Service Manual



FM/AM Stereo Tuner

ST-C03

(E),(EG),(EB),(XGH), (XGF),(XE),(XA),(XAL)

ST-C03K

(EG)

* The colors of this model include silver and black. The black type model is provided with (K) in the Service Manual.

Arose

- f [E] and [EG] are available in European and Scandinavia.
- * [EB] is available in Belgium.
- * (XGH) is available in Holland.
- * [XGF] is available in France.
- * [XE] is available in United Kingdom.
- [XA] is available in Asia, Latin America, Middle East and Africa.
- * [XAL] is available in Australia.

TECHNICAL SPECIFICATIONS Specifications are subject to change without notice for further improvement.

[DIN 45 500] FM TUNER SECTION

Frequency range		87.5 ~ 108.0 MHz
Sensitivity		1.9µ∨ (IHF, usable)
S/N 30 dB	2.	$0\mu V (300\Omega), 1.3\mu V (75\Omega)$
S/N 26 dB	1.	$8\mu V (300\Omega), 1.2\mu V (75\Omega)$
S/N 20 dB	1.	$6\mu V (300\Omega), 0.9\mu V (75\Omega)$
IHF 46 dB stereo quietin	g sensitivity	20μV/75Ω
Total harmonic distortion		0.08%
	STEREO	0.15%
S/N	MONO	68 dB (77 dB, IHF)
-,	STEREO	65 dB (72 dB, IHF)
Frequency response		5 kHz, +0.5 dB ~ -1.5 dB
Alternate channel selective		75 d8
Capture ratio	,	1.0 dB
Image rejection at 98 MH	lz	65 dB
IF rejection at 98 MHz	-	85 dB
Spurious response rejection	on at 98 MHz	
AM suppression	on at 50 mm	52 dB
Stereo separation	1 kHz	45 dE
Stereo separation	10 kHz	35 dB
Carrier leak	10 kHz	-30 dB (-40 dB, IHF)
Carrier reak	38 kHz	-50 dB (-40 dB, IHF)
Ohanna I halana /250 Ha		
Channel balance (250 Hz	: ~ 0,300 H2)	±1.0 dB

Power bandwidth	IF amplifier	180 kHz
	FM demodulator	1000 kHz
Antenna terminals		300Ω (balanced)
		75Ω (unbalanced)

AM TUNER SECTION

Frequency range	522 ~ 1611 kHz
Sensitivity (S/N 20 dB)	30µV, 250µV/m
Selectivity ±9 kHz	30 dB
Image rejection at 1,000 kHz	50 dB
IF rejection at 1,000 kHz	40 dB

GENERAL

Output voltage	0.3V	/
, -	0.6V (IHF)	
Power consumption	12W	
Power supply	AC 50 Hz/60 Hz, 110V/120V/220V/240V	
Batteries for memory	back-up (optional)	
	three "AA" size batteries	
	DC 4,5V	
Dimensions (WxHxD)	297 x 49 x 244mm	1
Weight	2 R kg	

Limiting point

SI-CU3/K

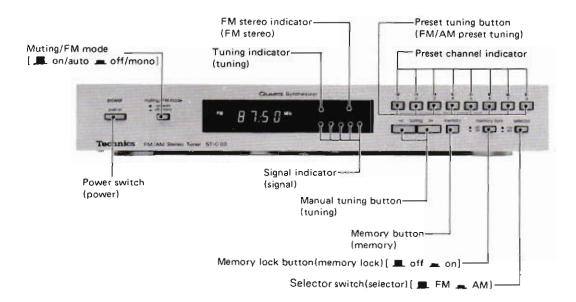
TECHNISCHE DATEN Spezifikationen können infolge von Verbesserungen ohne Ankündigung geändert werden. [DIN 45 500] UKW-TUNERTEIL Bandbreite 180 KHZ ZF-Verstärker 1000 kHz UKW-Demodulator Wellenbereich 87.5 ~108.0 MHz 30012 (symmetrisch) AntennenanschluB Eingangsempfindlichkeit 1.9µV (nutzbar nach IHF) 75Ω (unsymmetrisch) $2.0\mu \lor (300\Omega), 1.3\mu \lor (75\Omega) \\ 1.8\mu \lor (300\Omega), 1.2\mu \lor (75\Omega)$ S/R 30 dB S/R 26 dB AM-TUNERTEIL S/R 20 dB 1.6μ∨ (300Ω), 0.9μ∨ (75Ω) Stereoumschaltschwelle bei 46 dB nach IHF 20μV/75Ω Wellenbereiche 522 ~1611 kHz Gesamtklirrfaktor Mono 0,08% Eingangsempfindlichkeit (S/R 20 dB) 30µV, 250µV/m Stereo 0,15% Trennschärfe ±9 kHz 30 d8 68 dE (77 dB nach IHF) Geräuschabstand Mono Spiegelfrequenz-Dämpfung bei 1000 kHz 50 dB Stereo 65 dEl (72 dB nach IHF) ZF-Dämpfung bei 1000 kHz 40 dB Frequenzgang 20 Hz ~15 kHz (+0,5 dB ~1,5 dB) 75 dB ALLGEMEINE DATEN Trennschärfe bei Störsender Einfangverhältnis 1,0 dB Ausgangsspannung 0,37 Spiegelfrequenz-Dämpfung bei 98 MHz 65 dB 0.6V (IHF) ZF-Dämpfung bei 98 MHz 85 dB 12W Leistungsaufnahme Ansprechdämpfung auf Nebenfrequenzen bei 98 MHz 90 dB Netzspannung AM-Unterdrückung 52 dB Wechselstrom 50 Hz/60 Hz, 110V/120V/220V/240V Übersprechdämpfung 1 kHz 45 dB Batterien für den Speicher (Sonderzubehör) drei Batterien 10 kHz 35 dB "AA" (4,5V) Trägerrest 19 kHz -30 dB (-40 dB nach IHF) 297 x 49 x 244mm Abmessungen (B x H x T) 38 kHz -50 dB (-40 dB nach IHF) 2,8 kg Gewicht Kanalabweichung (250 Hz ~6300 Hz) ±1,0 dB Begrenzereinsatz 1,2µ∨

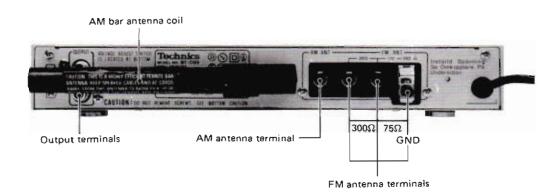
DIN 45 500)					
ECTION SYNTONISAT	EUR FM		Largeur de bande	Amplificateur Fi	180 kH:
Gamme de fréquence		87.5 ~ 108.0 MHz		Démodulateur FM	1000 kH:
Sensibilité		1,9µV (1HF utilisable)	Bornes d'antenne		300s (symétrique)
S/B 30 dB	2.0uV	(300Ω), 1,3μV (75Ω)			75Ω (asymétrique
S/B 26 dB		(300Ω), 1,2μV (75Ω)			
S/B 20 dB		(300Ω), 0.9 _± V (75Ω)	SECTION SYNTONI	SATEUR AM	
Sensibilité stéréo au seuil o	te 46 dB, IHF	20μV/75Ω	Gamme de fréquence		522 ~ 1611 kHz
Distorsion harmonique to:	ale MONO	0,08%	Sensibilité (S/B 20 d8	3)	30µV, 250µV/m
	STEREO	0,15%	Sélectivité ±9 kHz	,	30 dF
Signal/Bruit	MONO	68 dB (77 dB, IHF)	Réjection d'image à 1	.000 kHz	50 dB
	STEREO	65 dB (72 dB, IHF)	Réjection FI à 1,000	kHz	40 d E
Réponse de fréquence		1z, +0,5 dB ~1,5 dB			
Sélectivité alternée par car	ıal	75 dB	DIVERS		
Taux de capture		1,0 d8	Tension de sortie		0.3V
Rejection d'image à 98 Mi	12	65 dB	1 0/13/01(de 30/11e		(0.6V IHF)
Rejection FI à 98 MHz	2 - 2 00 MIL	85 dG	Consommation		1214
Rejection de réponse paras	SITE 8 98 MIMZ	90 dB		CA 50 Hz/60 Hz, 110	
Suppression AM Séparation stéréophonique	1 kHz	52 dB		n des mémoires (en apt	
Seberation stateobijouidae	10 kHz	45 dB 35 dB	and the second		VP0 AA (C.C.: 4.5V)
Fuite de porteuse		-30 dB (-40 dB, IHF)	Dimensions (L x H x I		297 x 49 x 244mm
i dite de baitease		-50 dB (-40 dB, IHF)	Poids	•	2,8 kg

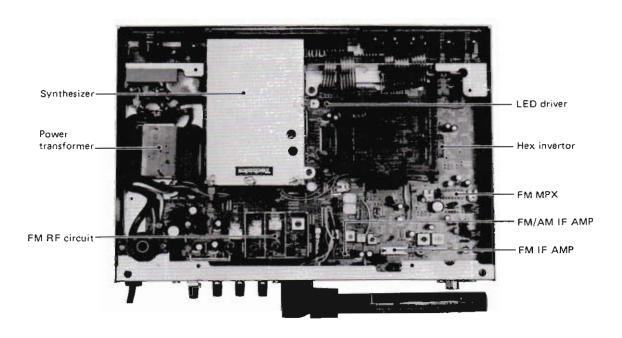
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■ LOCATION OF CONTROLS







ST-C03/K

■ HOW TO REMOVE THE PRINTED CIRCUIT BOARD

- Remove the 4 setscrews (①~④ in Fig. 1) used to fasten the buttom board.
- 2. Remove the buttom board.
- 3. Remove the 2 setscrews (⑤, ⑥ in Fig. 1) used to fasten the rear panel.
- 4. Remove the 6 setscrews (⑦,⑨~①,⑩ in Fig. 2) used to fasten the printed circuit board.
- 5. Remove the printed circuit board to backward.
- Remove the 2 setscrews (®, (3) in Fig. 2) used to fasten the shield cover.
- 7. Remove the shield cover.
- 8. To reassemble, reverse the above procedure.

■ HOW TO REMOVE SWITCHES

- Remove the 2 setscrews (1). (i) in Fig. 3) used to fasten the printed circuit board.
- Remove the printed circuit board.
- 3. Push the LED in the direction of arrows (in Fig. 3).
- Remove the adhesion (
 in Fig. 4) used to fasten the LED holder.
- 5. Unsolder the switch.
- 6. Remove the switch.
- To reassemble, reverse the above procedure and note the following.
 - (1) Fix the LED holder (17), (19) in Fig. 4) by adhesion.

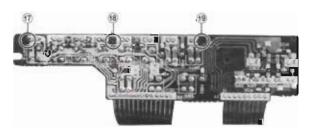


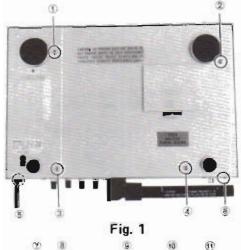
Fig. 4

■ HOW TO REPLACE CHIPS (RESISTOR, CAPACITOR, JUMPER)

- 1. Remive solder from chip by using solder sucker.
- Remove chip with tweezers by rotating it while removing solder as shown in fig. 5.
- Solder circuit board first and then solder chip in the direction of the arrow as shown in fig. 6.
 Notes:
 - Do not use chip again which is removed from printed circuit board.
 - Use lead wire with insulator for replacement instead of chip jumper.

■ NOTE FOR REPLACING CHIPS

- 1. Do not heat chips more than three (3) seconds.
- 2. Be careful not to damage the electrode of chips.
- Use soldering iron (less than 60 W) and tweezers for replacing chips.



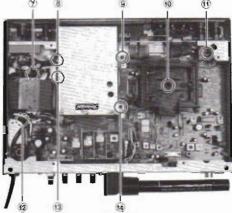


Fig. 2



Fig. 3

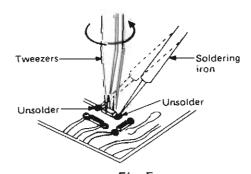


Fig. 5

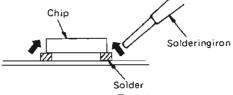
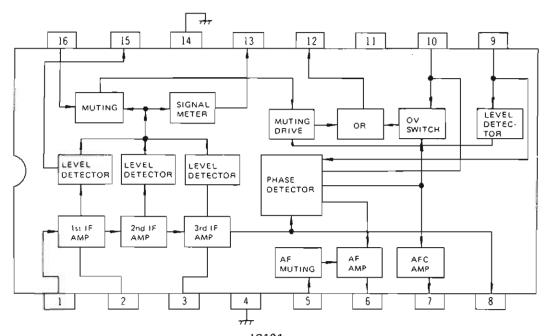


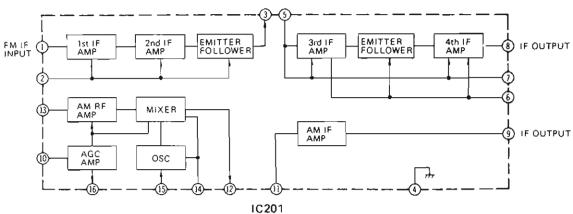
Fig. 6

Color	Original Parts Name
Black	Chip Resistor
Brown	Chip Capacitor
Black	Chip Jumper

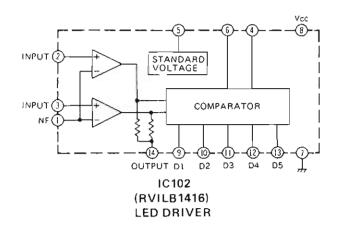
■ BLOCK DIAGRAM OF IC'S

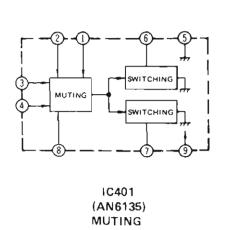


IC101 (RVIµPC1167C) FM IF AMP/DETECTOR

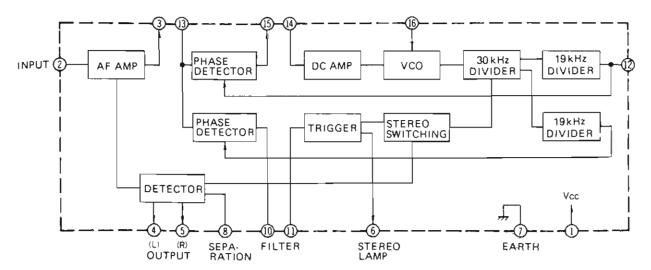


(AN217PBB)
FM-IF AMP, AM OSCILLATOR, AM-IF AMP

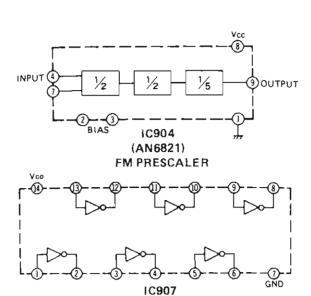


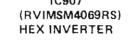


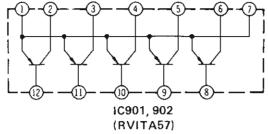
51-CU3/K

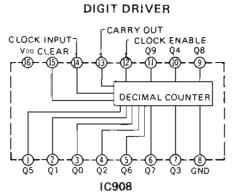


IC301 (RVILA3350S) FM MPX

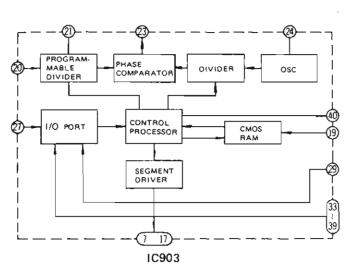




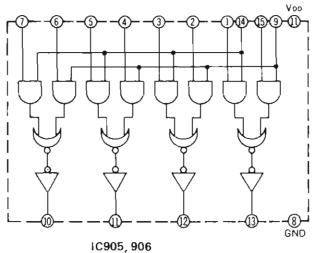




(RVIMSM4017RS)
DECADE COUNTER/DIVIDER



(MN6045A) PLL CONTROLER RAM



(RVIMSM4019RS)
QUAD AND/OR SELECT GATE

■ ALIGNMENT INSTRUCTIONS ■ ENGLISH ■ ENGLISH

				AM ALIGNMENT				
	SIGNAL GENERA	TOR	FREQUENCY	INDICATOR	ADJUSTMENT			
	CONNECTION	FREQUENCY	DISPLAY SETTING	(VTVM or SCOPE) (DISTORTION METER)	POINTS	REMARKS		
1	Fashion loop of several turns of wire and radiate signal into loop of receiver.	450kHz (30% Mod, with 400Hz)	Point of non- inter-ference.	Connect AC VTVM or scope to TP3,	T201 (AM 1st IFT) T202 (AM 2nd IFT)	Adjust for maximum reading on VTVM.		
2	_	no-signal	522kHz	Connect DC VTVM between TP1 and earth.	L203 (AM OSC Coil)	Adjust for 1.5±0.05V reading on DC VTVM.		
3	- 1	no-signal	1611kHz	Connect DC VTVM between TP1 and earth.	CT202 (AM OSC Trimmer)	Adjust for 20±0.1V reading on DC VTVM. Repeat steps 3 and 4.		
4	Fashion loop of several turns of wire and radiate signal into loop of receiver.	549kHz	549kHz	Connect AC VTVM or scope to output terminals.	L201 (AM ANT Coil)	Adjust for maximum output,		
5	Fashion loop of several turns of wire and radiate signal into loop of receiver.	1503kHz	1503kHz	Connect AC VTVM or scope to output terminals.	CT201 (AM ANT Trimmer)	Adjust for maximum output. Repeat steps 4 and 5.		
				FM IF ALIGNMENT				
6	Connect to TP2	10,7MHz	Point of non- inter-ference.	Connect scope to TP6.	T1 (FM IFT)	1. Pull out the core of T101. 2. Adjust for maximum amplitude and proper linearity between ±100kHz markers.		
			F	M RF ALIGNMENT				
7	<u>14</u> 5	no-signal	87.50MHz	Connect DC VTVM between TP1 and earth.	L5 (FM OSC Coil)	Adjust for 2,6±0,05V reading on DC VTVM,		
8	=1	no-signal	108.00MHz	Connect DC VTVM between TP1 and earth.	CT4 (FM OSC Trimmer)	Adjust for 16±0.1V reading on DC VTVM, Repeat steps 7 and 8.		
9	Connect to FM 300Ω antenna terminal through FM dummy antenna.	90.0MHz (100% Mod. with 1kHz)	90.00MHz	Connect AC VTVM or scope to output terminals.	L3 (FM DET Coil) L2 (FM ANT Coil) L1 (FM ANT Coil)	Adjust for maximum output.		
0	Connect to FM 300Ω antenna terminal through FM dummy antenna.	106,0MHz (100% Mod. with 1kHz)	106.00MHz	Connect AC VTVM or scope to output terminals.	CT3(FM DET Trimmer) CT2(FM ANT Trimmer) CT1(FM ANT Trimmer)	Adjust for maximum output.		
Ì		DC BA	LANCE AND	CE AND FM MONO DISTORTION ALIGNMENT				
1	Connect to FM 300Ω antenna terminal through FM dummy antenna (60dB)	98.0MHz (100% Mod. with 1kHz)	98.00MHz	Connect DC VTVM between TP4 and TP5 through resistors, (fig. 8)	T101 (FM IFT)	Adjust for OV reading on DC VTVM.		
2	Connect to FM 300Ω antenna terminal through FM dummy antenna (60dB)	98,0MHz (100% Mod, with 1kHz)	98.00MHz	Connect distortion meter to output terminal	T102 (FM IFT)	Adjust for minimum distortion of left output		
	-322		FM I	MPX VCO ALIGNMENT				
3	-	no-signal	Paint of non- inter-ference	Connect frequency counter to TP7 through resistor (100k Ω).	VR301	1. Set selector switch to "FM auto". 2. Adjust for 19kHz ±30Hz reading on frequency counter.		
ĺ			TUNII	NG METER ALIGNMENT				
4	Connect to FM 300Ω antenna terminal through FM dummy antenna (60dB)	98.1MHz (100% Mod. with 1kHz)	98.10MHz	1.874	VR101	Adjust VR101 so that the 5th LED illuminate.		



Notes: 1. Stereo modulator									
	FM SIGNAL GENERATOR CONNECTION	STEREO MODULATOR MODE & MODE RATE	INDICATOR (AC VTVM)	ADJUSTMENT POINT	REMARKS				
Ī	FM STEREO SEPARATION ALIGNMENT								
5	FM 300 Ω antenna terminals through FM dumrny antenna.	(1kHz 30% Modulation) MODE L (and R) Pilot signal to "ON".	Connect VTVM to output terminal through low pass filter. (Refer to fig. 9)	VR302	Frequency display at 98.0MHz. Make adjustment so that when the antenna input is subjected to L modulation (or R modulation). R channel output (or L channel output) becomes minimum.				
-	FM STEREO DISTORTION ALIGNMENT								
6	Connect to FM 3000 antenna terminal through FM dummy antenna. 98.0MHz 60dB	(1 kHz 100% Modulation) MODE R	Connect distortion meter to output terminal of receiver,	T1 (FM IFT)	Adjust for minimum distortion of right output.				

ABGLEICHANWEISUNGEN DEUTSCH

(Für Deutschland)

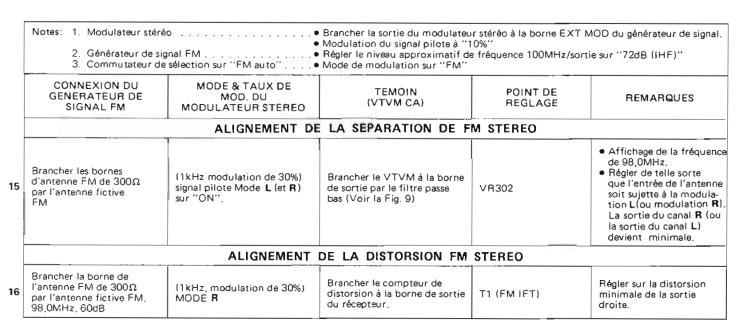
	Anmerkungen: 1. Netzschalter 2. Tondämpfung/UKW-Mor	no-Schafter	eingeschaltet ausgeschaltet/mo	3. Wahlschafter	entenne	MW/UKW Siehe Abbildung 7
	SIGNALGENERATOR (M	IESSENDER)	FREQUENZ-	MEGGERÄT	EINSTELLUNGS-	
	ANSCHLUSS	FREQUENZ	STELLUNG	(VTVM oder OSZILLOSKOP) (VERZERRUNGSMESSER)	PUNKTE	BEMERKUNGEN
	Testschleife aus mehreren Windungen eines Drahtes fertigen, und Signal in die Empfangsschleife des Gerätes senden,	450kHz (30% moduliert bei 400Hz)	Störungsfreie Stelle	Das Röhrenvoltmeter (VTVM) oder Oszilloskop mit TP3 (Testpunkt) verbinden,	T2011MW erster ZFT) T2021MW zweiter ZFT)	Auf maximalen Anzeige- wert des Röhrenvoltmeter (VTVM) einstellen.
	_	Kein Signal	522kHz	Das Gleichströmröhren- voltmeter zwischen TP1 (Testpunkt) und Erde verbinden.	L203 (MW-Schwingspule)	Auf 1.5V±0.05 auf dem Gleichstromrohrenvolt- meter einstellen.
	2	Kein Signat	1611kHz	Das Gleichstromröhrenvolt- meter zwischen TP1 und Erde verbinden.	CT 202 (MW- Schwingertrimmer)	Auf 20V±0.1 auf dem Gleichstromröhrenvolt- meter einstellen. Die Schritte 3 und 4 wiederhalen.
	Testschleife aus mehreren windungen eines Drahtes fertigen und Signal in die Eingangsschleife des Gerates senden,	549kHz	549kHz	Das Wechselstromröhrenvolt- meter oder Oszillosköp mit den Ausgangsklemmen verbinden	L201 (MW- Schwingertrimmer)	Auf maximalen Ausgang einstellen.
	Testschielfe aus mehreren Windungen eines Drahtes fertigen, und Signal in die Eingangsschleife des Gerites sienden.	1503kHz	1503kHz	Das Wechselstromröhrenvolt- meter oder Öszülloskop mit den Ausgangsklerrimen verbinden.	CT201 (MW- Amenneturimmet)	Auf maximaten Ausgang einstellen. Die Schritte 4 und 5 wiederholen
į		W		UKW-ZF-ABGLEICH		
3	Mit TP2 (Testpunkt) verbinden	10.7MHz	Snärungsfreie Stielle	Oszi lloskop mit TP6 verbinden	T‡ (UKW-ZFT)	(1) Elen Kern Spule) von T101 hermonziehen (2) Auf maximale Ampli- tude und richtiger Linnar ität zwischen den 100k hiz Markley. Wa einstellen

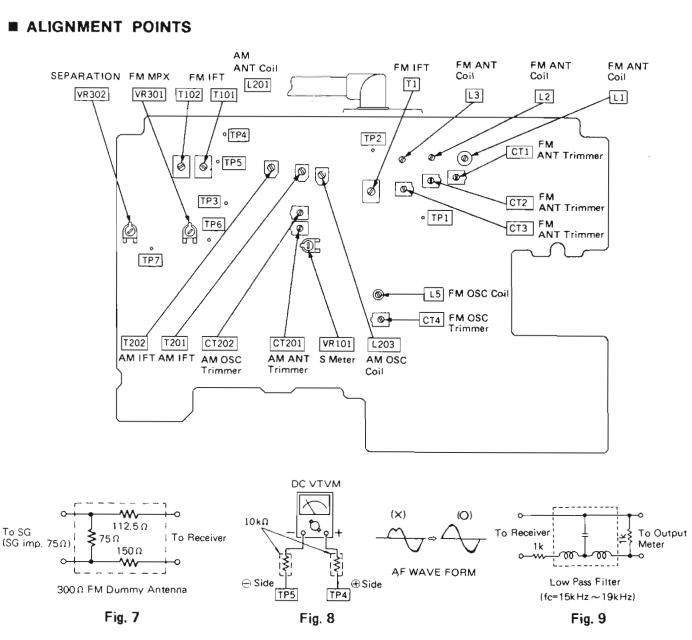
-	SIGNALGENERATOR (ME	FREQUENZ	ANZEIGEEIN-		EINSTELLUNGS- PUNKTE	BEMERKUNGEN	
	ANSCHLUSS	FREQUENZ	STELLUNG	(VERZERRUNGSMESSER) UKW-HF-ABGLEICH			
-		_		OKW-HF-ABGLETCH			
		Kein Signal	87,50MHz	Das Gleichstromröhrenvolt- meter zwischen TP1 und Erde verbinden,	L5 (UKW- Schwingspule)	Auf 26V±0.05 auf dem Gleichstromröhrenvolt- meter einstellen.	
	=	Kein Signal	108,00MHz	Das Gleichstromröhrenvolt- meter zwischen TP1 und Erde verbinden.	CT4 (UKW- Schwingertrimmer)	Auf 16V±0,1 auf dem Gleichstromröhrenvolt- meter einstellen. Die Schritte 7 und 8 wiederholen.	
	Die UKW-Kunstantenne über den 300 Ohm UKW- Antenneanschluss verbinden.	90,0MHz (100% moduliert bei 1kHz)	90.00MHz	Das Wechselstromröhrenvolt- meter oder Oszilloskop mit den Ausgangsklemmen verbinden.	L3IUKW-Detektor- spule L2(UKW-Antennen- spule L1IUKW-Antennen- spule	Auf maximalen Ausgang einstellen.	
	Die UKW-Kunstantenne über den 300 Ohm UKW- Antennenanschluss verbinden,	106,0MHz (100% moduliert bei 1kHz)	106,00MHz	Das Wechselstromröhrenvolt- meter oder Oszilloskop mit den Ausgangsklemmen verbinden,	CT3(UKW- Detektortrimmer) CT2(UKW- Antennentrimmer) CT1(UKW- Antennentrimmer)	Auf maximalen Ausgang einstellen.	
Ī	C	RRUNGSABGLEICH					
	Die UKW-Kunstantenne über den 300 Ohm UKW- Antennenanschluss verbinden,	98.0MHz (100% moduliert bei 1kHz)	98.00MHz	Das Gleichstromröhrenvolt- meter über Widerstände mit den Testpunkten TP4 und TP5 verbinden (Siehe Abb.8)	T101 (UKW-ZFT)	Auf OV auf dem Gleich- stromröhrenvoltmeter einstellen.	
	Die UKW-Kunstantenne (60dB) über den 300 Ohm UKW-Antennenanschluss verbinden,	98.0MHz (100% moduliert bei 1kHz)	98.00MHz	Verzerrungsmesser mit den Ausgangsklemmen verbinden.	T102 (UKW-ZFT)	Auf minimalste Verzer- rung des (inken Ausgang einstellen,	
ľ			UKV	V-MPX VCO-ABGLEICH			
	-	Kein Signal	Störungsfreie Stelle	Den Frequenzzähler über Widerstand (100 kOhm) mit TP7 (Testpunkt) verbinden	VR301	(1) Den Wahlschalter au "FM auto" stellen. (2) Auf 19kHz±30Hz au dem Frequenzzähler einstellen.	
-		ABSTIMMANZEIGEABGLEICH				pri	
	Die UKW-Kunstantenne (60dB) über den 300 Ohm UKW-Antennenanschluss verbinden.	98,1MHz (100% moduliert bei 1kHz)	98,10MHz	-	VR101	Den einstellbaren Wider stand VR101 so einstelle daß die fünfte Leucht- diode (LED) auf leucht-	
			Pilotsignalmo • Frequenzwer	Modulatorausgang mit den EXT M odulation auf 10% bringen. t ungefähr 100MHz/Ausgangspeg ert auf FM (UKW)		enerators verbinden.	
	UKW-SIGNAL- GENERATORVERBINDUNG	MODULATOR	REO- BETRIEBSART RATEN	MEßGERÄT (WECHSELSTROMRÖHREN- VOLTMETER)	STELLUNGSPUNKTE	BEMERKUNGEN	
		LEICH					
	Die UKW-Kunstantenne über den 300 Ohm UKW- Antennenanschluss verbinden.	(fkHz:30% m Betriebsart 1 Pilotsignagnal eingeschaltet	(und R)	Das Voltmeter über den "Tow pass" Filter mit den Ausgangsklemmen verbinden (Siehe Abb, 9)	VR302	Frequenzanzeige auf 98 NMHz Den Abgleich so vornehmen, daß bei Eingabe von Modullation den linken Kanal, der rechte Kanal minimal Ausgang anzeigt. Und entsprechender Weise im Umgekehrten Falt.	
			UKW-STER	EO-VERZERRUNGSABGLI	EICH		
	Die UKW-Kunstantenne über den 300 Ohm UKW- Antennenanschluss verbinden. 98.0MHz 60dB	FikHz 100% r Betriebs art F		Den Verzerrungsmesser mit den Ausgangsklemmen des Gerätes verbinden,	T1 (UKW ZFT)	Fuf minimalste Verzer- ning des rechten Ausgan einstellen	

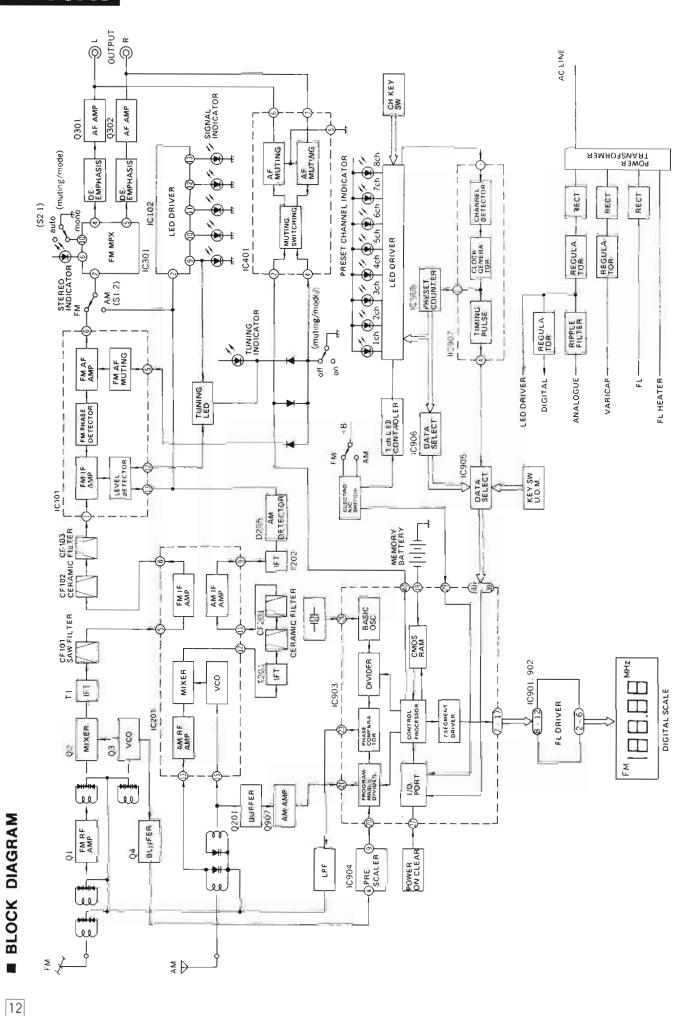
■ INSTRUCTIONS D'ALIGNMENT FRANÇAIS

				Arrêt/mono 5. Maintenir la lig		
			REGLAGE DE			
	CONNEXION	FREQUENCE	L'AFFICHAGE DE FREQUENCE	TEMOIN (VTVM or OSCILLOSCOPE) (COM- PTEUR DE DISTORSTION)	POINTS DE REGLAGE	REMARQUES
1	Effectuer des boucles de plusieurs tours de fil et passer le signai dans la boucle du récepteur	450kHz (30% de mod. avec 400Hz)	Points de non- interférence	Brancher le VTVM CA ou l'oscilloscope à TP3	T201(AM 1er IFT) T202(AM 2eme IFT)	Régler sur la lecture maximale du VTVM
2	-	Non-signal	522kHz	Brancher le VTVM CC entre TP1 et la terre	. L203(bobine AM OSC)	Régler la lecture du VTVN CC sur 1,5±0,05V
3	-	Non-signal	1611kHz	Brancher le VTVM CC entre TP1 et la terre	CT202 (Trimmer AM OSC)	Régler la lecture du VTVN CC pur 20±0,1V. Refaire les étapes 3 et 4
4	Effectuer des boucles de plusieurs tours de fil et passer le signal dans la boucle du récepteur.	549kHz	549kHz	Brancher le VTVM CA ou l'oscilloscope aux bornes de sortie.	L201 (bobine AM ANT)	Régler sur la sortie maximale.
5	Effectuer des boucles de plusieurs tours de fils et passer le signal dans la boucle du récepteur.	1503kHz	1503kHz	Brancher le VTVM CA ou l'oscilloscope aux bornes de sortie.	CT201 (Trimmer AM ANT)	Régler sur la sortie maximale, Refaire les étapes 4 et 5.
		27-2-	ALI	GNEMENT DE FM IF		
6	Brancher à TP2	10,7MH2	Point de non- interférence	Brancher l'oscilloscope à TP6	T1 (FM IET)	1. Extraire le noyau de TP101. 2. Régler sur l'amplitude maximale et la linéarité appropriée entre les marqueurs de ±100kHz
			ALI	GNEMENT DE FM RF		<u> </u>
7	-	Non-signal	87,50MHz	Brancher le VTVM CC entre TP1 et la terre	L5 (bobine FM OSC)	Régler la lecture du VTVN CC sur 26±0,05V
8		Non-signal	108,00MHz	Brancher la VTVM CC antre TP1 et la terre	CT4 (Trimmer FM OSC)	Régler la lecture du VTVN CC sur 26±0,05V. Refaire les étapes 7 et 8
9	Brancher la borne de l'antenne de 300Ω FM par l'antenne fictive FM.	90,0MHz 1100% de mod. avec 1kHz)	90.00MHz	Brancher le VTVM CA ou l'oscilloscope aux bornes de sortie.	L3(Bobine FM DET) L2(Bobine FM ANT) L1(Bobine FM ANT)	Régler sur la sortie
0	Brancher Ia borne de l'antenne FM de 300Ω par l'antenne fictive FM,	106,0MHz (100% de mod. avec 1kHz)	106,00MHz	Brancher le VTVM CA ou l'oscilloscope aux bornes de sortie.	CT3(Trimmer FM DET) CT2(Trimmer FM ANT) CT1 (Trimmer FM ANT)	Réglet sur la sortie maximale.
	ALI	GNEMENT DE	L'EQUILIBR	A GE DE CCET DELA D	ISTORSION DE FM	MONO
1	Brancher Ia borne de l'antenne FM de 300Ω par l'antenne fictive FM (60dB)	98,0MHz (100% de mod. avec 1kHz)	98,00MHz	Brancher le VTVM CC entre TP4 et TP5 par les résistances (Fig. 8)	T101 (FM IFT)	Régier la lecture du VTVM CC sur OV.
2	Brancher la borne de l'antenne FM de 300 Ω par l'antenne fictive FM (60dB)	98,0MHz (100% de rnod, avec 1kHz)	98,00MHz	Brancher le compteur de distorsion à la borne de sortie	T102 (FM IFT)	Régler sur la distorsion ni nimale de la sortie gauche
		· <u> </u>	ALIGNE	MENT DU FM MPX VCC		
3	_	Non-signal	Point de non- interférence	Brancher le fréquencemètre à TP7 par la résistance 1100kΩ)	VR301	1. Place* le commutateur de sélection sur "FM au to" 2. Régler la lecture du fréquencemètre sur 19kHz±30Hz
			ALIGNEMEN	T DU COMPTEUR D'ACC	ORD	
4	Brancher la borne de l'antenne F vide 300Ω par l'antenne fictive FM (60dB)	98,1MHz (100% de mod. avec 1kHz)	98,10MHz	-	VB101	Fligier la VR 101 de telle sorte que la 5ème LED s'allume.

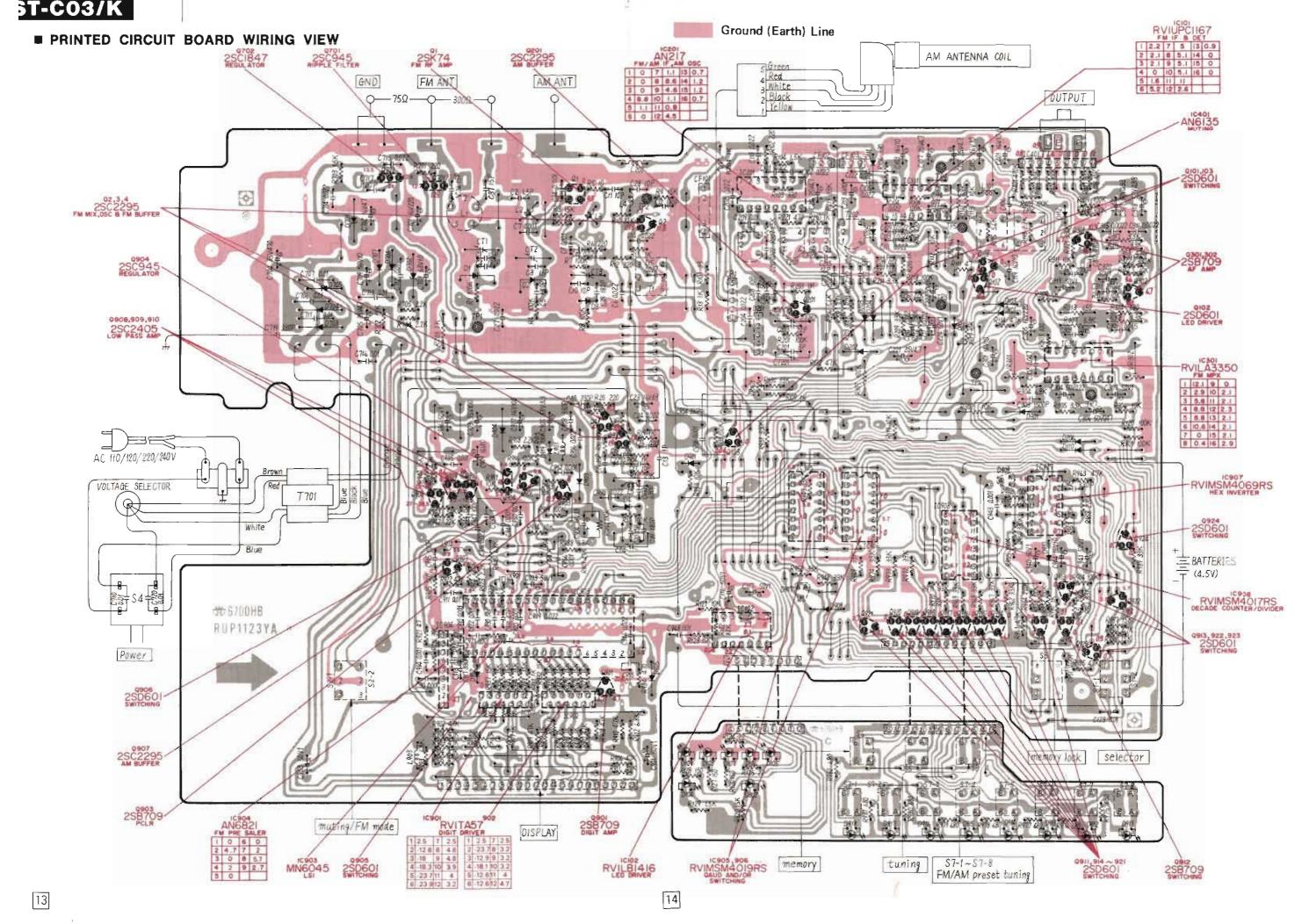
ST-CO3/K ST-CO3/K

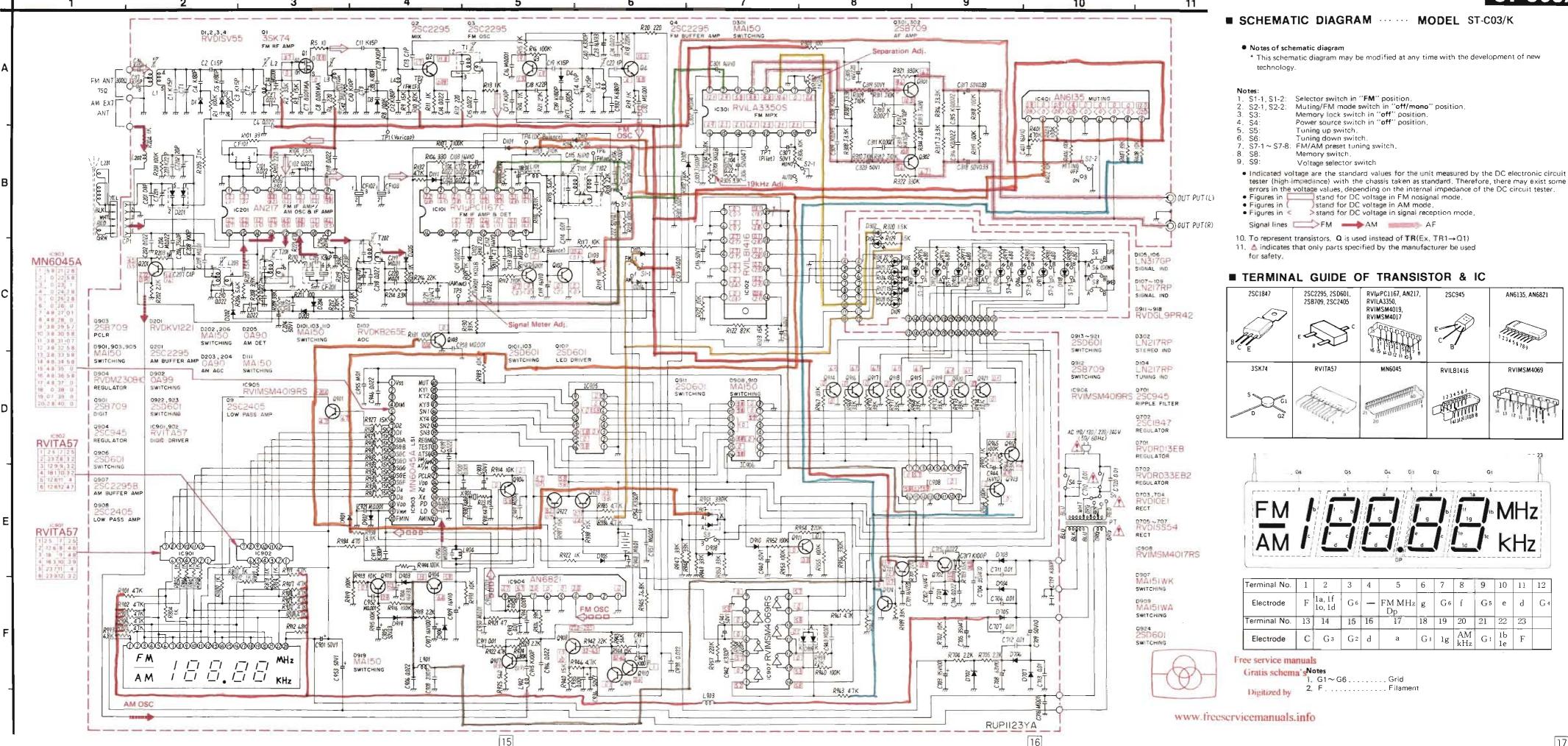




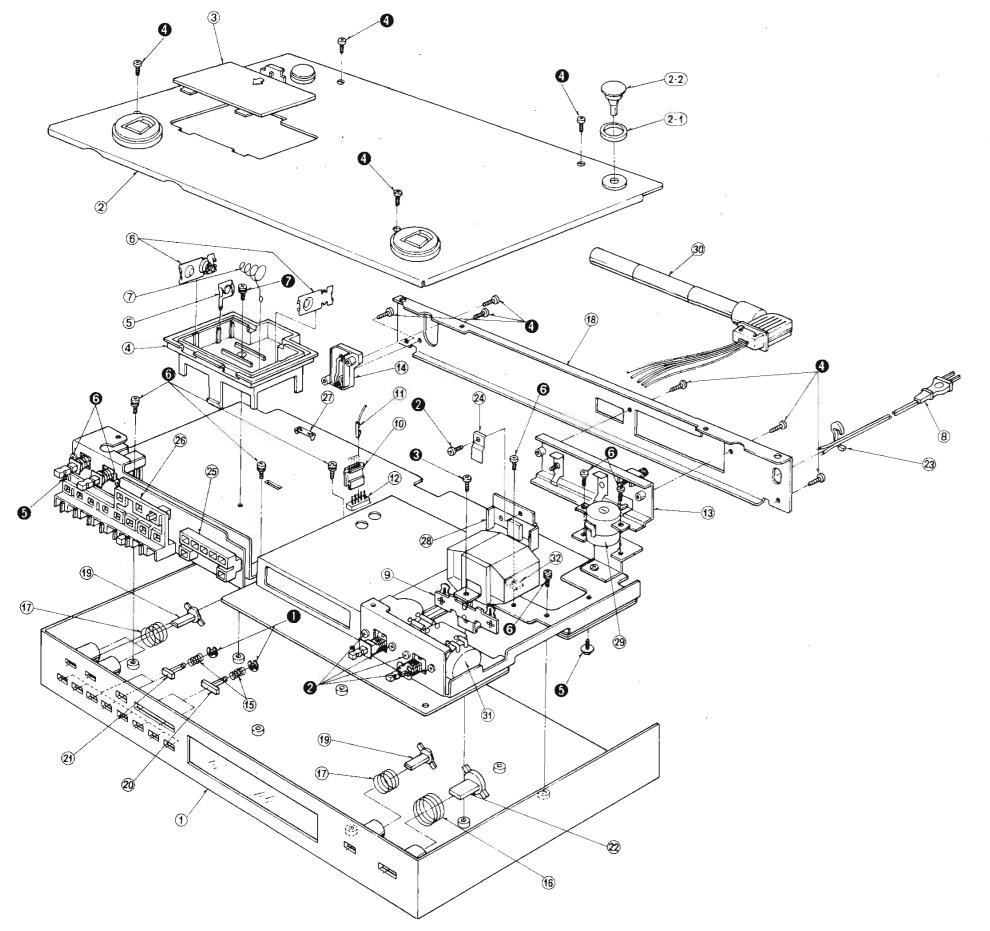


11





■ EXPLODED VIEW



■ REPLACEMENT PARTS LIST ····· Cabinet & Chassis Parts

NOTES: 1. Part numbers are indicated on most mechanical parts

Please use this part number for parts orders

2. \(\Delta\) indicates that only parts specified by the manufacturer

be used for safety.

Ref. No.		Part No.	Part Name & Description
		CABINET	and CHASSIS
1		FIYMTOD3N	Cabinet Assembly
2		RYUTC03E	Bottom Board Assembly
2-1		SGX803	Ring, Hear Side Feet
2-2		SHG1487	Foot, Rear Side
3		BYNTC03N	Battery Cover Assembly
4		BJB3016Z	Battery Case
5		RJC314A	Terminal, Battery + Side
5		BJC730Z	Terminal, Battery + , = Side
7		HJC322Z	Spring, Battery — Side
8 except XE, XAI	M	RJA23Z	AC Cord. Power Source
8 [XE]	Δ	RJA45Z	AC Cord. Power Source
8 [KAL]	Δ	RJA44Z	AC Cord, Power Source
O [ACE]	43	EN PHATE	AC CONG. YOME SOURCE
q	Δ	RJR29Z	Terminal
10	-	FJS217Y	Socket, Core Antenna
11		BJT462Z	Terminal, Socket
12		R IP1162	Plug, Socket
13		SJF4419-3	Terminal, Antenna
14		SJF3225A-1	Terminal, Antenna Terminal, Output
15	U.	8DS3052Z	Soring, Preset & Tuning Busson
16		RDS5132Z	Spring, Power Source Button
17		SUS123-1	Spring, Fower Source Button Spring, Switch Button
18 decent XA, XA	1.1	SGP1430-2C	Rear Panel
18[XA]	-,	SGP1430-2E	Rear Panel
18[XAL]		SGP1430-2F	Rear Panel
		3131 3400	The state of the s
19		SBC205-1	Button, Selector
20		RBC212Z	Button, Tuning
21		RBC213Z	Button, Preset
22		RBC220Z	Button, Power Source
23		RHB141Z	Bushing, AC Cord
24		RUS397Z	Spring, Q702
25		FIMP125Z	Holder, LED
26		RMP126Z	Holder, LED
27		RMC171Y	Shield Cover, IC1
28		RMY62YS	Heat Sink, Q702
500		III TO THE TO THE TOTAL TOTAL TO THE TOTAL TOTAL TO THE T	
29		RUV387Z	Cover, Voltage Selector
30		SQXA4029-2	Caution Label
31	Δ	BHR3252	Cover, Capacitor
32		SHM117Z	Spacer, Transformer
			The same of the sa
		SCREWS ar	nd WASHERS
0		XUC2FT	E Ring, Button M'tg
0		XSN3+6S	Screw, Switch M'tg
©		XTN3+6B	Screw, Terminal M'19
Ø		XTB3+8BFN	Screw, Bostom Board Mitg
Q		XTN3+6B	Screw, Chassis M'1g
0 000000		XSN3+8BNS	Screw, Circuit Board M'tg
V	'	XSN3+8BNS	Screw, Connit Board M'tg
		ACCES	SORIES
		SSA267	Cord, FM Indoor Antenna
A1		SJP2241	Connection Cord
A1 A2		RJP16ZS	Plug, AC Corts
	Δ		- Maria di
A2	Δ	PACKIN	G PARTS
A2	Δ	PACKIN	
A2 A3 [XA]	۵		Polyethylene Bag
A2 A3 [XA]	Δ	XZB36X40A04 XZB10X20A04	Polyethylene Bag Polyethylene Bag
A2 A3 XA] P1 P2 P3	Δ	XZB36X40A04	Polyethylene Bag Polyethylene Bag Pad, Bottom
A2 A3 [XA] P1 P2 P3 P4	Δ	XZH36X40A04 XZH10X20A04 SPS1770-1 SPS1771-2	Polyethylene Bag Polyethylene Bag Pad, Bottom Pad, Under
A2 A3 XA] P1 P2 P3	Δ	XZB36X40A04 XZB10X20A04 SPS1769-1	Polyethylene Bag Polyethylene Bag Pad, Bottom

■ REPLACEMENT PARTS LIST ······Electric Parts

NOTES: 1. Part numbers are indicated on most mechanical parts

Please use this part number for parts orders

2. \(\Delta \) indicates that only parts specified by the

		Part No.	Part Name & Description
	لبب	INTEGRATE	ED CIRCUITS
		SVIUPC1167C	IC, FM IF Amplifier & Detector
		RVILB1416	IC, LED Driver
		AN217P-88	IC, FM/AM IF Amplifier & AM Oscillator
		RV1LA3350S AN6135	IC, FM Multiplex
902		HVITA57	IC, Muting IC, Digit Driver
,,,		MN6045E	IC, PLL CONTROLER RAM
		AN6821	IC, FM Pre-Scaler
906		RVIMSM4019RS	IC, Quad And/Or Select Gate:
		RVIMSM4069RS	IC, Hex Invertor
		RVIMSM4017RS	IC, Decade Counter/Divider
		F-8	SISTORS
201, 907	, 1	3SK74-L1 2SC2295B	Transistor, FM RF Amplifier Transistor, FM Mixer, Oscillator,
. 201, 501		23022300	Buffer & AM Buffer
03, 911,		2SD601	Transistor, Switching, LED Driver
24		2/20/2028	
02,901		2SB709	Transistor, AM Amplifier, Digit Amplifier
04		2SC945-P2 2SC1847-R	Transistor, Ripple Filter, Regulator Transistor, Regulator
112		2SB709R	Transistor, Regulator Transistor, Regulator
150		2SD601	Transistor, Switching
21		130-2952-3	
910	Ш	25C2405-S	Transistor, Low Pass Amplifier
		DIC	DDES
		RVDMV104	Diode, Variable Capacitance
03, 110,		MA162A	Diode, Switching
12,202,			
05, 908,			
119	1 1		
		RVDKB265E	Diode, Operation Compensator
07~109	1	LN2178P=3	Light Emitting Diode, Turring, Signal &
ne		14101200 0	Stereo
06		LN317GP-2 RVDKV1221	Light Emitting Diode, Signal Diode, Variable Capacitance
205, 902		20A90	Diode, AM AGC, AM Detector & Switching
	1 1	RVDRD13EB	Diode, Regulator
		RVDRD33EB1	Diode, Regulator
04	Δ	SM112	Diode, Flectifier
06, 707	Δ	SM112	Diode, Hentifier
60		RVDVD6R8EB1	Diode, Regulator
918	1 1	MA151WK RVDGL9PR42	Diode, Switching Light Emitting Diode, Preset
	_		ANSFORMERS
		5LA4N2-0	Coil, FM RF
		RL04N128-0	Coil, FM RF
		RLQY15G5G-0	Cdil, JF Trap
		RL04N126-0 RLQX2701-K	Coil, FM Ospitator Coil, Phase Shitt
	1 !	RLF2D127	Coll, AM Antenna
		RLQX1014-Y	Coil, Choke
01, 903			
01,903		RLO2M25-K	Cail, AM Oscillator
01,903		RLO2M25-K	Coil, AM Oscillator
01.903		RL02M25-K RLQZ4701-D	Coil, AM Oscillator Coil, Choke
01.903		RLO2M25-K	Coil, AM Oscillator Coil, Choke Coil, Choke
01,903		RL02M25-K RLQZ4701-D RLQZ1003-Y	Coil, AM Oscillator Coil, Choke
01,903		RL02M25-K RLQZ4701-D RLQZ1093-Y SLI4C109	Coil, AM Oscillator Coil, Choke Coil, Choke Transformer, FM IF
01,903		RL02M25-K RL0Z4701-D RL0Z1003-Y SL14C109 SL14C511-K SL14C513-K RL12M213-K	Coil, AM Oscillator Coil, Choke Coil, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, FM IF
01,903		RL02M25-K RL024701-D RL021003-Y SL14C109 SL14C511-K SL14C513-K RL12M213-K RL12M201-M	Coil, AM Oscillator Coil, Choke Coil, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF
01,903	Δ	RL02M25-K RL0Z4701-D RL0Z1003-Y SL14C109 SL14C511-K SL14C513-K RL12M213-K RL12M401-M RLT5J265-W	Coil, AM Oscillator Coil, Choke Coii, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source
01,903	Δ	RL02M25-K RL0Z4701-D RL0Z1003-Y SL14C109 SL14C511-K SL14C513-K RL12M213-K RL12M401-M RLT5J265-W	Coil, AM Oscillator Coil, Choke Coii, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS
	Δ	RL02M25-K RL024701-D RL021003-Y SL14C109 SL14C511-K SL14C513-K RL12M401-M RLT5J265-W CERAMIO SVFF107MC1-A	Coil, AM Oscillator Coil, Choke Coii, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS Ceramic Filter, 10.7MHz
103	Δ	RL02M25-K RL024701-D RL021003-Y SL14C109 SL14C511-K SL14C513-K RL12M213-K RL12M401-M RLT5J265-W CERAMIC SVFF107MC1-A RVFSFE107LKA	Coil, AM Oscillator Coil, Choke Coil, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS Ceramic Filter, 10,7MHz Ceramic Filter, 10,7MHz
	Δ	RL02M25-K RL024701-D RL021003-Y SL14C109 SL14C511-K SL14C513-K RL12M213-K RL12M213-K RL12M205-W CERAMIO SVFF107MC1-A RVFSFE107LKA RVFSFZ45067	Coil, AM Oscillator Coil, Choke Coii, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS Ceramic Filter, 10.7MHz Ceramic Filter, 450kHz
103	Δ	RL02M25-K RL024701-D RL021003-Y SL14C109 SL14C511-K SL14C513-K RL12M213-K RL12M213-K RL12M205-W CERAMIO SVFF107MC1-A RVFSFE107LKA RVFSFZ45067 VARIABLE	Coil, AM Oscillator Coil, Choke Coii, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS Ceramic Filter, 10,7MHz Ceramic Filter, 450kHz RESISTORS
	Δ	RL02M25-K RL024701-D RL021003-Y SL14C109 SL14C511-K SL14C513-K RL12M213-K RL12M213-K RL12M205-W CERAMIO SVFF107MC1-A RVFSFE107LKA RVFSFZ45067	Coil, AM Oscillator Coil, Choke Coii, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS Ceramic Filter, 10,7MHz Ceramic Filter, 450kHz
103	Δ	RL02M25-K RL024701-D RL021003-Y \$L14C109 \$L14C511-K \$L14C513-K RL12M213-K RL12M213-K RL12M401-M RUT5J265-W CERAMIC SVEF107MC1-A RVFSFE107MC1-A RVFSFE107MC3 VARIABLE EVNK4AA00813 EVNMAA00853	Coil, AM Oscillator Coil, Choke Coil, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS Ceramic Filter, 10,7MHz Ceramic Filter, 10,7MHz Ceramic Filter, 450kHz RESISTORS Meter, Separation Adjustment
103	Δ	RL02M25-K RL024701-D RL021003-Y \$L14C109 \$L14C511-K \$L14C513-K RL12M213-K RL12M213-K RL12M201-M RLTDJ265-W CERAMIC SVFF107MC1-A RVFSF245067 VARIABLE EVNK4AA00813 EVNMAA00853 VARIABLE RCV1PX10AGS	Coil, AM Oscillator Coil, Choke Coil, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS Ceramic Filter, 10,7MHz Ceramic Filter, 10,7MHz Ceramic Filter, 450kHz RESISTORS Meter, Separation Adjustment PLL VCO 19kHz Adjustment CAPACITORS Trustoner
103	Δ	RL02M25-K RL024701-D RL021003-Y \$L14C109 \$L14C101-K \$L14C511-K \$L12M213-K RL12M213-K RL12M213-K RL12M201-M RLT5J265-W CERAMIC SVFF107MC1-A RVFSF245067 VARIABLE EVNK4AA00813 EVNMAA00853 VARIABLE RCV1PX10AGS RCV1PX20AGS	Coil, AM Oscillator Coil, Choke Coil, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS Ceramic Filter, 10,7MHz Ceramic Filter, 10,7MHz Ceramic Filter, 450kHz RESISTORS Meter, Separation Adjustment PLL VCO 19kHz Adjustment CAPACITORS Transmer
103	Δ	RL02M25-K RL024701-D RL021003-Y \$L14C109 \$L14C101-K \$L14C511-K \$L12M213-K RL12M213-K RL12M213-K RL12M213-K RL12M213-K RL12M201-M RLT5J265-W CERAMIC SVFF107MC1-A RVFSF245067 VARIABLE EVNK4AA00813 EVNK4AA00853 VARIABLE RCV1PX10AGS RCV1PX20AGS SWIT	Coil, AM Oscillator Coil, Choke Coil, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS Ceramic Filter, 10,7MHz Ceramic Filter, 10,7MHz Ceramic Filter, 450kHz RESISTORS Meter, Separation Adjustment PLL VCO 19kHz Adjustment CAPACITORS Trinsper
103	Δ	RL02M25-K RL024701-D RL021003-Y SL14C109 SL14C511-K SL14C513-K RL12M213-K RL12M213-K RL12M201-M RLT5J265-W CERAMIC SVFF107MC1-A RVFSFE107LAA RVFSFE107LAA RVFSFE245067 VARIABLE EVNK4AA00813 EVNM4A00853 VARIABLE RCV1PX10AGS RCV1PX20AGS SWIT RSHX013Z	Coil, AM Oscillator Coil, Choke Coii, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS Ceramic Filter, 10,7MHz Ceramic Filter, 10,7MHz Ceramic Filter, 450kHz RESISTORS Meter, Separation Adjustment PLL VCO 19kHz Adjustment CAPACITORS Trimmer Trimmer TCHES Switch, Memory Lock & Selector
103	Δ	RL02M25-K RL024701-D RL021003-Y \$L14C109 \$L14C101-K \$L14C511-K \$L12M213-K RL12M213-K RL12M213-K RL12M213-K RL12M213-K RL12M201-M RLT5J265-W CERAMIC SVFF107MC1-A RVFSF245067 VARIABLE EVNK4AA00813 EVNK4AA00853 VARIABLE RCV1PX10AGS RCV1PX20AGS SWIT	Coil, AM Oscillator Coil, Choke Coil, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, Power Source FILTERS Ceramic Filter, 10,7MHz Ceramic Filter, 10,7MHz Ceramic Filter, 450kHz RESISTORS Meter, Separation Adjustment PLL VCO 19kHz Adjustment CAPACITORS Trinsper
103		RL02M25-K RL024701-D RL021003-Y SL14C109 SL14C511-K SL14C513-K RL12M401-M RLT5J265-W CERAMIC SVFF107MC1-A RVFSFE107LKA RVFSFE45067 VARIABLE EVNK4AA00813 EVNMAA00853 VARIABLE RCV1PX20AGS RCV1PX20AGS SWIT RSHX013Z RSH2811Z	Coil, AM Oscillator Coil, Choke Coii, Choke Transformer, FM IF Transformer, FM IF Transformer, FM IF Transformer, AM IF Transformer, AM IF Transformer, AM IF Transformer, AM IF Transformer, To

Ref. Na.	Part No.		Part Nam	ne & Desc	ription
	DISPL	AY TUBE			
	RAD78To1S	Display,	Frequency		
	CRY	YSTAL			
(901	RVCA11520NZN	Crystal			
	RES	ISTORS			
RI	RRD18XK104	Chip.	100kΩ.	1/84.	±10%
R2	RRD18XK333	Chip.	$33k\Omega$.	1/8W.	
R3 R4	88D18XK153	Chip,	15kΩ. 100kΩ.	178W.	±10%
R5	BBD18XK100	Chip	10Ω.		±10%
R6	BBD18XK221	Chip.	220Ω .		±10%
R7, 8	RRD18XK104		100kΩ.		
R9 R10	RRD18XK153 RRD18XK823	Chip.	15kΩ, 82kΩ,	178W.	±10%
R11	BHD18XK102	Chip.	1kΩ,	1/8	
R12:	RBD18XK221	Chip.	220Ω,	1/8W.	±10%
R13, 14, 15	ARD18XK102	Citio.	1kΩ.	1/8VV.	
R16, 17	PRD18XK104	Chip,	100kΩ.	1/8W.	±10%
R18	RRD18XK224	Chip,	220kΩ.		
R19 R20	BBD18XK102 BBD18XK221	Chip.	1kΩ. 220Ω	1/8W_ 1/8W_	
R21	FFD18XK273	Chip.	27ks2.	1/8 V.	
R23	ABD18XK150	Chip,	15Ω.	1/894	±10
R101	RHD18XK330	Chip.	33Ω.	1/BW	
R102	RRD18XK221	Chip.	22012.	1/8//,	±10 ×
R103	RHD18XX331	Chip.	330Ω.	1/8W	
R 104 R 106	RHD18XK152	Chip.	1.5kΩ.		
R106	ERD25TJ104	Chip, Carbon	330Ω. 100kΩ.	1/8W.	
R109	RHD18XK102	Chip,	1452		±10%
R110	BBD18XK271	Onip,	270Ω .	/BVV.	±10
R111	RAD1BXK470	Chip.	47Ω.		±10%
R112 R113	ERD25FJ103 ERD25TJ183	Carbon, Carbon,		1./4W.	± 5%
B114	HRD18XK473	Chip.	47×Ω.	1.0	±10%
B115	FRD18XK562	Chip,	5 6kΩ	1/84	110%
H116	ERD25FJ392	Carbon,	39kΩ	1,4414	± 5%
R117	BRD18XK103	Chip.	10).Ω.	V8V	
R118	FRD18XK222	Chip,	22kΩ,	1/8W.	±173%
R119 R120	RRD18XK103 RRD18XK104	Chip,	10kΩ.	/BW.	
R120	ABD18XK104	Chip.	100kΩ, 10kΩ	1/8W,	
R122	FRD18XK823	Chip,	BZkΩ.	1/8W.	
R123	RBD18XK153	Chip.	15kΩ	I/BW.	±10%
R124, 125 R126, 127	RRD18XK220 RRD18XK151	Chip,	22Ω . 150Ω .		210%
10.7 (50)	2000 300 3700			Life 9	
R128 - R129	RRD18XK151 RRD18XK152	Chip,	150Ω, 1.6kΩ	178W.	±10%
R130	RAD18XK333	Chip,	33kΩ.	VARVI	±10%
R131	FRD18XK104	Chip.	100kΩ	178W,	±10%
B132	ARD18XK473	Dhip,	47kΩ.	1/8W,	±10%
R201 R202	89D18XK104 89D18XK222	Chip.	100kΩ. ≥ 2kΩ.	1/8W	±10% ±10%
F203	RHO18XK105	Chip,		1/84	±10%
R204	RRD18XK102	Chip,	1kΩ.	1/8W.	
R205	ERD25FJ102	Carbon		1.14%	
R206	RHD18XK562	Chip)	5 6k 52	1./8W.	±10%
R207	BBD18XK152	Chip.	1.5kΩ.	1/8/4	
R208	FRD18XK392	Chip,	.52#EE	L/BW.	
R209	RRD18XK333	Chip.	33112.	L/EW.	210%
R210	RRD18XK102	Chip.	īkΩ,	17800	±10%
R211	BBD18XK101	Chip,	100Ω,	1/8W.	±10%
R212	BBD18XK274	Chip.	270kΩ,	178W	±10%
R213 R214	RRD18XK182 RRD18XK332	Chip,	1.8kΩ, 3.3kΩ,	1/8W. 1/8W.	±10%
R215	BR018XK102	Chip,	1kΩ,		±10%
R216	RRD18XK223	Chip.	22kΩ,	178W.	±10%
R218	RRD18XK104	Chip,	100kΩ,	1/8W.	±10%
H219 H221	BRD18XK333 BBD18XK471	Chip,	33kΩ, 470Ω,	1/8W.	±10%
97535	DOUIGANS/	Chip,	470/52,	1/8W.	±10%
R301	RRD18XK104	Chip.	100k Ω	1/8W.	
H302 R303	ERD25FJ103	Caroon,		1/4W.	
R304	RRD18XK101 RRD18XK682	Chip.	100Ω, 6.8kΩ,	1/8W, 1/8W,	±10%
R305	ARD18XK332	Chip,	3.3k D	1/8W.	±10%
R306	RRD18XK103	Chip,	10k 12		±10%

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Ref. No.	Part No.		Part Name & Description			
307, 308	ERD25FJ332	Carbon,	3.3kΩ.	1/4W.	± 5%	
309,310	RRD18XK103	Chip.	10kΩ,	1/8W.	#10%	
311, 312	HRD18XK103	Chip.	10kΩ,	1/BW.	±10%	
313, 314	ERD25FJ681	Carbon,	680Ω,	1/4W.	± 5%	
0+6 0+3	EDDAET 1999	Post of	2210	1/4W.	4, 5%	
316, 317 318, 319	ERD25FJ332 BRD18XK104	Chip.	3.3kΩ, 100kΩ,	1/8W.	±10%	
320	RRD18XK152	Chip,	1.5k \$1	1/8W.	±10%	
321, 322	RRD18XK334	Chip.	330kΩ,	1/BW.	±10%	
401	RRD18XK474	Chip.	470kΩ,	1/8W,	#10%	
402	RRD18XK103	Chip.	10kΩ	1/8W.	±10%	
403	RRD18XK104	Chip.	100kΩ	1/8W.	±10%	
406	RRD18XK104	Chip.	100kΩ.	1/8W.	±10%	
107	RRD18XK333	Chip,	33kΩ.	1/8W	±10%	
808	RRD18XK103	Chip.	10kΩ.	1/BW,	±10%	
701	RRD18XK221	Chip.	22017,	1/8W,	±10%	
702	RRD18XK103	Chip.	i0kΩ,	1/8W	±10%	
703	RRD18XK152	Chip.	1.5kΩ,	1/8W.	±10%	
704, 705	RRD18XK222	Chip.	2.2kΩ.	1/8W.	±109	
304	ERD25FJ102	Carbon,	1kΩ.	1/4W.	± 5%	
805, 806	RRD18XK102	Chip,	1kΩ.	1/8W.	±10%	
07, 808	ERD25FJ102	Carbon,	1kΩ,	1/4W.	± 5%	
9,810	RRD18XK102	Chip.	1kΩ,	1/8W.	±10%	
11	ERD25FJ102	Carbon,	1kΩ,	1/4W.	± 5%	
12, 813	RRD18XK102	Chip.	1812	1/8W.	±10%	
314	RRD18XK102	Chip,	1k 17	1/8W,	±10%	
01,902	RRD18XK473	Chip,	47kΩ.	1/BW,	±10%	
03,904	RRD18XK473	Chip,	47kΩ,	1/8W.	±10%	
05, 906	RRD18XK473	Chip,	47kΩ,	1/8W	#10%	
07, 908	RRD18XK473	Chip,	47kΩ,	1/BW	±10%	
909,910	RRD18XK473	Chip,	47kΩ	1/8W	±10%	
11	BBD1BXK473	Chip,	47kΩ	1/8W.	±10%	
12	RRD18XK682	Chip.	6.8kΩ,	1/8W.	±10%	
13,914	RRD18XK103	Chip.	10k Ω	1/8W,	±10%	
15,916	RRD18XK104	Chip,	100k Ω	1/8W.	±10%	
18	RRD18XK222	Chip.	2.2k Ω,	1/8W.	±10%	
19	RRD18XK104	Chip,	100kΩ,	1/BW,	±10%	
20	RRD18XK471	Chip,	470Ω,	1/8W.	±10%	
1	RRD18XK470	Chip.	47Ω,	1/8W.	±109	
22	RRD18XK472	Chip,	4.7kΩ,	1/8W,	#10%	
23	RRD18XK222	Chip,	2.2kΩ.	1/8W.	±10%	
24	RRD18XK684	Chip,	680kΩ,	1/8W.	±10%	
25	BRD18XK561	Chip,	560(2,	1/8W,	#10%	
26	FRD18XK393	Chip,	.19kΩ_	1/844,	#10%	
27, 928	RRD18XK153	Chip,	15kΩ.	1/8W,	±10%	
29,930	BBD18XK153	Chip,	15kΩ.	1/8W	±10%	
31,932	RRD18XK153	Chip,	15kΩ.	1/8W,	±10%	
33, 934 35, 936	RRD18XK153 RRD18XK153	Chip, Chip,	15kΩ. 15kΩ.	1/8W, 1/8W,	±10% ±10%	
65 17	0.0000000000000000000000000000000000000	1000				
7	RRD18XK153	Chip,	15kΩ.	1/8W,	210%	
38	RRD18XK332	Chip.	3.3kΩ.	1/8W.	±10%	
10	HRD18XK153	Chip,	15kΩ.	1/8W,	*10%	
12	RRD18XK223	Chip,	22⊾Ω.	1/8W.	#10%	
13	RRD18XK563	Chip,	56kΩ.	1./8W,	±10%	
14	RRD18XK153	Chip,	15kΩ.	1/8W, 1/4W,	±10% + 5%	
15	ERD25FJ682 BRD18XK472	Chip,	33kΩ. 4.7kΩ.	1/8W.	± 5% ±10%	
7,948	RRD18XK333	Chip,	33kΩ.	1/8W.	±10%	
9,950	RRD18XK333	Chip.	33kΩ.	1/8W,	±10%	
	HRD18XK334	Chip.	330kΩ	1/8W.	±10%	
12, 963	RRD18XK104	Chip.	100kΩ	1/8W.	±10%	
4	HBD18XK224	Chip.	330kΩ.	1/8W.	±10%	
5	RRD18XK104	Chip.	100kΩ.	1/8W.	±10%	
6	RRD18XK334	Chip,	220kΩ.	1/8W.	±10%	
7,958	RRD18XK224	Chip.	220kΩ.	1/8W.	±10%	
9	RRD18XK223	Chip.	22kΩ.	1/8W.	±10%	
0	RRD18XK104	Chip.	100kΩ.	1/8W.	±10%	
11	HRD18XK472	Chip,	4.7kΩ.	1/8W.	±109	
,	RRD18XK333	Chic	33kΩ.	1/8W.	±109	
2	RRD18XK333	Chip,	47kΩ	1/8W,	±10%	
33 34, 965	RRD18XK104	Chip.	100kD	1/8W.	±10%	
96, 967	ARD18XK333	Chip.	33kΩ.	1/8W.	±10%	
88, 969	RRD18XK333	Chip.	33kΩ	1/8W.	±10%	
0,971	RRD18XK333	Chip,	33kΩ.	1/8W.	±10%	
72,973	RRD18XK333	Chip,	33kΩ.	1/8W	±10%	
14	RRD18XK333	Chip,	33kΩ.	1/8W.	110%	
5,976	RRD18XK681	Chip,	680Ω.	1/8W.	±1096	
77,978	ARD18XK681	Chip,	680Ω.	1/8W.	±10%	
9,980	RRD18XK681	Chip.	680 €	1/8W.	#10%	
31, 982	RRD18XK681	Chip,	6BOΩ.	1/8W,	±10%	
33	RRD18XK103	Chip,	10kΩ	1/8W.	±10%	
8-4	RRD18XK471	Chip,	470 12.	1/8W.	±10%	
85, 986	RRD18XK472	Chip.	4.7kΩ,	1/8W.	±10%	
87,988	RRD18XK153	Chip.	15kΩ.	1/8W.	±10%	
89	RRD18XK333	Chip.	33kΩ.	1/8W,	=10%	
90	RRD18XK102	Chip.	1kΩ,	1/8W,	±10%	
20						
91	RRD18XK103 RRD18XK102	Chip.	10kΩ, 1kΩ,	1/8W. 1/8W.	±10%	

Ref. No.	Part No.	Part Name & Description				
R993 R994	FRD18XK682 ERD25TJ104	Chip, 6.8kΩ, 1/8W, ±10% Carbon, 100kΩ, 1/4W, ±5%				
				7000		-
CI	ECUX1H150KC	Chip.	_	15pF,	50V.	±10%
C2	ECUXIH185CC	Chip,		1.5pF,	50V.	±0.25p
C3	ECUX1H150KC	Chip.		15pF,	50V.	±10%
C4. 5	ECUX1H181KC	Chip.		80pF,	50V.	±10%
C6 C7.8	ECUX1H223ZF ECKD1H102MD	Chip, Ceramic,		22μF. 01μF.	50V.	±20%
C10	ECUX1H100KC	Chip.		10pF.	50V.	±0.5pF
C11	ECUX1H150KC	Chip,		15pF.	50V.	±10%
C12 C13	ECUX1H181K ECCD1H010C	Chip, Ceramic,	. 1	80pF.	50V.	±10% ±0.25p
C14, 15	ECUX1H223ZF	Chip.	0.0	22µF.	50V.	±80 % ±80 %
C16	ECUX1H102MD	Chip,				±20%
C17 C18	ECUXIHI00KC	Chip.		10pF.	50V.	±10%
C19	ECUX1H220KC ECUX1H150KC	Chip, Chip,		22pF, 15pF,	50V.	±10% ±10%
C20	ECUX1H150KC	Chip,		150F.	50V.	±10%
C22	ECUX1H010CC	Chip,		1pF,	50 V.	±0.25p
C23 C24	ECEA1CS330	Electrolytic		33µF,	16V,	_90 m
C27	ECUX1H223ZF ECUX1H223ZF	Chip.		22μF, 22μF,	50V.	± 90 % ± 80 % ± 20 %
C28	ECUX1H100KC	Chip,		10pF.	50V.	±10%
C30 C34	ECUX1H102MD ECUX1H102MD	Chip.		01μF, 01μF,	50V.	±20% ±20%
C36, 37	ECUX1H102MD	Chip,		15pF,	50V.	±10%
C38, 39	ECUX1H181KC	Chip,		18pF,	50V,	
C40, 41	ECCD1H331K	Ceramic,		30pF.	50V.	±10%
C42 C101_102	ECUX1H223ZF ECUX1H223ZF	Chip, Chip,		22μF. 22μF.	50V.	250 %
C103	ECEA1HS100	Electrolytic		10μF,	50V,	±30 %
C104	ECUX1H223ZF	Chip.	0.0	22µF.	50V,	± 90 % ± 90 % ± 80 %
C105	ECKD1H223ZF	Ceramic,		22µF.	50V.	230 %
C106 C107, 108	ECEA25Z4R7	Chip, Electrolytic		00pF, 1.7μF,	50V, 25V	110%
C109	ECUX1H223ZF	Chip,		22µF		$\pm^{80}_{20}\%$
C111	ECUX1H223ZF	Chip,				2.80 %
C112 C113	ECEA1HS100 ECUX1H223ZF	Chip.		10μF, 22μF,	50V 50V	, 90 oc
C114	ECUX1H103ZF	Chip.		01µF.	50V.	200 % 200 % 200 %
C115	ECEA1HS100	Electrolytic	2	10µF.	50V	20
C116, 117	ECEA50Z1	Electrolytic		1μF.	50 V	W
C118 C119	ECUX1H223ZF ECEA1HS100	Chip, Electrolytic		22µF, 10µF,	50V.	2 30 %
C122	ECKD1H223ZF	Ceramic,		22µF.	50V.	± 80 %
C123	ECUX1H103MD	Chip.	0.	01μF.	50V.	±20%
C201	ECUX1H030DC	Chip.		3pF,	50V.	
C202	ECUX1H223ZF ECUX1H220KC	Chip.		22µF,	50V.	
C203 C204	ECUX1H223MD	Chip.		22pF, 22µF,	50V	±10% ±20%
C206	ECQS05561JZ	Styrol.		60pF,	50V.	± 5%
C207	ECUX1H010CC	Chip.		1pF,	50V,	±0.25p
C208 C209	ECUX1H100KC ECUX1H103MD	Chip.		10pF, 01μF,	50V.	
C210, 211	ECUX1H223ZF	Chip.		22µF.	50V.	± 80 %
C212	ECUX1H223ZF	Chip.		22µF.		± 80 %
C213	ECEA1HS100	Chin		10μF,	50V	4 80 Au
C214 C215	ECUX1H223ZF ECUX1H560KC	Chip, Chip,		22µF, 56pF,	50V.	
C216	ECEA25Z4R7	Electrolytic		1.7µF.	25V	12000
C217	ECUX1H330KC	Chip.		33pF,	50 V	110%
C218 C219, 220	ECUX1H223ZF ECUX1H103MD	Chip, Chip,		22μF, 01μF,	50V	±20%
C221	ECEA25Z4R7	Electrolytic		1.7µF	25V	100
C222	ECEA50ZR1	Electrolytic	. (),1µF,	50V	
C224 C301	ECEA50Z1 ECEA1HS100	Electrolytic Electrolytic		1μF. 10μF.	50V	
C302	ECQM1H473MZ	Polyester,		47μF.		±20%
0303	ECQ905152JZ	Styral,		00pF,	50V.	± 5%
C304 C305	ECEA50ZR22 ECEA1CS221	Electrolytic		22μF. 20μF.	50V 16V	
C306	ECEA50ZR47	Electrolytic		47µF.	50V	
C307	ECEA50Z1	Electrolytic		1 µF.	50V	12000
C308, 309	ECQM1H153KZ	Polyester .		15µF.	50V	±10%
C310, 311 C312, 313	ECQM1H272KZ ECKD1H471KB	Polyester Ceramic,		00pF. 70pF.	50V	±10% ±10%
C315, 316	ECQM1H222KZ	Polyester,	22	00pF.	50V.	±10%
C317, 318 C319, 320	ECEA50ZR33 ECEA50Z1	Electrolytic Electrolytic		33μF. 1μF.	50V 50V	
C401	ECEA1H\$100	Electrolytic		10µF.	50V	
C701	ECEA1CS221	Electrolytic	. 2	20μF,	16V	

Ref. No.		Part No.	Part	Name & Des	cription	
C704 C705 C706, 707 C708 C709 C710		ECEA1VS471 ECEA1HS470 ECKD2H103PE ECEA1JS100 ECEA1HS470 ECKDKC103PE	Electrolytic, Electrolytic, Ceramic, Electrolytic, Electrolytic, Ceramic,	470µF, 47µF, 0.01µF, 10µF, 47µF, 0.01µF,	50V 500V 63V	±100%
C711, 712 C713 C714, 715 C716 C717 C720 C901 C903 C904 C905	Δ	ECKD2H103PE ECKD2H103PE ECUX1H223ZF ECUX1H103MD ECUX1H101K ECKDKC103PF ECEA50Z1 ECEA50Z1 ECEA1CS330 ECEA50Z3R3	Ceramic, Ceramic, Chip, Chip, Chip, Ceramic, Electrolytic, Electrolytic, Electrolytic,	0.01µF 0.022µF 0.01µF 100pF 0.01µF 1µF 1µF 33µF	500V 50V, 50V, 50V, 50V 50V 16V	±20% ±20% ±10%
C906 C907		ECUX1H223ZF ECEA1ES101	Chip, Electrosytic,	0.022μF 100μF		±20 %
C908 C909		ECEA1HS100	Chip, Electrolytic,	330pF 10µF	50V, 50V	±10%
C910 C911 C913		ECUX1H102ZF ECUX1H103ZF ECUX1H103ZF	Chip, Chip, Chip,	0.001µF 0.01µF 0.01µF	50V.	±10 % ±10 % ±10 % ±10 % ±20 %
C914 C915		ECUX1H102ZF ECUX1H101K	Chip, Chip,	0.001µF 100pF		±10%
C916 C917		ECKD1H223ZF ECUX1H331KD	Ceramic, Chip,	0.022μF, 330σF.		±80 % ±10%

Ref. No.	Part No.	Part Name & Description			
C920	ECUX1H102ZF	Chip.	0.001µF	50V.	280 %
C921	ECUX1H102MD	Chip.	0.001µF	50V.	
C922	ECUX1H102ZF	Chip.	0.001µF,	50V.	± 80 %
C930	ECUX1H680KC	Chip.	68pF,	50V.	±10%
C931	ECUX1H470KC	Chip	47pF.	50V.	±10%
C932	ECUX1H6B1K	Chip.	680pF.	50V,	
C935	ECUX1H102ZF	Chip.	0.001µF.	50V	120 %
C936	ECEA50Z1	Electrolytic.	1 pF	50'V	
C937	ECGE1105KZ	Polyester,	1.µF.	50V	±10%
C938	ECKD1H223ZF	Ceramic,	0.022 µF_	501	±20%
C939	ECUX1H223ZF	Chip,	0.022µF,	50V	±30 %
C940	ECEA50ZR1	Electrolyt.	0.1µF	50V	
C941	ECEA50Z1	Electrolytic,	1 μF,	50V	
C942	ECUX1H331KD	Chip.	330pF,	50V	±10%
C943	ECUX 1H102MD	Chip.	0.001µF.	50V	±20%
C944	ECEA1HS100	Electrolytic.	10µF.	50V	
C946	ECUX1H223ZF	Chip.	0.022µF.	50V	±20 %
C947	ECUX1H101K	Chip.	100PF.	50V	±10%
C948	ECUX1H103MD	Chip.	0.01µF.	50V.	±20%
C949	ECUX1H102MD	Chip.	0.001µF.	50V	120%
C950	ECUX1H103MD	Chip.	0.01µF	50V	±20%
C951, 952	ECUX1H102MD	Chip.	0.001µF.	50V	:20%
C953	ECEA50Z1	Electrolytic,	1µF.	50V	
C954	ECCD1H331K	Ceramic,	330pF,	50V.	±10%
C955	ECFVD104MD	Semi-Conduct	or, 0.1µF,	25V.	±20%
C956	ECKD1H102MD	Ceramic,		50V.	±20%
C957	ECFVD103MD	Semi-Conduct	or, 0.01µF.	25V.	120%
C958	ECKD1H102MD	Ceramic.		50V.	±20%

■ CHANGE OF PARTS LIST

ST-CO3K (EG)

Note: This parts list included only the changes of the model ST-C03 parts list.

5-1-N-		Change	of Part No.			
Ref. No.		ST-C03 =	⇒ ST-C03K	Part Name & Description		
			CABINET			
1		RYMTC03N	RYMTC03KEG	Cabinet Assembly		
2		RYUTC03E	RYUTC03KEG1	Bottom Board Assembly		
2-1		SGX803	SGX803-1	Ring, Rear Side Feet		
3		RYNTC03N	RYNTC03KEG	Battery Cover Assembly		
8	Δ		RJA23Z	AC Cord		
18		SGP1430-2C	SGP1430-2D	Rear Panel		
19		SBC205-1	SBC205-2	Button, Selector		
20		RBC212Z	RBC212Z1	Button, Tuning		
21		RBC213Z	RBC213Z1	Button, Preset		
22		RBC220Z	RBC220Z1	Button, Power Source		
			SCREWS			
@		XTB3+8BFN	XTB3+8BFZ	Screw, Bottom Board M'tg		
226		P	ACKING PARTS	8		
			RPK919Z	Gift Box		

■ ACCESSORIES

