

Midland Radio 71-3200A/B VHF Base Tech II

5.0 LIST OF SEMICONDUCTORS DESIGNATIONS AND FUNCTIONS

5.1 Tx VCO UNIT

| | | |
|-------|------------|----------------------|
| Q301 | 2SK508 | Oscillator |
| Q302 | 2SC4325 | Amplifier |
| Q303 | 2SC3583 | VCO output amplifier |
| Q304 | DTA124EUA | Switch |
| Q305 | 2SC2351 | B + filter |
| Q306 | DTYA114EUA | B + switch |
| IC301 | uPC1688 | Amplifier |

5.2 Tx UNIT

| | | |
|-------|-------------|------------------|
| Q201 | 2SK3018 | PTT buffer |
| Q202 | UMG1N | Switch |
| Q204 | UMC2 | Switch |
| Q207 | 2SD2351 | B + filter |
| Q205 | 2SK3018 | Charge pump |
| Q208 | RTU002P02 | Charge pump |
| Q209 | 2SK3018 | Charge pump |
| Q210 | UMC2N | Switch |
| Q212 | UMG1N | Switch |
| Q213 | DTC124EUA | Switch |
| Q206 | DTA124EUA | Switch |
| Q211 | 2SC3357 | RF amplifier |
| Q214 | 2SC4250 | Switch |
| Q215 | 2SC4325 | Switch |
| Q217 | 2SK3018 | Switch |
| IC201 | BAJ0BCOFP | 10v regulator |
| IC202 | XC6202P702P | 7v regulator |
| IC204 | TC75W51F | Mod LF amplifier |
| IC205 | TA75S01F | Mod. Amplifier |
| IC208 | MB1511 | PLL |

| | | |
|---------|-------------|-------------------|
| IC210 | NJU7662M | DC/DC converter |
| IC209 | TC4566F | LPF, switch |
| IC211 | BA00CC0WFP | Tx power adjust |
| IC212-B | NJM2904 | Power control |
| IC212-A | NJM2904 | Error amplifier |
| IC203 | XC6202P502M | 5v regulator |
| IC213 | TA75S01F | Mod. LF amplifier |
| IC206 | TC7TW125FU | Level converter |
| IC207 | TC7TW125FU | Level converter |

5.3 PA UNIT

| | | |
|---------|------------|------------------------|
| Q501 | 2SK3018 | Switch |
| Q502 | DTB143EK | B + switch |
| IC501-B | BAM4558F | Reverse power control |
| IC501-A | BAM4558F | Error amplifier |
| IC502 | TA75S01F | Power control |
| IC504 | AN78L05M | 5v regulator |
| IC503 | TA75S01F | Power signal amplifier |
| PM510 | RA08H1317M | Driver amplifier |
| Q504 | RD70HVF1 | Power amplifier |
| Q505 | RD70HVF1 | Power amplifier |

5.4 RX VCO UNIT

| | | |
|-------|------------|----------------------|
| Q301 | 2SK508 | Oscillator |
| Q302 | 2SC4325 | Amplifier |
| Q303 | 2SC3583 | VCO output amplifier |
| Q304 | DTA124EUK | Switch |
| Q305 | 2SC2351 | B + filter |
| Q306 | DTYA114EUA | B + switch |
| IC301 | uPC1688 | Amplifier |

5.5 RX UNIT

| | | |
|------|--------|--------------|
| Q861 | 3SK177 | RF amplifier |
|------|--------|--------------|

| | | |
|-------|-------------|-----------------------------------|
| Q810 | 2SK508 | 1 st High IF amplifier |
| Q809 | 2SD2351 | B + filter |
| Q806 | RTU002P02 | Charge pump |
| Q805 | 2SK3018 | Charge pump |
| Q807 | 2SK3018 | Charge pump |
| Q808 | UMC2N | Switch |
| Q804 | UMC2N | Switch |
| Q811 | DTA144EUA | Switch |
| Q803 | 33061MCH | Rx switch |
| Q802 | 2SD2351 | Rx switch |
| Q801 | 2SK3018 | Rx switch |
| Q812 | 2SC4250 | Switch |
| Q813 | 2SC4325 | Switch |
| Q814 | 2SC4325 | Switch |
| | | |
| IC806 | MB1511 | PLL |
| IC807 | NJU7662M | DC/DC inverter |
| IC808 | TC4566F | LPF switch |
| IC805 | XC6202P502M | 5v regulator |
| IC809 | TA75S01F | VCO error amplifier |
| IC811 | SPM5001 | 1 st mixer |
| IC802 | XC221A200 | AF LPF |
| IC801 | BA70BCOFP | 7v regulator |
| IC803 | TCWT125FU | Level converter |
| IC804 | TCWT125FU | Level converter |
| IC810 | XC221A1200 | DC amplifier |
| IC812 | XC6201P502M | 5v regulator |

5.6 IF UNIT

| | | |
|------|----------|--------------------|
| Q001 | 2SC4250 | 1st IF amplifier |
| Q002 | 2SK880 | Wide/Narrow switch |
| Q003 | DTC323TU | Wide/Narrow switch |
| Q004 | 2SK880 | Wide/Narrow switch |
| Q005 | 2SK3018 | Wide/Narrow switch |
| Q006 | 2SD2351 | Noise amplifier |
| Q007 | XP01501 | Squelch switch |

IC001 TA31136FNG

2nd IF/oscillator/detector

IC002 TC75W51FU

AF amplifier

Logic Unit and Front Panel Unit semiconductor parts are the same as the MMA710100B radio.