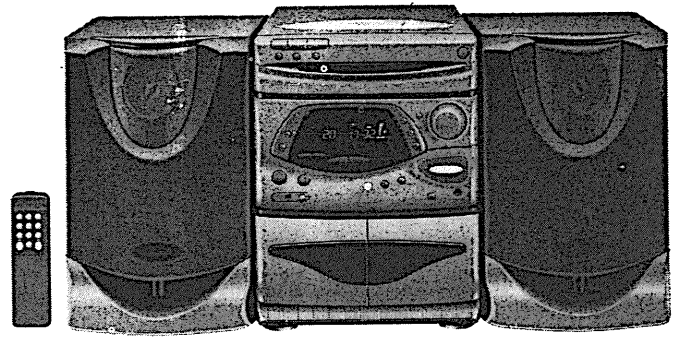


Service  
Service  
**Service**

←  
Volta ao Menu



# Service Manual

Índice	Página
Especificações .....	02
Instruções de desmontagem .....	04
Programa de testes de serviço .....	07
Diagrama em blocos .....	11
Diagrama de fiação .....	13
PAINEL FRONTAL .....	15
Observação sobre painel MTF .....	27
Lista de peças do Tape-deck .....	27
Lista de peças mecânicas .....	28
Vistas explodidas dos aparelhos .....	29

Para os demais painéis vide tabela abaixo:

PAINEL	MANUAL	FW352C	FW332
AF2 (v1.0)	4806 725 27020	X	X
CD-SL (v1.0)	4806 725 27023		X
CDC3 (v1.0)	4806 725 27024	X	
KARAOKE (v1.0)	4806 725 27026	X	X
MTF (DECK) (v1.0)	4806 725 27027	X	X
POWER 12W / 18W (v1.0)	4806 725 27028	X	X
TUNER ECO5 (v1.0)	4806 725 27029	X	X



## Especificações Técnicas

### Generalidades:

Tensão de alimentação	: 120 - 230 V
Frequência de alimentação	: 50 - 60 Hz
Consumo	: 28 Wmax @ 1/8 Pot. total especificada

### Amplificador:

Potência de saída	: 2 x 12 W @ 3 $\Omega$
Fone de ouvido	: Jack stereo 3,5 mm
Resposta em frequência	: 40 Hz - 20 KHz ( -3 dB )
Dynamic Bass Boost ( DBB )	: + 8 dB $\pm$ 1 dB @ 100 Hz
Sensibilidade da entrada Aux / Line	: 400 mV $\pm$ 2 dB
Sensibilidade da entrada Microphone	: 2,5 mV $\pm$ 2 dB

### Sintonizador:

#### FM

Faixa de sintonia	: 87,5 MHz - 108 MHz
Passo	: 100 KHz
FI	: 10,7 MHz
Sensibilidade Mono ( 26 dB S/N )	: < 7 $\mu$ V

#### MW

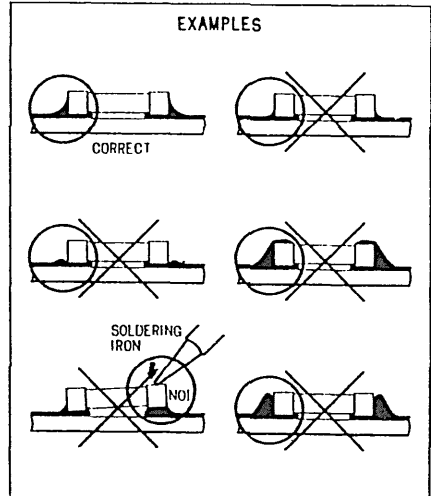
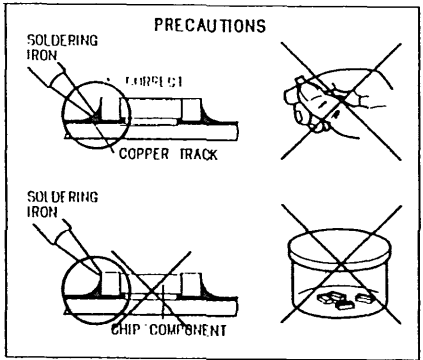
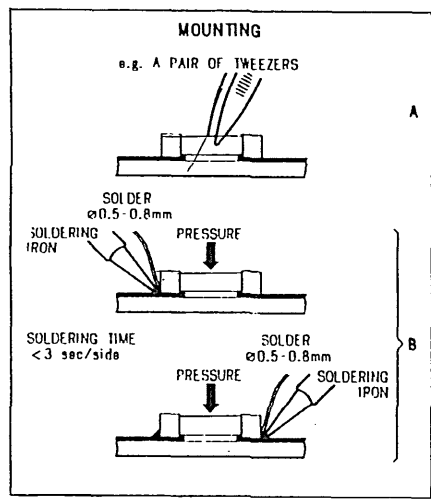
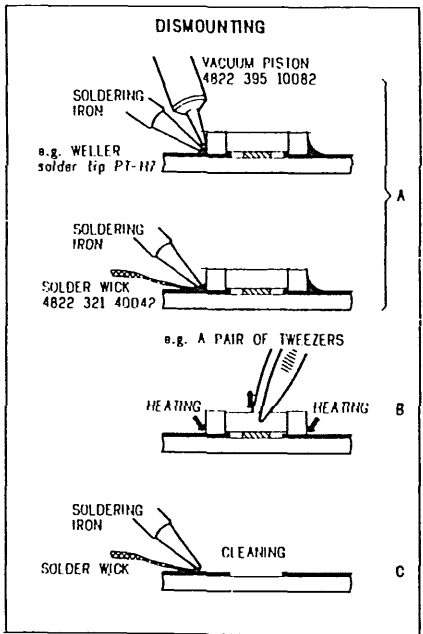
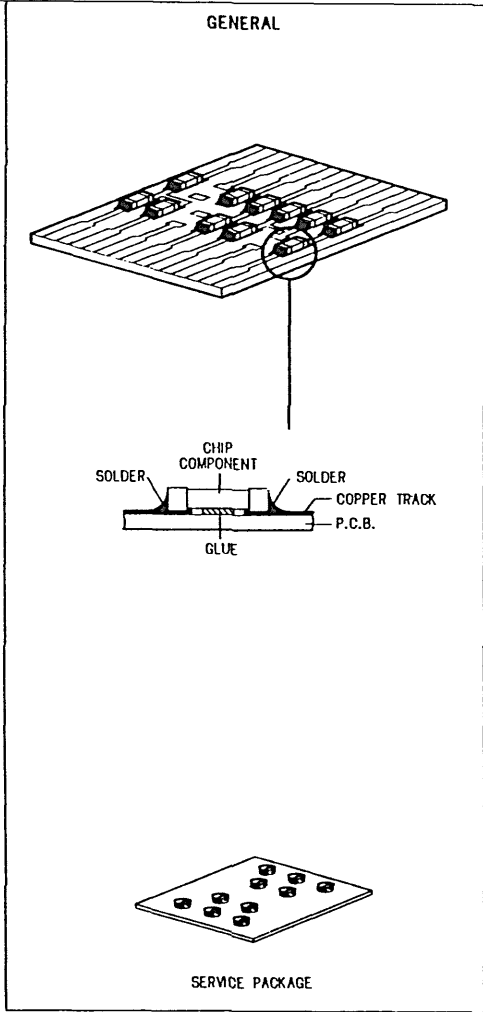
Faixa de sintonia	: 530 KHz - 1700 KHz
Passo	: 10 KHz
FI	: 450 KHz $\pm$ 1 KHz
Sensibilidade ( 26 dB S/N )	: < 4,0 mV/M

### Unidade CD:

Resposta em frequência	: 20 Hz - 20 KHz $\pm$ 3 dB
Relação Sinal / Ruído	: > 86 dB
Crosstalk entre canais	: > 50 dB
Dc-ênfase	: 0 ou 15/50 $\mu$ S

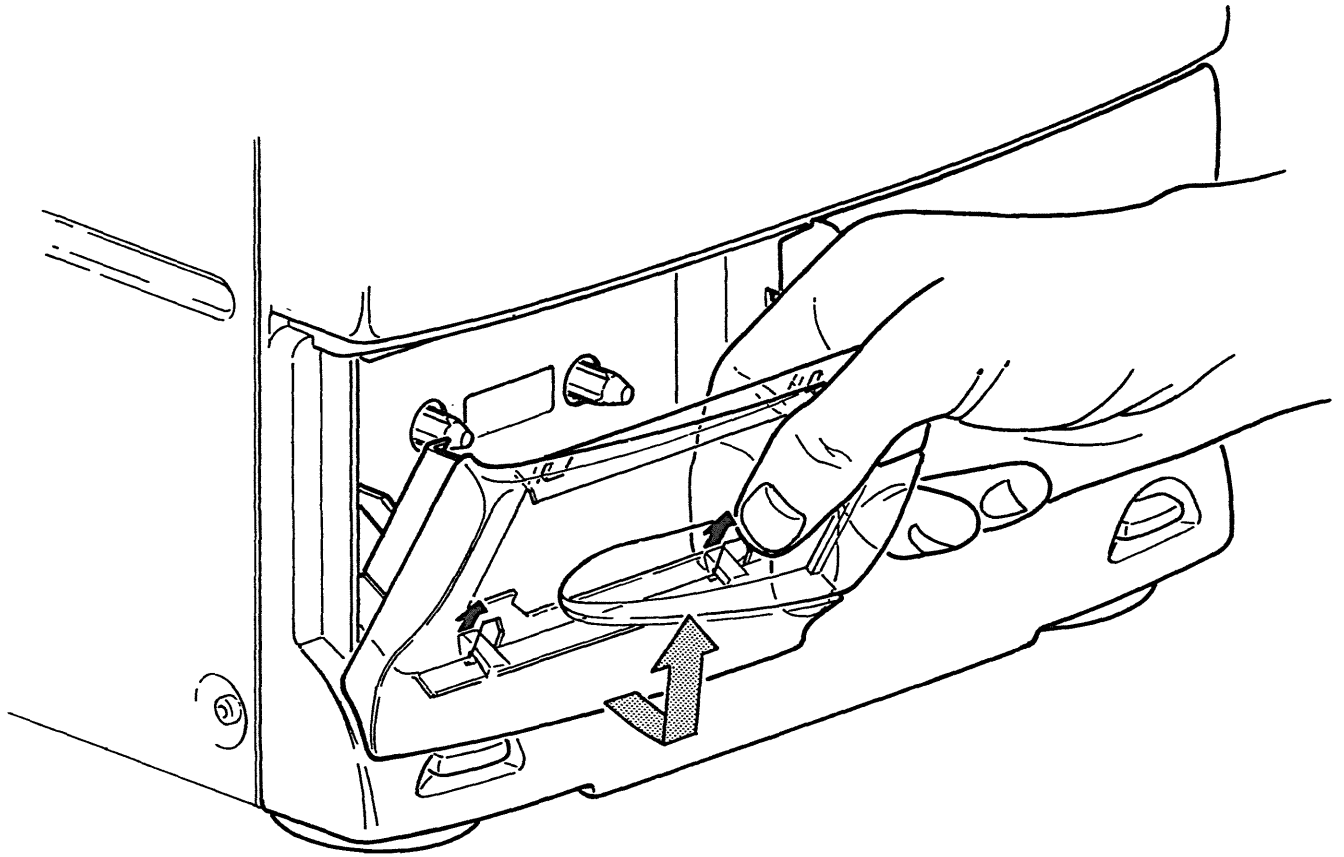
### Tape-deck:

Velocidade da fita	: 4,76 cm/s $\pm$ 2%
Wow & Flutter	: < 0,4%
Velocidade de rebobinamento	: 130 s ( fita C-60 )
Sistema de bias	: AC 65 KHz $\pm$ 5 KHz
Resposta em frequência	: 80 Hz - 12,5 KHz ( -8 dB )
Relação Sinal / Ruído	: > 43 dB
Atenuação de apagamento	: > 55 dB @ 1 KHz

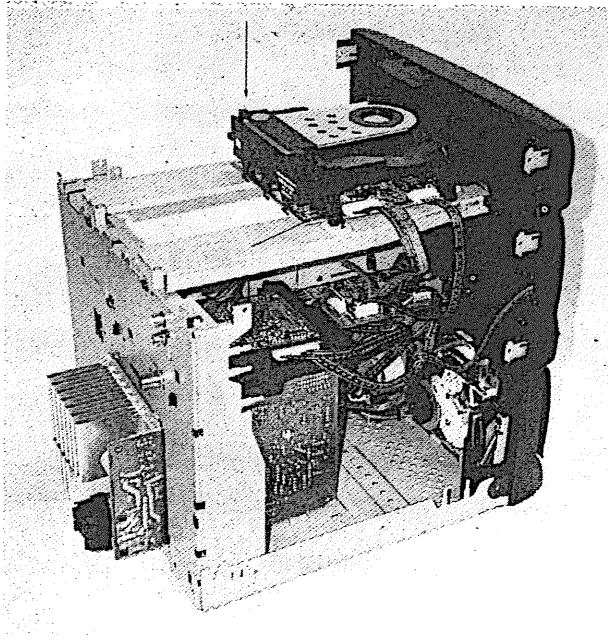


## Instruções de Desmontagem

Desmontagem da tampa do porta-cassetes

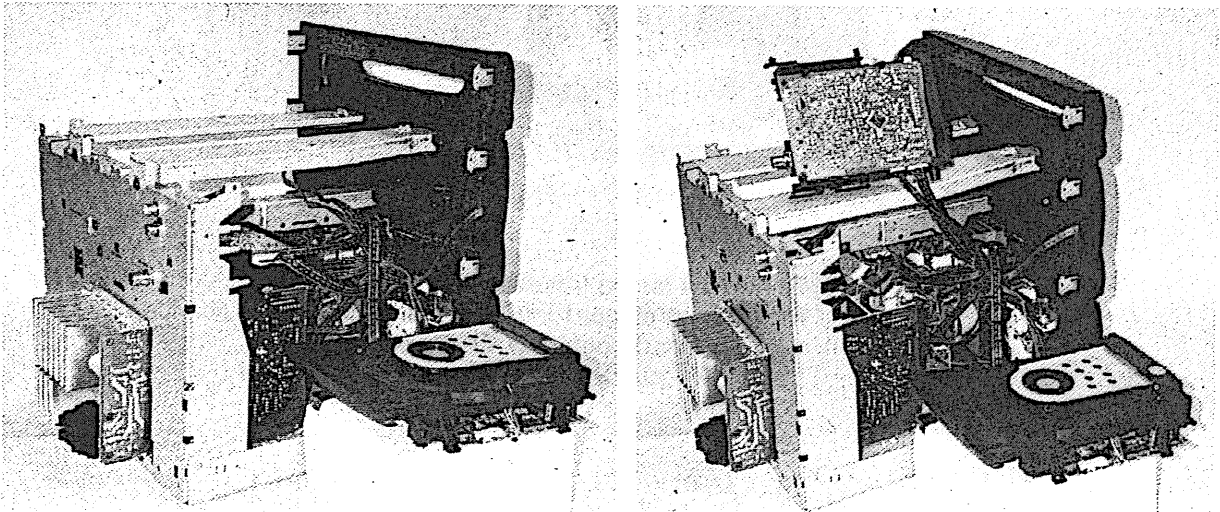


## Instruções de desmontagem



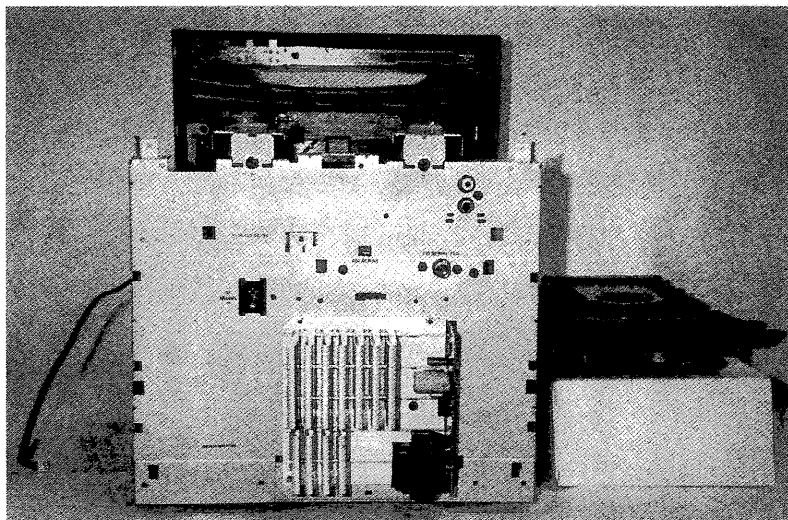
**Figura 1**

- 1) Remova o gabinete superior.
- 2) Remova os 2 parafusos no módulo CD.

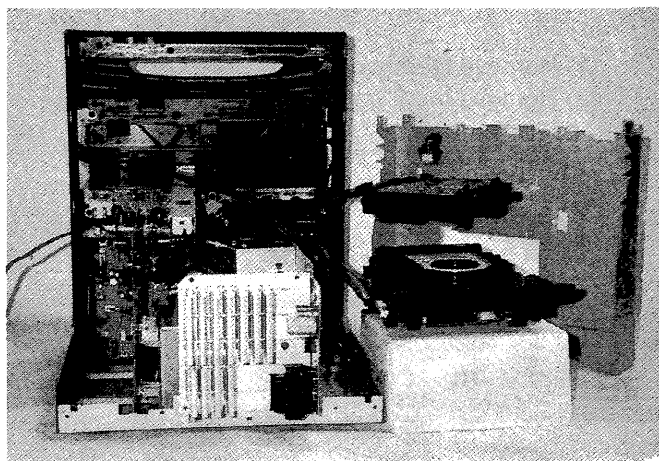


**Figura 2**

- 3) Posicione o módulo CD lateralmente.



**Figura 4**



**Figura 5**

- 5) Remova a tampa traseira de modo a realizar reparos nas placas fonte de alimentação, amplificador de potência ou nas placas AF e frontal. A figura 5 mostra uma possível posição de serviço.

PROGRAMA DE TESTES DE SERVIÇO

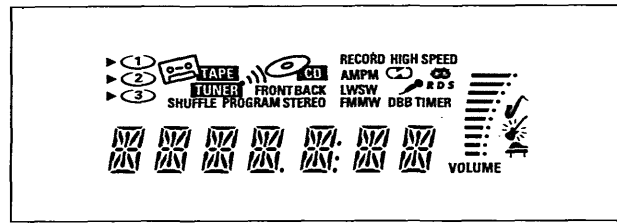
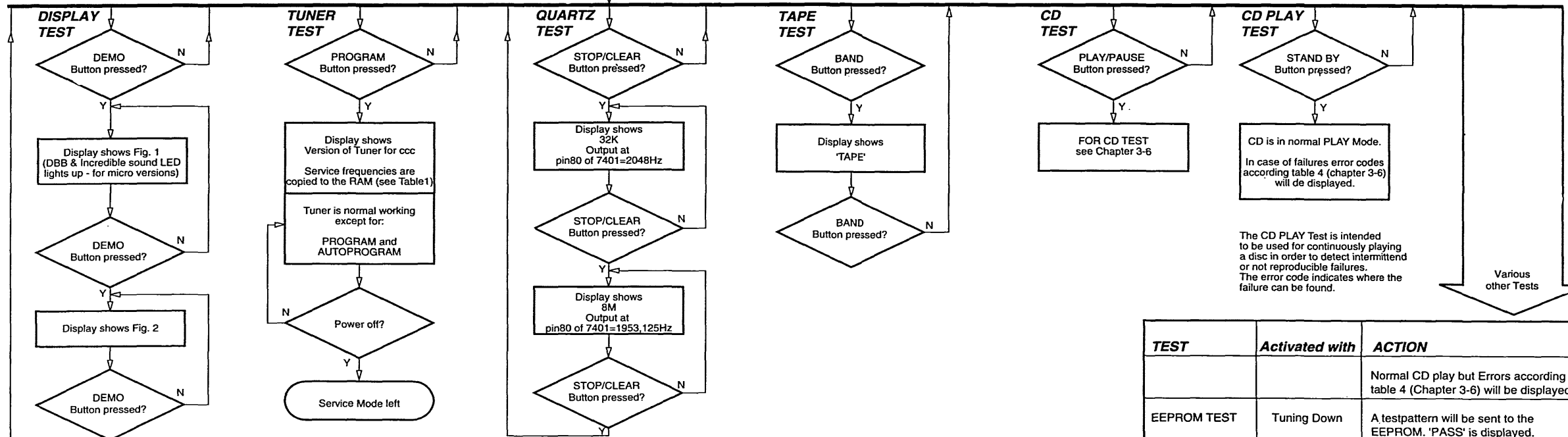


Figure 1

To start service test program hold Program & Preset Up depressed while plugging in the mains cord

Display shows set version and number of ROM version "S yy xxxxxx" (Main menu)

1) S stands for Service Testprogram  
 yy stands for software version number of uP on Front Board (counted from 01 upwards)  
 xxxxxx stands for model numbers



PRESET	Europe "EUR"	East Europe "EAS"	USA "USA"	Oversea "OSE"	Korea "KOR"
1	87.5MHz	65.81MHz	87.5MHz	87.5MHz	87.5MHz
2	108MHz	108MHz	108MHz	108MHz	108MHz
3	531kHz	74MHz	530kHz	531/530kHz	531kHz
4	1602kHz	87.5MHz	1700kHz	1602/1700kHz	1602kHz
5	558kHz	531kHz	560kHz	558/560kHz	558kHz
6	1494kHz	1602kHz	1500kHz	1494/1500kHz	1494kHz
7	153kHz	558kHz	98.0MHz	87.5MHz	87.5MHz
8	279kHz	1494kHz	87.5MHz	87.5MHz	87.5MHz
9	198kHz	153kHz	87.5MHz	87.5MHz	87.5MHz
10	98MHz	279kHz	87.5MHz	87.5MHz	98MHz
11	87.5MHz	198kHz	87.5MHz	98MHz	98MHz

Table 1

TEST	Activated with	ACTION
		Normal CD play but Errors according table 4 (Chapter 3-6) will be displayed
EEPROM TEST	Tuning Down	A testpattern will be sent to the EEPROM. 'PASS' is displayed. Otherwise ERR will be displayed.
EEPROM CLEAR	Preset Down	Load default data. Display shows NEW for 1 second. <b>Caution!</b> All presets from the customer are lost!!
KEY TEST	Preset Up	Key numbers according table 5 are shown on the display. (see Chapter 3-6)
FAST CLOCK TEST	DBB	The clock is switched to fast mode. 'FAST' is displayed for 2 sec.  Press DBB again to reset the clock to normal. 'NOM' displayed for 2 sec.
LEAVE SERVICE TESTPROGRAM	disconnect mains	

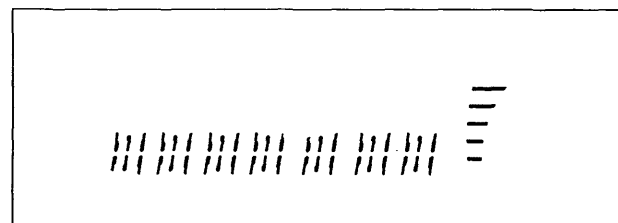


Figure 2

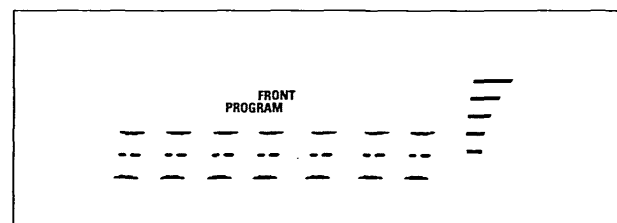


Figure 3

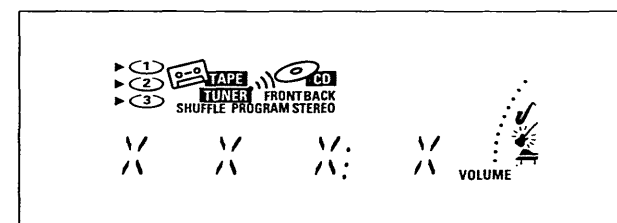


Figure 4

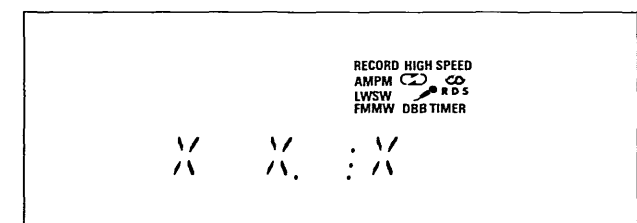


Figure 5

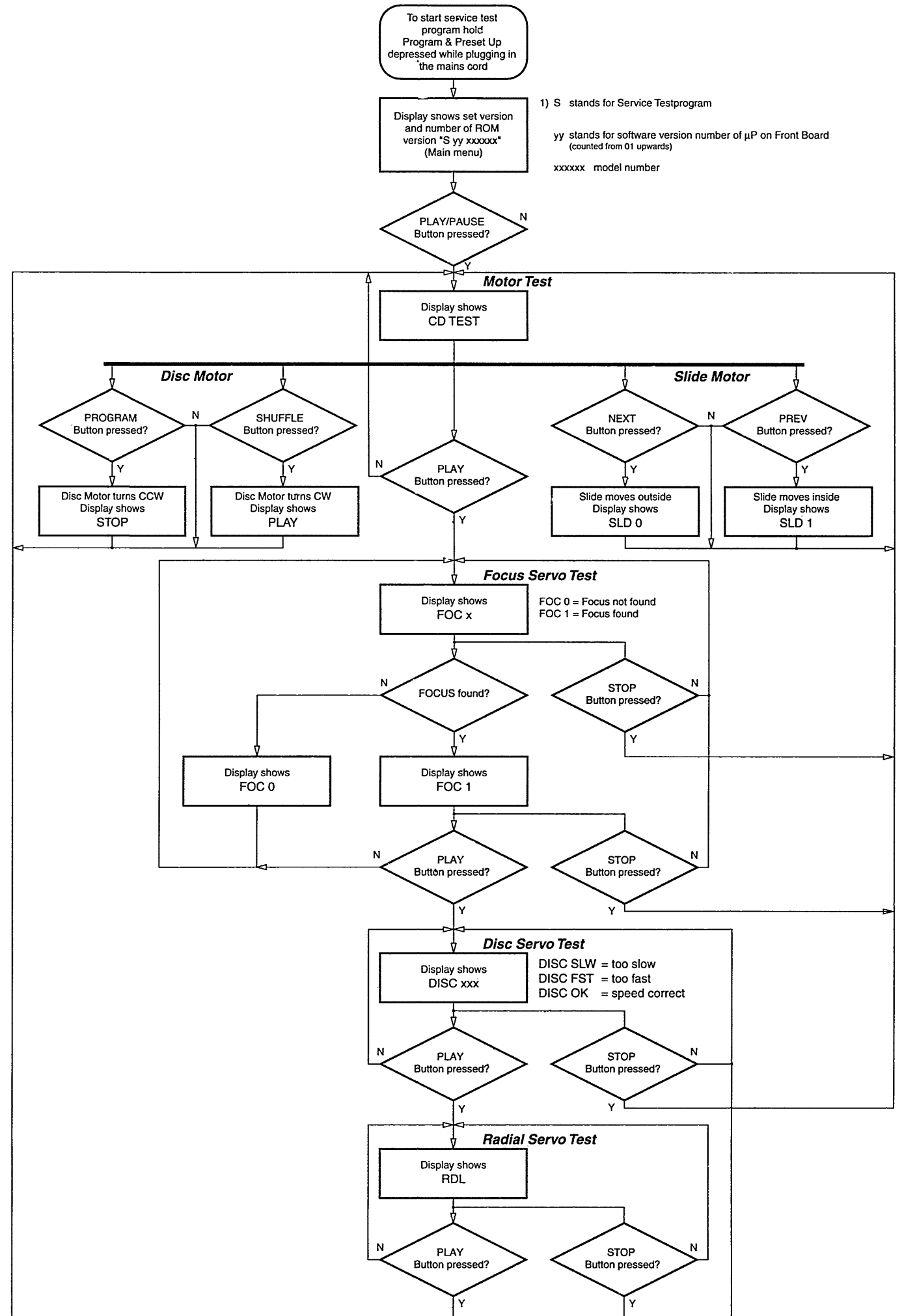
Error number	Error description
E 1002	Focus error
E 1007	Subcode error (no subcode within time)
E 1008	TOC error, out of lead-in area while reading TOC
E 1010	Radial error
E 1011	Sledge error (innerswitch used as indication)
E 1012	Fatal sledge error (FATAL) (when moving inside)
E 1013	Turnatble motor error (disc acceleration failed)
E 1014	Jump-offtrack error (too less grooves within time)
E 1020	PLL locked error
E 1070	Carousel blocked in a disc position
E 1071	Carousel blocked in the middle
E 1075	Drawer blocked in the middle
E 1076	Drawer blocked in open or closed state

**For FW332**

Key activated	Display	Key activated	Display	Key activated	Display
Stop/Clear	01	Clock Set	11	Incredible Sound	21
Program (CD)	02	Timer Set	12	Dbb	22
Shuffle	03	Timer On/Off	13	Optimal	23
Search/Prev	04	Demo	14	Jazz	24
Play/Pause	05	Tuning Down	15	Rock	25
Search/Next	06	Tuning Up	16	Pop	26
CD Open/Close	07	Preset Down	17	Classic	27
Program (TU)	08	Preset Up	18	HSD	28
Band	09	Power/Standby	19	any RC keys	RC
RDS Mode	10	Scroll Source	20		

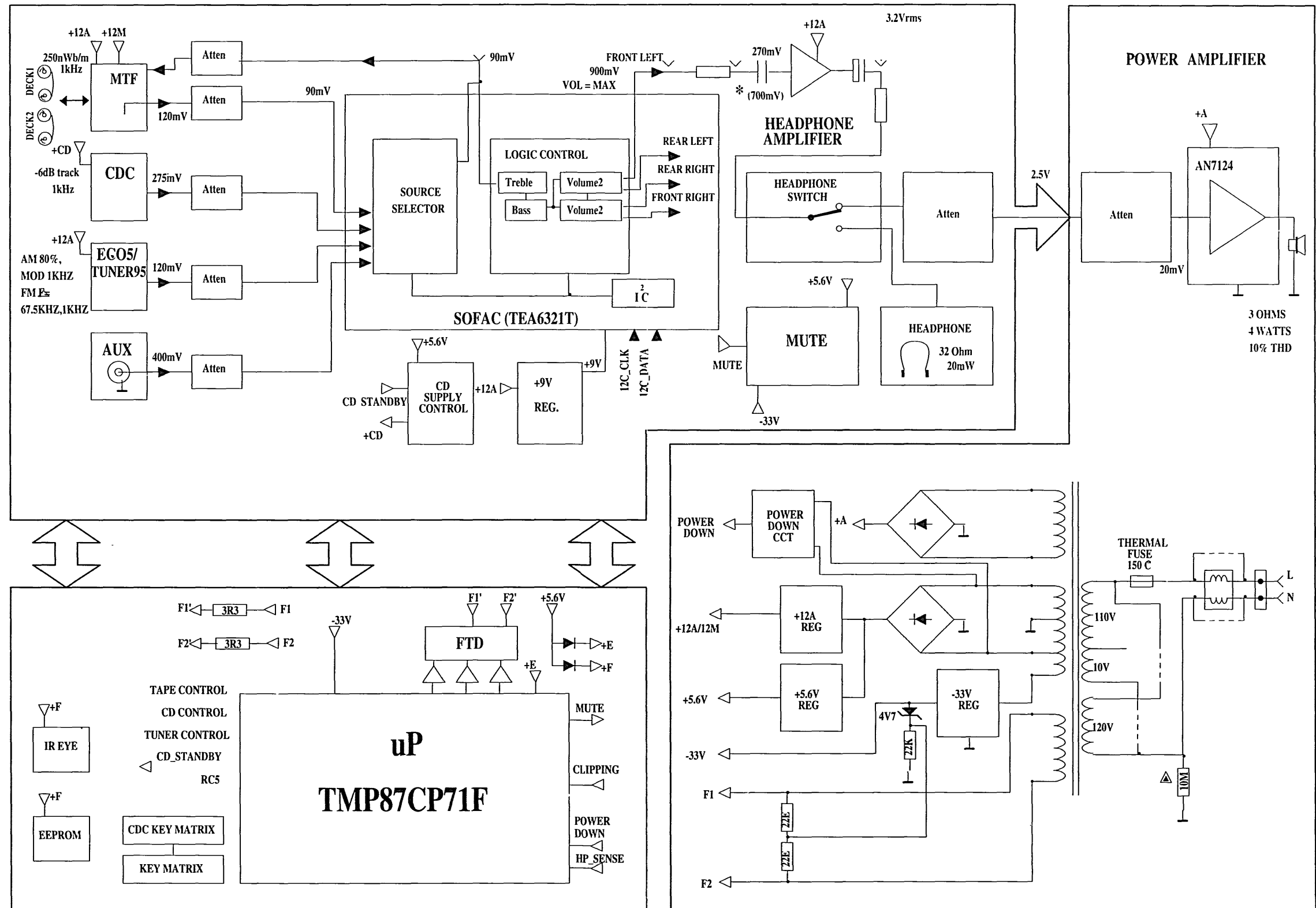
**For FW322C/FW352C/FW391C/FW392C**

Key activated	Display	Key activated	Display	Key activated	Display
Stop/Clear	01	RDS Mode	13	Scroll Source	25
Program (CDC)	02	Clock Set	14	Incredible Stereo	26
Shuffle	03	Timer Set	15	Dbb	27
Search/Prev	04	Timer On/Off	16	Optimal	28
Play/Pause	05	Demo	17	Jazz	29
Search/Next	06	Volume Up	18	Rock	30
Disc 1	07	Volume Down	19	Pop	31
Disc 2	08	Tuning Down	20	Classic	32
Disc 3	09	Tuning Up	21	HSD	33
CD Open Close	10	Preset Down	22	any RC keys	RC
Program (TU)	11	Preset Up	23		
Band	12	Power/Standby	24		



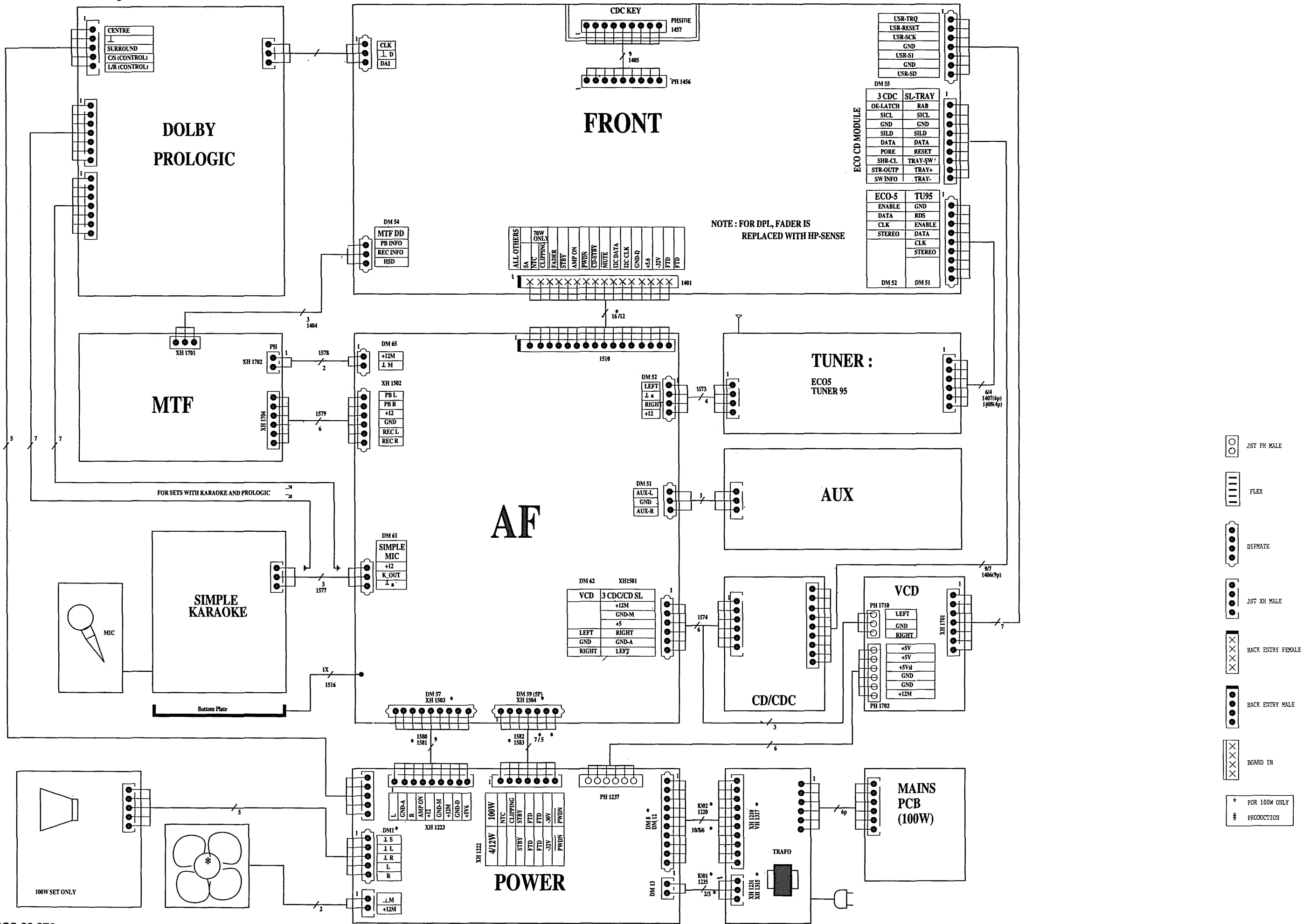


← +20dB × -10.5dB × +21.7dB →



LEGEND:  
 ▲ : PROVISIONS FOR U1 VERSION

DIAGRAMA DE FIAÇÃO



NOTE: FOR DPL, FADER IS REPLACED WITH HP-SENSE

- JST PH MALE
- FLEX
- DIPMATE
- JST XH MALE
- BACK ENTRY FEMALE
- BACK ENTRY MALE
- BOARD IN
- \* FOR 100W ONLY
- # PRODUCTION

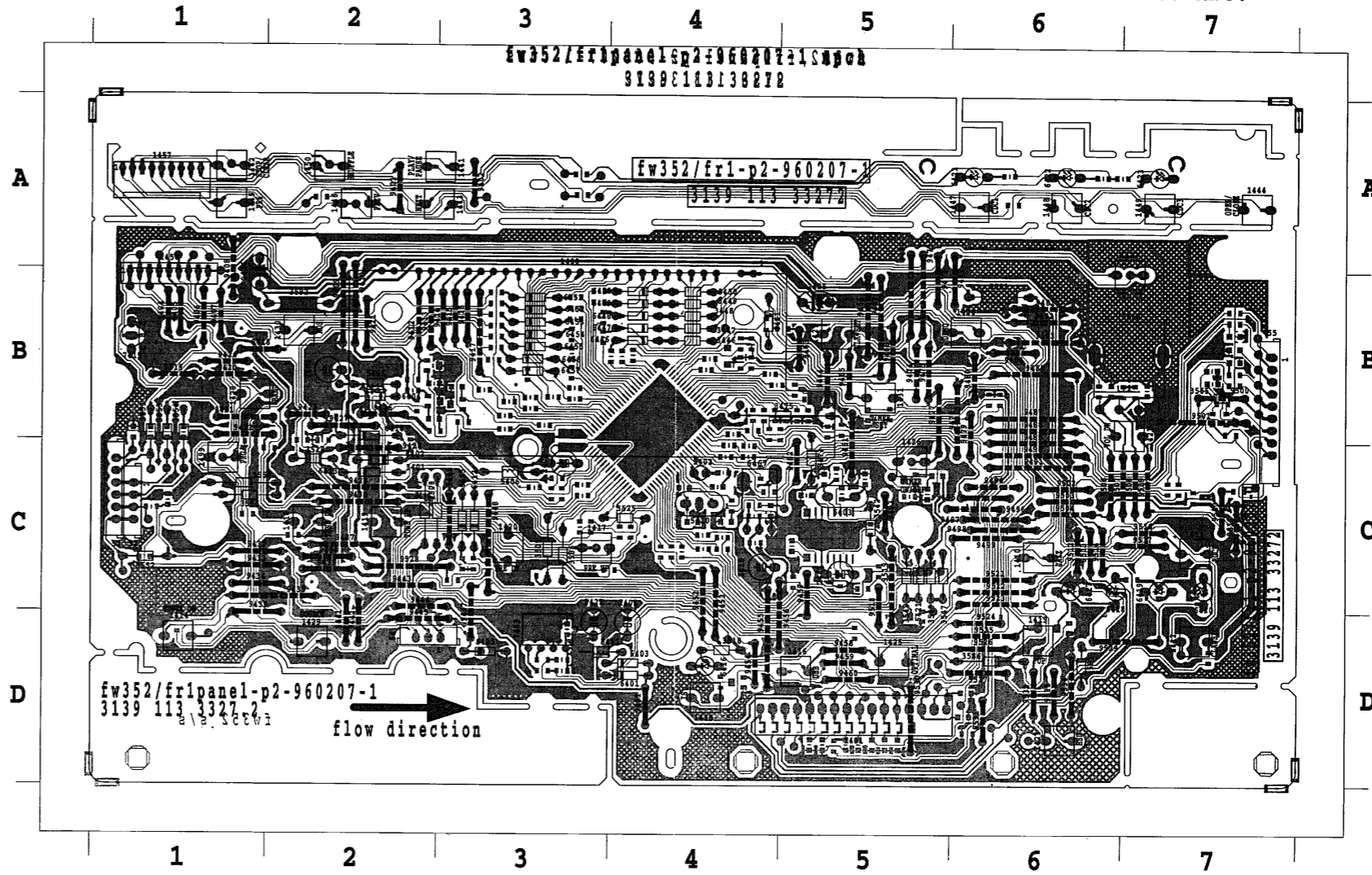
XH 1231 IS FOR VCD VERSION ONLY

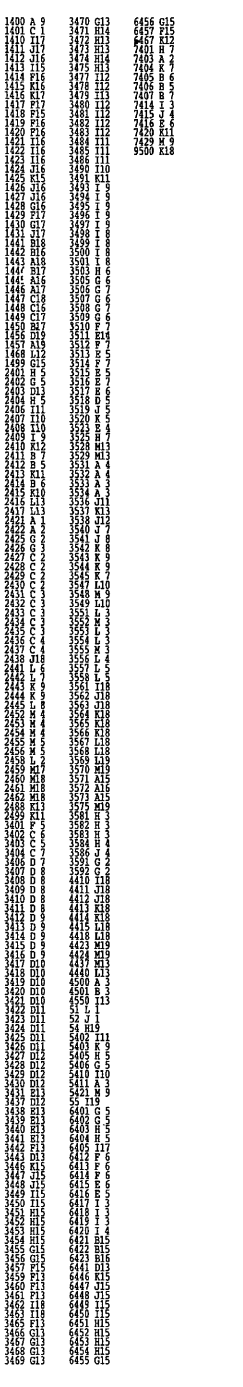
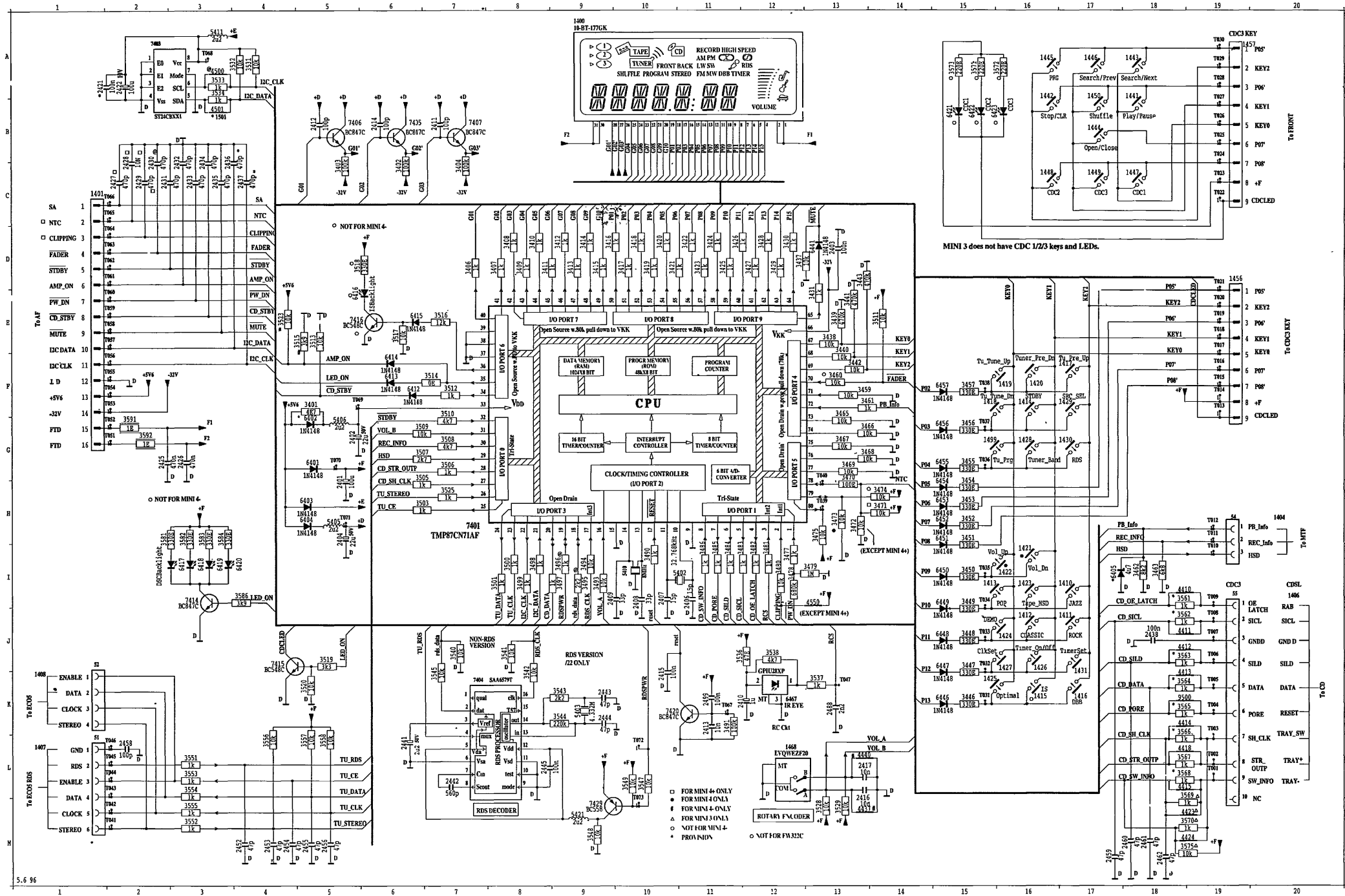
Lado do Componente

51 C 1	1417 C 3	1430 B 2	1457 A 1	3447 B 4	3542 C 5	3591 B 6	6405 D 3	6441 B 4	6467 C 4	9412 B 2	9426 B 2	9441 D 2	9456 D 5	9469 B 5	9484 B 6	9499 C 6	9513 C 6	9528 C 2
52 C 1	1418 C 2	1431 B 5	1468 B 7	3448 B 4	3547 C 5	3592 B 2	6412 C 3	6446 B 4	7403 D 3	9413 B 2	9427 B 2	9442 D 2	9457 C 5	9471 B 5	9485 B 6	9500 B 7	9514 C 6	9529 D 7
54 D 2	1419 C 2	1441 A 3	1499 C 1	3449 B 4	3548 C 5	5402 C 4	6413 C 2	6447 B 4	7415 B 1	9414 B 3	9428 C 2	9443 C 2	9458 D 5	9472 B 5	9487 B 6	9501 B 7	9516 C 7	9530 D 5
55 B 7	1420 C 3	1442 A 1	2401 D 4	3450 B 4	3549 C 5	5403 C 5	6414 B 2	6448 B 4	9401 A 2	9415 B 3	9429 C 2	9444 C 2	9459 D 5	9473 B 6	9488 B 6	9502 C 6	9517 C 7	9531 D 6
1400 B 3	1421 B 7	1443 A 3	2402 C 3	3473 C 5	3551 B 1	5405 B 2	6415 C 3	6449 B 4	9402 A 3	9416 B 3	9430 C 2	9445 D 2	9460 D 5	9474 B 5	9489 C 6	9503 C 6	9518 C 5	9532 D 6
1401 D 5	1422 B 7	1444 A 7	2404 B 2	3475 B 5	3552 C 1	5406 C 3	6416 D 4	6450 B 4	9404 B 1	9417 B 3	9432 C 1	9446 C 3	9461 C 5	9475 B 5	9490 C 6	9504 C 6	9519 C 5	9533 D 6
1410 C 6	1423 D 6	1445 A 1	2410 C 4	3506 C 3	3553 B 1	5410 C 4	6417 C 6	6451 B 3	9405 B 1	9418 B 1	9433 C 1	9447 D 3	9462 C 5	9477 B 5	9491 C 6	9506 C 6	9521 C 6	9534 D 6
1411 C 7	1424 B 6	1446 A 2	2422 D 3	3507 C 2	3554 B 1	5411 D 3	6418 C 6	6452 B 3	9406 B 1	9419 B 1	9434 C 1	9448 C 3	9463 B 5	9478 B 6	9493 C 5	9507 C 7	9522 C 6	-----
1412 D 7	1425 D 5	1447 A 6	2425 B 5	3508 C 2	3556 C 1	5421 C 5	6419 C 7	6453 B 3	9407 B 1	9420 B 1	9435 C 2	9451 D 4	9464 B 5	9479 B 6	9494 C 6	9508 C 7	9523 C 6	-----
1413 D 6	1426 C 5	1448 A 6	2426 B 1	3509 C 3	3558 C 1	6401 D 4	6420 C 7	6454 B 3	9408 B 1	9421 B 1	9436 D 1	9452 C 4	9465 B 5	9480 B 6	9495 C 6	9509 C 7	9524 D 6	-----
1414 D 1	1427 B 5	1449 A 7	2441 C 5	3518 D 4	3565 B 7	6402 C 2	6421 A 6	6455 B 3	9409 B 2	9422 B 1	9437 C 2	9453 C 4	9466 B 5	9481 B 6	9496 C 6	9510 C 7	9525 D 6	-----
1415 D 4	1428 B 1	1450 A 2	3401 C 2	3519 C 2	3581 D 6	6403 D 4	6422 A 6	6456 B 3	9410 B 2	9423 B 2	9438 C 2	9454 D 4	9467 B 5	9482 B 6	9497 C 6	9511 C 7	9526 D 6	-----
1416 D 5	1429 D 2	1456 B 1	3446 B 4	3525 C 4	3586 D 6	6404 B 2	6423 A 7	6457 B 3	9411 B 2	9424 B 1	9439 C 2	9455 D 4	9468 B 5	9483 B 6	9498 C 6	9512 C 6	9527 D 6	-----

# FRONT BOARD

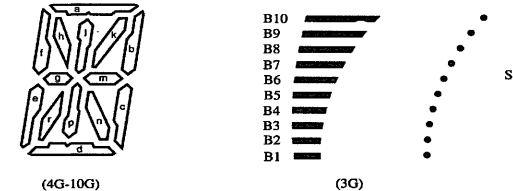
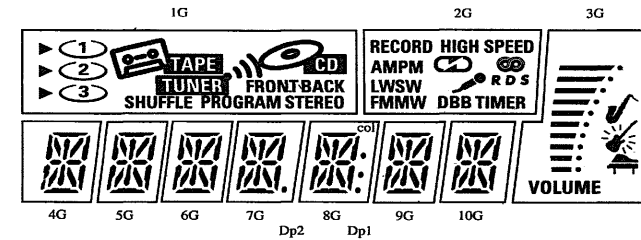
Índice	Página
Layout - Lado Componente .....	16
Diagrama Esquemático .....	18
Layout - Lado Cobre .....	21
Pinagem do LCD .....	23



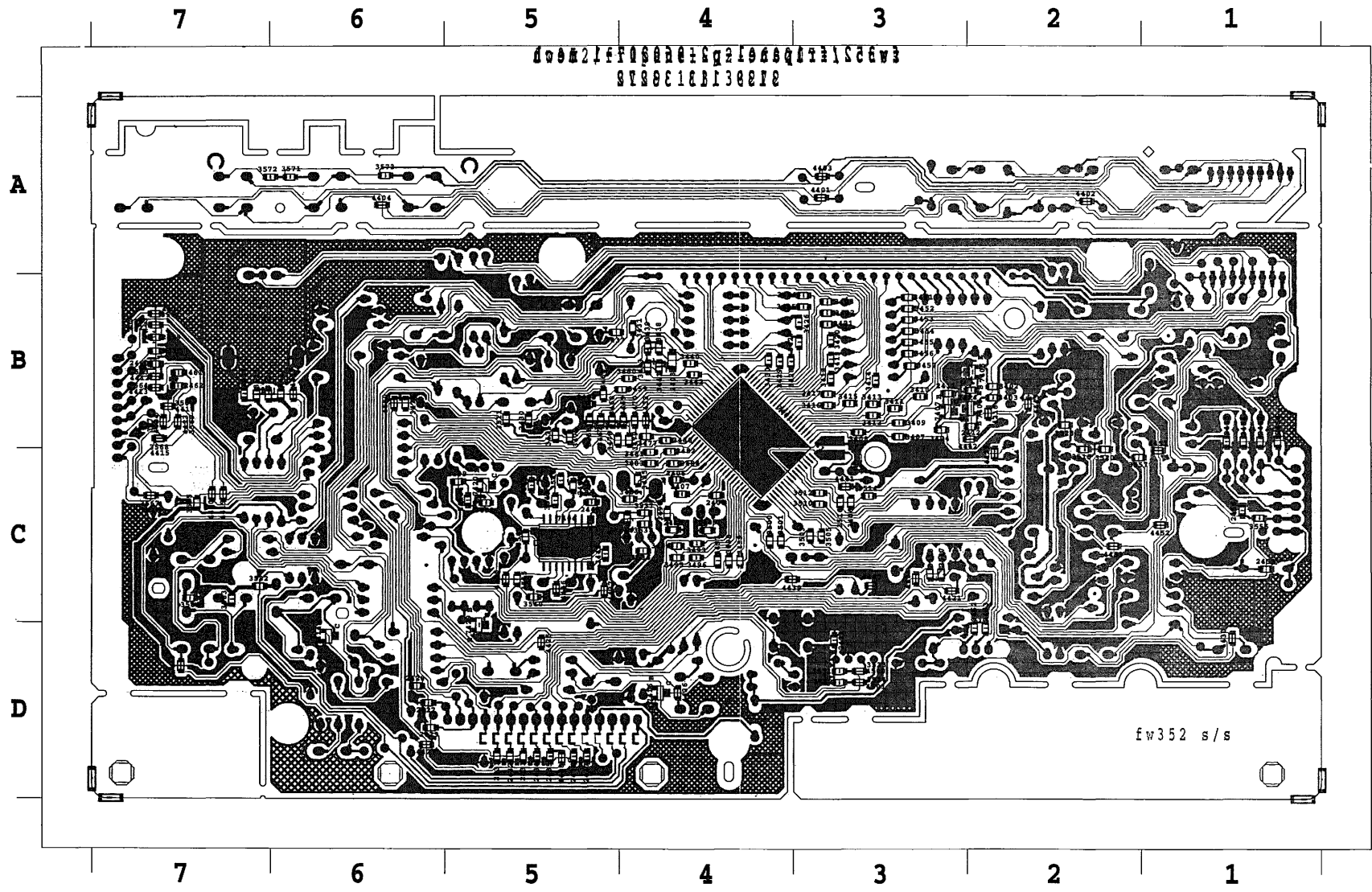


2403 B 4	2421 D 3	2438 B 7	2460 B 7	3410 B 3	3422 B 3	3439 B 4	3459 B 4	3472 B 5	3490 C 4	3505 C 3	3529 B 7	3545 C 5	3571 A 6	4410 B 7	4423 B 7	4437 C 5	7401 B 4
2406 C 4	2427 D 6	2442 C 5	2461 B 7	3411 B 3	3423 B 3	3440 B 4	3460 B 4	3474 B 6	3491 C 5	3510 C 3	3531 D 3	3555 C 1	3572 A 6	4411 B 7	4424 B 7	4439 C 4	7404 C 5
2407 C 4	2428 D 6	2443 C 5	2462 B 7	3412 B 3	3424 B 3	3441 B 4	3461 B 5	3477 B 4	3493 C 4	3511 B 5	3532 D 3	3557 C 2	3573 A 6	4412 B 7	4425 D 5	4440 C 3	7405 B 2
2408 C 4	2429 D 6	2444 C 5	2488 C 4	3413 B 3	3425 B 3	3442 B 4	3462 D 2	3478 B 5	3494 C 4	3512 C 3	3533 D 3	3561 B 7	3575 C 7	4413 B 7	4426 D 4	4441 C 3	7406 B 2
2409 C 4	2430 B 5	2445 C 5	2499 C 5	3414 B 3	3426 B 3	3443 B 4	3463 D 2	3479 B 4	3495 C 4	3513 C 3	3534 C 3	3562 B 7	3582 C 7	4414 B 7	4427 D 6	4442 B 2	7407 B 3
2411 B 3	2431 D 5	2452 B 1	3402 B 2	3415 B 3	3427 B 3	3451 B 3	3465 B 5	3480 B 4	3496 C 4	3514 C 3	3536 C 4	3563 B 7	3583 C 7	4415 B 7	4428 D 5	4443 B 2	7414 D 6
2412 B 2	2432 D 5	2453 C 1	3403 B 2	3416 B 3	3428 B 4	3452 B 3	3466 B 5	3481 C 4	3497 C 4	3515 C 2	3537 C 4	3564 B 7	3584 C 7	4417 B 6	4429 C 2	4451 C 1	7416 D 4
2413 C 5	2433 D 5	2454 B 1	3404 B 3	3417 B 3	3429 B 4	3453 B 3	3467 B 5	3482 C 4	3498 C 4	3516 C 3	3538 C 4	3566 B 7	4216 B 2	4418 C 7	4430 D 1	4452 C 1	7420 C 5
2414 B 2	2434 D 5	2455 B 1	3406 C 3	3418 B 3	3430 B 4	3454 B 3	3468 B 5	3483 C 4	3499 C 4	3517 C 3	3540 C 5	3567 C 7	4401 A 3	4419 C 7	4431 C 3	4453 C 2	7429 D 5
2415 C 4	2435 D 5	2456 C 1	3407 B 3	3419 B 3	3431 B 4	3455 B 3	3469 B 4	3484 C 4	3500 C 4	3520 C 2	3541 C 5	3568 B 7	4402 A 2	4420 C 7	4432 B 4	4500 D 3	
2416 B 6	2436 D 5	2458 B 1	3408 B 3	3420 B 3	3437 B 5	3456 B 3	3470 B 4	3485 C 4	3501 C 4	3523 B 2	3543 C 5	3569 B 7	4403 A 3	4421 C 3	4435 C 5	4501 D 3	
2417 B 7	2437 D 5	2459 B 7	3409 B 3	3421 B 3	3438 B 4	3457 B 3	3471 B 5	3486 C 4	3503 C 3	3528 B 7	3544 C 5	3570 B 7	4404 A 6	4422 D 7	4436 C 5	4550 B 6	

LCD CONNECTION



	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G
P1	▷ (1)	<b>RECORD</b>	B1	a	a	a	a	a	a	a
P2	▷ (2)	<b>HIGH SPEED</b>	B2	h	h	h	h	h	h	h
P3	▷ (3)	<b>AM</b>	B3	j, p	j, p	j, p	J, P	J, P	J, P	J, P
P4	<b>1 2 3</b>	<b>PM</b>	B4	k	k	k	k	k	k	k
P5	○ (1)		B5	b	b	b	b	b	b	b
P6	○ (2)		B6	f	f	f	f	f	f	f
P7	○ (3)		B7	m	m	m	m	m	m	m
P8			B8	g	g	g	g	g	g	g
P9			B9	c	c	c	c	c	c	c
P10		<b>LW</b>	B10	e	e	e	e	e	e	e
P11	<b>FRONT</b>	<b>SW</b>	<b>VOLUME</b> S1	r	r	r	r	r	r	r
P12	<b>BACK</b>	<b>FM</b>		n	n	n	n	n	n	n
P13	<b>SHUFFLE</b>	<b>MW</b>		d	d	d	d	d	d	d
P14	<b>PROGRAM</b>	<b>DBB</b>		-	-	-	Dp2	Dp1	-	-
P15	<b>STEREO</b>	<b>TIMER</b>		-	-	-	-	col	-	-



ELECTRICAL PARTLIST FRONT BOARD

MISCELLANEOUS		
1400	4822 135 00014	DISPLAY
1410	4822 276 13114	TACT SWITCH
1411	4822 276 13114	TACT SWITCH
1412	4822 276 13114	TACT SWITCH
1413	4822 276 13114	TACT SWITCH
1415	4822 276 13114	TACT SWITCH
1414	4822 276 13114	TACT SWITCH
1416	4822 276 13114	TACT SWITCH
1417	4822 276 13114	TACT SWITCH
1418	4822 276 13114	TACT SWITCH
1419	4822 276 13114	TACT SWITCH
1420	4822 276 13114	TACT SWITCH
1423	4822 276 13114	TACT SWITCH
1424	4822 276 13114	TACT SWITCH
1425	4822 276 13114	TACT SWITCH
1426	4822 276 13114	TACT SWITCH
1427	4822 276 13114	TACT SWITCH
1428	4822 276 13114	TACT SWITCH
1429	4822 276 13114	TACT SWITCH
1430	4822 276 13114	TACT SWITCH (For -/22 & -/25)
1431	4822 276 13114	TACT SWITCH
1441	4822 276 13114	TACT SWITCH
1442	4822 276 13114	TACT SWITCH
1443	4822 276 13114	TACT SWITCH
1444	4822 276 13114	TACT SWITCH
1445	4822 276 13114	TACT SWITCH
1446	4822 276 13114	TACT SWITCH
1447	4822 276 13114	TACT SWITCH
1448	4822 276 13114	TACT SWITCH
1449	4822 276 13114	TACT SWITCH
1450	4822 276 13114	TACT SWITCH
1499	4822 276 13114	TACT SWITCH
1468	4822 101 90254	Variable Resitors
CAPACITORS		
2401	4822 124 41584	100µF 20% 10V
2402	4822 124 41596	22µF 20% 50V
2403	4822 122 33496	100nF 10% 63V
2404	4822 124 41596	22µF 20% 50V
2406	5322 122 32481	15pF 5% 50V
2407	5322 122 32481	15pF 5% 50V
2408		33pF 5% 50V
2409		33pF 5% 50V
2410	4822 124 40242	1µF 20% 50V
2411	5322 122 32531	100pF 5% 50V
2412	5322 122 32531	100pF 5% 50V
2413		10nF 20% 50V
2414	5322 122 32531	100pF 5% 50V
2415	5322 122 32531	100pF 5% 50V
2416		10nF 20% 50V
2417		10nF 20% 50V
2422	4822 124 41584	100µF 20% 10V

ELECTRICAL PARTLIST FRONT BOARD

RESISTORS		
2425		470nF 5% 63V
2426		470nF 5% 63V
2431		470pF 10% 63V
2432		470pF 10% 63V
2433		470pF 10% 63V
2434		470pF 10% 63V
2435		470pF 10% 63V
2438		100nF 20% 25V
2441	4822 124 41576	2.2µF 20% 50V (For -/22 & -/25)
2442		560pF 5% 63V (For -/22 & -/25)
2443	5322 122 32452	47pF 5% 63V (For -/22 & -/25)
2444	5322 122 32452	47pF 5% 63V (For -/22 & -/25)
2445		100nF 10% 63V (For -/22 & -/25)
2452	5322 122 32452	47pF 5% 63V (For -/22 & -/25)
2453	5322 122 32452	47pF 5% 63V
2454	5322 122 32452	47pF 5% 63V
2455	5322 122 32452	47pF 5% 63V
2456	5322 122 32452	47pF 5% 63V
2458	5322 122 32531	100pF 5% 50V (For -/22 & -/25)
2459	5322 122 32452	47pF 5% 63V
2460	5322 122 32452	47pF 5% 63V
2461	5322 122 32452	47pF 5% 63V
2462	5322 122 32452	47pF 5% 63V
2488		2.2nF 20% 50V
2499		100nF 50V
RESISTORS		
3401	4822 050 24708	4Ω 1% 0.6W
3402	4822 051 20104	100k 5% 0.1W
3403	4822 051 20104	100k 5% 0.1W
3404	4822 051 20104	100k 5% 0.1W
3406	4822 051 10102	1k 2% 0.25W
3407	4822 051 10102	1k 2% 0.25W
3408	4822 051 10102	1k 2% 0.25W
3409	4822 051 10102	1k 2% 0.25W
3410	4822 051 10102	1k 2% 0.25W
3411	4822 051 10102	1k 2% 0.25W
3412	4822 051 10102	1k 2% 0.25W
3413	4822 051 10102	1k 2% 0.25W
3414	4822 051 10102	1k 2% 0.25W
3415	4822 051 10102	1k 2% 0.25W
3416	4822 051 10102	1k 2% 0.25W
3417	4822 051 10102	1k 2% 0.25W
3418	4822 051 10102	1k 2% 0.25W
3419	4822 051 10102	1k 2% 0.25W
3420	4822 051 10102	1k 2% 0.25W
3421	4822 051 10102	1k 2% 0.25W
3422	4822 051 10102	1k 2% 0.25W
3423	4822 051 10102	1k 2% 0.25W
3424	4822 051 10102	1k 2% 0.25W
3425	4822 051 10102	1k 2% 0.25W
3426	4822 051 10102	1k 2% 0.25W
3427	4822 051 10102	1k 2% 0.25W
3428	4822 051 10102	1k 2% 0.25W
3429	4822 051 10102	1k 2% 0.25W
3430	4822 051 10102	1k 2% 0.25W
3431	4822 051 10102	1k 2% 0.25W
3432	4822 051 20103	10k 5% 0.1W
3433	4822 051 20103	10k 5% 0.1W
3434	4822 051 20103	10k 5% 0.1W
3435	4822 051 20103	10k 5% 0.1W
3436	4822 051 20103	10k 5% 0.1W
3437	4822 051 20103	10k 5% 0.1W
3438	4822 051 20103	10k 5% 0.1W
3439	4822 051 20474	470k 5% 0.1W
3440	4822 051 20103	10k 5% 0.1W
3441	4822 051 20474	470k 5% 0.1W
3442	4822 051 20103	10k 5% 0.1W
3443	4822 051 20474	470k 5% 0.1W
3446		330Ω 5% 0.5W
3447		330Ω 5% 0.5W
3448		330Ω 5% 0.5W
3449		330Ω 5% 0.5W
3450		330Ω 5% 0.5W
3451	4822 051 20331	330Ω 5% 0.1W
3452	4822 051 20331	330Ω 5% 0.1W
3453	4822 051 20331	330Ω 5% 0.1W
3454	4822 051 20331	330Ω 5% 0.1W
3455	4822 051 20331	330Ω 5% 0.1W
3456	4822 051 20331	330Ω 5% 0.1W
3457	4822 051 20331	330Ω 5% 0.1W
3459	4822 051 20103	10k 5% 0.1W
3460	4822 051 20103	10k 5% 0.1W
3461	4822 051 10102	1k 2% 0.25W
3462		8k2 5% 0.1W
3463	4822 051 20682	6k8 5% 0.1W
3465	4822 051 20103	10k 5% 0.1W
3466	4822 051 20103	10k 5% 0.1W
3467	4822 051 20103	10k 5% 0.1W
3468	4822 051 20103	10k 5% 0.1W
3469	4822 051 20103	10k 5% 0.1W
3470	4822 051 20101	100Ω 5% 0.1W
3471	4822 051 20103	10k 5% 0.1W (For -/22 & -/25)
3472	4822 051 20103	10k 5% 0.1W (Not for -/22 & -/25)
3474	4822 051 20103	10k 5% 0.1W
3475		10k 5% 0.5W
3477	4822 051 10102	1k 2% 0.25W
3478		680k 5% 0.1W
3479		1M 5% 0.1W
3480	4822 051 20103	10k 5% 0.1W
3481	4822 051 10102	1k 2% 0.25W
3482	4822 051 10102	1k 2% 0.25W
3483	4822 051 10102	1k 2% 0.25W
3484	4822 051 10102	1k 2% 0.25W
3485	4822 051 10102	1k 2% 0.25W
3486	4822 051 10102	1k 2% 0.25W
3490	4822 051 10102	1k 2% 0.25W
3491		100k 5% 0.1W
3493	4822 051 20103	10k 5% 0.1W

ELECTRICAL PARTLIST FRONT BOARD

RESISTORS		
3494	4822 051 20103	10k 5% 0.1W
3495	4822 051 20222	2k2 5% 0.1W
3496	4822 051 10102	1k 2% 0.25W (For -/22 & -/25)
3497	4822 051 10102	1k 2% 0.25W
3498	4822 051 10102	1k 2% 0.25W
3499	4822 051 10102	1k 2% 0.25W
3500	4822 051 10102	1k 2% 0.25W
3501	4822 051 10102	1k 2% 0.25W
3503	4822 051 10102	1k 2% 0.25W
3505	4822 051 10102	1k 2% 0.25W
3506		1k 1% 0.4W
3507	4822 116 52263	2k7 5% 0.5W
3508		4k7 5% 0.5W
3509		10k 5% 0.5W
3510	4822 051 20472	4k7 5% 0.1W
3511	4822 051 20103	10k 5% 0.1W
3512	4822 051 10102	1k 2% 0.25W
3513	4822 051-20103	10k 5% 0.1W
3514		0Ω Jumper
3516		12k 1% 0.1W
3517	4822 051 20103	10k 5% 0.1W
3519		3K3 5% 0.5W
3520	4822 051 20103	10k 5% 0.1W
3525		1k 1% 0.4W
3528	4822 051 20103	10k 5% 0.1W
3529	4822 051 20103	10k 5% 0.1W
3531	4822 051 20103	10k 5% 0.1W
3532	4822 051 20103	10k 5% 0.1W
3533	4822 051 10102	1k 2% 0.25W
3534	4822 051 10102	1k 2% 0.25W
3536	4822 051 20479	47Ω 5% 0.1W
3537	4822 051 10102	1k 2% 0.25W
3538	4822 051 20472	4k7 5% 0.1W
3540	4822 051 20103	10k 5% 0.1W (Not for -/22 & -/25)
3541	4822 051 20103	10k 5% 0.1W (Not for -/22 & -/25)
3542		10k 5% 0.5W (For -/22 & -/25)
3543		2k2 1% 0.1W (For -/22 & -/25)
3544	4822 051 20224	220k 5% 0.1W (For -/22 & -/25)
3545	4822 051 20103	10k 5% 0.1W (For -/22 & -/25)
3547		10k 5% 0.5W (For -/22 & -/25)
3548		10k 5% 0.5W (For -/22 & -/25)
3549		10k 5% 0.5W (For -/22 & -/25)
3551		1k 1% 0.4W (For -/22 & -/25)
3552		1k 1% 0.4W
3553		1k 1% 0.4W
3554		1k 1% 0.4W
3555		1k 2% 0.25W
3556		10k 5% 0.5W
3557	4822 051 20103	10k 5% 0.1W
3558		10k 5% 0.5W
3571		220Ω 5% 0.1W (Not for -/22 & -/25)
3572		220Ω 5% 0.1W (Not for -/22 & -/25)
RESISTORS		
3573		220Ω 5% 0.1W (Not for -/22 & -/25)
3581		330Ω 5% 0.5W
3582	4822 051 20331	330Ω 5% 0.1W
3583	4822 051 20331	330Ω 5% 0.1W
3584	4822 051 20331	330Ω 5% 0.1W
3591	4822 052 10108	1Ω 5% 0.33W
3592	4822 052 10108	1Ω 5% 0.33W
CHIP JUMPERS		
4216		0Ω Jumper
4401		0Ω Jumper
4402		0Ω Jumper
4403		0Ω Jumper
4404		0Ω Jumper
4410		0Ω Jumper
4411		0Ω Jumper
4412		0Ω Jumper
4413		0Ω Jumper
4414		0Ω Jumper
4415		0Ω Jumper
4417		0Ω Jumper
4418		0Ω Jumper
4419		0Ω Jumper
4420		0Ω Jumper
4422		0Ω Jumper
4425		0Ω Jumper
4426		0Ω Jumper
4427		0Ω Jumper
4428		0Ω Jumper
4429		0Ω Jumper
4430		0Ω Jumper
4431		0Ω Jumper
4432		0Ω Jumper
4435		0Ω Jumper
4436		0Ω Jumper
4439		0Ω Jumper
4441		0Ω Jumper
4442		0Ω Jumper
4443		0Ω Jumper
4451		0Ω Jumper
4452		0Ω Jumper
4453		0Ω Jumper
4550		0Ω Jumper
COILS		
5402	4822 242 70938	Crystal 32.768kHz
5403	4822 242 72195	Crystal 4.322kHz (For -/22 & -/25)
5405	4822 156 21721	2.2µH 10%
5406	4822 156 21721	2.2µH 10%
5410	5322 242 73697	CER.RES.8MHz
COILS		
5411	4822 156 21721	2.2µH 10%
5421	4822 156 21721	2.2µH 10%
COILS		
6401	4806 130 37078	1N4148
6403	4806 130 37078	1N4148
6404	4806 130 37078	1N4148
6412	4806 130 37078	1N4148
6414	4806 130 37078	1N4148
6415	4806 130 37078	1N4148
6416	4822 130 82978	Led LTL-16KGE
6417	4822 130 82978	Led LTL-16KGE
6418	4822 130 82978	Led LTL-16KGE
6419	4822 130 82978	Led LTL-16KGE
6420	4822 130 82978	Led LTL-16KGE
6421	4822 130 82978	Led

## Painel MTF ( Deck )

Os Mini-Systems FW332 e FW352C utilizam, para os circuitos do tape-deck, o painel MTF. O diagrama esquemático a descrição de funcionamento e a lista de peças do mesmo estão no manual MTF ( Deck ) V 1.0, cod. 4806 725 27027 já distribuído. Contudo, foram feitas algumas alterações nos valores de alguns resistores e capacitores, com o intuito de otimizar as características do circuito.

Na tabela a seguir estão listados os novos valores desses componentes.

Pos.	Valor antigo	Valor atual	Pos.	Valor antigo	Valor atual
2705	1 mF	4,7 mF	3724	15 W	18 W
2707	22 mF	2,2 mF	3732	3,3 KW	10 KW
2710	10 mF	47 mF	3741	15 W	18 W
2714	10 mF	47 mF	3746	15 W	18 W
2717	1 mF	-	3748	510 W	470 W
2720	1 mF	-	3752	15 W	18 W
2721	22 nF	10 nF	3753	510 W	470 W
2724	15 nF	18 nF	3758	500 W - PTC	-
2732	10 nF	22 nF	3760	1 KW	2,7 KW
2740	4,7 nF	2,2 nF	3770	10 KW	47 KW
2748	10 nF	22 nF	3774	100 KW	8,2 KW
2754	1 mF	47 mF	3775	10 KW	47 KW
2756	1 mF	47 mF	3777	10 KW	47 KW
3703	10 W	-	3781	470 W	100 W
3704	3,9 KW	-	3782	470 W	100 W
3710	22 KW	3,3 KW	3787	33 W	100 W
3715	2,2 KW	1 KW			

## Lista de Peças do Tape-Deck

Código	Descrição
4822 691 10479	Mecanismo completo ( YSW 27- 500 )
4822 358 31231	Correia pequena
4822 358 31229	Correia grande
4822 403 30811	Alavanca eject
4822 402 61418	Braço do rolo pressor
4822 528 70785	Rolo pressor
4822 278 90752	Chave de lâmina p/ motor
4822 278 90751	Chave de lâmina p/ Play
4822 249 10425	Cabeça gravadora / reprodutora
4822 249 40276	Cabeça apagadora ( usada apenas no tape B )
4822 361 21585	Motor
4822 528 81482	Polia do motor

Obs: As peças mencionadas acima são as únicas disponíveis para reposição e servem tanto par o Deck A como para o Deck B.



## LISTA DE PEÇAS MECÂNICAS DO APARELHO

POS.	CÓDIGO	DESCRIÇÃO	FW352C	FW332
200	4822 459 04197	Gabinete Frontal	x	
200	4822 459 04172	Gabinete Frontal		x
201	4822 410 10195	Botão DISPLAY (Esquerdo)	x	x
202	4822 410 10196	Botão DISPLAY (Direito)	x	x
203	4822 410 10197	Botão TUNER	x	x
204	4822 410 10198	Botão HSD	x	x
205	4822 410 10199	Botão OPTIMUM / DBB	x	x
206	4822 410 10418	Botão INCREDIBLE SOUND	x	x
208	4822 410 10201	Botão POWER / SOURCE	x	x
209	4822 256 10206	Suporte p/ LED	x	
210	4822 410 10202	Botão DSC 1	x	x
211	4822 410 10203	Botão DSC 2	x	x
212	4822 466 11124	Guia de Luz DSC		x
213	4822 462 10758	Capa p/ Guia de Luz DSC		x
214	4822 410 10204	Botão OPEN / CLOSE	x	x
215	4822 410 10205	Botão CDC Select	x	x
216	4822 462 40683	Pés de Borracha	x	x
217	4822 410 10206	Botão CDC 1	x	x
218	4822 410 10207	Botão CDC 2	x	x
219	4822 466 10972	Guia de Luz CDC	x	
221	4822 381 11671	Lente do DISPLAY	x	x
224	4822 492 11049	Mola p/ Tampa K7	x	x
225	4822 443 10173	Transportador K7	x	x
226	4822 443 10173	Transportador K7	x	x
227	4822 442 00283	Cobertura Esquerda p/ Transp. K7	x	x
228	4822 442 00447	Cobertura Direita p/ Transport. K7	x	x
229	4822 381 11672	Lente p/ Tampa K7 Esquerda	x	x
230	4822 381 11673	Lente p/ Tampa K7 Direita	x	x
231	4822 529 10322	Hidráulico p/ Tampa K7	x	x
235	4822 410 10208	Botão K7 1 RECORD	x	x
236	4822 410 10209	Botão K7 2 PLAY	x	x
237	4822 410 10211	Botão K7 3 FRW	x	x
238	4822 410 10212	Botão K7 4 FFW	x	x
239	4822 410 10213	Botão K7 5 STOP	x	x
240	4822 410 10214	Botão K7 6 PAUSE	x	x
241	4822 410 10215	Botão K7 7 PLAY	x	x
242	4822 410 10216	Botão K7 8 FRW	x	x
243	4822 410 10217	Botão K7 9 FFW	x	x
244	4822 410 10218	Botão K7 10 STOP	x	x
245	4822 410 10219	Botão K7 11 PAUSE	x	x
247	4822 410 10221	Botão SPACER	x	
265	4822 410 10533	Botão KARAOKE	x	x
266	4822 410 10419	Botão VOLUME (Rotativo)	x	x
270	4822 442 00285	Cobertura p/ tampa CDC-3	x	
270	4822 442 00383	Cobertura p/ tampa CD		x
294	4822 600 10407	Proteção p/ Dissipador	x	
297	4822 462 40683	Pés de Borracha	x	x
298	4822 426 10069	Gabinete Traseiro	x	
298	4822 426 10187	Gabinete Traseiro		x
299	4822 381 11674	Lente CDC p/ Gabinete Traseiro	x	
300	4822 402 10288	Suporte p/ Cabo de Rede	x	x
350	4822 445 10556	Caixa Acústica	x	x
351	4822 303 50063	Antena de FM	x	x
356	4822 218 10724	Controle Remoto	x	x
384	4822 303 50082	Antena de AM.	x	x
385	4822 321 10249	Cabo de Rede	x	x
1105	4822 691 10479	Tape Deck montado ( YSW 27-500)	x	x
	4822 691 30278	CDM 12.1	x	x
1110	4822 146 10443	Transformador de Rede 110V / 220V	x	x

Obs: As peças relacionadas na lista acima são as únicas disponíveis para reposição.

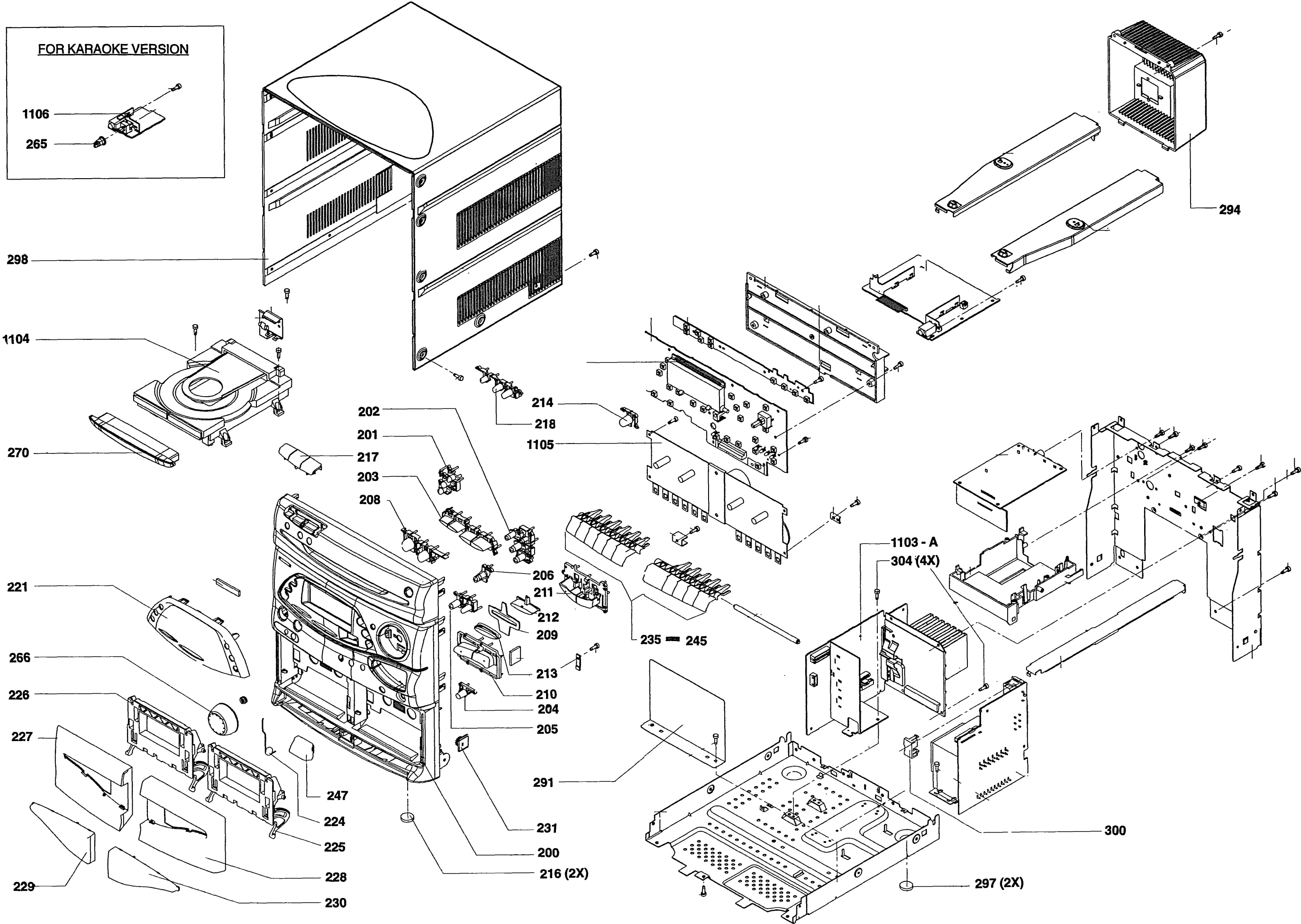


Vista Explodida FW332

**FOR KARAOKE VERSION**

1106

265



Vista Explodida FW352C

