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Cobra 67LTD Service Manual

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PRELIMINARY
SERVICE MANUAL
MODEL 67 LTD

MANUAL
MANUAL
SERVICE
SERVICE



COBRA MODEL 67 LTD
40 CHANNEL "HIDEAWAY" MOBILE CB RADIO WITH
"CHANNEL LOCK" AND "CHANNEL SAVER"

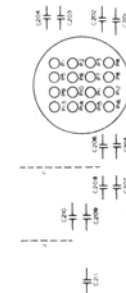
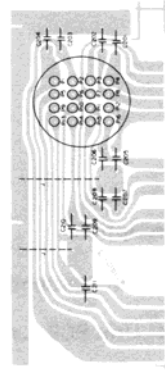
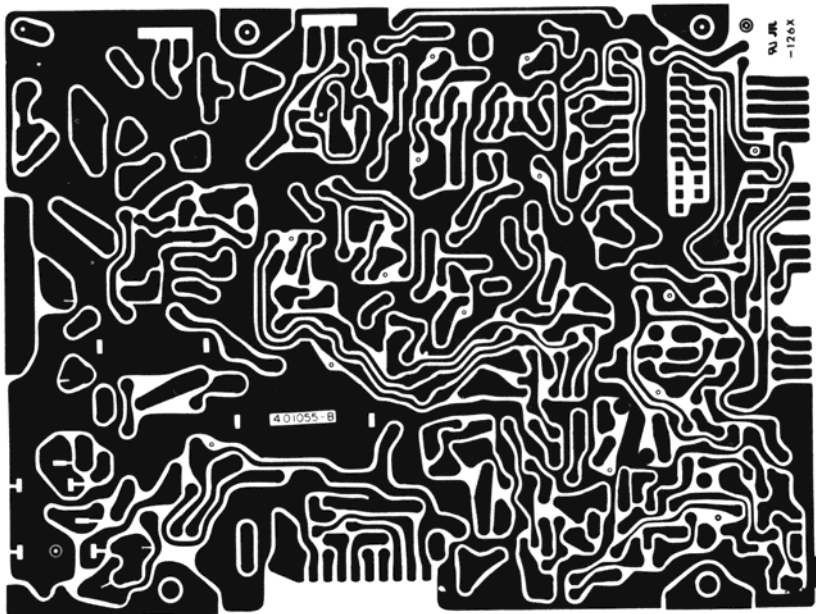
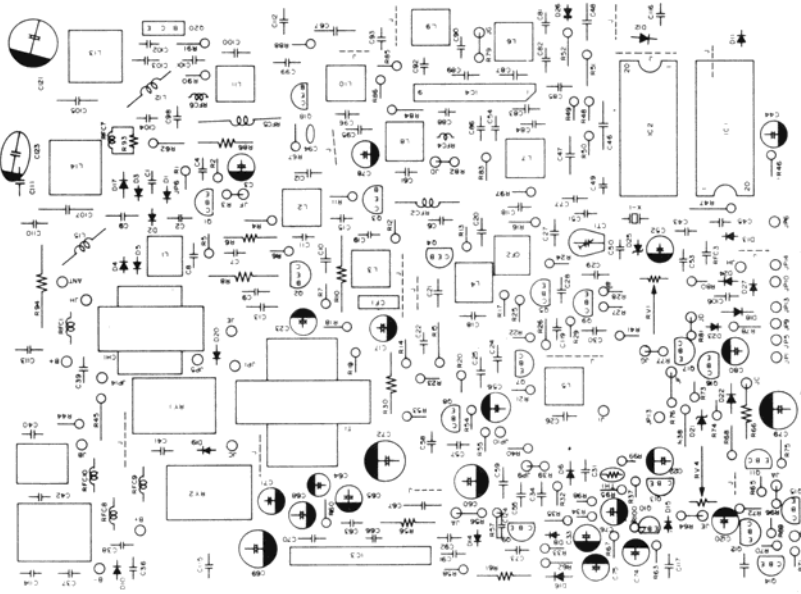
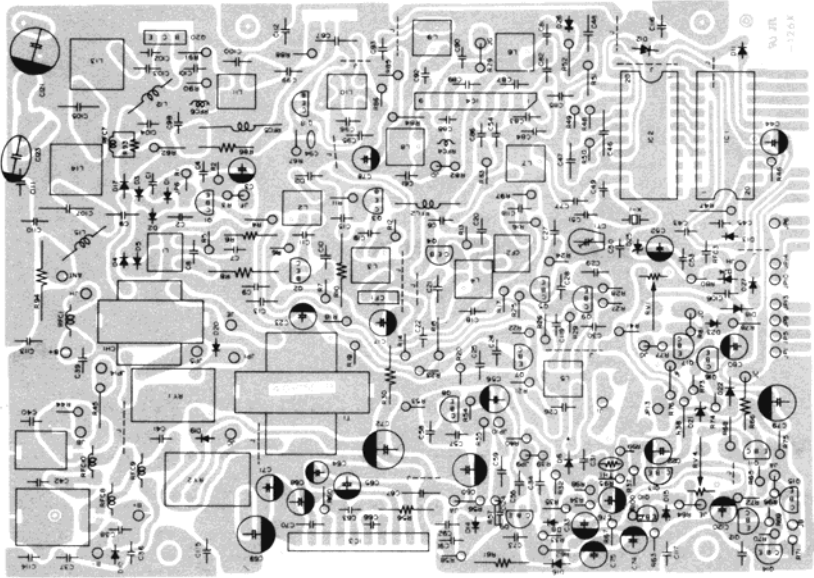


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Phone 1-312-889-8870

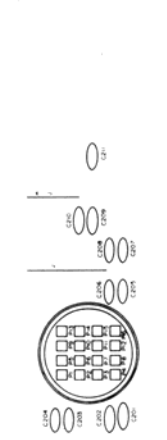
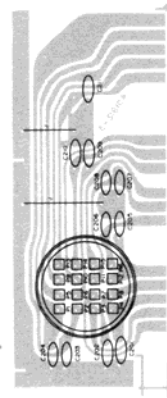
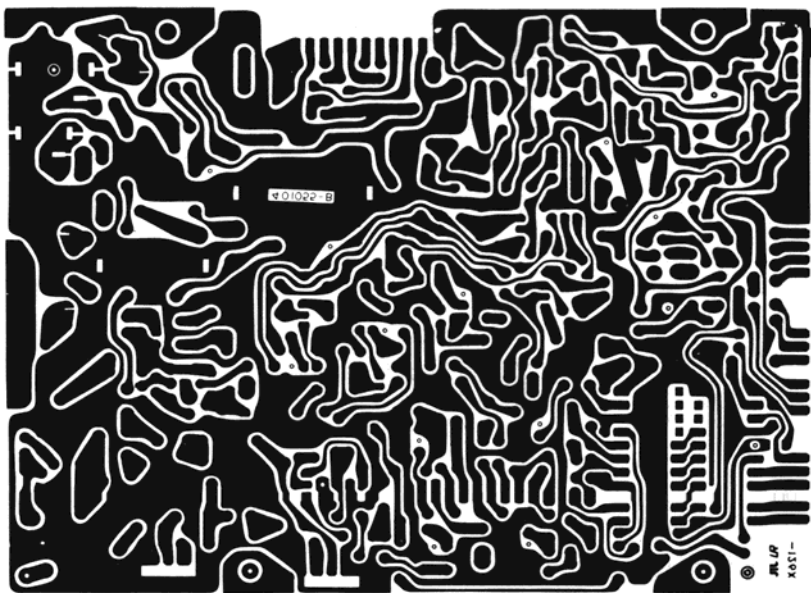
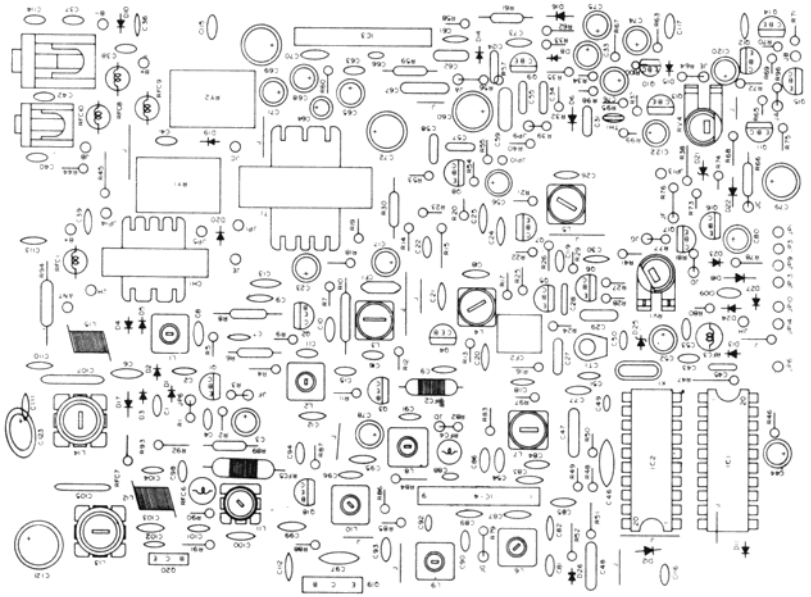
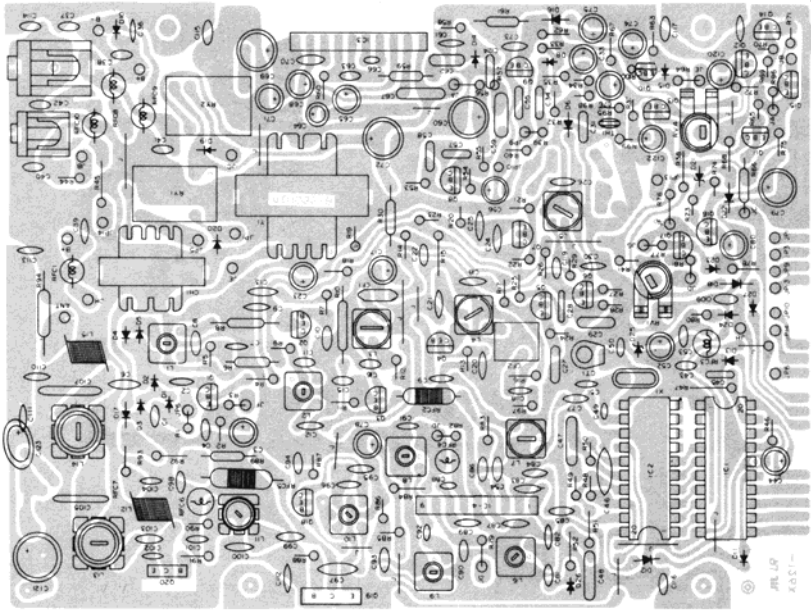
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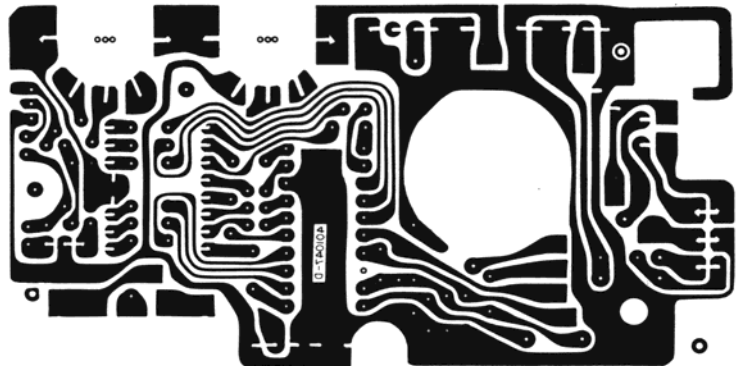
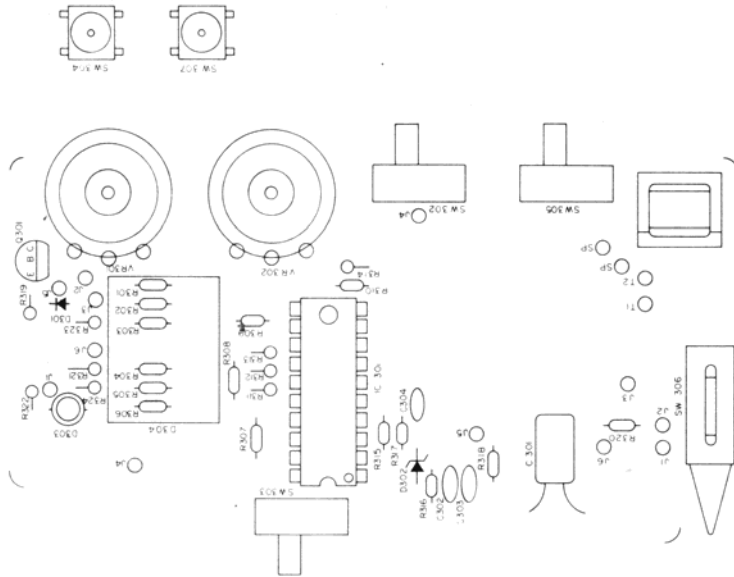
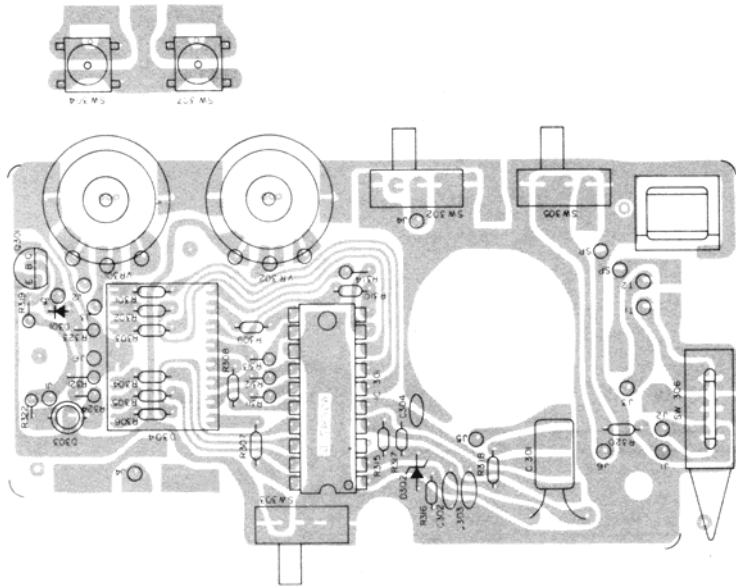
BASE UNIT P.C.B. LAYOUT (BOTTOM VIEW)



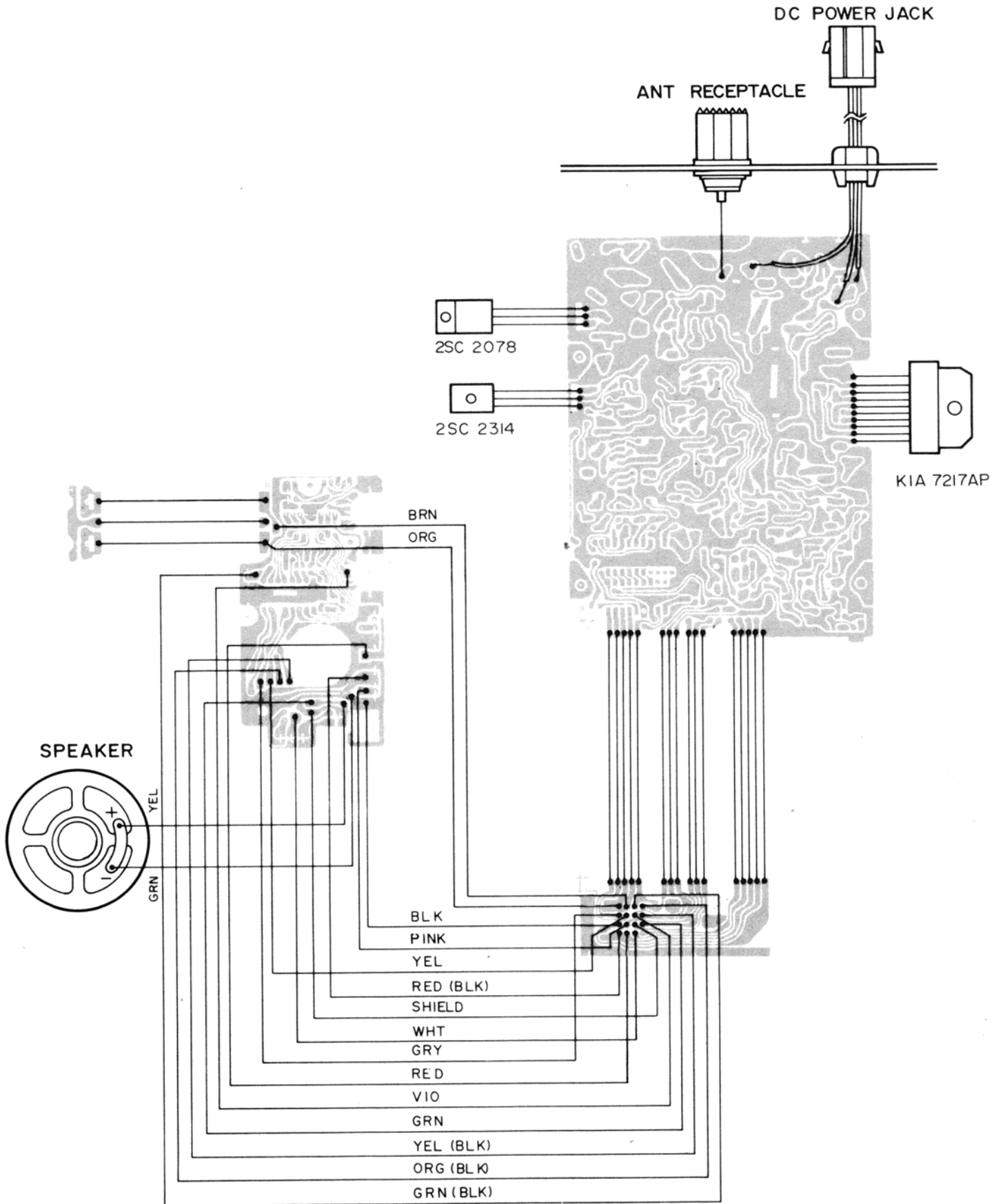
BASE UNIT P.C.B. LAYOUT (TOP VIEW)



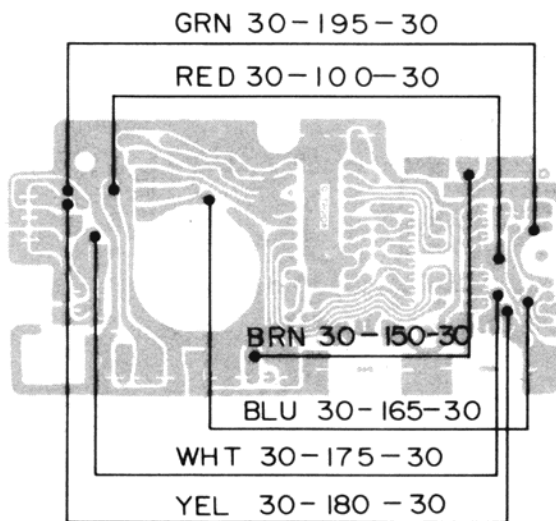
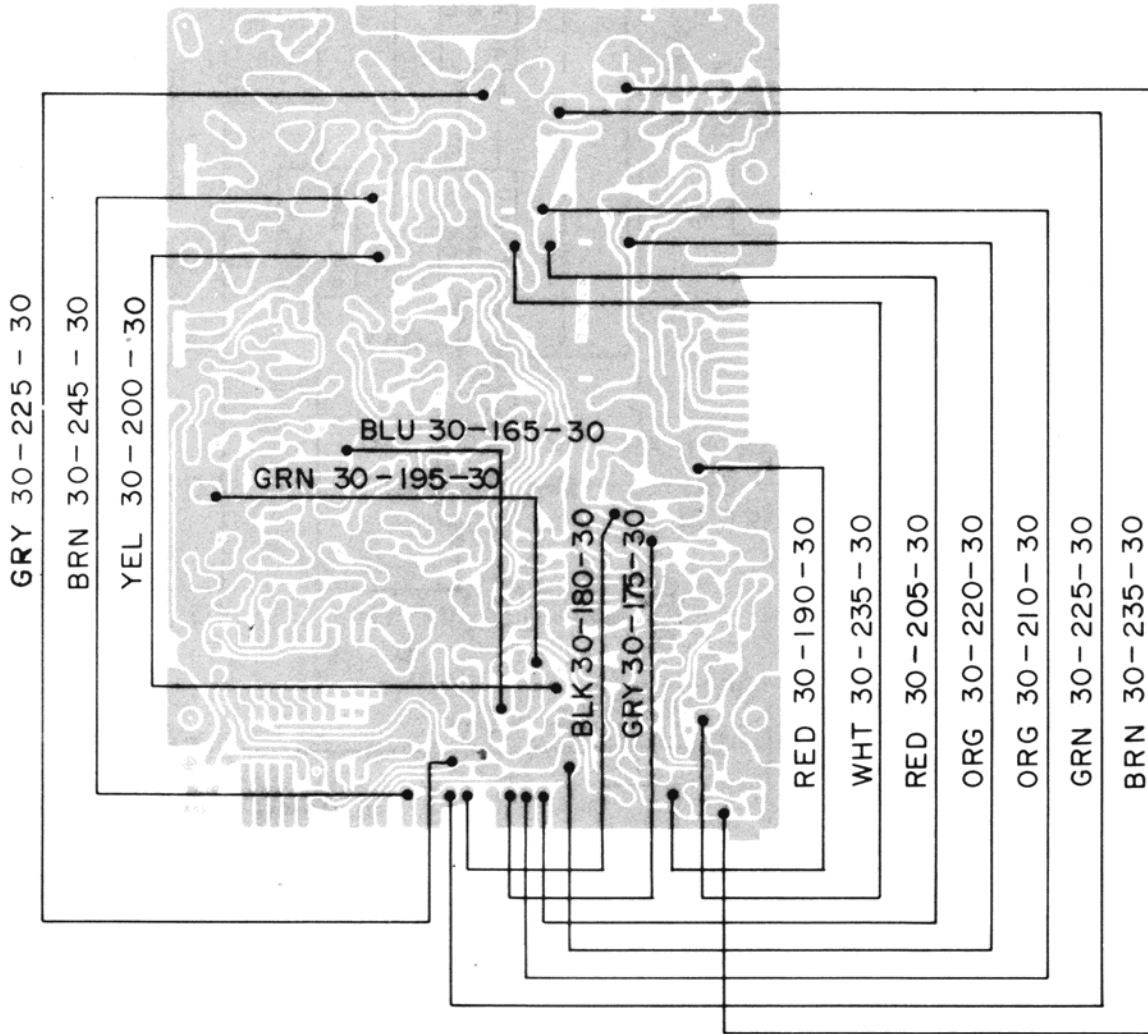
HAND UNIT P.C.B. LAYOUT (TOP VIEW)



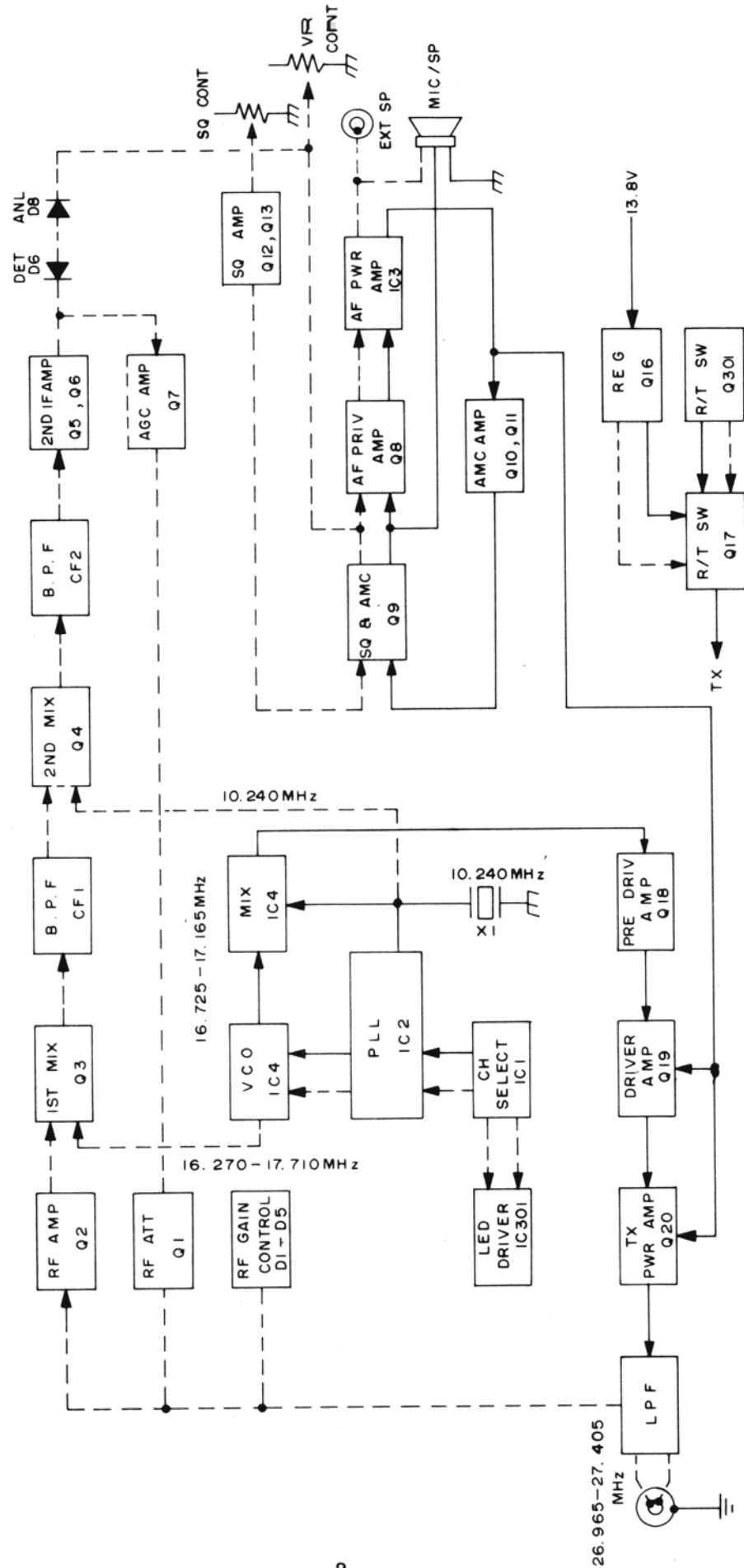
Wiring Diagram



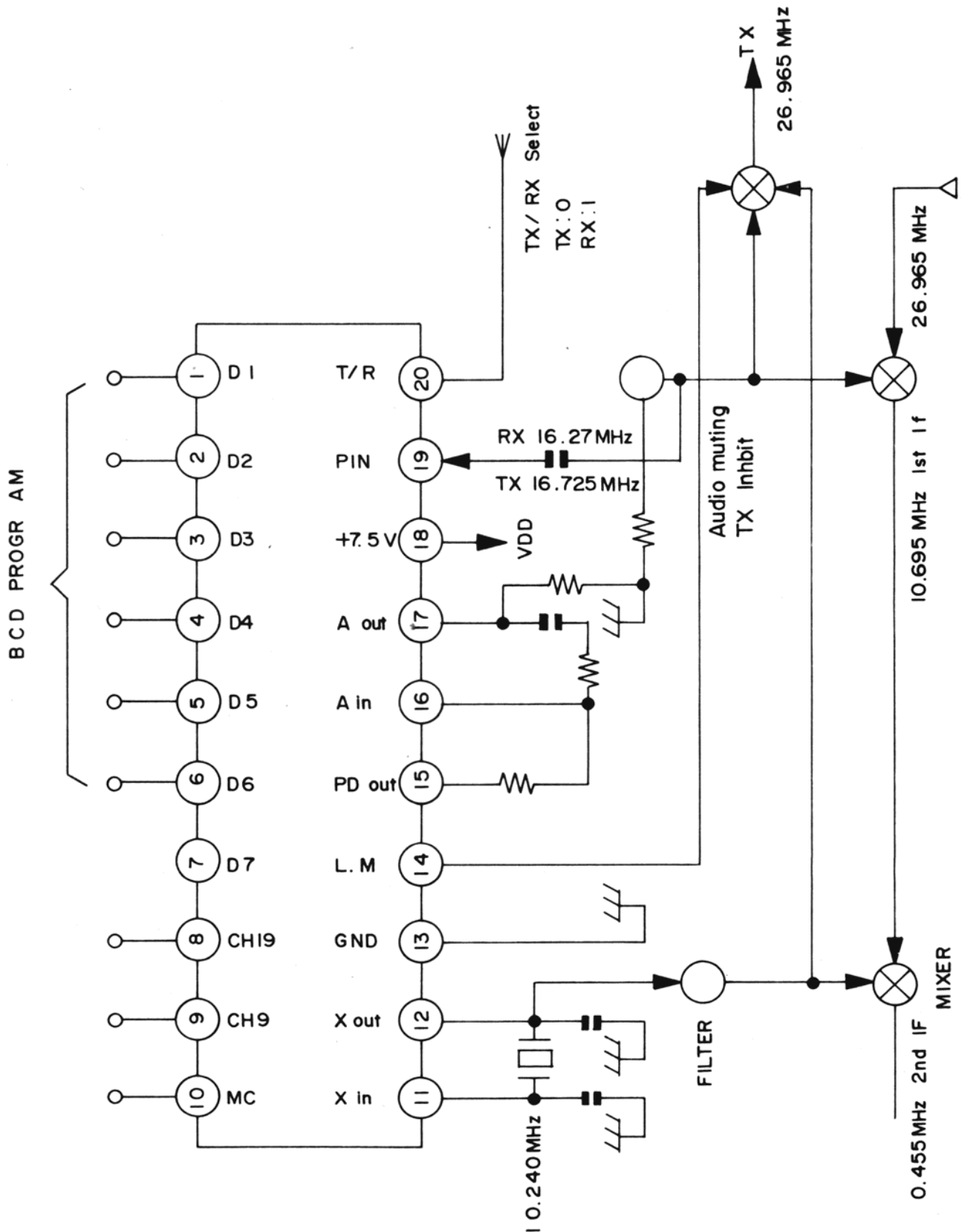
P.C.B Wire Diagram

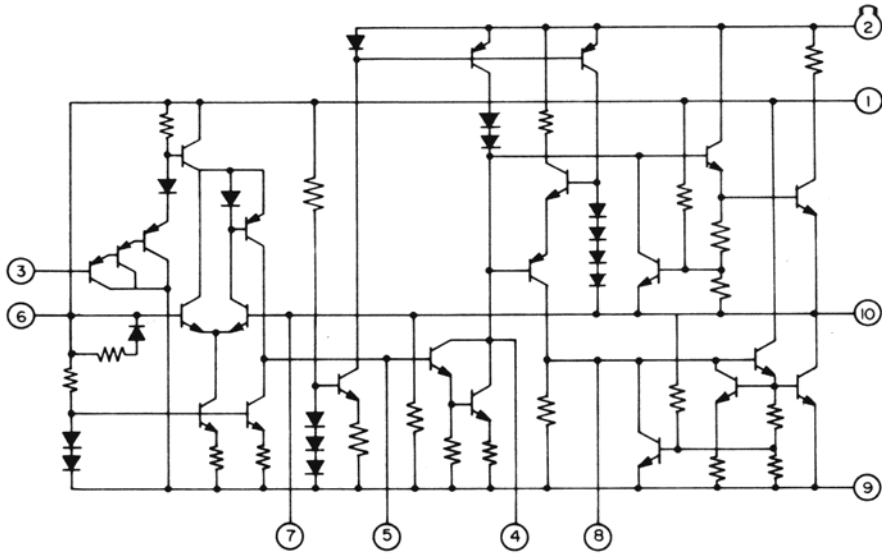


Block Diagram



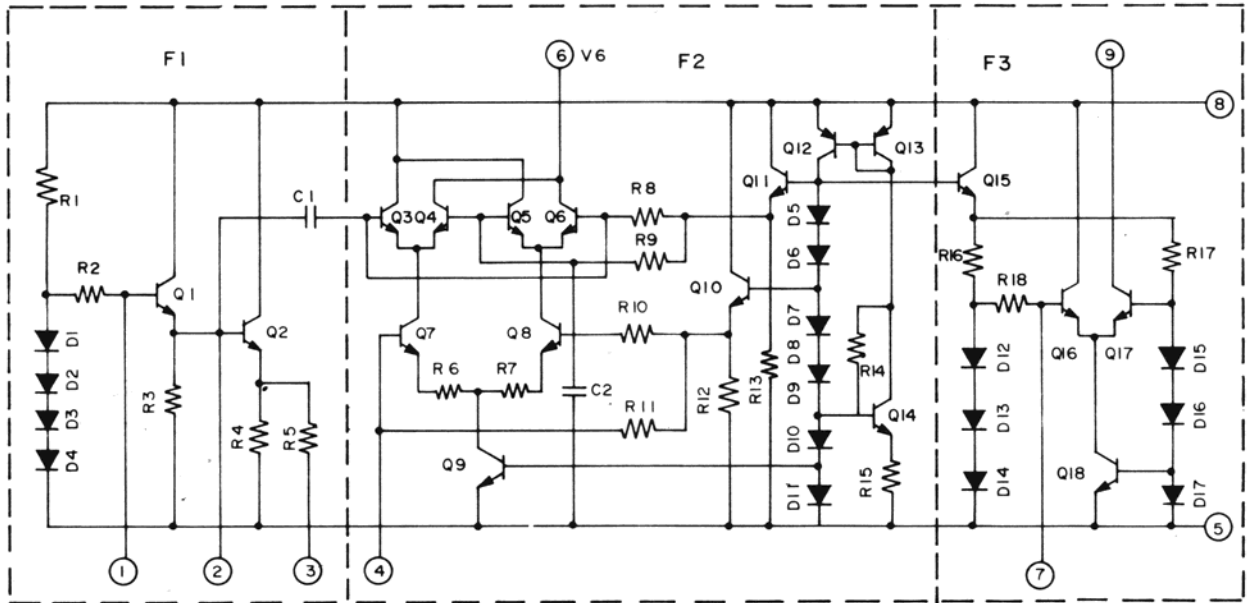
PLL Circuit Block Diagram



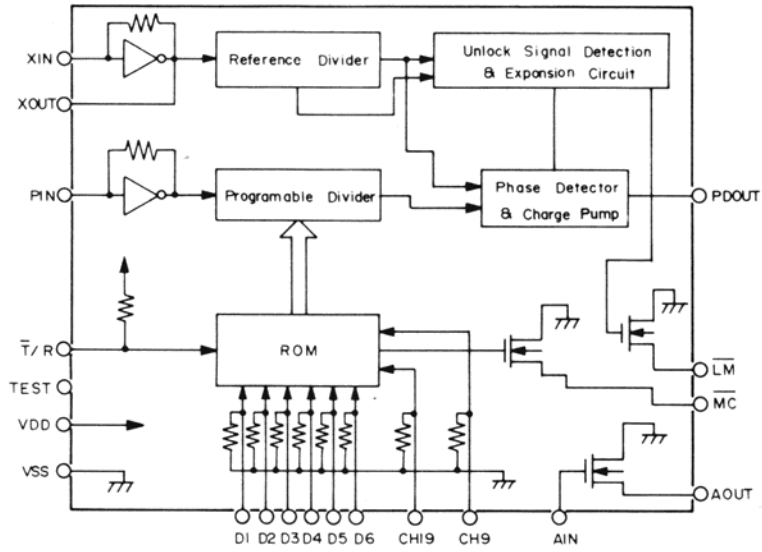


KIA 7217 AP

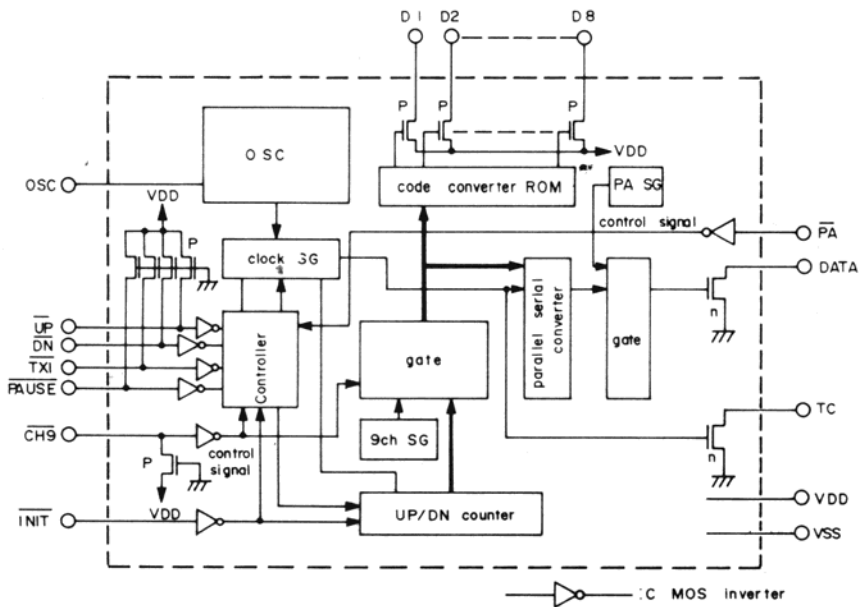
KIA 7310



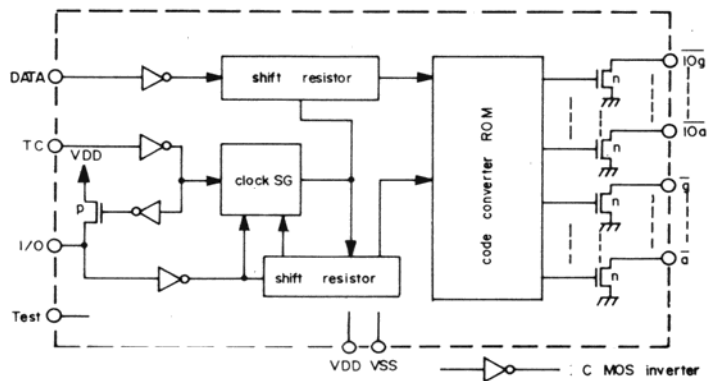
LC 7131



LC 7181



LC 7191



INTEGRATED CIRCUITS

KIA 7310P

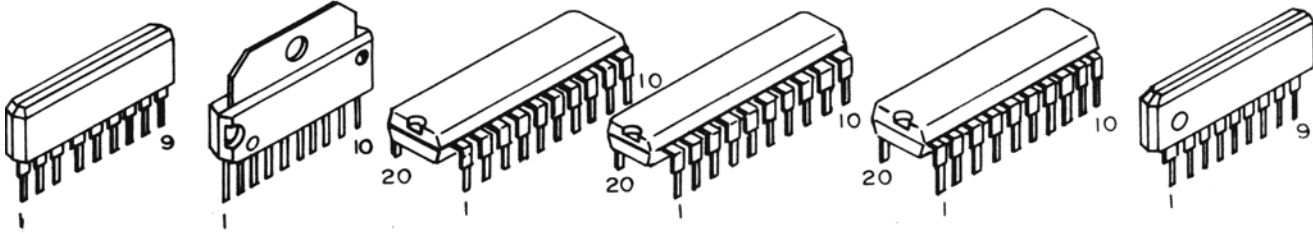
KTA 7217AP

LC 7131

LC7181

LC7191

LB1403P



TRANSISTORS

MPS9623
MPS 9631
MPS 9634
MPS 9681
MPS 9418



MPS9426



2SC1957 OR 2SC 2314

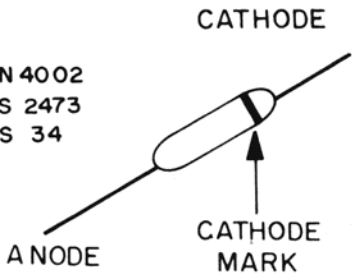


2SC 2078 OR 2SC 1306

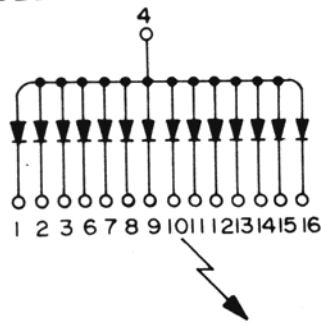
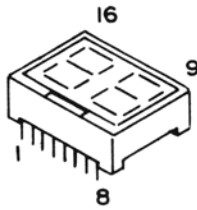


IODES

IN 4002
IS 2473
IS 34



LTD482LGC



SPR54MUW3



PIN 1 — ANODE RED
PIN 2 — CATHODE
PIN 3 — ANODE GREEN

Voltage Chart

CONDITIONS HEASURED ONI9CH
NO SIGNAL
NO MODULATION

IC

| IC NO | IC-1 | | | | | | | | | | | | | | | | | | | |
|--------|------|---|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| PIN NO | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| RX | 0 | 0 | 0 | 0.02 | 7.28 | 7.28 | 0.02 | 0.02 | 7.28 | 7.33 | 0.22 | 0.22 | 7.32 | 7.32 | 7.32 | 7.33 | 7.34 | 7.33 | 5.34 | 7.20 |
| TX | 0 | 0 | 0 | 0.02 | 7.10 | 7.10 | 0.02 | 0.02 | 7.10 | 7.15 | 0.23 | 0.23 | 7.14 | 7.14 | 0.87 | 7.14 | 7.15 | 7.14 | 5.21 | 7.02 |

| IC NO | IC-2 | | | | | | | | | | | | | | | | | | | |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|----|------|------|------|------|------|------|------|
| PIN NO | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| RX | 7.29 | 0.02 | 0.02 | 7.29 | 7.29 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 3.20 | 3.50 | 0 | 0.77 | 1.64 | 1.64 | 1.07 | 7.34 | 3.61 | 7.33 |
| TX | 7.11 | 0.02 | 0.02 | 7.11 | 7.11 | 0.02 | 0.02 | 0.02 | 0.02 | 0 | 3.16 | 3.42 | 0 | 4.52 | 1.57 | 1.57 | 1.84 | 7.15 | 3.61 | 0.89 |

| IC NO | IC-3 | | | | | | | | | | IC-4 | | | | | | | | |
|--------|-------|-------|------|------|------|------|------|------|---|------|------|------|------|------|---|------|------|------|------|
| PIN NO | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| RX | 13.69 | 12.43 | 3.98 | 8.13 | 1.53 | 3.36 | 3.37 | 1.30 | 0 | 6.81 | 2.63 | 1.96 | 1.47 | 1.75 | 0 | 1.27 | 2.06 | 5.56 | 1.27 |
| TX | 13.26 | 12.01 | 3.88 | 7.92 | 1.53 | 3.25 | 3.27 | 1.30 | 0 | 6.61 | 2.65 | 2.00 | 1.56 | 2.61 | 0 | 7.91 | 2.05 | 6.12 | 7.92 |

| IC NO | IC-301 | | | | | | | | | | | | | | | | | | | |
|--------|--------|------|------|------|------|------|------|------|------|------|------|-------|----|------|-------|-------|-------|-------|------|-------|
| PIN NO | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| RX | 7.70 | 7.71 | 0.01 | 0.11 | 0.11 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 12.03 | 0 | 0.20 | 11.98 | 11.95 | 11.99 | 11.99 | 0.18 | 11.99 |
| TX | 7.69 | 7.70 | 0.01 | 0.09 | 0.09 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 11.61 | 0 | 0.19 | 11.56 | 11.54 | 11.57 | 11.57 | 0.17 | 11.57 |

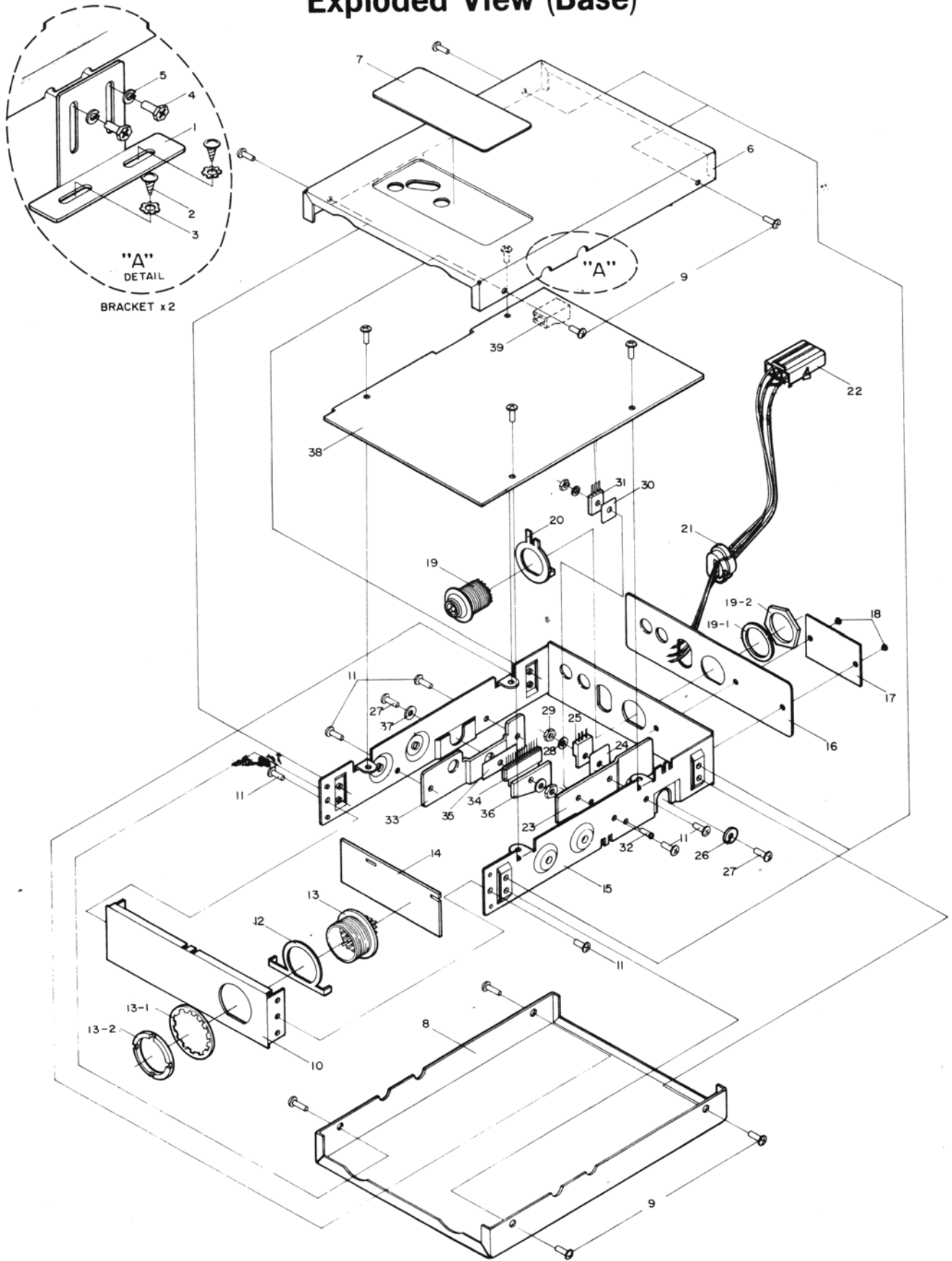
TR

| TR NO | Q1 | | Q2 | | Q3 | | Q4 | | Q5 | | Q6 | | Q7 | | Q8 | | Q9 | | Q10 | |
|-------|------|------|------|-------|-------|-------|------|------|------|------|-------|-------|------|------|------|------|----|----|------|------|
| | RX | TX | RX | TX | RX | TX | RX | TX | RX | TX | RX | TX | RX | TX | RX | TX | RX | TX | RX | TX |
| B | 1.46 | 1.50 | 1.03 | 12.35 | 0.96 | 0.6 | 0.93 | 0.60 | 0.85 | 0.95 | 1.38 | 0.26 | 0.58 | 0.15 | 1.18 | 1.16 | 0 | 0 | 1.00 | 4.49 |
| C | 4.65 | 1.44 | 5.67 | 0.60 | 12.99 | 12.35 | 4.67 | 0.99 | 5.30 | 1.08 | 13.44 | 12.48 | 4.67 | 1.22 | 8.90 | 8.59 | 0 | 0 | 0 | 0 |
| E | 1.46 | 1.43 | 0.33 | 0.05 | 0.25 | 0.05 | 0.22 | 0.01 | 0.20 | 0.01 | 0.72 | 0 | 0.03 | 0 | 0.52 | 0.50 | 0 | 0 | 0.39 | 3.91 |

| TR NO | Q11 | | Q12 | | | Q13 | | | Q14 | | | Q15 | | | Q16 | | Q17 | | Q18 | |
|-------|-------|-------|------|------|------|------|------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|
| | RX | TX | RX | | TX | RX | | TX | RX | | TX | RX | | TX | RX | TX | RX | TX | RX | TX |
| | | | MIN | MAX | | MIN | MAX | | MIN | MAX | | MIN | MAX | | | | | | | |
| B | 13.70 | 12.46 | 0.75 | 0.04 | 0.74 | 0.43 | 0.68 | 0.28 | 0.01 | 0.69 | 0 | 13.69 | 12.92 | 13.20 | 9.12 | 9.12 | 8.48 | 7.73 | 0.27 | 1.39 |
| C | 0.39 | 13.15 | 0.02 | 2.46 | 0.01 | 0.75 | 0.04 | 0.74 | 13.69 | 0.08 | 13.20 | 0.01 | 13.68 | 0.08 | 12.82 | 12.04 | 1.26 | 8.41 | 13.54 | 12.14 |
| E | 13.70 | 13.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13.70 | 13.70 | 13.21 | 8.48 | 8.47 | 8.48 | 8.47 | 0 | 0.74 |

| TR NO | Q19 | | Q20 | | Q301 | |
|-------|-------|------|-------|-------|-------|------|
| | RX | TX | RX | TX | RX | TX |
| B | 0 | 0.04 | 0 | 0.04 | 0 | 0.93 |
| C | 13.45 | 9.25 | 13.45 | 11.41 | 13.64 | 0.18 |
| E | 0 | 0 | 0 | 0 | 0 | 0 |

Exploded View (Base)



Exploded View Parts List (Base)

| No. | Part No. | Part Name & Description |
|-----|----------|---------------------------------|
| 1 | 722090 | Bracket (Set) |
| 2 | 625007 | (+) Tapping Screw (T.H) 5x12-1S |
| 3 | 664518 | Washer (Lock "B" Type) |
| 4 | 680029 | Hex Volt |
| 5 | 662509 | Washer Spring |
| 6 | 714340 | Upper Cover |
| 7 | 791100 | Upper Plate |
| 8 | 714330 | Bottom Cover |
| 9 | 633082 | (+) Tap Tite Screw 3x6 |
| 10 | 701030 | Front Body |
| 11 | 623265 | (+) Tapping Screw 3x6-2S |
| 12 | 731770 | Holder (16Pin Connector) |
| 13 | 4215220 | Connector 16Pin Socket |
| 14 | 4019123 | P.C.B Connector |
| 15 | 701020 | Main Body |
| 16 | 789700 | Back Plate |
| 17 | 789710 | Name Plate |
| 18 | 670025 | Rivet Blind |
| 19 | 992440 | ANT Receptacle |
| 20 | 731790 | Holder (ANT MTG) |
| 21 | 750765 | Cord Stopper |
| 22 | 4225038 | Molex Connector |
| 23 | 760970 | Heat Sink (TR MTG) |
| 24 | 4400040 | Mica (TR 2SC2078) |
| 25 | 2040091 | Transistor 2SC2078 (D) |
| 26 | 4410045 | Bushing (TR 2SC2078) |
| 27 | 613305 | (+) Machine Screw M3x8 |
| 28 | 662305 | Washer (Spring) |
| 29 | 651024 | Nut |
| 30 | 4400051 | Mica (TR 2SC2314) |
| 31 | 2040167 | Transistor 2SC2314 (E) |
| 32 | 613332 | (+) Machine Screw M3x10 |
| 33 | 760980 | Heat Sink (IC MTG) |
| 34 | 2220064 | I.C KIA 7217AP |
| 35 | 900966 | Mica (IC) |
| 36 | 760704 | Heat Sink (IC MTG) |
| 37 | 4410100 | Bushing (IC TA7217AP) |
| 38 | 4010463 | P.C.B Main |
| 39 | 4207076 | Jack Earphone |