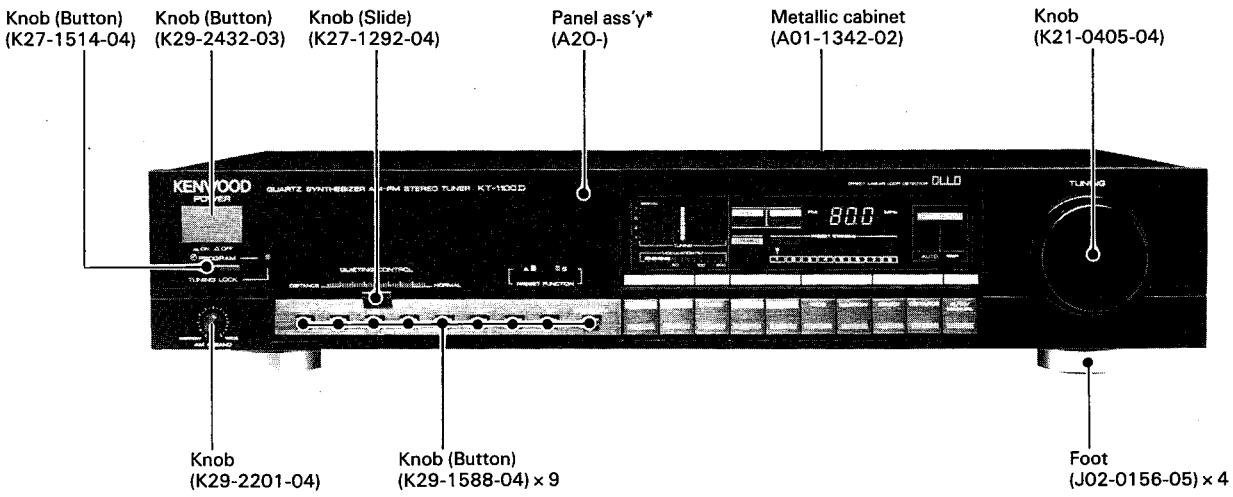
QUARTZ SYNTHESIZER AM-FM STEREO TUNER

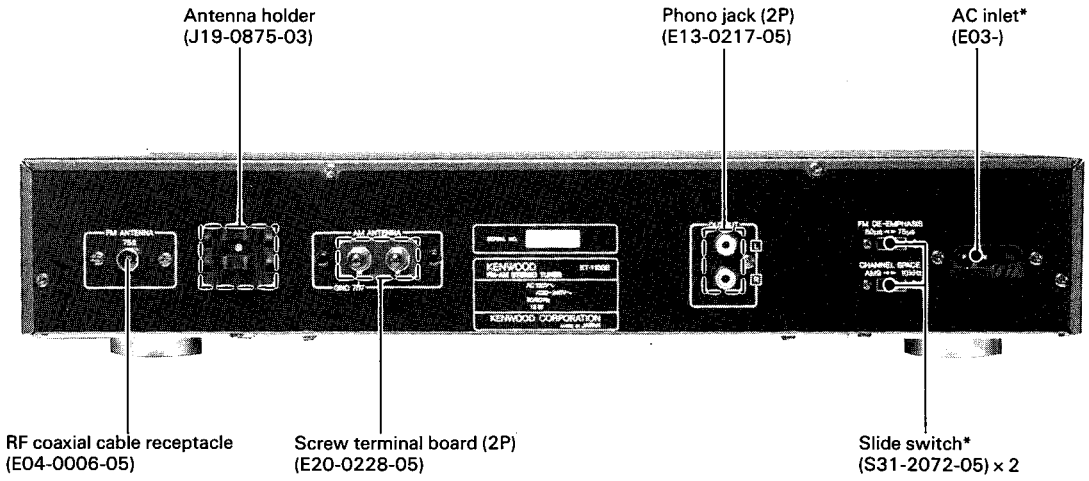
KT-1100D

SERVICE MANUAL

KENWOOD

KENWOOD CORPORATION





保存用

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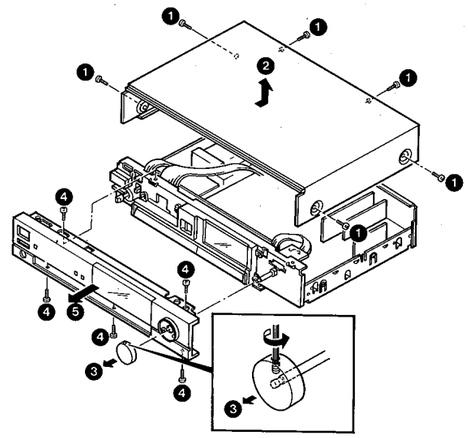
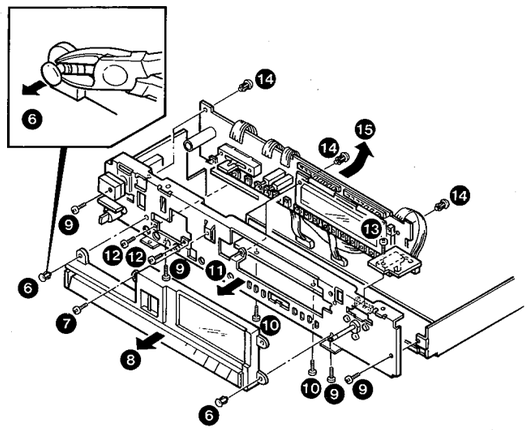
* Refer to Parts List on page 30.

DISASSEMBLY FOR REPAIR

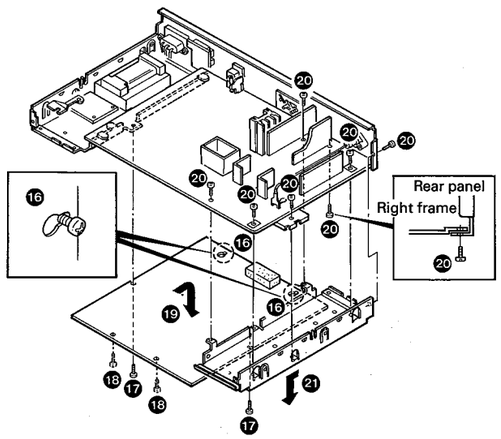
❶ Remove the 6 screws on the metallic cabinet.
❷ Remove the metallic cabinet in the direction of the arrow.
❸ Loosen halfway the set screw of slotted head on the knob, then remove the knob from the front panel.
❹ Remove the 5 screws on the front panel.
❺ Remove the front panel in the direction of the arrow.



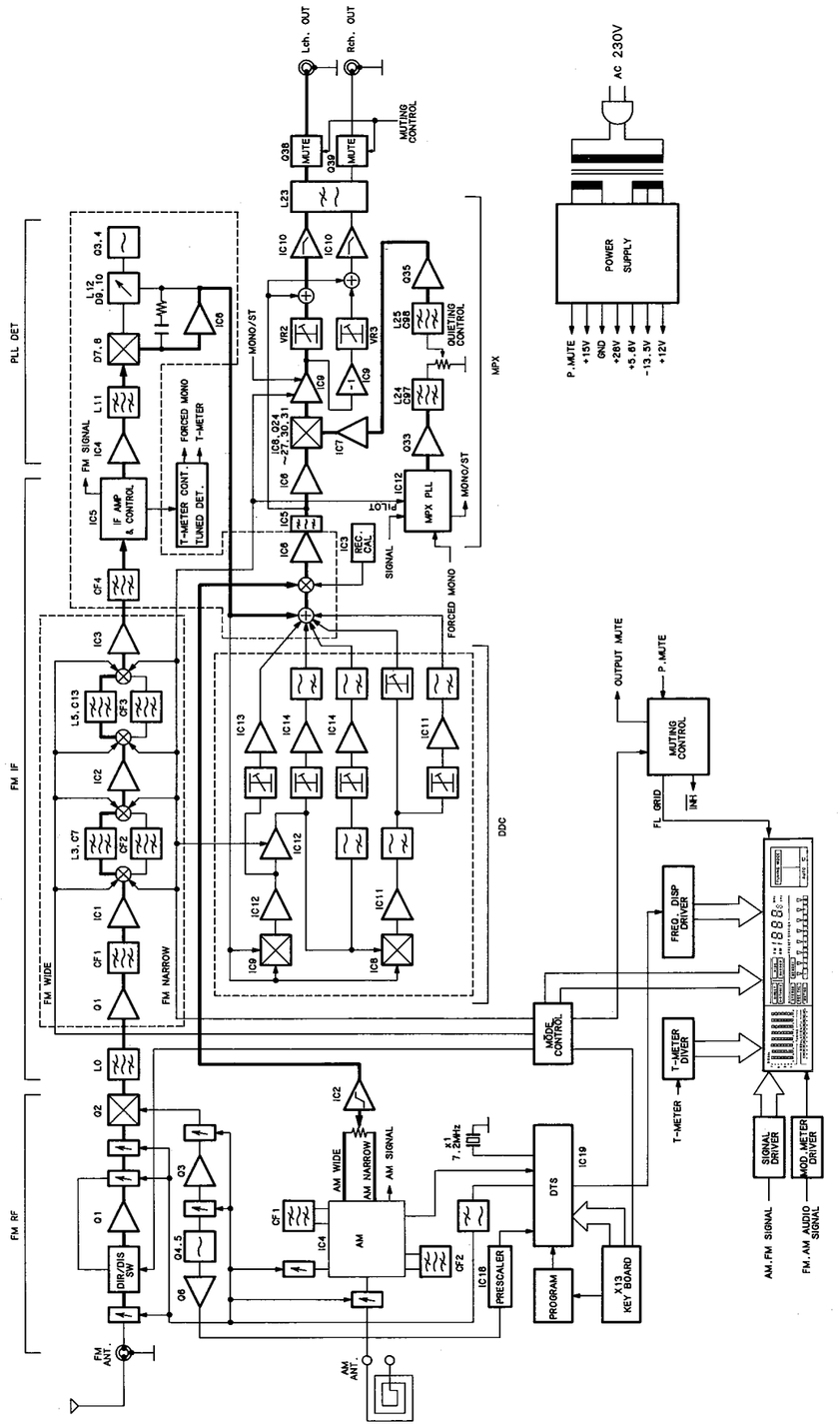
❻ Remove 2 push rivets retaining the escutcheon to the sub-panel.
❼ Remove the screw on the escutcheon.
❽ Remove the escutcheon in the direction of the arrow.
❾ Remove the 4 screws on the sub-panel (front side: 2, lower side: 2).
❿ Remove the 2 screws at the sub-panel on the bottom plate.
⓫ Pull out the sub-panel slightly toward the front.
⓬ Remove the 2 screws on the Quieting control unit.
⓭ Remove the screw on the Sub-unit (X13-5422-72) (D/5), then remove the Sub-unit (X13-) (D/5).
⓮ Remove 3 push rivets retaining the Sub-unit (X13-) (A/5) to the sub-panel.
⓯ Remove the Sub-unit (X13-) (A/5) in the direction of the arrow.



⓰ Loosen halfway the 2 screws at the rear side on the bottom plate.
⓱ Remove the 2 screws at the front side on the bottom plate.
⓲ When removing the bottom plate only, also remove the 2 screws on the front side.
⓳ Remove the bottom plate.
⓴ Remove the 7 screws retaining the right frame (4 on the tuner unit, 2 on the rear panel and 1 screw from the frame at the bottom of the board).
㉑ Pull out the right frame slightly toward the front and remove it.



BLOCK DIAGRAM



CIRCUIT DESCRIPTION

Function of components

Tuner unit (X05-3172-71)

Components	Use/Function	Operation/Condition/Interchangeability
Q1	FM RF amp	
Q2	Mixer	
Q3	Tuned buffer amp	Isolates the oscillater from the mixer.
Q4,5	FM oscillator	
Q6	Oscillator buffer amp	For pre-scaler.
Q8	FM RF select output	ON when in the Direct mode.
Q9	FM RF select	Turns Q10 ON and Q8 OFF when base is high.
Q10	FM RF select output	ON when in the Distance mode.
Q11	IF BAND select output	ON when in the WIDE mode.
Q12	IF BAND select	Turns Q11 ON when base is high.
Q13	IF BAND select output	ON when in NARROW mode.
Q14	IF BAND select	Turns Q13 ON when base is low.
Q15	FM-AM select output	ON when in FM mode.
Q16	FM-AM select	Turns Q15 ON when base is high.
Q17	FM-AM select output	ON when in the AM mode.
Q18	FM-AM select	Turns Q17 ON when base is high.
Q19	AUTO STOP signal control	Turns ON when the output from IC1 pin 1 is low to turn the STOP signal low.
Q20	AM signal switch	Turns ON when in the AM mode to transmit the audio signal.
Q21	REC CAL signal switch	Turns ON when in the REC CAL mode to transmit the REC CAL signal.
Q22	REC CAL signal control	Turns ON when in the REC CAL mode to cut the FM/AM signal (Q20: OFF).
Q23		Turns Q21 ON when in the REC CAL mode.
Q24	Current mirror constant current	Applies the load resistance to IC8.
Q25		Performs constant current operation together with Q24.
Q26		Applies the load resistance to IC8.
Q27		Performs constant current operation together with Q26.
Q28	Gain select switch	Turns ON when in the NARROW mode and controls the separation (NARROW).
Q29	Sub signal decode switch	OFF when in stereo, ON when in mono.
Q30, 31	Current mirror contact current	Applies the constant current load (to ground side).
Q32	Auto quieting control	Controls the sub decoding level automatically when ANT input is low.
Q33	38 kHz sine wave generator amp	Loads the tuning circuit (38 kHz) consisting of LC (coil and capacitor) to convert the square wave into the sine wave.
Q34	Stereo display switch	Receives the signal from IC12 to turn the STEREO indication ON/OFF.
Q35	38 kHz buffer amp	Transmits the 38 kHz signal from the tank circuit to the SUB decoder in low impedance.
Q36	Power ON muting	This switch is used to make the rising edge of IC2 (pin 1) output the muting signal.
Q37	Mute driver switch	Turns OFF when muting signal does not exist and make the base of the muting driver high impedance.
Q38, 39	Muting driver	Receives the muting signal and short-circuits the audio output.
Q40	Constant voltage power supply	+15V output. (Current buffer for IC13)
Q41	Error amp	Tracks to +15V power supply. (For −14V)
Q42	Constant voltage power supply	−14V output. (Power supply for control)
Q43	Constant voltage power supply & display switch	+18V output. (Power supply for display)
Q44	Error amp & display control	For +18V. (Tracking to −14V power supply)
Q45	Power OFF mute control	Turns ON at the same time when the power is turned OFF and controls the mute signal.
Q46	Constant voltage power supply	For +28V (VT).
Q47	Error amp	For +28V (VT).
Q48	Mute signal generator	Receives the control signal and generates the muting signal.
Q49	DIRECT/DISTANCE select control	Receives the signal from IC17 (pin 10) and turns DISTANCE ON. → Outputs 5 V.
Q50	WIDE/NARROW select control	Receives the signal from IC17 (pin 3) and outputs 5 V when in WIDE mode.
Q51	PLL loop filter	Output amp.
Q52	Differential amp	Output side.
Q53		Receives the error signal from the controller.
Q54	5V switch for display	Power supply for CH A/CH B display LED. (Synchronized with the FL display)

Components	Use/Function	Operation/Condition/Interchangeability
Q55	Program control	
Q56	Program signal output	Transmits the signal to the M81 controller.
Q57, 58	P-CH A/B select	Sends the latch output to the controller to change the channel between A and B.
Q59		Sends the latch output to display LED. (CH A LED driver)
Q60		Sends the latch output to display LED. (CH B LED driver)
Q61	AUTO/MANUAL select	Sends the latch output to the controller and LED. (AUTO)
Q62		Sends the latch output to the controller and LED. (MANUAL)
Q63	REC CAL ON/OFF select	Sends the latch output to LED and control circuit when REC CAL is ON.
IC1 (1/2)	Stop signal control	Receives the FM range mute signal for controlling.
IC1 (2/2)	Stop signal generator	Receives the signal meter voltage and generates the auto stop signal (+15V).
IC2 (1/2)	Power ON mute signal generator	Generates the mute signal synchronizing with the rising DC voltage of IC10.
IC2 (2/2)	AM pre-emphasis amp	Calibrates the AM signal frequency.
IC3	REC CAL signal generator	400 Hz.
IC4	AM	RF amp, IF amp, DET, AGC, S meter.
IC5	Notch filter	114 kHz.
IC6	Main signal buffer	
IC7	Sub carrier buffer	38 kHz.
IC8	Sub signal decoder	Linear multiplier.
IC9		Current/voltage conversion.
IC10	Stereo decode & de-emphasis	Addition of main signal and sub signal.
IC12	38 kHz generator (square wave)	Auto quieting control, beacon control.
IC13	Constant voltage power supply	+15V.
IC14	3-pin regulator	5V.
IC15	Power mute signal generator	
IC16	Select mute signal generator	
IC17 (1/4, 2/4)	WIDE/NARROW select latch	
IC17 (3/4, 4/4)	DIRECT/DISTANCE select latch	
IC18	Pre-scaler	FM oscillator dividing.
IC19	Controller	Including PLL.
IC20, 21	Latch for program	D-type flip-flop.
IC22 (1/2)	Latch for REC CAL	D-type flip-flop.
IC22 (2/2)	Latch for AUTO/MANUAL	D-type flip-flop.

IF/DET daughter unit (X86-1022-72)

Components	Use/Function	Operation/Condition/Interchangeability
Q1	IF amp	
Q3, 4	PLL DET VCO	10.7 MHz.
Q5	FM signal switch	Switches from REC CAL or AM, etc.
Q6	Gain control	Turns ON to raise the gain when in the NARROW mode.
Q7	DCC ON/OFF switch	Receives the auto stop signal and compensates the distortion.
IC1 – 4	IF amp	
IC5	IF system	IF amp, range mute signal generation, S meter, quadrature detection.
IC6 (1/2)	PLL detector DC amp	
IC6 (2/2)	FM/AM signal amp	
IC8	3rd distortion generation	Linear multiplier.
IC9	2nd distortion generation	Linear multiplier.
IC11 (1/2)	3rd distortion current-voltage conversion	
IC11 (2/2)	Distortion phase compensation amp	3rd distortion in stereo mode.
IC12 (1/2)	2nd distortion current-voltage conversion	
IC12 (2/2)	Distortion phase compensation amp	Increase the distortion in NARROW mode.
IC13 (1/2)	Reference voltage generation	VCC/2 = 7.5V.
IC13 (2/2)	DET distortion compensation amp	Compensates the distortion in PLL detector.
IC14 (1/2)	MONO distortion compensation amp	For 2nd distortion compensation.
IC14 (2/2)	STEREO distortion compensation amp	For 3rd distortion compensation.

Tuner display unit (X13-5422-72)

Components	Use/Function	Operation/Condition/Interchangeability
Q1	Display control for AM mode	Turns ON when in the AM mode and controls WIDE, NARROW, DIRECT and DISTANCE indicators OFF.
Q6	DISTANCE display control	When turned ON, controls the DISTANCE indicator's OFF.
Q7	WIDE display control	When turned ON, controls the WIDE indicator's OFF.
IC1	S-meter driver	Controls the vertical axis of S (signal strength) meter.
IC2	T-meter driver	Controls the horizontal axis of T-S (tuning-signal strength) meter.
IC3	DIV meter driver	
IC4, 5	FL driver	Converts the low-voltage circuit (0 – 5V) to FL drive voltage (0 – 18V).
IC6	Frequency display driver	Status driver for frequency display.
IC7	UP/DOWN controller	Dividing the pulses to UP and DOWN sides depending on the tuning direction.
IC8	Dividing, mono-stable	Divides the tuning pulse and maintains for fixed period.
IC9 1/2 (1– 3)	AUTO control	
IC9 2/2 (5 – 7)	Level shift	Shifts the center voltage of the tuning meter.
IC10	DIV meter control	Controls the hold and reset operation of DIV meter.

Muting Circuit on Switching

Each key switch receives 5V in "push" status and is latched in IC17. (REC CAL circuit uses the exclusive flip-flop.) In the steady state, the cathode of D54 is pulled up at 5V by R216 (470 kohms). However, at the moment when each of DIS/DIR, WID/NAR keys is operated, the voltage is inverted to L by any of D55 – D58. At this moment, IC16 ⑫ goes high and its voltage is charged in C145 so that IC16 ⑩ generates the muting signal. In the REC CAL mode, since IC16 ① is fixed at high level forcibly by D54, muting signal is not generated even when the DIS/DIR switch or WID/NAR switch is changed over. At this time, the muting signal from DTS will not be accepted (due to D51).

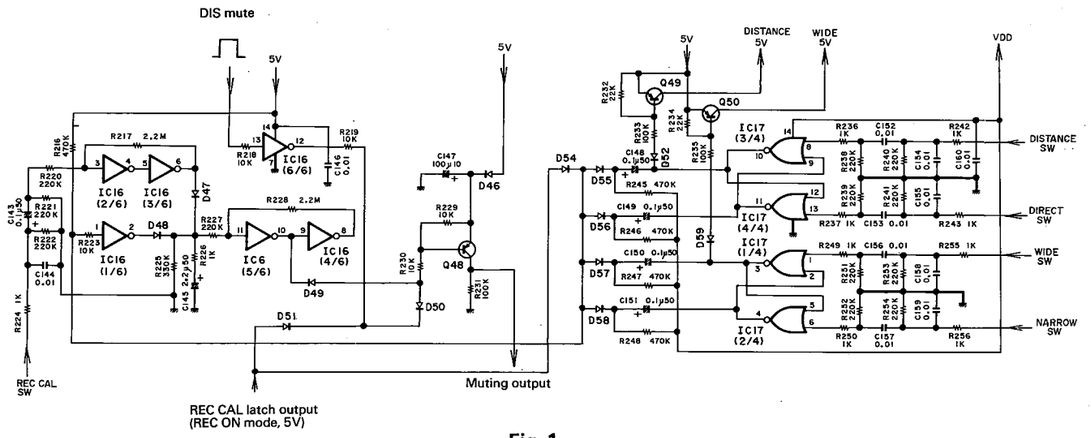


Fig. 1

POWER ON/OFF Muting

In this unit, the power muting circuit is designed as a 2-stage construction. First after the power is turned ON, INH, display and audio muting signal are generated by IC15 sequentially. And the audio muting voltage is obtained by using the output voltage of op amp (IC2).

Therefore, even if the mute output (⑥) of IC15 goes high (5V), the audio muting is activated when the output ① of IC2 is more than 3V (since Q36 turns ON). Timing chart diagrams are shown below.

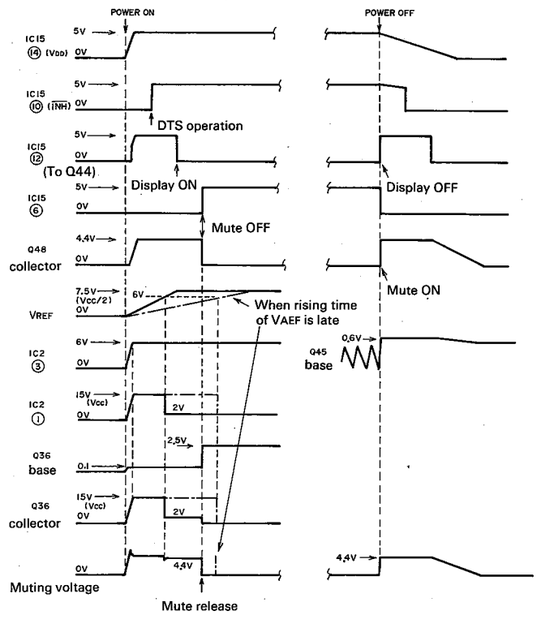


Fig. 2

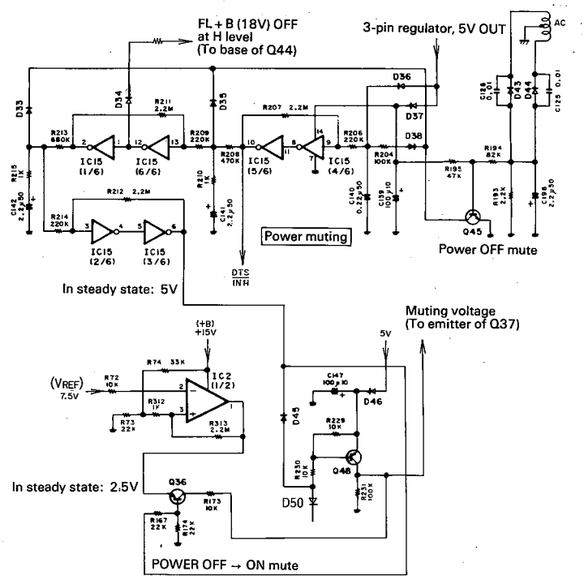


Fig. 3

Auto-Stop Signal Generator Circuit

In FM mode: When no signal input (at no station) (Detune):
Since the range mute signal (LA1231N daughter) is 5V, IC1 ① is –15V. For this, Q19 turns ON and IC1 ⑥ becomes 6.5V. At this time, as the S-meter voltage is less than 1V, IC1 ⑦ (auto-stop signal output) becomes –15V.

: When a weak signal is input (receiving broadcast) (weak signal area: less then approx. 10 dBμV):
The range mute signal becomes 1V or less and IC1 ① becomes +15V. For this, Q19 turns OFF. However, since the S-meter voltage is low, IC1 ⑦ is –15V.

: When the broadcast station is received (more than 10 – 14 dBμV):
Since the range mute signal is 0V, Q19 turns OFF and IC1 ⑥ becomes 1V. And since the S-meter voltage is high (IC1 ⑤ > 1V), IC1 ⑦ becomes +15V.

In AM mode: Since AM + B signal is applied to IC1 ③, IC1 ① is +15V regardless of the range mute signal state (H or L). Therefore Q19 turns OFF and IC1 ⑥ becomes 1V. For this, when the AM S-meter voltage is raised and IC1 ⑤ > 1V, stop signal is generated.

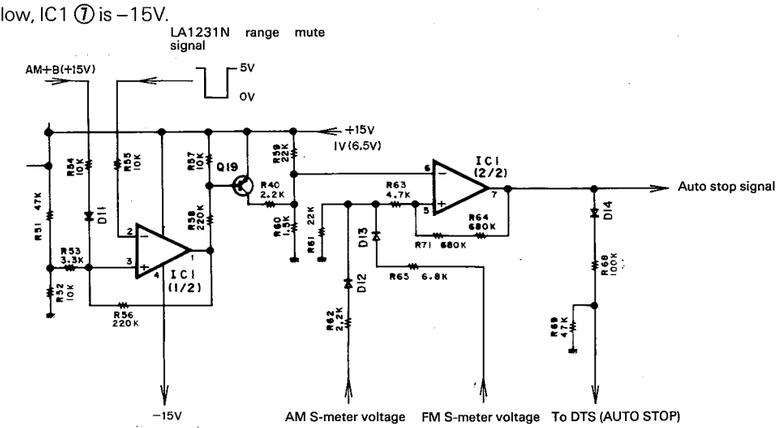


Fig. 4

MPX SUB Decoder (IC8: MC1495L)

The Direct Pure MPX enables stereo decoding without causing beat interference, in theory, by linear-multiplying two analog signals (stereo composite signal and 38 kHz sine wave sub carrier signal).
This unit provides the linear multiplier with high S/N ratio, which is designed with the new theory, so that the high signal-to-noise ratio of 94 dB for the MPX unit itself and the resistance to overmodulation of 400% (dynamic range: 106 dB) are realized while the conventional characteristics are maintained.

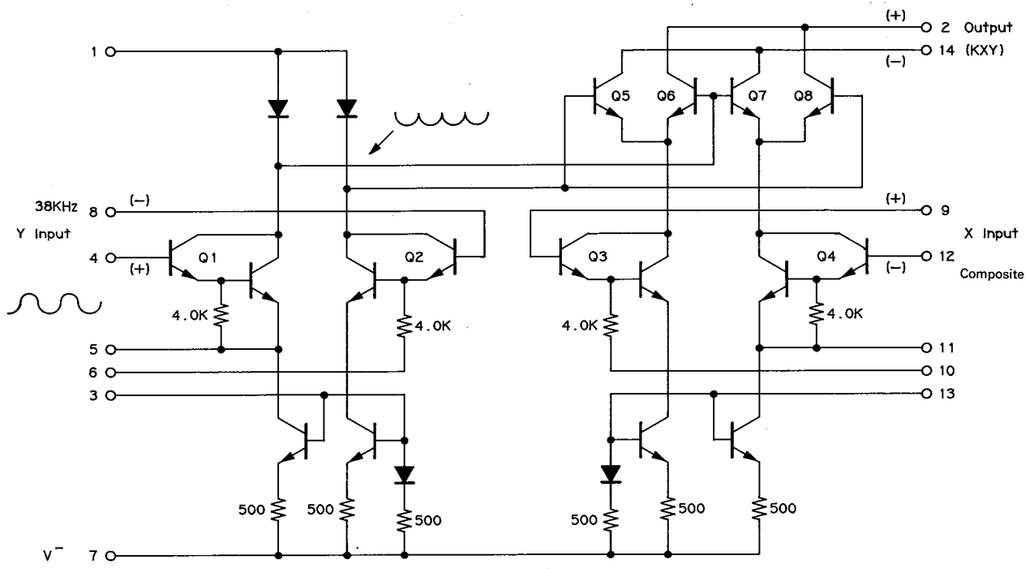


Fig. 5 MC1495L Internal equivalent circuit

Non-Stable Multi-Vibrator for Peak Hold and Reset

Since the BA668A deviation meter drive IC provides the peak-hold function as well as the reset pin, when random pulses are applied, a simple peak hold meter will be constructed. For this purpose, this circuit is used as the multivibrator consisting of two NOR gates (C-MOS) and oscillates by the mechanism as follows:

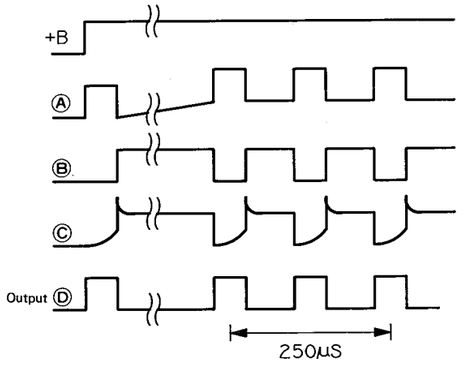


Fig. 6

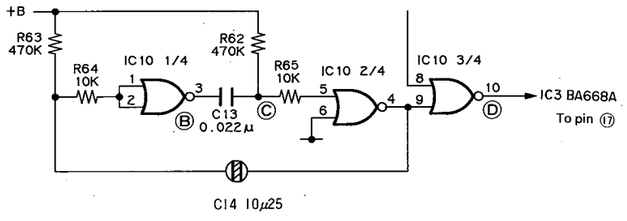


Fig. 7 IC10: μPD4001BC

While two inputs of the first NOR gate are short-circuited, one end of the second NOR gate is grounded. This is because the threshold values of two gates are set differently to prevent the circuit from entering non-oscillation/stable state at the power ON/OFF timing.

Digital Rotary Tuning

The basic configuration is that the transparent slits (30 slits) on the rotating disk attached to the tuning knob pass through PH1 as shown, whereby the rotary direction is identified, until the required reception frequency is obtained.
PH1 is a photo-interrupter incorporating LED (light-emitting diode), phototransistor and logic circuits.
The phototransistors are arranged in a pair.

1. The signal which identifies the rotary direction is output from pin 4.
   Clockwise rotation (tuning to high frequency band): high level
   Counterclockwise rotation (tuning to low frequency band): low level
2. The tuning speed is determined by the number of pulses to be output from pin 5 which are proportional to the number of slits.
   So that by using these two signals (a and b) the UP and DOWN pulses are obtained, logic circuits IC7 and IC8 are added.
   IC7 distributes pulses for UP or DOWN directions.
   IC8 prevents malfunction and serves as a frequency divider and monostable multivibrator.

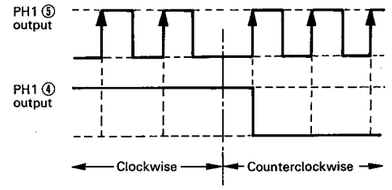


Fig. 9 Operation timing chart of PH1

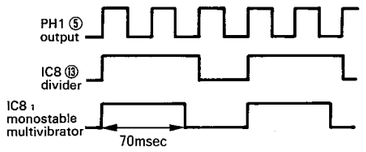


Fig. 10

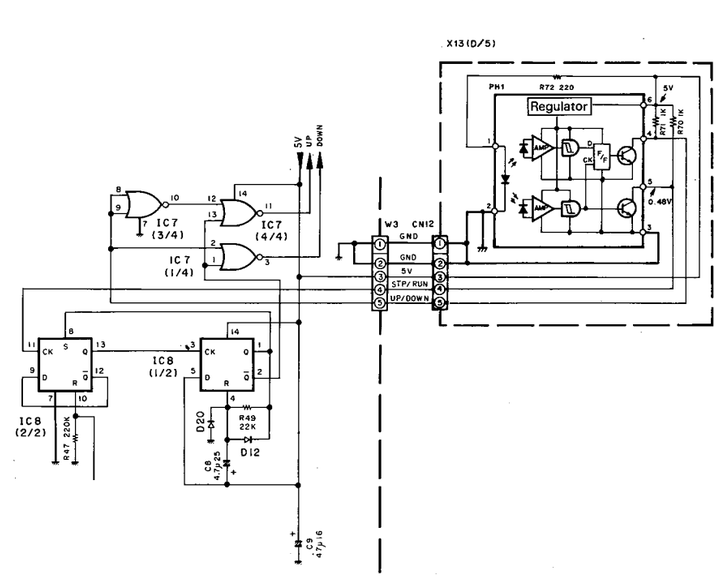


Fig. 8 Digital rotary timing circuit

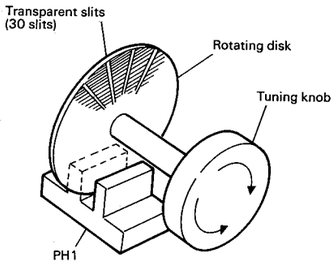


Fig. 11

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION	Unless otherwise specified, the individual switches should be set as following: SELECTOR:FM IF BAND:WIDE RF SELECTOR:DISTANCE TUNING MODE:AUTO REC CAL:OFF PROGRAM:OFF QUIETING CONTROL:NORMAL						
1	IFT	Connect a genescope to the junction of C19 and L8.	Connect a genescope to pin 4 of CN3 of DT2.	IF BAND: NARROW	L10 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	(a)
2	BAND EDGE (1)	–	Connect a DC voltmeter between TP6 and TP7.	TUNING MODE: MANU 87.5MHz	L14 (X05-)	3.0V±0.1V	(b)
3	BAND EDGE (2)	–	Connect a DC voltmeter between TP6 and TP7.	TUNING MODE: MANU 108.0MHz	TC1 (X05-)	25.0V±0.1V	(b)
Repeat alignments 2 and 3 several times.							
4	DISCRIMINATOR	(A) 98.0MHz 0 dev 100dBμ(ANT input)	Connect a DC voltmeter between TP10 and TP11.	98.0MHz	L9 (X86-)	0.000V±10mV	(c)
5	PLL DETECTOR	(A) 98.0MHz 0 dev 100dBμ(ANT input)	Connect a DC voltmeter between TP12 and TP13.	98.0MHz	L12 (X86-)	0.000V±10mV	(d)
6	RF ALIGNMENT	(A) 98.0MHz 1kHz,±75kHz dev	(B)	98.0MHz	L1.4.7.18 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	
7	AUTO-STOP SENSITIVITY	(A) 98.0MHz 1kHz,±75kHz dev 12dBμ(ANT input)	(B)	98.0MHz	VR1 (X86-)	Turn clockwise until the Modulation indicator lights.	
8	MPX VCO	(C) 98.0MHz 0 dev 80dBμ(ANT input)	Connect a frequency counter between TP14 and GND.	98.0MHz	VR4 (X05-)	19.000kHz±15Hz	(e)
9	SUB CARRIER (38kHz)	(C) 98.0MHz Selector: SUB 100Hz,±68.25kHz dev Pilot:±6.75kHz dev 80dBμ(ANT input)	(B)	98.0MHz	L25 (X05-)	Minimum distortion.	
10	DISTORTION (1) DET	(C) 98.0MHz Selector: MONO 1kHz,±75kHz dev 80dBμ(ANT input)	(B)	98.0MHz	VR3 (X86-)	Minimum distortion.	
11	DISTORTION (2) MONO	(C) 98.0MHz Selecter: MONO 1kHz,±75kHz dev 80dBμ(ANT input)	(B)	98.0MHz	VR4 (X86-)	Minimum distortion.	
12	DISTORTION (3) MONO	(C) 98.0MHz Selecter: MONO 1kHz,±75kHz dev 80dBμ(ANT input)	(B)	98.0MHz	VR6 (X86-)	Minimum distortion.	
13	DISTORTION (4) STEREO	(C) 98.0MHz Selecter: L 1kHz,±68.25kHz dev Pilot:±6.75kHz dev 80dBμ(ANT input)	(B)	98.0MHz	VR5 (X86-)	Minimum distortion.	
14	DISTORTION (5) STEREO	(C) 98.0MHz Selecter: SUB 1kHz,±68.25kHz dev Pilot:±6.75kHz dev 80dBμ(ANT input)	(B)	98.0MHz	VR7 (X86-)	Minimum distortion.	

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No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
15	DISTORTION (6) STEREO NARROW (E,T type)	(C) 98.0MHz Selector: L 1kHz,±40.0kHz dev Pilot: ±6.00kHz dev 80dBμ(ANT input)	(B)	98.0MHz IF BAND: NARROW	VR2 (X86-)	Minimum distortion.	
15	DISTORTION (6) STEREO NARROW (U,UE,M type)	(C) 98.0MHz Selector: SUB 1kHz,±68.25kHz dev Pilot: ±6.75kHz dev 80dBμ(ANT input)	(B)	98.0MHz IF BAND: NARROW	VR2 (X86-)	Minimum distortion.	
Repeat alignments 11～15 several times.							
16	SEPARATION (1) R→L	(C) 98.0MHz Selector: R 1kHz,±68.25kHz dev Pilot: ±6.75kHz dev 80dBμ(ANT input)	(B)	98.0MHz	VR2 (X05-)	Minimum crosstalk.	
17	SEPARATION (2) L→R	(C) 98.0MHz Selector: L 1kHz,±68.25kHz dev Pilot: ±6.75kHz dev 80dBμ(ANT input)	(B)	98.0MHz	VR3 (X05-)	Minimum crosstalk.	
18	SEPARATION (3) NARROW L→R	(C) 98.0MHz Selector: L 1kHz,±68.25kHz dev Pilot: ±6.75kHz dev 80dBμ(ANT input)	(B)	98.0MHz IF BAND: NARROW	VR1 (X05-)	Minimum crosstalk.	
19	T-S METER	(C) 98.0MHz Selector: MONO 10Hz,±100kHz dev 80dBμ(ANT input)	–	98.0MHz	VR2 (X13-) *	Operate so that the red colors at the extremeties of the center light uniformly.	
20	DEVIATION	–	–	REC CAL:ON	VR4 (X13-)	Position where the 4th dot lights.	(f)
21	SIGNAL METER	(C) 98.0MHz Selector: MONO 1kHz,±75kHz dev 40dBμ(ANT input)	–	98.0MHz	VR3 (X13-)	Lighting of the 7th dot.	(g)
*If red color does not light, increase the modulation or decrease the modulated frequency of the signal generator.							
AM SECTION	Keep the AM loop antenna installed. SELECTOR:AM IF BAND:NARROW TUNING MODE:AUTO REC CAL:OFF						
[1]	BAND EDGE (1)	–	Connect a DC voltmeter between TP6 and TP7.	531kHz	L20 (X05-)	1.5±0.1V	(b)
[2]	BAND EDGE (2)	–	Connect a DC voltmeter between TP6 and TP7.	1602kHz	TC2 (X05-)	8.0±0.1V	(b)
Repeat alignments [1] and [2] several times.							
[3]	RF ALIGNMENT (1)	(D) 630kHz 400Hz,30% mod	(B)	630kHz	L21 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	
[4]	RF ALIGNMENT (2)	(D) 1440kHz 400Hz,30% mod	(B)	1440kHz	TC3 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments [3] and [4] several times.							
[5]	IFT	Apply IF(450kHz) from the genescope to pin 6 of IC4.	Connect the genescope to pin 13 of IC4 or to the junction of R98 and C61.	–	L22 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	(a)

REGLAGE

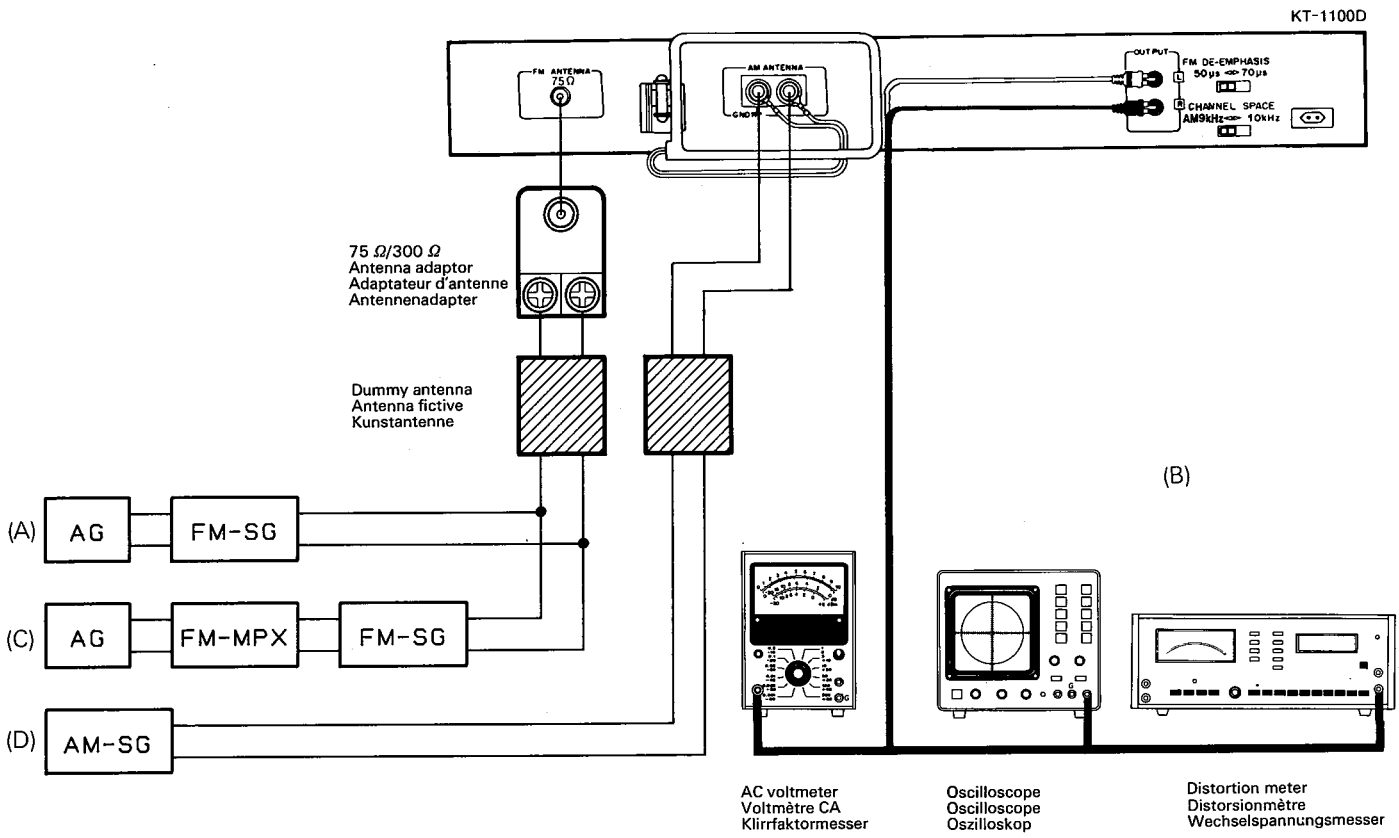
N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU TUNER	POINT DE L'ALIGNEMENT	ALIGNER POUR	FIG
SECTION MF Sauf en cas d'indications spéciales, régler chaque commutateur comme suit: SELECTOR:FM IF BAND:WIDE RF SELECTOR:DISTANCE TUNING MODE:AUTO REC CAL:OFF PROGRAM:OFF QUIETING CONTOL:NORMAL							
1	TRANSFORMATEUR FI	Raccorder le généscope à la jonction de C19 et L8.	Raccorder le généscope à la broche 4 de CN3 de DT2.	IF BAND: NARROW	L10 (X05-)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	(a)
2	BORD DE BANDE (1)	–	Connecter un voltmètre CC entre les TP6 et 7.	TUNING MODE: MANU 87.5MHz	L14 (X05-)	3.0V±0.1V	(b)
3	BORD DE BANDE (2)	–	Connecter un voltmètre CC entre les TP6 et 7.	TUNING MODE: MANU 108.0MHz	TC1 (X05-)	25.0V±0.1V	(b)
Répéter les points 2 et 3 plusieurs fois.							
4	DISCRIMINATEUR	(A) 98.0MHz 0dév 100dBμ (Entrée ANT)	Connecter un voltmètre CC entre les TP10 et 11.	98.0MHz	L9 (X86-)	0.000V±10mV	(c)
5	DETECTEUR PLL	(A) 98.0MHz 0dév 100dBμ (Entrée ANT)	Connecter un voltmètre CC entre les TP12 et 13.	98.0MHz	L12 (X86-)	0.000V±10mV	(d)
6	ALIGNEMENT HT	(A) 98.0MHz 1kHz.±75kHz dév	(B)	98.0MHz	L1.4.7.18 (X05-)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
7	SENSIBILITE ARRET AUTOMATIQUE	(A) 98.0MHz 1kHz.±75kHz dév 12dBμ (Entrée ANT)	(B)	98.0MHz	VR1 (X86-)	Tourner dans le sens des aiguilles d'une montre jusqu'à ce que l'indicateur de modulation s'allume.	
8	MPX VCO	(C) 98.0MHz 0dév 80dBμ (Entrée ANT)	Connecter un compteur de fréquence entre les TP14 et GND.	98.0MHz	VR4 (X05-)	19.000kHz±15Hz	(e)
9	SOUS-PORTEUSE (38kHz)	(C) 98.0MHz Sélection:SUB 100Hz.±68.25kHz dév Pilote:±6.75kHz dév 80dBμ (Entrée ANT)	(B)	98.0MHz	L25 (X05-)	Distorsion minimale.	
10	DISTORSION (1) DET	(C) 98.0MHz Sélection:MONO 1kHz.±75kHz dév 80dBμ (Entrée ANT)	(B)	98.0MHz	VR3 (X86-)	Distorsion minimale.	
11	DISTORSION (2) MONO	(C) 98.0MHz Sélection:MONO 1kHz.±75kHz dév 80dBμ (Entrée ANT)	(B)	98.0MHz	VR4 (X86-)	Distorsion minimale.	
12	DISTORSION (3) MONO	(C) 98.0MHz Sélection:MONO 1kHz.±75kHz dév 80dBμ (Entrée ANT)	(B)	98.0MHz	VR6 (X86-)	Distorsion minimale.	
13	DISTORSION (4) STEREO	(C) 98.0MHz Sélection:L 1kHz.±68.25kHz dév Pilote:±6.75kHz dév 80dBμ (Entrée ANT)	(B)	98.0MHz	VR5 (X86-)	Distorsion minimale.	
14	DISTORSION (5) STEREO	(C) 98.0MHz Sélection:SUB 1kHz.±68.25kHz dév Pilote:±6.75kHz dév 80dBμ (Entrée ANT)	(B)	98.0MHz	VR7 (X86-)	Distorsion minimale.	
15	DISTORSION (6) (E et T type)	(C) 98.0MHz Sélection:L 1kHz.±40.0kHz dév Pilote:±6.00kHz dév 80dBμ (Entrée ANT)	(B)	98.0MHz IF BAND: NARROW	VR2 (X86-)	Distorsion minimale.	
15	DISTORTION (6) (U,UE,M type)	(C) 98.0MHz Sélection:SUB 1kHz.±68.25kHz dév Pilote:±6.75kHzdév 80dBμ (Entrée ANT)	(B)	98.0MHz IF BAND: NARROW	VR2 (X86-)	Distorsion minimale.	
Répéter les points 11～15 plusieurs fois.							
16	SEPARATION (1) D→G	(C) 98.0MHz Sélection:R 1kHz.±68.25kHz dév Pilote:±6.75kHz dév 80dBμ (Entrée ANT)	(B)	98.0MHz	VR2 (X05-)	Diaphonie minimale.	
17	SEPARATION (2) G→D	(C) 98.0MHz Sélection:L 1kHz.±68.25kHz dév Pilote:±6.75kHz dév 80dBμ (Entrée ANT)	(B)	98.0MHz	VR3 (X05-)	Diaphonie minimale.	
18	SEPARATION (3) NARROW G→D	(C) 98.0MHz Sélection:L 1kHz.±68.25kHz dév Pilote:±6.75kHz dév 80dBμ (Entrée ANT)	(B)	98.0MHz IF BAND: NARROW	VR1 (X05-)	Diaphonie minimale.	
19	T-S METRE	(C) 98.0MHz Sélection:MONO 10Hz.±100kHz dév 80dBμ (Entrée ANT)	–	98.0MHz	VR2 (X13-) *	Faire fonctionner de manière à ce que la couleur rouge aux extrémités du centre s'allume uniformément.	
20	DEVIATION	–	–	REC CAL: ON	VR4 (X13-)	Position où le 4ème point s'allume.	(f)
21	COMPTEUR DE SIGNAL	(C) 98.0MHz Sélection:MONO 1kHz.75kHz dév 40dBμ (Entrée ANT)	–	98.0MHz	VR3 (X13-)	Illumination du 7ème point.	(g)
*Si la couleur rouge ne s'allume pas, augmenter la modulation ou diminuer la fréquence modulée du générateur de signal.							
SECTION MA Laisser l'antenne bouche MA installée. SELECTOR: AM IF BAND:NARROW TUNING MODE:AUTO REC CAL:OFF							
[1]	BORD DE BANDE (1)	–	Connecter un voltmètre CC entre les TP6 et 7.	531kHz	L20 (X05-)	1.5±0.1V	(b)
[2]	BORD DE BANDE (2)	–	Connecter un voltmètre CC entre les TP6 et 7.	1602kHz	TC2 (X05-)	8.0±0.1V	(b)
Répéter les points [1] et [2] plusieurs fois.							
[3]	ALIGNEMENT HT (1)	(D) 630kHz 400Hz.30% mod	(B)	630kHz	L21 (X05-)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
[4]	ALIGNEMENT HT (2)	(D) 1440kHz 400Hz.30% mod	(B)	1440kHz	TC3 (X05-)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
Répéter les points [3] et [4] plusieurs fois.							
[5]	TRANSFORMATEUR FI	Appliquer FI(450kHz) du généscope à la broche 6 de C14.	Raccorder le généscope à la broche 13 de C14 ou à la jonction de R98 et C61.	–	L22 (X05-)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	(a)

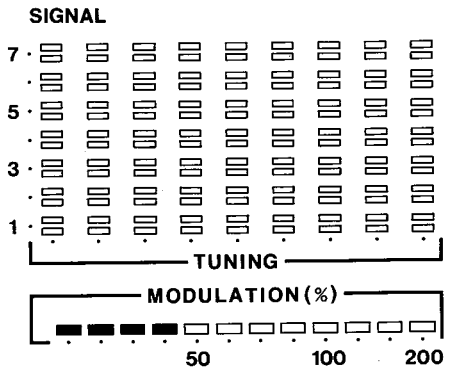
KT-1100D

ABGLEICH

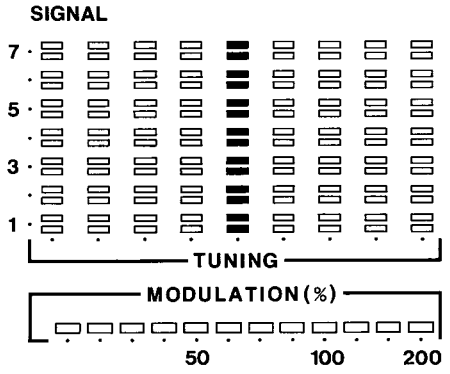
NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
UKW-EMPFANGSABTEILUNG Außer wenn anders angegeben, die verschiedenen Schalter wie folgt einstellen: SELECTOR:FM IF BAND:WIDE RF SELECTOR:DISTANCE TUNING MODE:AUTO REC CAL:OFF PROGRAM:OFF QUIETING CONTROL:NORMAL							
1	ZF-ÜBERTRAGR	Das Genskop an die Verbindung von C19 und L8 anschließen.	Das Genskop an Stift 4 von CN3 von DT2 anschließen.	IF BAND: NARROW	L10 (X05-)	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	(a)
2	BANDKANTE (1)	–	Einen Gleichspannungs-messer zwischen TP6 und TP7 anschließen.	TUNING MODE: MANU 87.5MHz	L14 (X05-)	3.0V±0.1V	(b)
3	BANDKANTE (2)	–	Einen Gleichspannungs-messer zwischen TP6 und TP7 anschließen.	TUNING MODE: MANU 108.0MHz	TC1 (X05-)	25.0V±0.1V	(b)
Abstimmungen 2 und 3 mehrere Male wiederholen.							
4	DISKRIMINATOR	(A) 98.0MHz 0 Hub 100dBμ (ANT-Eingang)	Einen Gleichspannungs-messer zwischen TP10 und TP11 anschließen.	98.0MHz	L9 (X86-)	0.000V±10mV	(c)
5	PLL-DETEKTOR	(A) 98.0MHz 0 Hub 100dBμ (ANT-Eingang)	Einen Gleichspannungs-messer zwischen TP12 und TP13 anschließen.	98.0MHz	L12 (X86-)	0.000V±10mV	(d)
6	HF-ABGLEICH	(A) 98.0MHz 1kHz.±75kHz Hub	(B)	98.0MHz	L1.4.7.18 (X05-)	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	
7	AUTOSTOP-EMPFINDLICHKEIT	(A) 98.0MHz 1kHz.±75kHz Hub 12dBμ (ANT-Eingang)	(B)	98.0MHz	VR1 (X86-)	In Uhrzeigerrichtung drehen, bis die Modulationsanzeige leuchtet.	
8	MPX VCO	(C) 98.0MHz 0 Hub 80dBμ (ANT-Eingang)	Einen Frequenzmesser zwischen TP14 und GND anschließen.	98.0MHz	VR4 (X05-)	19.000kHz±15Hz	(e)
9	HILFSTRÄGER (38kHz)	(C) 98.0MHz Wähler:SUB 100Hz.±68.25kHz Hub Pilotten: ±6.75kHz Hub 80dBμ (ANT-Eingang)	(B)	98.0MHz	L25 (X05-)	Minimal Klirrfaktor.	
10	KLIRRFAKTOR (1) DET	(C) 98.0MHz Wähler:MONO 1kHz.75kHz Hub 80dBμ (ANT-Eingang)	(B)	98.0MHz	VR3 (X86-)	Minimal Klirrfaktor.	
11	KLIRRFAKTOR (2) MONO	(C) 98.0MHz Wähler:MONO 1kHz.±75kHz Hub 80dBμ (ANT-Eingang)	(B)	98.0MHz	VR4 (X86-)	Minimal Klirrfaktor.	
12	KLIRRFAKTOR (3) MONO	(C) 98.0MHz Wähler:MONO 1kHz.±75kHz Hub 80dBμ (ANT-Eingang)	(B)	98.0MHz	VR6 (X86-)	Minimal Klirrfaktor.	
13	KLIRRFAKTOR (4) STEREO	(C) 98.0MHz Wähler:L 1kHz.±68.25kHz Hub Pilotten: ±6.75kHz Hub 80dBμ (ANT-Eingang)	(B)	98.0MHz	VR5 (X86-)	Minimal Klirrfaktor.	
14	KLIRRFAKTOR (5) STEREO	(C) 98.0MHz Wähler:SUB 1kHz.±68.25kHz Hub Pilotten: ±6.75kHz Hub 80dBμ (ANT-Eingang)	(B)	98.0MHz	VR7 (X86-)	Minimal Klirrfaktor.	

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
15	KLIRRFAKTOR (6) STEREO NARROW (E.T Typ)	(C) 98.0MHz Wähler:L 1kHz.±40kHz Hub Pilotten: ±6.00kHz Hub 80dBμ (ANT-Eingang)	(B)	98.0MHz IF BAND: NARROW	VR2 (X86-)	Minimal Klirrfaktor.	
15	KLIRRFAKTOR (6) STEREO NARROW (U.UE.M Typ)	(C) 98.0MHz Wähler:SUB 1kHz.±68.25kHz Hub Pilotten: ±6.75kHz Hub 80dBμ (ANT-Eingang)	(B)	98.0MHz IF BAND: NARROW	VR2 (X86-)	Minimal Klirrfaktor.	
Abstimmungen 11 und 15 mehrere Male wiederholen.							
16	STEREO KANAL TRENNUNG (1) R → L	(C) 98.0MHz Wähler:R 1kHz.±68.25kHz Hub Pilotten: ±6.75kHz Hub 80dBμ (ANT-Eingang)	(B)	98.0MHz	VR2 (X05-)	Minimales Übersprechen.	
17	STEREO KANAL TRENNUNG (2) L → R	(C) 98.0MHz Wähler:L 1kHz.±68.25kHz Hub Pilotten: ±6.75kHz Hub 80dBμ (ANT-Eingang)	(B)	98.0MHz	VR3 (X05-)	Minimales Übersprechen.	
18	STEREO KANAL TRENNUNG (3) NARROW L → R	(C) 98.0MHz Wähler:L 1kHz.±68.25kHz Hub Pilotten: ±6.75kHz Hub 80dBμ (ANT-Eingang)	(B)	98.0MHz IF BAND: NARROW	VR1 (X05-)	Minimales Übersprechen.	
19	T-S MESSER	(C) 98.0MHz Wähler:MONO 10Hz.±100kHz Hub 80dBμ (ANT-Eingang)	–	98.0MHz	VR2 (X13-) *	So bedienen, daß die roten Farben an den Seiten der Mitte gleichmäßig leuchten.	
20	HUBVERHÄLTNIS	–	–	REC CAL:ON	VR4 (X13-)	So positionieren, daß der 4. Punkt leuchtet.	(f)
21	SIGNALMESSER	(C) 98.0MHz Wähler:MONO 1kHz.±75kHz Hub 40dBμ (ANT-Eingang)	–	98.0MHz	VR3 (X13-)	Der 7. Punkt leuchtet.	(g)
*Wenn die rote Farbe nicht leuchtet, die Modulation erhöhen oder die modulierte Frequenz des Signalgenerators verringern.							
MW-EMPFANGSABTEILUNG Die MW-Rahmwnantenne angebracht lassen. SELECTOR:AM IF BAND:NARROW TUNING MODE:AUTO REC CAL:OFF							
[1]	BANDKANTE (1)	–	Einen Gleichspannungs-messer zwischen TP6 und TP7 anschließen.	531kHz	L20 (X05-)	1.5±0.1V	(b)
[2]	BANDKANTE (2)	–	Einen Gleichspannungs-messer zwischen TP6 und TP7 anschließen.	1602kHz	TC2 (X05-)	8.0±0.1V	(b)
Abstimmungen [1] und [2] mehrere Male wiederholen.							
[3]	HF-ABGLEICH (1)	(D) 630kHz 400Hz.30% mod	(B)	630kHz	L21 (X05-)	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	
[4]	HF-ABGLEICH (2)	(D) 1440kHz 400Hz.30% mod	(B)	1440kHz	TC3 (X05-)	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	
Abstimmungen [3] und [4] mehrere Male wiederholen.							
[5]	ZF-ÜBERTRAGER	ZF (450kHz) vom Genskop an Stift 6 von IC4 anlegen.	Das Genskop an Stift 13 von IC4 oder an die Verbindung von R98 und C61 anschließen.	–	L22 (X05-)	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	(a)


KT-1100D
FM ANTENNA 75Ω
AM ANTENNA
GND
OUTPUT
FM DE-EMPHASIS 50μs ⇔ 75μs
CHANNEL SPACE AM9kHz ⇔ 10kHz
75 Ω/300 Ω
Antenna adaptor
Adaptateur d'antenne
Antennenadapter
Dummy antenna
Antenna fictive
Kunstantenne
(A)
AG
FM-SG
(C)
AG
FM-MPX
FM-SG
(D)
AM-SG
(B)
AC voltmeter
Voltmètre CA
Klirrfaktormesser
Oscilloscope
Oscilloscope
Oszilloskop
Distortion meter
Distorsionmètre
Wechselspannungsmesser


SIGNAL
7
5
3
1
TUNING
MODULATION (%)
50
100
200

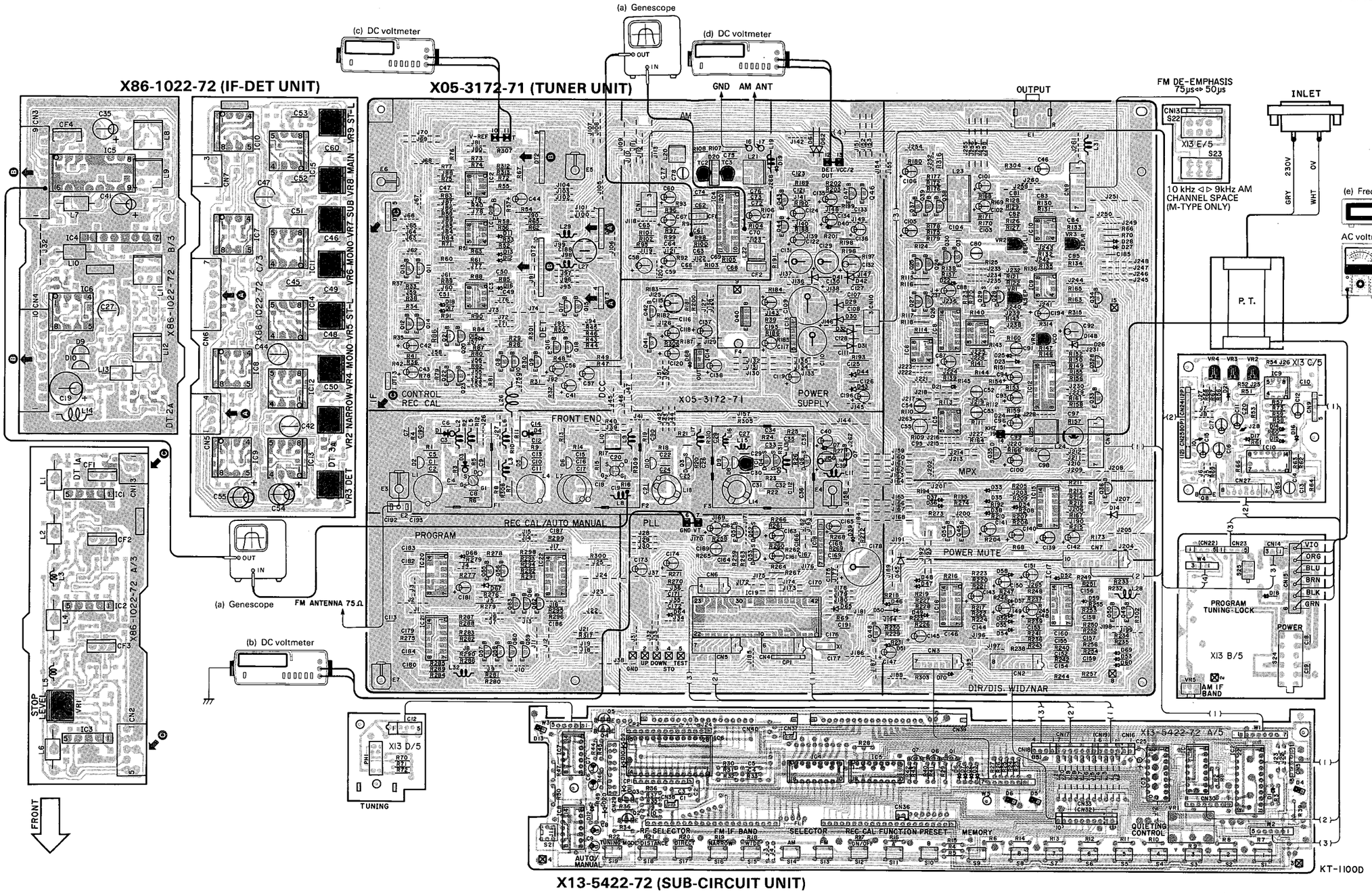
(f)


SIGNAL
7
5
3
1
TUNING
MODULATION (%)
50
100
200

(g)

PC BOARD

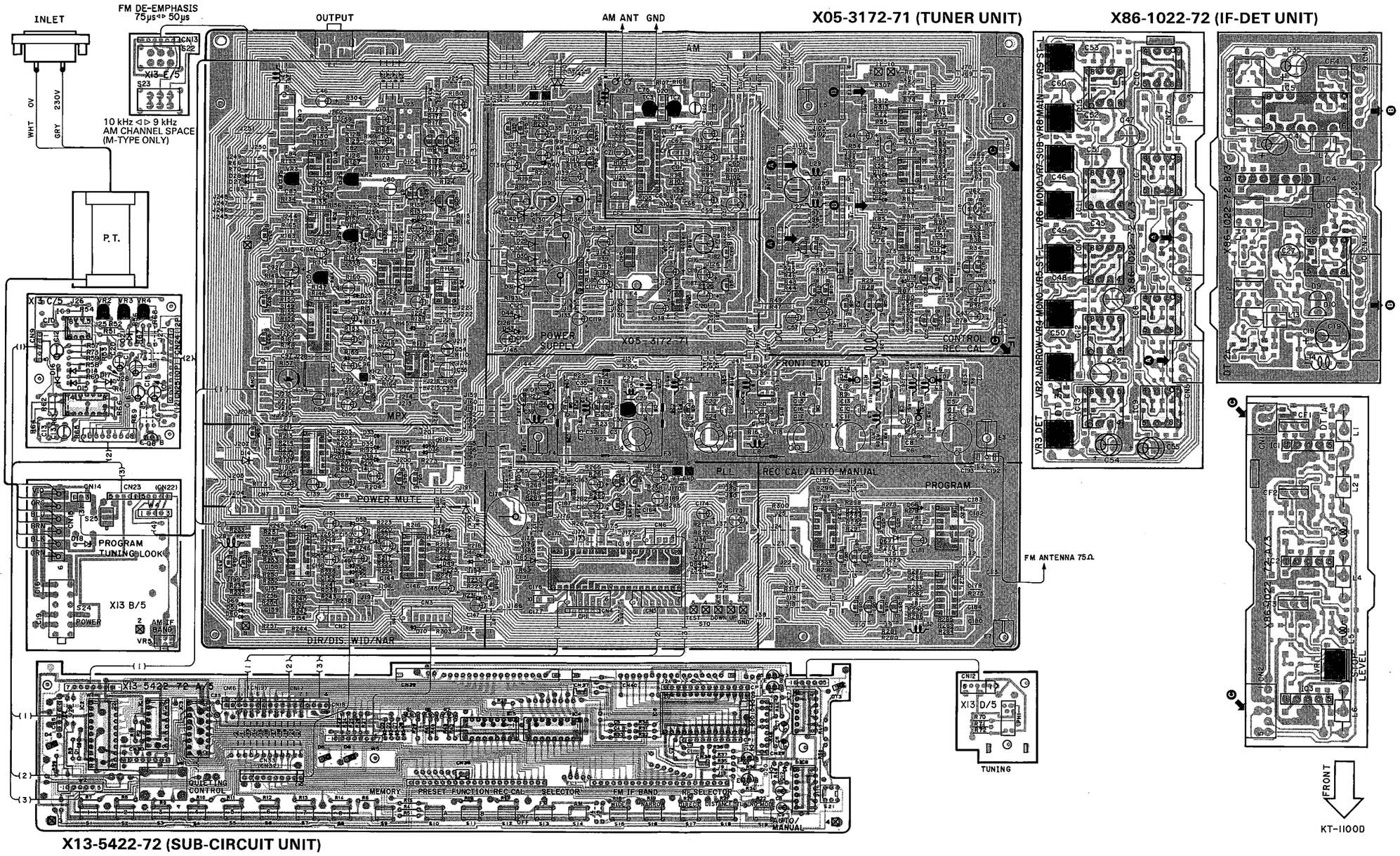
FOIL SIDE VIEW



Refer to the schematic diagram for the values of resistors and capacitors.

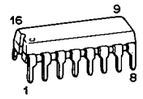
PC BOARD

COMPONENT SIDE VIEW

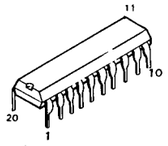


X13-5422-72 (SUB-CIRCUIT UNIT)

Refer to the schematic diagram for the values of resistors and capacitors.

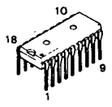


LA1231NS
LA3350S
LB1494

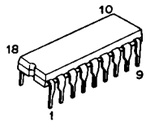


LA1245

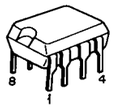
μPC1163H



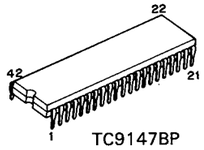
BA668A



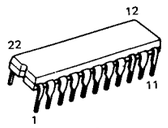
LB1290



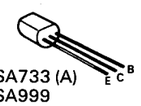
AN6562
M5218P



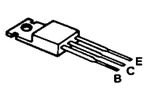
TC9147BP



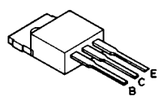
LB1473



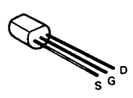
2SA733 (A)
2SA999
2SB764
2SC2003
2SC2320
2SC945 (A)
2SD1302
2SD863



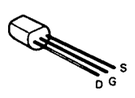
MC1495L



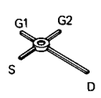
2SC2167



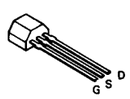
2SK246



2SK364

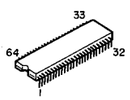


3SK122

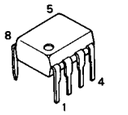


2SK161
2SK241

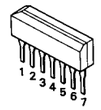
2SK211
2SK302



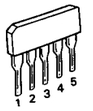
2SK425



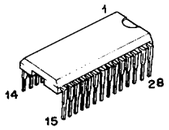
NJM4200D
NJM4560D (A)



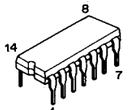
TD6104P



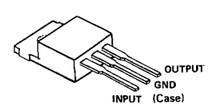
M5231TL



TD6301AP



μPD4001BC
μPD4013BC
μPD4069UBC



μPC78M05H

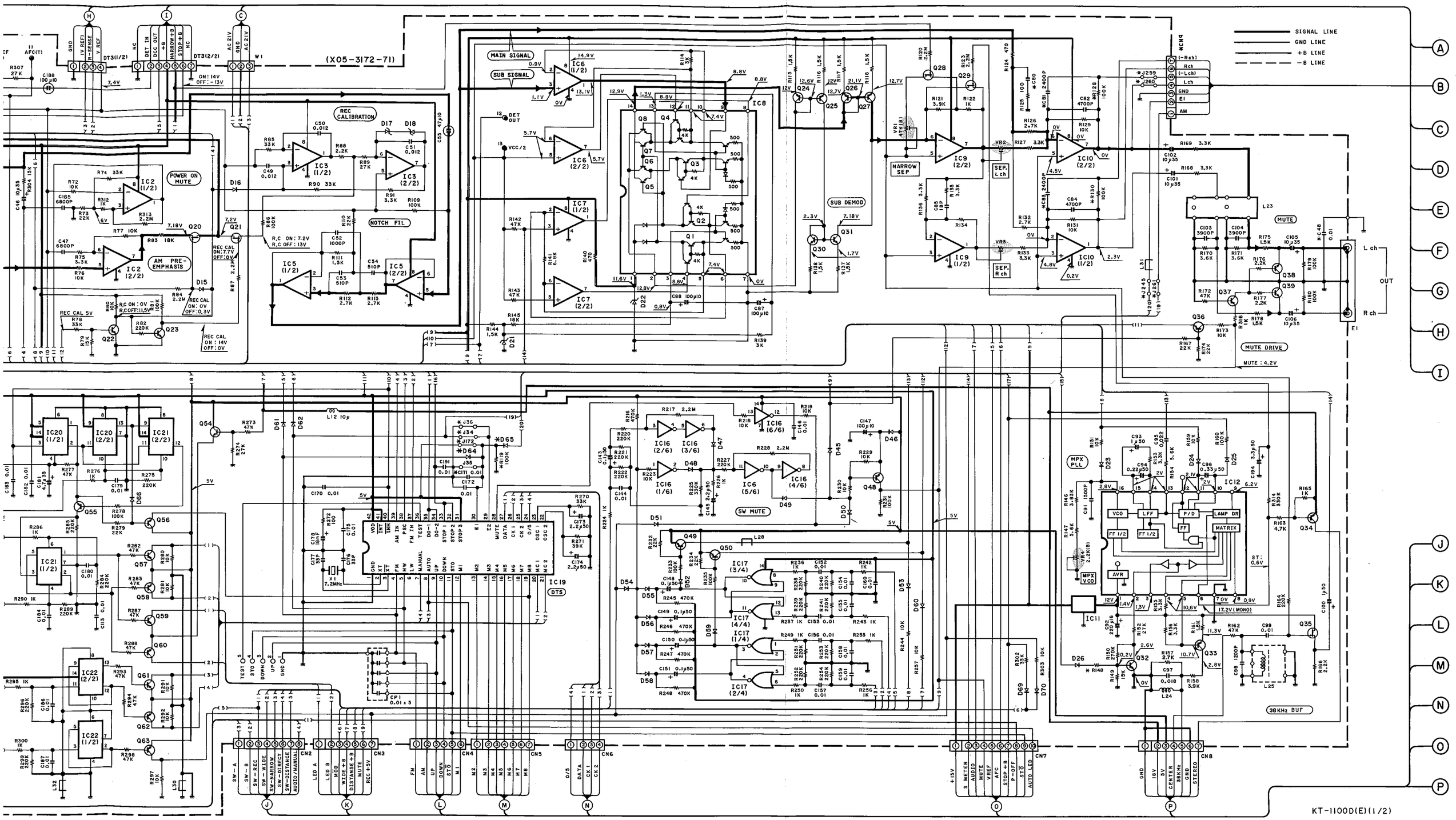
IC1~3,7	: M5218P
IC4	: LA1245
IC5,6,9,10	: NJM4560D-A
IC8	: MC1495L
IC11	: μPC78L12
IC12	: LA3350S
IC13	: M5231TL
IC14	: μPC78M05H
IC15,16	: μPD4069UBC
IC17	: μPD4001BC
IC18	: TD6104P
IC19	: TC9157AP
IC20~22	: μPD4013BC

Q1,2	: 3SK122(L)
Q3~5	: 2SK241(Y) or 2SK161(GR)
Q6	: 2SK161(GR)
Q8,9,12~14,16,18,22,23,30~32,44,45 47,54,56	: 2SC945(A)(Q,P) or 2SC2320(E,F)
Q10,11,15,17,19,24~27,33,34,36,37,41 48~51,55,57~63	: 2SA733(A)(Q,P) or 2SA999(E,F)
Q20,21,28	: 2SK246(Y,GR)
Q29,35,52,53	: 2SK364(GR,BL)
Q38,39	: 2SD1302(S)
Q40	: 2SC2167(O,Y)
Q42	: 2SB764(E,F)
Q43,46	: 2SD863(E,F)

D1,4	: ISS85
D2,5,6,8,10	: KV1320-6
D3	: ISV80
D11~16,19,23~28,33~39,45~62 64~70	: ISS176 or ISS133
D17,18,21,40	: RD5.1ES(B2) or HZS5.1N(B2)
D20	: KV1236(Z2)
D22	: RD12JS(B2)
D29~32,41,42	: DSM1A1
D43,44	: ISS131 or ISS178

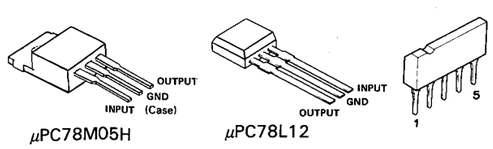
(X05-317)

DESTINATION	NO.	C30,48 R315,318,319 J36,172 L3,9,17,19	C81,83,171 R119,128,130,308~310 J34,41,245,259~261,266 L15,16 D64,65 CN9	C31	C33	C34	C80	R22	R24	R65	R148	R305	Q3~5	TC1
E,T	2-71	YES	NO	15P	10P	7P	2000P	4.7K	470	6.8K	68K	100	2SK161(GR)	7P
M	0-21	NO	YES	12P	15P	15P	1000P	10K	680	5.6K	47K	47	2SK241(Y)	11P



KT-1100D(E)(1/2)

CAUTION: For continued safety, replace safety critical components only with manufacture's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before tha appliance is returned to the customer.



1BC
3BC
9UBC

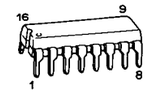
Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser bei Empfang eines UKW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.
Die eingeklammerten Gleichspannungswerte wurden bei Empfang eines MW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance pendant la réception d'un signal de programme FM (avec une force de signal de 60 dB à la borne ANT). Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.
Les valeurs entre parenthèses doivent être mesurées pendant la réception d'un signal de programme AM avec une force de signal de 60 dB à la borne ANT).

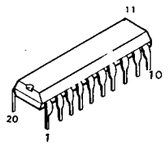
DC voltages are as measured with a high impedance voltmeter during reception of the FM broadcast signal (with a signal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

KT-1100D

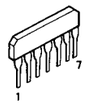
KENWOOD



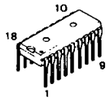
LA1231NS
LA3350S
LB1494



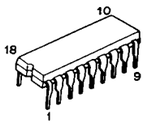
LA1245



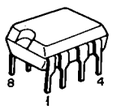
μPC1163H



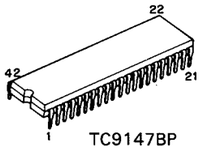
BA668A



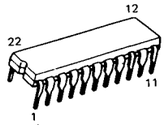
LB1290



AN6562
M5218P



TC9147BP



LB1473

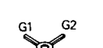
2SA733 (A)
2SA999
2SB764
2SC2003
2SC2320
2SC945 (A)
2SD1302
2SD863

MC1495L

2SC2167

2SK246

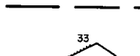
2SK364



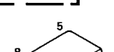
3SK122

2SK161
2SK241

2SK211
2SK302



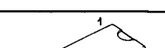
2SK425



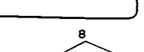
NJM4200D
NJM4560D (A)

TD6104P

M5231TL

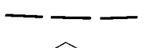


TD6301AP

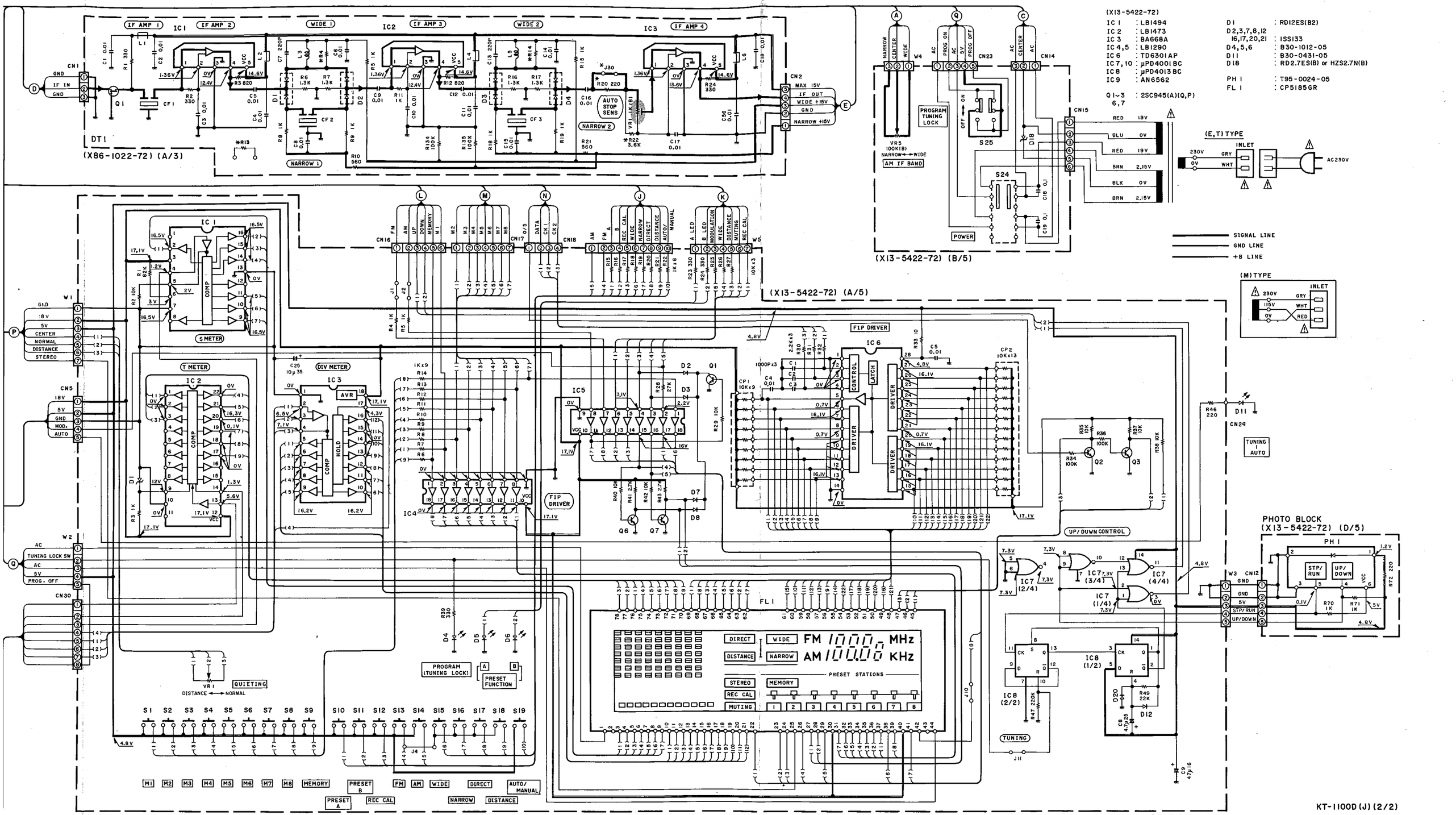


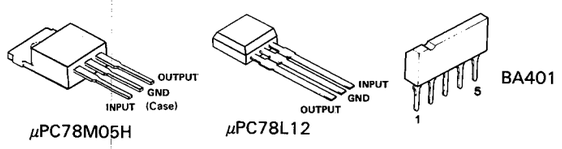
μPD4001BC
μPD4013BC
μPD4069UBC

μPC78M05H



μPC78L12





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KT-1100D (J) (2/2)

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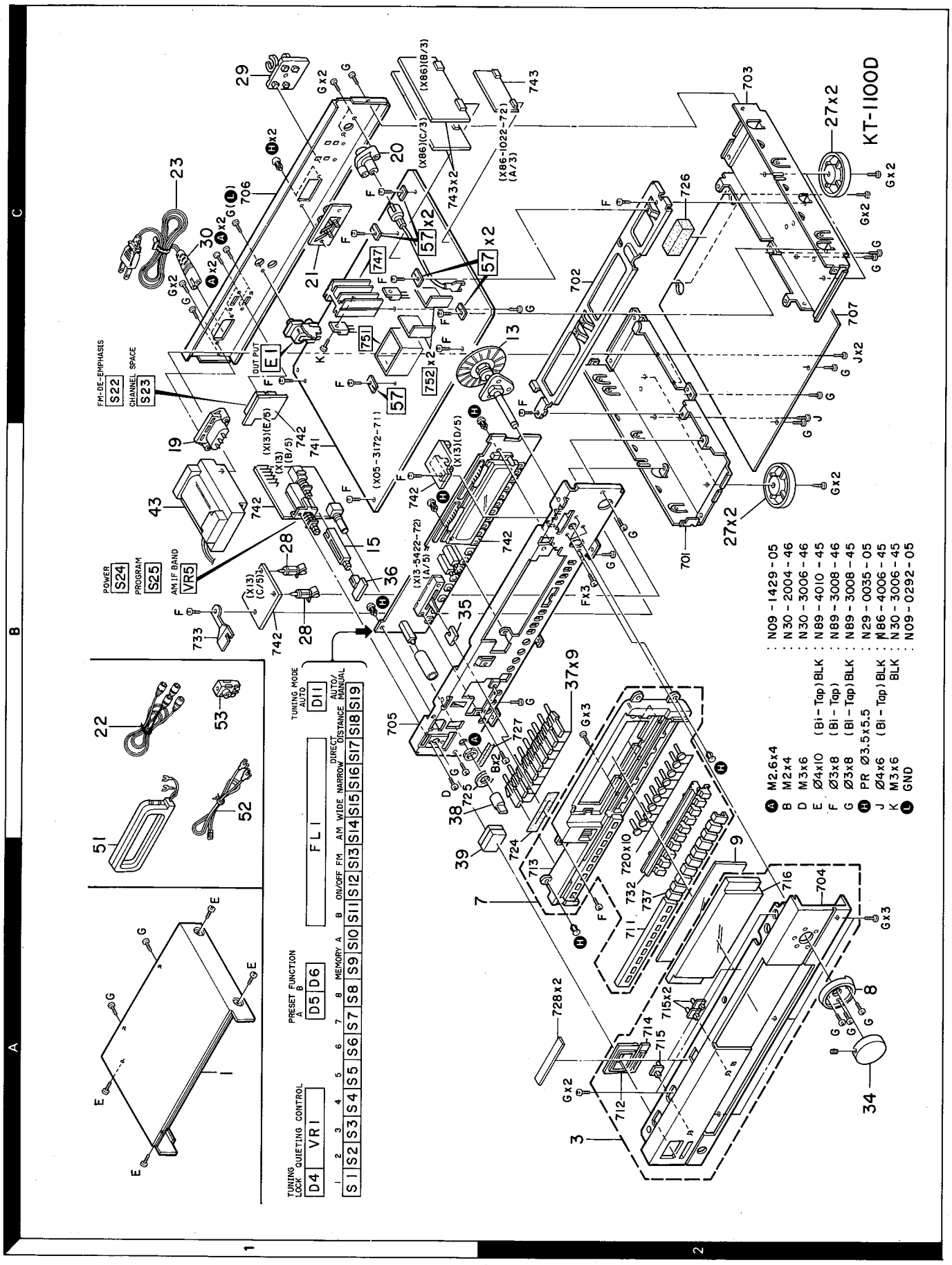
KT-1100D
KENWOOD

EXPLODED VIEW



Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST

* New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
			KT-1100D			
1	1A		A01-1342-02	METALLIC CABINET		
3	2A	*	A20-4954-02	PANEL ASSY	ME	
3	2A	*	A20-4955-02	PANEL ASSY	T	
7	1A	*	B07-1483-02	ESCUTCHEON ASSY		
8	2A		B07-1487-04	ESCUTCHEON (TUNING)		
9	2A	*	B11-0136-04	COLOR FILTER		
-			B46-0122-13	WARRANTY CARD	E	
-			B46-0123-03	WARRANTY CARD	T	
-		*	B50-6372-~~00~~ 10	INSTRUCTION MANUAL(ENGLISH)	ME	
-		*	B50-6373-~~00~~ 10	INSTRUCTION MANUAL(FRENCH)	ME	
-		*	B50-6374-~~00~~ 10	INSTRUCTION MANUAL(SPANISH)	M	
-		*	B50-6375-~~00~~ 10	INSTRUCTION MANUAL(G,D,I)	E	
-		*	B50-6391-~~00~~ 10	INSTRUCTION MANUAL(TRIO.ENG)	T	
-			B58-0803-03	CAUTION CARD	E	
13	2C		D20-0177-03	DIAL SHAFT ASSY		
15	1B		D21-1144-04	EXTENSION SHAFT(PROGRAM)		
⚠ 19	1C		E03-0047-05	AC INLET	ET	
⚠ 19	1C		E03-0102-25	AC INLET	M	
20	1C		E04-0006-05	RF COAXIAL CABLE RECEPTACLE		
21	1C		E20-0228-05	SCREW TERMINAL BOARD(2P)		
22	1B		E30-0505-05	AUDIO CORD		
⚠ 23	1C		E30-1305-15	AC POWER CORD (INLET)	M	
⚠ 23	1C		E30-1328-15	AC POWER CORD (INLET)	T	
⚠ 23	1C		E30-1329-05	AC POWER CORD (INLET)	E	
-		*	H01-7285-04	ITEM CARTON CASE	ME	
-		*	H01-7286-04	ITEM CARTON CASE	T	
-		*	H10-3398-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-3399-02	POLYSTYRENE FOAMED FIXTURE		
-			H12-1146-04	PACKING FIXTURE		
-			H25-0181-04	PROTECTION BAG (150X260X0.05)		
-			H25-0224-04	PROTECTION BAG (800X400)		
-			H25-0232-04	PROTECTION BAG (235X350)		
27	2B,2C		J02-0156-05	FOOT (Ø40X12.5)		
28	1B		J19-0514-05	UNIT HOLDER		
29	1C		J19-~~0875-03~~ 2815	ANTENNA HOLDER		
-			J61-0307-05 -04	WIRE BAND		
34	2A		K21-0405-04	KNOB (TUNING)		
35	1B		K27-1292-04	KNOB (BUTTON) SLIDE		
36	1B		K27-1514-04	KNOB (BUTTON) PROGRAM		
37	2B		K29-1588-04	KNOB (PRESET)		
38	1B		K29-2201-04	KNOB (OUTPUT VR)		
39	1A		K29-2432-03	KNOB ASSY(BUTTON)POWER		
⚠ 43	1B	*	L01-7282-05	POWER TRANSFORMER	ET	
⚠ 43	1B	*	L01-7284-05	POWER TRANSFORMER	M	
A	1C		N09-0292-05 N09-1445-05	STEPPED SCREW (Ø3X19)	ET	
H	1B,1C		N29-0035-05	PUSH RIVET (3.5X5.5)		
M	1C		N09-1429-05	MACHINE SCREW (M2.6X4)	M	
51	1A		T90-0111-15	LOOP ANTENNA		
52	1B		T90-0132-05	T TYPE ANTENNA		

E: Scandinavia & Europe H:Audio Club K: USA P: Canada W:Europe
S: South Africa T: England U: PX(Far East, Hawaii)
UE: AAFES(Europe) X: Australia M: Other Areas

⚠ indicates safety critical components.

KT-1100D

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Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
53	1B		T90-0136-05	ANTENNA ADAPTOR		
			TUNER UNIT (X05-3172-71)			
C2			CC45FTH1H060D	CERAMIC 6.0PF D		
C3			CC45FSL1H020C	CERAMIC 2.0PF C		
C4			CC45FSL1H060D	CERAMIC 6.0PF D		
C5			CC45FSH1H330J	CERAMIC 33PF J		
C6			CC45FSL1H010C	CERAMIC 1.0PF C		
C7			CK45FF1H103Z	CERAMIC 0.010UF Z		
C8 ,9			CK45FB1H102K	CERAMIC 1000PF K		
C11			CC45FTH1H090D	CERAMIC 9.0PF D		
C12			CC45FSL1H020C	CERAMIC 2.0PF C		
C13			CC45FSH1H330J	CERAMIC 33PF J		
C14			CC45FSL1H010C	CERAMIC 1.0PF C		
C15			CC45FSH1H330J	CERAMIC 33PF J		
C17			CC45FTH1H080D	CERAMIC 8.0PF D		
C18			CC45FSL1H060D	CERAMIC 6.0PF D		
C19			CC45FSL1H221J	CERAMIC 220PF J		
C20			CK45FF1H103Z	CERAMIC 0.010UF Z		
C21			CC45FSL1H070D	CERAMIC 7.0PF D		
C22			CC45FSH1H330J	CERAMIC 33PF J		
C24			CC45FTH1H090D	CERAMIC 9.0PF D		
C25			CC45FSL1H070D	CERAMIC 7.0PF D		
C26			CK45FB1H102K	CERAMIC 1000PF K		
C27			CC45FSL1H010C	CERAMIC 1.0PF C		
C28			CK45FF1H103Z	CERAMIC 0.010UF Z		
C29			CC45FSH1H330J	CERAMIC 33PF J		
C30			CC45FUJ1H030C	CERAMIC 3.0PF C	ET	
C31			CC45FTH1H120J	CERAMIC 12PF J	M	
C31			CC45FUJ1H150J	CERAMIC 15PF J	ET	
C32			CK45FB1H102K	CERAMIC 1000PF K		
C33			CC45FUJ1H100D	CERAMIC 10PF D	ET	
C33 ,34			CC45FSL1H150J	CERAMIC 15PF J	M	
C34			CC45FUJ1H070D	CERAMIC 7.0PF D	ET	
C35			CC45FSL1H030C	CERAMIC 3.0PF C		
C36			C91-0737-05	CERAMIC 47PF J		
C37			C91-0757-05	CERAMIC 0.001UF K		
C38			C91-0769-05	CERAMIC 0.01UF M	M	
C39			CE04KW1C221M	ELECTRO 220UF 16WV		
C41 ,42			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C43 ,44			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C46			CE04KW1V100M	ELECTRO 10UF 35WV		
C47			CF92FV1H682J	MF 6800PF J		
C48			CK45F1H103Z	CERAMIC 0.010UF Z	ET	
C49 -51			CF92FV1H123J	MF 0.012UF J		
C52			CQ09FS1H102J	POLYSTY 1000PF J		
C53 ,54			CQ09FS1H511J	POLYSTY 510PF J		
C55			C90-1334-05	NP-ELEC 47UF 10WV		
C56 ,57			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C58			CE04KW1C101M	ELECTRO 100UF 16WV		
C59			CE04KW1H3R3M	ELECTRO 3.3UF 50WV		
C60			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C61			CF92FV1H103J	MF 0.010UF J		
C62			C91-0769-05	CERAMIC 0.01UF M		
C63			CF92FV1H682J	MF 6800PF J		

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C64			CF92FV1H103J	MF 0.010UF J		
C65			CF92FV1H183J	MF 0.018UF J		
C66			CF92FV1H124J	MF 0.12UF J		
C67			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C68			CK45FB1H102K	CERAMIC 1000PF K		
C69 ,70			C91-0769-05	CERAMIC 0.01UF M		
C71			CE04KW1V100M	ELECTRO 10UF 35WV		
C72			C91-0769-05	CERAMIC 0.01UF M		
C73			C91-0757-05	CERAMIC 0.001UF K		
C74			C91-0769-05	CERAMIC 0.01UF M		
C75			CK45FF1H223Z	CERAMIC 0.022UF Z		
C76			C91-0769-05	CERAMIC 0.01UF M		
C77			CK45FF1H223Z	CERAMIC 0.022UF Z		
C78			CQ09FS1H391JYO	POLYSTY 390PF J		
C80			CQ09FS1H102J	POLYSTY 1000PF J	M	
C80		*	CQ09FS1H202J	POLYSTY 2000PF J	ET	
C81			CF92FV1H242J	MF 2400PF J	M	
C82			CF92FV1H472J	MF 4700PF J		
C83			CF92FV1H242J	MF 2400PF J	M	
C84			CF92FV1H472J	MF 4700PF J		
C85			CC45FSL1H180J	CERAMIC 18PF J		
C87 ,88			CE04KW1A101M	ELECTRO 100UF 10WV		
C90			CK45FF1H103Z	CERAMIC 0.010UF Z		
C91			CQ09FS1H152JYO	POLYSTY 1500PF J		
C92			CE04KW1C221M	ELECTRO 220UF 16WV		
C93			CE04GW1H010M	LL-ELEC 1.0UF 50WV		
C94			CE04GW1HR22M	LL-ELEC 0.22UF 50WV		
C95			CF92FV1H223J	MF 0.022UF J		
C96			CE04GW1HR33M	LL-ELEC 0.33UF 50WV		
C97			CF92FV1H183J	MF 0.018UF J		
C98			CQ09FS1H122JYO	POLYSTY 1200PF J		
C99			CF92FV1H103J	MF 0.010UF J		
C100			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C101,102			CE04KW1V100M	ELECTRO 10UF 35WV		
C103,104			CF92FV1H392J	MF 3900PF J		
C105,106			CE04KW1V100M	ELECTRO 10UF 35WV		
C107,108			CK45FF1H103Z	CERAMIC 0.010UF Z		
C109			CE04KW1V222M	ELECTRO 2200UF 35WV		
C110			CE04KW1V102M	ELECTRO 1000UF 35WV		
C111			CK45FF1H103Z	CERAMIC 0.010UF Z		
C112			CC45FSL1H221J	CERAMIC 220PF J		
C113			CK45FF1H103Z	CERAMIC 0.010UF Z		
C114			CE04KW1V330M	ELECTRO 33UF 35WV		
C115			CE04KW1V101M	ELECTRO 100UF 35WV		
C116			CK45FB1H102K	CERAMIC 1000PF K		
C117,118			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C119,120			CE04KW1V100M	ELECTRO 10UF 35WV		
C121			CK45FB1H102K	CERAMIC 1000PF K		
C122			CE04KW1V100M	ELECTRO 10UF 35WV		
C123			CK45FF1H103Z	CERAMIC 0.010UF Z		
C124			CE04KW1V100M	ELECTRO 10UF 35WV		
C125-128			CK45FF1H103Z	CERAMIC 0.010UF Z		
C129			CE04KW1V331M	ELECTRO 330UF 35WV		
C130			CK45FF1H103Z	CERAMIC 0.010UF Z		
C131			CE04KW1H331M	ELECTRO 330UF 50WV		

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C132			CE04KW1H101M	ELECTRO 100UF 50WV		
C133			CK45FB1H102K	CERAMIC 1000PF K		
C134			CE04KW1A101M	ELECTRO 100UF 10WV		
C135			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C136,137			CE04KW1V100M	ELECTRO 10UF 35WV		
C138			CE04KW1A470M	ELECTRO 47UF 10WV		
C139			CE04KW1A101M	ELECTRO 100UF 10WV		
C140			CE04KW1HR22M	ELECTRO 0.22UF 50WV		
C141,142			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C143			CE04KW1H0R1M	ELECTRO 0.1UF 50WV		
C144			CK45FF1H103Z	CERAMIC 0.010UF Z		
C145			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C146			C91-0769-05	CERAMIC 0.01UF M		
C147			CE04KW1A101M	ELECTRO 100UF 10WV		
C148-151			CE04KW1H0R1M	ELECTRO 0.1UF 50WV		
C152-154			C91-0769-05	CERAMIC 0.01UF M		
C155-159			CK45FF1H103Z	CERAMIC 0.010UF Z		
C160			C91-0769-05	CERAMIC 0.01UF M		
C161			CE04KW1V330M	ELECTRO 33UF 35WV		
C162			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C163			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C164			CK45FF1H223Z	CERAMIC 0.022UF Z		
C165			CE04KW1V100M	ELECTRO 10UF 35WV		
C166			C91-0769-05	CERAMIC 0.01UF M		
C167			CK45FF1H103Z	CERAMIC 0.010UF Z		
C168			CC45FSL1H220J	CERAMIC 22PF J		
C169			CK45FB1H222K	CERAMIC 2200PF K		
C170			CK45FF1H103Z	CERAMIC 0.010UF Z		
C171,172			C91-0769-05	CERAMIC 0.01UF M	M	
C172			C91-0769-05	CERAMIC 0.01UF M	ET	
C173,174			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C175			C91-0769-05	CERAMIC 0.01UF M		
C176,177			CC45FCH1H330J	CERAMIC 33PF J		
C178			C90-1416-05	ELECTRO 18UF 5.5WV		
C179,180			CK45FF1H103Z	CERAMIC 0.010UF Z		
C181			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C182-184			CK45FF1H103Z	CERAMIC 0.010UF Z		
C185			CF92FV1H682J	MF 6800PF J		
C186,187			CK45FF1H103Z	CERAMIC 0.010UF Z		
C188			C90-1443-05	NP-ELEC 100UF 10WV		
C189			C90-1331-05	NP-ELEC 0.47UF 50WV		
C190,191			CK45FF1H103Z	CERAMIC 0.010UF Z		
C193			CC45FSL1H390J	CERAMIC 39PF J		
C194			CE04KW1H3R3M	ELECTRO 3.3UF 50WV		
C195			CK45FB1H102K	CERAMIC 1000PF K		
C196			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
TC1			C05-0301-05	CERAMIC TRIMMER CAPACITOR(7PF)	ET	
TC1			C05-0302-05	CERAMIC TRIMMER CAPACITOR(11PF	M	
TC2 ,3			C05-0303-05	CERAMIC TRIMMER CAPACITOR(20PF		
57	1C		E23-0149-05	TERMINAL		
E1	1C		E13-0217-05	PHONO JACK (2P)OUTPUT		
CF1			L72-0096-05	CERAMIC FILTER		
CF2			L72-0099-05	CERAMIC FILTER		
L1			L31-0545-05	FM-RF COIL		

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L2			L40-1092-14	SMALL FIXED INDUCTOR(1.0UH,M)		
L3			L92-0017-05	FERRITE CORE	ET	
L4			L31-0546-05	FM-RF COIL		
L5 ,6			L40-1092-14	SMALL FIXED INDUCTOR(1.0UH,M)		
L7			L31-0545-05	FM-RF COIL		
L8			L40-1092-14	SMALL FIXED INDUCTOR(1.0UH,M)		
L9			L92-0017-05	FERRITE CORE	ET	
L10			L30-0434-05	FM IFT		
L11			L92-0017-05	FERRITE CORE		
L12			L40-1001-14	SMALL FIXED INDUCTOR(10UH,K)		
L14			L32-0270-05	FM OSCILLATING COIL		
L15 ,16			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)	M	
L17			L92-0017-05	FERRITE CORE	ET	
L18			L32-0270-05	FM OSCILLATING COIL		
L19			L40-1092-14	SMALL FIXED INDUCTOR(1.0UH,M)	ET	
L20			L32-0277-15	MW OSCILLATING COIL		
L21			L31-0509-05	MW-RF COIL		
L22			L30-0362-05	AM IFT		
L23			L79-0154-05	LC FILTER		
L24		*	L39-0143-05	PEAKING COIL		
L25			L35-0059-05	MPX COIL		
L26 -29			L92-0017-05	FERRITE CORE		
L31 ,32			L92-0017-05	FERRITE CORE		
X1			L77-0578-05	CRYSTAL RESONATOR(7.2MHZ)		
CP1			R90-0545-05	COMPOSITE ELEMENTS		
R95			RD14GB2E151J	FL-PROOF RD 150 J 1/4W	ET	
R146			RN14BK2C3831F	RN 3.83K F 1/6W		
R183			RD14GB2E101J	FL-PROOF RD 100 J 1/4W	ET	
R196			RD14GB2E470J	FL-PROOF RD 47 J 1/4W	ET	
R200			RS14KB3A101J	FL-PROOF RS 100 J 1W		
R266			RD14GB2E101J	FL-PROOF RD 100 J 1/4W	ET	
R301			RD14GB2E101J	FL-PROOF RD 100 J 1/4W	ET	
R305			RD14GB2E101J	FL-PROOF RD 100 J 1/4W	ET	
VR1			R12-3099-05	TRIMMING POT.(47K)NARROW L-R		
VR2 -4			R12-1067-05	TRIMMING POT.(2.2K)SEP,MPX VCO		
D1			1SS85	DIODE		
D2			KV1320-5	VARIABLE CAPACITANCE DIODE		
D3			1SV80	DIODE		
D4			1SS85	DIODE		
D5 ,6			KV1320-5	VARIABLE CAPACITANCE DIODE		
D8			KV1320-5	VARIABLE CAPACITANCE DIODE		
D10			KV1320-5	VARIABLE CAPACITANCE DIODE		
D11 -16			1SS133	DIODE		
D11 -16			1SS176	DIODE		
D17 ,18			HZS5.1N(B2)	ZENER DIODE		
D17 ,18			RD5.1ES(B2)	ZENER DIODE		
D19			1SS133	DIODE		
D19			1SS176	DIODE		
D20			KV1236(Z2)	VARIABLE CAPACITANCE DIODE		
D21			HZS5.1N(B2)	ZENER DIODE		
D21			RD5.1ES(B2)	ZENER DIODE		
D22		*	RD12JS(B2)	ZENER DIODE		
D23 -28			1SS133	DIODE		
D23 -28			1SS176	DIODE		

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D29 -32			DSM1A1	DIODE		
D33 -39			1SS133	DIODE		
D33 -39			1SS176	DIODE		
D40			HZS5.1N(B2)	ZENER DIODE		
D40			RD5.1ES(B2)	ZENER DIODE		
D41 ,42			DSM1A1	DIODE		
D43 ,44			1SS131	DIODE		
D43 ,44			1SS178	DIODE		
D45 -62			1SS133	DIODE		
D45 -62			1SS176	DIODE		
D64 -70			1SS176	DIODE	M	
D64 ,65			1SS133	DIODE	M	
D66 -70			1SS133	DIODE		
D66 -70			1SS176	DIODE	ET	
IC1 -3			M5218P	IC(OP AMP X2)		
IC4			LA1245	IC(AM)		
IC5 ,6			NJM4560D(A)	IC(OP AMP X2)		
IC7			M5218P	IC(OP AMP X2)		
IC8			MC1495L	IC(MULTIPLIER)		
IC9 ,10			NJM4560D(A)	IC(OP AMP X2)		
IC11			UPC78L12	IC(VOLTAGE REGULATOR/ +12V)		
IC12			LA3350S	IC(FM MPX)		
IC13		*	M5231TL	IC(VOLTAGE REGULATOR)		
IC14			UPC78M05H	IC(VOLTAGE REGULATOR/ +5V)		
IC15,16			UPD4069UBC	IC(INVERTER X6)		
IC17			UPD4001BC	IC(NOR X6)		
IC18			TD6104P	IC(PRE SCALER)		
IC19			TC9157AP	IC(DIGITAL TUNING SYSTEM)		
IC20-22			UPD4013BC	IC(D FLIP-FLOP X2)		
Q1 ,2			3SK122(L)	FET		
Q3 -5			2SK241(Y)	FET	M	
Q3 -6			2SK161(GR)	FET	ET	
Q6			2SK161(GR)	FET	M	
Q8 ,9			2SC2320(E,F)	TRANSISTOR		
Q8 ,9			2SC945(A)(Q,P)	TRANSISTOR		
Q10 ,11			2SA733(A)(Q,P)	TRANSISTOR		
Q10 ,11			2SA999(E,F)	TRANSISTOR		
Q12 -14			2SC2320(E,F)	TRANSISTOR		
Q12 -14			2SC945(A)(Q,P)	TRANSISTOR		
Q15			2SA733(A)(Q,P)	TRANSISTOR		
Q15			2SA999(E,F)	TRANSISTOR		
Q16			2SC2320(E,F)	TRANSISTOR		
Q16			2SC945(A)(Q,P)	TRANSISTOR		
Q17			2SA733(A)(Q,P)	TRANSISTOR		
Q17			2SA999(E,F)	TRANSISTOR		
Q18			2SC2320(E,F)	TRANSISTOR		
Q18			2SC945(A)(Q,P)	TRANSISTOR		
Q19			2SA733(A)(Q,P)	TRANSISTOR		
Q19			2SA999(E,F)	TRANSISTOR		
Q20 ,21			2SK246(Y,GR)	FET		
Q22 ,23			2SC2320(E,F)	TRANSISTOR		
Q22 ,23			2SC945(A)(Q,P)	TRANSISTOR		
Q24 -27			2SA733(A)(Q,P)	TRANSISTOR		
Q24 -27			2SA999(E,F)	TRANSISTOR		
Q28			2SK246(Y,GR)	FET		

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Q29			2SK364(GR,BL)	FET		
Q30 -32			2SC2320(E,F)	TRANSISTOR		
Q30 -32			2SC945(A)(Q,P)	TRANSISTOR		
Q33 ,34			2SA733(A)(Q,P)	TRANSISTOR		
Q33 ,34			2SA999(E,F)	TRANSISTOR		
Q35			2SK364(GR,BL)	FET		
Q36 ,37			2SA733(A)(Q,P)	TRANSISTOR		
Q36 ,37			2SA999(E,F)	TRANSISTOR		
Q38 ,39			2SD1302(S)	TRANSISTOR		
Q40			2SC2167(O,Y)	TRANSISTOR		
Q41			2SA733(A)(Q,P)	TRANSISTOR		
Q41			2SA999(E,F)	TRANSISTOR		
Q42			2SB764(E,F)	TRANSISTOR		
Q43			2SD863(E,F)	TRANSISTOR		
Q44 ,45			2SC2320(E,F)	TRANSISTOR		
Q44 ,45			2SC945(A)(Q,P)	TRANSISTOR		
Q46			2SD863(E,F)	TRANSISTOR		
Q47			2SC2320(E,F)	TRANSISTOR		
Q47			2SC945(A)(Q,P)	TRANSISTOR		
Q48 -51			2SA733(A)(Q,P)	TRANSISTOR		
Q48 -51			2SA999(E,F)	TRANSISTOR		
Q52 ,53			2SK364(GR,BL)	FET		
Q54			2SC2320(E,F)	TRANSISTOR		
Q54			2SC945(A)(Q,P)	TRANSISTOR		
Q55			2SA733(A)(Q,P)	TRANSISTOR		
Q55			2SA999(E,F)	TRANSISTOR		
Q56			2SC2320(E,F)	TRANSISTOR		
Q56			2SC945(A)(Q,P)	TRANSISTOR		
Q57 -63			2SA733(A)(Q,P)	TRANSISTOR		
Q57 -63			2SA999(E,F)	TRANSISTOR		
SUB-CIRCUIT UNIT (X13-5422-72)						
D4 -6	1A		B30-1012-05	LED(SLP-981C-50)TUN LO,PRE FUN		
D11	1B		B30-0431-05	LED(LN21CPH) AUTO		
C1 -3			C91-0757-05	CERAMIC 0.001UF K		
C4 ,5			C91-0769-05	CERAMIC 0.01UF M		
C8			C90-0482-05	ELECTRO 4.7UF 25WV		
C9			C90-0822-05	ELECTRO 47UF 16WV		
C11			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C12			CE04KW1E470M	ELECTRO 47UF 25WV		
C13			CF92FV1H104J	MF 0.10UF J		
C14			C90-1332-05	NP-ELEC 10UF 25WV		
C15			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C16			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C17			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C18 -20			CF92FV1H104J	MF 0.10UF J		
C25			CE04JW1V100M	ELECTRO 10UF 35WV		
CP1			R90-0441-05	MULTI-COMP 10KX9 J 1/6W		
CP2			R90-0416-05	MULTI-COMP 10KX13 J 1/6W		
VR1	1A	*	R13-3040-05	POTENTIOMETER(QUIETING CONTROL		
VR2			R12-1067-05	TRIMMING POT.(2.2K)T-METER		
VR3			R12-3099-05	TRIMMING POT.(47K) S-METER		
VR4			R12-3096-05	TRIMMING POT.(10K) DEVIATION		
VR5		*	R10-9003-05	POTENTIOMETER(AM IF BAND)		

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S1 -19	1A,1B		S40-1064-05	PUSH SWITCH		
S22 ,23	1C		S31-2072-05	SLIDE SWITCH (FM,CHANNEL SPACE	M	
S24	1B		S40-4061-05	PUSH SWITCH (POWER)		
S25	1B		S40-2193-05	PUSH SWITCH (PROGRAM)		
PH1			T95-0024-05	OPTO ISOLATOR		
D1		*	RD12ES(B2)	DIODE		
D2 ,3			1SS133	DIODE		
D7 ,8			1SS133	DIODE		
D12			1SS133	DIODE		
D16 ,17			1SS133	DIODE		
D18			HZS2.7N(B)	ZENER DIODE		
D18			RD2.7ES(B)	ZENER DIODE		
D20 ,21			1SS133	DIODE		
FL1	1A		CP5185GR	FLUORESCENT INDICATOR TUBE		
IC1		*	LB1494	IC(DC LEVEL METER)		
IC2			LB1473	IC(1 OF 16PT LED DRIVER)		
IC3			BA668A	IC(12PT FL PEAK LEVEL METER DR		
IC4 ,5			LB1290	IC(8CH TRANSISTOR ARRAY)		
IC6			TD6301AP	IC(FL/LED/LCD FREQ DISPLAY DR)		
IC7			UPD4001BC	IC(NOR X6)		
IC8			UPD4013BC	IC(D FLIP-FLOP X2)		
IC9			AN6562	IC(OP AMP X2)		
IC10			UPD4001BC	IC(NOR X6)		
Q1			2SC945(A)(Q,P)	TRANSISTOR		
Q2 ,3			2SC945(A)(Q,P)	TRANSISTOR		
Q6 ,7			2SC945(A)(Q,P)	TRANSISTOR		
IF-DET UNIT (X86-1022-72)						
C1 -6		*	C93-0012-05	CYLND CHIP C 0.01UF M		
C7		*	CK41FB1H221K	CYLND CHIP C 220PF K		
C8 -12		*	C93-0012-05	CYLND CHIP C 0.01UF M		
C13		*	CK41FB1H221K	CYLND CHIP C 220PF K		
C14 -18		*	C93-0012-05	CYLND CHIP C 0.01UF M		
C19			CE04KW0J471M	ELECTRO 470UF 6.3WV		
C20 ,21		*	CC41FSL1H330J	CYLND CHIP C 33PF J		
C22 ,23			CK73EB1E473K	CHIP C 0.047UF K		
C24		*	CC41FUJ1H130J	CYLND CHIP C 13PF J		
C25 ,26		*	C93-0012-05	CYLND CHIP C 0.01UF M		
C27			CQ09FS1H271J	POLYSTY 270PF J		
C28		*	CC41FSL1H220J	CYLND CHIP C 22PF J		
C29 -33		*	C93-0012-05	CYLND CHIP C 0.01UF M		
C34		*	C93-0013-05	CERAMIC 22000PF 25WV		
C35			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C36 -40		*	C93-0012-05	CYLND CHIP C 0.01UF M		
C41			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C42			C90-1334-05	NP-ELEC 47UF 10WV		
C43		*	CC41FSL1H020C	CYLND CHIP C 2.0PF C		
C44			C90-1334-05	NP-ELEC 47UF 10WV		
C45 ,46			CF92FV1H102J	MF 1000PF J		
C48 -51			CF92FV1H102J	MF 1000PF J		
C54 ,55			CE04KW1A470M	ELECTRO 47UF 10WV		
C56		*	C93-0012-05	CYLND CHIP C 0.01UF M		
C57		*	C93-0013-05	CERAMIC 22000PF 25WV		
C58		*	CK41FA1H101K	CYLND CHIP C 100PF K		

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C59		*	CK41FY1E102M	CYLND CHIP C 1000PF M		
C61 ,62		*	C93-0012-05	CYLND CHIP C 0.01UF M		
CF1 -4			L72-0190-05	CERAMIC FILTER	ET	
CF1 -4			L72-0505-05	CERAMIC FILTER	M	
L1 ,2		*	L92-0018-05	FERRITE CORE		
L3			L40-1092-16	SMALL FIXED INDUCTOR(1UH,M)		
L4		*	L92-0018-05	FERRITE CORE		
L5			L40-1092-16	SMALL FIXED INDUCTOR(1UH,M)		
L6 ,7		*	L92-0018-05	FERRITE CORE		
L8			L39-0128-05	PEAKING COIL		
L9			L30-0435-05	FM IFT		
L10		*	L92-0018-05	FERRITE CORE		
L11			L30-0434-05	FM IFT		
L12			L32-0294-05	FM OSCILLATING COIL		
L13		*	L92-0018-05	FERRITE CORE		
L14		*	L40-1001-14	SMALL FIXED INDUCTOR(10UH,K)		
-			R92-0338-05	CLYND CHIP R 0 OHM		
-			R92-0350-05	JUMPER WIRE (RESISTOR TYPE)		
R1 ,2		*	RD41FB2B331J	CYLND CHIP R 330 J 1/8W		
R3		*	RD41FB2B821J	CYLND CHIP R 820 J 1/8W		
R4		*	RD41FB2B131J	CYLND CHIP R 130 J 1/8W	M	
R4		*	RD41FB2B221J	CYLND CHIP R 220 J 1/8W	ET	
R5			RD41FB2B102J	CYLND CHIP R 1.0K J 1/8W		
R6 ,7		*	RD41FB2B132J	CYLND CHIP R 1.3K J 1/8W		
R8 ,9			RD41FB2B102J	CYLND CHIP R 1.0K J 1/8W		
R10			RD41FB2B561J	CYLND CHIP R 560 J 1/8W		
R11			RD41FB2B102J	CYLND CHIP R 1.0K J 1/8W		
R12		*	RD41FB2B821J	CYLND CHIP R 820 J 1/8W		
R13			RD41FB2B100J	CYLND CHIP R 10 J 1/8W	M	
R13			RD41FB2B220J	CYLND CHIP R 22 J 1/8W	ET	
R14		*	RD41FB2B131J	CYLND CHIP R 130 J 1/8W	M	
R14		*	RD41FB2B221J	CYLND CHIP R 220 J 1/8W	ET	
R15			RD41FB2B102J	CYLND CHIP R 1.0K J 1/8W		
R16 ,17		*	RD41FB2B132J	CYLND CHIP R 1.3K J 1/8W		
R18 ,19			RD41FB2B102J	CYLND CHIP R 1.0K J 1/8W		
R20		*	RD41FB2B221J	CYLND CHIP R 220 J 1/8W	ET	
R21			RD41FB2B561J	CYLND CHIP R 560 J 1/8W		
R22		*	RD41FB2B362J	CYLND CHIP R 3.6K J 1/8W	ET	
R23			RD41FB2B100J	CYLND CHIP R 10 J 1/8W	M	
R23			RD41FB2B220J	CYLND CHIP R 22 J 1/8W	ET	
R24		*	RD41FB2B331J	CYLND CHIP R 330 J 1/8W		
R28			RD41FB2B104J	CYLND CHIP R 100K J 1/8W		
R29			RD41FB2B471J	CYLND CHIP R 470 J 1/8W		
R30			RD41FB2B104J	CYLND CHIP R 100K J 1/8W		
R31 ,32		*	RD41FB2B105J	CYLND CHIP R 1.0M J 1/8W		
R33		*	RD41FB2B101J	CYLND CHIP R 100 J 1/8W		
R34			RD41FB2B102J	CYLND CHIP R 1.0K J 1/8W		
R35			RD41FB2B472J	CYLND CHIP R 4.7K J 1/8W		
R36 -41			RD41FB2B102J	CYLND CHIP R 1.0K J 1/8W		
R42			RD41FB2B224J	CYLND CHIP R 220K J 1/8W		
R43			RD41FB2B102J	CYLND CHIP R 1.0K J 1/8W		
R44		*	RD41FB2B221J	CYLND CHIP R 220 J 1/8W		
R45		*	RD41FB2B123J	CYLND CHIP R 12K J 1/8W		
R47			RD41FB2B472J	CYLND CHIP R 4.7K J 1/8W		

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R48		*	RD41FB2B105J	CYLND CHIP R 1.0M J 1/8W		
R49			RD41FB2B223J	CYLND CHIP R 22K J 1/8W		
R50			RD41FB2B222J	CYLND CHIP R 2.2K J 1/8W		
R51		*	RD41FB2B332J	CYLND CHIP R 3.3K J 1/8W		
R52			RD41FB2B223J	CYLND CHIP R 22K J 1/8W		
R54		*	RD41FB2B101J	CYLND CHIP R 100 J 1/8W		
R55		*	RD41FB2B331J	CYLND CHIP R 330 J 1/8W		
R56			RD41FB2B223J	CYLND CHIP R 22K J 1/8W		
R57			RD41FB2B473J	CYLND CHIP R 47K J 1/8W		
R58			RD41FB2B223J	CYLND CHIP R 22K J 1/8W		
R59 ,60		*	RD41FB2B513J	CYLND CHIP R 51K J 1/8W		
R61			RD41FB2B223J	CYLND CHIP R 22K J 1/8W		
R62 ,63		*	RD41FB2B513J	CYLND CHIP R 51K J 1/8W		
R64		*	RD41FB2B113J	CYLND CHIP R 11K J 1/8W		
R65			RD41FB2B223J	CYLND CHIP R 22K J 1/8W		
R66 ,67		*	RD41FB2B513J	CYLND CHIP R 51K J 1/8W		
R68 ,69			RD41FB2B223J	CYLND CHIP R 22K J 1/8W		
R70 ,71		*	RD41FB2B513J	CYLND CHIP R 51K J 1/8W		
R80			RD41FB2B273J	CYLND CHIP R 27K J 1/8W		
R81			RD41FB2B223J	CYLND CHIP R 22K J 1/8W		
R82			RD41FB2B822J	CYLND CHIP R 8.2K J 1/8W		
R83		*	RD41FB2B123J	CYLND CHIP R 12K J 1/8W		
R84			RD41FB2B223J	CYLND CHIP R 22K J 1/8W		
R85		*	RD41FB2B105J	CYLND CHIP R 1.0M J 1/8W		
R86			RD41FB2B223J	CYLND CHIP R 22K J 1/8W		
R87		*	RD41FB2B393J	CYLND CHIP R 39K J 1/8W		
R88			RD41FB2B102J	CYLND CHIP R 1.0K J 1/8W		
R90 -93			RD41FB2B103J	CYLND CHIP R 10K J 1/8W		
R94			RD41FB2B222J	CYLND CHIP R 2.2K J 1/8W		
R95			RD41FB2B103J	CYLND CHIP R 10K J 1/8W		
R96			RD41FB2B222J	CYLND CHIP R 2.2K J 1/8W		
R97			RD41FB2B103J	CYLND CHIP R 10K J 1/8W		
R98		*	RD41FB2B123J	CYLND CHIP R 12K J 1/8W	ET	
R98			RD41FB2B333J	CYLND CHIP R 33K J 1/8W	M	
R99			RD41FB2B102J	CYLND CHIP R 1.0K J 1/8W		
R100			RD41FB2B222J	CYLND CHIP R 2.2K J 1/8W		
R101			RD41FB2B103J	CYLND CHIP R 10K J 1/8W		
R102		*	RD41FB2B153J	CYLND CHIP R 15K J 1/8W	M	
R102			RD41FB2B472J	CYLND CHIP R 4.7K J 1/8W	ET	
R103			RD41FB2B102J	CYLND CHIP R 1.0K J 1/8W		
R104			RD41FB2B222J	CYLND CHIP R 2.2K J 1/8W		
R105			RD41FB2B103J	CYLND CHIP R 10K J 1/8W		
R106			RD41FB2B561J	CYLND CHIP R 560 J 1/8W		
R107			RD41FB2B223J	CYLND CHIP R 22K J 1/8W	M	
R107			RD41FB2B822J	CYLND CHIP R 8.2K J 1/8W	ET	
R108			RD41FB2B222J	CYLND CHIP R 2.2K J 1/8W		
R109			RD41FB2B103J	CYLND CHIP R 10K J 1/8W		
R110			RD41FB2B222J	CYLND CHIP R 2.2K J 1/8W		
R111		*	RD41FB2B332J	CYLND CHIP R 3.3K J 1/8W	ET	
R111,112			RD41FB2B103J	CYLND CHIP R 10K J 1/8W	M	
R112			RD41FB2B103J	CYLND CHIP R 10K J 1/8W	ET	
R113			RD41FB2B561J	CYLND CHIP R 560 J 1/8W		
R124		*	RD41FB2B100J	CYLND CHIP R 10 J 1/8W	M	
R124		*	RD41FB2B220J	CYLND CHIP R 22 J 1/8W	ET	
R125,126			RD41FB2B472J	CYLND CHIP R 4.7K J 1/8W		

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R127		*	RD41FB2B101J	CYLND CHIP R 100 J 1/8W		
R128		*	RD41FB2B154J	CYLND CHIP R 150K J 1/8W		
R129		*	RD41FB2B105J	CYLND CHIP R 1.0M J 1/8W		
R132-135			RD41FB2B104J	CYLND CHIP R 100K J 1/8W		
R136,137		*	RD41FB2B105J	CYLND CHIP R 1.0M J 1/8W		
VR1			R12-1070-05	TRIMMING POT.(1K) AUTO STOP		
VR2			R12-5048-05	TRIMMING POT.(100K)ST.NARROW		
VR3			R12-1073-05	TRIMMING POT.(4.7K)DET		
VR4 ,5			R12-3101-05	TRIMMING POT.(22K) MONO,STEREO		
VR6			R12-1070-05	TRIMMING POT.(1K) MONO		
VR7			R12-3101-05	TRIMMING POT.(22K) STEREO		
D1 -4			1SS184	DIODE		
D5 ,6			RLS-73	DIODE		
D7 ,8		*	1SS226	DIODE		
D9 ,10			KV1320-2	VARIABLE CAPACITANCE DIODE		
D11		*	RD5.1M(B2)	ZENER DIODE		
D12			RLS-73	DIODE		
IC1 -3			BA401	IC(FM IF)		
IC4		*	UPC1163HA	IC(IF AMP)		
IC5			LA1231NS	IC(FM IF/DETECTION)		
IC6			NJM4560D(A)	IC(OP AMP X2)		
IC8 ,9			NJM4200D	IC(OP AMP X2)		
IC11-14			M5218P	IC(OP AMP X2)		
Q1		*	2SK302(Y,GR)	FET		
Q3 ,4			2SK211(Y,GR)	FET		
Q5 -7		*	2SK425(X16,X17)	FET		

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KT-1100D

Specification

– EIA –

[FM tuner section]

	DISTANCE	DIRECT
Usable sensitivity	10.8 dBf (0.95 μV)	31.2 dBf (10 μV)
50dB quieting sensitivity		
Mono	16.2 dBf (1.8 μV)	36.3 dBf (18 μV)
Stereo	38.8 dBf (24 μV)	58.8 dBf (240 μV)
Signal to noise ratio (85 dBf)		
Mono	92 dB	
Stereo	86 dB	
Total harmonic distortion	**WIDE**	**NARROW**
Mono: 100 Hz	0.009%	0.05%
1,000Hz	0.005%	0.04%
50 Hz ~ 10,000 Hz	0.015%	0.1%
Stereo: 100 Hz	0.02%	0.3%
1,000 Hz	0.008%	0.06%
50 Hz ~ 10,000 Hz	0.05%	0.3%
Capture ratio	1.0 dB	2.5 dB
Alternate channel selectivity (±400 k Hz)	70 dB	100 dB
Stereo separation		
1,000 Hz	70 dB	55 dB
50 Hz ~ 10,000 Hz	50 dB	45 dB
15,000 Hz	45 dB	40 dB
Frequency response	20 Hz to 15 kHz +0.5 dB, –0.5 dB	
Spurious rejection ratio	100 dB	
Image rejection ratio	80 dB	
IF rejection ratio	110 dB	
AM suppression ratio	70 dB	
Subcarrier suppression ratio	70 dB	
Antenna impedance	75 ohms unbalanced	
Tuning frequency range	87.5 MHz to 108 MHz	
Output level at 1 kHz 100% dev.		
Fixed	0.6V/1.7 kΩ	

[AM tuner section]

Usable sensitivity	10 μV (250 μV/m)	
S/N ration: 1 mV input	52 dB	
Image rejection ratio	40 dB	
	WIDE	**NARROW**
Total harmonic distortion	0.4%	0.6%
Selectivity	25 dB	50 dB

[General]

Power consumption	18 W
Dimensions	W: 440 mm (17-5/16") H: 88 mm (3-15/32") D: 331 mm (13-1/16")
Weight (Net)	4.6 kg (10.2 lb)

KT-1100D

IEC/NF

[FM tuner section]

Sensitivity (DIN)		
Mono: S/N 26 dB, 40 kHz dev.	0.9 μV	
Stereo: S/N 46 dB, 46 kHz dev.	20 μV	
Limiting level –3 dB point, 40 kHz dev.	0.45 μV	
Frequency response	20 Hz ~ 15 kHz ± 0.5 dB	
Total harmonic distortion	**WIDE**	**NARROW**
Mono: 1 kHz, 40 kHz dev.	0.02%	0.06%
Stereo: 1 kHz, 46 kHz dev.	0.1%	0.35%
S/N weighted		
Mono: 40 kHz dev., 1 mV input	82 dB	
Stereo: 46 kHz dev., 1 mV input	67 dB	
S/N unweighted		
Mono: 40 kHz dev., 1 mV input	78 dB	
Stereo: 46 kHz dev., 1 mV input	67 dB	
FM Stereo separation: 1 mV input (DIN)	**WIDE**	**NARROW**
250 Hz	50 dB	45 dB
1 kHz	50 dB	45 dB
6.3 kHz	40 dB	35 dB
12.5 kHz	35 dB	30 dB
Image rejection ratio	80 dB	
IF rejection ratio	110 dB	
AM suppression ratio	70 dB	
Spurious rejection ratio	100 dB	
	WIDE	**NARROW**
Capture ratio	2.0 dB	3.5 dB
Subcarrier suppression ratio		
19 kHz: 46 kHz dev.	55 dB	
38 kHz: 46 kHz dev.	68 dB	
Alternate channel selectivity ± 300 kHz (DIN)	**WIDE** 55 dB	**NARROW** 80 dB

[AM tuner section]

Usable sensitivity	10 μV (250 μV/m)	
S/N ration: 1 mV input	52 dB	
Image rejection ratio	40 dB	
	WIDE	**NARROW**
Total harmonic distortion	0.4%	0.6%
Selectivity (IHF)	25 dB	50 dB

[General]

Power consumption	18 W
Dimensions	W: 440 mm H: 88 mm D: 331 mm
Weight (Net)	4.6 kg

Note:
We follow a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Note:
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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