TECHNICAL MANUAL

Quality. Uncompromised

ROTEL

RTC-850

AM/FM STERO TUNER PRE-AMPLFIER

RTC-850L

LW/MW/FM STEREO TUNER PRE-AMPLFIER

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THE ROTEL CO., LTD.

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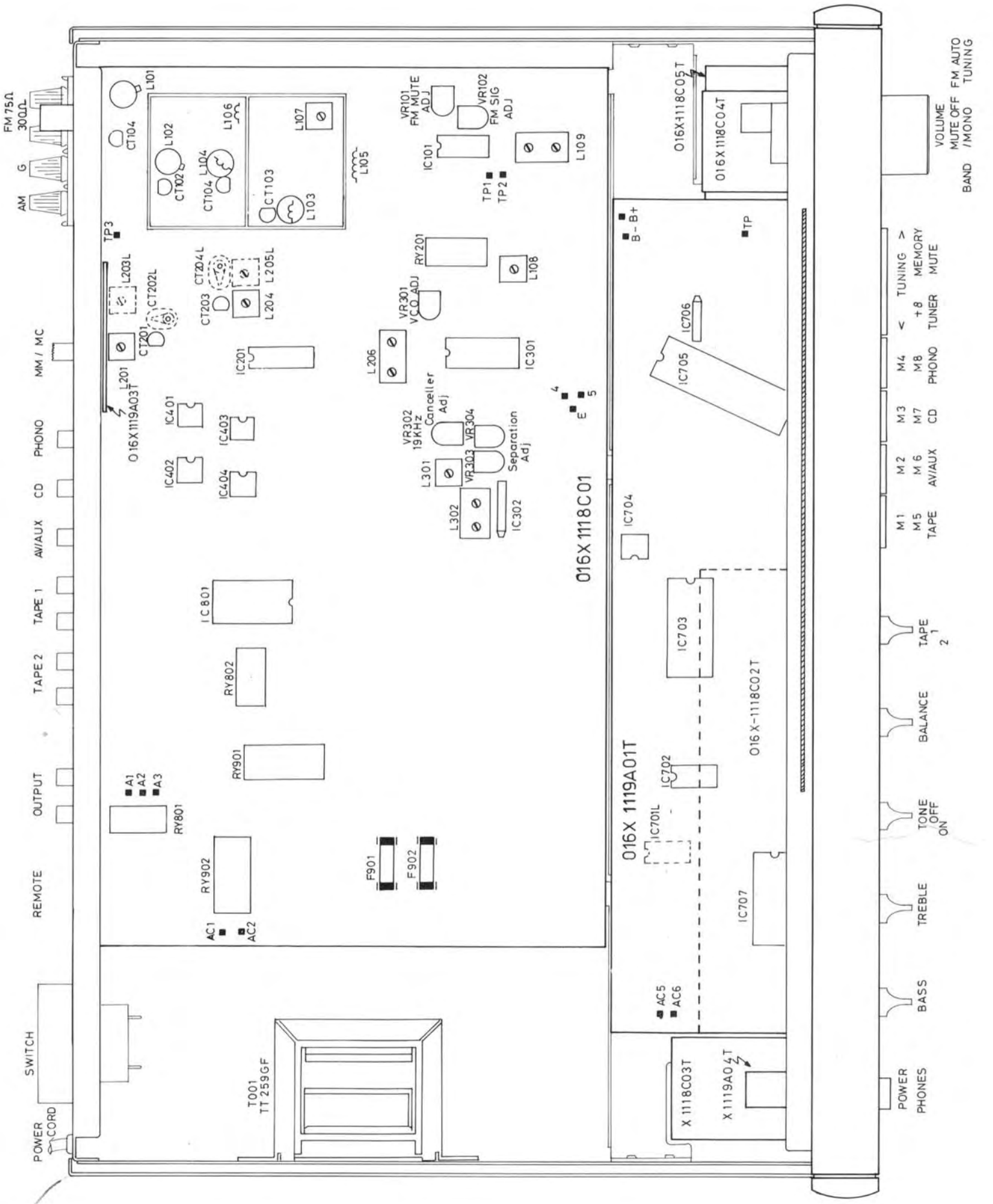
ROTEL ELECTRONICS CO., LTD.

ROTEL BLDG., 3F. NO. 35, FUSING N. ROAD, TAIPEI, TAIWAN, REPUBLIC OF CHINA

MN20001706

Chassis Layout



FM IF and RF Alignment

Instruments : FM Signal Generator, (400Hz, 100% Modulated) T.H.D. analyzer, Oscilloscope, AC VTVM, DC Voltmeter, Tuning Meter

Terminated : DC Voltmeter...Between TP and earth On 016X1119A01T P.C.B
Tuning Meter...Between TP1 and TP2 On 016X1118C01T P.C.B

Step	Generator		Tuning Dial Setting	Adjust	Adjust for
	Coupling	Frequency			
1	No use.		87.5 MHz	L103	3V reading on DC Voltmeter
2			108 MHz	CT103	22V reading on DC Voltmeter
3	Repeat steps 1 and 2 unit no further improvement is noticed.				
4	Antenna terminal	90 MHz	90 MHz	L101, L102 L104	Maximum reading on AC VTVM.
5		105 MHz	105 MHz	CT101, CT102 CT104	Maximum reading on AC VTVM.
6	Repeat steps 4.5 and 6 unit on further improvement is noticed (Muting OFF)				
7	Antenna terminal 1mV input	90 MHz	90 MHz	L109(A)	Adjust center on Tuning Meter
8				L109(B)	Minimum reading on T.H.D. Analyzer
9	Repeat steps 7 and 8 unit no further improvement is noticed (Muting OFF)				
10	Antenna terminal 15μV input Europe : 7uV	90 MHz	90 MHz	VR101	Muting Level (Muting ON)
11	Antenna terminal 1mV input	90 MHz	90 MHz	VR102	Signal Indicator Level 5th LED light On

FM MPX alignment

Instruments : FM Stereo Generator, AC VTVM, Oscilloscope, Frequency Countor and THD Analizer

Step	Generator		Tuning Dial Setting	Adjust	Adjust for
	Coupling	Frequency			
1	No use		98 MHz	VR 301	VCO 76 kHz ± 100Hz (Muting ON) TP4 Thru 220 kohms resistor
2	Antenna terminal 1mV input	98 MHz Pilot.....10% 1 KHz.....90% Mod.	98 MHz	L107 , VR302	Pilot Cancel 19 KHz Minimum Dist.
3	Antenna terminal 1mV input	98 MHz Pilot.....10% 1 KHz.....90% Mod.	98 MHz	VR103 VR104	Best separation
4	Repeat steps 2 to 3 unit no further improvement is noticed. Check the stereo indicator can be operated normally when pilot signal is reduce from 10% to 5%.				

MW IF and RF Alignment

Instruments : AM signal Generator (400Hz 30% Modulated), AC VTVM, Oscilloscope, DC Voltmeter
Terminated : DC Voltmeter ... Between TP and Earth On 016X 1119A01T P.C.B

Step	Generator		Tuning Dial Setting	Adjust	Adjust for
	Coupling	Frequency			
1	No use.		530 KHz (531 KHz) Europe	L204	About 1.2V ± 0.1V on DC Volt meter
2			1600 KHz (1602 KHz) Europe	CT203	About 9V ± 0.2V on DC Volt meter
3	Repeat steps 1 and 2 unit no further improvement is noticed.				
4	Test Loop Radiate signal into loop antenna	450 KHz	530KHz	L206	Maximum reading on AC VTVM.
5		600 KHz	600KHz	L201	
6		1400 KHz	1400 KHz	CT201	
7	Repeat steps 5 and 6 unit no further improvement is noticed.				

LW RF Alignment

Instruments : AM signal Generator (400Hz 30% Modulated), AC VTVM, Oscilloscope, DC Voltmeter
Terminated : DC Voltmeter ... Between TP and Earth On 016X 1119A01T P.C.B

Step	Generator		Tuning Dial Setting	Adjust	Adjust for
	Coupling	Frequency			
1	No use.		153KHz	L205L	About 2.5V ± 0.1V on DC Volt meter
2			281KHz	CT204L	About 7.5V ± 0.2V on DC Volt meter
3	Repeat steps 1 and 2 unit no further improvement is noticed.				
4	Test Loop Radiate signal into loop antenna	160KHz	160KHz	L202L	Maximum reading on AC VTVM.
5		250KHz	250KHz	CT202L	
6	Repeat steps 4 and 5 unit no further improvement is noticed.				

Parts List

NOTE: THE COMPONENTS INDENTIFIED BY ⚠ MARK ARE FOR SAFETY. REPLACE ONLY WITH ORIGINAL PARTS.DO NOT SUBSTITUTE

SYMBOL	PARTS NO.	DESCRIPTION
	X-1118A01T	PCB ASSEMBLY
R101	RD54702824	R,CARBON 47K J 1/4W
R102	RD51003820	R CARBON 100K J 1/4W
R103	RD52209820	R,CARBON 22 J 1/4W
R104	RD54702824	R,CARBON 47K J 1/4W
R105	RD51500827	R,CARBON 150 J 1/4W
R106	RD51003820	R,CARBON 100K J 1/4W
R107-109	RD51002827	R,CARBON 10K J 1/4W
R110	RD52201820	R,CARBON 2.2K J 1/4W
R111	RD51003820	R,CARBON 100K J 1/4W
R112	RD56800825	R,CARBON 680 J 1/4W
R113	RD51000820	R,CARBON 100 J 1/4W
R114	RD53300829	R,CARBON 330 J 1/4W
R15,116	RD54702824	R,CARBON 47K J 1/4W
R117	RD22202822	R,CARBON 22K J 1/4W
R118	RD54701820	R,CARBON 4.7K J 1/4W
R119	RD53301822	R,CARBON 3.3K J 1/4W
R120,121	RD54709820	R,CARBON 47 J 1/4W
R122	RD54700827	R,CARBON 470 J 1/4W
R123	RD56802822	R,CARBON 68K J 1/4W
R124,126	RD53300829	R,CARBON 330 J 1/4W
R127	RD51000820	R,CARBON 100 J 1/4W
R128	RD54702824	R,CARBON 47K J 1/4W
R129	RD53300829	R,CARBON 330 J 1/4W
R130	RD52201820	R,CARBON 2.2K J 1/4W
R131	RD51002827	R,CARBON 10K J 1/4W
R132	RD51000820	R,CARBON 100 J 1/4W
R133	RD52201820	R,CARBON 2.2K J 1/4W
R134	RD54701820	R,CARBON 4.7K J 1/4W
R135	RD55600828	R,CARBON 560 J 1/4W
R136	RD52202824	R,CARBON 22K J 1/4W
R137,138	RD52202824	R,CARBON 22K J 1/4W
R139	RD52201820	R,CARBON 2.2K J 1/4W
R140	RD52203820	R,CARBON 220K J 1/4W
R141	RD52200827	R,CARBON 220 J 1/4W
R142	RD54700827	R,CARBON 470 J 1/4W
R143	RD52201820	R,CARBON 2.2K J 1/4W
R144	RD58202822	R,CARBON 82K J 1/4W
R145	RD54701820	R,CARBON 4.7K J 1/4W
R146	RD51002827	R,CARBON 10K J 1/4W
R147	RD52202824	R,CARBON 22K J 1/4W
R148	RD58202822	R,CARBON 82K J 1/4W
R149	RD51000820	R,CARBON 100 J 1/4W
R150,151	RD54701820	R,CARBON 4.7K J 1/4W
R152	RD51202828	R,CARBON 12K J 1/4W
R153	RD52701828	R,CARBON 2.7K J 1/4W
C102	CC31011435	CAP,CERAMIC 100P 50V
C103,104	CC31009465	CAP,CERAMIC 0.01uF 50V
C105	CC15013410	CAP,CERAMIC 5P CH 50V
C106	CC11012410	CAP,CERAMIC 10P CH 50V
C107	CC05013485	CAP,CERAMIC 5P 50V
C108	CC33312438	CAP,CERAMIC 33P 50V
C109,110	CC05013485	CAP,CERAMIC 5P 50V
C111	CC31009465	CAP,CERAMIC 0.01uF 50V
C112	CE01005167	CAP,ELEC. 100uF 16V
C113	CC15013410	CAP,CERAMIC 5P CH 50V
C114	CC05013485	CAP,CERAMIC 5P 50V
C115	CC31013481	CAP,CERAMIC 1P 50V
C116	CC32212436	CAP,CERAMIC 22P 50V
C117	CC31011435	CAP,CERAMIC 100P 50V
C118-122	CC31009465	CAP,CERAMIC 0.01uF 50V
C123-125	CC05009457	CAP,CERAMIC 0.047uF 50V
C126	CC33311434	CAP,CERAMIC 330P 50V
C127	CE02206107	CAP,ELEC. 22uF 10V
C128	CE01007504	CAP,ELEC. 1uF 50V
C129	CE01006251	CAP,ELEC. 10uF 25V
C130	CL31006258	CAP,LOW NOISE U25V10LN
C131	CE01006157	CAP,ELEC. 100uF 16V
C132	CE01007504	CAP,ELEC. 1uF 50V
C133-135	CC05009457	CAP,CERAMIC 0.047uF 50V
C136	CE01007504	CAP,ELEC. 1uF 50V

SYMBOL	PARTS NO.	DESCRIPTION
C137	CC05009457	CAP,CERAMIC 0.047uF 50V
C138	CE01005167	CAP,ELEC. 100uF 16V
C139,140	CC05009457	CAP,CERAMIC 0.047uF 50V
C141	CE01005106	CAP,ELEC. 100uF 16V
Q101	TR50000140	TRANSISTOR 3SK107-F
Q102	TR30000133	TRANSISTOR 2SC1674
Q103	TR50000103	TRANSISTOR 2SK544
Q104,105	TR30000133	TRANSISTOR 2SC1674
Q106,107	TR30000108	TRANSISTOR 2SC1571
Q108	TR30000327	TRANSISTOR 2SC536
D101-104	DD50000020	DIODE SVC202AF
D105-108	DD80000021	DIODE 1N4148
IC101	IC00001103	IC LA1235
L101	LC23390009	FM ANT. COIL TRL339
L102	LC23380004	FM RF COIL TRL338
L103	LC23360005	FM OSC COIL TRL336
L104	LC23370000	FM RF COIL TRL337
L105	LM00000346	MICRO INDUCTOR RL247T
L106	LM00000073	MICRO INDUCTOR TRL239
L107	LC02333000	FM IF COIL RL233T
L108	LC23060009	MPX FILTER TRL306
L109	LC31090007	IF COIL RLV-109T
VR101,102	RV20000193	R,SEMI-FIXED 08-301 10KB
CT101-104	CF00000159	CAP,FILM TRIMMER VCT51C
X101	LF00000166	CERAMIC FILTER SFE10.7MSG (E)
X101	LF00000014	CERAMIC FILTER SFE10.7MA8-A (U.C.A)
X102	LF00000166	CERAMIC FILTER SFE10.7MS2G
X103	LF00000166	CERAMIC FILTER SFE10.7MS2G (U)
X103	CC31009465	CAP,CERAMIC 0.01uF 50V (E)
R201,202	RD51003820	R,CARBON 100K J 1/4W
R203	RD54709820	R,CARBON 47 J 1/4W
R204	RD52200827	R,CARBON 220 J 1/4W
R205	RD53300829	R,CARBON 330 J 1/4W
R206L-210L	RD56801829	R,CARBON 6.8K J 1/4W
R211L	RD52202824	R,CARBON 22K J 1/4W
R212L	RD51502824	R,CARBON 15K J 1/4W
R213	RD51001823	R,CARBON 1K J 1/4W
R214,216	RD51002827	R,CARBON 10K J 1/4W
R215	RD52200827	R,CARBON 220 J 1/4W
R217	RD51001823	R,CARBON 1K J 1/4W
R218,218	RD52202824	R,CARBON 22K J 1/4W
R220	RD52200827	R,CARBON 220 J 1/4W
R221	RD51501820	R,CARBON 1.5K J 1/4W
R222	RD54700827	R,CARBON 470 J 1/4W
R223-225	RD51000820	R,CARBON 100 J 1/4W
R226	RD51002827	R,CARBON 10K J 1/4W
R227	RD54702824	R,CARBON 47K J 1/4W
R228	RD51000820	R,CARBON 100 J 1/4W
R229	RD28201827	R,CARBON 8.2K J 1/4W
C201	CE01007504	CAP,ELEC. 1uF 50V
C202,203	CC31009465	CAP,CERAMIC 0.01uF 50V
C204	CC05013485	CAP,CERAMIC 5P 50V
C205L	CM08210426	CAP,MYLAR 822 J 50V
C207L	CC11012410	CAP,CERAMIC 10P CH 50V
C208L	CS41811426	CAP,STYROL 180P 50V
C209	CS43911424	CAP,STYROL 390P 50V
C210	CC11512418	CAP,CERAMIC 15P CH 50V (MW)
C210	CC11012410	CAP,CERAMIC 10P CH 50V (LW)
C211L	CC31009465	CAP,CERAMIC 0.01uF 50V
C212L	CC16812416	CAP,CERAMIC 68P CH 50V
C213,216	CC31009465	CAP,CERAMIC 0.01uF 50V
C214	CE03307254	CAP,ELEC. 3.3uF 25V
C215,217	CE01007504	CAP,ELEC. 1uF 50V
C218	CM02209426	CAP,MYLAR 223 J 50V
C219	CM02208434	CAP,MYLAR 224 K 50V
C220	CE01006500	CAP,ELEC. 1uF 50V
C221	CC31010431	CAP,CERAMIC 0.001uF 50V

Parts List

SYMBOL	PARTS NO.	DESCRIPTION
C222	CC05009457	CAP,CERAMIC 0.047uF 50V
C223	CC02009458	CAP,CERAMIC 0.02uF 50V
C224,225	CC31009465	CAP,CERAMIC 0.01uF 50V
C226	CE01005167	CAP,ELEC. 100UF 16V
C227	CC31009465	CAP,CERAMIC 0.01uF 50V
C228	CC02009458	CAP,CERAMIC 0.02uF 50V
C229	CC31010431	CAP,CERAMIC 0.001uF 50V
C230	CE01005167	CAP,ELEC. 100uF 16V
D201,202	DD50000031	DIODE SVC321B
D203L	DD80000021	DIODE 1N4148
D204-206	DD80000021	DIODE 1N4148
Q201	TR50000097	TRANSISTOR 2SK49
Q202L-208L	TR30000327	TRANSISTOR 2SC536
Q209	TR30000327	TRANSISTOR 2SC536
IC201	IC00001322	IC LA1245
X201	LF00000221	CERAMIC FILTER BFU450C
L201	LC31070008	AM ANT.COIL RLV107A00
L202L	LC31080002	LW ANT.COIL RLV108A00
L203L	LM00000073	MICRO INDUCTOR TRL239
L204	LC31050009	AM OSC COIL RLV105T
L205L	LC31060003	LW OSC COIL RLV106T
L206	LC01980000	AM IFT COIL RL198T
CT201,203	CF00000159	CAP,FILM TRIMMER VCT51C
CT202L,204L	CF00000263	CAP,FILM TRIMMER AT1-53-9W
RY201	LY00000095	RELAY RY12W-OH
R301	RD51502824	R,CARBON 15K J 1/4W
R302	RD58202822	R,CARBON 82K J 1/4W
R303	RD54700827	R,CARBON 470 J 1/4W
R304	RD51003820	R,CARBON 100K J 1/4W
R305	RD55600828	R,CARBON 560 J 1/4W
R306	RD52002823	R,CARBON 20K J 1/4W
R307,308	RM11002710	R,METAL MR2510K 0.4W
R309	RD53301822	R,CARBON 3.3K J 1/4W
R310	RD53902829	R.CARBON 39K J 1/4W
R311	RD56801829	R,CARBON 6.8K J 1/4W
R312,313	RD53302826	R,CARBON 33K J 1/4W
R314,315	RM13002717	R,METAl MR2530K 0.4W
R316-319	RM13301710	R,METAL MR253K3 0.4W
R320	RD52203828	R,CARBON 220K J 1/4W
R321	RD51201824	R,CARBON 1.2K J 1/4W
R322	RD51002827	R,CARBON 10K J 1/4W
R323	RD51503828	R,CARBON 150K J 1/4W
R324	RD52203828	R,CARBON 220K J 1/4W
C301	CS43911424	CAP,STYROL 390P J 50V
C302	CS42710435	CAP,STYROL 2700P K 50V
C303	CE04707252	CAP,ELEC. 4.7uF 25V
C304	CE04708505	CAP,ELEC. 0.47uF 50V
C305	CS48211430	CAP,STYROL 820P K 50V
C306	CE01006251	CAP,ELEC. 10uF 25V
C307	CE01008508	CAP,ELEC. 0.1uF 50V
C308,309	CM04709426	CAP,MYLAR 473 J 50V
C310	CE04705164	CAP,ELEC. 470uF 16V
C311	CE01005167	CAP,ELEC. 100uF 16V
C312	CL32206164	CAP,LOW NOISE U16V22LN
C313	CE01005167	CAP,ELEC. 100uF 16V
C314,316	CS44710438	CAP,STYROL 4700P K 50V
C315	CE04705164	CAP,ELEC. 470uF 16V
C317,318	CS48211430	CAP,STYROL 820P 50V (U.C.A)
C319,320	CS31510429	CAP,STYROL SRA152J50
C321,322	CL34707259	CAP,LOW NOISE U25V4R7LN
C323	CE04707252	CAP,ELEC. 47uF 25V
Q301	TR30000108	TRANSISTOR 2SC1571
IC301	IC00001905	IC uPC1223C
IC302	IC00000603	IC TA7324P
L301	LM00000360	MICRO INDUCTOR TRL312
L302	LC23400003	MPX FILTER COIL TRL340 (MW)
D301,302	DD80000021	DIODE IN4148
VR301	RV20000193	R,SEMI-FIXED 08-301 10KB
VR302	RV20000284	R,SEMI-FIXED 08-301 30KB
VR303,304	RV20000181	R,SEMI-FIXED 08-301 100KB

SYMBOL	PARTS NO.	DESCRIPTION
R401,402	RM11009715	R,METAL MR2510R 0.4W
R403,404	RM14702715	R,METAL MR2547K 0.4W
R405,406	RM14709710	R,METAL MR2547R 0.4W
R407,408	RM14700718	R,METAL MR25470R 0.4W
R409,410	RM12701718	R,METAL MR252K7 0.4W
R411,412	RM13301710	R,METAL MR253K3 0.4W
R413,414	RM12701718	R,METAL MR252K7 0.4W
R415,416	RM12402715	R,METAL MR2524K 0.4W
R417,418	RM12001710	R,METAL MR252K 0.4W
R419,420	RM13303717	R,METAL MR25330K 0.4W
R421,422	RM11000712	R,METAL MR25100R 0.4W
R423,424	RM11003713	R,METAL MR25100K 0.4W
C401,402	CS31511318	CAP,POLYSTYRENE 150P 160V
C403,304	CA04707730	CAP,SOLID ALUM 4.7uF 16V
C405,406	CE51005254	CAP,ELEC. UKSIE101M
C407,408	CP11008330	CAP,M.P. FILM 0.1uF 100V
C409,410	CS32010301	CAP,STYORL 2000P 160V
C411,412	CS36810300	CAP,STYROL 6800P 160V
C413,414	CS33010308	CAP,STYROL 3000P 160V
C415,416	CE51006477	CAP,ELEC. 50BGF10M
C419	CC05009457	CAP,CERAMIC 0.047uF 50V
IC401-404	IC00001735	IC NE5534AN
R801-814	RM11001716	R,METAL MR251K 0.4W
R815-819	RD52202824	R,CARBON 22K J 1/4W
R820	RD51003820	R,CARBON 100K J 1/4W
R823	RD53302826	R,CARBON 33K J 1/4W
R825	RD54702824	R,CARBON 47K J 1/4W
R826	RD51003820	R,CARBON 100K J 1/4W
R827,830	RM12200924	R,METAL 220 1/2W
R828	RD52203828	R,CARBON 220K J 1/4W
R831	RD51002827	R,CARBON 10K J 1/4W
C816	CE01007504	CAP,ELEC. 1uF 50V
C817,819	CE51005254	CAP,ELEC. UKSIE101M
Q801-808	TR30000327	TRANSISTOR 2SC536
Q809-814	TR10000254	TRANSISTOR 2SA1345
D802-810	DD80000021	DIODE 1N4148
IC801	IC00001486	IC TC9152P
RY801,802	LY00000174	RELAY RZ-24W ⚠
R905	RM14700718	R,METAL MR25470R 0.4W
R907,908	RM11001716	R,METAL MR251K 0.4W
R909,910	RM11002710	R,METAL MR2510K 0.4W
R911,912	RM11001716	R,METAL MR251K 0.4W
R913	RD54701820	R,CARBON 4.7K J 1/4W
R914	RD52202824	R,CARBON 22K J 1/4W
R915	RD51001823	R,CARBON 1K J 1/4W
R916	RD54702824	R,CARBON 47K J 1/4W
R917	RM22212814	R,METAL 22.1K 1/4W
R918	RD52200827	R,CARBON 220 J 1/4W
R919	RD53301822	R,CARBON 3.3K J 1/4W
R920,922	RM12200924	R,METAL 220 1/2W
R921	RD55601821	R,CARBON 5.6K J 1/4W
R923	RD52202824	R,CARBON 22K J 1/4W
R924	RD52201820	R,CARBON 2.2K J 1/4W
R925	RD51003820	R,CARBON 100K J 1/4W
R928	RM25620818	R,METAL 562 1/4W
R929	RM14700718	R,METAL 470 0.4W
R930	RM21503816	R,METAL 150K 0.4W
C905,906	CE51005254	CAP,ELEC. UKSIE101M
C907,908	CE52204258	CAP,ELEC. UKSIE222MRB
C909	CK00000060	SPARK KILLER DE7100FZ472P (U,C,A) ⚠
	CK00000035	SPARK KILLER DE7150F472M ⚠
C911,912	CE14704351	CAP,ELEC. 4700uF 35V ⚠
C913-916	CC01009256	CAP,CERAMIC 0.01uF 250V
C917	CE01005016	CAP,ELEC. 100uF 10V
C918	CE02205164	CAP,ELEC. 220uF 16V
C919	CE04705103	CAP,ELEC. 470uF 10V
C920	CE01006251	CAP,ELEC. 10uF 25V
C921	CE04705164	CAP,ELEC. 470uF 16V
C922	CE01005258	CAP,ELEC. 100uF 25V
C923	CE01005106	CAP,ELEC. 100uF 10V

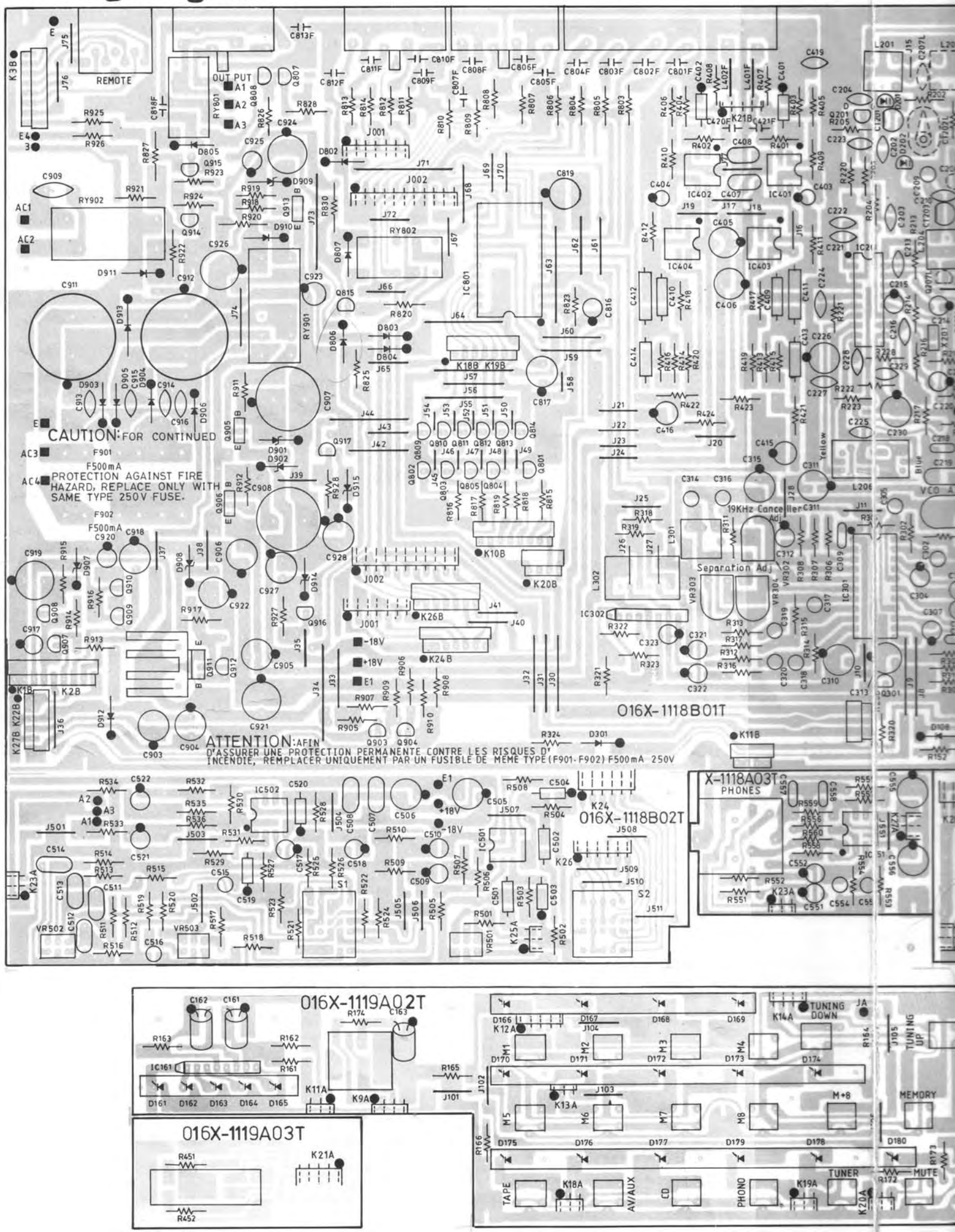
SYMBOL	PARTS NO.	DESCRIPTION
C924	CE04705164	CAP,ELEC. 470uF 16V
C925	CE01006500	CAP,ELEC. 10uF 50V
C926	CE01004357	CAP,ELEC. 1000uF 35V ⚠
C927,928	CE01005258	CAP,ELEC. 100uF 25V
C929	CE01007504	CAP,ELEC. 1uF 50V
C930,931	CC01009256	CAP,CERAMIC 0.01uF 50V
C932	CE04708505	CAP,ELEC. 4.7uF 50V
Q903	TR10000140	TRANSISTOR 2SA984K
Q904	TR30000121	TRANSISTOR 2SC2274
Q905	TR10000047	TRANSISTOR 2SB631K
Q907	TR10000126	TRANSISTOR 2SA608K
Q908	TR30000080	TRANSISTOR 2SD863
Q909	TR30000108	TRANSISTOR 2SC1570
Q910,912	TR30000327	TRANSISTOR 2SC536
Q911,Q906	TR30000029	TRANSISTOR 2SD313
Q913	TR40000069	TRANSISTOR 2SD600K
Q914	TR10000140	TRANSISTOR 2SA984K
Q915	TR30000327	TRANSISTOR 2SC536
D901,902	DD20000041	DIODE RD18E
D903-906	DD80000010	DIODE 1N4003TB
D907	DD20000181	DIODE RD6.2E
D908	DD20000077	DIODE RD16E
D909	DD20000181	DIODE RD6.2E
D910-912	DD80000021	DIODE 1N4148
D913,916	DD80000010	DIODE 1N4003TB
D914,915	DD20000193	DIODE RD15E
RY901	LY00000150	RELAY UB24AMBU-E ⚠
RY902	LY00000137	RELAY VS-24 MB-NR ⚠
F901,902	FU24000057	FUSE 250V UC/CSA 5MF 1.0A (C,U,A,H) ⚠
	FU23000025	FUSE 250V 1A S ⚠
	AH20000539	HEAT SINKER BOARD 4TR-2478#1
	JD08000017	8P DIN JACK DJ-026-8P
	JP04000140	4P PIN JACK (NI) P-14 4TR-2408#1 (GND)
	JP04000151	4P PIN JACK (AU1) P-14 4TR-2408#2 (GND)
	JP06000129	6P PIN JACK (AU1-4) P-18 4TR-2488#3
	TP20000250	4P ANT TERMINAL 4TR-2358
	X-1118A02T	PCB ASSEMBLY
R501,502	RM11500710	R,METAL MR25150R 0.4W
R503,504	RM14702715	R,METAL MR2547K 0.4W
R505,506	RM14700718	R,METAL MR25470R 0.4W
R507,508	RM12701718	R,METAL MR252K7 0.4W
R511,512	RM11002710	R,METAL MR2510K 0.4W
R513,514	RM18201710	R,METAL MR258K2 0.4W
R515,516	RM01802710	R,METAL MR2518K 0.4W
R517,518	RM01502714	R,METAL MR2515K 0.4W
R519,520	RM11501713	R,METAL MR251K5 0.4W
R521,522	RM13301710	R,METAL MR253K3 0.4W
R523,524	RM11501713	R,METAL MR251K5 0.4W
R525,526	RM11500710	R,METAL MR25150R 0.4W
R527,528	RM14702715	R,METAL MR2547K 0.4W
R529,530	RM11201717	R,METAL MR251K2 0.4W
R531,532	RM12701718	R,METAL MR252K7 0.4W
R533,534	RM11000712	R,METAL MR25100R 0.4W
C501,502	CY01007303	CAP,LAYER 1uF 100V
C503,504	CS34712311	CAP,POLYSTYRENE 47P 160V
C505,506	CE51005254	CAP,ELEC. UKSIE 101M
C507,508	CP11008330	CAP,M.P. FILM 0.1uF 100V
C511-514	CM01008423	CAP,MYLAR 104 J 50V
C515,516	CS41010429	CAP,STYROL 1000P 50V
C517,518	CE51006477	CAP,ELEC. 50BGF 10M
C519,520	CS34712311	CAP,POLYSTYRENE 47P 160V
C521,522	CE51006477	CAP,ELEC. 50BGF 10M
IC501,502	IC00001693	IC NE5532AN
VR501	RV10001206	R,VARIABLE 4TR-2492 100KMN
VR502,503	RV10001190	R,VARIABLE 4TR-2491 20KBx2
S1,S2	SH30000432	FUNCTION SW C-4174A09

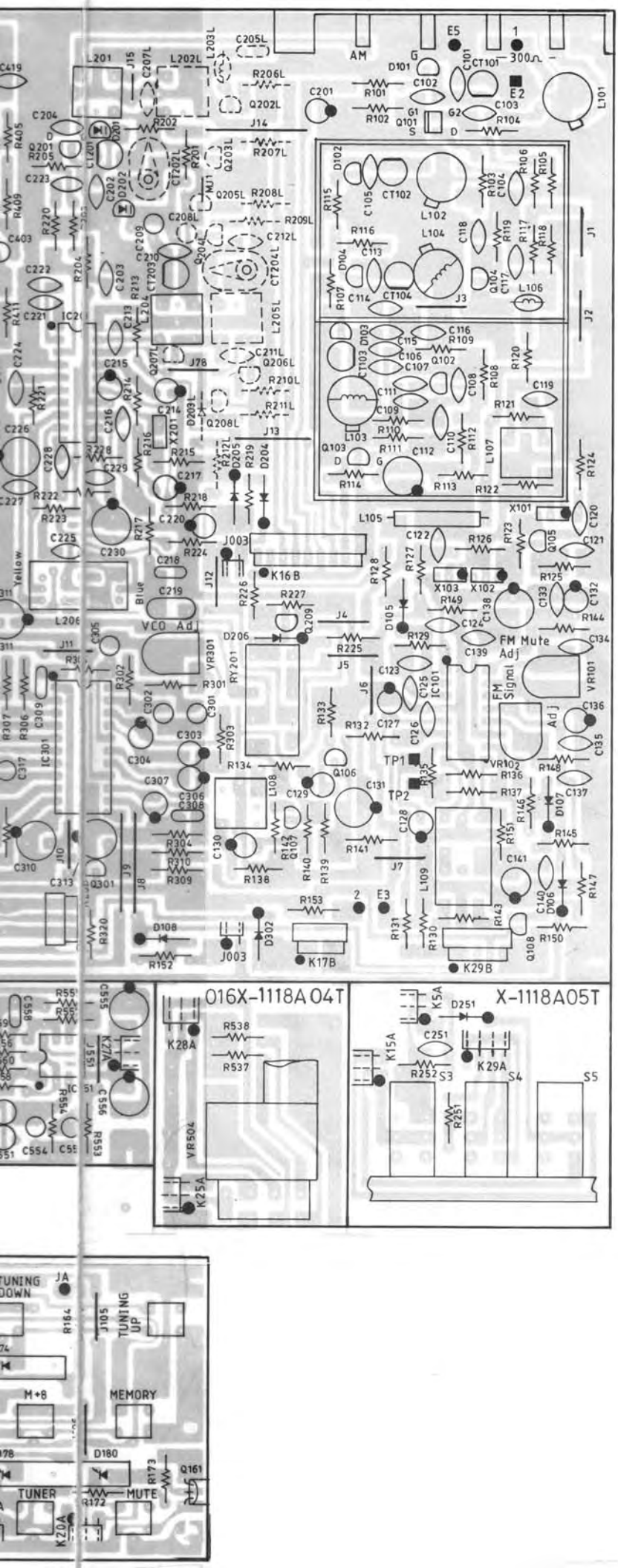
SYMBOL	PARTS NO.	DESCRIPTION
	X-1118A03T	PCB ASSEMBLY
R551,552	RD22202822	R,CARBON 22K J 1/4W
R553,554	RD24702822	R,CARBON 47K J 1/4W
R555,556	RD23302824	R,CARBON 33K J 1/4W
R557,558	RD23303828	R,CARBON 330K J 1/4W
R559,560	RD21500825	R,CARBON 150 J 1/4W
C551,552	CE04707252	CAP,ELEC. 4.7uF 25V
C553,554	CS45012421	CAP,STYR0L 50P 50V
C555,556	CE01005258	CAP,ELEC. 100uF 25V
C557,558	CM01009427	CAP,MYLAR 103 J 50V
IC551	IC00001474	IC NJM4556D
	JH00000123	HEADPHONE JACK C-3654#3
	X-1118A04T	PCB ASSEMBLY
R537,538	RM15601712	R,METAL MR255K6 0.4W
VR504	RV10001255	R,VARIABLE C-4170A15 50KBx2
	X-1118A05T	PCB ASSEMBLY
R251,252	RD24702822	R,CARBON 47K J 1/4W
C251,252	CC31010431	CAP,CERAMIC 0.001uF 50V
D251	DD10000100	DIODE 1N4148
S3,4,5	SH13000395	3 KEY PUSH SW SUN 4TR-2554
	X-1119A01T	PCB ASSEMBLY
R701M	RD51003820	R,CARBON 100K J 1/4W (MW)
R702	RD51003820	R,CARBON 100K J 1/4W
R703L,704L	RD51003820	R,CARBON 100K J 1/4W (LW)
R705	RD54713828	R,CARBON 470K J 1/4W
R706	RD51003820	R,CARBON 100K J 1/4W
R707	RD51002827	R,CARBON 10K J 1/4W
R708	RD51003820	R,CARBON 100K J 1/4W
R709	RD54702824	R,CARBON 47K J 1/4W
R710	RD51004824	R,CARBON 1M J 1/4W
R711,713	RD51003820	R,CARBON 100K J 1/4W
R712	RD54703828	R,CARBON 470K J 1/4W
R714,716	RD54702824	R,CARBON 47K J 1/4W
R715	RD51002827	R,CARBON 10K J 1/4W
R717,742	RD51003820	R,CARBON 100K J 1/4W
R718-721	RD54702824	R.CARBON 47K J 1/4W
R722-731	RD52202824	R,CARBON 22K J 1/4W
R732	RD53302826	R,CARBON 33K J 1/4W
R734,735	RD52700824	R,CARBON 270 J 1/4W
R736,737	RD51002827	R,CARBON 10K J 1/4W
R738	RD52201820	R,CARBON 2.2K J 1/4W
R739,740	RD58201829	R,CARBON 8.2K J 1/4W
R741	RD51000820	R,CARBON 100 J 1/4W
R743	RD53302826	R,CARBON 33K J 1/4W
R745	RD51002827	R,CARBON 10K J 1/4W
R746,747	RD58202822	R,CARBON 82K J 1/4W
R748,749	RD52202824	R,CARBON 22K J 1/4W
R750	RD51003820	R,CARBON 100K J 1/4W
R751	RD52202524	R,CARBON 22K J 1/4W
R752,753	RD54701820	R,CARBON 4.7K J 1/4W
R754	RD51002827	R,CARBON 10K J 1/4W
R755-757	RD54701820	R,CARBON 4.7K J 1/4W
R758	RD51003820	R,CARBON 100K J 1/4W
R759,760	RD54701820	R,CARBON 4.7K J 1/4W
R761	RD54702824	R,CARBON 47K J 1/4W
R762	RD54709820	R,CARBON 47 J 1/4W
R763	RD53302826	R,CARBON 33K J 1/4W
R764	RD54702824	R,CARBON 47K J 1/4W
R765	RN11002068	THICK FILM RS NETWORK A6103J
R766,767	RN31002087	THICK FILM RS NETWORK A8103J
C701,702	CE01007504	CAP,ELEC. 1uF 50V
C703	CC05009457	CAP,CERAMIC 0.047uF 50V
C704L	CE01007504	CAP,ELEC. 1uF 50V
C705,706	CE04707252	CAP,ELEC. 4.7uF 25V
C707	CC05009457	CAP,CERAMIC 0.047uF 50V

SYMBOL	PARTS NO.	DESCRIPTION
C708,709	CC32211432	CAP,CERAMIC 220P 50V
C710	CE01007504	CAP,ELEC. 1uF 50V
C712	CE01005106	CAP,ELEC. 100uF 10V
C713	CC05009457	CAP,CERAMIC 0.047uF 50V
C715,716	CC01512434	CAP,CERAMIC 15P 50V
C717,720	CC31009465	CAP,CERAMIC 0.01uF 50V
C718	CE04705103	CAP,ELEC. 470uF 10V
C719	CE04706107	CAP,ELEC. 47uF 10V
C721	CC31010431	CAP,CERAMIC 0.001uF 50V
C722-724	CC31009465	CAP,CERAMIC 0.01uF 50V
C725	CM04709426	CAP,MYLAR 473 J 50V
C726	CE01338508	CAP,ELEC. 0.33uF 50V
C727,731	CC31009465	CAP,CERAMIC 0.01uF 50V
C728	CE01005167	CAP,ELEC. 100uF 16V
C729,730	CE01007504	CAP,ELEC. 1uF 50V
C732	CE04705103	CAP,ELEC. 470uF 10V
C733	CE01005167	CAP,ELEC. 100uF 16V
C734	CE04706107	CAP,ELEC. 47uF 10V
Q701-712	TR30000327	TRANSISTOR 2SC536
Q713	TR30000108	TRANSISTOR 2SCC1571
Q714	TR50000127	TRANSISTOR 2SK246-Y
Q715-718	TR30000327	TRANSISTOR 2SC536
Q719	TR10000126	TRANSISTOR 2SA608K
Q720-723	TR30000327	TRANSISTOR 2SC536
D701L	DD80000021	DIODE 1N4148
D702-711	DD80000021	DIODE 1N4148
D713M	DD80000021	DIODE 1N4148
D713L	DD80000021	DIODE 1N4148
D714M	DD80000021	DIODE 1N4148
D715-718	DD80000021	DIODE 1N4148
D719	DD20000107	DIODE RD-3.6E
IC701L	IC00001188	IC LC4081B
IC702	IC00001188	IC LC4081B
IC703	IC00001759	IC LC6522C-3433
IC704	IC00001760	IC LB1630
IC705	IC00001346	IC TC-9157AP
IC706	IC00000482	IC TD6104P
IC707	IC00000573	IC TD6301AP
X701	DD40000976	FL TUBE CSB8005
X702	DD60000040	CRYSTAL OSCILLATOR HC18U7.2MHz
FL701	DD40000976	FL TUBE FIP7F-8S
	X-1119A02T	PCB ASSEMBLY
R161	RD52201820	R,CARBON 2.2K J 1/4W
R162	RD55601821	R,CARBON 5.6K J 1/4W
R163	RD51002827	R,CARBON 10K J 1/4W
R164,165	RD54700827	R,CARBON 470 J 1/4W
R166,172	RD51001823	R,CARBON 1K J 1/4W
R173	RD21003829	R,CARBON 100K J 1/4W
R174	RD51000820	R,CARBON 100 J 1/4W
C161	CE01007504	CAP,ELEC. 1uF 50V
C162	CE03307503	CAP,ELEC. 3.3uF 16V
C163	CE04706107	CAP,ELEC. 47uF 10V
Q161	TR30000327	TRANSISTOR 2SC536
D161-165	DD40000095	L.E.D SEL-1124R
D166-174	DD40000757	L.E.D LTL2201A
D175-180	DD40000940	L.E.D LTL2231A
	SH60000070	KEY BOARD SW 4.3MM C-4004T
	SH60000240	KEY BOARD SW 9.5MM 4TR-2343
	SA00000378	L.E.D HOLDER C-3794
	SA00001954	PLAS. L.E.D HOLDER 3TTV-6
	X-11119A-03T	PCB ASSEMBLY
R451,452	RM01800713	R,METAL MR25180R 0.4W
	SH20000265	SLIDE SW 4TR-2172
	X-1119A04T	PCB ASSEMBLY
S01	SH11000252	1 KEY SW 4TR-2386-1 ⚠

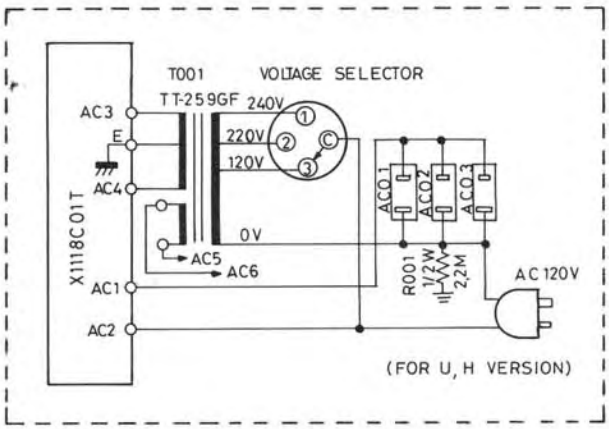
SYMBOL	PARTS NO.	DESCRIPTION
		OTHERS
AB00000330		BOTTOM BOARD 3TTV-5
AF30000127		FRONT CHASSIS 2TTV-2
AM00001616		CHASSIS BODY 3TTV-4
AR30000143		PRINTED REAR CHASSIS TRP-473
AS01000221		SIDE CHASSIS 3TTH-8A
OM10000590		FL DIAL BOARD 4TTV-10
DD40000095		L.E.D LN224R
LB07068000		AM LOOP ANT. WITH HOLDER TRL-345
PT25907105		POWER TRANSFORMER TT-259GF ⚠
FT00000138		RUBBLE FOOT 4TR-2274 40Fx8
CD00000218		AC CORD SPT-2 AWG#18 4TR-670#4 (U,C) ⚠
CD00000097		AC CORD SPT-2 AWG#18 4TR-670#2 (H1,2,3,4) ⚠
CD00000048		AC POWER CORD 4TR-1037 (H5,6,7,E,K2) ⚠
CD00000085		AC POWER CORD C-2504A (K1) ⚠
CD00000115		AC POWER CORD C-3763-T (G) ⚠
CD00000267		AC CORD SPT-2 AWG#16 C-2743 ⚠
SC00000131		AC CORD STOPPER SR-5N-4 (A,K1) ⚠
SC00000027		AC CORD STOPPER SR-4N-4 ⚠
VC00000048		VOLTAGE SELECTOR C-4304A01 (U,H1,2,4,5,6,E1) ⚠
SA00001530		COAXIAL CONNECTOR W/NUT 4TR-2290 (U,C,A,H) ⚠
SA00001760		COAXIAL CONNECTOR W/NUT 4TR-2439 ⚠
RD02204928		R,CARBON 1/2W 2.2M ⚠ (U,C,A H6)
SA00001450		AC OUTLET SOCKET S-I6519 (U,C,A,H) ⚠
SA00001796		AC OUTLET SOCKET S-I6536#1 (E,K2) ⚠
SA00001980		AC OUTLET SOCKET S2-741T-110 (K1,G) ⚠
AW00000411		PANEL WINDOW 4TTU-8
KB20002000		PUSH BUTTON 4TTL-13 19.5x11.5
KB20002012		BUTTON CAP (A) 4TTL-11 39.5x11.5
KB20002024		BUTTON CAP (B) 4TTL-12 19.5x11.5
OM10000085		ORNAMENTAL SIDE PLATE 3TTF-6
OM10000346		FUNCTION PVC PLATE 4TTU-9#1
OM10000358		FUNCTION PVC PLATE 4TTU-9#2
OM10000607		FUNCTION PVC PLATE 4TTU-10#2
OM70000065		PUSH BUTTON CONNECTOR 4TTL-15
AA30000333		FRONT PANEL 2TTV-1#1 TRP-503 (RTC-850)
AA30000345		FRONT PANEL 2TTV-1#2 TFP-505 (RTC-850L)
AG00000135		REMOTE CONTROL HANDSET RRT-3
AU00000890		UPPER COVER 3TTF-5#4
KB10001345		KNOB C-3187#5-T 13F GREY
KB10001576		KNOB 3TTV-11 33F
KB20000994		PUSH BUTTON 4TR-2010 5x5
KB20001561		PUSH BUTTON 4TR-2176 14x14
FE00000067		FELT 4TR-1083B#1 22F
SR00000882		UPPER COVER SPACER 4TR-2418
PL00000770		STYROL SIDE MOULDING 2TTF-9A TZ-165
TN10002958		INSIDE CARTON RTC-850 4TR-2377#6
TN10002960		INSIDE CARTON RTC-850L 4TR-2377#7

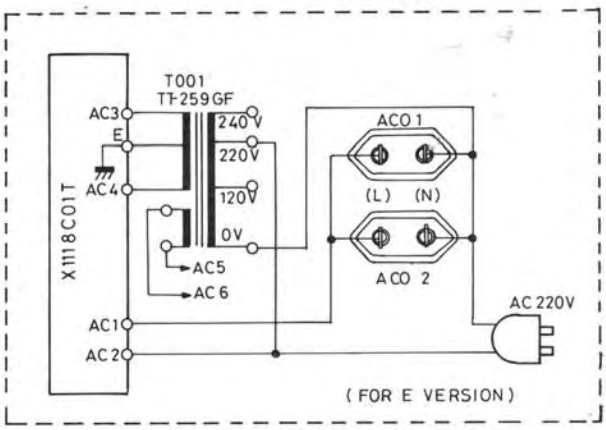
Wiring Diagram

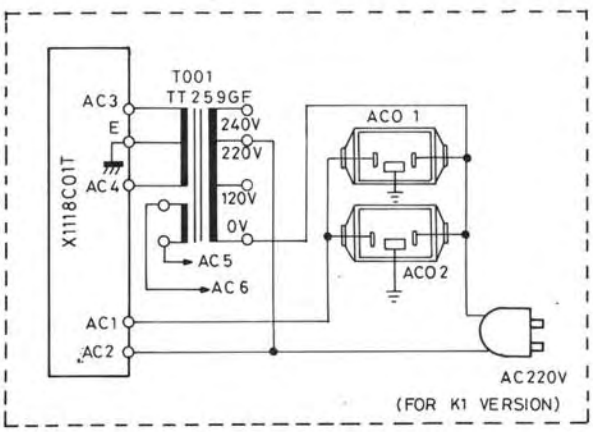


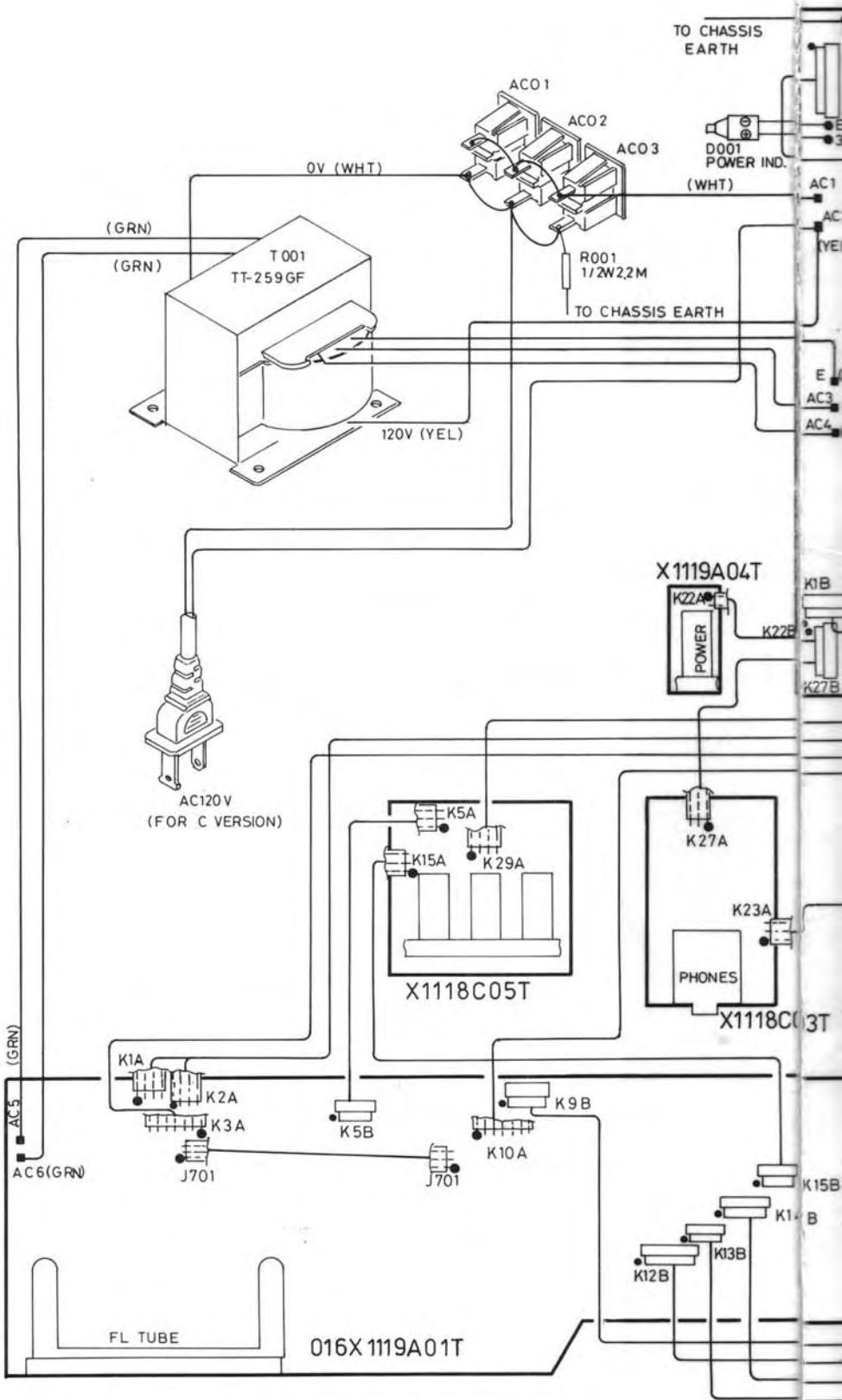

016X-1119A01T
016X-1118A04T
X-1118A05T
VCO Adj
FM Mute Adj
FM Signal Adj
TUNING DOWN
TUNING UP
MEMORY
TUNER
MUTE
Yellow
Blue

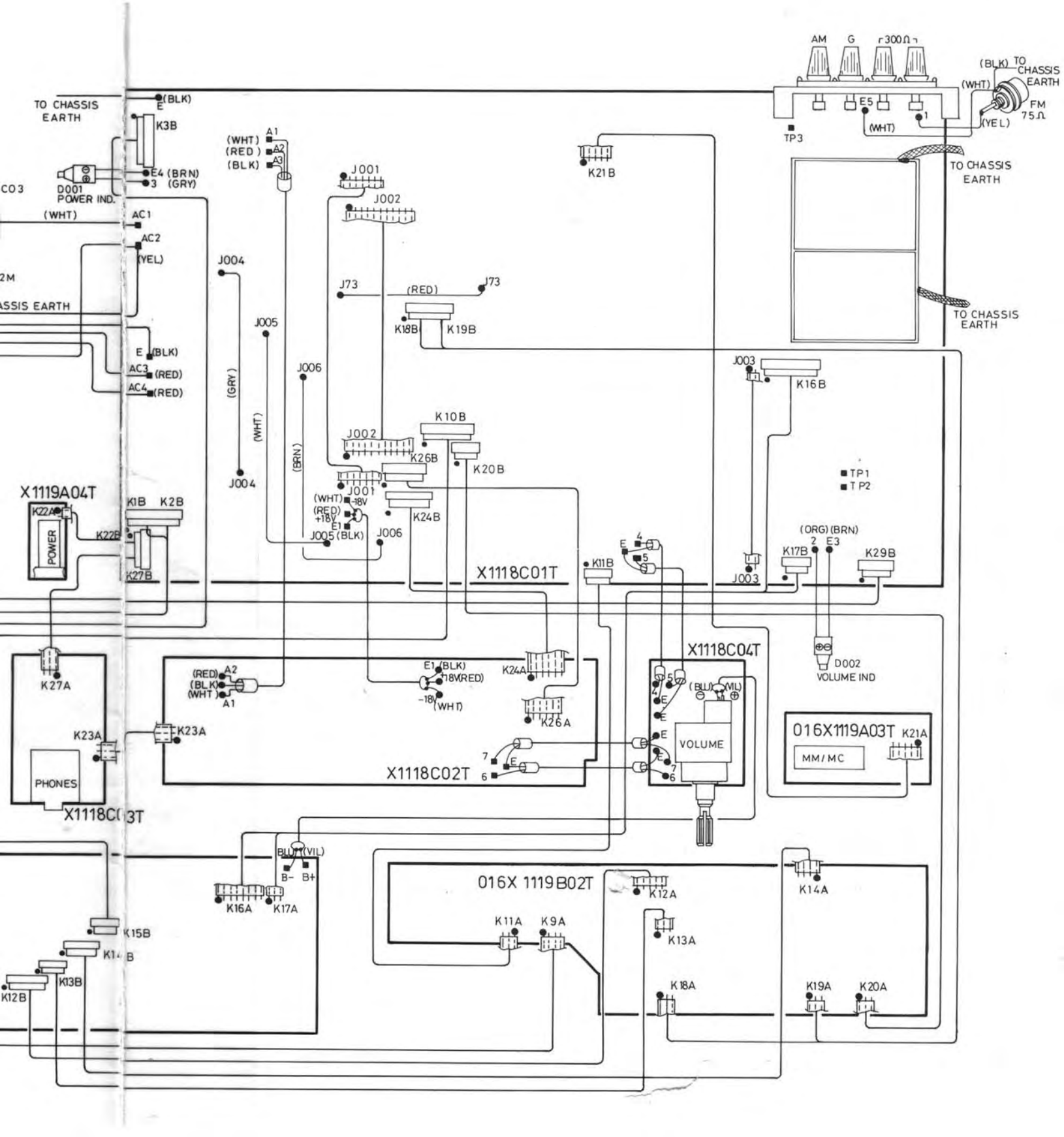
Wiring Diagram





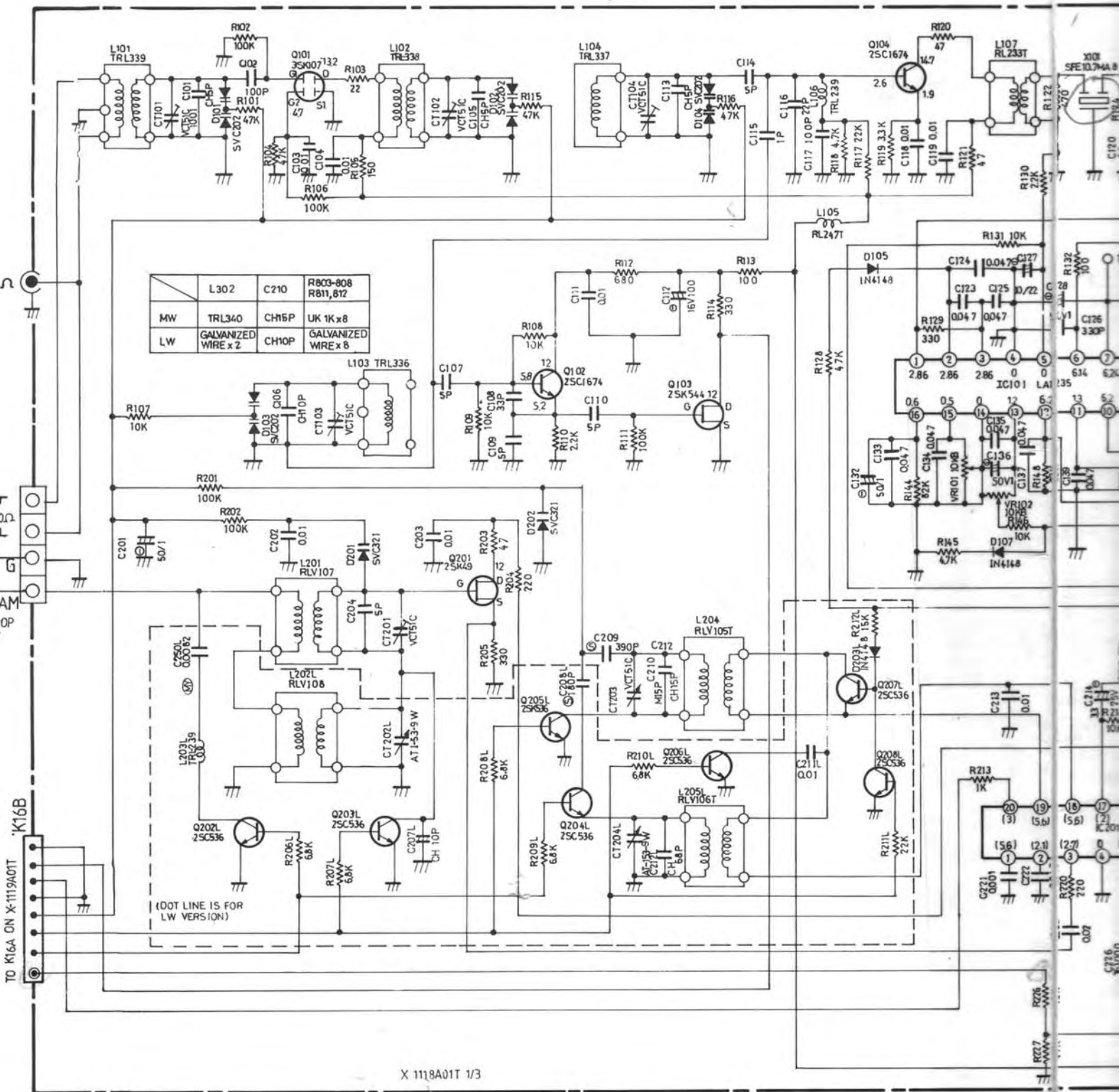


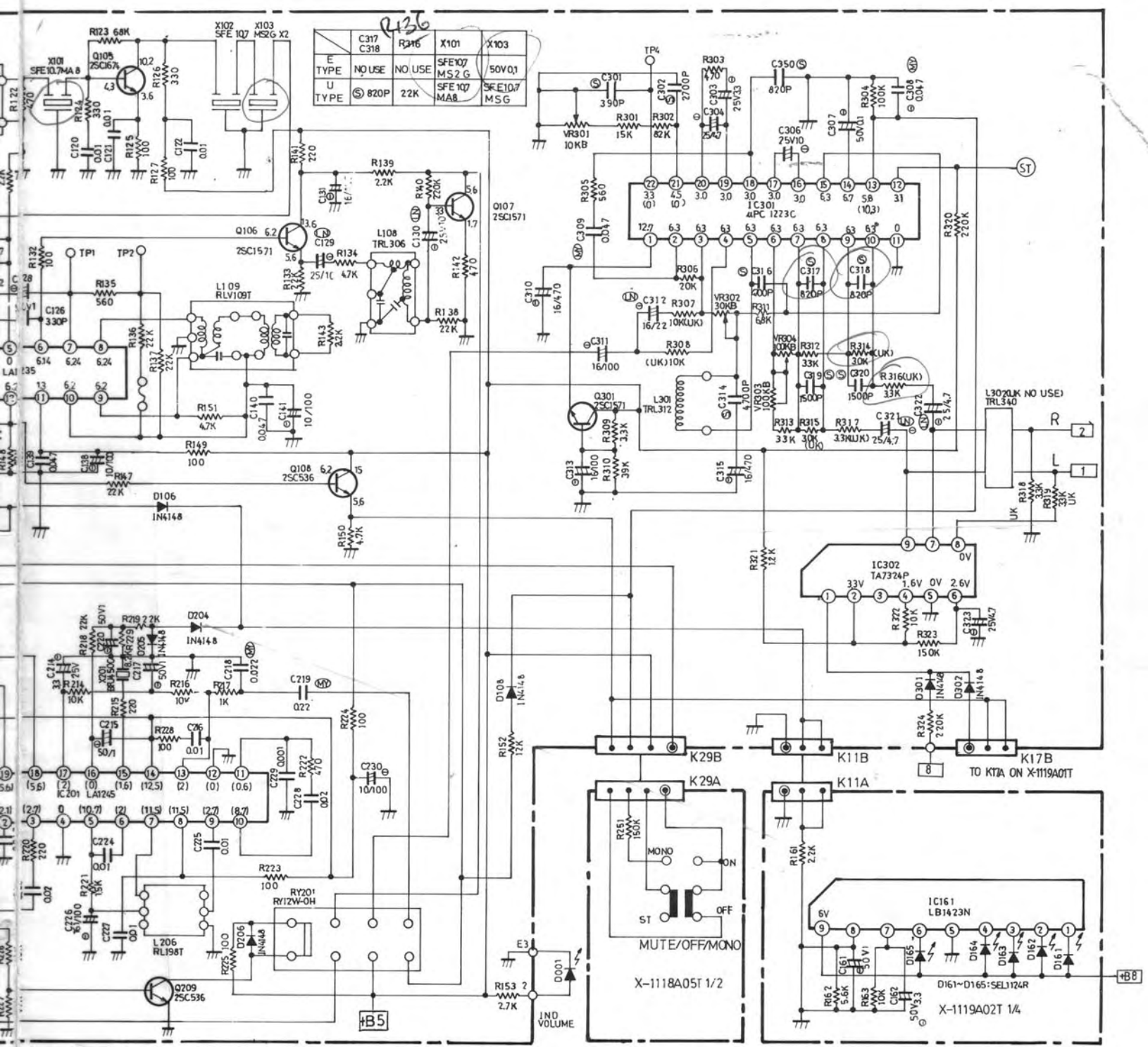



AM
G
300Ω
(BLK) TO CHASSIS EARTH
(WHT)
FM 75Ω
(YEL)
E5
(WHT)
1
TP3
TO CHASSIS EARTH
TO CHASSIS EARTH
TO CHASSIS EARTH
E (BLK)
K3B
E4 (BRN)
3 (GRY)
D001 POWER IND.
(WHT) A1
(RED) A2
(BLK) A3
J001
J002
K21B
AC1
AC2
(YEL)
J004
J73
(RED)
J73
K18B
K19B
J005
E (BLK)
AC3 (RED)
AC4 (RED)
J006
(GRY)
(WHT)
(BRN)
J003
K16B
K10B
J002
K26B
K20B
J001
(WHT) -18V
(RED) +18V
E1
K24B
J005 (BLK)
J006
J004
TP1
TP2
X1119A04T
K22A
POWER
K1B K2B
K22B
K27B
X1118C01T
K11B
E 4
E 5
J003
(ORG) (BRN)
2 E3
K17B
K29B
D002 VOLUME IND
X1118C04T
K27A
(RED) A2
(BLK)
(WHT) A1
E1 (BLK)
18V (RED)
-18V (WHT)
K24A
K26A
K23A
K23A
PHONES
X1118C02T
7
E
6
E
5
4
E
E
E
E
7
6
(BLU)
(VIL)
VOLUME
016X1119A03T K21A
MM/MC
X1118C03T
BLU (VIL)
B- B+
K16A
K17A
016X 1119B02T
K12A
K14A
K11A
K9A
K13A
K15B
K14B
K13B
K12B
K18A
K19A
K20A

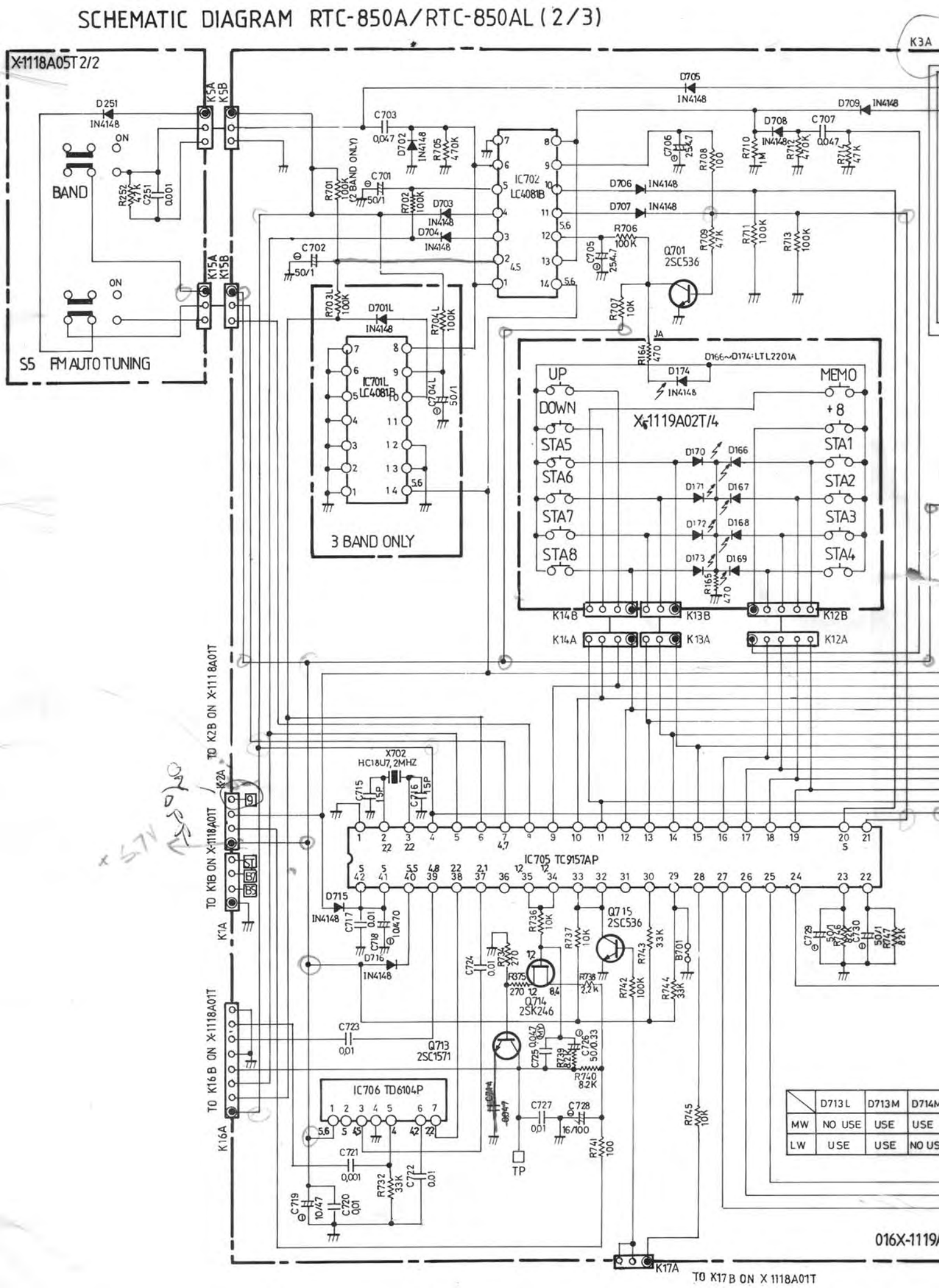
Schematic Diagram

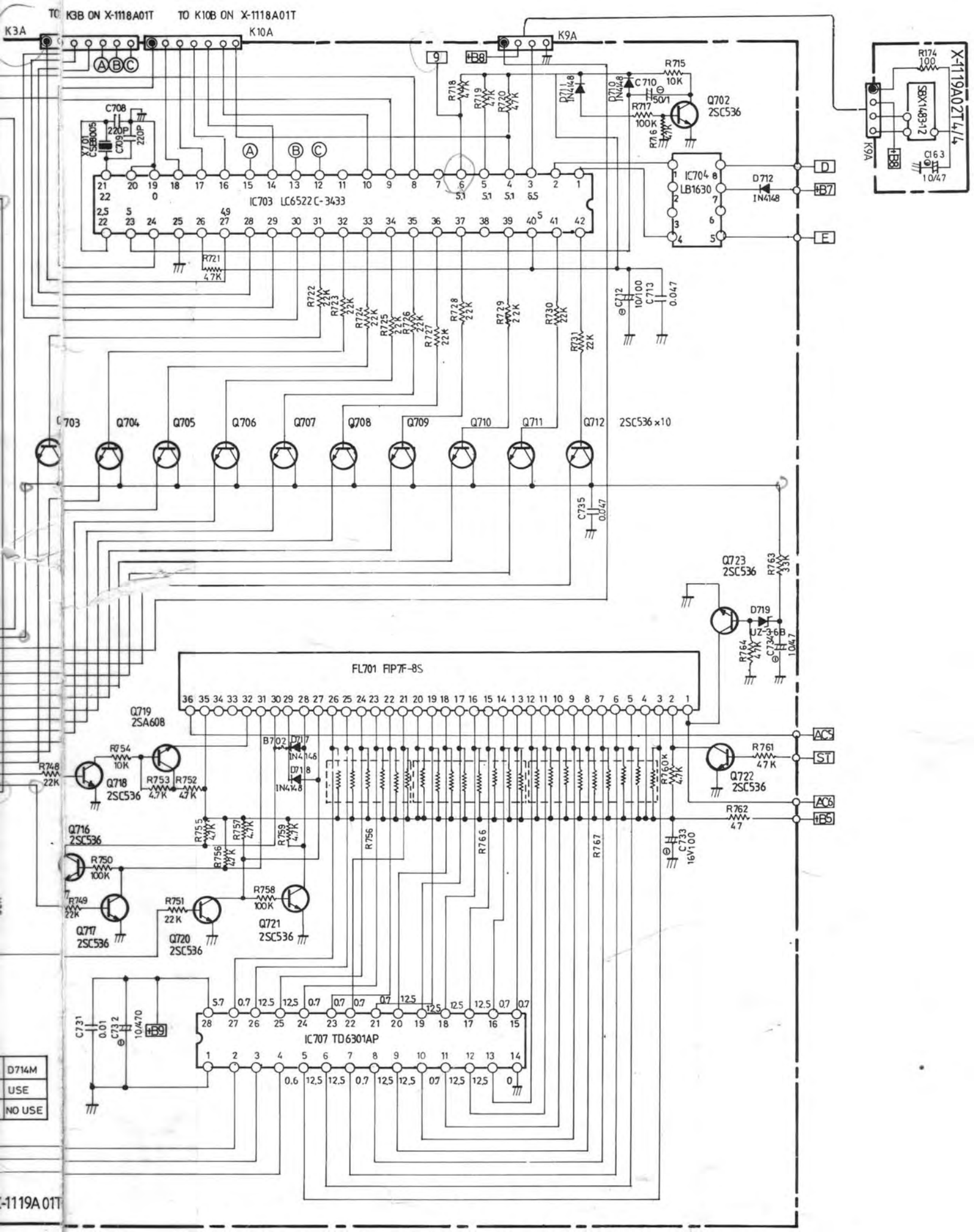
SCHMATIC DIAGRAM RTC-850A/RTC-850AL(1/3)




R136
C317 C318 | R316 | X101 | X103
E TYPE | NO USE | NO USE | SFE107 MS2G | 50V0.1
U TYPE | S 820P | 22K | SFE107 MA8 | SFE10.7 MSG
X101 SFE10.7MA8
X102 SFE 107
X103 MS2G X2
Q105 2SC1674
R123 68K
R126 330
R124 330
C120 0.01
C121 0.01
R125 100
C122 0.01
R127 100
R141 220
R139 2.2K
C131
R140 220K
Q107 2SC1571
Q106 2SC1571
C129
C130 25V10
L108 TRL306
R134 4.7K
R133 22K
R142 470
R138 22K
TP1
TP2
R132 100
R135 560
C126 330P
L109 RLV109T
R136 22K
R137 22K
R143 22K
C140 0.047
C141 10/100
R151 4.7K
R149 100
C138 0.047
C139 10/100
R147 22K
D106 IN4148
Q108 2SC536
R150 4.7K
TP4
C301 390P
C302 2700P
R303 470
C303 25V33
C304 5u47
VR301 10KB
R301 15K
R302 82K
C350 820P
C307 50V0.1
R304 100K
C308 0.047
C306 25V10
R305 560
IC301 4PC 1223C
C309 0.047
C310 16/470
R306 20K
C316 6200P
C317 820P
C318 820P
C312 16/22
R307 10K(UK)
VR302 30KB
R311 6.8K
C311 16/100
R308 (UK)10K
VR304 100KB
R312 33K
R314 (UK) 30K
C319 1500P
C320 1500P
R316(UK) 33K
Q301 2SC1571
L301 TRL312
C314 4700P
VR303 100KB
R313 33K
R315 30K (UK)
R317 33K(UK)
C321 25/4.7
C322 25/4.7
L302(UK NO USE) TRL340
R318 33K
R319 33K UK
C313 16/100
R309 3.3K
R310 39K
C315 16/470
R321 12K
IC302 TA7324P
R322 10K
C323 25/47
R323 150K
D301 IN4148
D302 IN4148
R324 220K
D108 IN4148
R152 12K
K29B
K29A
K11B
K11A
K17B
TO KITA ON X-1119A01T
R251 150K
MONO
ST
ON
OFF
MUTE/OFF/MONO
X-1118A05T 1/2
R161 2.2K
IC161 LB1423N
D165
D164
D163
D162
D161
D161~D165:SEL3124R
R162 5.6K
R163 10K
C162 50V3.3
X-1119A02T 1/4
D204 IN4148
D205 IN4148
R219 22K
R218 22K
C220 50V1
X201 BR4.500
C217 50V1
R214 10K
C214 33 25V
R216 10K
R217 1K
C218 0.022
C219 Q22
R215 220
C215 50/1
R228 100
C216 0.01
R224 100
C230 10/100
C229 0.001
R222 470
C228 002
C224 Q01
C225 0.01
R223 100
R220 220
C222 0.02
R221 15K
C226 16/100
C227 001
L206 RL198T
RY201 RY12W-0H
D206 IN4148
R225 100
Q209 2SC536
IC201 LA1245
E3
D001
R153 2.7K
IND VOLUME
+B5
+B8
ST
R
L
UK

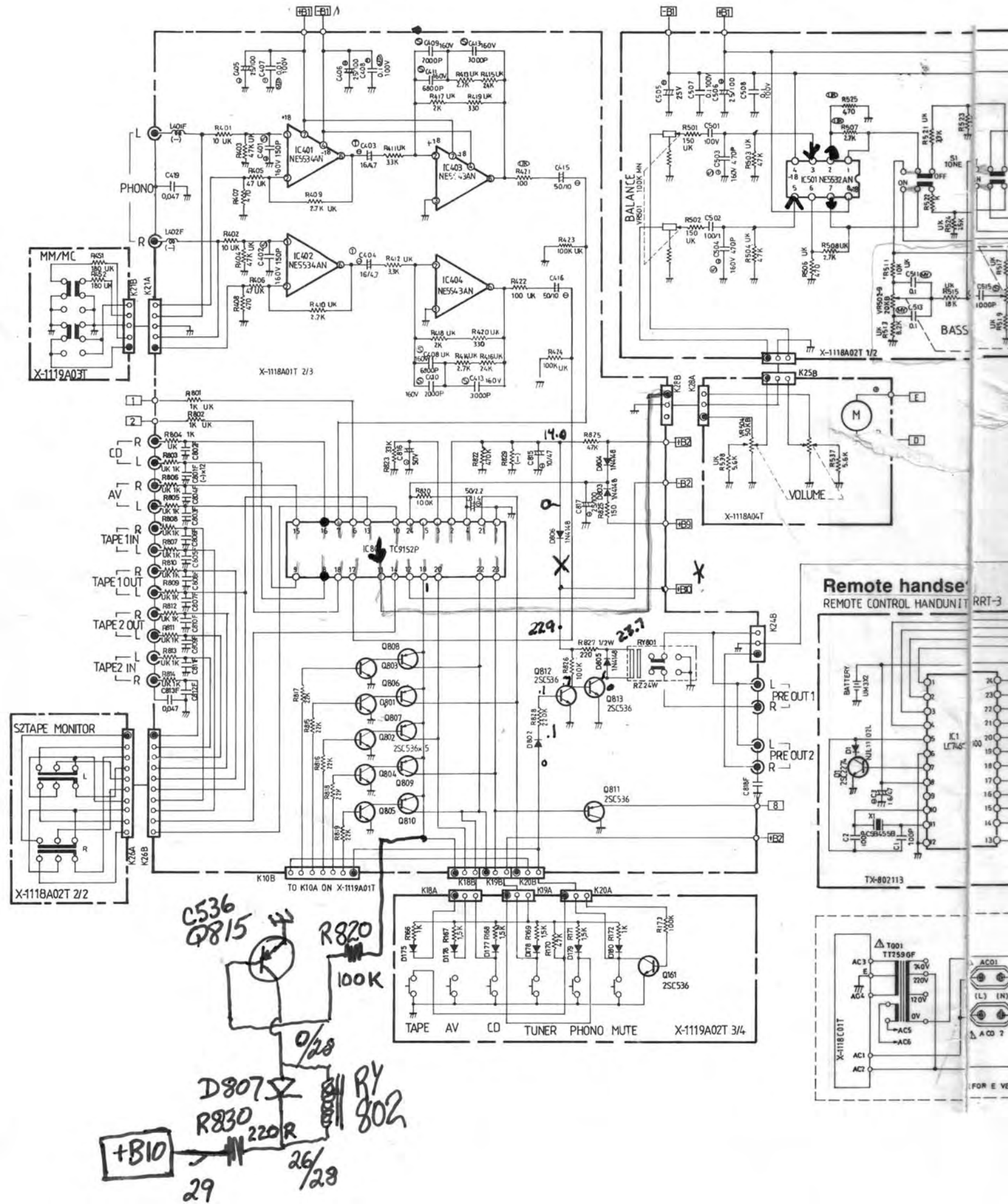
SCHEMATIC DIAGRAM RTC-850A/RTC-850AL (2/3)

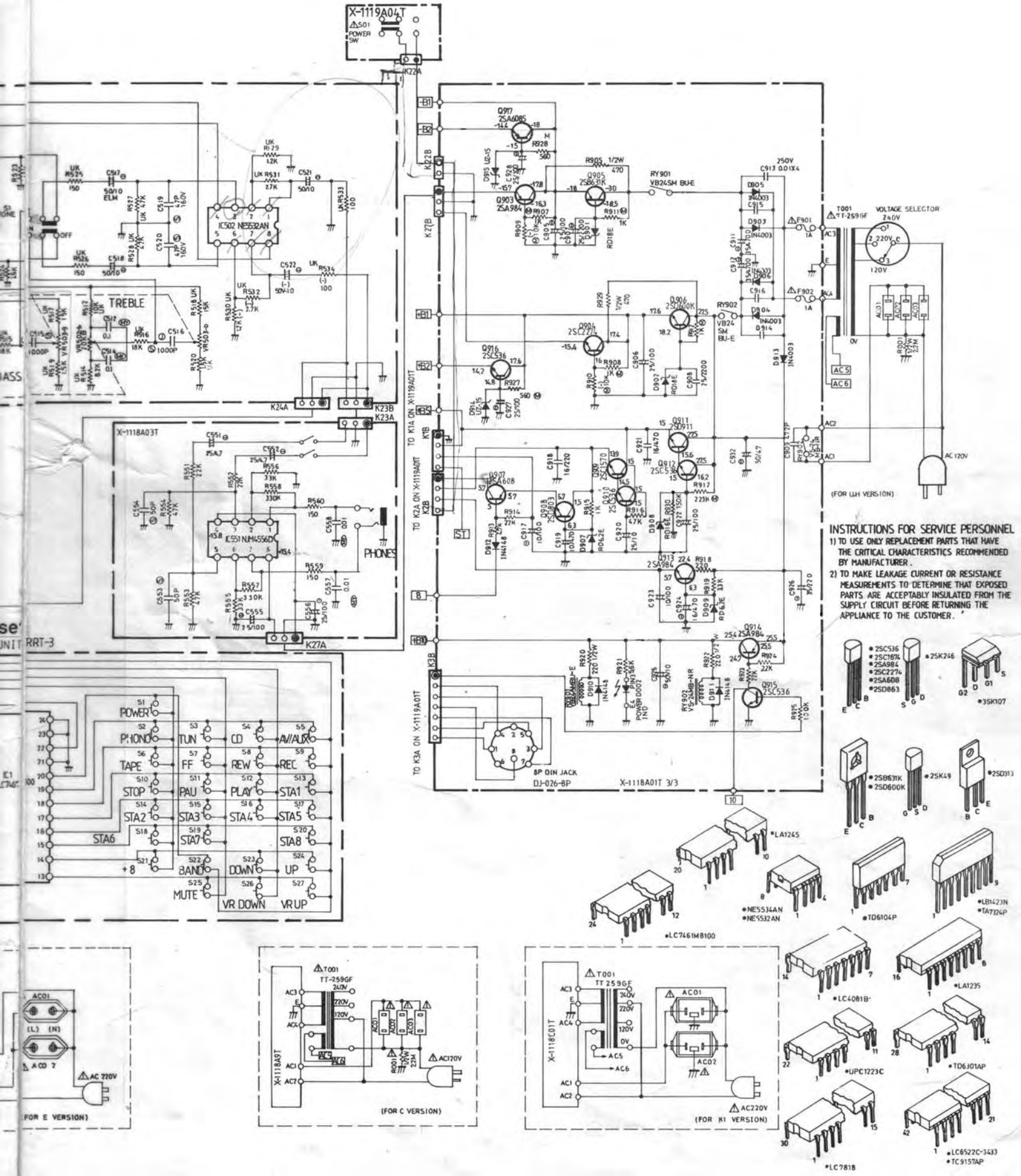



TO K3B ON X-1118A01T
TO K10B ON X-1118A01T
K3A
K10A
K9A
X-1119A02T4/4
IC703 LC6522C-3433
IC704 LB1630
IC707 TD6301AP
FL701 FIP7F-8S
Q702 2SC536
Q703 Q704 Q705 Q706 Q707 Q708 Q709 Q710 Q711 Q712 2SC536×10
Q719 2SA608
Q718 2SC536
Q716 2SC536
Q717 2SC536
Q720 2SC536
Q721 2SC536
Q722 2SC536
Q723 2SC536
D712 IN4148
D719 UZ-3.6B
D714M
USE
NO USE
X-1119A01T

Schematic Diagram

SCHEMATIC DIAGRAM RTC-850A/RTC-850AL(3/3)




X-1119A04T
POWER SW
K22A
K22B
K27B
K24A
K23B
K23A
K27A
TREBLE
IC502 NE5532AN
X-1118A03T
IC551 NJM4556D
PHONES
TO K1A ON X-1119A01T
TO K2A ON X-1119A01T
TO K3A ON X-1119A01T
8P DIN JACK
DJ-026-8P
X-1118A01T 3/3
RY901 VB24SM BU-E
RY902 VB24 SM BU-E
T001 TT-259GF
VOLTAGE SELECTOR
240V
220V
120V
0V
AC 120V
(FOR UH VERSION)
INSTRUCTIONS FOR SERVICE PERSONNEL
1) TO USE ONLY REPLACEMENT PARTS THAT HAVE THE CRITICAL CHARACTERISTICS RECOMMENDED BY MANUFACTURER.
2) TO MAKE LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.
POWER
PHONO
TUN
CD
AV/AUX
TAPE
FF
REW
REC
STOP
PAU
PLAY
STA1
STA2
STA3
STA4
STA5
STA6
STA7
STA8
+8
BAND
DOWN
UP
MUTE
VR DOWN
VR UP
*2SC536
*2SC1674
*2SA984
*2SC2274
*2SA608
*2SD863
*2SK246
*3SK107
*2SB631K
*2SD600K
*2SK49
*2SD313
*LA1245
*NE5534AN
*NE5532AN
*LC7461M8100
*TD6104P
*LB1423N
*TA7324P
*LC4081B
*LA1235
*UPC1223C
*TD6J01AP
*LC6522C-3433
*TC9157AP
*LC7818
(FOR E VERSION)
(FOR C VERSION)
(FOR K1 VERSION)