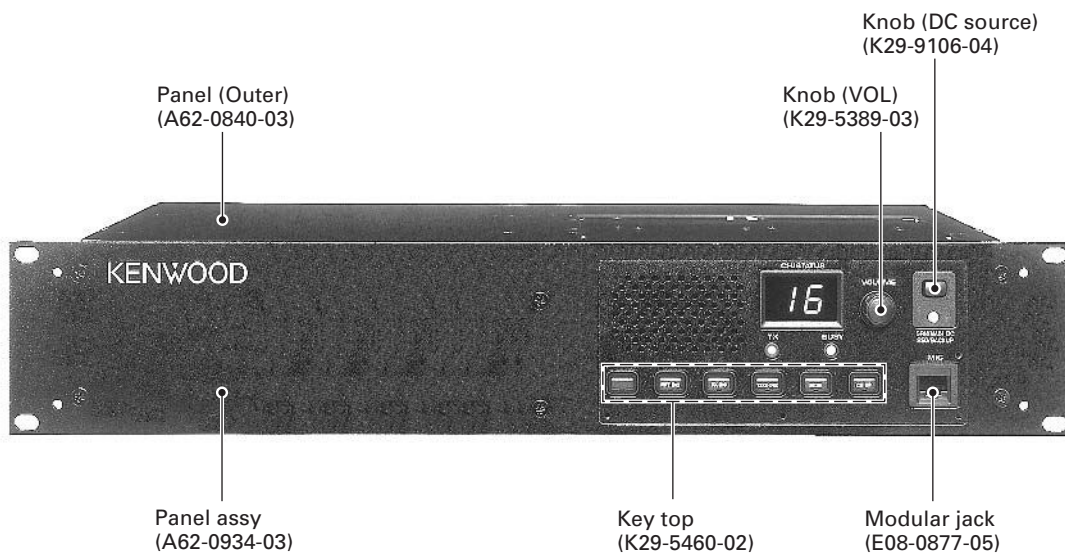


This supplement to the Service Manual is available for products with serial number 50500001 or later.
This Service Manual contains a parts list, schematic diagrams and PC boards of a new final unit for the TKR-750.
Since the adjustment procedure is the same as before, refer to the Service Manual (K,E : B51-8556-10 , C : B51-8567-00) for the TKR-750 for items not provided in this Service Manual.



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TKR-750

PARTS LIST

* New Parts. Δ indicates safety critical components.

Parts without **Parts No.** are not supplied.

Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.

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

L : Scandinavia

Y : PX (Far East, Hawaii)

Y : AAFES (Europe)

C : China

K : USA

T : England

X : Australia

P : Canada

E : Europe

M : Other Areas

TKR-750 (Y54-318X-XX)

FINAL UNIT (X45-3730-XX)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
TKR-750					
-			G02-0894-04	EARTH SPRING (FINAL FET)	
-		*	J21-8467-04	HARDWARE FIXTURE (DRIVE FET)	
FINAL UNIT (X45-3730-XX) -10 : K,E,C -11 : K2,C2					
C1,2			CK73GB1H102K	CHIP C 1000PF K	
C3			C90-2146-05	ELECTRO 100UF 25WV	
C7			CK73GB1H102K	CHIP C 1000PF K	
C9,10			CK73GB1H102K	CHIP C 1000PF K	
C11			CC73GCH1H470J	CHIP C 47PF J	
C12			CK73GB1H102K	CHIP C 1000PF K	
C13			CK73FB1E104K	CHIP C 0.10UF K	
C14,15			CK73GB1H102K	CHIP C 1000PF K	
C16			CK73FB1H102K	CHIP C 1000PF K	
C19			C93-0603-05	CHIP C 1000PF 500WV	
C21			C93-0564-05	CHIP C 22PF 500WV	
C22			C93-0568-05	CHIP C 47PF 500WV	
C27			CK73FB1H102K	CHIP C 1000PF K	
C28			CK73GB1H102K	CHIP C 1000PF K	
C29			C93-0603-05	CHIP C 1000PF 500WV	
C30			C93-0573-05	CHIP C 120PF 500WV	
C31			C93-0565-05	CHIP C 27PF 500WV	
C32			C93-0603-05	CHIP C 1000PF 500WV	
C35			CK73GB1H102K	CHIP C 1000PF K	
C37			CK73FB1E474K	CHIP C 0.47UF K	
C39			CK73GB1H102K	CHIP C 1000PF K	
C42			CK73FB1H103K	CHIP C 0.010UF K	
C43,44			CK73GB1H102K	CHIP C 1000PF K	
C46			C93-0603-05	CHIP C 1000PF 500WV	
C47			CM73F2H360J	CHIP C 36PF J	K2,C2
C49			C93-0564-05	CHIP C 22PF 500WV	
C54			CM73F2H102J	CHIP C 1000PF J	
C55			CK73GB1H103K	CHIP C 0.010UF K	
C57			C90-2143-05	ELECTRO 47UF 25WV	
C64			CK73GB1H102K	CHIP C 1000PF K	
C68			CK73GB1H102K	CHIP C 1000PF K	
C69,70			C93-0559-05	CHIP C 9.0PF 500WV	
C71,72			C93-0564-05	CHIP C 22PF 500WV	
C74			C93-0567-05	CHIP C 39PF 500WV	
C77			C93-0565-05	CHIP C 27PF 500WV	
C80-87			CK73GB1H102K	CHIP C 1000PF K	
C90			CK73GB1H102K	CHIP C 1000PF K	
C91			C92-0777-05	ELECTRO 1000UF 25WV	
C92			CM73F2H102J	CHIP C 1000PF J	
C96			CC73FCH1H180J	CHIP C 18PF J	
C98			CK73GB1H102K	CHIP C 1000PF K	
C99			C90-2143-05	ELECTRO 47UF 25WV	
C106-109			CK73GB1H102K	CHIP C 1000PF K	
C110			C92-0628-05	CHIP-TAN 10UF 10WV	
C112			C93-0560-05	CHIP C 10PF 500WV	
C117			CM73F2H221J	CHIP C 220PF J	
C118			CK73FB1E474K	CHIP C 0.47UF K	
C136,137			CK73GB1H102K	CHIP C 1000PF K	

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
C140			CC73FCH1H100D	CHIP C 10PF D	
C142			CC73FCH1H020C	CHIP C 2.0PF C	
C143			CC73FCH1H330J	CHIP C 33PF J	
C160			CM73F2H102J	CHIP C 1000PF J	
C161,162			CM73F2H270J	CHIP C 27PF J	
C163			C93-0570-05	CHIP C 68PF 500WV	
C164			CM73F2H820J	CHIP C 82PF J	
CN1			E04-0154-05	PIN SOCKET	
CN3			E40-5632-05	PIN ASSY	
CN4			E40-3246-05	PIN ASSY	
CN5			E40-5703-05	PIN ASSY	
CN6-8			E23-0462-05	TERMINAL	
F1			F53-0217-05	FUSE	
CN51,52			J13-0071-05	FUSE HOLDER	
L2			L40-4775-34	SMALL FIXED INDUCTOR (47NH)	
L3			L40-6875-34	SMALL FIXED INDUCTOR (68NH)	
L4,5			L34-4518-05	AIR-CORE COIL	
L6			L34-4520-05	AIR-CORE COIL	
L7			L34-4523-05	AIR-CORE COIL	
L8			L34-4517-05	AIR-CORE COIL	K2,C2
L8			L34-4518-05	AIR-CORE COIL	K,E,C
L9-11			L34-4520-05	AIR-CORE COIL	
L12			L34-4523-05	AIR-CORE COIL	
L15			L40-4785-34	SMALL FIXED INDUCTOR (470NH)	
R1			RK73FB2A100J	CHIP R 10 J 1/10W	
R6			RK73GB1J220J	CHIP R 22 J 1/16W	
R7			RK73GB1J822J	CHIP R 8.2K J 1/16W	
R8			RK73FB2A100J	CHIP R 10 J 1/10W	
R9			RK73FB2A560J	CHIP R 56 J 1/10W	
R10			RK73FB2A151J	CHIP R 150 J 1/10W	
R11			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R13			RK73GB1J471J	CHIP R 470 J 1/16W	
R14			R92-0700-05	CHIP R 180 J 1/2W	
R15			R92-0686-05	CHIP R 33 J 1/2W	
R16			R92-0700-05	CHIP R 180 J 1/2W	
R17			RK73FB2A154J	CHIP R 150K J 1/10W	
R18			RK73EB2B101J	CHIP R 100 J 1/8W	K,E,C
R18			RK73EB2B470J	CHIP R 47 J 1/8W	K2,C2
R19			RK73FB2A104J	CHIP R 100K J 1/10W	
R20,21			R92-1252-05	CHIP R 0 OHM J 1/16W	
R22			R92-1213-05	CHIP R 100 J 1/2W	
R23,24			RK73FB2A104J	CHIP R 100K J 1/10W	
R25			RK73GB1J473J	CHIP R 47K J 1/16W	
R26			RK73GB1J101J	CHIP R 100 J 1/16W	
R27			RK73GB1J471J	CHIP R 470 J 1/16W	
R28			RK73GB1J105J	CHIP R 1.0M J 1/16W	
R29			RK73GB1J471J	CHIP R 470 J 1/16W	
R30			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R31			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R32			RK73GB1J104J	CHIP R 100K J 1/16W	
R34			R92-1252-05	CHIP R 0 OHM J 1/16W	
R35			RK73GB1J393J	CHIP R 39K J 1/16W	
R36			R92-1252-05	CHIP R 0 OHM J 1/16W	
R37			R92-0670-05	CHIP R 0 OHM	

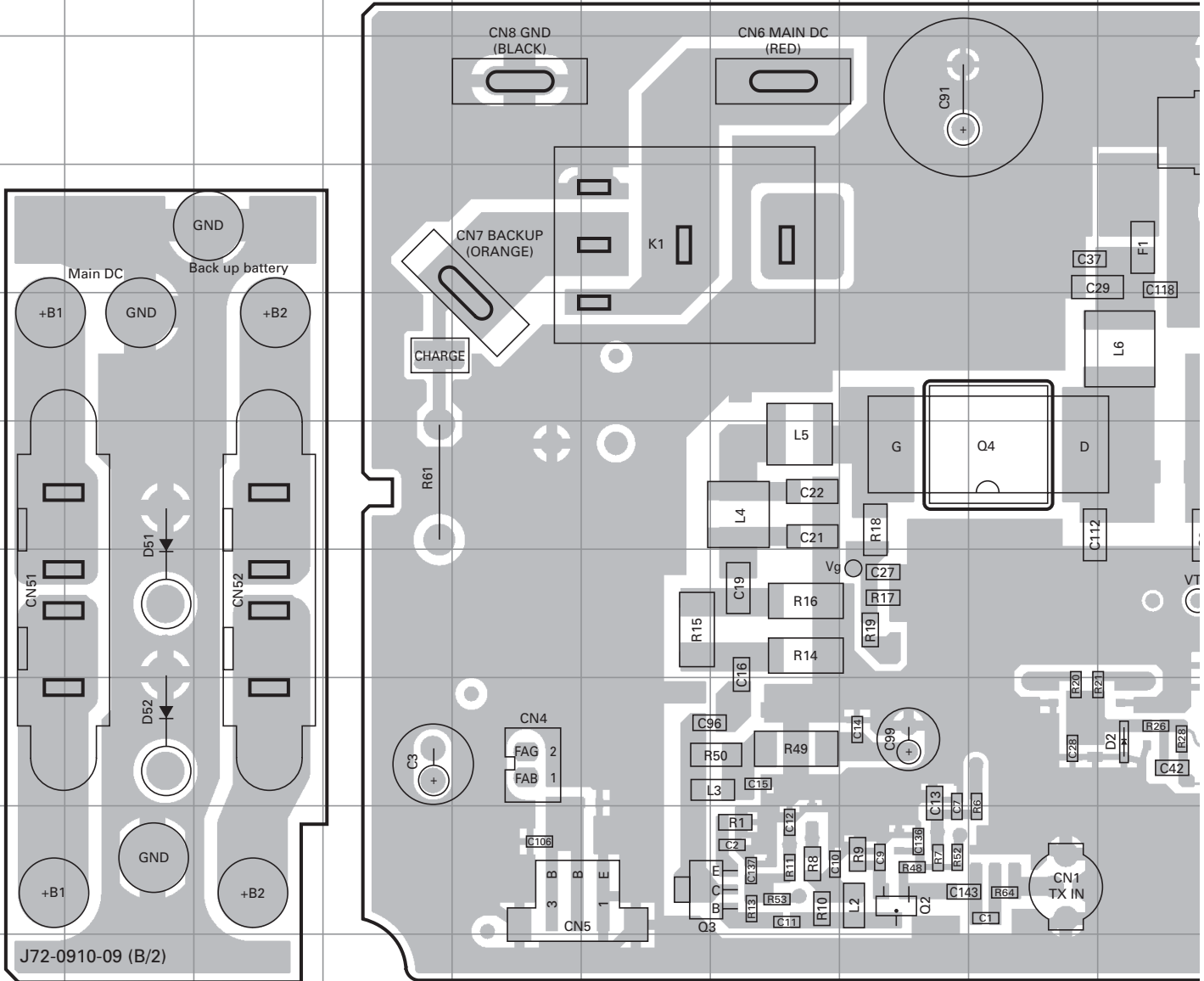
PARTS LIST

FINAL UNIT (X45-3730-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
R38			RK73GB1J103J	CHIP R 10K J 1/16W							
R40			RK73FB2A121J	CHIP R 120 J 1/10W							
R41			R92-1252-05	CHIP R 0 OHM J 1/16W							
R43			RK73FB2A101J	CHIP R 100 J 1/10W							
R45			RK73GB1J102J	CHIP R 1.0K J 1/16W							
R48			RK73GB1J471J	CHIP R 470 J 1/16W							
R49			R92-1217-05	CHIP R 0 OHM							
R50			RK73EB2B222J	CHIP R 2.2K J 1/8W							
R52,53			RK73GB1J102J	CHIP R 1.0K J 1/16W							
R55			RK73GB1J102J	CHIP R 1.0K J 1/16W							
R56			R92-1317-05	CHIP R 18 J 1W							
R57			RK73GB1J224J	CHIP R 220K J 1/16W							
R58			RK73GB1J104J	CHIP R 100K J 1/16W							
R59			RK73GB1J393J	CHIP R 39K J 1/16W							
R60			RK73GB1J154J	CHIP R 150K J 1/16W							
R61			R92-2687-05	RESISTOR 5.6 J 5W							
R62,63			R92-0670-05	CHIP R 0 OHM							
R64			R92-1252-05	CHIP R 0 OHM J 1/16W							
R69			RK73GB1J222J	CHIP R 2.2K J 1/16W							
VR1			R12-6429-05	TRIMMING POT. (100K)							
K1			S76-0426-05	RELAY							
D1			1SS226	DIODE							
D2			02DZ6.2(Y)	ZENER DIODE							
D4,5			HSM88AS	DIODE							
D6			1SS355	DIODE							
D7			ZSA5A27	ZENER DIODE							
D8			RB051L-40	DIODE							
D9			MINISMDC050-02	VARIATOR							
D51,52			DSA3A1	DIODE							
IC1			TA75W01FU	MOS IC							
IC2			TK11050M	ANALOG IC							
IC3			NJM78L05UA	BI-POLAR IC							
Q2			2SC3356(R24)	TRANSISTOR							
Q3			2SC3357	TRANSISTOR							
Q4			PD55003S	DRIVE FET							
Q5			RD70HVF1-01	FINAL FET							
Q8			2SC4116(Y)	TRANSISTOR							
Q9			DTD123EK	DIGITAL TRANSISTOR							
TH1			PTH9M04BE471TS	THERMISTOR							

TKR-750 PC BOARD

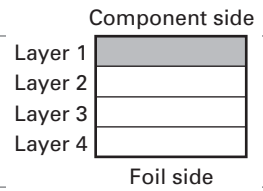
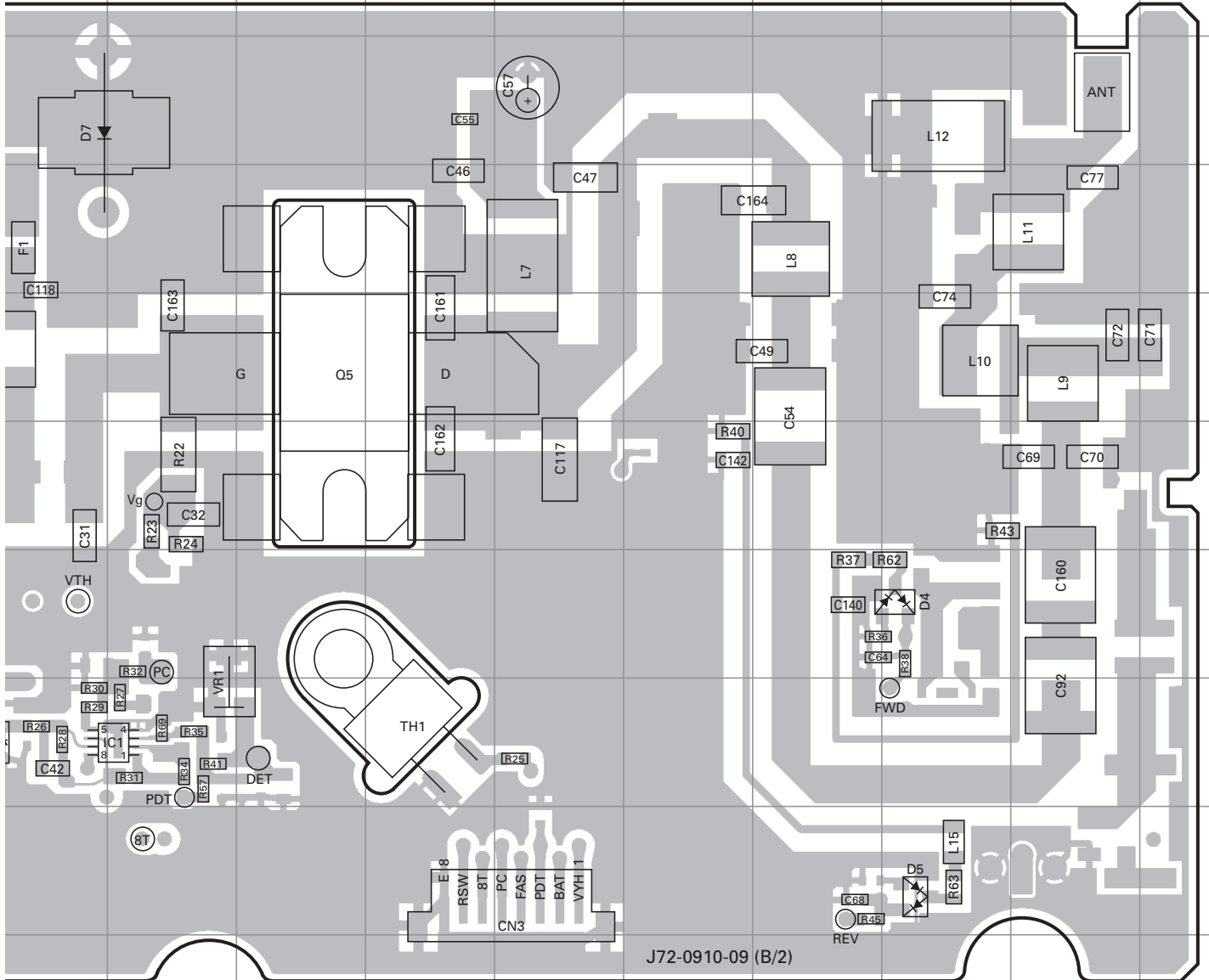
FINAL UNIT (X45-3730-XX) -10 : K,E,C -11 : K2,C2
Component side view (J72-0910-09)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC1	8K	Q5	5L	D7	3J
Q2	9H	D2	8J	D51	7B
Q3	9F	D4	7Q	D52	8B
Q4	6I	D5	9Q		

PC BOARD TKR-750

FINAL UNIT (X45-3730-XX) -10 : K,E,C -11 : K2,C2
Component side view (J72-0910-09)

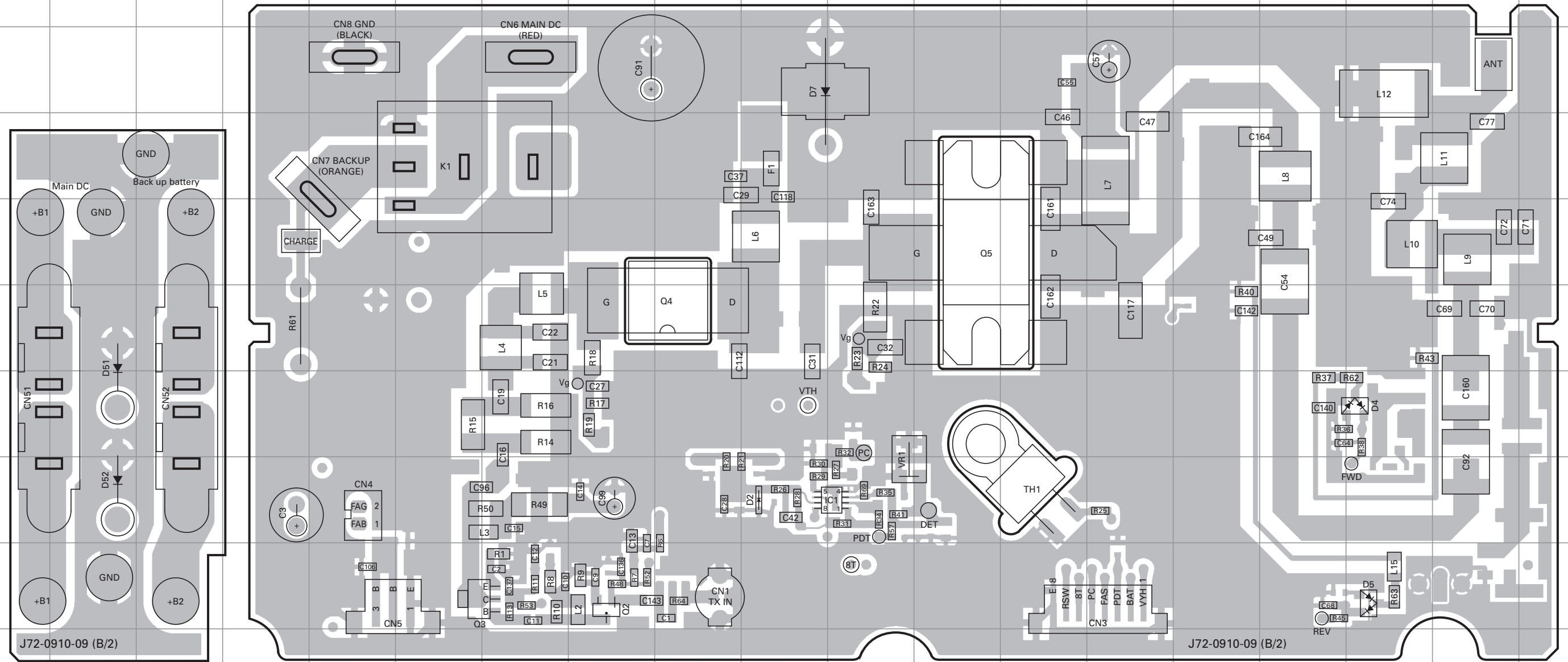


TKR-750 PC BOARD

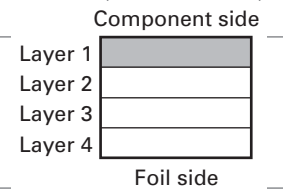
PC BOARD TKR-750

FINAL UNIT (X45-3730-XX) -10 : K,E,C -11 : K2,C2
Component side view (J72-0910-09)

FINAL UNIT (X45-3730-XX) -10 : K,E,C -11 : K2,C2
Component side view (J72-0910-09)

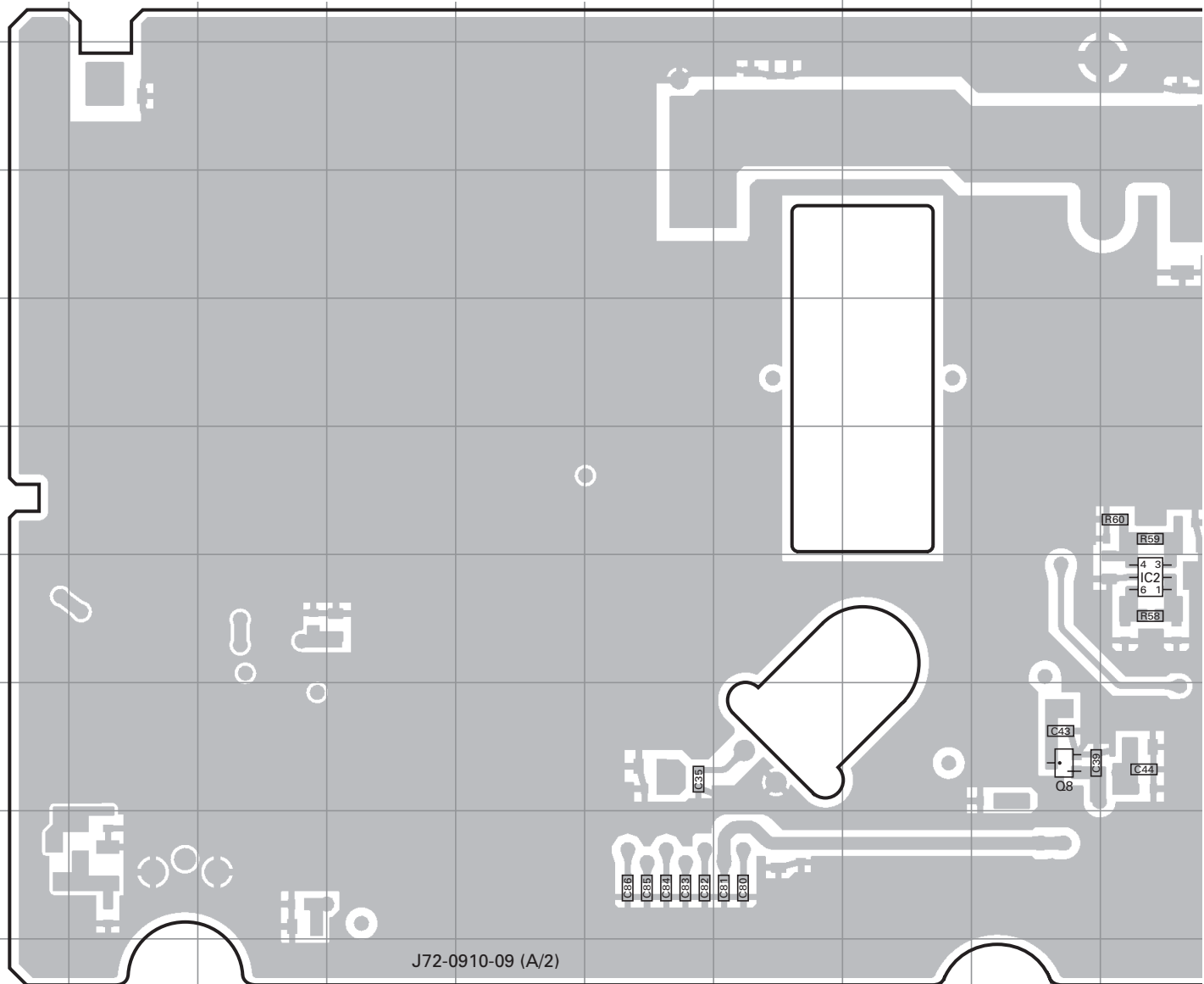


Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC1	8K	Q5	5L	D7	3J
Q2	9H	D2	8J	D51	7B
Q3	9F	D4	7Q	D52	8B
Q4	6I	D5	9Q		



TKR-750 PC BOARD

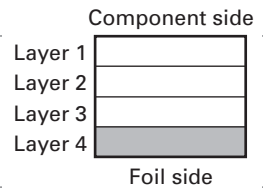
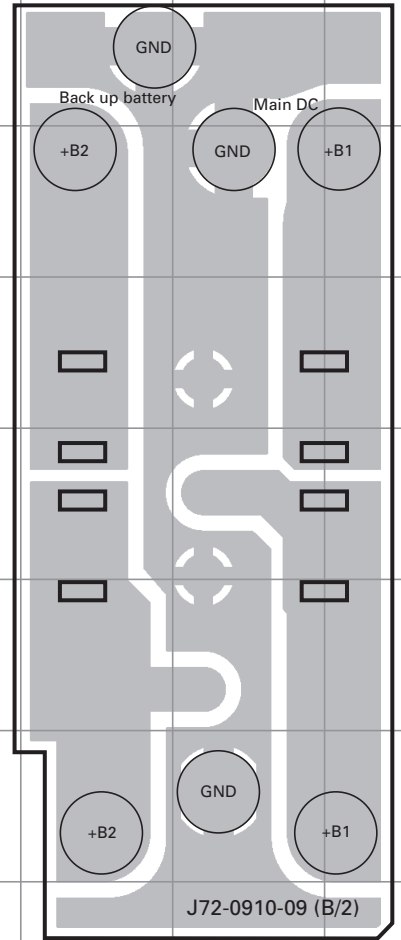
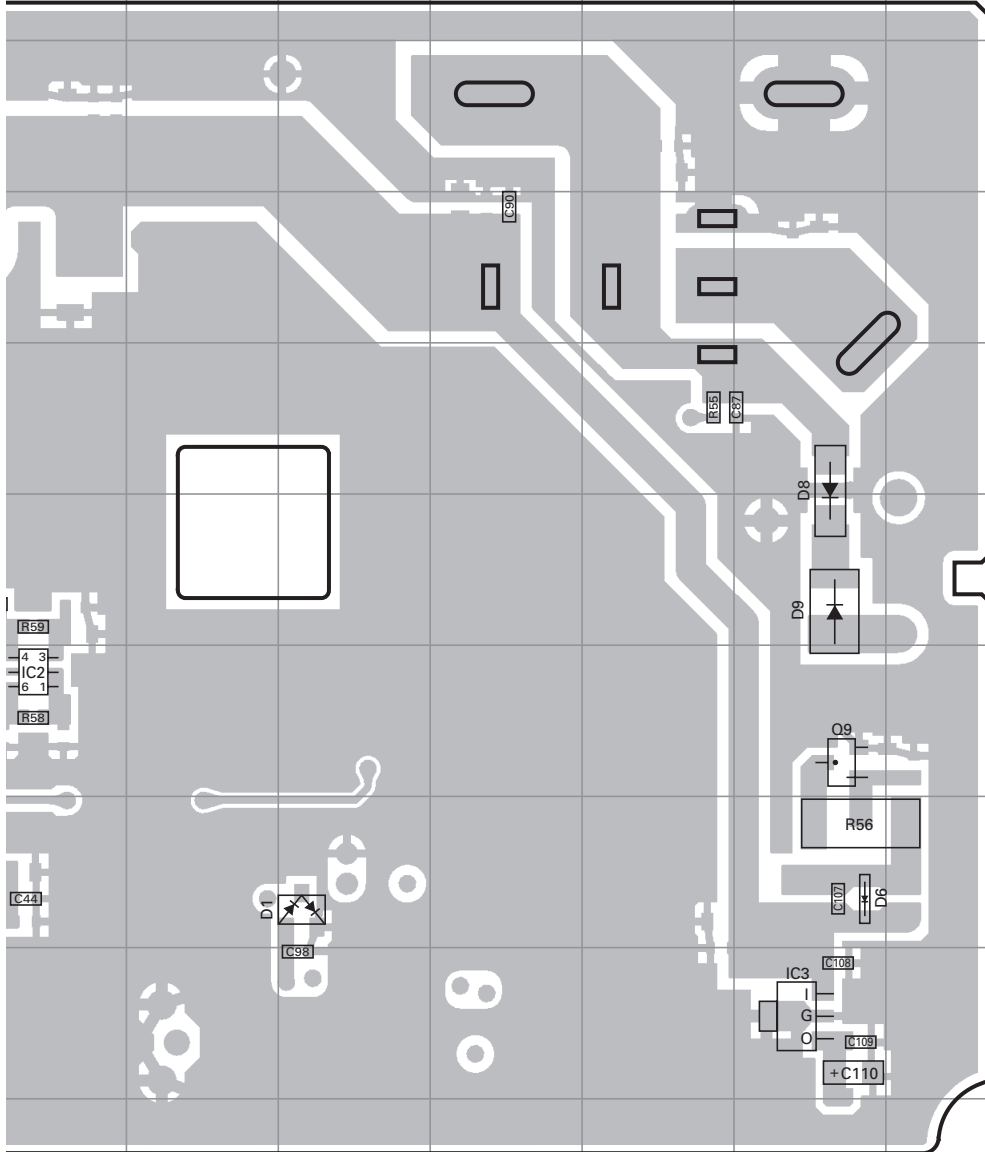
FINAL UNIT (X45-3730-XX) -10 : K,E,C -11 : K2,C2
 Foil side view (J72-0910-09)



Ref. No.	Address	Ref. No.	Address
IC2	7J	D1	8L
IC3	9O	D6	8O
Q8	8I	D8	5O
Q9	7O	D9	6O

PC BOARD TKR-750

FINAL UNIT (X45-3730-XX) -10 : K,E,C -11 : K2,C2
Foil side view (J72-0910-09)

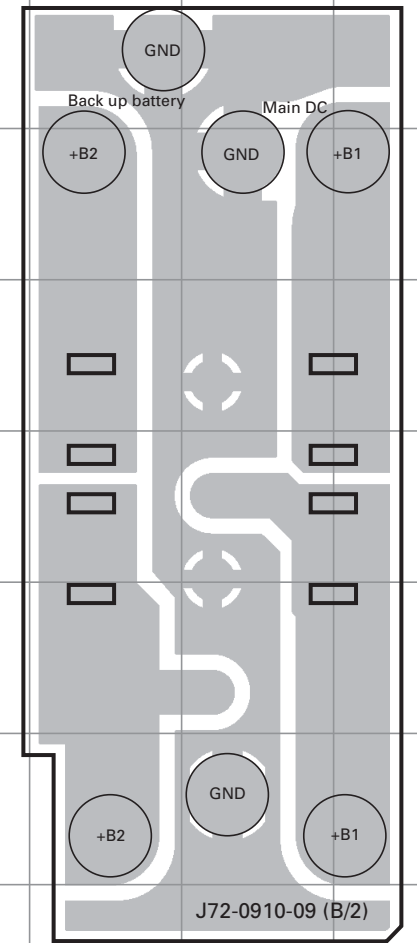
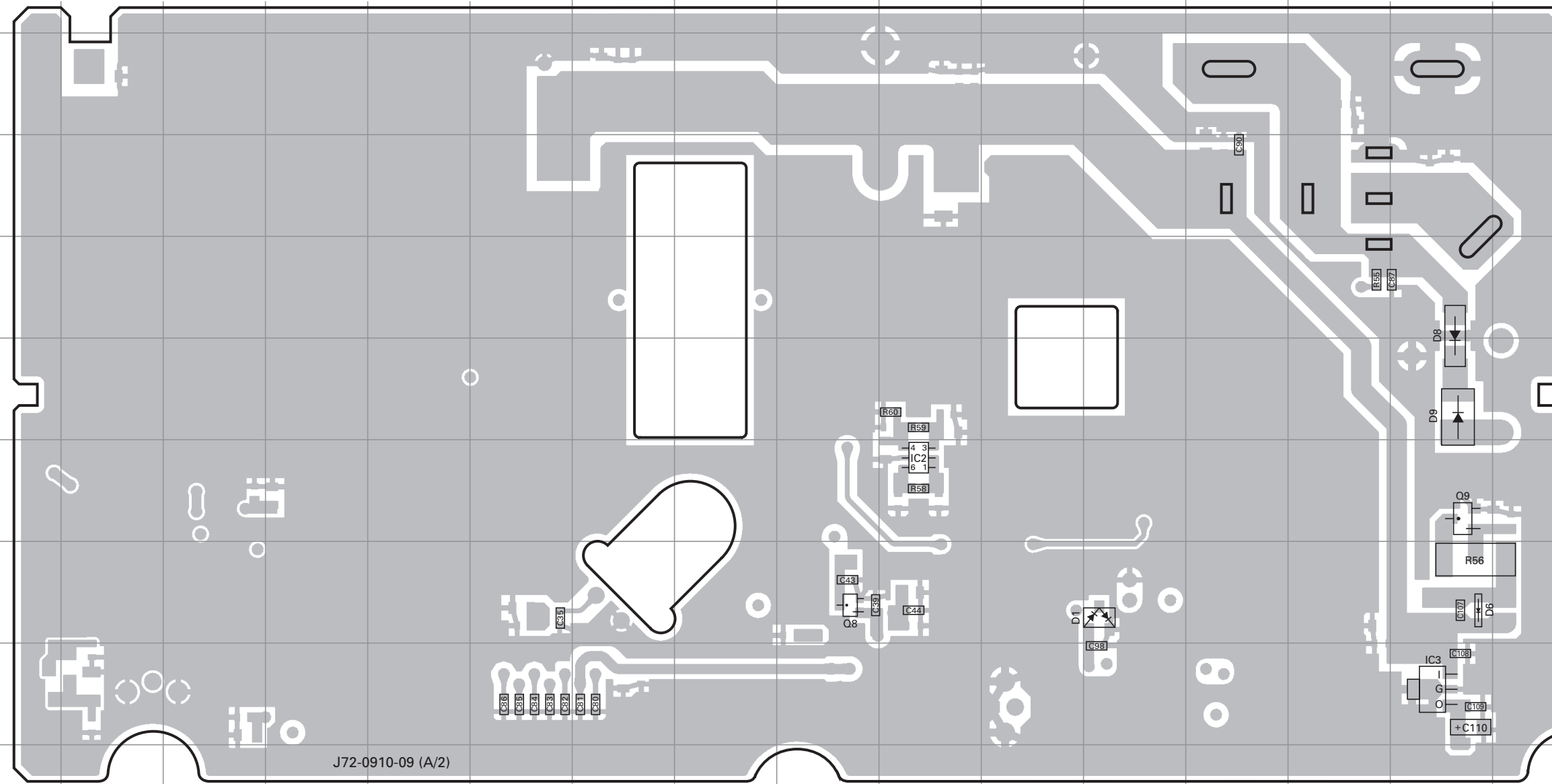


TKR-750 PC BOARD

PC BOARD TKR-750

FINAL UNIT (X45-3730-XX) -10 : K,E,C -11 : K2,C2
Foil side view (J72-0910-09)

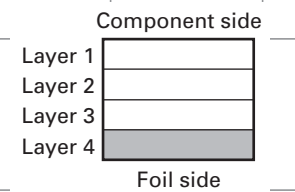
FINAL UNIT (X45-3730-XX) -10 : K,E,C -11 : K2,C2
Foil side view (J72-0910-09)



J72-0910-09 (A/2)

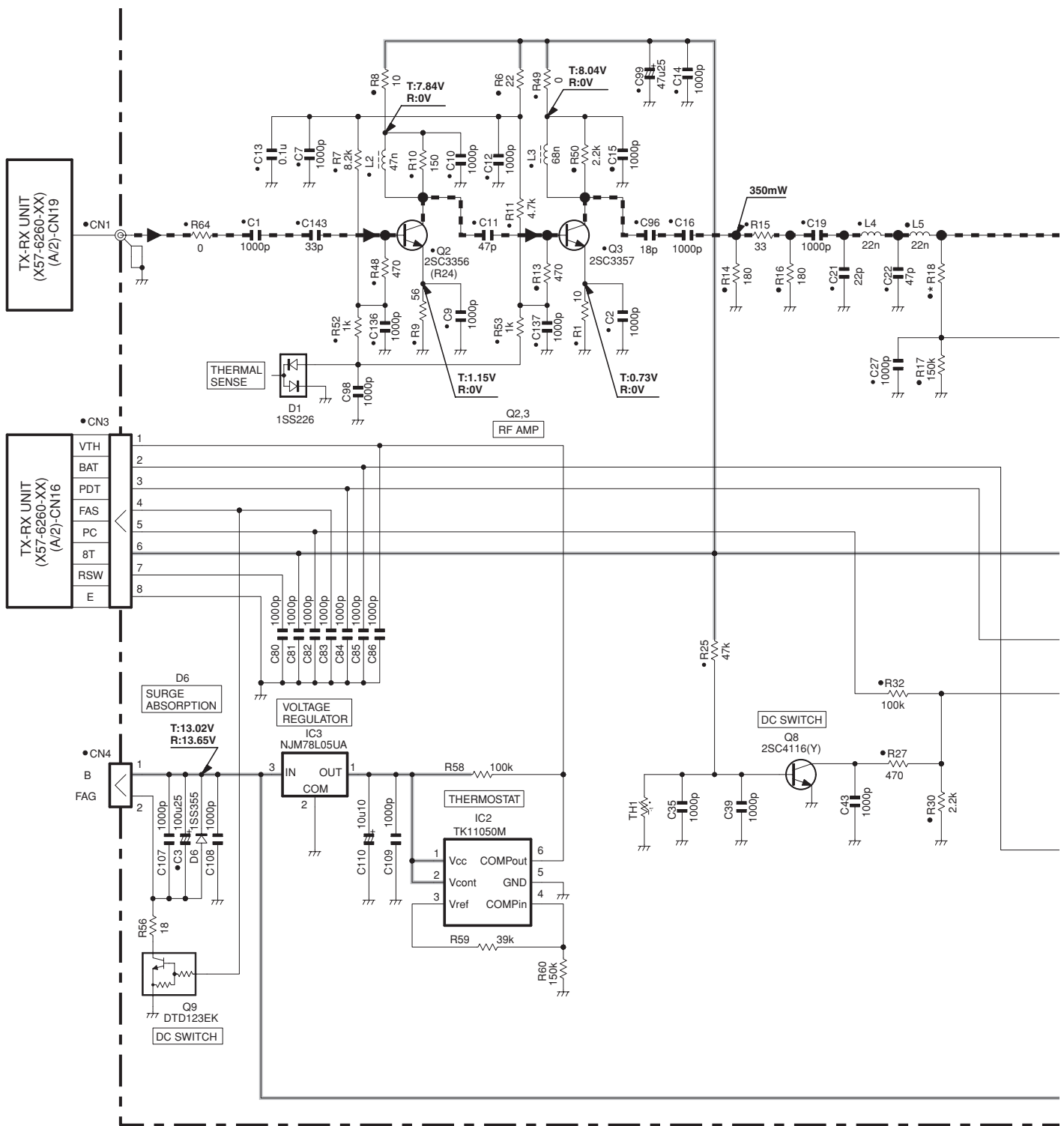
J72-0910-09 (B/2)

Ref. No.	Address	Ref. No.	Address
IC2	7J	D1	8L
IC3	9O	D6	8O
Q8	8I	D8	5O
Q9	7O	D9	6O



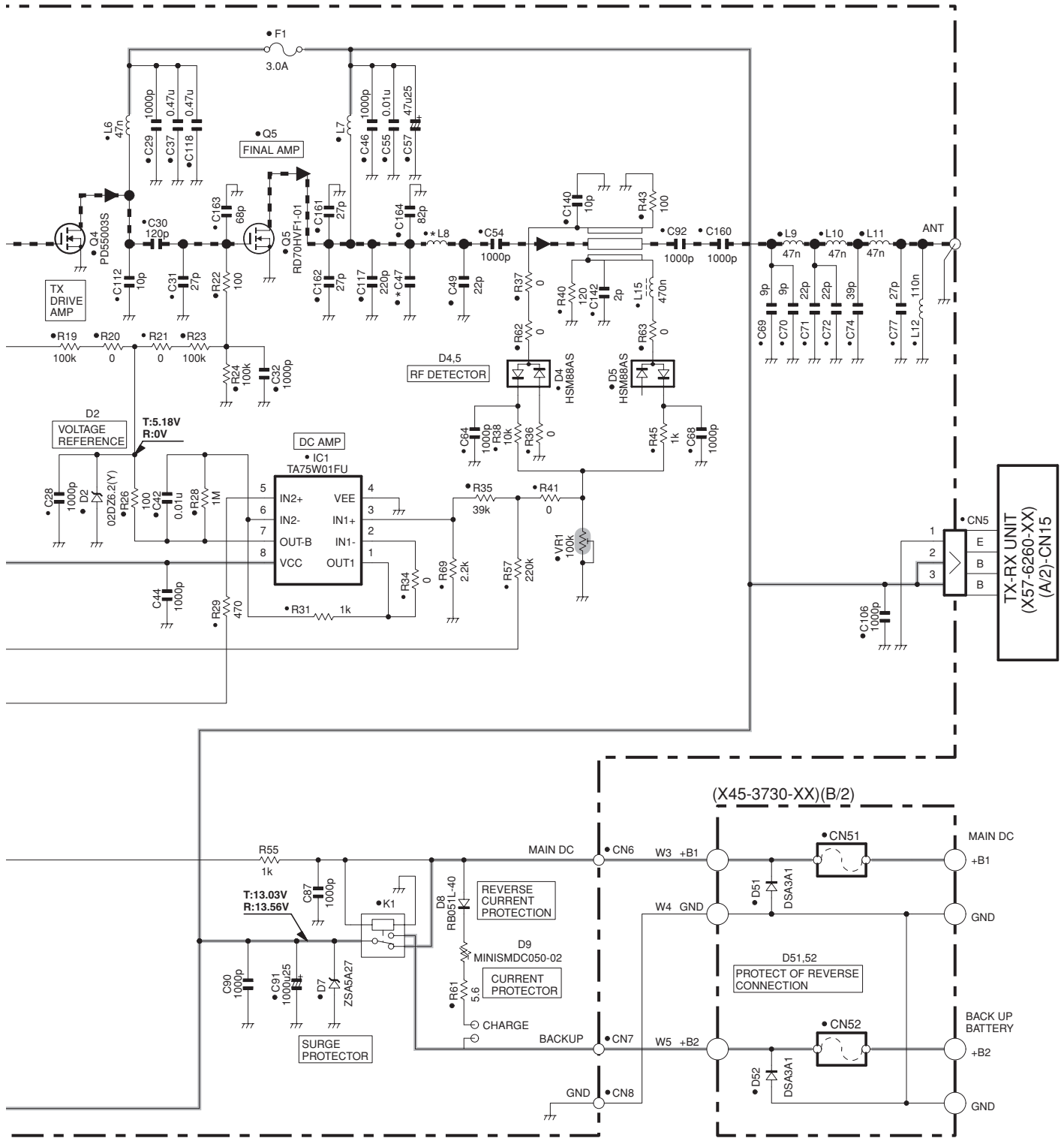
TKR-750 SCHEMATIC DIAGRAM

FINAL UNIT
(X45-3730-XX)(A/2)



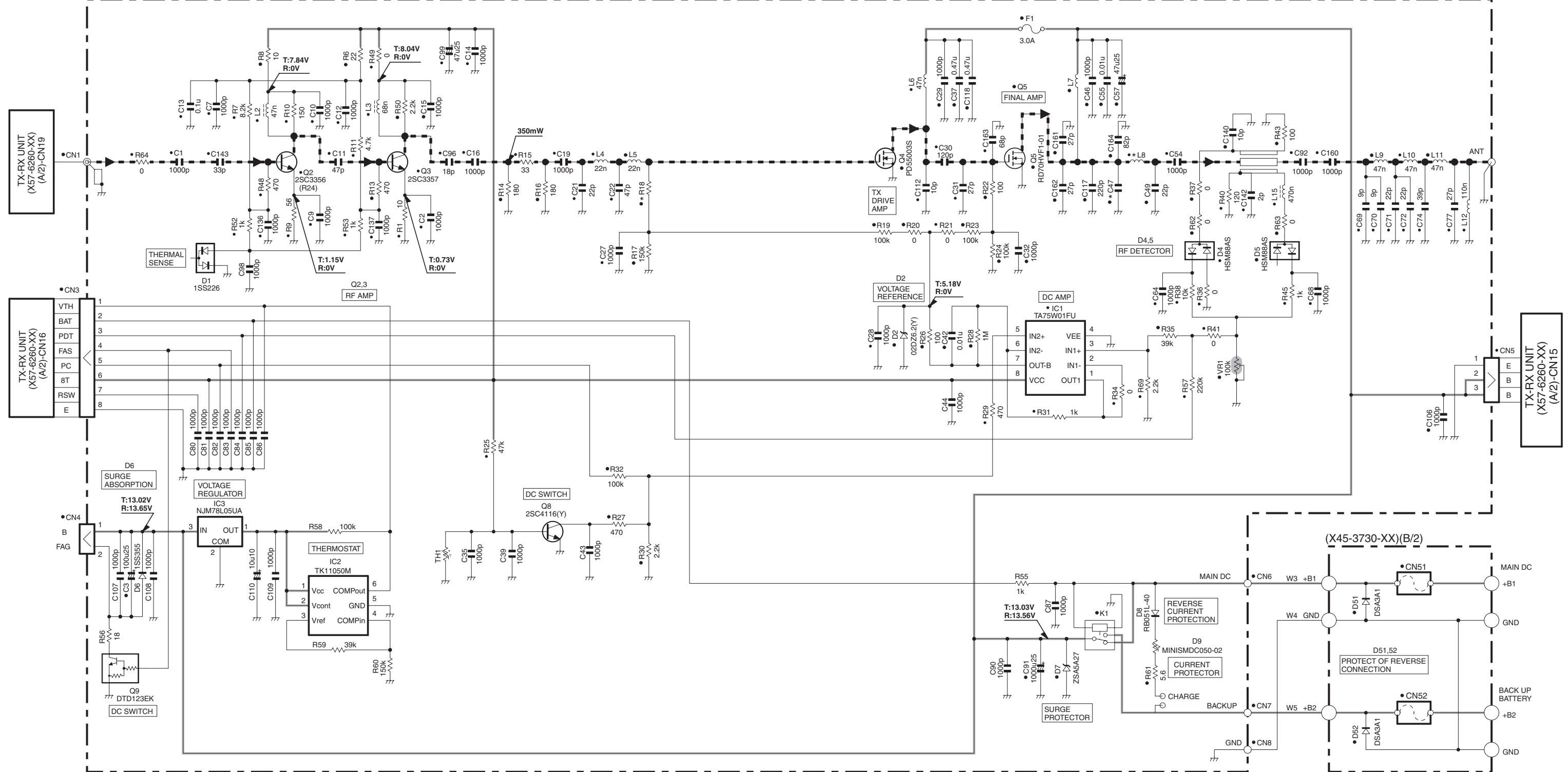
	X45-3730-XX	R18	C47	L8	
-10	K,E,C	146-174MHz	100	NO	22n
-11	K2,C2	136-150MHz	47	36p	15n

SCHEMATIC DIAGRAM TKR-750



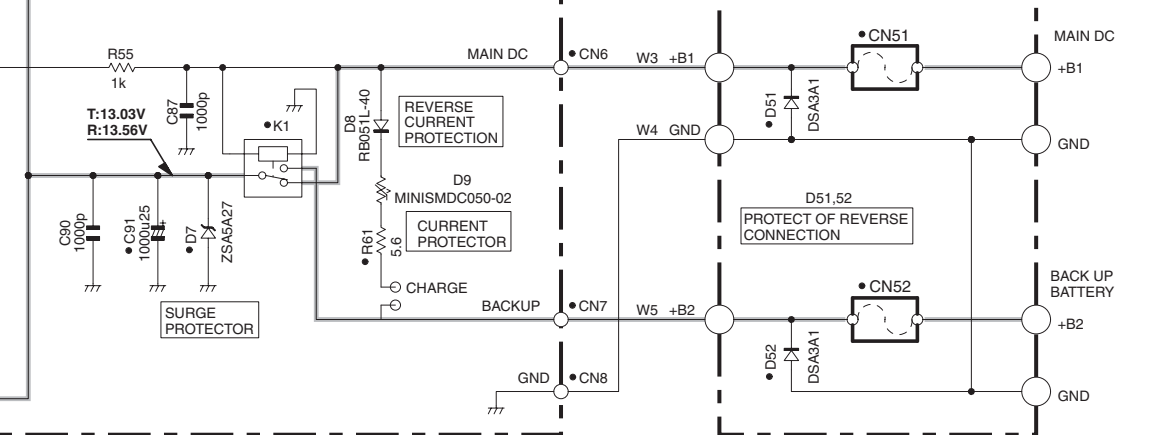
Note : The components marked with a dot (•) are parts of layer 1.

FINAL UNIT
(X45-3730-XX)(A/2)



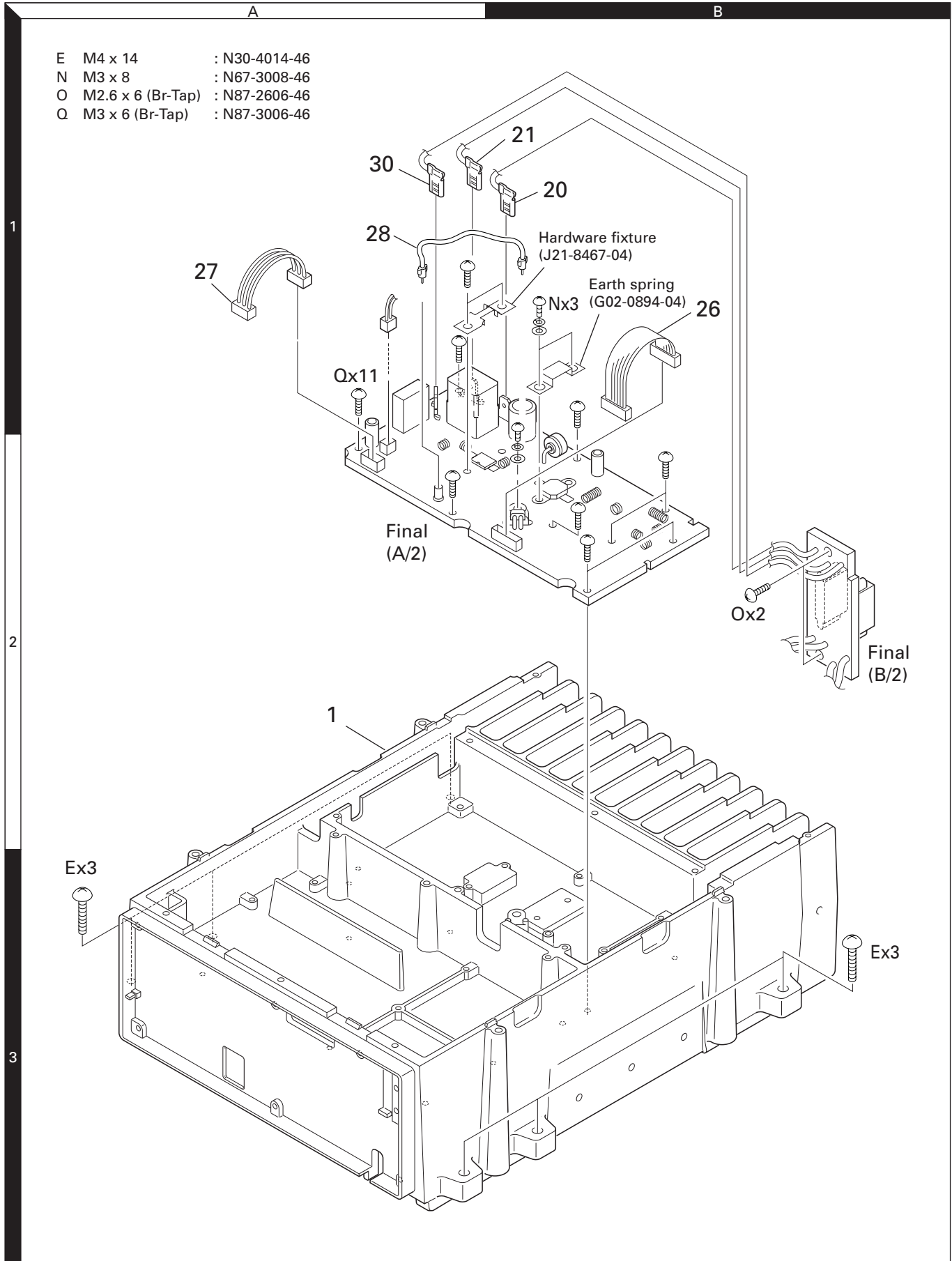
X45-3730-XX		R18	C47	L8	
-10	K,E,C	146-174MHz	100	NO	22n
-11	K2,C2	136-150MHz	47	36p	15n

(X45-3730-XX)(B/2)



TKR-750

EXPLODED VIEW



SPECIFICATIONS (K,K2,C,C2 TYPE)

GENERAL

Frequency Range	K,C : 146 to 174MHz	K2,C2 : 136 to 150MHz
Number of Channels	16 channel	
Channel Spacing	K,K2 : Wide : 30kHz, 25kHz Narrow : 15kHz, 12.5kHz (PLL channel stepping 2.5kHz/5kHz/6.25kHz/7.5kHz)	
	C,C2 : Wide : 25kHz Narrow : 12.5kHz (PLL channel stepping 5kHz/6.25kHz)	
Operating Voltage	13.6V DC±15%	
Current Drain		
Standby	0.8A	
Standby w/power save	0.3A (Operating mode DC-IN : Backup, FAN : Temp, SAVE : ON, DISP : OFF)	
Receive	1.2A	
Transmit/Receive	Less than 13A	
Duty Cycle		
Receive	100%	
Transmit	100% (100% @25W)	
Frequency Stability	Less than ±0.0002% -30°C to +60°C (-22°F to +140°F)	
Antenna Impedance	50Ω	
Operating Temperature Range	-30°C to +60°C (-22°F to +140°F)	
Dimensions	483 (19) W x 88 (3-1/2) H x 340 (13-1/3) D mm (inch)	
Weight	9.7kg (21.4 lbs.)	

RECEIVER (Measured by TIA/EIA-603)

Sensitivity		
12dB SINAD	0.35μV	
20dB Quieting	0.45μV	
Selectivity	K,K2 : Wide : 85dB (±30kHz) Narrow : 80dB (15kHz), 77dB (12.5kHz)	
	C,C2 : Wide : 85dB (±25kHz) Narrow : 77dB (12.5kHz)	
Intermodulation	K,K2 : Wide : 80dB (±30kHz/±60kHz) Narrow : 75dB (±15kHz/±30kHz)	
	C,C2 : Wide : 80dB (±25kHz/±50kHz) Narrow : 75dB (±12.5kHz/±25kHz)	
Hum and Noise	Wide : 50dB Narrow : 45dB	
Spurious & Image Rejection	90dB	
Audio Output (Ext. Speaker)	4W at 4Ω less than 5% distortion	
Audio Distortion (Ext. Speaker)	Less than 2.5% at 1000Hz	
Band Spread	3MHz	

TRANSMITTER (Measured by TIA/EIA-603)

RF Power Output	50W adjustable to 25W (100% duty @25W)	
Type of Emission	K,K2 : Wide : 16K0F3E Narrow : 11K0F3E	
	C,C2 : Wide : 16K0F3E Narrow : 8K50F3E	
Spurious Response	80dB	
FM Hum and Noise	Wide : 50dB Narrow : 45dB	
Audio Distortion	Less than 3% at 1000Hz	
Microphone Impedance	600Ω	
Band Spread	K,C : 28MHz K2,C2 : 14MHz	

TKR-750

SPECIFICATIONS (E TYPE)

GENERAL

Frequency Range	146 to 174MHz
Number of Channels	16 channel
Channel Spacing	Wide : 25kHz Narrow : 12.5kHz (PLL channel stepping 5kHz/6.25kHz)
Operating Voltage	13.2V DC
Current Drain	
Standby	0.8A
Standby w/power save	0.3A (Operating mode DC-IN : Backup, FAN : Temp, SAVE : ON, DISP : OFF)
Receive	1.2A
Transmit/Receive	Less than 13A
Duty Cycle	Receive : 100% Transmit : 100% (100% @25W)
Frequency Stability	Less than $\pm 0.0002\%$ -30°C to $+60^{\circ}\text{C}$
Antenna Impedance	50 Ω
Operating Temperature Range	-30°C to $+60^{\circ}\text{C}$
Dimensions	483 W x 88 H x 340 D mm
Weight	9.7kg

RECEIVER (Measured by EN 300 086)

Sensitivity	0.45 μV
Adjacent Channel Selectivity	85dB ($\pm 25\text{kHz}$) 77dB ($\pm 12.5\text{kHz}$)
Intermodulation	72dB
Spurious & Image Rejection	90dB
Audio Output (Ext. Speaker)	4W at 4 Ω less than 5% distortion
Audio Distortion (Ext. Speaker)	Less than 2.5% at 1000Hz
Band Spread	3MHz

TRANSMITTER (Measured by EN 300 086)

RF Power Output	50W adjustable to 25W (100% duty @25W)
Modulation Limiting	$\pm 5\text{kHz}$ at $\pm 25\text{kHz}$ $\pm 2.5\text{kHz}$ at $\pm 12.5\text{kHz}$
Spurious Emission	$-36\text{dBm} \leq 1\text{GHz}$ $-30\text{dBm} > 1\text{GHz}$
FM Noise (EIA)	25kHz : 50dB 12.5kHz : 45dB
Modulation Distortion	Less than 3% at 1000Hz
Microphone Impedance	600 Ω
Band Spread	28MHz

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