

## Control Board Section

| Ref. No | Description      | Type  | Function            | Parts Number |
|---------|------------------|-------|---------------------|--------------|
| CN101   | B2B-PH-KS(LF)    | CN    | Power supply        | 002-48337-02 |
| CN102   | 52559-3092       | CN    | to Display Board    | 102-48992-30 |
| CN103   | 52559-3092       | CN    | to Main Board       | 102-48992-30 |
| CN106   | 52465-1091       | CN    | for writing CPU     | 102-49179-10 |
|         |                  |       |                     |              |
| IC101   | MC68HC908AP32CFB | IC    | CPU                 | 478-00840-01 |
| IC102   | TC7SU04FU        | IC    | BUFFER              | 178-00188-01 |
| IC103   | TC7SU04FU        | IC    | OSC                 | 178-00188-01 |
| IC108   | TC4S584F         | IC    | BUFFER              | 178-00124-01 |
| IC109   | TC4S584F         | IC    | BUFFER              | 178-00124-01 |
| IC110   | TC4S584F         | IC    | INVERTER            | 178-00124-01 |
| IC111   | TC4W66F          | IC    | CTCSS/DCS SW        | 178-00207-01 |
| IC112   | MX805A           | IC    | TONE GENERATOR      | 178-00215-01 |
| IC113   | NJM78L05         | IC    | VOLTAGE REGURATOR   | 178-00023-01 |
| IC114   | TC4S584F         | IC    | BUFFER              | 178-00124-01 |
| IC115   | TC7W241FU        | IC    | Signal direction SW | 178-00221-01 |
| IC120   | TC4S01F          | IC    | Theft circuit latch | 178-00224-01 |
| IC121   | TC4S01F          | IC    | Theft circuit latch | 178-00224-01 |
|         |                  |       |                     |              |
| Q101    | DTA114EK         | TR    | Pull-up SW          | 178-00028-01 |
| Q106    | 2SD1280S         | TR    | RIPPLE FILTER       | 178-41280-20 |
| Q107    | 2SC4116Y         | TR    | AF AMP              | 178-34116-26 |
|         |                  |       |                     |              |
| SW2     | CHS-06TA1        | SW    | Setting SW          | 150-46404-06 |
|         |                  |       |                     |              |
| X101    | 9.8304MHZ        | X'TAL | for CPU             | 150-47343-01 |
| X102    | 4MHZ             | X'TAL | for MX805A          | 150-46516-01 |
|         |                  |       |                     |              |

## Main Board Section

| Ref. No | Description      | Type | Function                         | Parts Number |
|---------|------------------|------|----------------------------------|--------------|
| CN301   | B3B-EH(LF)       | CN   | for PA                           | 002-48338-03 |
| CN302   | B4B-EH(LF)       | CN   | Power supply                     | 002-48338-04 |
| CN303   | B3B-EH(LF)       | CN   | to Power SW                      | 002-48338-03 |
| CN304   | B2B-EH(LF)       | CN   | Speaker Out                      | 002-48338-02 |
| CN305   | B3B-EH(LF)       | CN   | EXT. Speaker Out                 | 002-48338-03 |
| CN306   | B3B-PH-KS(LS)    | CN   | AF Audio Volume                  | 002-48337-03 |
| CN307   | B3B-PH-KS(LS)    | CN   | Squelch Volume                   | 002-48337-03 |
| CN308   | 52559-3092       | CN   | to Control board                 | 102-48992-30 |
|         |                  |      |                                  |              |
| J301    | V TYPE MINI JACK | JK   | TX exciter RF Out                | 002-48169-01 |
| J302    | V TYPE MINI JACK | JK   | RX RF In                         | 002-48169-01 |
|         |                  |      |                                  |              |
| IC301   | TC4S01F          | IC   | INVERTER                         | 178-00224-01 |
| IC302   | NJU4066BM        | IC   | Wide/Narrow Analog SW            | 178-00046-01 |
| IC303   | NJM4558MD        | IC   | Pre-emphasis and Splatter Filter | 178-00049-01 |
| IC304   | NJM4558MD        | IC   | Microphone and Tone AMP          | 178-00049-01 |
| IC305   | TC74VHC595FT     | IC   | Shift Register                   | 178-00839-01 |
| IC306   | TC4W66FU         | IC   | Wide/Narrow Analog SW            | 178-00322-01 |
| IC307   | NJM4558MD        | IC   | Splatter Filter                  | 178-00049-01 |
| IC308   | MB15E03L         | IC   | PLL SYNTHESIZER                  | 478-00330-01 |
| IC309   | TK83361M         | IC   | FM IF/DET AMP                    | 178-00372-01 |
| IC310   | TC7S66FU         | IC   | ANALOG SWITCH                    | 178-00187-01 |
| IC311   | TC7S66FU         | IC   | ANALOG SWITCH                    | 178-00187-01 |
| IC312   | FMG1             | IC   | INVERTER                         | 178-00004-01 |
| IC313   | NJM062MD         | IC   | BUFFER                           | 178-00165-01 |
| IC314   | NJM4558MD        | IC   | VOLTAGE REGURATOR 8V             | 178-00049-01 |
| IC315   | NJM4558MD        | IC   | LPF                              | 178-00049-01 |
| IC316   | NJU7201U30       | IC   | VOLTAGE REGURATOR 3V             | 178-00164-05 |
|         |                  |      |                                  |              |
| VR301   | EVM3WSX50BI4     | VR   | HI-POWER                         | 150-44694-09 |
| VR302   | EVM3WSX50BQ2     | VR   | LO-POWER                         | 150-44694-04 |
| VR303   | EVM3WSX50BQ2     | VR   | MIC SENS                         | 150-44694-04 |
| VR304   | EVM3WSX50BI4     | VR   | MAX DEV                          | 150-44694-09 |
| VR305   | EVM3YSX50BE4     | VR   | CTCSS LEVEL                      | 150-45638-10 |
| VR306   | EVM3WSX50BI4     | VR   | BEEP LEVEL                       | 150-44694-09 |
| VR307   | EVM3YSX50BQ3     | VR   | DCS LEVEL                        | 150-44694-08 |
|         |                  |      |                                  |              |
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|         |                  |      |                                  |              |

## Main Board Section

| Ref. No | Description | Type | Function              | Parts Number |
|---------|-------------|------|-----------------------|--------------|
| IC317   | FMW1        | IC   | APC                   | 178-00007-01 |
| IC318   | LA5010M     | IC   | VOLTAGE REGURATOR 10V | 178-00222-01 |
| IC319   | NJM78L08    | IC   | VOLTAGE REGURATOR 8V  | 178-00387-01 |
| IC320   | LA4425A     | IC   | AF Power AMP          | 078-01294-01 |
| IC321   | NJM78L05    | IC   | VOLTAGE REGURATOR 5V  | 178-00023-01 |
| IC322   | NJM78L05    | IC   | VOLTAGE REGURATOR 5V  | 178-00023-01 |
|         |             |      |                       |              |
| Q301    | 2SK2158     | FET  | Level Converter       | 178-92221-01 |
| Q302    | 2SC2712GR   | TR   | Charge pump           | 178-32712-31 |
| Q303    | 2SA1162GR   | TR   | Charge pump           | 178-11162-31 |
| Q304    | 2SK209GR    | FET  | Loop filter           | 178-90006-31 |
| Q305    | 2SC4215Y    | TR   | RF AMP                | 178-34215-26 |
| Q306    | 2SC4083P    | TR   | RF AMP                | 178-34083-17 |
| Q307    | 2SC4116Y    | TR   | Schmitt trigger       | 178-34116-26 |
| Q308    | 2SC2712GR   | TR   | Loop filter           | 178-32712-31 |
| Q309    | 2SC4116Y    | TR   | Schmitt trigger       | 178-34116-26 |
| Q310    | 2SC4215Y    | TR   | NOISE AMP             | 178-34215-26 |
| Q311    | 2SK882GR    | FET  | RF AMP                | 178-90018-31 |
| Q312    | 2SK2158     | FET  | MUTE                  | 178-92221-01 |
| Q313    | 2SC4116Y    | TR   | RIPPLE FILTER         | 178-34116-26 |
| Q314    | 2SC4116Y    | TR   | RIPPLE FILTER         | 178-34116-26 |
| Q315    | 3SK195      | FET  | MIXER                 | 178-90034-01 |
| Q316    | 2SC4116Y    | TR   | De-emphasis           | 178-34116-26 |
| Q317    | 2SD1664Q    | TR   | VOLTAGE REGURATOR 8V  | 178-41664-18 |
| Q318    | 2SK209GR    | FET  | VOLTAGE REGURATOR 8V  | 178-90006-31 |
| Q319    | 2SK2158     | FET  | RX/TX SW              | 178-92221-01 |
| Q320    | 2SC4116Y    | TR   | VOLTAGE REGURATOR 8V  | 178-34116-26 |
| Q321    | 2SC4083P    | TR   | 1st Local BUFFER      | 178-34083-17 |
| Q322    | 2SC4116Y    | TR   | VOLTAGE REGURATOR 8V  | 178-34116-26 |
| Q323    | 2SK2158     | FET  | RX/TX SW              | 178-92221-01 |
| Q324    | 2SK209GR    | FET  | VOLTAGE REGURATOR 8V  | 178-90006-31 |
| Q325    | 2SD1664Q    | TR   | VOLTAGE REGURATOR 8V  | 178-41664-18 |
| Q326    | 2SA1313Y    | TR   | APC                   | 178-11313-26 |
| Q327    | 2SC4083P    | TR   | RF DRIVE AMP          | 178-34083-17 |
| Q329    | 3SK195      | TR   | Front End RF AMP      | 178-90034-01 |
| Q330    | 2SK2158     | TR   | MUTE                  | 178-92221-01 |
| Q331    | 2SC5087     | TR   | Exciter RF AMP        | 178-35087-01 |
| Q332    | 2SB798      | TR   | TX INH                | 178-20798-33 |
| Q333    | 2SK2158     | FET  | TX INH                | 178-92221-01 |
| Q334    | 2SK2158     | FET  | RF Hi/Lo Power SW     | 178-90021-01 |
| Q335    | 2SK2158     | FET  | RX gain SW            | 178-90021-01 |
| Q336    | 2SK2158     | FET  | Wide/Narrow SW        | 178-90021-01 |
| Q337    | 2SC4116Y    | TR   | INVERTER              | 178-34116-26 |
|         |             |      |                       |              |
|         |             |      |                       |              |

## Main Board Section

| Ref. No | Description  | Type  | Function                | Parts Number |
|---------|--------------|-------|-------------------------|--------------|
| D301    | MA2J111      | DI    | REVERSE BLOCKING DIODE  | 178-50048-01 |
| D302    | HVU306ATRU   | DI    | VARACTOR DIODE for DCS  | 178-50057-01 |
| D303    | HVU306ATRU   | DI    | VARACTOR DIODE for DCS  | 178-50057-01 |
| D304    | MA2J111      | DI    | CONSTANT VOLTAGE        | 178-50048-01 |
| D305    | MA2J111      | DI    | CONSTANT VOLTAGE        | 178-50048-01 |
| D306    | MA2J111      | DI    | REVERSE BLOCKING DIODE  | 178-50048-01 |
| D307    | DA204U       | DI    | NOISE RECTIFIER         | 178-50044-01 |
| D309    | DAN202U      | DI    | SW                      | 178-50052-01 |
| D310    | 1SS312       | DI    | SW                      | 178-50043-01 |
| D311    | 1SS193       | DI    | CONSTANT VOLTAGE        | 178-50019-01 |
| D312    | 1SV229       | DI    | VARACTOR DIODE for F.E. | 178-50051-01 |
| D313    | 1SV229       | DI    | VARACTOR DIODE for F.E. | 178-50051-01 |
| D314    | 1SV229       | DI    | VARACTOR DIODE for F.E. | 178-50051-01 |
| D315    | DA204U       | DI    | CONSTANT VOLTAGE        | 178-50044-01 |
| D316    | MA2J111      | DI    | REVERSE BLOCKING DIODE  | 178-50048-01 |
| D317    | 1SV229       | DI    | VARACTOR DIODE for F.E. | 178-50051-01 |
| D318    | 1SV229       | DI    | VARACTOR DIODE for F.E. | 178-50051-01 |
| D319    | DA204K       | DI    | LIMMITER                | 178-50006-01 |
| D320    | SB20-03P     | DI    | REVERSE BLOCKING DIODE  | 178-50041-01 |
| D321    | XB15A709AOHR | DI    | ANT SW                  | 178-50046-01 |
| ZD301   | MA8062L      | DI    | CONSTANT VOLTAGE        | 178-50069-61 |
| ZD302   | MA8027       | DI    | CONSTANT VOLTAGE        | 178-50069-27 |
| ZD303   | MA8091-H     | DI    | LIMMITER                | 178-50069-92 |
|         |              |       |                         |              |
| FL301   | KBF455R-6A   | FL    | Narrow ceramic filter   | 050-42571-01 |
| FL302   | KBF455R-15A  | FL    | Wide ceramic filter     | 050-41205-01 |
|         |              |       |                         |              |
| T301    | 150-46428-01 | TRANS | Quad Coil               | 150-46428-01 |
| T302    | 150-44421-01 | TRANS | IFT                     | 150-44421-01 |
| T303    | 050-43106-02 | TRANS | RFT                     | 050-43106-02 |
| T304    | 050-43106-02 | TRANS | RFT                     | 050-43106-02 |
| T305    | 050-43106-02 | TRANS | RFT                     | 050-43106-02 |
| T306    | 050-43106-02 | TRANS | RFT                     | 050-43106-02 |
| T307    | 050-43106-01 | TRANS | RFT                     | 050-43106-01 |
| T308    | 150-44421-02 | TRANS | IFT                     | 150-44421-02 |
|         |              |       |                         |              |
| XF301   | 21M15BU      | FL    | X'Tal Filter            | 050-41687-01 |
| XF302   | 21M15BU      | FL    | X'Tal Filter            | 050-41687-01 |
|         |              |       |                         |              |
| X301    | 20.945MHZ    | X'TAL | 2nd OSC                 | 150-46570-01 |
| X302    | 12.5MHZ      | X'TAL | PLL reference OSC       | 050-43107-01 |
|         |              |       |                         |              |
| CV301   | ECRJA020E11X | CV    | Frequency Adjustment    | 150-44570-04 |
|         |              |       |                         |              |
| UNIT301 | 055-117-01   | UNIT  | VCO unit                | 055-117-01   |

## PA Board SECTION

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## Display Board Section

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