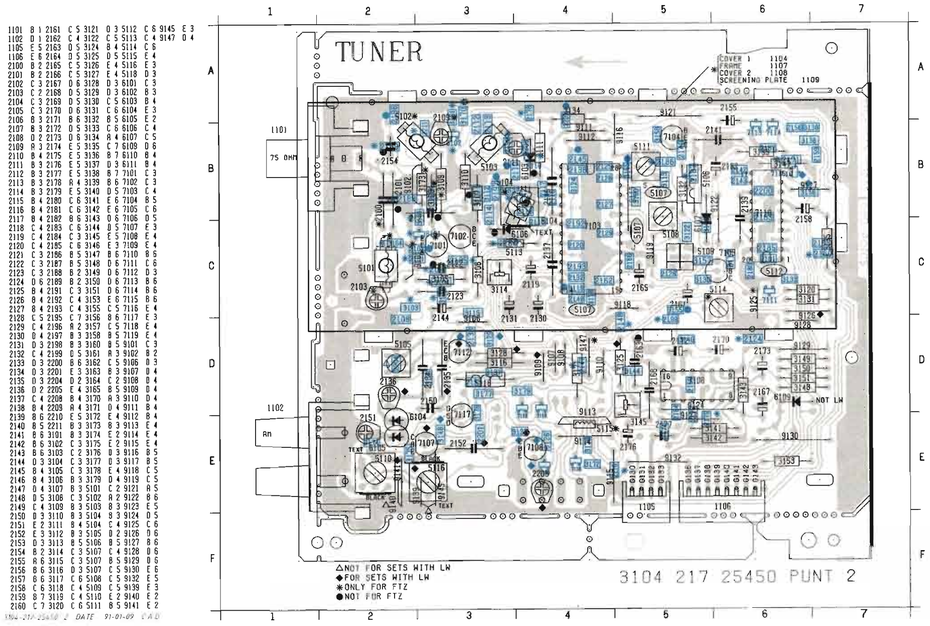
‡ Repeat

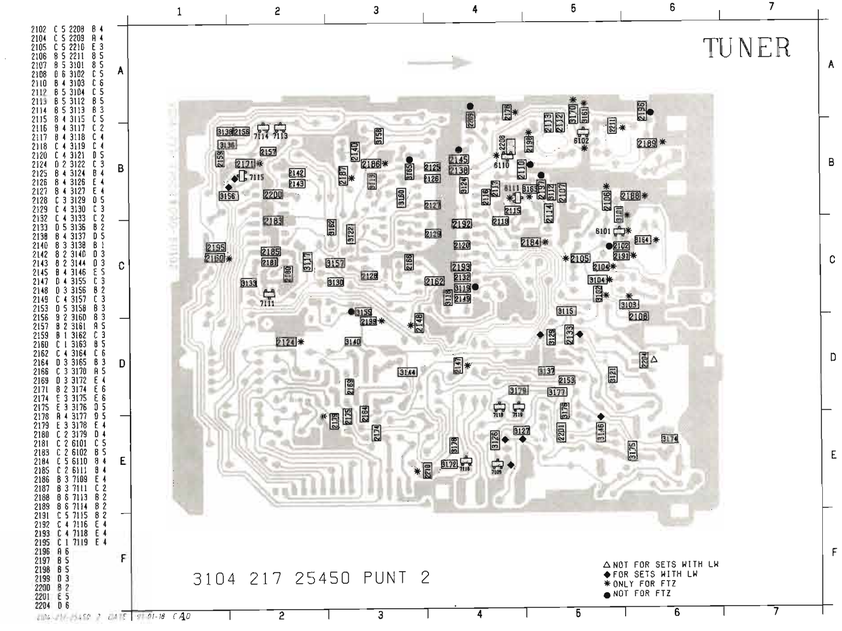
1) used in AUSTRALIA, CANADA and USA versions.
2) used in European versions.
3) For all sets except /02 adjust coil 5101 for nominal position (top of core approx. 3mm from topedge coil).
4) only for FTZ versions
5) Connect G136 to GND to switch set into Autostore sensitivity
6) via low impedance (5Ω) direct to pin 10 of 7103 (see fig. 1).

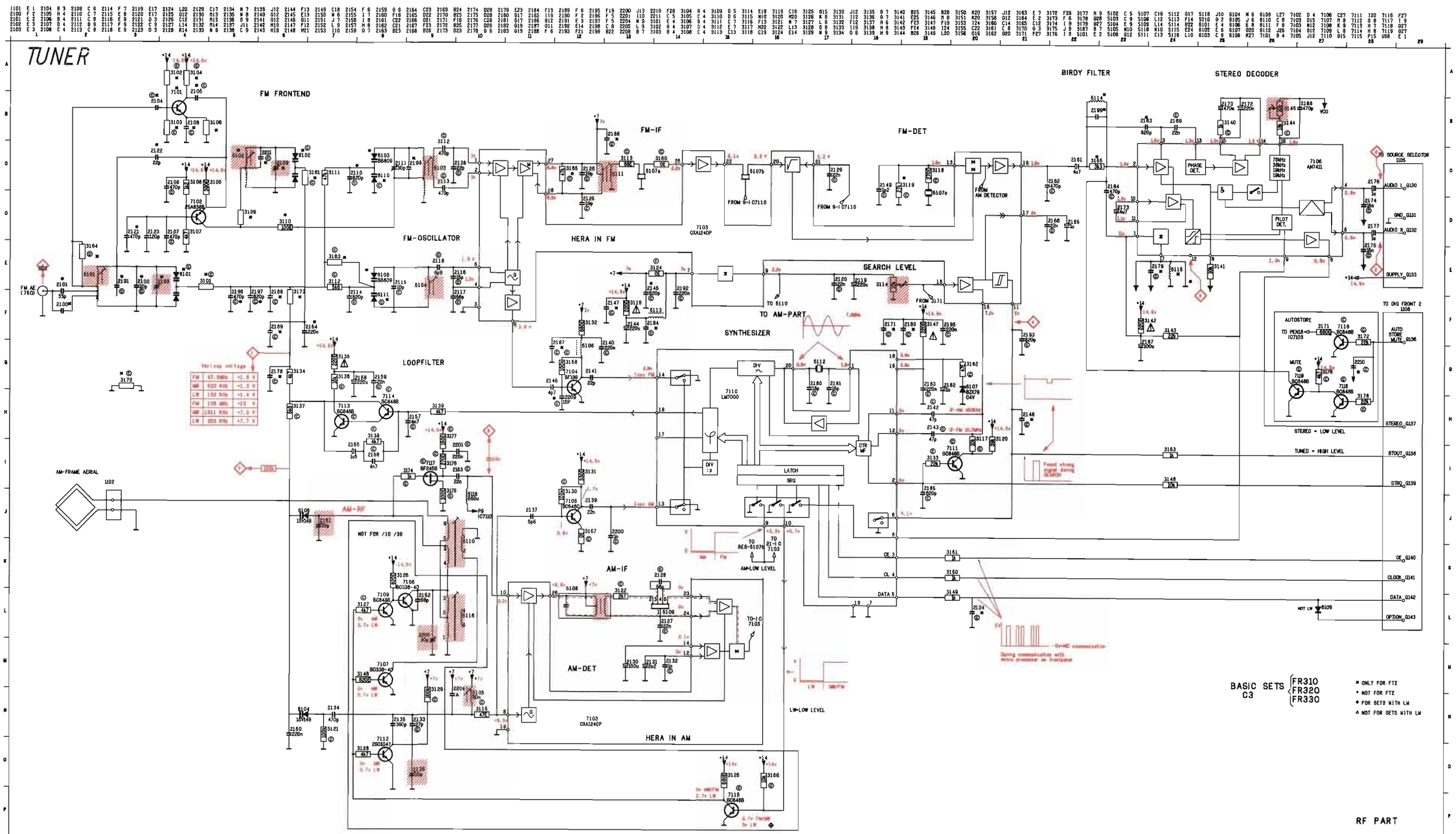


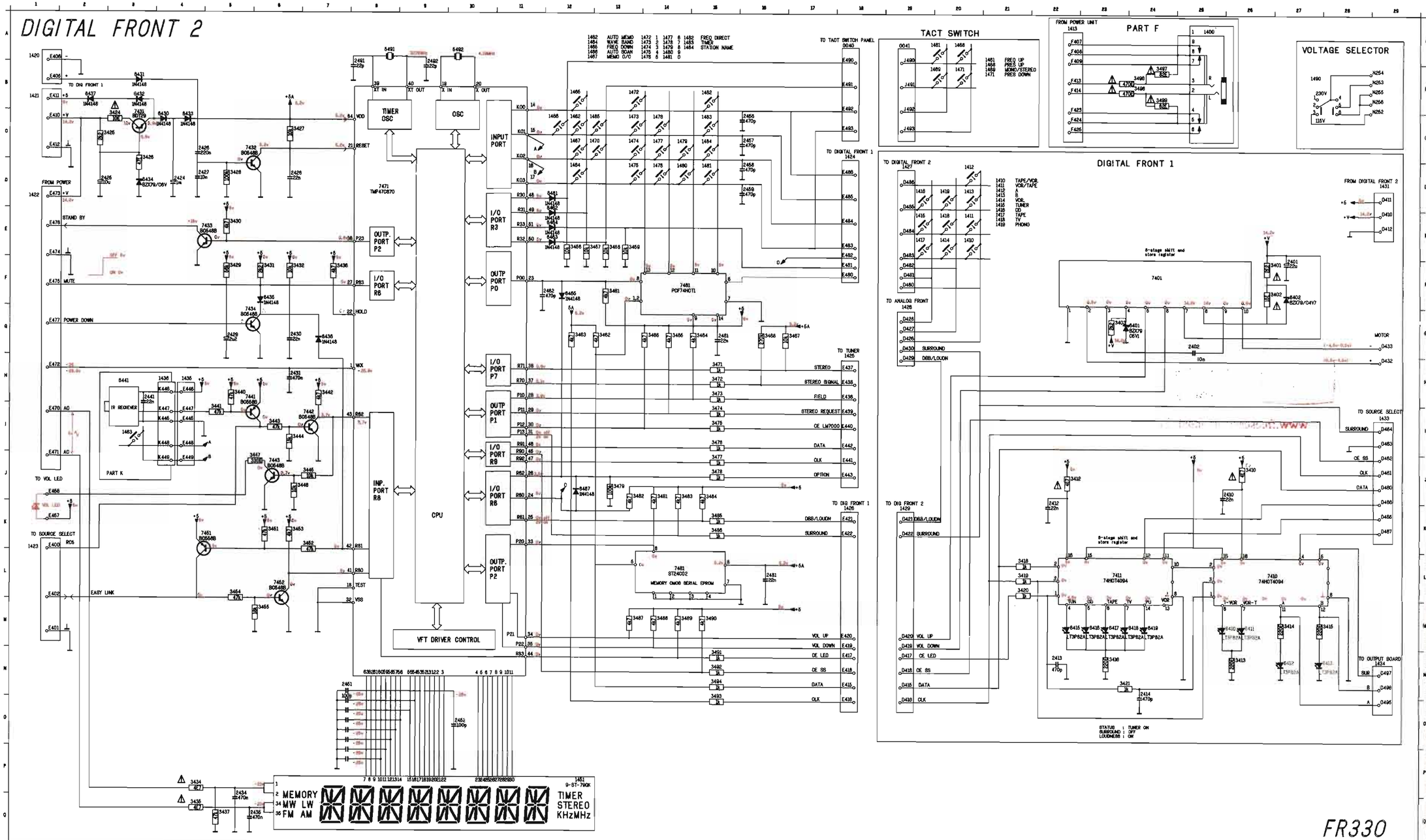
$$Z = \frac{R2*(Z_0+R1)}{R2+(Z_0+R1)} \approx 5\Omega$$

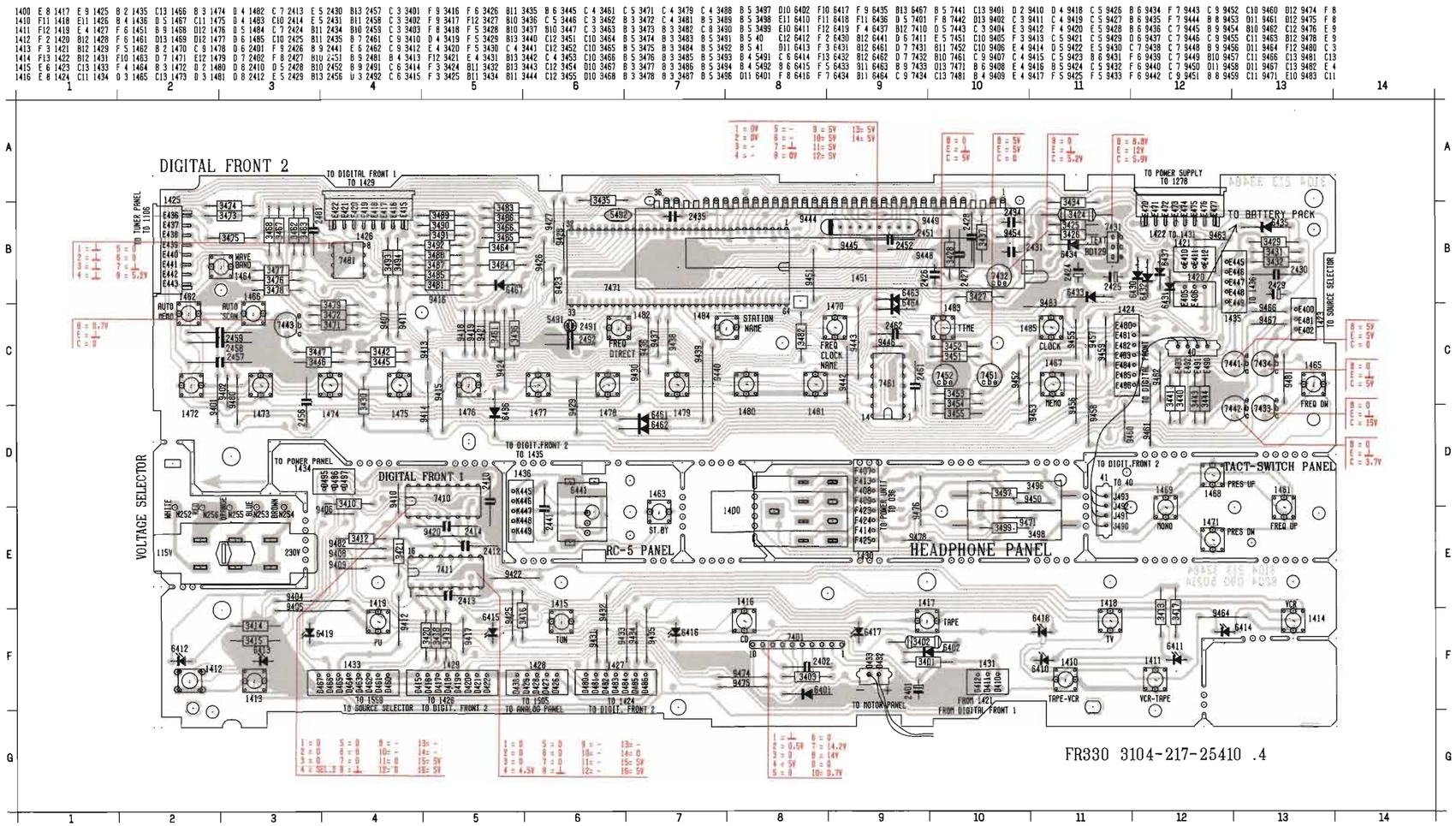
Fig. 1



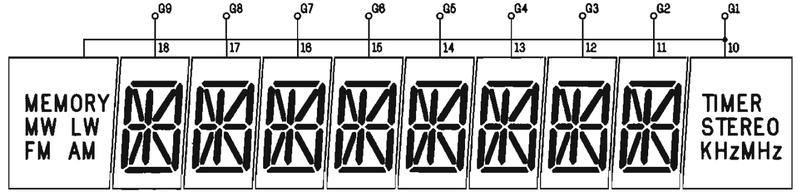


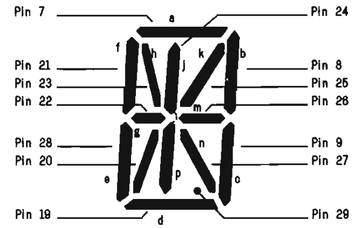

TUNER
FM FRONTEND
FM-OSCILLATOR
FM-IF
FM-DET
HERA IN FM
SEARCH LEVEL
TO AM-PART
SYNTHESIZER
LOOPFILTER
BIRDY FILTER
STEREO DECODER
AM-FRAME AERIAL
AM-RF
AM-IF
AM-DET
HERA IN AM
LATCH
SRQ
AM-LOW LEVEL
LW-LOW LEVEL
TO SOURCE SELECTOR
TO DIG FRONT 2
AUTOSTORE
STEREO = LOW LEVEL
TUNED = HIGH LEVEL
BASIC SETS C3
FR310
FR320
FR330
RF PART


DIGITAL FRONT 2
DIGITAL FRONT 1
TACT SWITCH
PART F
VOLTAGE SELECTOR
TIMER OSC
OSC
CPU
INPUT PORT
I/O PORT R3
OUTP PORT P0
OUTP. PORT P2
I/O PORT R6
I/O PORT P7
OUTP PORT P1
I/O PORT R8
I/O PORT R6
INP. PORT R8
OUTP. PORT P2
VFT DRIVER CONTROL
7471 TMP47C870
7481 POF74A01TL
7481 ST24C02
MEMORY CMOS SERIAL EPROM
IR RECEIVER
PART K
TO TUNER 1425
TO DIG FRONT 1 1426
TO TACT SWITCH PANEL 0040
TO DIGITAL FRONT 1 1424
TO DIGITAL FRONT 2 1427
TO ANALOG FRONT 1428
TO DIG FRONT 2 1429
TO SOURCE SELECT 1433
TO OUTPUT BOARD 1434
FROM POWER 1422
FROM POWER UNIT 1413
FROM DIGITAL FRONT 2 1431
TO DIG FRONT 1 1423
TO VOL LED
EASY LINK
STAND BY
MUTE
POWER DOWN
MEMORY MW LW FM AM
TIMER STEREO KHzMHz
STEREO
STEREO SIGNAL
FIELD
STEREO REQUEST
CE LM7000
DATA
CLK
OPTION
DBB/LOUDN
SURROUND
VOL UP
VOL DOWN
CE LED
CE SS
DATA
CLK
TAPE/VCR
VCR/TAPE
TUNER
CD
TAPE
TV
PHONO
8-stage shift and store register
MOTOR
STATUS : TUNER ON
SURROUND : OFF
LOUDNESS : ON
FR330



GRID ASSIGMENT





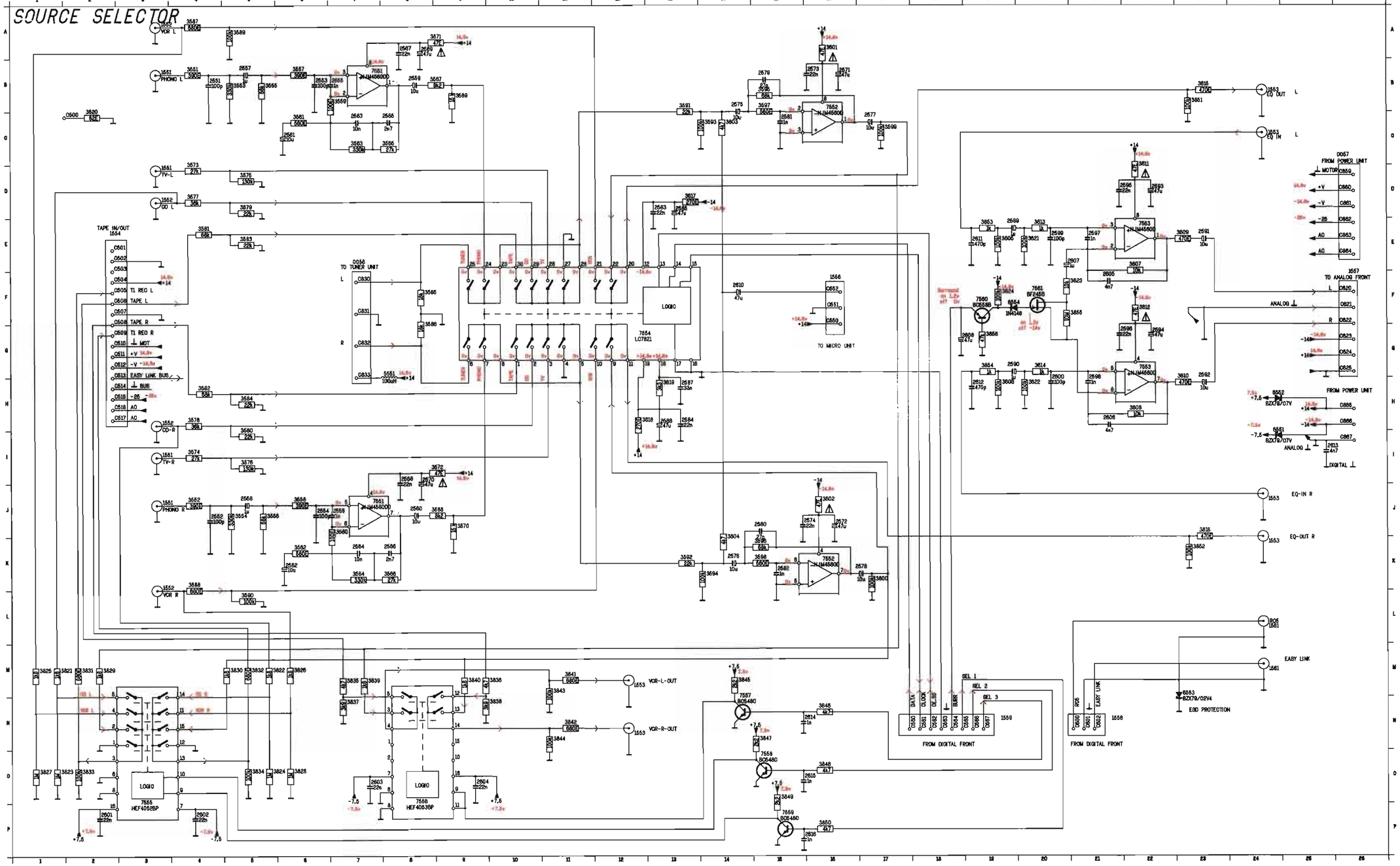
PIN CONNECTION

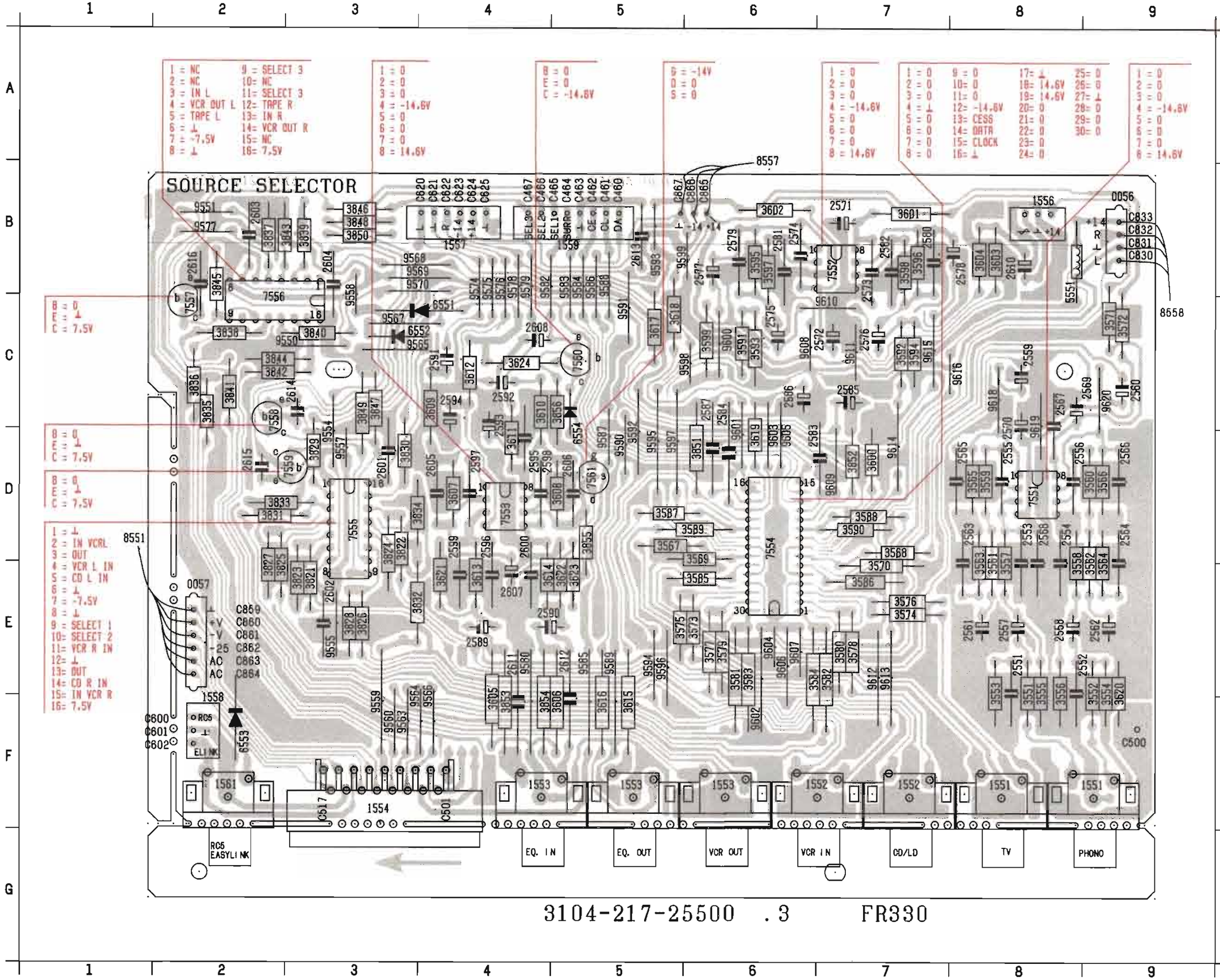
PIN NO	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	F 2	N P	N P	N C	P 16	P 14	P 13	P 12	P 11	P 10	P 9	P 8	P 7	P 6	P 5	P 4	G 9	G 8	G 7	G 6	G 5	G 4	G 3	G 2	G 1	P 3	P 2	P 1	N C	N C	N P	N P	F 1	F 1

ANODE CONNECTION

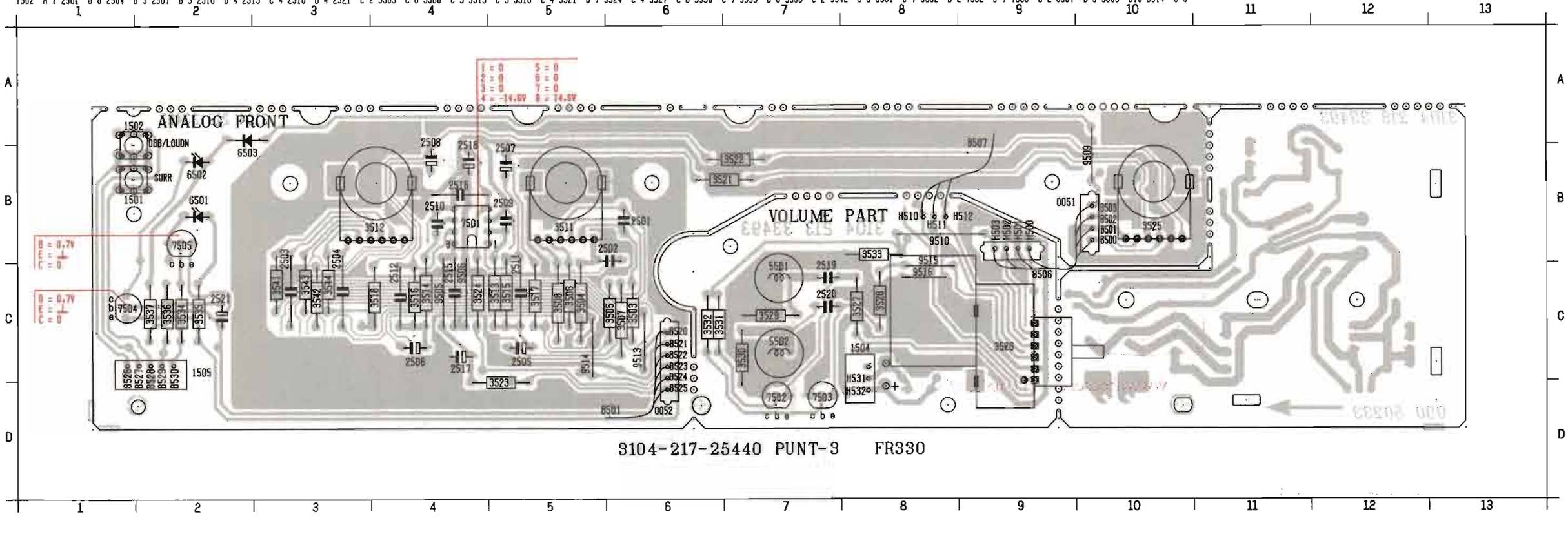
	G9	G8	G7	G6	G5	G4	G3	G2	G1
P1	a	a	a	a	a	a	a	a	TIMER
P2	b	b	b	b	b	b	b	b	STEREO
P3	o	o	o	o	o	o	o	o	kHz
P4	d	d	d	d	d	d	d	d	MHz
P5	e	e	e	e	e	e	e	e	MEMORY
P6	f	f	f	f	f	f	f	f	MW
P7	g	g	g	g	g	g	g	g	LW
P8	h	h	h	h	h	h	h	h	FM
P9	j,p	j,p	j,p	j,p	j,p	j,p	j,p	j,p	AM
P10	k	k	k	k	k	k	k	k	-
P11	m	m	m	m	m	m	m	m	-
P12	n	n	n	n	n	n	n	n	-
P13	r	r	r	r	r	r	r	r	-
P14	.	.	.	.	.	.(lower)	.	.	-
P15	-	-	-	-	-	-(upper)	-	-	-

SOURCE SELECTOR





0056	B	9	2613	B	5	3622	E	5	9576	B	4
0057	E	2	2614	C	3	3623	E	5	9577	B	2
1551	F	8	2615	D	2	3624	C	4	9578	B	4
1551	F	9	2616	B	2	3821	E	3	9579	B	4
1552	F	7	3551	E	8	3822	D	3	9580	E	4
1552	F	7	3552	E	9	3823	E	3	9582	B	4
1553	F	4	3553	E	8	3824	D	3	9583	B	5
1553	F	5	3554	E	9	3825	E	3	9584	B	5
1553	F	6	3555	E	8	3826	E	3	9585	E	5
1554	F	3	3556	E	8	3827	E	2	9586	B	5
1556	B	8	3557	D	8	3828	E	3	9587	D	5
1557	B	4	3558	D	8	3829	D	3	9588	B	5
1558	F	2	3559	D	8	3830	D	3	9589	E	5
1559	B	5	3560	D	9	3831	D	2	9590	D	5
1561	F	2	3561	D	8	3832	E	4	9591	C	5
2551	E	8	3562	D	9	3833	D	2	9592	D	5
2552	E	9	3563	D	8	3634	D	4	9593	B	5
2553	D	8	3564	D	9	3835	C	2	9594	E	5
2554	D	8	3565	D	8	3836	C	2	9595	D	5
2555	D	8	3566	D	9	3837	B	2	9596	E	5
2556	D	9	3567	D	5	3838	C	2	9597	D	5
2557	E	8	3568	D	7	3839	B	3	9598	C	6
2558	E	8	3569	E	6	3840	C	3	9599	B	6
2559	C	8	3570	E	7	3841	C	2	9600	C	6
2560	C	9	3571	C	9	3842	C	2	9601	C	6
2561	E	8	3572	C	9	3843	B	3	9602	F	6
2562	E	9	3573	E	6	3844	C	2	9603	D	6
2563	D	8	3574	E	7	3845	B	2	9604	E	6
2564	D	9	3575	E	6	3846	B	3	9605	D	6
2565	D	8	3576	E	7	3847	C	3	9606	E	6
2566	D	9	3577	E	6	3848	B	3	9607	E	6
2567	C	8	3578	E	7	3849	C	3	9608	C	6
2568	D	8	3579	E	6	3850	B	3	9609	D	7
2569	C	9	3580	E	7	3851	D	6	9610	C	7
2570	C	8	3581	E	6	3852	D	7	9611	C	7
2571	B	7	3582	E	7	3853	F	4	9612	E	7
2572	C	7	3583	E	6	3854	F	4	9613	E	7
2573	B	7	3584	E	7	3855	D	5	9614	D	7
2574	B	6	3585	E	6	3856	C	5	9615	C	7
2575	C	6	3586	E	7	5551	B	8	9616	C	8
2576	C	7	3587	D	5	6551	C	4	9618	C	8
2577	B	6	3588	D	7	6552	C	4	9619	C	8
2578	B	8	3589	D	6	6553	F	2	9620	C	9
2579	B	6	3590	D	7	6554	D	5			
2580	B	7	3591	C	6	7551	D	8			
2581	B	6	3592	C	7	7552	B	7			
2582	B	7	3593	C	6	7553	D	4			
2583	D	7	3594	C	7	7554	D	6			
2584	C	6	3595	B	6	7555	D	3			
2585	C	7	3596	B	7	7556	C	2			
2586	C	6	3597	B	6	7557	C	2			
2587	C	6	3598	B	7	7558	C	2			
2589	E	4	3599	C	6	7559	D	3			
2590	E	4	3600	D	7	7560	C	5			
2591	C	4	3601	B	7	7561	D	5			
2592	C	4	3602	B	6	8551	D	1			
2593	C	4	3603	B	8	8557	A	6			
2594	C	4	3604	B	8	9550	C	3			
2595	D	4	3605	F	4	9551	B	2			
2596	D	4	3606	F	5	9554	D	3			
2597	D	4	3607	D	4	9555	E	3			
2598	D	5	3608	D	5	9557	D	3			
2599	D	4	3609	C	4	9558	B	3			
2600	D	4	3610	C	4	9559	F	3			
2601	D	3	3611	D	4	9560	F	3			
2602	E	3	3612	C	4	9563	F	3			
2603	B	2	3613	E	4	9564	E	4			
2604	B	3	3614	E	5	9565	C	4			
2605	D	4	3615	F	5	9566	E	4			
2606	D	5	3616	F	5	9567	C	3			
2607	E	4	3617	C	5	9568	B	3			
2608	C	4	3618	C	5	9569	B	4			
2610	B	8	3619	D	6	9570	B	4			
2611	E	4	3620	E	9	9574	B	4			
2612	E	5	3621	E	4	9575	B	4			


ANALOG FRONT
VOLUME PART
3104-217-25440 PUNT-3 FR330

ANALOG FRONT

0052
FROM SOURCE SELECTOR
B520 L
B521
B522 R
B523 -14 → -14.6
B524 +14 → +14.6
B525

14.6v
+14
3523 47E
2515 22n
2517 47u

BA88
2501
27n
3503 12k
3511 A 50k
3505 12k
3507 15k
2503 1n2
3541 4k7
3512 A 50k TREBLE
3543 4k7
2505 1u
3513 680E
2509 1n
7501 N-LM4560D
84.6v
0v
10v
3515 680k
2511 56p
3517 470E
2507 10u
3521 100E
3525 A 10k BALANCE

0051
TO VOLUME
B500
B501
B502
B503

-14.6v
-14
3524 47E
2518 22n
2518 47u

BA88
2502
27n
3504 12k
3511 B 50k
3506 12k
3508 15k
2504 1n2
3542 4k7
3512 B 50k TREBLE
3544 4k7
2506 1u
3514 680E
2510 1n
7501 N-LM4560D
84.6v
0v
10v
3516 680k
2512 56p
3518 470E
2508 10u
3522 100E
3525 B 10k BALANCE

14.6v
+14
3535 820E
8501 LT3P82A
14.6v
+14
3537 820E
8503 BZX79/09V
8502 LT3P82A

1505
FROM DIGITAL FRONT
B530 SURROUND
B529 DBB LOUDNESS
B528
B527
B526
1501 SURR
1502 DBB LOUDNESS

7505 BC548B
on +0.7v off 0v
3534 1k
7504 BC548B
on +0.7v off 0v
3536 1k
2521 47u

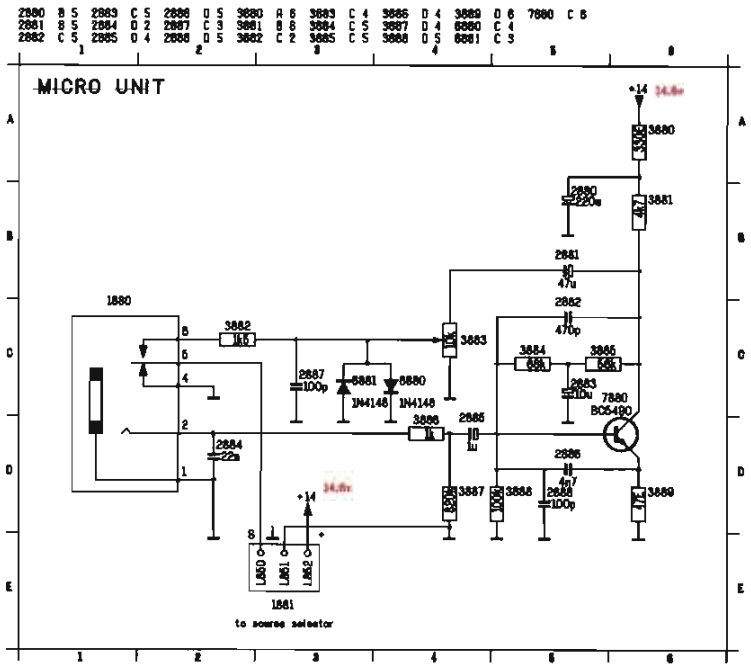
VOLUME PART

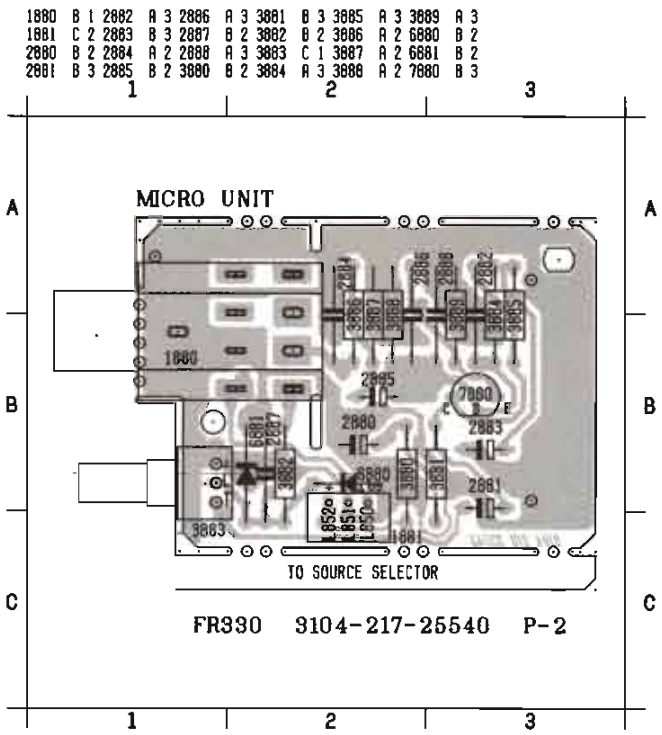
1504
TO DIGITAL FRONT
H532
H531
MOTOR

0051
TO ANALOG FRONT
H600
H601
H602
H603

3526 A 20k
3527 1k5
7502 BC338-40
3531 1k
off=0.7v on = 0v
2519 180n
TO POWER PANEL
H610 L
H611
H612 R
3529
6501 68mH

3526 B 20k
3528 1k5
7503 BC338-40
3532 1k
3533 100k
off=0.7v on = 0v
2520 180n
3530
6502 68mH

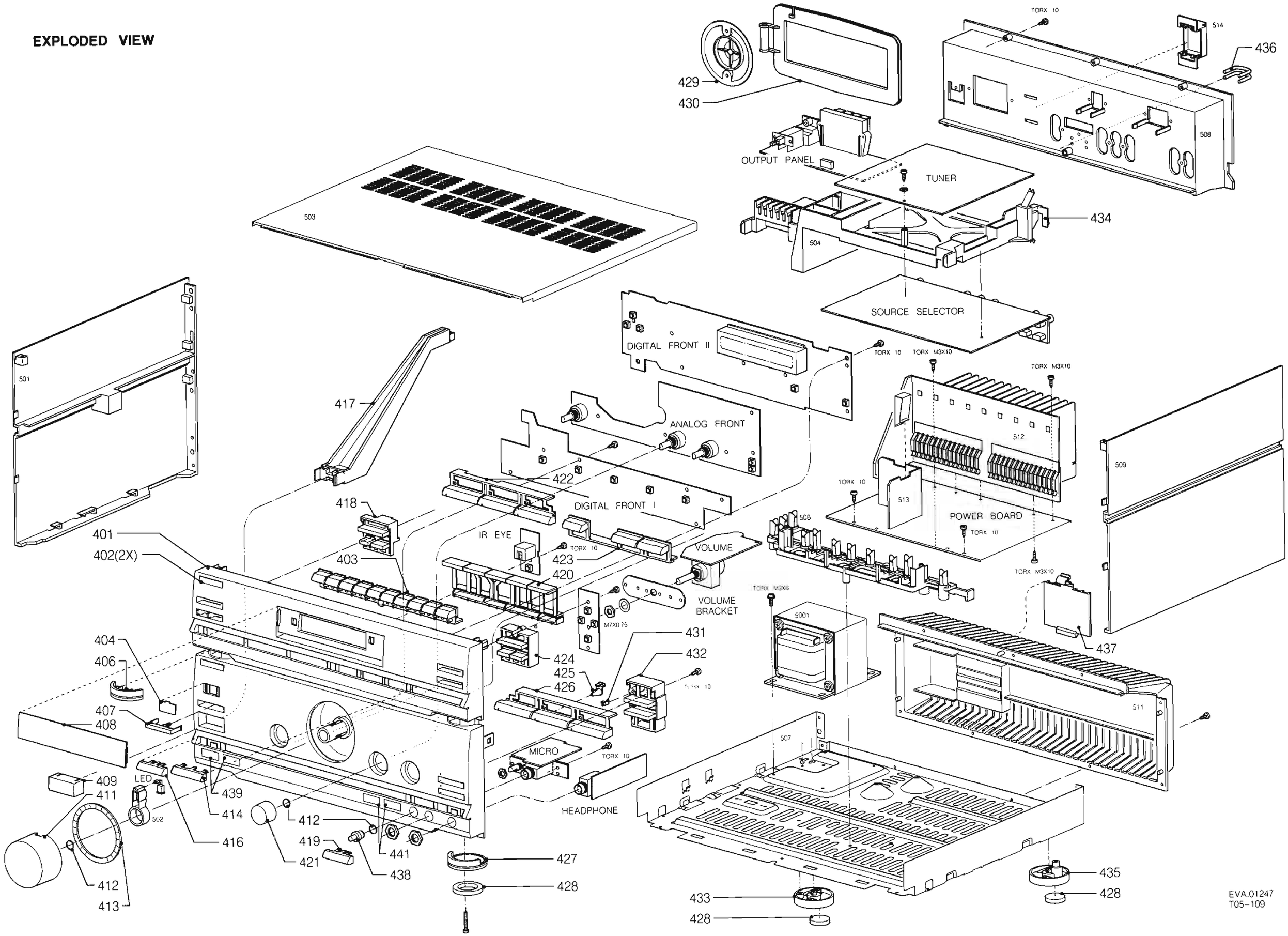




Mechanical Partslist

	4822 256 91755	DISPLAY HOLDER
401	4822 443 41003	FRONT PRINTED
402	4822 459 10887	WORDMARK "PHILIPS"
403	4822 410 61133	TUNER PRESET BUTTONS
404	4822 450 61675	WINDOW REMOTE
406	4822 462 71743	FOOT TUNER
407	4822 410 61099	BUTTON STAND BY
408	4822 450 61691	WINDOW TUNER
409	4822 410 61098	CAP POWER BUTTON
411	4822 411 61765	KNOB VOLUME
412	4822 492 63086	SPRING KNOB FIXATION
413	4822 450 61677	WINDOW VOLUME
414	4822 410 61131	FAKE BUTTON TUNER
416	4822 410 61132	FAKE BUTTON SELECTOR
417	4822 535 93188	POWER ROD
418	4822 417 11131	BUTTON WAVE BAND
419	4822 410 61132	FAKE BUTTON SELECTOR
420	4822 410 61134	BUTTONS TIMER
421	4822 413 51364	KNOB (BASS TREBLE BALANCE)
422	4822 410 61136	BUTTON PHONO/TUNER/CD
423	4822 410 61135	BUTTON MEMORY/FREQUENCY
424	4822 417 11134	BUTTON MONO/STEREO
425	4822 466 70717	LIGHT DIFFUSER SELECTOR
426	4822 410 61137	BUTTON TAPE/TV
427	4822 462 71744	FOOT AMPLIFIER
428	4822 462 41783	RUBBER FOOT BACK/FRONT
429	4822 462 71749	LOOP ANTENNA FOOT
430	4822 303 40055	FRAME AERIAL
431	4822 466 70716	LIGHT DIFFUSER SURROUND
432	4822 417 11132	BUTTON SURROUND
433	4822 462 41784	FOOT REARSIDE LEFT
434	4822 492 70854	EARTH SPRING
435	4822 462 41785	FOOT REARSIDE RIGHT
436	4822 404 21141	EQUALIZER BRIDGE
437	4822 426 60599	CAP BATTERY HOLDER
	4822 290 80901	BATTERY SPRING +/-
	4822 492 70868	BATTERY SPRING +
	4822 492 70869	BATTERY SPRING -
438	4822 410 61231	KNOB MICRO MIX
439	4822 410 61228	BUTTON SPEAKER A/B
441	4822 410 61229	BUTTON COPY TAPE/VCR

EXPLODED VIEW



MISCELLANEOUS

	4822 218 10413	IR REMOTE CONTROL
1101	4822 267 31128	COAX,ANTENNA 75 OHM
1102	4822 267 31306	TERMINAL (AM AERIAL)
1250	4822 071 54002	FUSE T4A
1251	4822 071 54002	FUSE T4A
1252	4822 071 53152	FUSE T3,5A
1253	4822 071 53152	FUSE T3,5A
1259	4822 071 51002	FUSE T1A
1260	4822 071 51002	FUSE T1A
1261	4822 071 51602	FUSE T1.6A
1262	4822 071 51602	FUSE T1.6A
1271	4822 276 13088	POWER SWITCH
1272	4822 267 31308	TERMINAL (2xSPEAKER)
1273	4822 265 20291	MAINS SOCKET
1282	4822 267 31347	PUSH TERMINAL
1400	4822 267 30968	PHONE SOCKET
1410	4822 276 13066	TACT SWITCH
1411	4822 276 13066	TACT SWITCH
1412	4822 276 13066	TACT SWITCH
1413	4822 276 13066	TACT SWITCH
1414	4822 276 13066	TACT SWITCH
1415	4822 276 13066	TACT SWITCH
1416	4822 276 13066	TACT SWITCH
1417	4822 276 13066	TACT SWITCH
1418	4822 276 13066	TACT SWITCH
1419	4822 276 13066	TACT SWITCH
1451	4822 130 90953	DISPLAY (FTD)
1461	4822 276 13066	TACT SWITCH
1462	4822 276 13066	TACT SWITCH
1463	4822 276 13066	TACT SWITCH
1464	4822 276 13066	TACT SWITCH
1465	4822 276 13066	TACT SWITCH
1466	4822 276 13066	TACT SWITCH
1467	4822 276 13066	TACT SWITCH
1468	4822 276 13066	TACT SWITCH
1469	4822 276 13066	TACT SWITCH
1470	4822 276 13066	TACT SWITCH
1471	4822 276 13066	TACT SWITCH
1472	4822 276 13066	TACT SWITCH
1473	4822 276 13066	TACT SWITCH
1474	4822 276 13066	TACT SWITCH
1475	4822 276 13066	TACT SWITCH
1476	4822 276 13066	TACT SWITCH
1477	4822 276 13066	TACT SWITCH
1478	4822 276 13066	TACT SWITCH
1479	4822 276 13066	TACT SWITCH
1480	4822 276 13066	TACT SWITCH
1481	4822 276 13066	TACT SWITCH
1482	4822 276 13066	TACT SWITCH
1483	4822 276 13066	TACT SWITCH
1484	4822 276 13066	TACT SWITCH
1485	4822 276 13066	TACT SWITCH
1501	4822 276 13066	TACT SWITCH
1502	4822 276 13066	TACT SWITCH
1551	4822 266 30293	CHINCH SOCKET
1552	4822 266 30293	CHINCH SOCKET
1554	4822 267 31307	CHINCH SOCKET
1561	4822 267 20416	CHINCH SOCKET PLATE
1880	4822 267 30968	PHONE SOCKET
5001	4822 146 30976	TRANSFORMER not /01
5001	4822 146 30987	TRANSFORMER only /01
5254	4822 280 70368	RELAY 36V
5255	4822 280 70368	RELAY 36V
5256	4822 280 70368	RELAY 36V

DIODES

4822 130 82489	GL2PR9 (LED red)	
4822 130 81643	BB804	
5322 130 31684	BB809	
4822 130 81673	1SV149(B)	
4822 130 34174	BZX79-C4V7	
4822 130 30621	1N4148	
4822 130 61219	BZX79-C10	
4822 130 30842	BAV21	
5322 130 34563	BZX79-C2V7	
4822 130 80235	BZX79-C3V3	
4822 130 34167	BZX79-C6V2	
5322 130 30684	1N4002	
4822 130 34281	BZX79-C15	
4822 130 82078	D5SBA20	
4822 130 82079	D3SBA20	
4822 130 32213	BYV28-50	
4822 130 34233	BZX79-B5V1	
5322 130 31504	BZX79-C20	
5322 130 32184	BYV27-50	
4822 130 31024	BZX79-C18	
4822 130 34379	BZX79-C27	
4822 130 31983	BAT85	
4822 130 81007	LED LT3P82A	
4822 130 30861	BZX79-C7V5	
4822 130 81254	IR-EYE	
4822 130 30862	BZX79-C9V1	
4822 130 31253	BZX79-C2V4	

TRANSISTORS

4822 130 60163	2SC1047	4822 130 44503	BC547C
4822 130 60093	2SA838B	4822 130 62269	BDT65C
4822 130 44154	BF199	4822 130 62268	BDT64
4822 130 40937	BC548B	5322 130 61575	BDT64C
5322 130 44779	BC338-40	4822 130 40959	BC547B
5322 130 41982	BC848 (CHIP)	4822 130 42629	BD331
4822 130 41024	BF245B	4822 130 41774	BD826
4822 130 44196	BC548C	4822 130 41715	BC328-40
4822 130 44197	BC558B	4822 130 40824	BD136
4822 130 41691	BC556B	4822 130 60784	BDT61
5322 130 44413	BF457	4822 130 44246	BC549C

INTEGRATED CIRCUITS

4822 209 72744	CXA1240P	4822 209 63727	TMP 47C870 N
4822 209 71321	AN7411	4822 209 62098	ST24C02CP
4822 209 71331	LM7000	4822 209 70157	NJM4560DD
4822 209 83274	NJM4560D	4822 209 72748	LC7821
4822 209 63667	BA6229 MOTOR DRIVER	4822 209 10263	HEF4052BP
4822 209 61522	PC74HCT4094P	5322 209 10576	HEF4053BP
5322 209 11268	PC74HCT164P		

COILS

5001	4822 157 63158	AM OSCILLATOR COIL	5111	4822 157 63163	FM IF COIL only /02
5101	4822 156 30947	RF COIL 1,5 TURNS	5112	4822 242 72976	QUARTZ 2,7MHz
5102	4822 156 30947	RF COIL 1,5 TURNS	5113	4822 157 60147	COIL 2,2uH
5103	4822 156 30947	RF COIL 1,5 TURNS	5114	4822 158 60509	BIRDY FILTER
5104	4822 157 60284	FM OSC COIL not /02	5115	4822 157 60147	COIL 2,2uH
5104	4822 157 63288	FM OSC COIL only /02	5116	4822 157 63032	LW AERIAL COIL
5105	4822 157 63031	AM OSC COIL not /02	5118	4822 152 20699	560uH
5105	4822 157 63158	AM OSC COIL only /02	5252	4822 157 62255	COIL 18,5 TURNS
5106	4822 157 53192	0,22uH	5253	4822 157 62255	COIL 18,5 TURNS
5107	4822 242 72096	CER.FILT.KIT 10,7MHz	5491	4822 242 80206	X-TAL 32,768kHz
5108	4822 157 63029	AM IF COIL	5492	4822 242 73769	CER.RES. 4,194MHz
5109	4822 242 71878	CERAM.RES. 450kHz	5501	4822 157 63209	68mH
5110	4822 157 63033	MW AERIAL not 2Band	5502	4822 157 63209	68mH
5110	4822 157 63159	MW AERIAL only 2Band	5551	4822 157 53123	100uH
5111	4822 157 63028	FM IF COIL not /02			

RESISTORS

3105	4822 050 23901	390R	1%	0,6W	3135	4822 050 22201	220R	2%	0,25W
3106	4822 116 52224	470R	5%	0,5W	3139	4822 050 24702	4k7	1%	0,6W
3107	4822 050 24702	4k7	1%	0,6W	3141	4822 050 21003	10k	2%	0,25W
3111	4822 050 24703	47k	1%	0,6W	3142	4822 050 22201	220R	2%	0,25W
3114	4822 100 11141	10k TRIM POT			3143	4822 050 22203	22k	1%	0,6W
3116	4822 050 22201	220R	2%	0,25W	3145	4822 100 11141	10k TRIM POT		
3120	4822 050 23903	39k	1%	0,6W	3147	4822 050 22201	220R	2%	0,25W
3125	4822 050 24702	4k7	1%	0,6W	3148	4822 050 21003	10k	2%	0,25W
3128	4822 050 24702	4k7	1%	0,6W	3149	4822 050 21002	1k	1%	0,6W
3131	4822 050 23301	330R	2%	0,25W	3150	4822 050 21002	1k	1%	0,6W
3132	4822 050 26801	680R	1%	0,6W	3151	4822 050 21002	1k	1%	0,6W
3134	4822 050 24702	4k7	1%	0,6W	3153	4822 050 21002	1k	1%	0,6W

RESISTORS

3171	4822	050	26801	680R	1%	0,6W	3303	4822	116	52224	470R	5%	0,5W
3173	4822	050	21002	1k	1%	0,6W	3304	4822	113	80525	0R15	10%	3W
3250	4822	050	22202	2k2	1%	0,6W	3305	4822	113	80525	0R15	10%	3W
3251	4822	050	22202	2k2	1%	0,6W	3306	4822	113	80525	0R15	10%	3W
3252	4822	050	24702	4k7	1%	0,6W	3307	4822	113	80525	0R15	10%	3W
3253	4822	050	24702	4k7	1%	0,6W	3308	4822	050	28203	82k	1%	0,6W
3254	4822	050	22202	2k2	1%	0,6W	3309	4822	050	28203	82k	1%	0,6W
3255	4822	050	22202	2k2	1%	0,6W	3310	4822	050	28203	82k	1%	0,6W
3256	4822	050	24702	4k7	1%	0,6W	3311	4822	050	22203	22k	1%	0,6W
3257	4822	050	24702	4k7	1%	0,6W	3312	4822	050	24703	47k	1%	0,6W
3258	4822	050	22203	22k	1%	0,6W	3313	4822	050	22203	22k	1%	0,6W
3259	4822	050	22203	22k	1%	0,6W	3314	4822	050	26803	68k	1%	0,6W
3260	4822	050	22203	22k	1%	0,6W	3315	4822	050	21501	150R	1%	0,6W
3261	4822	050	21003	10k	2%	0,25W	3316	4822	050	24702	4k7	1%	0,6W
3264	4822	050	21002	1k	1%	0,6W	3318	4822	050	21002	1k	1%	0,6W
3265	4822	050	21002	1k	1%	0,6W	3319	4822	050	21002	1k	1%	0,6W
3266	4822	050	21801	180R	1%	0,6W	3328	4822	116	52224	470R	5%	0,5W
3267	4822	050	21801	180R	1%	0,6W	3329	4822	116	52224	470R	5%	0,5W
3268	4822	050	22203	22k	1%	0,6W	3330	4822	050	21003	10k	2%	0,25W
3269	4822	050	22203	22k	1%	0,6W	3331	4822	050	21003	10k	2%	0,25W
3270	4822	053	10122	1k2	5%	1W	3332	4822	050	23302	3k3	1%	0,6W
3271	4822	053	10122	1k2	5%	1W	3333	4822	116	80562	10R	5%	NFR
3272	4822	052	10681	680R	5%	0,33W	3334	4822	050	22702	2k7	1%	0,6W
3273	4822	052	10681	680R	5%	0,33W	3335	4822	052	10229	22R	5%	0,33W
3274	4822	050	22202	2k2	1%	0,6W	3336	4822	050	21002	1k	1%	0,6W
3275	4822	050	22202	2k2	1%	0,6W	3337	4822	053	10109	10R	5%	1W
3276	4822	050	16809	68R	1%	0,4W	3338	4822	053	10109	10R	5%	1W
3277	4822	050	16809	68R	1%	0,4W	3339	4822	052	10108	1R	5%	0,33W
3278	4822	053	12152	1k5	5%	3W	3340	4822	050	22204	220k	1%	0,6W
3279	4822	053	12152	1k5	5%	3W	3341	4822	050	22204	220k	1%	0,6W
3280	4822	053	11152	1k5	5%	2W	3342	4822	116	80562	10R	5%	NFR
3281	4822	053	11152	1k5	5%	2W	3343	4822	116	80335	47R	5%	NFR
3282	4822	050	22202	2k2	1%	0,6W	3344	4822	050	21802	1k8	1%	0,6W
3283	4822	050	22202	2k2	1%	0,6W	3345	4822	050	21202	1k2	1%	0,6W
3284	4822	101	10927	470R	POTMETER		3352	4822	050	21002	1k	1%	0,6W
3285	4822	101	10927	470R	POTMETER		3353	4822	050	21002	1k	1%	0,6W
3286	4822	050	28201	820R	1%	0,6W	3354	4822	116	52224	470R	5%	0,5W
3287	4822	050	28201	820R	1%	0,6W	3355	4822	116	52224	470R	5%	0,5W
3288	4822	053	10302	3k	5%	1W	3358	4822	116	80311	4,7R	5%	NFR
3289	4822	053	10302	3k	5%	1W	3359	4822	116	80311	4,7R	5%	NFR
3290	4822	053	11222	2k2	5%	2W	3364	4822	050	22204	220k	1%	0,6W
3291	4822	053	11222	2k2	5%	2W	3365	4822	050	22204	220k	1%	0,6W
3294	4822	050	21801	180R	1%	0,6W	3368	4822	116	80562	10R	5%	NFR
3295	4822	050	21801	180R	1%	0,6W	3369	4822	116	80562	10R	5%	NFR
3296	4822	050	22201	220R	2%	0,25W	3370	4822	050	22203	22k	1%	0,6W
3297	4822	050	22201	220R	2%	0,25W	3371	4822	050	22203	22k	1%	0,6W
3298	4822	116	52224	470R	5%	0,5W	3372	4822	050	21003	10k	2%	0,25W
3299	4822	116	52224	470R	5%	0,5W	3373	4822	050	21003	10k	2%	0,25W
3300	4822	050	21003	10k	2%	0,25W	3374	4822	050	21003	10k	2%	0,25W
3301	4822	050	21003	10k	2%	0,25W	3377	4822	050	22203	22k	1%	0,6W
3302	4822	116	52224	470R	5%	0,5W	3378	4822	050	22203	22k	1%	0,6W

RESISTORS

3379	4822 050 22203	22k	1%	0,6W
3380	4822 116 80562	10R	5%	NFR
3381	4822 116 80562	10R	5%	NFR
3384	4822 050 21003	10k	2%	0,25W
3386	4822 116 52263	2k7	5%	0,5W
3401	4822 116 82366	2R2	5%	
3402	4822 053 10159	15R	5%	1W
3403	4822 050 22202	2k2	1%	0,6W
3410	4822 116 80311	4,7R	5%	NFR
3412	4822 116 80311	4,7R	5%	NFR
3413	4822 050 22201	220R	2%	0,25W
3414	4822 050 22201	220R	2%	0,25W
3415	4822 050 22201	220R	2%	0,25W
3416	4822 050 22201	220R	2%	0,25W
3417	4822 050 22201	220R	2%	0,25W
3418	4822 050 21002	1k	1%	0,6W
3419	4822 050 21002	1k	1%	0,6W
3420	4822 050 21002	1k	1%	0,6W
3421	4822 050 21002	1k	1%	0,6W
3424	4822 116 80562	10R	5%	NFR
3425	4822 050 22202	2k2	1%	0,6W
3426	4822 050 22201	220R	2%	0,25W
3427	4822 050 21003	10k	2%	0,25W
3428	4822 116 52234	100k	5%	0,5W
3429	4822 050 25603	56k	1%	0,6W
3430	4822 050 24702	4k7	1%	0,6W
3431	4822 050 22202	2k2	1%	0,6W
3432	4822 050 21003	10k	2%	0,25W
3434	4822 116 80311	4,7R	5%	NFR
3435	4822 116 80311	4,7R	5%	NFR
3436	4822 050 24702	4k7	1%	0,6W
3437	4822 050 24703	47k	1%	0,6W
3440	4822 050 24703	47k	1%	0,6W
3441	4822 050 24703	47k	1%	0,6W
3442	4822 050 24702	4k7	1%	0,6W
3443	4822 050 24703	47k	1%	0,6W
3444	4822 050 21803	18k	1%	0,6W
3445	4822 050 21003	10k	2%	0,25W
3446	4822 050 21003	10k	2%	0,25W
3447	4822 050 23301	330R	2%	0,25W
3451	4822 050 24703	47k	1%	0,6W
3452	4822 050 24703	47k	1%	0,6W
3453	4822 050 24702	4k7	1%	0,6W
3454	4822 050 24703	47k	1%	0,6W
3455	4822 050 21803	18k	1%	0,6W
3456	4822 050 21003	10k	2%	0,25W
3457	4822 050 21003	10k	2%	0,25W
3458	4822 050 21003	10k	2%	0,25W
3459	4822 050 21003	10k	2%	0,25W
3461	4822 050 24702	4k7	1%	0,6W
3462	4822 050 24702	4k7	1%	0,6W
3463	4822 050 24702	4k7	1%	0,6W
3464	4822 050 24702	4k7	1%	0,6W
3465	4822 050 24702	4k7	1%	0,6W
3466	4822 050 24702	4k7	1%	0,6W
3467	4822 050 21003	10k	2%	0,25W
3468	4822 050 22704	270k	1%	0,6W
3471	4822 050 21002	1k	1%	0,6W
3472	4822 050 21002	1k	1%	0,6W
3473	4822 050 21002	1k	1%	0,6W
3474	4822 050 21002	1k	1%	0,6W
3475	4822 050 21002	1k	1%	0,6W
3476	4822 050 21002	1k	1%	0,6W
3477	4822 050 21002	1k	1%	0,6W
3478	4822 050 21002	1k	1%	0,6W
3479	4822 116 52234	100k	5%	0,5W
3481	4822 050 24702	4k7	1%	0,6W
3482	4822 050 24702	4k7	1%	0,6W
3483	4822 050 24702	4k7	1%	0,6W
3484	4822 050 24702	4k7	1%	0,6W
3485	4822 050 21002	1k	1%	0,6W
3486	4822 050 21002	1k	1%	0,6W
3487	4822 050 24702	4k7	1%	0,6W
3488	4822 050 24702	4k7	1%	0,6W
3489	4822 050 24702	4k7	1%	0,6W
3490	4822 050 24702	4k7	1%	0,6W
3491	4822 050 21002	1k	1%	0,6W
3492	4822 050 21002	1k	1%	0,6W
3493	4822 050 21002	1k	1%	0,6W
3494	4822 050 21002	1k	1%	0,6W
3496	4822 113 80571	470R		
3497	4822 050 28209	82R	1%	0,6W
3498	4822 113 80571	470R		
3499	4822 050 28209	82R	1%	0,6W
3503	4822 050 21203	12k	1%	0,6W
3504	4822 050 21203	12k	1%	0,6W
3505	4822 050 21203	12k	1%	0,6W
3506	4822 050 21203	12k	1%	0,6W
3507	4822 116 52244	15k	5%	0,5W
3508	4822 116 52244	15k	5%	0,5W
3511	4822 102 10422	POTMETER 2x 50k		
3512	4822 102 10422	POTMETER 2x 50k		
3515	4822 050 25604	560k	1%	0,6W
3516	4822 050 25604	560k	1%	0,6W
3517	4822 116 52224	470R	5%	0,5W
3518	4822 116 52224	470R	5%	0,5W
3523	4822 116 80335	47R	5%	NFR
3524	4822 116 80335	47R	5%	NFR
3525	4822 102 10413	POTMETER 2x 10k		
3526	4822 102 10414	POTM. 2x20kB		
3527	4822 050 21502	1k5	1%	0,6W
3528	4822 050 21502	1k5	1%	0,6W

RESISTORS

3529	4822 050 24702	4k7	1%	0,6W
3530	4822 050 24702	4k7	1%	0,6W
3531	4822 050 21002	1k	1%	0,6W
3532	4822 050 21002	1k	1%	0,6W
3533	4822 116 52234	100k	5%	0,5W
3534	4822 050 21002	1k	1%	0,6W
3535	4822 050 28201	820R	1%	0,6W
3536	4822 050 21002	1k	1%	0,6W
3537	4822 050 28201	820R	1%	0,6W
3541	4822 050 24702	4k7	1%	0,6W
3542	4822 050 24702	4k7	1%	0,6W
3543	4822 050 24702	4k7	1%	0,6W
3544	4822 050 24702	4k7	1%	0,6W
3551	4822 050 23901	390R	1%	0,6W
3552	4822 050 23901	390R	1%	0,6W
3553	4822 116 52272	330k	5%	0,5W
3554	4822 116 52272	330k	5%	0,5W
3555	4822 050 25603	56k	1%	0,6W
3556	4822 050 25603	56k	1%	0,6W
3557	4822 050 23901	390R	1%	0,6W
3558	4822 050 23901	390R	1%	0,6W
3563	4822 116 52272	330k	5%	0,5W
3564	4822 116 52272	330k	5%	0,5W
3565	4822 116 52264	27k	5%	0,5W
3566	4822 116 52264	27k	5%	0,5W
3567	4822 116 52303	8k2	5%	0,5W
3568	4822 116 52303	8k2	5%	0,5W
3569	4822 116 52244	15k	5%	0,5W
3570	4822 116 52244	15k	5%	0,5W
3571	4822 116 80335	47R	5%	NFR
3572	4822 116 80335	47R	5%	NFR
3573	4822 116 52264	27k	5%	0,5W
3574	4822 116 52264	27k	5%	0,5W
3575	4822 050 21304	130k	1%	0,6W
3576	4822 050 21304	130k	1%	0,6W
3577	4822 050 23603	36k	1%	0,6W
3578	4822 050 23603	36k	1%	0,6W
3579	4822 050 22203	22k	1%	0,6W
3580	4822 050 22203	22k	1%	0,6W
3581	4822 050 26803	68k	1%	0,6W
3582	4822 050 26803	68k	1%	0,6W
3583	4822 050 22203	22k	1%	0,6W
3584	4822 050 22203	22k	1%	0,6W
3585	4822 050 21803	18k	1%	0,6W
3586	4822 050 21803	18k	1%	0,6W
3587	4822 050 26801	680R	1%	0,6W
3588	4822 050 26801	680R	1%	0,6W
3589	4822 116 52234	100k	5%	0,5W
3590	4822 116 52234	100k	5%	0,5W
3591	4822 050 22203	22k	1%	0,6W
3592	4822 050 22203	22k	1%	0,6W
3593	4822 116 52234	100k	5%	0,5W
3594	4822 116 52234	100k	5%	0,5W
3595	4822 050 26803	68k	1%	0,6W
3596	4822 050 26803	68k	1%	0,6W
3599	4822 116 52234	100k	5%	0,5W
3600	4822 116 52234	100k	5%	0,5W
3601	4822 116 80335	47R	5%	NFR
3602	4822 116 80335	47R	5%	NFR
3603	4822 050 24702	4k7	1%	0,6W
3604	4822 050 24702	4k7	1%	0,6W
3605	4822 116 52234	100k	5%	0,5W
3606	4822 116 52234	100k	5%	0,5W
3607	4822 050 21003	10k	2%	0,25W
3608	4822 050 21003	10k	2%	0,25W
3609	4822 116 52224	470R	5%	0,5W
3610	4822 116 52224	470R	5%	0,5W
3611	4822 116 80335	47R	5%	NFR
3612	4822 116 80335	47R	5%	NFR
3613	4822 050 21002	1k	1%	0,6W
3614	4822 050 21002	1k	1%	0,6W
3615	4822 116 52224	470R	5%	0,5W
3616	4822 116 52224	470R	5%	0,5W
3617	4822 116 52217	270R	5%	0,5W
3618	4822 116 52217	270R	5%	0,5W
3619	4822 050 23302	3k3	1%	0,6W
3620	4822 050 28209	82R	1%	0,6W
3621	4822 116 52234	100k	5%	0,5W
3622	4822 116 52234	100k	5%	0,5W
3623	4822 050 21003	10k	2%	0,25W
3624	4822 116 52234	100k	5%	0,5W
3823	4822 050 21005	1M	1%	0,6W
3824	4822 050 21005	1M	1%	0,6W
3827	4822 050 21005	1M	1%	0,6W
3828	4822 050 21005	1M	1%	0,6W
3831	4822 050 26801	680R	1%	0,6W
3832	4822 050 26801	680R	1%	0,6W
3833	4822 116 52234	100k	5%	0,5W
3834	4822 116 52234	100k	5%	0,5W
3835	4822 050 24702	4k7	1%	0,6W
3836	4822 050 24702	4k7	1%	0,6W
3837	4822 050 23902	3k9	1%	0,6W
3838	4822 050 23902	3k9	1%	0,6W
3841	4822 050 26801	680R	1%	0,6W
3842	4822 050 26801	680R	1%	0,6W
3843	4822 116 52234	100k	5%	0,5W
3844	4822 116 52234	100k	5%	0,5W
3845	4822 050 22202	2k2	1%	0,6W
3846	4822 050 24702	4k7	1%	0,6W
3847	4822 050 22202	2k2	1%	0,6W
3848	4822 050 24702	4k7	1%	0,6W
3849	4822 050 22202	2k2	1%	0,6W

RESISTORS

3850	4822 050 24702	4k7	1%	0,6W
3851	4822 116 52234	100k	5%	0,5W
3852	4822 116 52234	100k	5%	0,5W
3853	4822 050 21002	1k	1%	0,6W
3854	4822 050 21002	1k	1%	0,6W
3855	4822 050 21006	10M	1%	0,6W
3856	4822 050 24703	47k	1%	0,6W
3880	4822 050 23301	330R	2%	0,25W
3881	4822 050 24702	4k7	1%	0,6W
3882	4822 050 21502	1k5	1%	0,6W
3883	4822 100 20841	10K		
3884	4822 050 26803	68k	1%	0,6W
3885	4822 050 25603	56k	1%	0,6W
3886	4822 050 21002	1k	1%	0,6W
3887	4822 050 28204	820k	1%	0,6W
3888	4822 116 52234	100k	5%	0,5W
3889	4822 050 14709	47R	1%	0,4W

CHIP RESISTORS

3101	4822 051 20473	47k	5%	0,1W
3102	4822 051 20333	33k	5%	0,1W
3103	4822 051 10472	4k7	2%	0,25W
3104	4822 051 10102	1k	2%	0,25W
3108	4822 051 10122	1k2	2%	0,25W
3109	4822 051 10101	100R	2%	0,25W
3110	4822 051 10101	100R	2%	0,25W
3112	4822 051 20562	5k6	5%	0,1W
3112	4822 051 20008	CHIP JUMPER		
3113	4822 051 20689	68R	5%	0,1W
3115	4822 051 10479	47R		
3117	4822 051 10103	10k	2%	0,25W
3118	4822 051 20271	270R	5%	0,1W
3119	4822 051 20273	27k	5%	0,1W
3121	4822 051 20104	100k	5%	0,1W
3122	4822 051 10272	2k7	2%	0,25W
3124	4822 051 10008	JUMPER		
3126	4822 051 10472	4k7	2%	0,25W
3127	4822 051 20472	4k7	5%	0,1W
3129	4822 051 20104	100k	5%	0,1W
3130	4822 051 20104	100k	5%	0,1W
3133	4822 051 20223	22k	5%	0,1W
3136	4822 051 10153	15k	2%	0,25W
3137	4822 051 20562	5k6	5%	0,1W
3138	4822 051 20472	4k7	5%	0,1W
3140	4822 051 10102	1k	2%	0,25W
3144	4822 051 20183	18k	5%	0,1W
3146	4822 051 10821	820R	2%	0,25W
3155	4822 051 20332	3k3	5%	0,1W
3156	4822 051 10103	10k	2%	0,25W
3157	4822 051 10008	JUMPER		
3158	4822 051 20104	100k	5%	0,1W
3160	4822 051 10008	JUMPER		
3161	4822 051 20473	47k	5%	0,1W
3162	4822 051 20479	47R	5%	0,1W
3163	4822 051 20562	5k6	5%	0,1W
3164	4822 051 20008	CHIP JUMPER		
3165	4822 051 20473	47k	5%	0,1W
3170	4822 051 10008	JUMPER		
3172	4822 051 20223	22k	5%	0,1W
3174	4822 051 10102	1k	2%	0,25W
3175	4822 051 10331	330R	2%	0,25W
3176	4822 051 20271	270R	5%	0,1W
3177	4822 051 10151	150R	2%	0,25W
3178	4822 051 20223	22k	5%	0,1W
3179	4822 051 10472	4k7	2%	0,25W
3292	4822 051 10101	100R	2%	0,25W
3293	4822 051 10101	100R	2%	0,25W
3356	4822 051 10101	100R	2%	0,25W
3357	4822 051 10101	100R	2%	0,25W
3385	4822 051 10101	100R	2%	0,25W
3513	4822 051 10561	560R	2%	0,25W
3514	4822 051 10561	560R	2%	0,25W
3521	4822 051 10101	100R	2%	0,25W
3522	4822 051 10101	100R	2%	0,25W
3559	4822 051 10101	100R	2%	0,25W
3560	4822 051 10101	100R	2%	0,25W
3561	4822 051 10561	560R	2%	0,25W
3562	4822 051 10561	560R	2%	0,25W
3597	4822 051 10561	560R	2%	0,25W
3598	4822 051 10561	560R	2%	0,25W
3821	4822 051 10182	1k8	2%	0,25W
3822	4822 051 10182	1k8	2%	0,25W
3825	4822 051 10182	1k8	2%	0,25W
3826	4822 051 10182	1k8	2%	0,25W
3829	4822 051 10182	1k8	2%	0,25W
3830	4822 051 10182	1k8	2%	0,25W
3839	4822 051 10182	1k8	2%	0,25W
3840	4822 051 10182	1k8	2%	0,25W

CAPACITORS

2100	4822 122 31555	120pF	5%	50V
2101	4822 122 10179	33pF	5%	50V
2103	4822 125 50355	4,2-20pF VARIABLE		
2109	4822 125 50355	4,2-20pF VARIABLE		
2111	4822 125 60102	30pF VAR not /02		
2111	4822 125 50355	4,2-20pF only /02		
2115	5322 122 32481	15pF	5%	50V
2116	5322 122 32481	15pF	5%	50V

CAPACITORS

2119	4822 124 41554	220uF 20%	10V
2121	4822 122 31435	470pF 10%	50V
2122	4822 122 31385	22pF 5%	50V
2123	4822 122 31555	120pF 5%	50V
2130	4822 124 40178	100uF 20%	10V
2131	4822 124 40244	2,2uF 20%	63V
2134	5322 121 50999	470pF not 2 Band	
2134	4822 121 51381	560pF only 2 Band	
2135	4822 121 43253	360pF 1%	400V
2136	4822 125 60101	10pF VARIABLE	
2137	4822 122 10436	6,8pF 10%	50V
2139	4822 122 10166	22nF 30%	16V
2141	4822 122 31385	22pF 5%	50V
2144	4822 124 41554	220uF 20%	10V
2146	4822 122 32096	4,7pF 10%	50V
2150	4822 121 42408	220nF 5%	63V
2151	4822 125 60101	10pF VAR not 2 Band	
2151	4822 125 60102	30pF VAR only 2 Band	
2152	4822 121 43861	56pF 1%	63V
2154	4822 121 42408	220nF 5%	63V
2155	4822 124 41631	1,5uF 20%	50V
2158	4822 124 40196	220uF 20%	16V
2161	4822 124 40246	4,7uF 20%	63V
2163	4822 122 10173	820pF 10%	50V
2165	4822 124 40242	1uF 20%	63V
2167	4822 124 41643	100uF 20%	16V
2168	5322 121 50999	470pF 1%	400V
2170	4822 124 40239	0,47uF 20%	63V
2172	4822 124 42129	0,22uF 20%	63V
2173	4822 124 40246	4,7uF 20%	63V
2176	4822 124 40242	1uF 20%	63V
2177	4822 124 40242	1uF 20%	63V
2180	5322 122 32965	18pF 5%	50V
2181	5322 122 32481	15pF 5%	50V
2182	4822 124 40242	1uF 20%	63V
2198	5322 122 32481	15pF 5%	50V
2204	4822 122 32596	TRIM CAP 5,2pF-30pF	
2205	4822 125 60102	30pF VARIABLE	
2209	5322 122 32481	15pF 5%	50V
2250	4822 124 40242	1uF 20%	63V
2251	4822 124 40242	1uF 20%	63V
2254	4822 122 10172	220pF 10%	50V
2255	4822 122 10172	220pF 10%	50V
2256	4822 122 31435	470pF 10%	50V
2257	4822 122 31435	470pF 10%	50V
2258	4822 124 41554	220uF 20%	10V
2259	4822 124 41554	220uF 20%	10V
2260	4822 124 41643	100uF 20%	16V
2261	4822 124 41643	100uF 20%	16V
2262	4822 122 10183	100pF 5%	50V
2263	4822 122 10183	100pF 5%	50V
2264	4822 126 11307	180pF 10%	500V
2265	4822 126 11307	180pF 10%	500V
2266	4822 122 31693	560pF 10%	50V
2267	4822 122 31693	560pF 10%	50V
2268	4822 122 10173	820pF 10%	50V
2269	4822 122 10173	820pF 10%	50V
2270	4822 124 42151	100uF 20%	50V
2271	4822 124 42151	100uF 20%	50V
2272	4822 122 31435	470pF 10%	50V
2273	4822 122 31435	470pF 10%	50V
2274	4822 126 11308	47pF 5%	500V
2275	4822 126 11308	47pF 5%	500V
2276	4822 124 40178	100uF 20%	10V
2277	4822 124 40178	100uF 20%	10V
2278	4822 124 41596	22uF 20%	50V
2279	4822 124 41596	22uF 20%	50V
2280	4822 122 10183	100pF 5%	50V
2281	4822 122 10183	100pF 5%	50V
2284	5322 121 42491	47nF 5%	100V
2285	5322 121 42491	47nF 5%	100V
2286	4822 126 11311	4,7nF	50V
2287	4822 126 11311	4,7nF	50V
2288	4822 126 11311	4,7nF	50V
2289	4822 126 11311	4,7nF	50V
2292	4822 124 40242	1uF 20%	63V
2293	4822 124 40248	10uF 20%	63V
2296	4822 124 40749	3,3uF 20%	63V
2303	4822 121 43875	47nF 5%	250V
2305	4822 124 41998	2200uF 20%	50V
2306	4822 124 41998	2200uF 20%	50V
2307	4822 121 43875	47nF 5%	250V
2309	4822 121 43875	47nF 5%	250V
2310	4822 121 42007	100nF 10%	100V
2311	4822 121 42007	100nF 10%	100V
2312	4822 121 42007	100nF 10%	100V
2313	5322 121 42491	47nF 5%	100V
2314	5322 121 42491	47nF 5%	100V
2315	5322 121 42491	47nF 5%	100V
2316	4822 124 42157	680uF 20%	50V
2317	5322 124 21189	100uF 20%	40V
2318	4822 124 41643	100uF 20%	16V
2319	4822 122 10158	1nF 10%	50V
2320	4822 124 41994	3300uF 20%	16V
2321	4822 122 10166	22nF 30%	16V
2322	4822 124 40433	47uF 20%	25V
2323	4822 124 40242	1uF 20%	63V
2324	4822 124 40242	1uF 20%	63V
2326	4822 124 42154	4800uF 20%	80V
2327	4822 124 42154	4800uF 20%	80V
2328	4822 122 10158	1nF 10%	50V
2329	4822 122 10158	1nF 10%	50V

CAPACITORS

2330	4822 124 42125	1000uF	20%	50V
2331	4822 124 40433	47uF	20%	25V
2333	4822 122 10158	1nF	10%	50V
2401	4822 124 41678	22uF	20%	25V
2402	4822 122 10177	10nF	20%	25V
2410	4822 122 10166	22nF	30%	16V
2412	4822 122 10166	22nF	30%	16V
2413	4822 122 31435	470pF	10%	50V
2414	4822 122 31435	470pF	10%	50V
2424	4822 124 21694	1000uF	20%	10V
2425	4822 124 40248	10uF	20%	63V
2426	4822 121 42408	220nF	5%	63V
2427	4822 122 10177	10nF	20%	25V
2428	4822 122 10166	22nF	30%	16V
2429	4822 124 40244	2,2uF	20%	63V
2430	4822 122 10166	22nF	30%	16V
2431	4822 121 51252	470nF	5%	63V
2434	4822 121 51252	470nF	5%	63V
2435	4822 121 51252	470nF	5%	63V
2441	4822 122 10166	22nF	30%	16V
2451	4822 122 90099	CAP NETWORK 8x100pF		
2452	4822 122 10183	100pF	5%	50V
2456	4822 122 31435	470pF	10%	50V
2457	4822 122 31435	470pF	10%	50V
2458	4822 122 31435	470pF	10%	50V
2459	4822 122 31435	470pF	10%	50V
2461	4822 122 10166	22nF	30%	16V
2462	4822 122 31435	470pF	10%	50V
2481	4822 122 10166	22nF	30%	16V
2491	4822 122 31385	22pF	5%	50V
2492	4822 122 31385	22pF	5%	50V
2501	4822 121 43187	27nF	10%	63V
2502	4822 121 43187	27nF	10%	63V
2503	4822 122 10185	1,2nF	10%	50V
2504	4822 122 10185	1,2nF	10%	50V
2505	4822 124 40242	1uF	20%	63V
2506	4822 124 40242	1uF	20%	63V
2507	4822 124 40248	10uF	20%	63V
2508	4822 124 40248	10uF	20%	63V
2509	4822 126 11183	1nF	20%	50V
2510	4822 126 11183	1nF	20%	50V
2511	4822 122 33997	56pF	5%	
2512	4822 122 33997	56pF	5%	
2515	4822 122 10166	22nF	30%	16V
2516	4822 122 10166	22nF	30%	16V
2517	4822 124 41506	47uF	20%	16V
2518	4822 124 41506	47uF	20%	16V
2519	4822 121 51356	180nF	10%	63V
2520	4822 121 51356	180nF	10%	63V
2521	4822 124 22794	47uF	20%	10V
2551	4822 122 10183	100pF	5%	50V
2552	4822 122 10183	100pF	5%	50V
2553	4822 122 10183	100pF	5%	50V
2554	4822 122 10183	100pF	5%	50V
2555	4822 122 10158	1nF	10%	50V
2556	4822 122 10158	1nF	10%	50V
2557	4822 124 40242	1uF	20%	63V
2558	4822 124 40242	1uF	20%	63V
2559	4822 124 40248	10uF	20%	63V
2560	4822 124 40248	10uF	20%	63V
2561	4822 124 40248	10uF	20%	63V
2562	4822 124 40248	10uF	20%	63V
2563	4822 122 10177	10nF	20%	25V
2564	4822 122 10177	10nF	20%	25V
2565	4822 126 11309	2,7nF	10%	50V
2566	4822 126 11309	2,7nF	10%	50V
2567	4822 122 10166	22nF	30%	16V
2568	4822 122 10166	22nF	30%	16V
2569	4822 124 41506	47uF	20%	16V
2570	4822 124 41506	47uF	20%	16V
2571	4822 124 41506	47uF	20%	16V
2572	4822 124 41506	47uF	20%	16V
2573	4822 122 10166	22nF	30%	16V
2574	4822 122 10166	22nF	30%	16V
2575	4822 124 40248	10uF	20%	63V
2576	4822 124 40248	10uF	20%	63V
2577	4822 124 40248	10uF	20%	63V
2578	4822 124 40248	10uF	20%	63V
2579	4822 122 10215	27pF	5%	50V
2580	4822 122 10215	27pF	5%	50V
2581	4822 122 10158	1nF	10%	50V
2582	4822 122 10158	1nF	10%	50V
2583	4822 122 10166	22nF	30%	16V
2584	4822 122 10166	22nF	30%	16V
2585	4822 124 41506	47uF	20%	16V
2586	4822 124 41506	47uF	20%	16V
2587	4822 126 10003	33nF	30%	50V
2589	4822 124 40242	1uF	20%	63V
2590	4822 124 40242	1uF	20%	63V
2591	4822 124 40248	10uF	20%	63V
2592	4822 124 40248	10uF	20%	63V
2593	4822 124 41506	47uF	20%	16V
2594	4822 124 41506	47uF	20%	16V
2595	4822 122 10166	22nF	30%	16V
2596	4822 122 10166	22nF	30%	16V
2597	4822 122 10158	1nF	10%	50V
2598	4822 122 10158	1nF	10%	50V
2599	4822 122 10183	100pF	5%	50V
2600	4822 122 10183	100pF	5%	50V
2601	4822 122 10166	22nF	30%	16V
2602	4822 122 10166	22nF	30%	16V
2603	4822 122 10166	22nF	30%	16V

CAPACITORS

2604	4822	122	10166	22nF	30%	16V	2616	4822	122	10158	1nF	10%	50V
2605	4822	122	10176	4,7nF	10%	50V	2880	4822	124	22263	220uF	20%	25V
2606	4822	122	10176	4,7nF	10%	50V	2881	4822	124	22794	47uF	20%	10V
2607	4822	124	40242	1uF	20%	63V	2882	4822	122	31435	470pF	10%	50V
2608	4822	124	22794	47uF	20%	10V	2883	4822	124	40248	10uF	20%	63V
2610	4822	124	41506	47uF	20%	16V	2884	4822	122	10166	22nF	30%	16V
2611	4822	122	31435	470pF	10%	50V	2885	4822	124	40242	1uF	20%	63V
2612	4822	122	31435	470pF	10%	50V	2886	4822	126	11311	4,7nF		50V
2613	4822	122	10176	4,7nF	10%	50V	2887	4822	122	10183	100pF	5%	50V
2614	4822	126	11183	1nF	20%	50V	2888	4822	122	10183	100pF	5%	50V
2615	4822	126	11183	1nF	20%	50V							

CHIP CAPACITORS

2102	5322	122	32448	10pF	5%	50V	2148	4822	122	31727	470pF	5%	63V
2104	5322	122	32658	22pF	5%	50V	2149	5322	122	33537	1,2pF	5%	63V
2105	5322	122	32531	100pF	5%	50V	2153	5322	122	32654	22nF	10%	63V
2106	4822	122	31727	470pF	5%	63V	2156	4822	122	33339	4,7nF	10%	50V
2107	4822	122	31727	470pF	5%	63V	2157	4822	122	33339	4,7nF	10%	50V
2108	4822	122	31727	470pF	5%	63V	2159	5322	122	32654	22nF	10%	63V
2110	4822	122	32765	820pF	10%	63V	2160	4822	122	31727	470pF	5%	63V
2112	4822	122	31727	470pF	5%	63V	2162	4822	122	31727	470pF	not	/02
2113	4822	122	31727	470pF	5%	63V	2162	4822	122	32142	270pF	only	/02
2114	4822	122	32765	820pF	10%	63V	2164	5322	122	34099	470pF	not	/02
2115	5322	122	32448	10pF	5%	50V	2164	4822	122	33173	560pF	only	/02
2116	5322	122	32658	22pF	5%	50V	2166	5322	122	32654	22nF	10%	63V
2117	5322	122	32661	56pF	not	/02	2169	5322	122	32654	22nF	10%	63V
2117	4822	122	32139	12pF	only	/02	2171	4822	122	31727	470pF	5%	63V
2118	4822	122	32507	6,8pF	not	/02	2174	4822	122	33543	15nF	10%	
2118	4822	122	31971	10pF	only	/02	2175	4822	122	33543	15nF	10%	
2120	5322	122	32654	22nF	10%	63V	2178	4822	122	33173	560pF	10%	63V
2124	4822	122	31727	470pF	5%	63V	2179	5322	122	32654	22nF	10%	63V
2125	5322	122	32966	39pF	not	/02	2183	4822	122	32927	220nF	10%	63V
2125	5322	122	33538	150pF	only	/02	2184	4822	122	31727	470pF	5%	63V
2126	5322	122	32966	39pF	not	/02	2185	4822	122	32765	820pF	10%	63V
2126	5322	122	33538	150pF	only	/02	2186	4822	122	31727	470pF	5%	63V
2127	5322	122	32654	22nF	10%	63V	2187	4822	122	31727	470pF	5%	63V
2128	5322	122	32661	56pF	5%	50V	2188	4822	122	31727	470pF	5%	63V
2129	5322	122	32654	22nF	10%	63V	2192	4822	122	32927	220nF	10%	63V
2132	5322	122	34123	1nF	10%	50V	2193	4822	122	32765	820pF	10%	63V
2133	4822	122	31825	27pF	10%	50V	2195	4822	122	32927	220nF	10%	63V
2138	4822	122	32482	22pF	5%	63V	2196	5322	122	32268	470pF	10%	50V
2140	4822	122	32927	220nF	10%	63V	2197	4822	122	32765	820pF	10%	63V
2142	5322	122	32452	47pF	5%	50V	2199	5322	122	33538	150pF	5%	63V
2143	5322	122	32452	47pF	5%	50V	2200	5322	122	31647	1nF	10%	63V
2145	4822	122	32765	820pF	10%	63V	2201	4822	122	32927	220nF	10%	63V
2147	5322	122	32268	470pF	10%	50V	2210	5322	122	32268	470pF	10%	50V
2148	5322	122	32268	470pF	10%	50V							