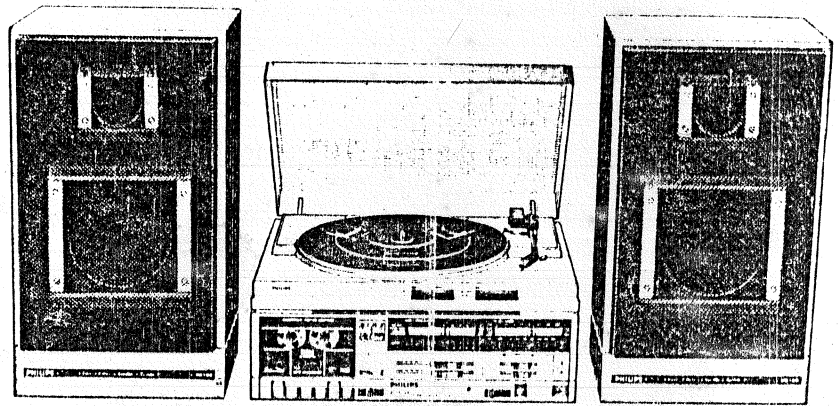


Service
Service
Service



Service Manual

Manual de Serviço
Manual de Servicio
Service Manual

- Para mais informações veja Manuais de Serviço: RT1, FP210/310, F1430, AR675
- Para demás informaciones vease los Manuales de Servicio: RT1, FP210/310, F1430, AR675
- For more informations see Service Manual: RT1, FP210/310, F1430, AR675.

P ESPECIFICAÇÕES

E ESPECIFICACIONES

GB SPECIFICATIONS

GERAL

Alimentação

Consumo

Caixas acústicas
Dimensões
Peso

SINTONIZADOR

Faixas de onda

Sensibilidade

AMPLIFICADOR

Potência de saída
Resposta de frequência
Impedância de carga
Saída de fones de ouvido

TOCA DISCOS

Força vertical
Motor
Velocidade
"Wow & Flutter"
"Rumble"

"TAPE DECK"

Velocidade
"Wow & Flutter"
Relação sinal/ruído

GENERAL

Alimentación

Consumo

Cajas acusticas
Dimensiones
Peso

SINTONIZADOR

Rango de banda

Sensibilidad

AMPLIFICADOR

Potencia de salida
Respuesta de frecuencia
Impedancia de carga
Salida de auriculares

TOCA DISCOS

Fuerza vertical
Motor
Velocidad
"Wow & Flutter"
"Rumble"

"TAPE DECK"

Velocidad
"Wow & Flutter"
Relación señal/ruído

GENERAL

Mains supply

Power consumption

Loudspeaker boxes
Dimensions
Weight

TUNER

Wave range

Sensitivity

AMPLIFIER

Output power
Frequency response
Rated load impedance
Headphones outputs

RECORD PLAYER

Vertical force
Motor
Speed
Wow & Flutter
Rumble

TAPE DECK

Tape speeds
Wow & Flutter
Signal/noise relation

110-10% to 127+10% and 220-10%
to 240+10% 50/60Hz
Power out OW - ≤ 5W
Power out 2x5W - ≤ 27W
FB 110 (2 x 4 Ω)
420x208x365 (HxWxD) mm
6.300 gram

MW = 520 to 1705 kHz
SW1 = 2,2 to 7,45 MHz
SW2 = 9,3 to 22,22 MHz
FM = 88 to 108 MHz
FM = 4uV for 26dB S/N
MW = 2500uV/m for 26 dB S/N

70W (PMPO) / 30 W "Music Power"
100 - 10kHz
4 ohms
2 x 32 ohms (40mW max)

4 gram
DC, electronic control
33 1/3 rpm and 45 rpm
< 0,2% (WRMS)
< -65dB (DIN B)

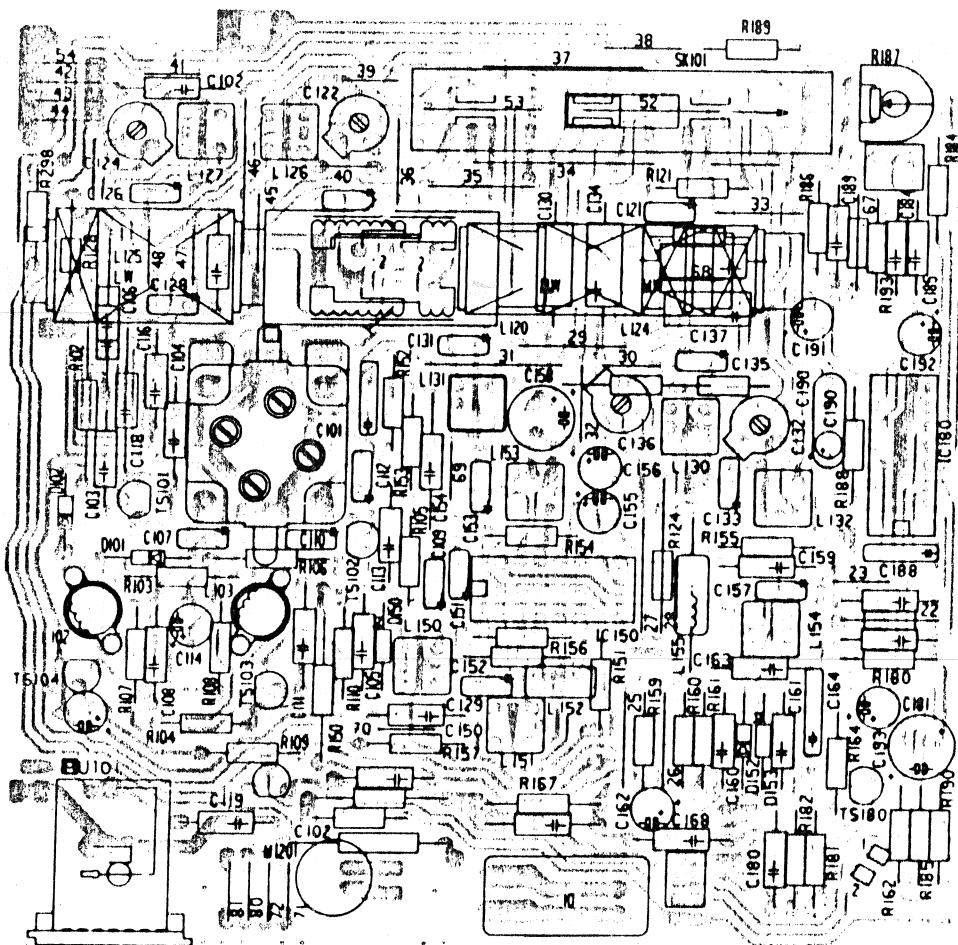
4,76 cm/sec ± 2%
≤ 0,3%
> 45 dB



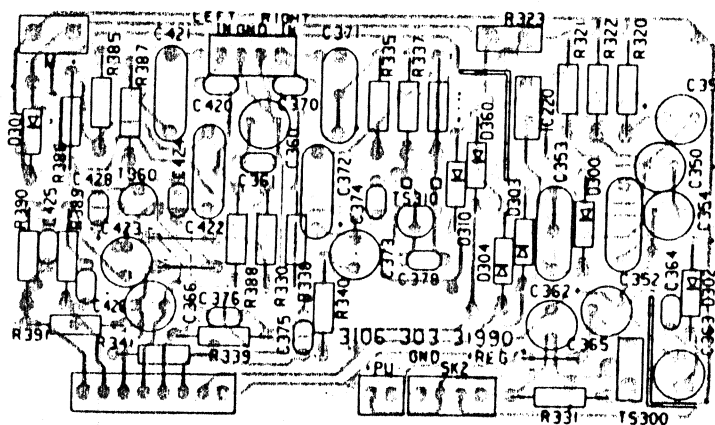
Subject to modification
4806 725 17132

PHILIPS

mestredoradio@ig.com.br vivo 11 97192-1560 carlos Peçanha



ESBREL
 RUA VITÓRIA N.º 391
 FONE: 221-0683
 SÃO PAULO - SP



AJUSTES - AJUSTES - ADJUSTMENTS

SK 101						
MW	455 kHz	A	MIN. CAP.	S151		
MW 515-1622kHz	515 kHz 1722 kHz 600 kHz 1600 kHz	A	MAX. CAP. MIN. CAP. SINT. SINT.	S130 C136 S121 C122	ESBREL RUA VITÓRIA N.º 391 FONE: 221-0683 SÃO PAULO - SP	 max
SW1 2.5-7.2 MHz	2.2 MHz 7.45 MHz 2.5 MHz 7.2 MHz	B	MAX. CAP. MIN. CAP. SINT. SINT.	S131 C101a S126 C101b		 max.
SW2 10.0-21.0 MHz	9.33 MHz 22.22 MHz 10 MHz 21 MHz	B	MAX. CAP. MIN. CAP. SINT. SINT.	S132 C132 S127 C124		center max. max.
FM (*)	10.7 MHz	B	MIN. CAP.	S154 S150		 max.
FM 87.5 MHz to 108 MHz	87.2 MHz 108.5 MHz 90 MHz 106 MHz	B	MAX. CAP. MIN. CAP. SINT. SINT.	S103 C101c S102 C101d	 max. 	

(*)

P Desconecte o "AFC", conectar um divisor de tensão 47k/47K do pino 1/IC 150 à terra, ligue R109 ao centro do divisor de tensão.

E Desconecte el "AFC", conectar un divisor de tensión 47K/47K del pino 1/IC 150 a la tierra, ligue R109 al punto medio del divisor de tensión.

GB Disconnect AFC, connect a voltage divider 47K/47K from pin 1/IC 150 to ground. Connect R109 to the mid point of the voltage divider.

↑ Repita
↓ Repeat

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ELECTRICAL SPARE PARTS

DIVERSOS - VARIOS - MISCELANEOUS

		Code Number
Transformador (60Hz)	Trafo (60Hz)	Mains transformer (60Hz)
Chave de rede	Llave de red	Mains switch
Microfone Electret	Mic. Electret	Electret microphone
Conj. tomada traseira	Conj. toma trasera	Back plugs assy
Botão de voltagem	Botón de tensión	Voltage selector
Conjunto Motor	Motor	Motor
CJ CB (12VDC)	Conjunto Cable (12VDC)	Cable assy (supply/12VDC)
Conjunto cabo áudio	Cable de audio	Audio cable assy
Conjunto Chave "Reed"	Reed switch	Reed switch
Soquete fones	Zocallo de auriculares	Phones socket
Conjunto cápsula cerâmica	Conj. capsula ceramica	P.U. head
Painel impr. regulador	Panel impreso (regulador)	Regulator P.C. board
Painel imp. (fonte)	Panel impreso (fuente)	Supply P.C. board
Painel Impreso (rádio)	Panel impreso (radio)	Radio P.C. board
Fusível 2A	Fusible 2A	Fuse 2A
Chave de ondas	Llave de banda	Wave switch
Chave de funções	Llave de funciones	Functions switch
Chave Grav/Reprodução	Llave Grab/Reprod.	Rec/Play switch
Transformador (50Hz)	Trafo (50Hz)	Mains transformer (50Hz)
Cabeça gravadora/reprod.	Cabeza Grab/rep.	Play/Rec head
Cabeça apagadora	Cabeza borradora	Eraser head
Porta fusível (do trafo)	Puerta fusible (trafo)	Fuse holder (transformer)
Balun	Balun	Baloon
		4806 146 57011
		4806 276 17040
		4806 242 37012
		4806 267 47078
		4806 272 17035
		4806 361 27054
		4806 321 27076
		4806 321 27075
		4806 280 27007
		4806 267 47041
		4806 693 97175
		4806 466 17254
		4806 466 17257
		4806 466 17267
		4806 253 37017
		4806 277 27057
		4806 277 27058
		4806 277 27059
		4806 146 57014
		4806 249 17032
		4806 249 47020
		4806 290 87101
		4806 158 17021

		4806...
C144/155	47µF x 10V - Elco	124 27210
C156/214/...	10µF x 63V - Elco	124 27114
C162	4,7µF x 63V - Elco	124 27205
C205/...	470µF x 10V - Elco	124 27285
C181/...	1µF x 63V - Elco	124 27209
C191/...	0,47µF x 63V - Elco	124 27241
C193/234/237/...	47µF x 25V - Elco	124 27290
C204/...	150µF x 25V - Elco	124 27349
C211/261	2,2µF x 63V - Elco	124 27279
C215/265/...	220µF x 10V - Elco	124 47015
C192	0,47µF x 63V - Elco	124 27117
C239	220µF x 25V - Elco	124 27251
C240	220µF x 16V - Elco	124 27293
C247/...	100µF x 10V - Elco	124 27294
C350	3,3µF x 50V - Elco	124 27301
C351	10µF x 50V - Elco	124 27296
C107/110	27µF x 100V - Cer.	120 17234
C103/106	47pF x 50V - Cer.	120 17233
C262	1nF x 50V - Cer.	120 17127
C108/188	4n7F x 50V - Cer.	120 17133
C131/...	10pF x 100V - Cer.	120 17202
C153	100pF x 100V - Cer.	120 17236
C160/161	180pF x 50V - Cer.	120 17128
C137	7n5 x 63V - Cer.	120 37087
C135	15pF x 50V - Cer.	120 17222
C217/267/...	2,2nF x 50V - Cer.	120 17132
C219/269/...	150pF x 50V - Cer.	120 17240
C233/...	4k7F x 100V - Cer.	120 47144
C292	68nF x 100V - Cer.	120 47207
C238/288	47nF x 25V - Cer.	120 17207
C245/...	100nF x 250V - Pol. met.	120 47061

		4806...
D152/153	BA315	130 37015
D201 to D204/...	1N 4002	130 37076
D101/102/150/...	1N 4148	130 37078
D300/301	BA220	130 37011
D302	BZX79C12 - Zener	130 37042
D205	BZX79/C8V2 - Zener	130 37054
D289	BZX79/C4V7 - Zener	130 37047
D400	LED Green	130 37178
D401	LED Red	130 37179
D303/...	BAW62	130 37005

		4806...
IC 150	TEA 5570	209 87224
IC 180	BA 1332	209 87237
IC 210	AN 7168	209 87262
IC 220	TDA 1559	209 87222

		4806...
TS101/2/3	BF 494 B	130 47096
TS104/212/...	BC 548 C	130 47042
TS180/201	BC 548 B	130 47041
TS211/261	BC 558 C	130 47217
TS210/260/...	BC 549 C	130 47045
TS290	BC 556	130 47170
TS292	BC 337	130 47030
TS293	BC 558	130 47048
TS300	BD 135	130 47054

		4806...
C101	Varco	125 47005
C122/132/124	Trimmer 22pF	125 57003
C136	Trimmer 10pF	125 57002

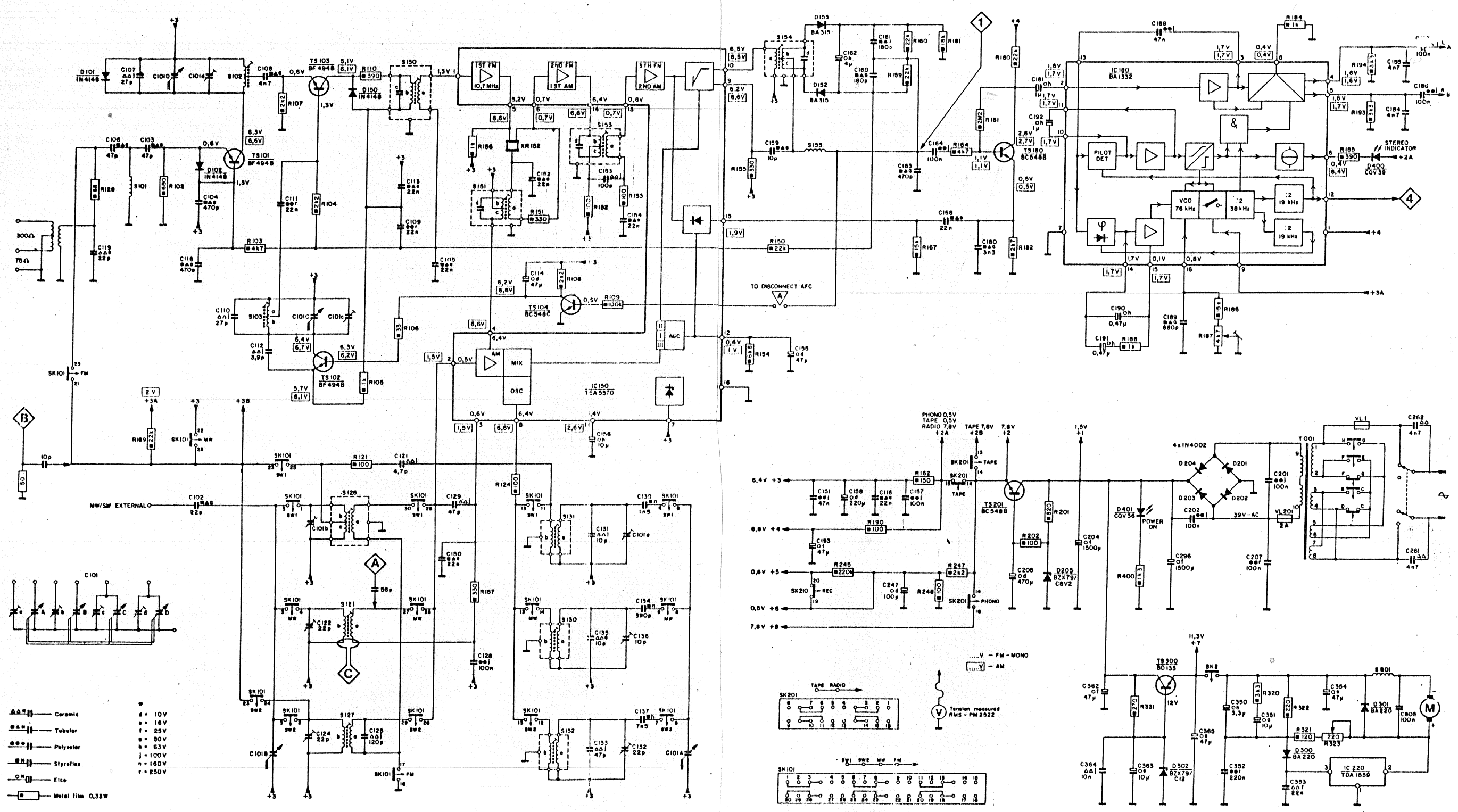
		4806...
S102/103	RF FM	156 37031
S121	AM aerial assy	156 47017
S126	Antenna SW1	156 27100
S127	Antenna SW2	156 27101
S130	AM Osc.	156 17083
S131	SW1 Osc.	156 17084
S132	SW2 Osc.	156 17085
S150	IF FM	153 57023
S151/153	IF AM	153 17055
S154	Disc. FM	156 57002
S155	10uH	152 17017
S290	680uH	152 17018
KT152	Filter 10.7 MHz	242 77003

		4806...
R103/164/...	4k7Ω - 0,4W	110 97070
R104/7/...	2k2Ω - 0,4W	110 67021
R105/56/188...	1kΩ - 0,4W	110 97064
R106	33Ω - 0,4W	110 67031
R109/...	100kΩ - 0,4W	110 67003
R121/152...	100Ω - 0,4W	110 67001
R150/159/160...	22kΩ - 0,4W	110 67022
R151/155/157...	330Ω - 0,4W	110 67029
R162/190	47Ω - 0,4W	110 67126
R181	2M2Ω - 0,4W	110 67148
R221/235...	3K3Ω - 0,4W	110 97069
R210/215...	5K6Ω - 0,4W	110 97061
R161/216...	18KΩ - 0,4W	110 97071
R213/263	3M3Ω - 0,4W	110 67149
R124/264	1M5Ω - 0,4W	110 67150
R220/270/...	12KΩ - 0,4W	110 67008
R233/283	2,2Ω - 0,4W - safety	110 97010
R224/...	10Ω - 0,4W	110 67004
R292	62KΩ - 0,4W	116 57053
R298	47KΩ - 0,4W	110 97063
R321	120Ω - 0,4W	110 67006
R340/...	30KΩ - 0,4W	110 67118
R400	1,2KΩ - 0,4W	110 67065

		4806...
R187	4,7kΩ - horizontal	100 17041
R231/281	20kΩ - (volume)	101 17043
R280	50kΩ (Tonal.)	101 17042
R250	100kΩ (mono/stereo)	101 17044
R323	220Ω - horizontal	100 17045

ESBREL
RUA VITORIA N.º 391
FONE: 221-0388
S/2 - PAULO - SP

TS-10	101	102	103-102	104	105	106	107	108	109	110	111	112-121-126	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500
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TS - IC :	360-310	212-262	260-210	211-261	289	292-290 - IC210a,b - 293	5100-5200
D - S :	304 - 303 - 360-310			260-210			
C :	421 - 420 - 424	295 - 426	261 - 212 - 266-375	228-264	238 - 230 - 231	282 - 283	239 - 284 - 286
C :	371-366 - 374	248 - 376	267 - 215 - 425 - 213	214	291 - 293	232 - 233	287 - 234 - 236
C :	370-360 - 361		423 - 373	217 - 211	216-265	283	282 - 290 - 300 - 233 - 288
R :	337	348	218 - 339 - 274	273-223-213 - 209-340-271-222-204		284 - 250 - 250	251 - 289 - 202 - 285-281 - 256
R :	385	338	262 - 260	224 - 287-276-294-259 - 264-221-265-216-270		234	280 - 289 - 202 - 285-281 - 256
R :	335 - 367		248 - 210 - 389	217-228-244-263 - 214-390-215-272-220		293 - 292 - 295 - 297 - 283	

