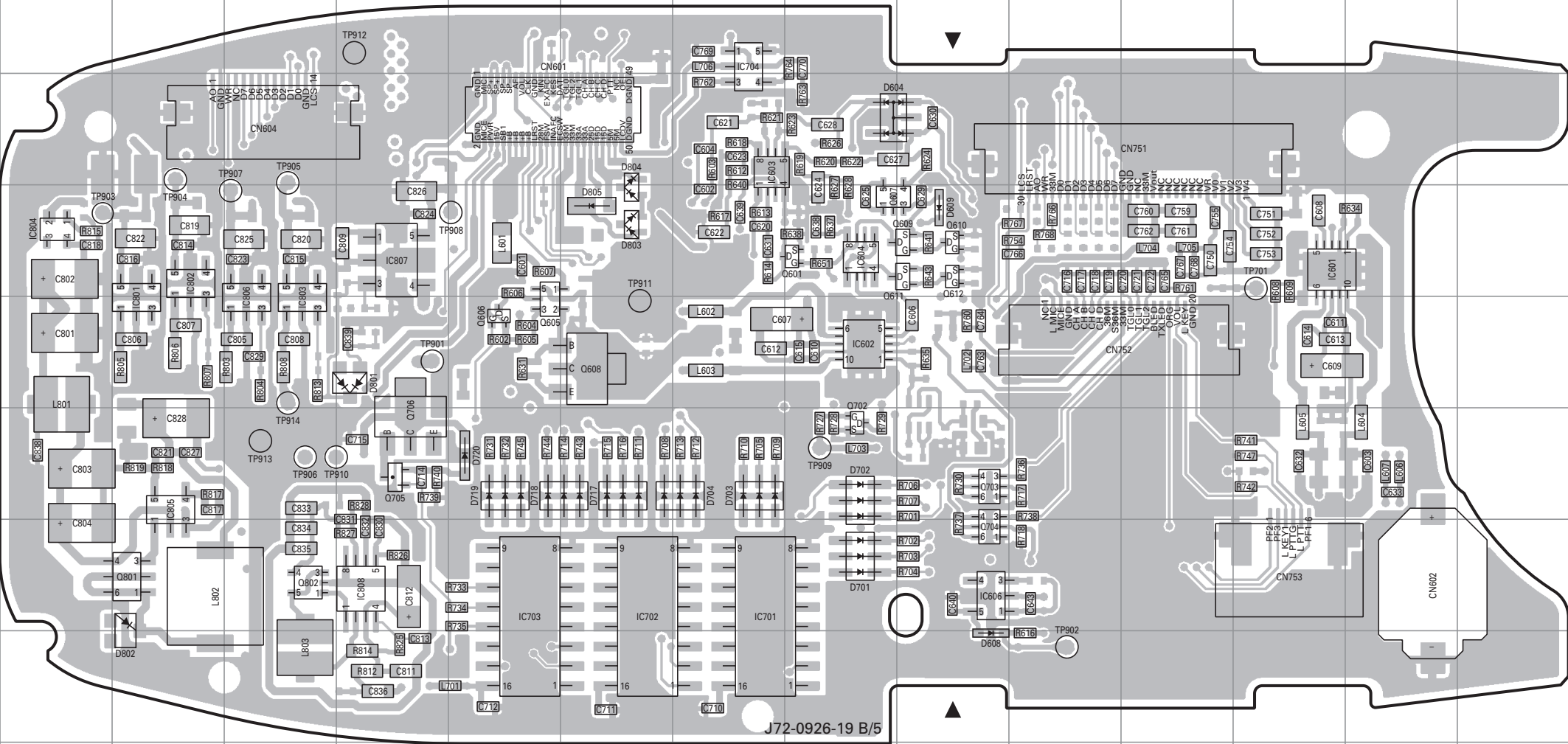
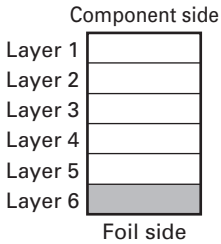


TK-5210 PC BOARD

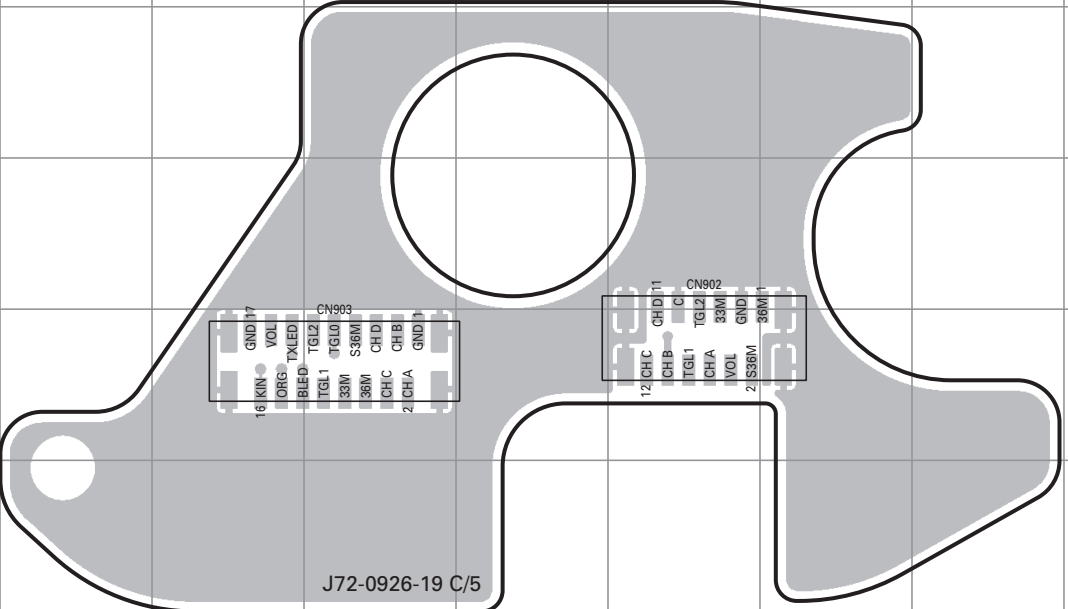
TX-RX UNIT (X57-6820-XX) (B/5) : Control section
-10 : K -11 : K2 -12 : K3 Foil side view (J72-0926-19 B/5)



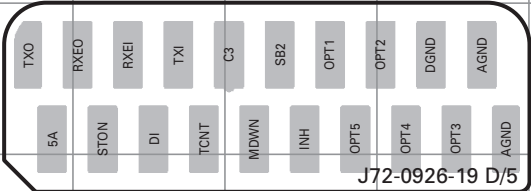
Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC601	4M	Q601	4I	D608	8J
IC602	5I	Q605	5F	D609	4J
IC603	3H	Q606	5F	D701	7I
IC604	4I	Q607	4I	D702	6I
IC606	7J	Q608	5G	D703	6H
IC701	7H	Q609	4J	D704	6H
IC702	7G	Q610	4J	D717	6G
IC703	7F	Q611	4J	D718	6G
IC704	2H	Q612	4J	D719	6F
IC801	5C	Q702	6I	D720	6F
IC802	4C	Q703	6J	D801	5E
IC803	5D	Q704	7J	D802	8C
IC804	4B	Q705	6E	D803	4G
IC805	6C	Q706	6E	D804	3G
IC806	5D	Q801	7C	D805	4G
IC807	4E	Q802	7D		
IC808	7E	D604	3I		



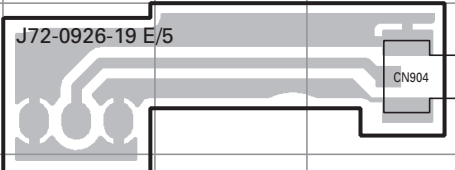
TX-RX UNIT (X57-6820-XX) (C/5) : Top section
-10 : K -11 : K2 -12 : K3 Foil side view (J72-0926-19 C/5)



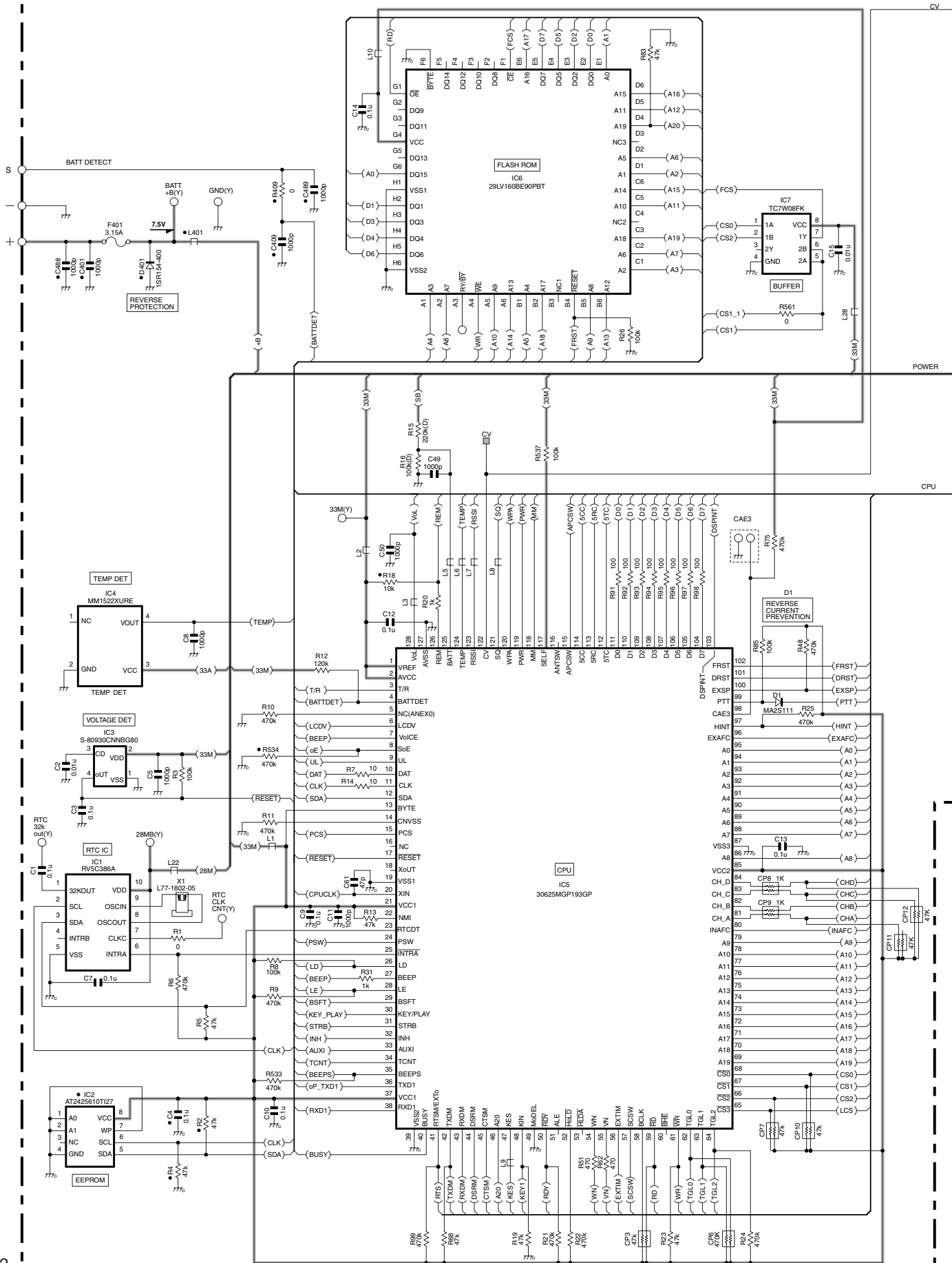
TX-RX UNIT (X57-6820-XX) (D/5)
: Option section
-10 : K -11 : K2 -12 : K3
Foil side view (J72-0926-19 D/5)



TX-RX UNIT (X57-6820-XX) (E/5)
: ANT section
-10 : K -11 : K2 -12 : K3
Foil side view (J72-0926-19 E/5)

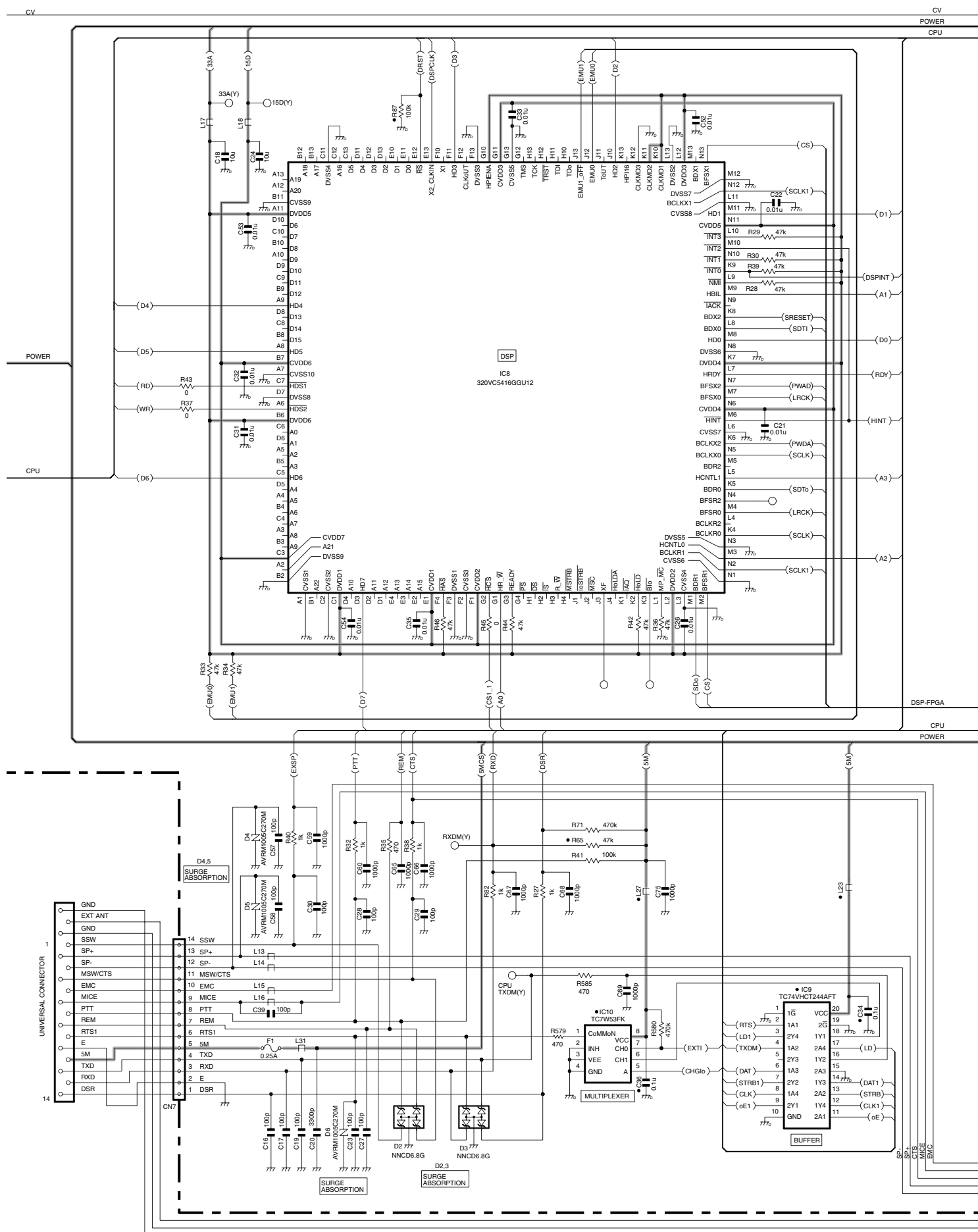


TX-RX UNIT :TX-RX SECTION(X57-6820-XX)(A/5)



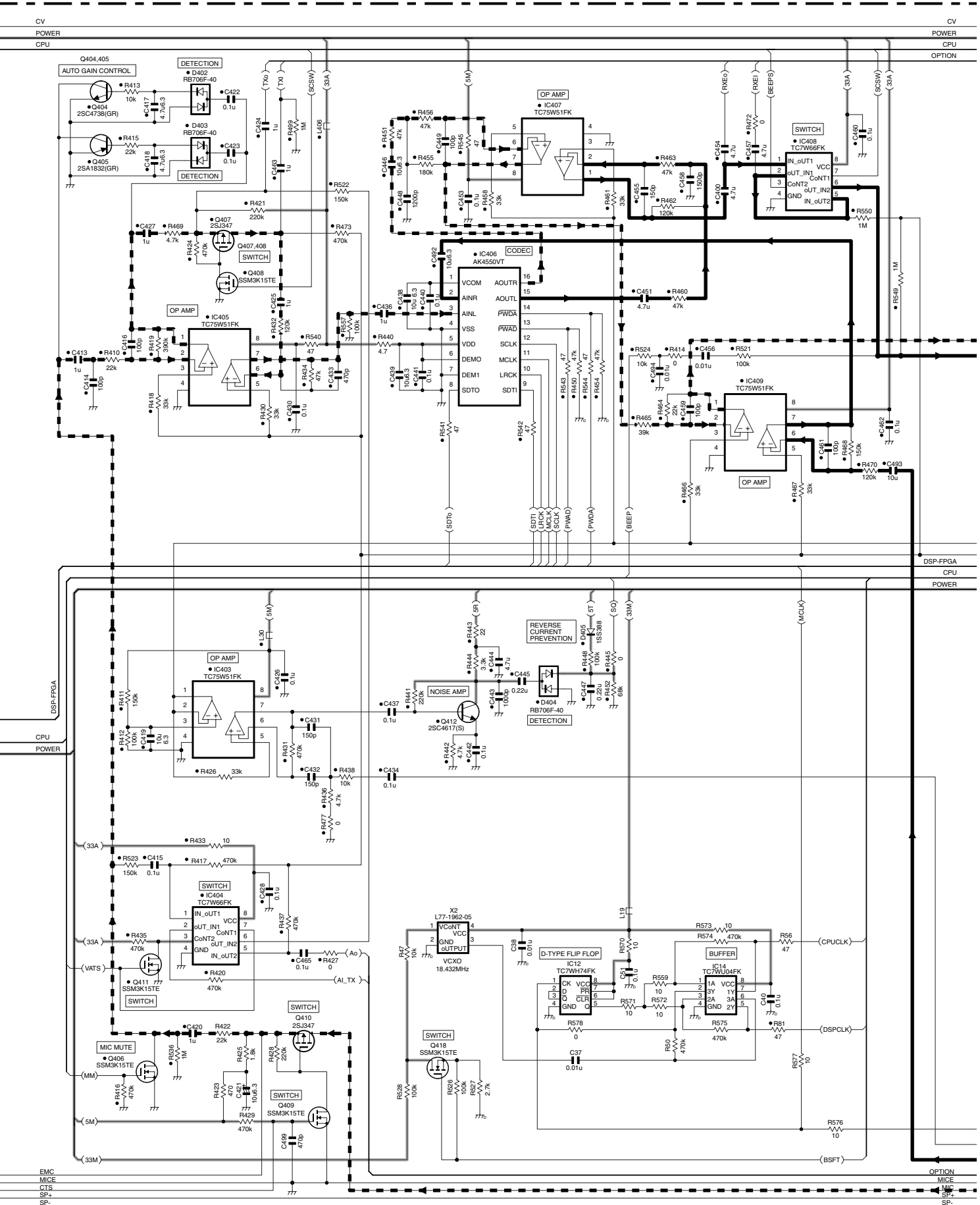
TK-5210

TX-RX UNIT :TX-RX SECTION(X57-6820-XX)(A/5)



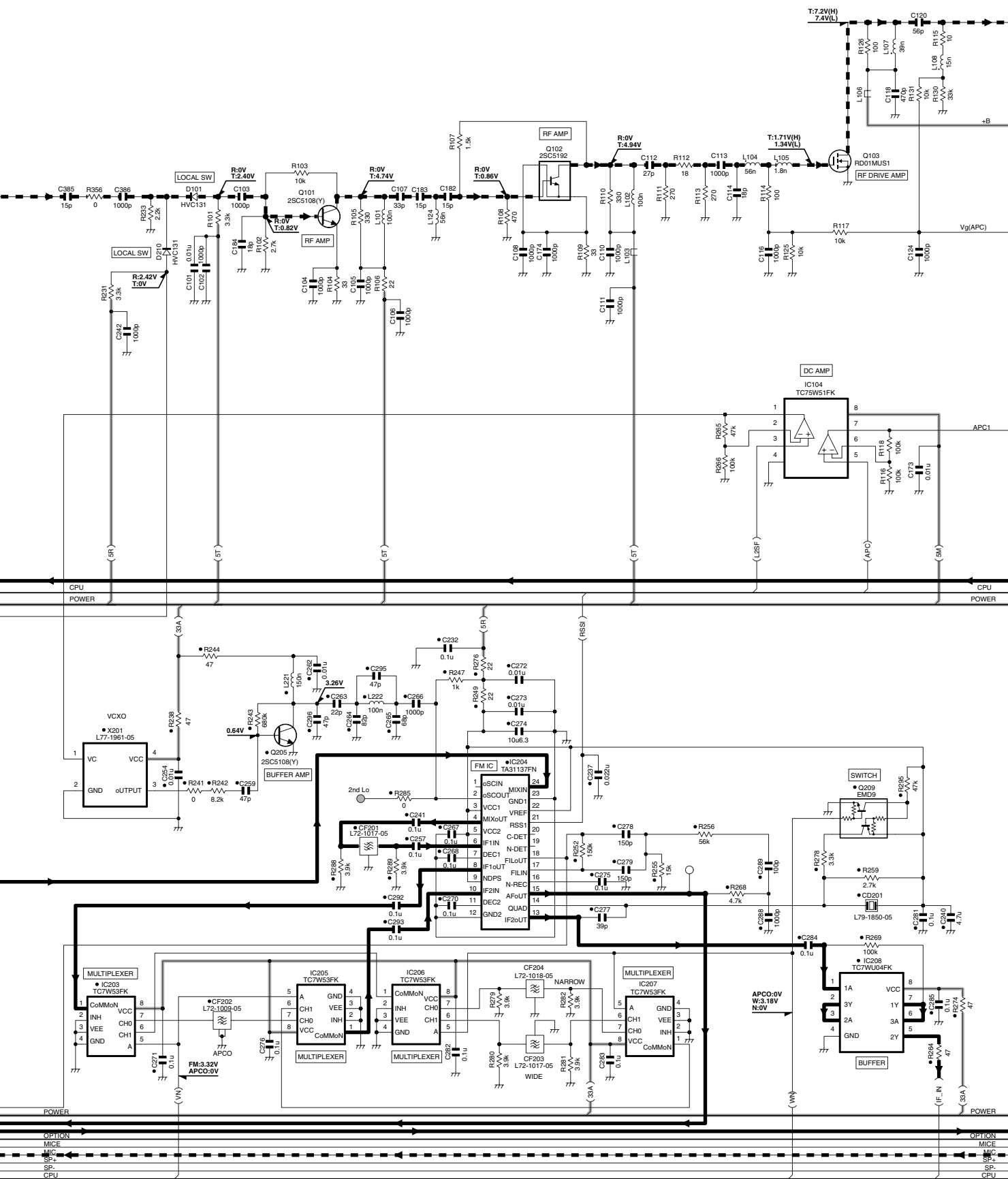
TK-5210 SCHEMATIC DIAGRAM

TX-RX UNIT :TX-RX SECTION(X57-6820-XX)(A/5)

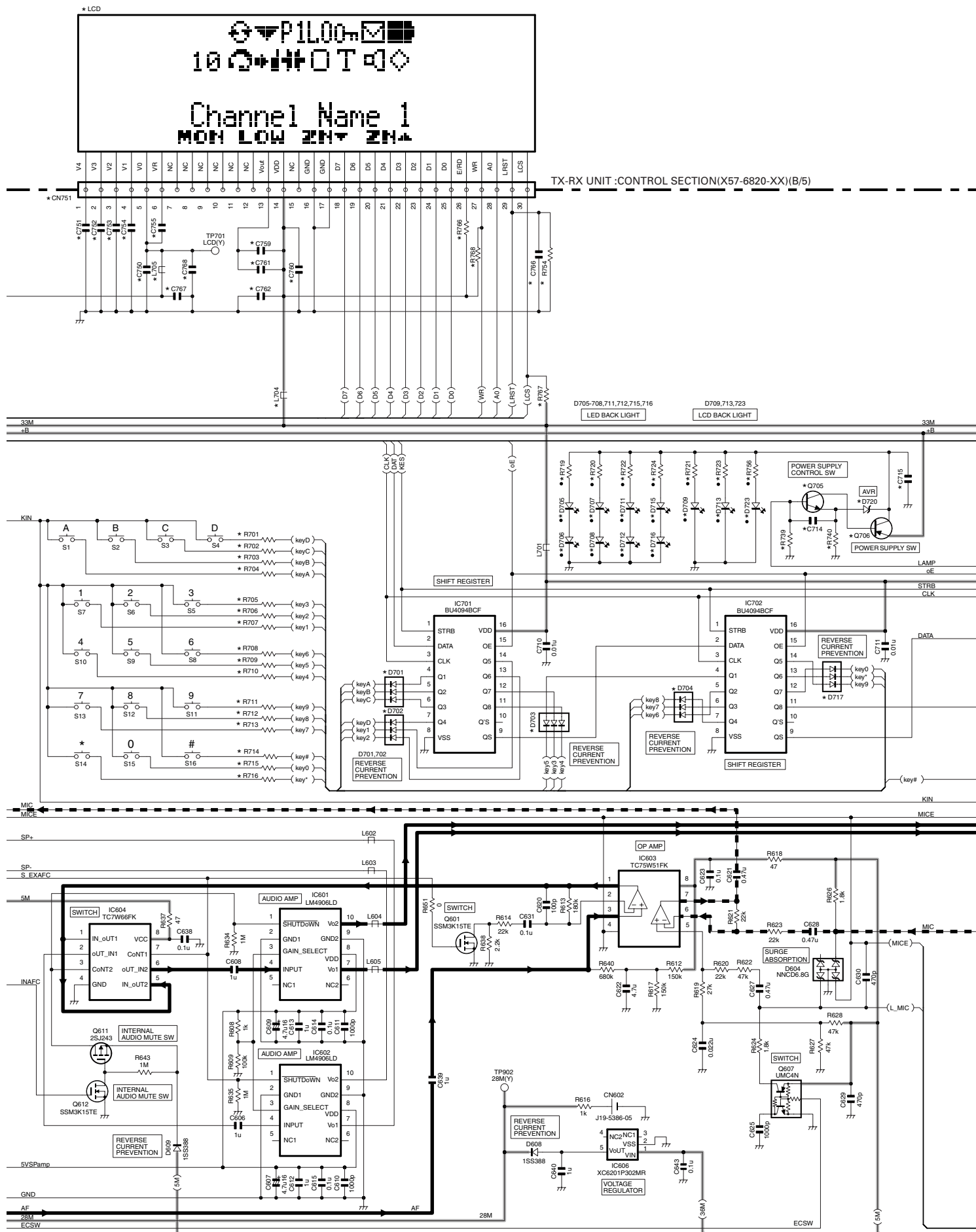


TK-5210 SCHEMATIC DIAGRAM

TX-RX UNIT :TX-RX SECTION(X57-6820-XX)(A/5)



TK-5210



SCHEMATIC DIAGRAM TK-5210

TX-RX UNIT :CONTROL SECTION(X57-6820-XX)(B/5)

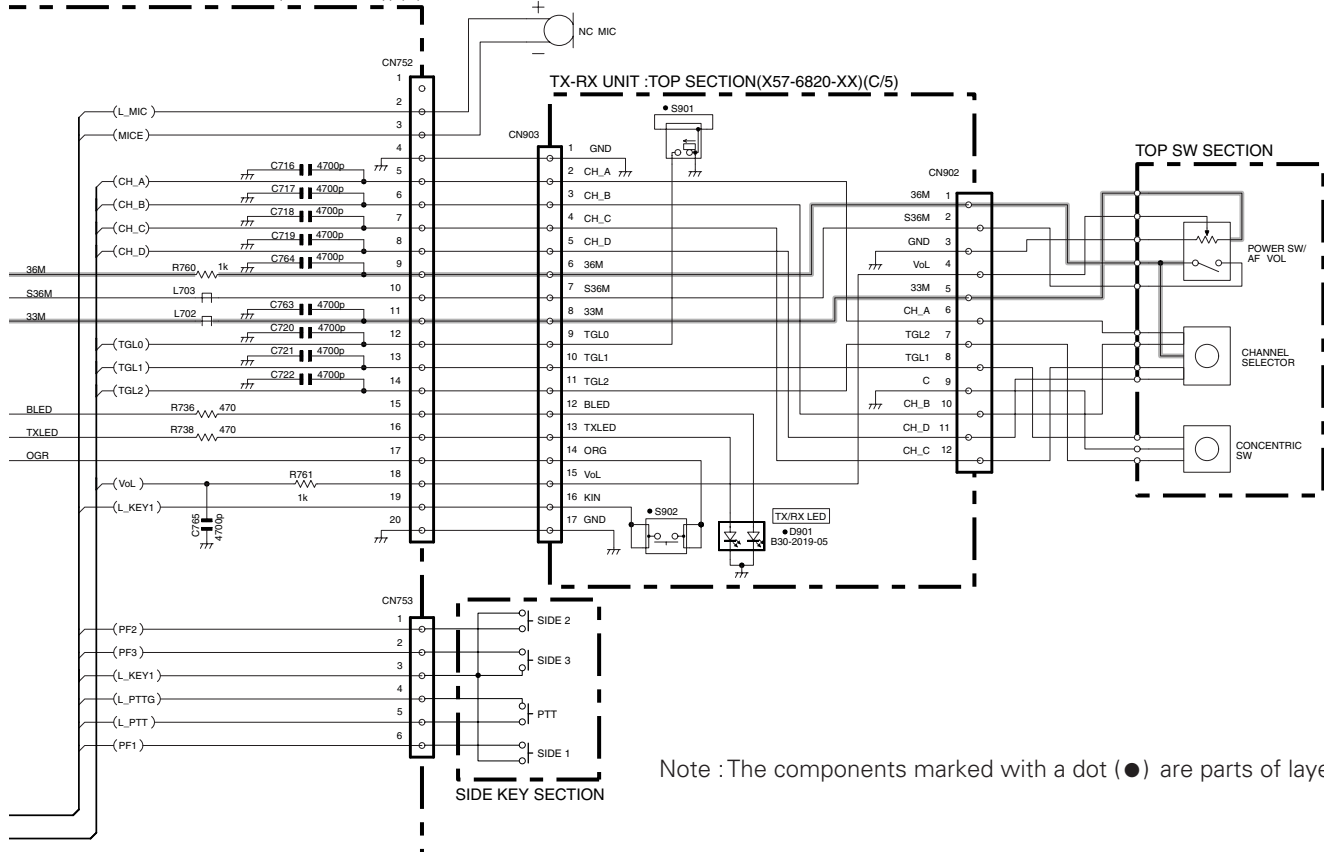
X57-6820-XX	LCD	CN604	CN751	D701	D702	D703	D704	D705	D706	D707	D708	D709	D711	D712	D713
-10	K	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
-11	K2	YES	E40-6431-05	E40-6337-05	IMN10	IMN10	NO	NO	B30-2171-05	B30-2171-05	NO	NO	B30-2261-05	NO	B30-2261-05
-12	K3	YES	E40-6431-05	E40-6337-05	IMN10	IMN10	IMN10	IMN10	B30-2171-05	B30-2171-05	B30-2171-05	B30-2261-05	B30-2171-05	B30-2171-05	B30-2261-05

X57-6820-XX	D715	D716	D717	D720	D723	IC704	Q705	Q706	L704	L705	L706	R701	R702	R703	R704
-10	K	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
-11	K2	NO	NO	NO	DTZ3.9(B)	B30-2261-05	LM7101BIM5	2SC4617(S)	2SB798(DL,DK)	L92-0446-05	L92-0446-05	L92-0446-05	1k	1k	1k
-12	K3	B30-2171-05	B30-2171-05	IMN10	DTZ3.9(B)	B30-2261-05	LM7101BIM5	2SC4617(S)	2SB798(DL,DK)	L92-0446-05	L92-0446-05	L92-0446-05	1k	1k	1k

X57-6820-XX	R705	R706	R707	R708	R709	R710	R711	R712	R713	R714	R715	R716	R719	R720	R721	R722	R723	R724	R734	R739	R740	R754	R756	R762	R763
-10	K	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
-11	K2	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	100	100	180	NO	180	NO	1k	470k	2.2k	470k	180	1k	33k
-12	K3	1k	1k	1k	1k	1k	1k	1k	1k	1k	1k	1k	100	100	180	100	180	100	1k	470k	2.2k	470k	180	1k	33k

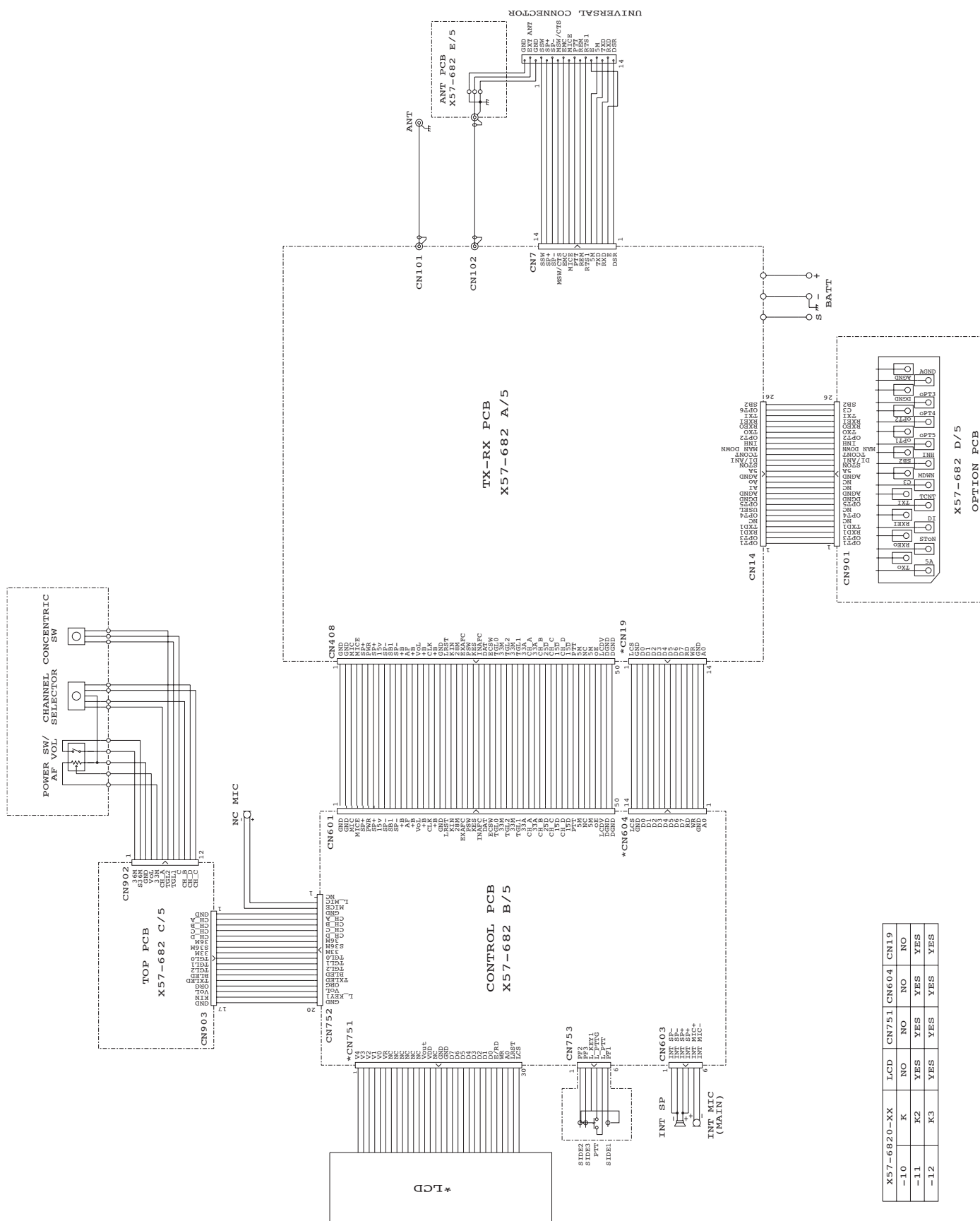
X57-6820-XX	R764	R766	R767	R768	C714	C715	C750	C751	C752	C753	C754	C755	C759	C760	C761	C762	C766	C767	C768	C769	C770
-10	K	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
-11	K2	100k	22k	22k	22k	100p	0.1u	0.47u	0.47u	0.47u	0.47u	0.01u	1u	1u	1u	1u	1000p	0.01u	1000p	0.01u	470p
-12	K3	100k	22k	22k	22k	100p	0.1u	0.47u	0.47u	0.47u	0.47u	0.01u	1u	1u	1u	1u	1000p	0.01u	1000p	0.01u	470p

TX-RX UNIT :CONTROL SECTION(X57-6820-XX)(B/5)



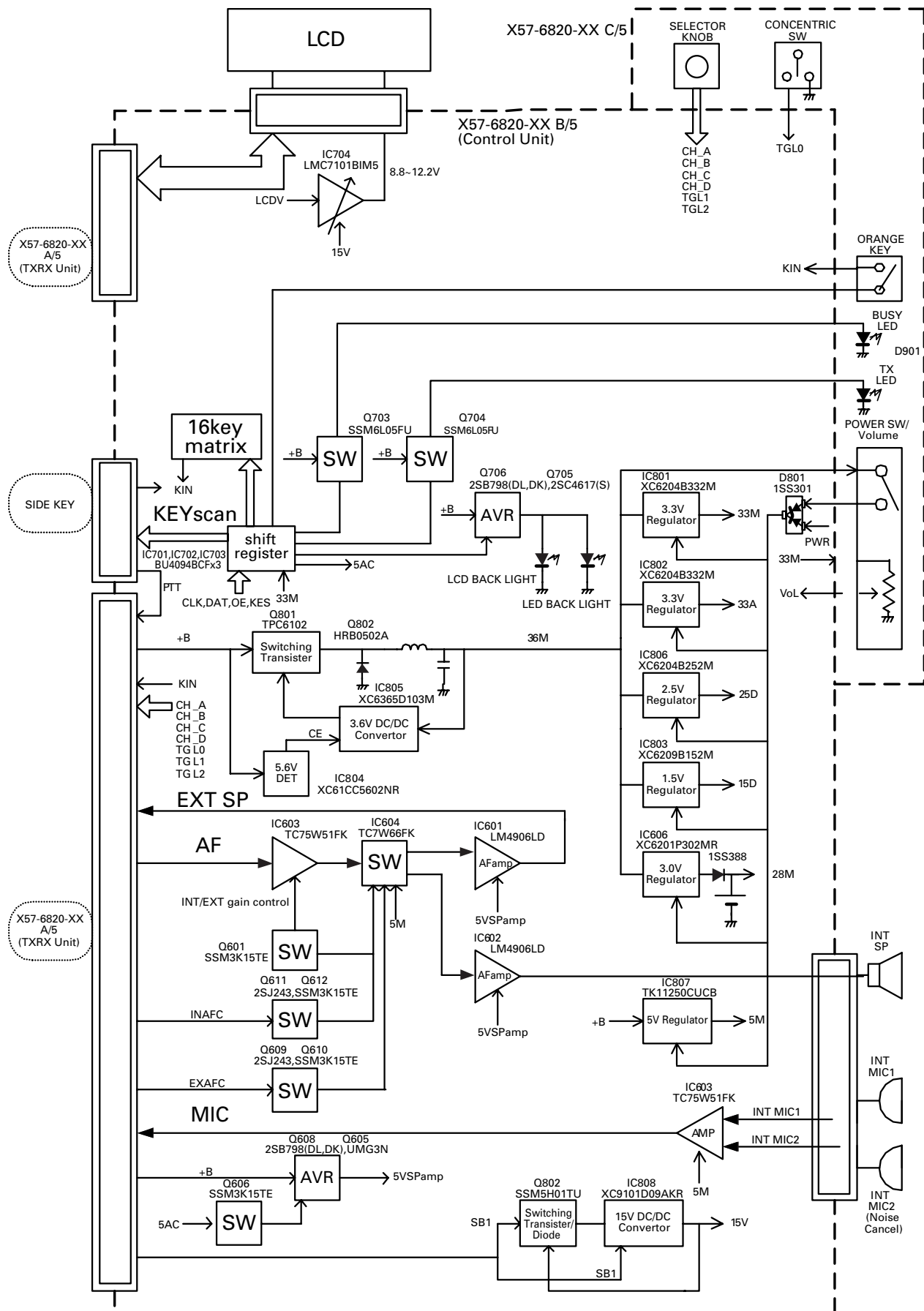
Note : The components marked with a dot (●) are parts of layer1.

INTERCONNECTION DIAGRAM

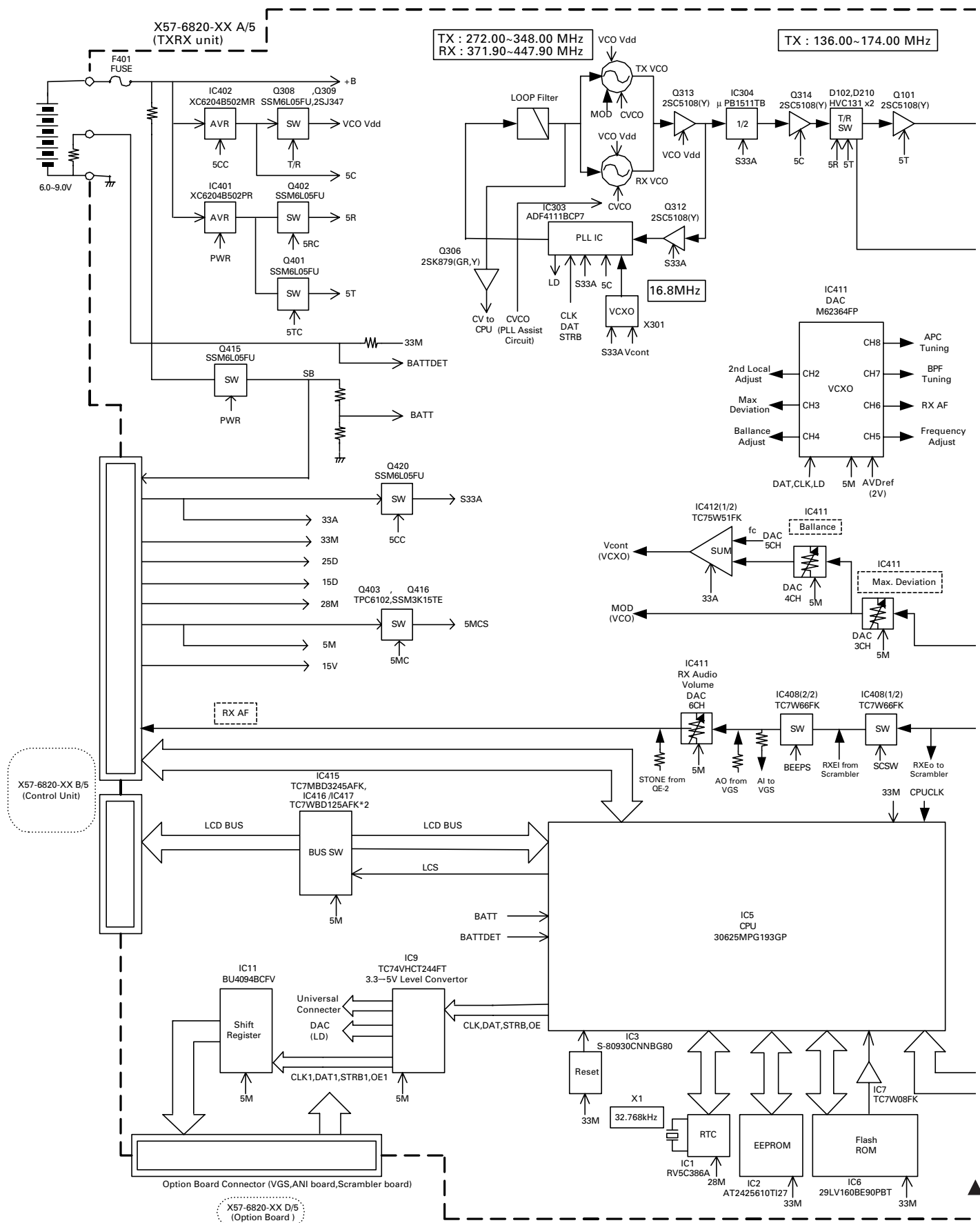


X57-6820-XX	LCD	CN751	CN604	CN19
-10	K	NO	NO	NO
-11	K2	YES	YES	YES
12	K2	YES	YES	YES

BLOCK DIAGRAM

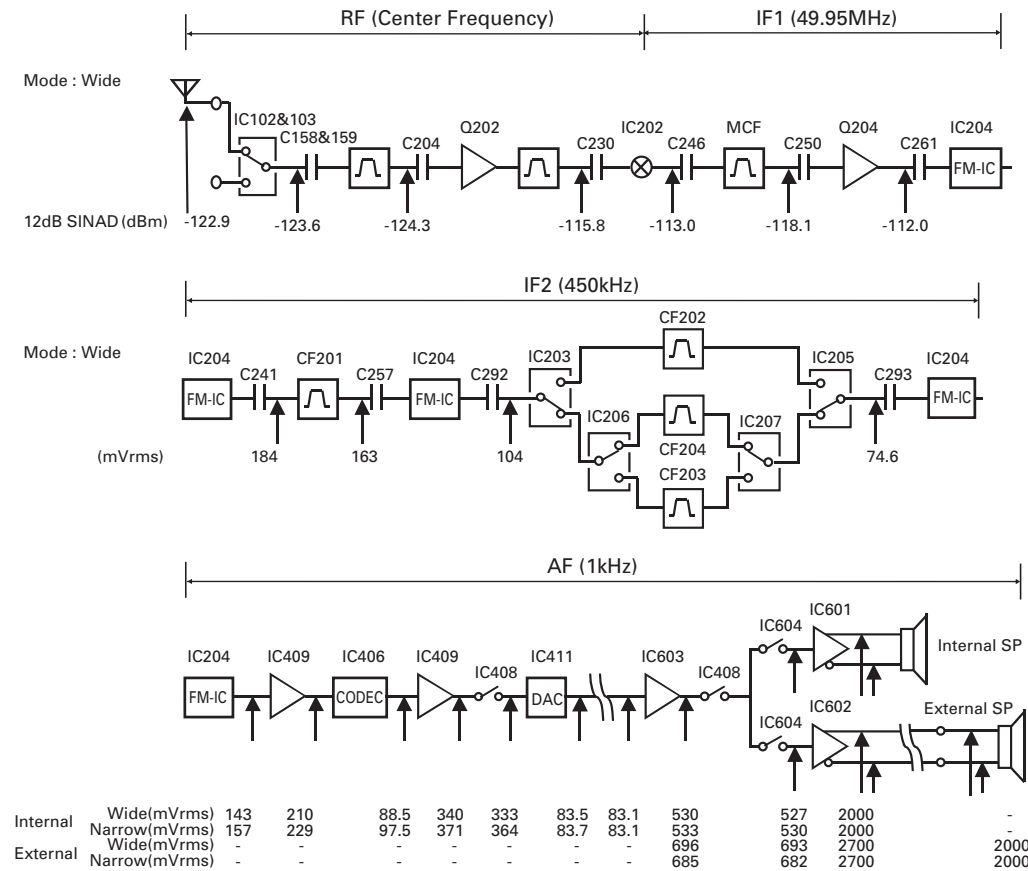


BLOCK DIAGRAM



LEVEL DIAGRAM

Receiver Section

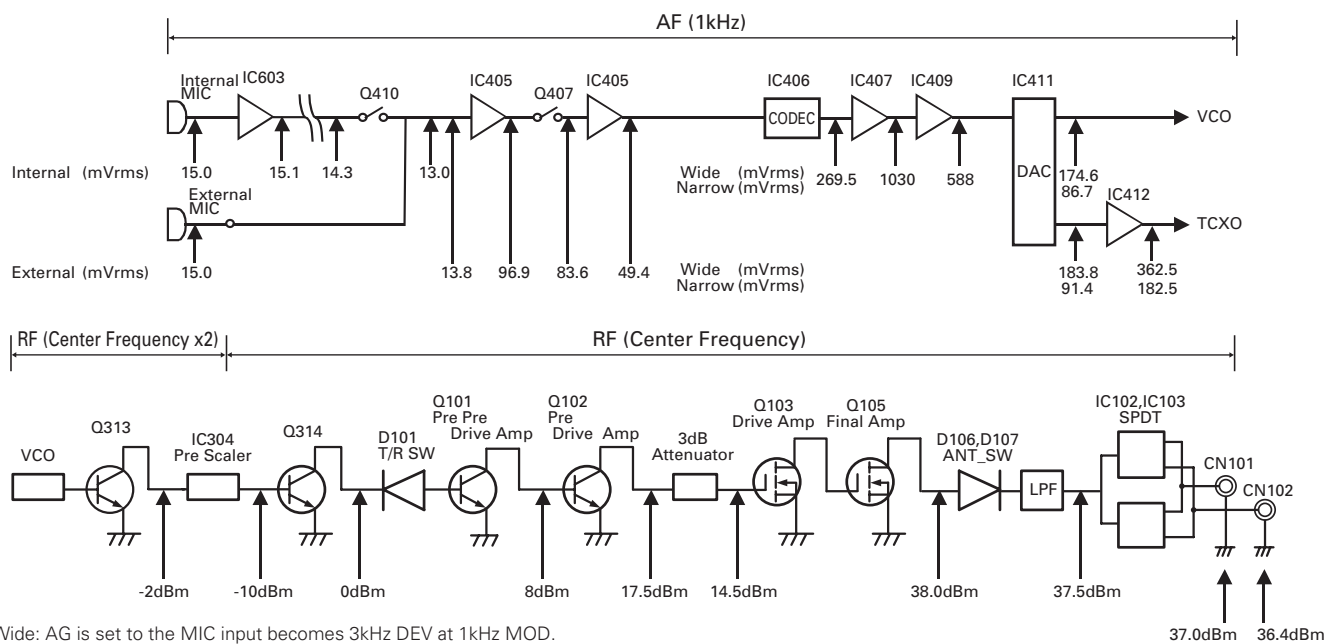


To make measurements in the AF section, connect the AC level meter. (ANT input: -47dBm, 1kHz FM, 3kHz DEV (Wide), 1.5kHz DEV (Narrow))

In the RF section, use 1000pF coupling capacitor.

(The display shows the SSG input value required to obtain 12dB SINAD without local level.)

Transmitter Section



Wide: AG is set to the MIC input becomes 3kHz DEV at 1kHz MOD.

Narrow: AG is set to the MIC input becomes 1.5kHz DEV at 1kHz MOD.

To make measurements in the AF section, connect the AC level meter.

In the RF section, use 1000pF coupling capacitor.

OPTIONAL ACCESSORIES

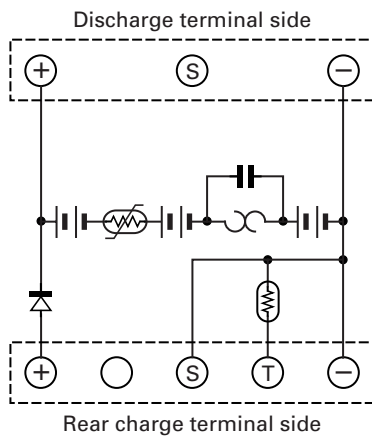
KNB-31A (Ni-Cd 7.2V 1700mAh)

KNB-32N (Ni-MH 7.2V 2500mAh)

■ External view



■ KNB-31A Internal wiring

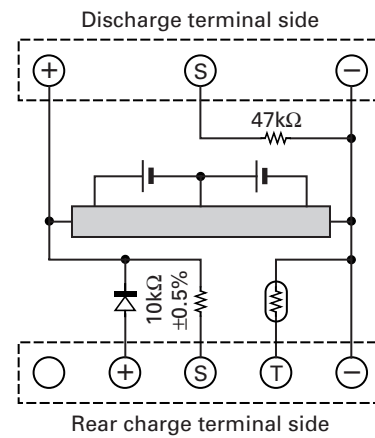


KNB-33L (Li-ion 7.4V 1700mAh)

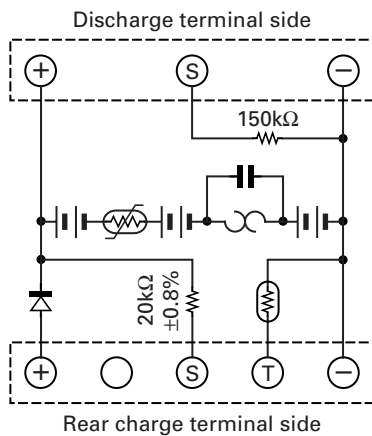
■ External view



■ Internal wiring



■ KNB-32N Internal wiring



KSC-32 (Rapid charger)

■ External view



SPECIFICATIONS

GENERAL

Models	K : Basic Model K2 : 4-Key w/LCD Model K3 : Full Key w/LCD Model
Frequency Range	136~174 MHz
Number of Channels	512
Zones	50
Max. Channels per Zone	250
Channel Spacing	Analog : 12.5/15/20/25/30 kHz Digital : 12.5 kHz
Operating Voltage	7.5V DC $\pm$ 20%
Battery Life (5-5-90 duty cycle)	KNB-31A, 7.5VDC, 1700 mAh : 8 hours KNB-32N, 7.5VDC, 2500 mAh : 12 hours KNB-33L, 7.5VDC, 1700 mAh : 8 hours
Operating Temperature Range	-22°F to +140°F (-30°C to +60°C)
Frequency Stability (-22°F to +140°F)	$\pm$ 2.0 ppm
Antenna Impedance	50 Ω
Dimensions (W x H x D)	2-5/16 x 6-3/32 x 1-13/16 in. (58 x 155 x 45.7 mm) with KNB-31A or KNB-32N battery
(Projections not included)	2-5/16 x 6-3/32 x 1-9/16 in. (58 x 155 x 39.2 mm) with KNB-33L battery
Weight	
Radio only	TK-5210 K : 11.11 oz. (315g) TK-5210 K2 : 11.64 oz. (330g) TK-5210 K3 : 11.64 oz. (330g)
TK-5210 K2 with battery,	22.22 oz. (630g) with KNB-31A battery
antenna(KRA-22) and belt clip(KBH-11)	23.28 oz. (660g) with KNB-32N battery 17.64 oz. (500g) with KNB-33L battery

RECEIVER

Sensitivity	Digital (5% BER) : 0.25 μ V Digital(1% BER) : 0.40 μ V Analog 12dB SINAD : 0.25 μ V
Selectivity	Digital : -60dB Analog @25/30kHz : -78dB Analog @12.5kHz : -67dB
Intermodulation Distortion	Digital : -75dB Analog @25/30kHz : -75dB Analog @12.5kHz : -68dB
Spurious and Image	Digital : -80dB Analog : - 80dB
Audio Distortion	Digital : Less than 1.5% Analog : Less than 2%
Audio Output	500mW/ 8 Ω

TRANSMITTER

RF Output Power	5W / 1W
Spurious and Harmonics	70dB
FM Hum and Noise	Analog @25kHz : 50dB Analog @12.5kHz : 45dB
Audio Distortion	Less than 2%
Modulation	16K0F3E, 11K0F3E, 8K10F1E, 8K10F1D

Analog measurements made per TIA/EIA-603

Digital measurements made per TIA/EIA-102CAAA

KENWOOD reserves the right to change specifications without prior notice or obligation.

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