

Apr. 2011



SERVICE MANUAL ADDENDUM

ID-1

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5-2 PLL AND CODEC ADJUSTMENT

| ADJUSTMENT | ADJUSTMENT CONDITION | MEASUREMENT | | VALUE | ADJUSTMENT | |
|---|--|--------------|---|--|--------------|---|
| | | UNIT | LOCATION | | UNIT | ADJUST |
| FPGA FREQUENCY [Set FPGA frequency] | 1 • Operating freq. : 1240.00 MHz • Mode : DD mode • Receiving | LOGIC-1 unit | Connect a frequency counter to the check point "CP200". | 16.3840 MHz | LOGIC-1 unit | C202 |
| | 2 • Operating freq. : 1240.00 MHz • Mode : DV mode • Receiving | | | 9.8304 MHz | | |
| PLL LOCK VOLTAGE | 1 • Operating freq. : 1240.00 MHz • Mode : DV mode • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Receiving | MAIN unit | Connect a digital multimeter or an oscilloscope to the check point "LV1". | More than 0.9 V | Verify | |
| | 2 • Operating freq. : 1300.00 MHz • Receiving | | | Less than 4.4 V | | |
| | 3 • Mode : FM mode • Receiving | MAIN unit | Connect a digital multimeter or an oscilloscope to the check point "LV2". | 1.3–4.1 V | | |
| | 4 • Mode : DD mode • Receiving | | | | | |
| | 5 • Mode : FM mode • Transmitting | | | | | |
| I/Q BALANCE [FPGA D.C. voltage adjustment /DV I] | 1 • Preset "IQ Direct-current output" ON. • Operating freq. : 1270.00 MHz • Mode : DV mode • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting | MAIN unit | Connect a digital multimeter or an oscilloscope to the check point "CP.I". | The same voltage of the check point "CP.IR". | PC screen | [FPGA D.C. voltage adjustment /DV I] |
| [FPGA D.C. voltage adjustment /DV Q] | 2 • Transmitting | MAIN unit | Connect a digital multimeter or an oscilloscope to the check point "CP.Q". | The same voltage of the check point "CP.QR". | PC screen | [FPGA D.C. voltage adjustment /DV Q] |
| [FPGA D.C. voltage adjustment /DV I] | 3 • Transmitting | Rear panel | Connect a spectrum analyzer to the antenna connector through an attenuator. | Minimum output level | PC screen | [FPGA D.C. voltage adjustment /DV I], [FPGA D.C. voltage adjustment /DV Q] |
| [FPGA D.C. voltage adjustment /DV Q] | | | | | | |
| • Repeat step 3 and step 4 several times. | | | | | | |

[MAIN-1 UNIT]

Table with 6 columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains a list of components with their specifications and locations.

[MAIN-1 UNIT]

Table with 6 columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains a list of components with their specifications and locations.

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side) S.=Surface mount

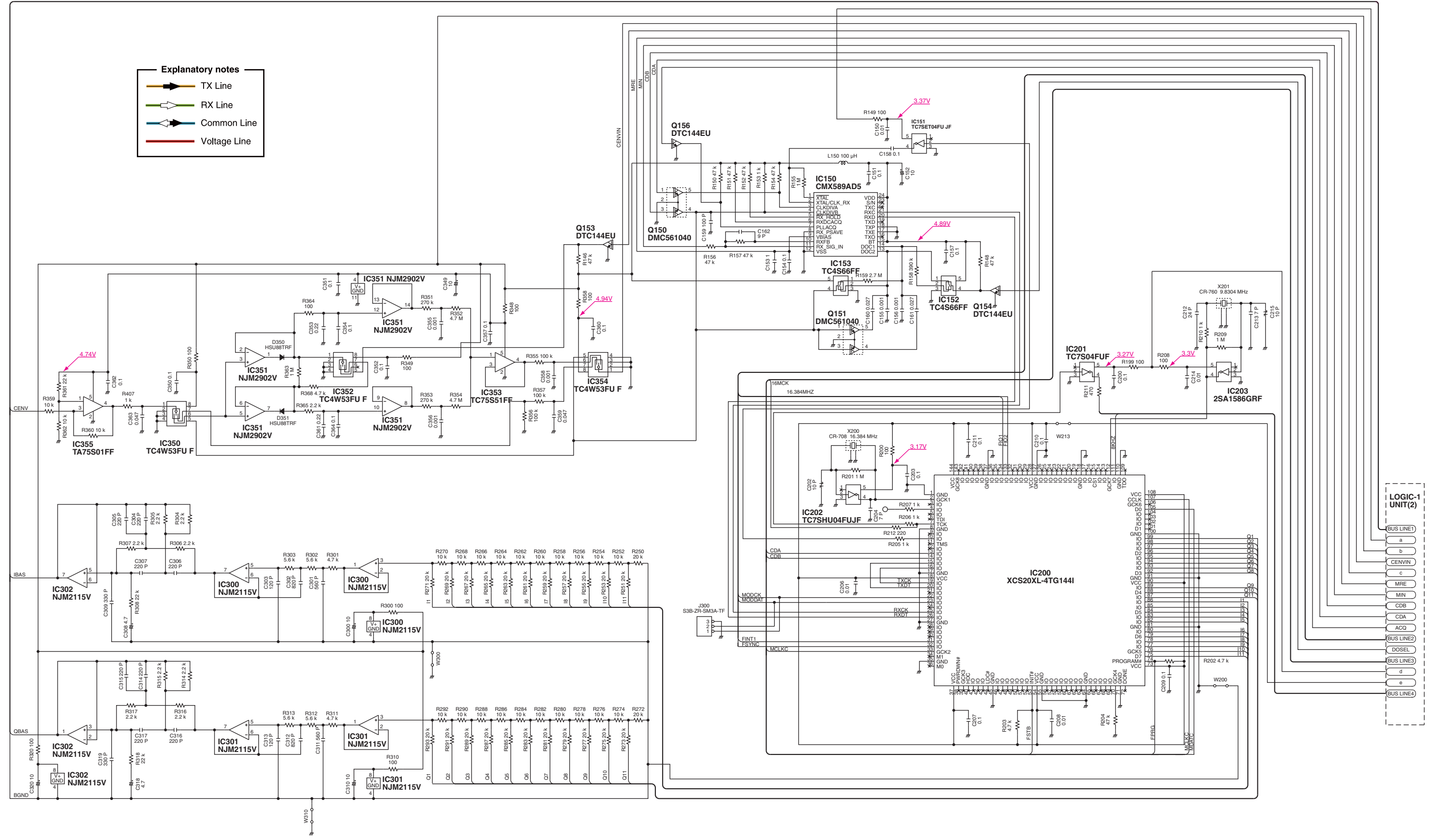
[MAIN-1 UNIT]

| REF NO. | PARTS NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|-------------------------------------|----|--------------|
| C1695 | 4030008890 | S.CER C1608 JB 1H 273K-T | B | 89.8/3.0 |
| C1696 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 1.7/11.4 |
| C1697 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 40.2/2.5 |
| C1698 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 1.7/12.6 |
| C1699 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 25.0/1.7 |
| C1700 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 5.4/91.6 |
| C1750 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 26.9/12.2 |
| C1751 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 54.6/123.8 |
| C1752 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 28.6/119.3 |
| C1753 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 24.2/120.5 |
| C1754 | 4510008520 | S.ELE EEE1CA470SP | T | 31.8/127.5 |
| C1755 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 25.8/113.2 |
| C1800 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 24.0/20.5 |
| C1801 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 42.0/103.6 |
| C1802 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 42.5/112.3 |
| C1803 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 28.6/104.1 |
| C1804 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 32.4/103.3 |
| C1805 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 27.8/101.5 |
| C1806 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 32.4/99.7 |
| C1807 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 42.0/101.4 |
| C1808 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 38.8/112.0 |
| J1550 | 6450001440 | CON HSJ1403-01-010 | | |
| J1600 | 6510016481 | CON 52018-8846(8845) | | |
| J1602 | 6510021970 | S.CON AXN330C130P | T | 26.2/21.8 |
| J1750 | 6510009351 | CON B2B-ZR(LF)(SN) | | |
| J1800 | 6510021722 | S.CON 30FLT-SM2-TB(LF)(SN)(M) | T | 44.0/107.5 |
| J1801 | 6510021722 | S.CON 30FLT-SM2-TB(LF)(SN)(M) | T | 87.0/5.8 |
| S1601 | 2260002590 | SWI SKHHLU | | |
| W1164 | 7030012280 | JUM RD25T0R0 | | |
| W1330 | 8900011960 | CAB OPC-1216 | | |
| EP5 | 6910000630 | BEA FSRH070140RN000B (FSOH070RN) | | |
| EP6 | 6910000630 | BEA FSRH070140RN000B (FSOH070RN) | | |
| EP401 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 16.5/70.3 |
| EP403 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 20.8/63.0 |
| EP404 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 14.5/60.4 |
| EP405 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 21.3/66.3 |
| EP470 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 16.4/68.3 |
| EP482 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 12.9/82.9 |
| EP550 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 24.6/39.8 |
| EP551 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 35.1/26.6 |
| EP552 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.1/48.7 |
| EP553 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 18.0/48.1 |
| EP721 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 32.1/85.5 |
| EP1601 | 6910014690 | S.BEA MPZ1608S221A-T | T | 114.3/16.5 |
| EP1602 | 6910014690 | S.BEA MPZ1608S221A-T | T | 105.1/18.2 |
| EP1603 | 6910014690 | S.BEA MPZ1608S221A-T | T | 104.4/14.1 |
| EP1604 | 6910014690 | S.BEA MPZ1608S221A-T | T | 109.0/12.4 |
| EP1606 | 6910014690 | S.BEA MPZ1608S221A-T | B | 114.4/12.3 |
| EP1607 | 6910014690 | S.BEA MPZ1608S221A-T | T | 113.5/13.9 |
| EP1608 | 6910014690 | S.BEA MPZ1608S221A-T | T | 102.7/11.9 |
| EP1609 | 6910014690 | S.BEA MPZ1608S221A-T | B | 107.5/8.6 |
| EP1750 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.8/124.0 |
| EP1751 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.8/125.5 |

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
S.=Surface mount

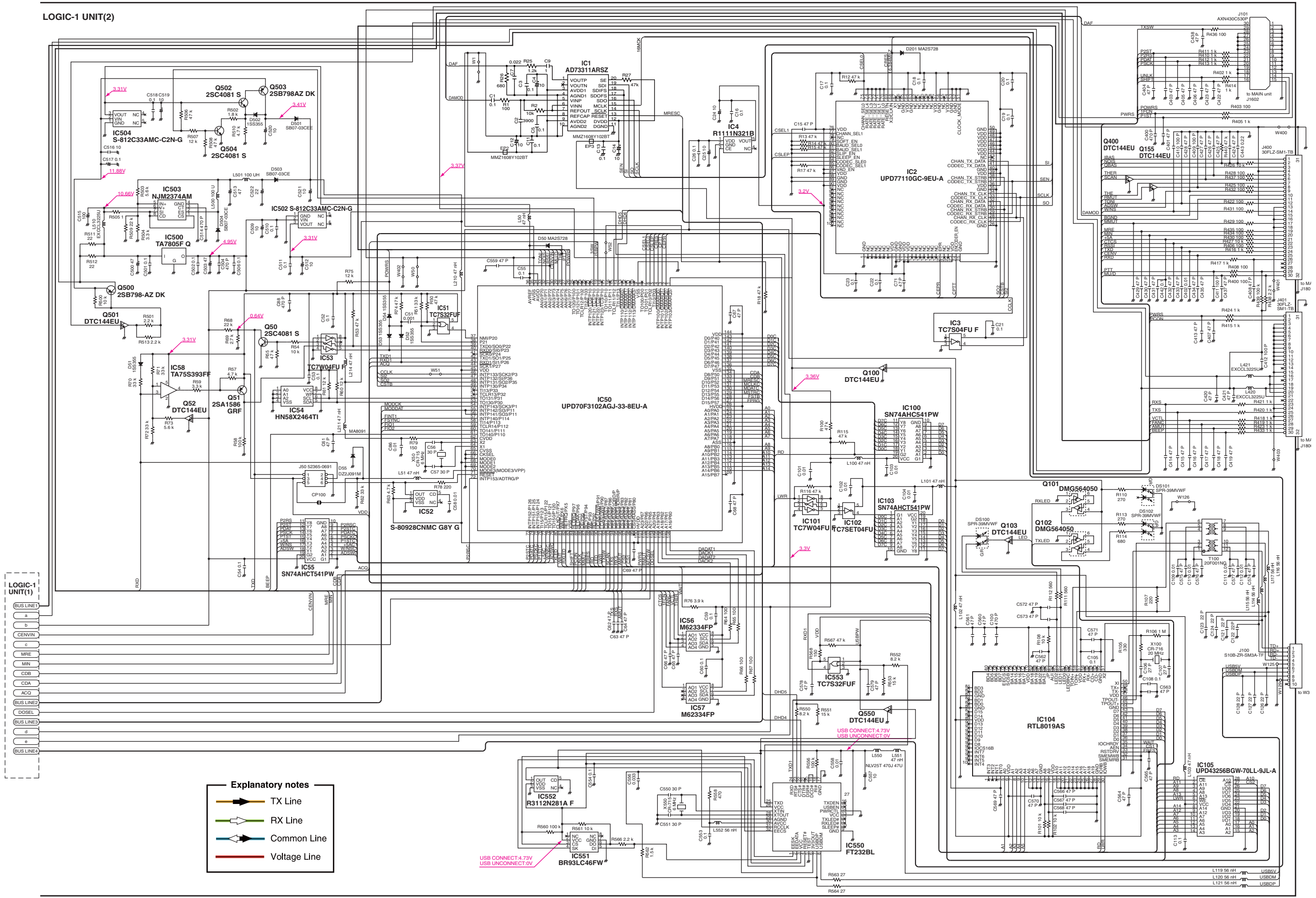
VOLTAGE DIAGRAM

LOGIC-1 UNIT(1)



*; Refer to "PARTS LIST."

LOGIC-1 UNIT(2)

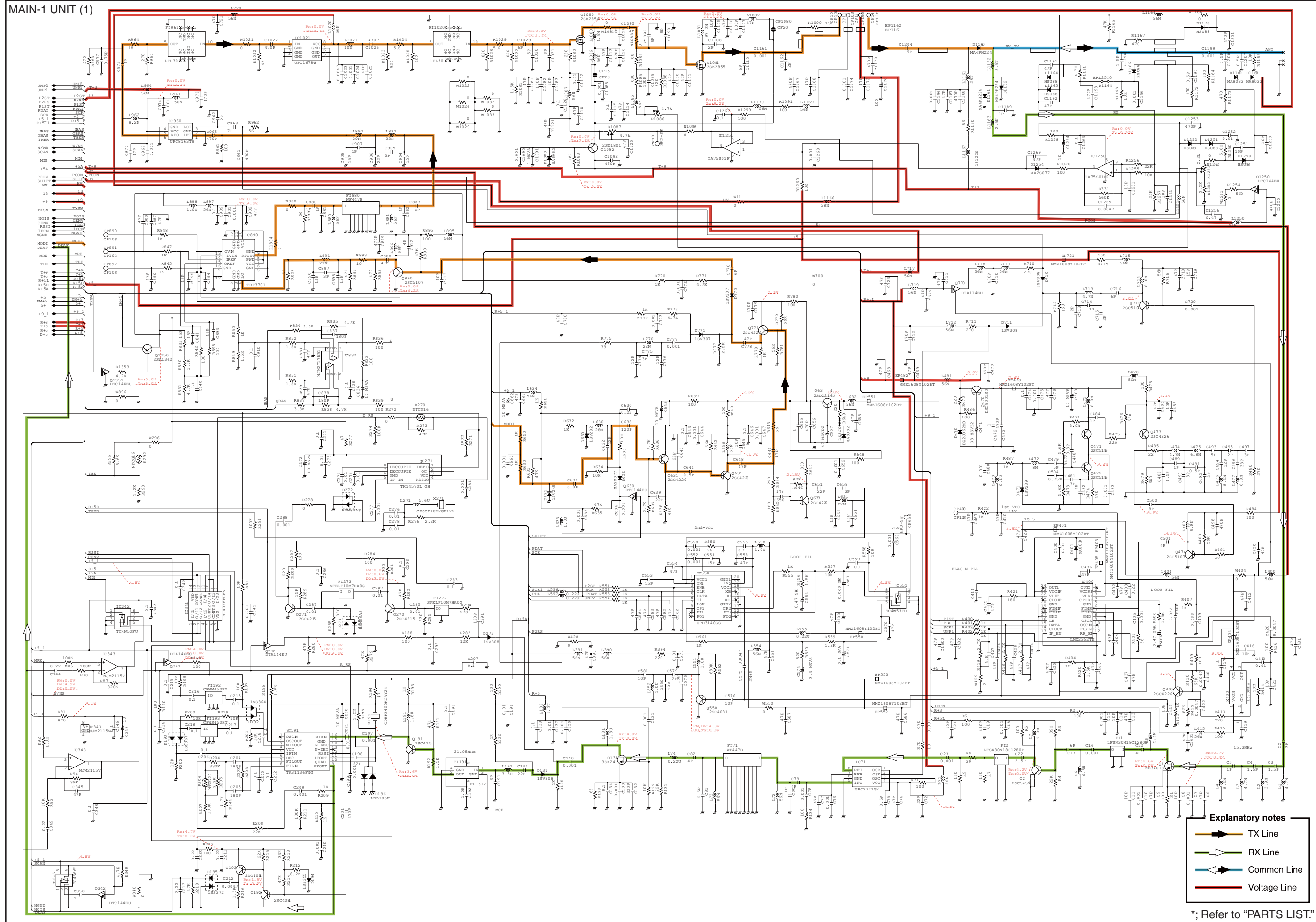


Explanatory notes

- TX Line
- RX Line
- Common Line
- Voltage Line

*; Refer to "PARTS LIST"

MAIN-1 UNIT (1)

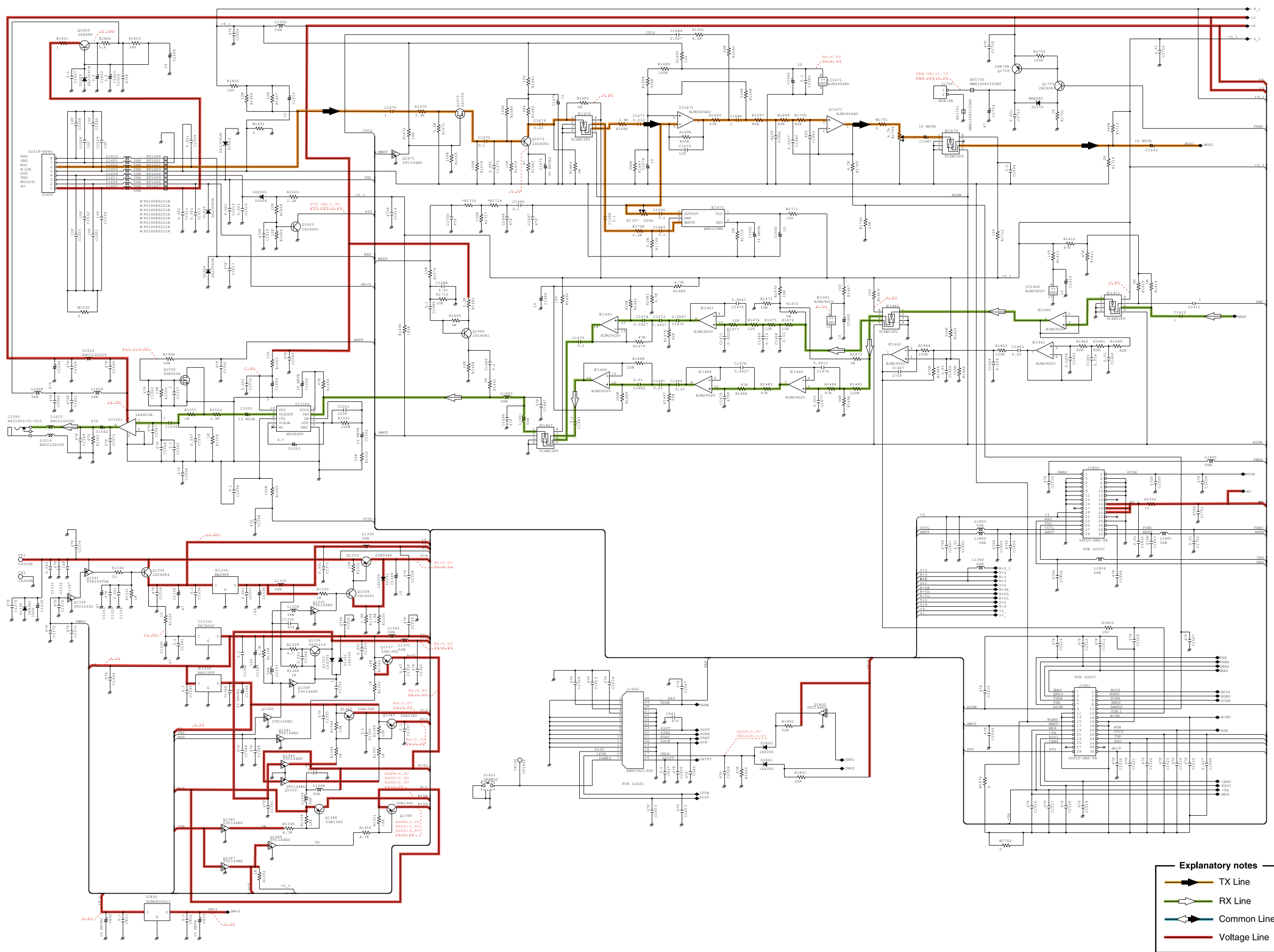


Explanatory notes

- TX Line
- RX Line
- Common Line
- Voltage Line

*; Refer to "PARTS LIST."

MAIN-1 UNIT (2)



Explanatory notes

- TX Line
- RX Line
- Common Line
- Voltage Line

*; Refer to "PARTS LIST."

Nov. 2010



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[MAIN-1 UNIT]

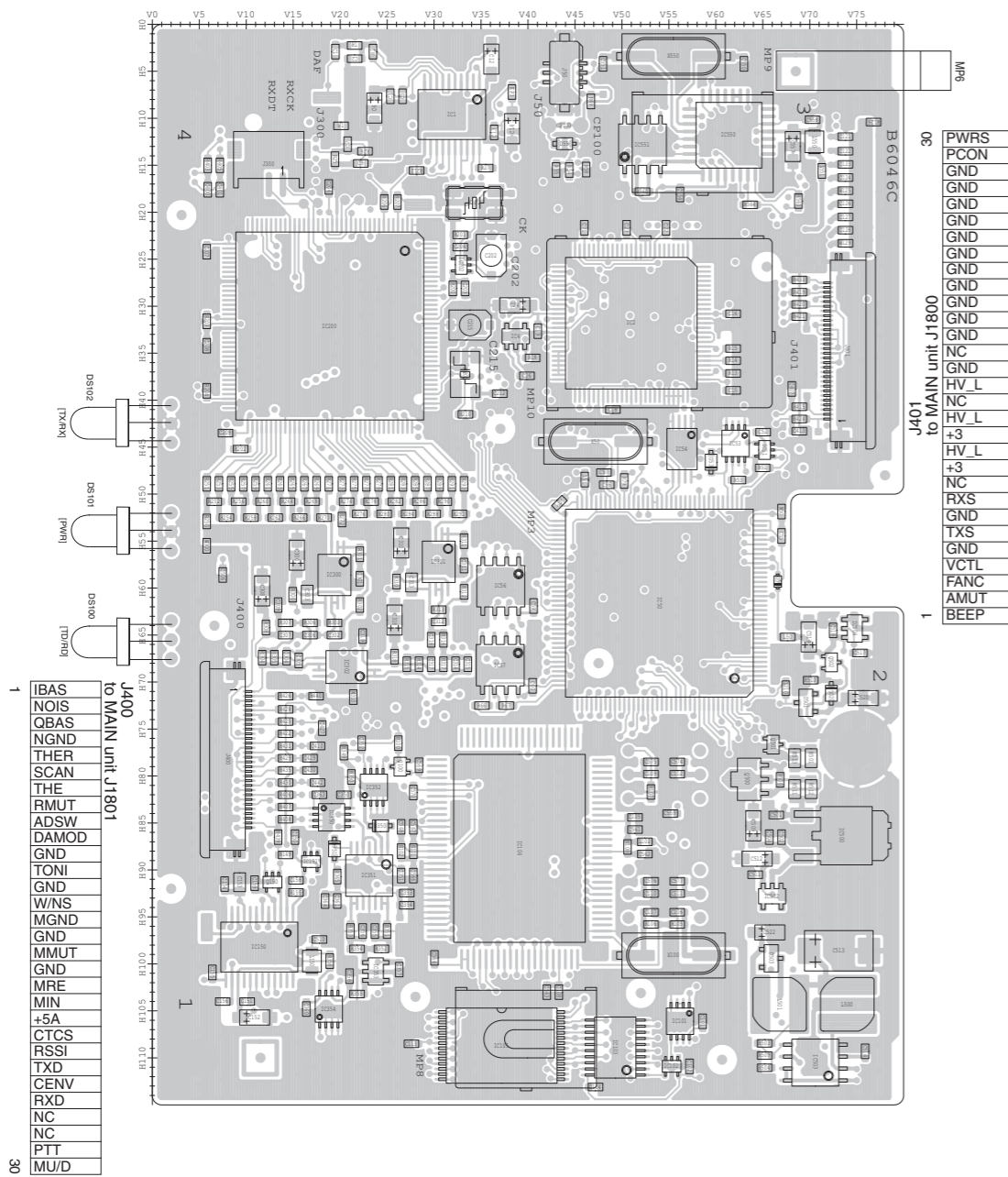
| REF NO. | PARTS NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|-------------------------------------|----|--------------|
| C1750 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 26.9/12.2 |
| C1751 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 54.6/123.8 |
| C1752 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 28.6/119.3 |
| C1753 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 24.2/120.5 |
| C1754 | 4510008520 | S.ELE EEE1CA470SP | T | 31.8/127.5 |
| C1755 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 25.8/113.2 |
| C1800 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 24.0/20.5 |
| C1801 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 42.0/103.6 |
| C1802 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 42.5/112.3 |
| C1803 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 28.6/104.1 |
| C1804 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 32.4/103.3 |
| C1805 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 27.8/101.5 |
| C1806 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 32.4/99.7 |
| C1807 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 42.0/101.4 |
| C1808 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 38.8/112.0 |
| J1550 | 6450001440 | CON HSJ1403-01-010 | | |
| J1600 | 6510016481 | CON 52018-8846(8845) | | |
| J1602 | 6510021970 | S.CON AXN330C130P | T | 26.2/21.8 |
| J1750 | 6510009351 | CON B2B-ZR(LF)(SN) | | |
| J1800 | 6510021722 | S.CON 30FLT-SM2-TB(LF)(SN)(M) | T | 44.0/107.5 |
| J1801 | 6510021722 | S.CON 30FLT-SM2-TB(LF)(SN)(M) | T | 87.0/5.8 |
| S1601 | 2260002590 | SWI SKHHLU | | |
| W1164 | 7030012280 | JUM RD25T0R0 | | |
| W1330 | 8900011960 | CAB OPC-1216 | | |
| EP5 | 6910000630 | BEA FSRH070140RN000B (FSOH070RN) | | |
| EP6 | 6910000630 | BEA FSRH070140RN000B (FSOH070RN) | | |
| EP401 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 16.5/70.3 |
| EP403 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 20.8/63.0 |
| EP404 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 14.5/60.4 |
| EP405 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 21.3/66.3 |
| EP470 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 16.4/68.3 |
| EP482 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 12.9/82.9 |
| EP550 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 24.6/39.8 |
| EP551 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 35.1/26.6 |
| EP552 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.1/48.7 |
| EP553 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 18.0/48.1 |
| EP721 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 32.1/85.5 |
| EP1601 | 6910014690 | S.BEA MPZ1608S221A-T | T | 114.3/16.5 |
| EP1602 | 6910014690 | S.BEA MPZ1608S221A-T | T | 105.1/18.2 |
| EP1603 | 6910014690 | S.BEA MPZ1608S221A-T | T | 104.4/14.1 |
| EP1604 | 6910014690 | S.BEA MPZ1608S221A-T | T | 109.0/12.4 |
| EP1606 | 6910014690 | S.BEA MPZ1608S221A-T | B | 114.4/12.3 |
| EP1607 | 6910014690 | S.BEA MPZ1608S221A-T | T | 113.5/13.9 |
| EP1608 | 6910014690 | S.BEA MPZ1608S221A-T | T | 102.7/11.9 |
| EP1609 | 6910014690 | S.BEA MPZ1608S221A-T | B | 107.5/8.6 |
| EP1750 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.8/124.0 |
| EP1751 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.8/125.5 |

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
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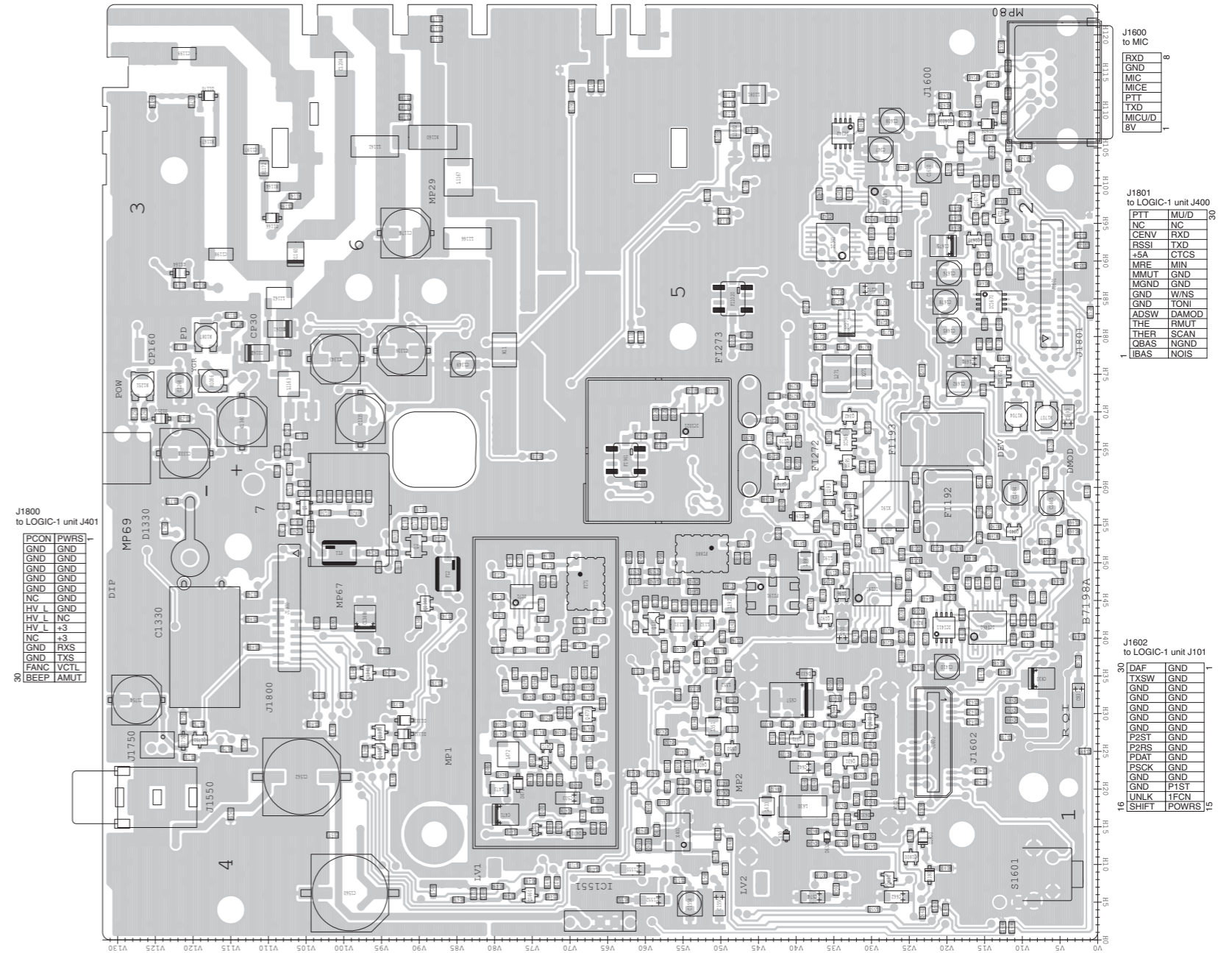
BOARD LAYOUTS

The combination of this side and the bottom side shows the board layout in the same configuration as the actual P.C.Board.

• LOGIC-1 UNIT (TOP VIEW)

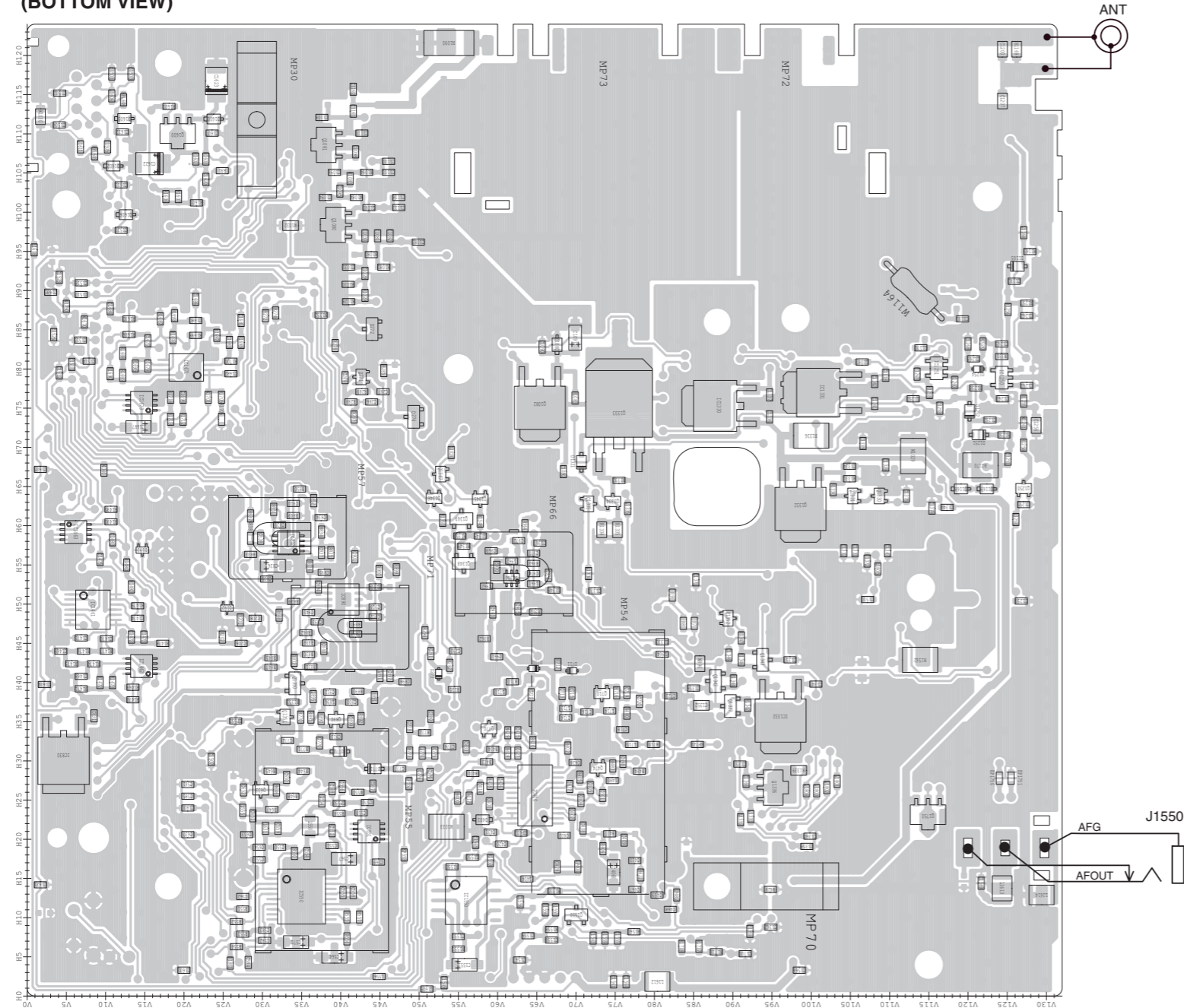


• MAIN-1 UNIT (TOP VIEW)

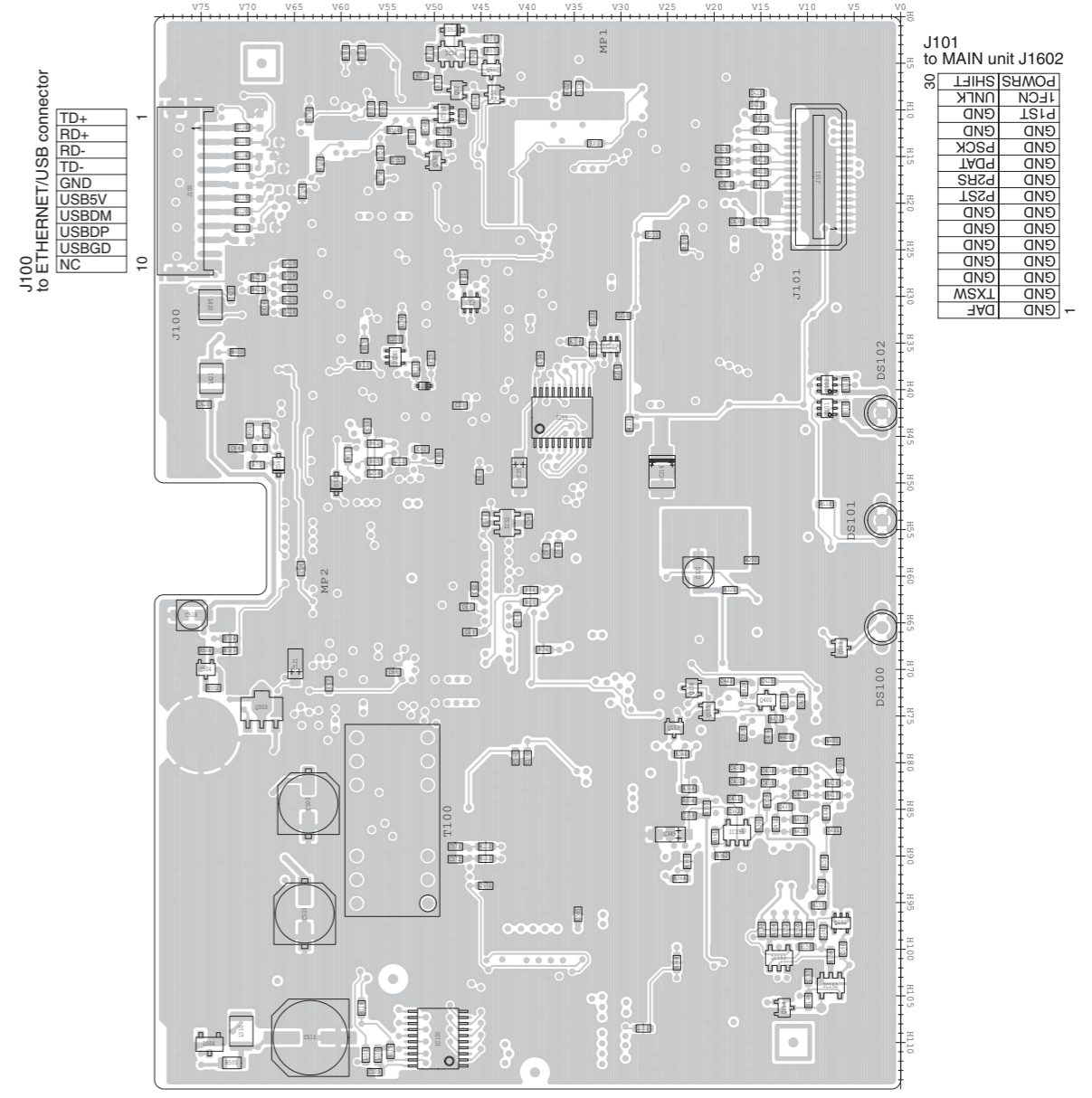


The combination of this side and the bottom side shows the board layout in the same configuration as the actual P.C.Board.

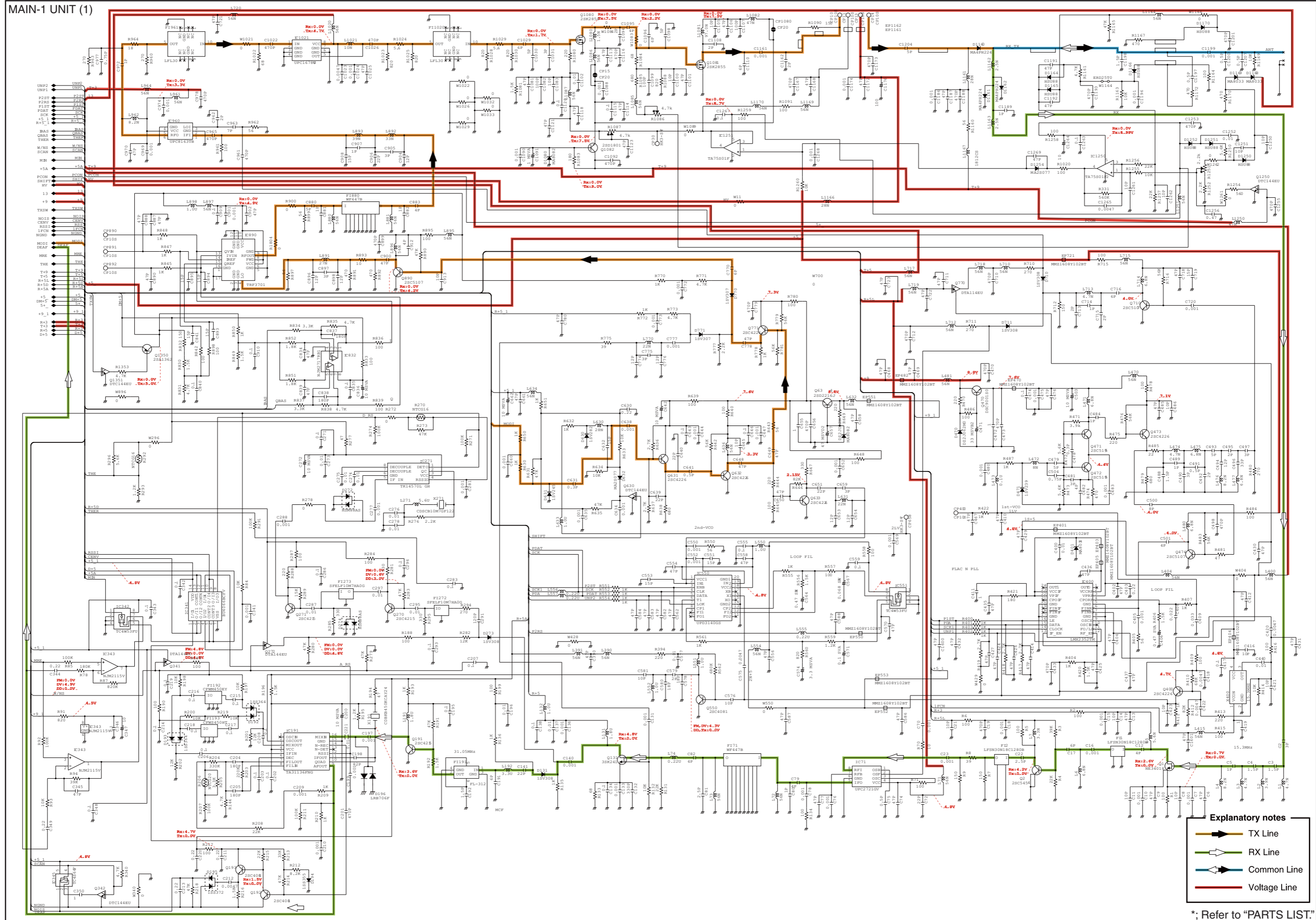
• MAIN-1 UNIT
(BOTTOM VIEW)



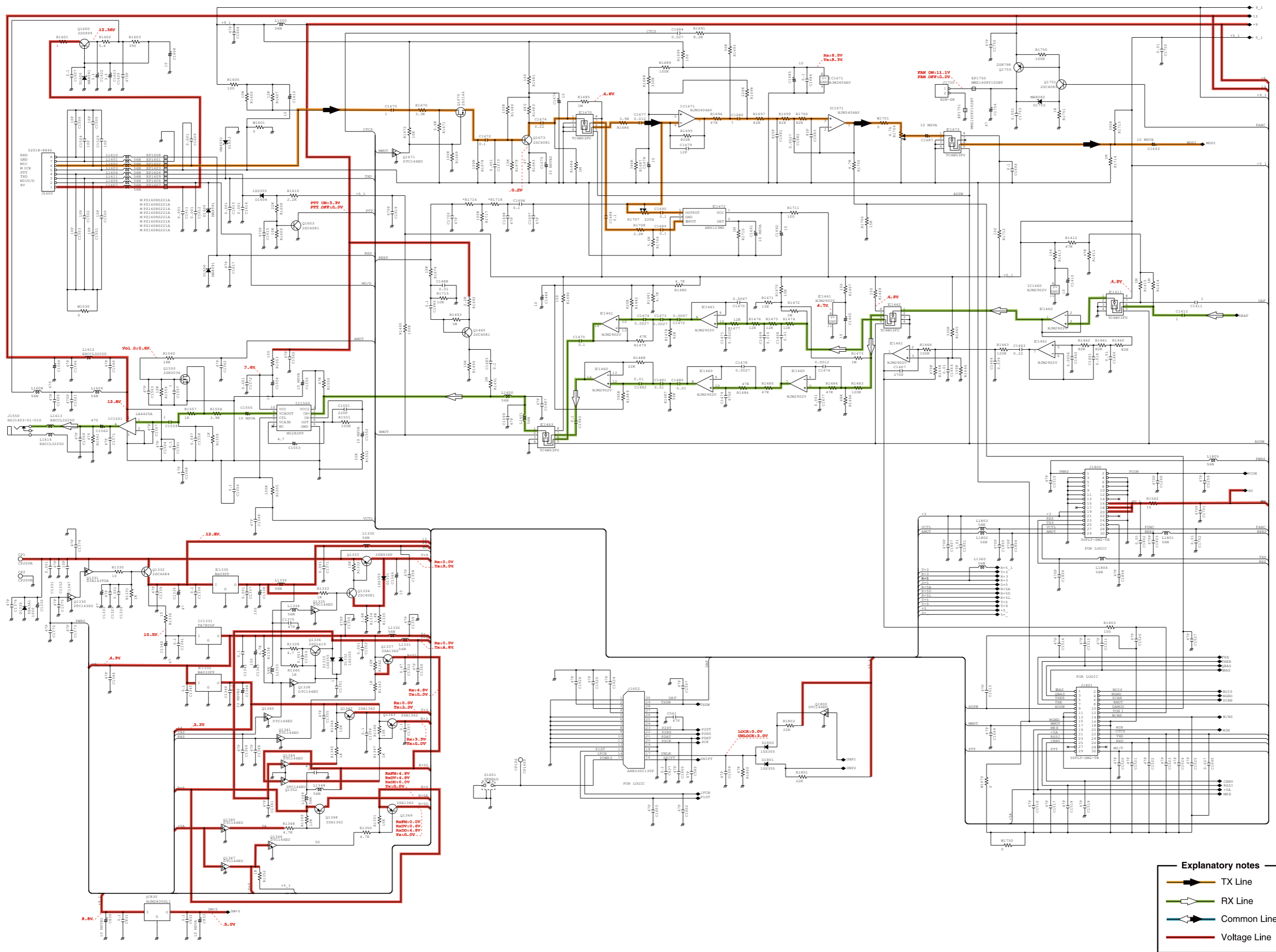
• LOGIC-1 UNIT
(BOTTOM VIEW)



VOLTAGE DIAGRAM



MAIN-1 UNIT (2)



Explanatory notes

- TX Line
- ◇— RX Line
- ◇— Common Line
- Voltage Line

*; Refer to "PARTS LIST."

Jan. 2009



SERVICE MANUAL ADDENDUM

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5-3 TRANSMITTER ADJUSTMENT

| ADJUSTMENT | ADJUSTMENT CONDITION | MEASUREMENT | | VALUE | ADJUSTMENT | | |
|--|----------------------|---|--------------|---|--|-----------|---------------------------------------|
| | | UNIT | LOCATION | | UNIT | ADJUST | |
| YGR CURRENT [FPGA D.C. voltage ad- justment /DV I] | 1 | <ul style="list-style-type: none"> • Preset R1086 and R1087 maximum counterclockwise. • Preset "IQ Direct-current output" ON. | Rear panel | Connect an ammeter between the DC power supply and ID-1. | 100 mA higher from the pre-set position. | MAIN unit | R1087 |
| | 2 | <ul style="list-style-type: none"> • Operating freq. : 1300.00 MHz • Mode : DV mode • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting | | | 100 mA higher from step 1. | MAIN unit | R1086 |
| REFERENCE FREQUENCY [REF Crystal adjustment] | 1 | <ul style="list-style-type: none"> • Operating freq. : 1300.00 MHz • Mode : FM mode • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting | Rear panel | Loosely couple a frequency counter to the antenna connector. | 1300.0000 MHz | PC screen | [REF Crystal adjustment] |
| FM CARRIER [FPGA D.C. voltage ad- justment /FM I] | 1 | <ul style="list-style-type: none"> • Operating freq. : 1300.00 MHz • Mode : FM mode • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting | MAIN unit | Connect a digital multimeter or an oscilloscope to the check point "CP30". | The same voltage that during in DV mode (TX) at the check point "CP30". | PC screen | [FPGA D.C. voltage adjustment /FM I] |
| [FPGA D.C. voltage ad- justment /FM Q] | 2 | <ul style="list-style-type: none"> • Transmitting | | | The same adjustment as step 1, if need. | PC screen | [FPGA D.C. voltage adjustment /FM Q] |
| OUTPUT POWER [TX output adjustment] | 1 | <ul style="list-style-type: none"> • Operating freq. : 1300.00 MHz • Mode : FM mode • TX power : High • Transmitting | Rear panel | Connect an RF power meter to the antenna connector. | 11 W | MAIN unit | R1251 |
| FM DEVIATION [FM modulation adjustment] | 1 | <ul style="list-style-type: none"> • Operating freq. : 1270.00 MHz • Mode : FM mode • Connect an audio generator to the [MIC] connector and set as : 1.0 kHz/20 mVrms • Set a Modulation analyzer as: HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P-P)/2 • Transmitting | Rear panel | Connect a modulation analyzer to the antenna connector through an attenuator. | ±4.35 kHz | MAIN unit | R1704 |
| DSP INPUT LEVEL [DSP input level adjustment] | 1 | <ul style="list-style-type: none"> • Operating freq. : 1270.00 MHz • Connect an audio generator to the [MIC] connector and set as : 1.0 kHz/20 mVrms • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting | LOGIC-1 unit | Connect an oscilloscope to the check point "CP207". | IC1 (LOGIC-1) is; "uPD9930" ->750 mVp-p "AD73311" ->2.1 Vp-p | MAIN unit | R1707 |

[MAIN-1 UNIT]

Table with 6 columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains 320 rows of part specifications for the MAIN-1 UNIT.

[MAIN-1 UNIT]

Table with 6 columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains 320 rows of part specifications for the MAIN-1 UNIT.

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side) S.=Surface mount

[MAIN-1 UNIT]

| REF NO. | PARTS NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|----------------------------------|----|--------------|
| C1692 | 4510008490 | S.ELE EEE1CS100SR | T | 73.7/18.4 |
| C1693 | 4550006250 | S.TAN TEESVA 1A 106M8R | T | 69.3/3.9 |
| C1694 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 76.4/19.9 |
| C1695 | 4030008890 | S.CER C1608 JB 1H 273K-T | B | 89.8/3 |
| C1696 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 1.6/11.4 |
| C1697 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 40.2/2.5 |
| C1698 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 1.6/12.6 |
| C1699 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 25/1.7 |
| C1700 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 5.4/91.6 |
| C1750 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 26.8/12.2 |
| C1751 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 54.5/123.7 |
| C1752 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 28.6/119.3 |
| C1753 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 24.2/120.5 |
| C1754 | 4510008520 | S.ELE EEE1CA470SP | T | 31.8/127.5 |
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| C1801 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 42/103.6 |
| C1802 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 42.5/112.2 |
| C1803 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 28.6/104.1 |
| C1804 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 32.4/103.3 |
| C1805 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 27.8/101.5 |
| C1806 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 32.4/99.7 |
| C1807 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 42/101.4 |
| C1808 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 38.8/112 |
| J1550 | 6450001440 | CON HSJ1403-01-010 | | |
| J1600 | 6510016481 | CON 52018-8846(8845) | | |
| J1602 | 6510021970 | S.CON AXN330C130P | T | 26.2/21.8 |
| J1750 | 6510009351 | CON B2B-ZR(LF)(SN) | | |
| J1800 | 6510021722 | S.CON 30FLT-SM2-TB(LF)(SN)(M) | T | 44/107.5 |
| J1801 | 6510021722 | S.CON 30FLT-SM2-TB(LF)(SN)(M) | T | 87/5.8 |
| W1164 | 7120000490 | JUM ERD25T0 | | |
| W1330 | 8900011960 | CAB OPC-1216 | | |
| EP5 | 6910000630 | BEA FSRH070140RN000B (FSOH070RN) | | |
| EP6 | 6910000630 | BEA FSRH070140RN000B (FSOH070RN) | | |
| EP401 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 16.5/70.2 |
| EP403 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 20.8/63 |
| EP404 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 14.4/60.4 |
| EP405 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 21.3/66.3 |
| EP470 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 16.4/68.3 |
| EP482 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 12.9/82.8 |
| EP550 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 24.6/39.8 |
| EP551 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 35.1/26.6 |
| EP552 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.1/48.7 |
| EP553 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 18/48.1 |
| EP721 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 32.1/85.5 |
| EP1601 | 6910014690 | S.BEA MPZ1608S221A-T | T | 114.3/16.5 |
| EP1602 | 6910014690 | S.BEA MPZ1608S221A-T | T | 105.1/18.2 |
| EP1603 | 6910014690 | S.BEA MPZ1608S221A-T | T | 104.4/14 |
| EP1604 | 6910014690 | S.BEA MPZ1608S221A-T | T | 109/12.4 |
| EP1606 | 6910014690 | S.BEA MPZ1608S221A-T | B | 114.3/12.3 |
| EP1607 | 6910014690 | S.BEA MPZ1608S221A-T | T | 113.4/13.9 |
| EP1608 | 6910014690 | S.BEA MPZ1608S221A-T | T | 102.7/11.8 |
| EP1609 | 6910014690 | S.BEA MPZ1608S221A-T | B | 107.4/8.6 |
| EP1750 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.8/124 |
| EP1751 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.8/125.5 |

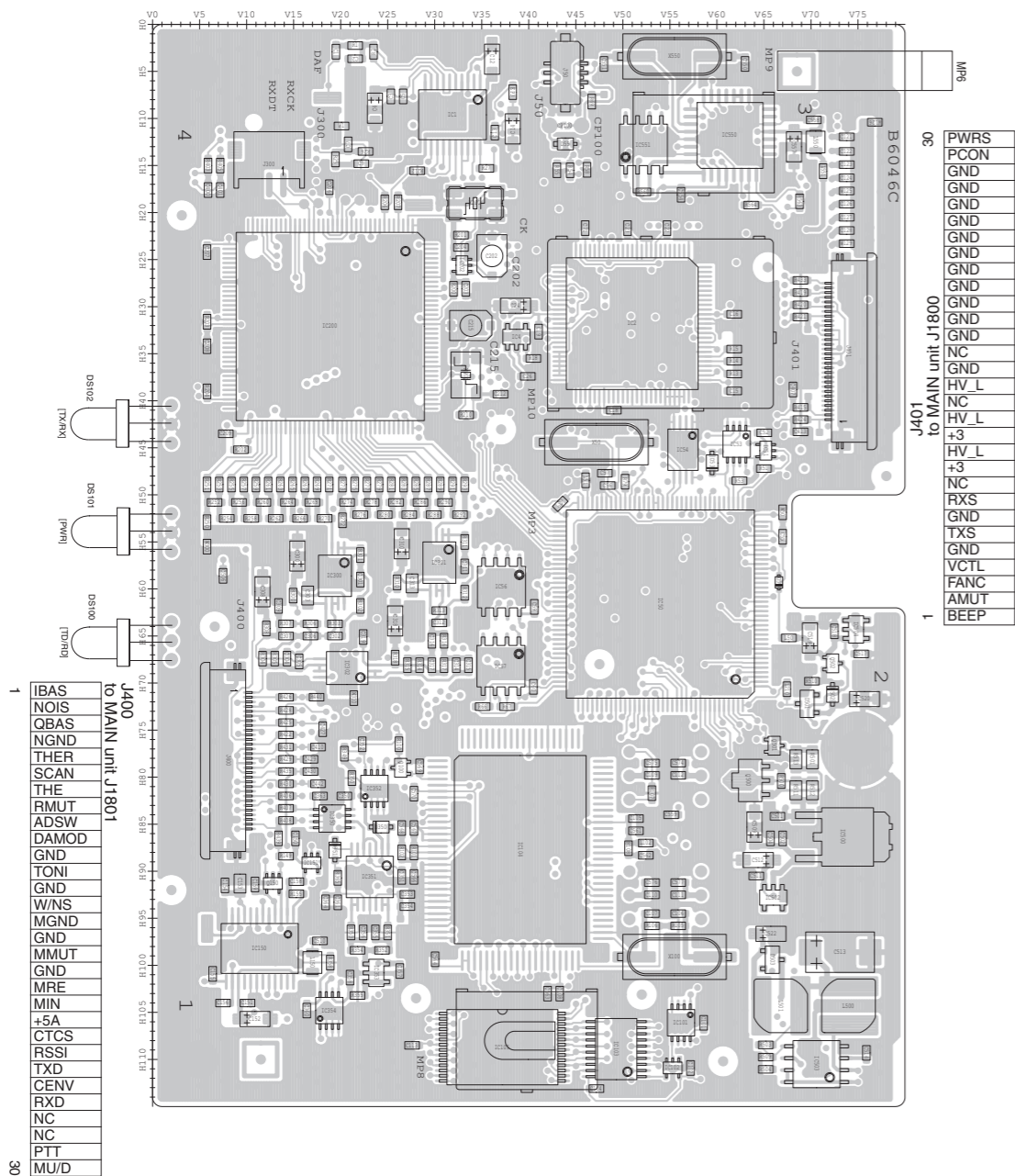
M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

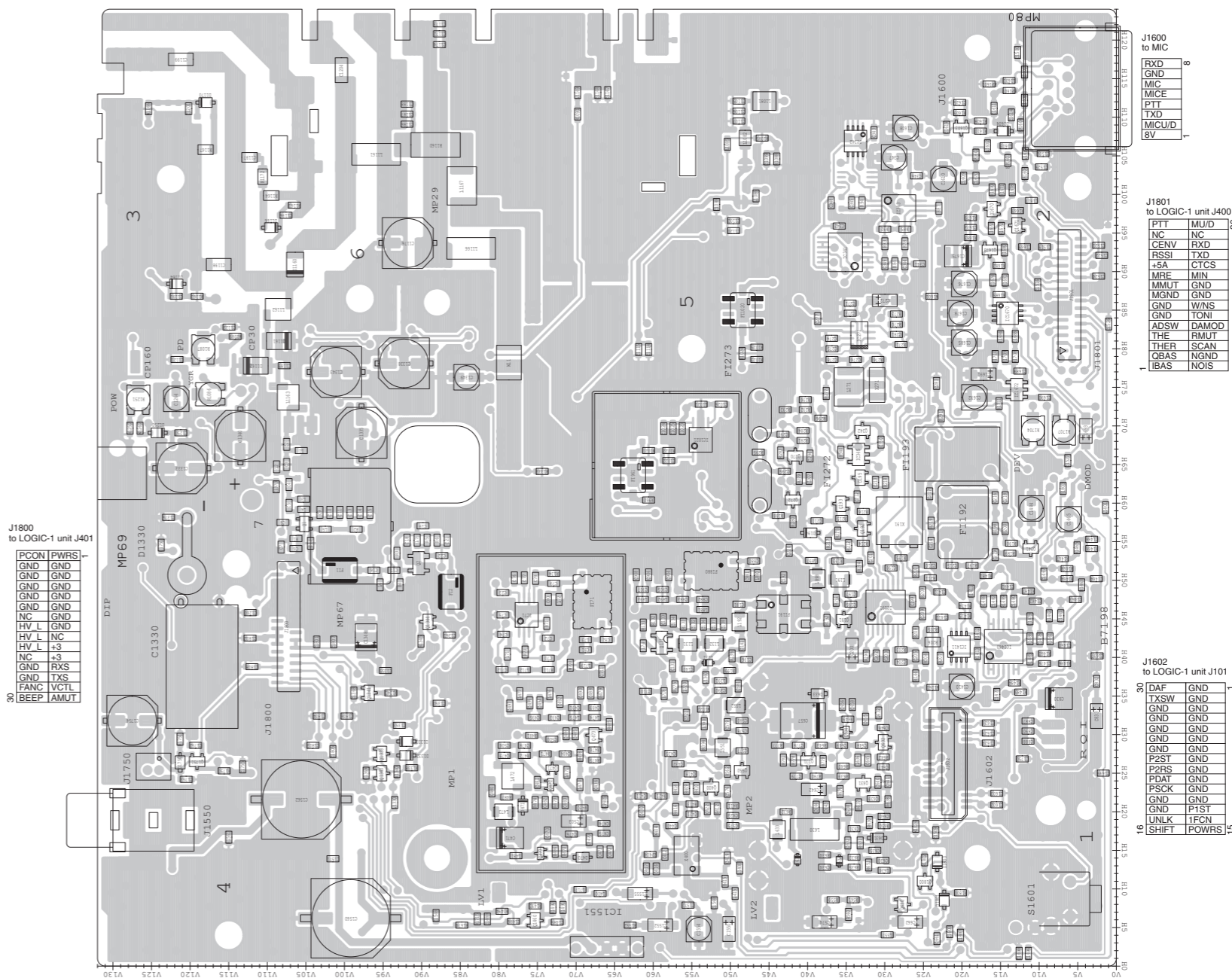
BOARD LAYOUTS

The combination of this side and the bottom side shows the board layout in the same configuration as the actual P.C.Board.

• LOGIC-1 UNIT (TOP VIEW)

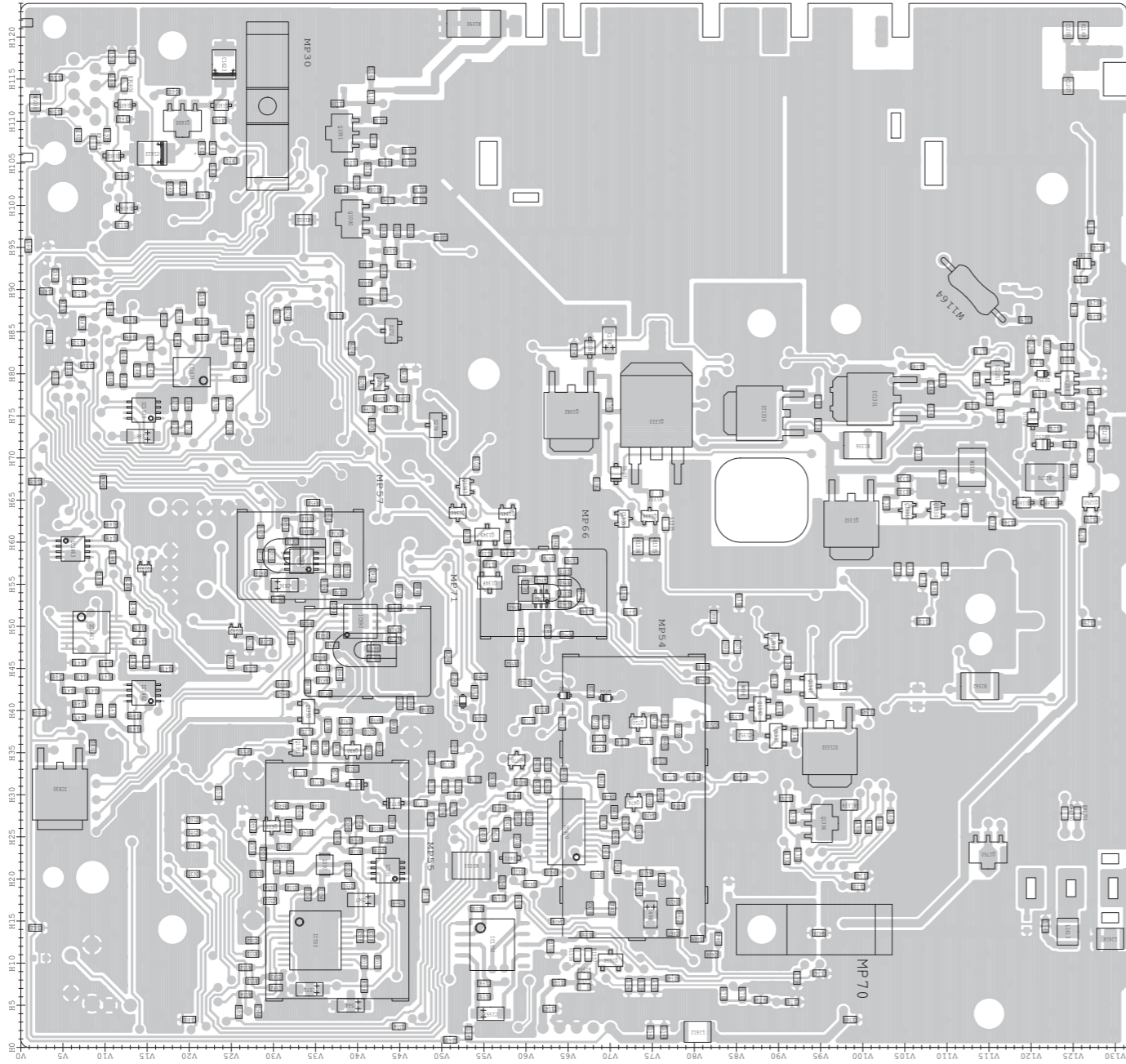


• MAIN-1 UNIT (TOP VIEW)

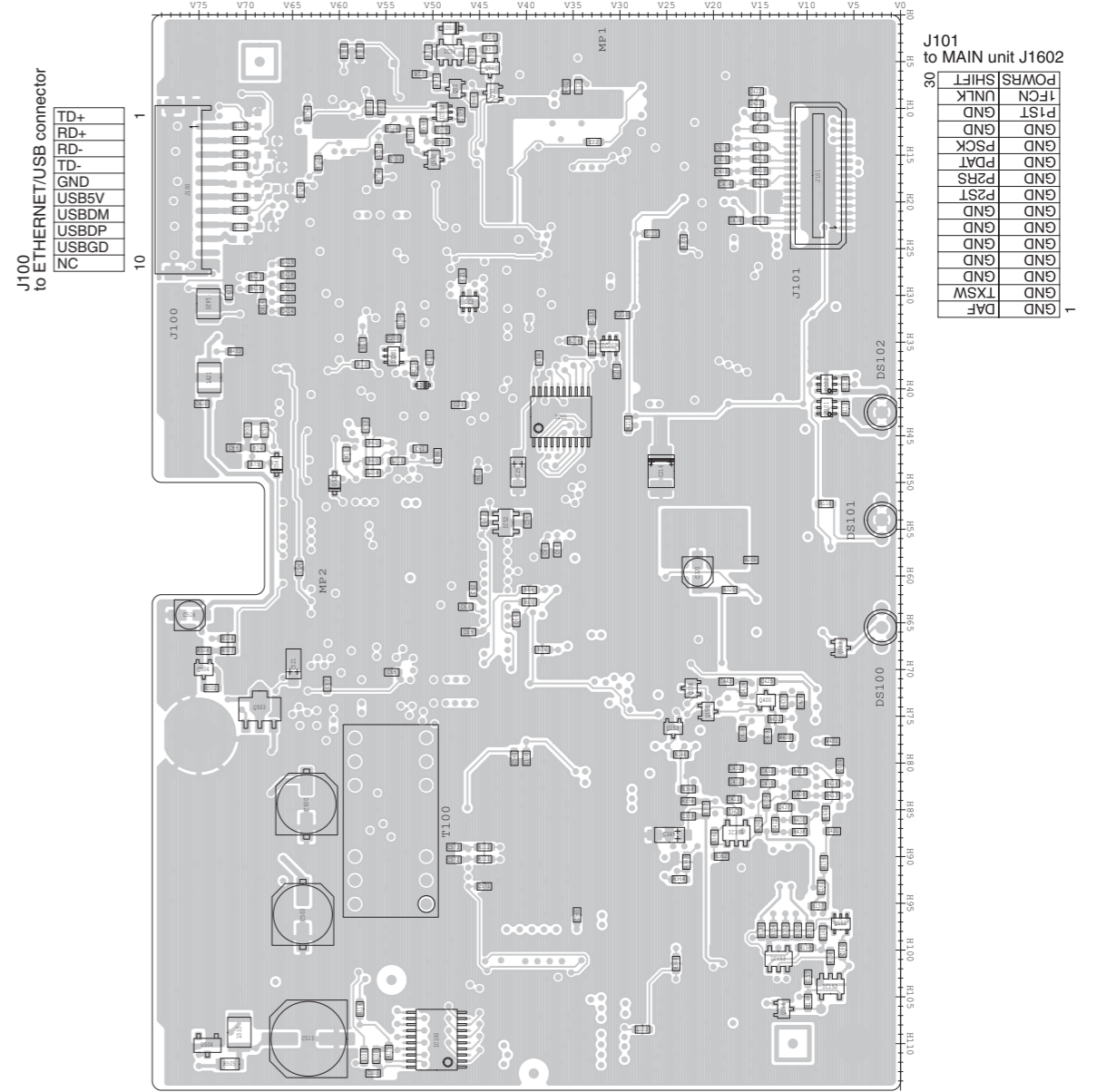


The combination of this side and the bottom side shows the board layout in the same configuration as the actual P.C.Board.

• MAIN-1 UNIT
(BOTTOM VIEW)

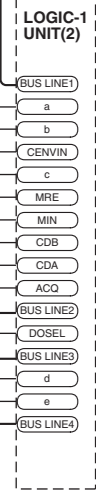
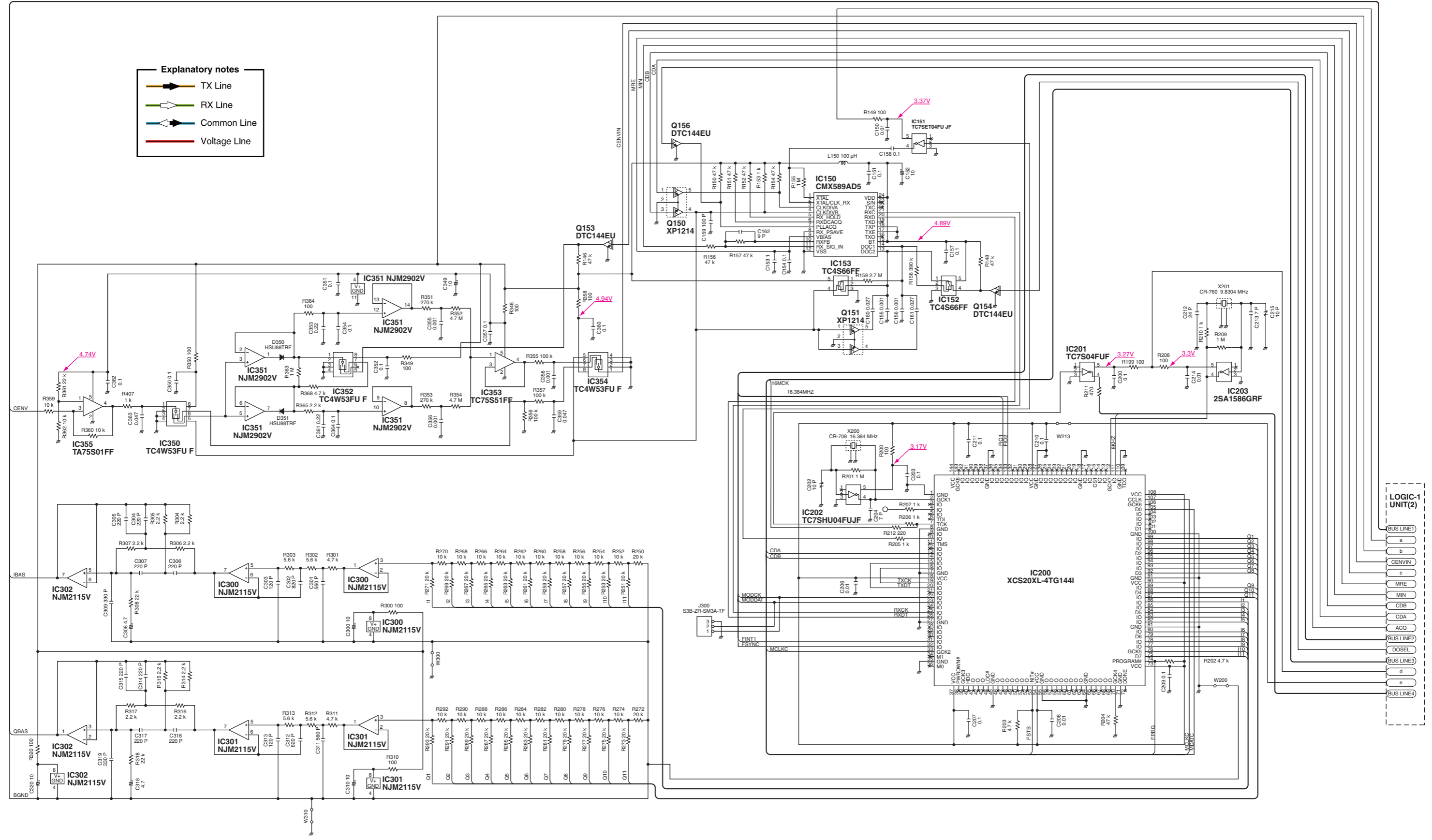


• LOGIC-1 UNIT
(BOTTOM VIEW)



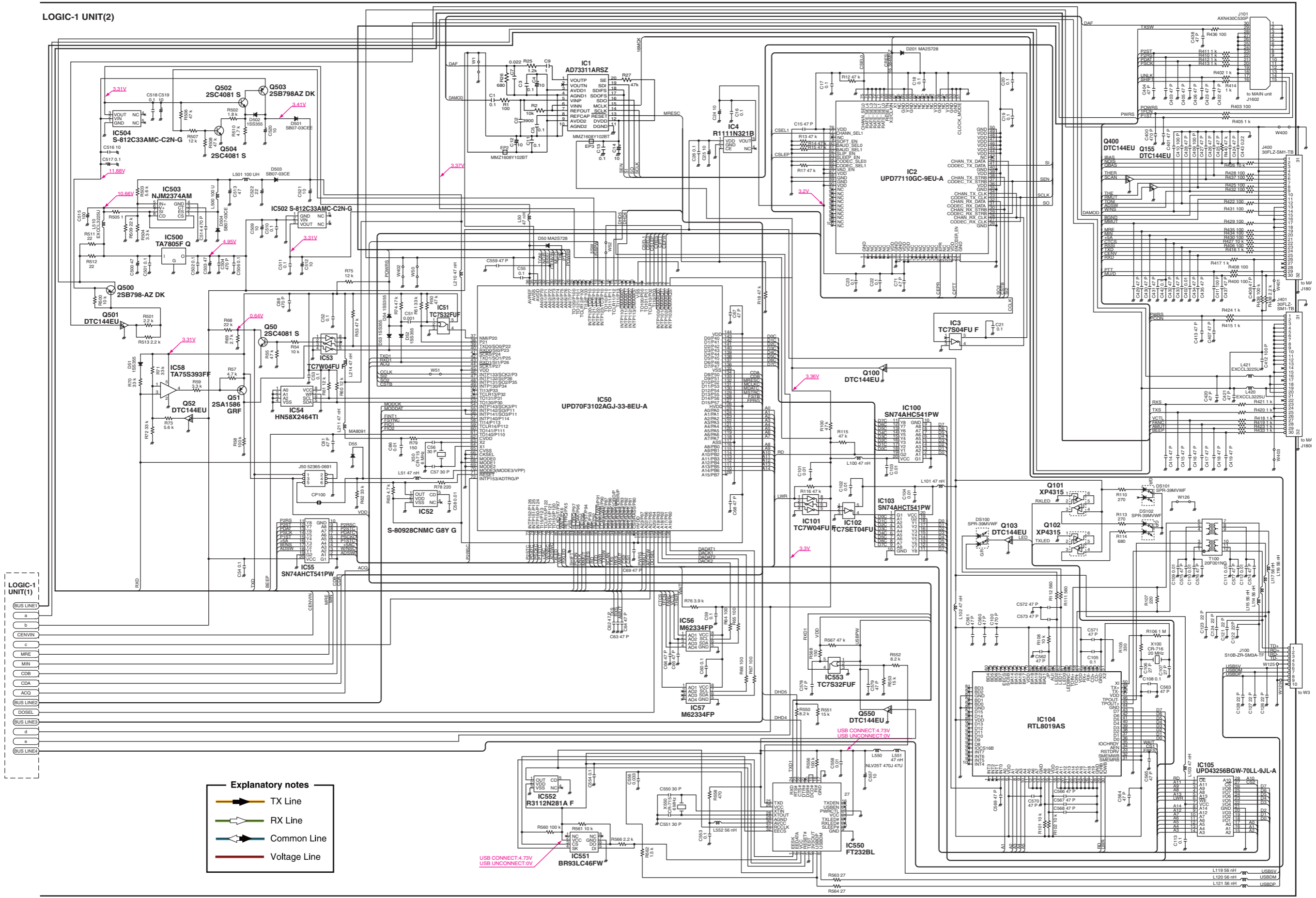
VOLTAGE DIAGRAM

LOGIC-1 UNIT(1)



*; Refer to "PARTS LIST."

LOGIC-1 UNIT(2)

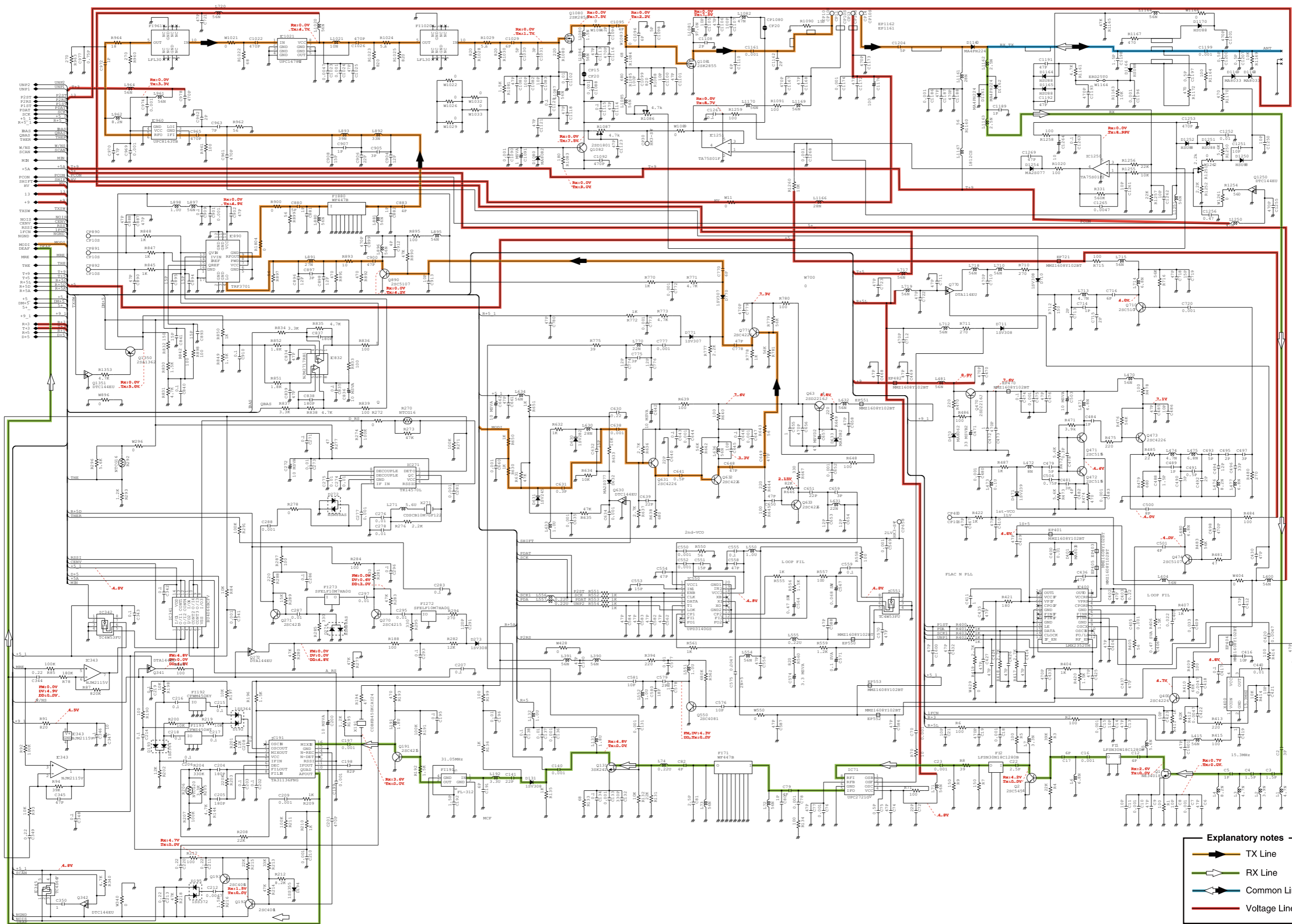


Explanatory notes

- > TX Line
- > RX Line
- > Common Line
- > Voltage Line

*; Refer to "PARTS LIST."

MAIN-1 UNIT (1)

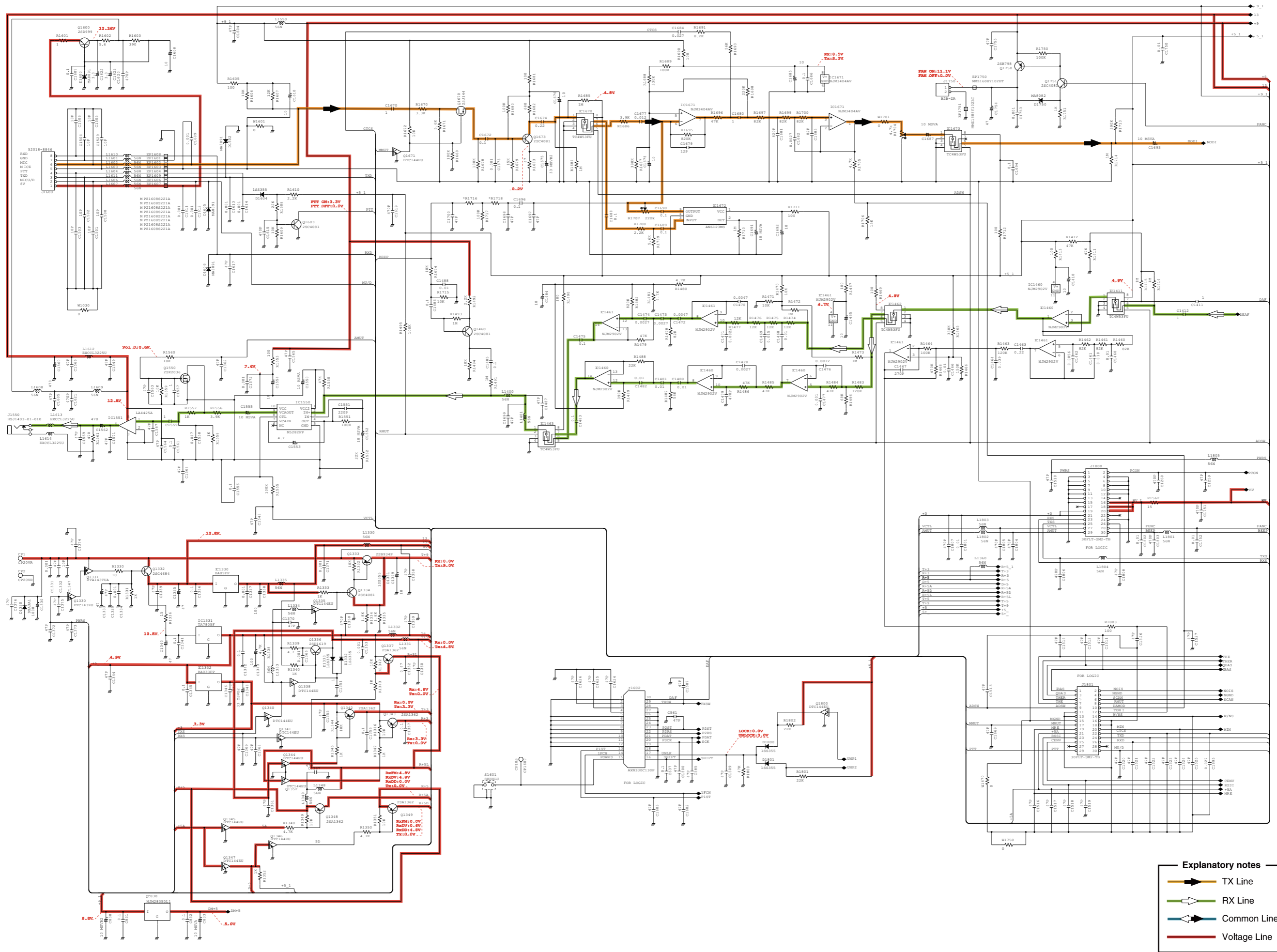


Explanatory notes

- TX Line
- RX Line
- Common Line
- Voltage Line

*; Refer to "PARTS LIST"

MAIN-1 UNIT (2)



Explanatory notes

- TX Line
- RX Line
- Common Line
- Voltage Line

*; Refer to "PARTS LIST."



SERVICE MANUAL

DIGITAL TRANSCEIVER

ID-1

S-14120IZ-C1

May. 2005

Icom Inc.

INTRODUCTION

This service manual describes the latest service information for the **ID-1** DIGITAL TRANSCEIVER at the time of publication.

| MODEL | VERSION | SYMBOL | RC-24 |
|-------|---------|--------|----------|
| ID-1 | U.S.A. | USA-2 | Optional |
| | | USA-3 | Supplied |
| | Europe | EUR-2 | Optional |
| | | EUR-3 | Supplied |
| | General | GEN-2 | Optional |
| | | GEN-3 | Supplied |

To upgrade quality, all electrical or mechanical parts and internal circuits are subject to change without notice or obligation.

DANGER

NEVER connect the transceiver to an AC outlet or to a DC power supply that uses more than 16 V. Such a connection could cause a fire or electric hazard.

DO NOT expose the transceiver to rain, snow or any liquids.

DO NOT reverse the polarities of the power supply when connecting the transceiver.

DO NOT apply an RF signal of more than 20 dBm (100 mW) to the antenna connector. This could damage the transceiver's front end.



ORDERING PARTS

Be sure to include the following four points when ordering replacement parts:

1. 10-digit order numbers
2. Component part number and name
3. Equipment model name and unit name
4. Quantity required

<SAMPLE ORDER>

2710000590 Fan MF40D-12H-001 ID-1 Chassis 2 pieces
8900010940 Cable OPC-1119 RC-24 Chassis 3 pieces

Addresses are provided on the inside back cover for your convenience.

REPAIR NOTES

1. Make sure a problem is internal before disassembling the transceiver.
2. **DO NOT** open the transceiver until the transceiver is disconnected from its power source.
3. **DO NOT** force any of the variable components. Turn them slowly and smoothly.
4. **DO NOT** short any circuits or electronic parts. An insulated turning tool **MUST** be used for all adjustments.
5. **DO NOT** keep power ON for a long time when the transceiver is defective.
6. **DO NOT** transmit power into a signal generator or a sweep generator.
7. **ALWAYS** connect a 30 dB to 40 dB attenuator between the transceiver and a deviation meter or spectrum analyzer when using such test equipment.
8. **READ** the instructions of test equipment thoroughly before connecting equipment to the transceiver.

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SECTION 1 SPECIFICATIONS

■ GENERAL

- Frequency coverage : 1240.000–1300.000 MHz
- Type of emission : FM, GMSK (Digital)
- Transmission speed (theoretical value) : Data 128 kbps
Digital voice 4.8 kbps
- Codec : AMBE (2.4 kbps)
- Number of memory channel : 105 (incl. 2 scan edges and 3 calls)
- Tuning steps : 5, 6.25, 10, 12.5, 20, 25, 50, 100 kHz
- Frequency stability : ± 2.5 ppm (-10°C to $+60^{\circ}\text{C}$)
- Operating temperature range : -10°C to $+60^{\circ}\text{C}$ (-22°F to $+140^{\circ}\text{F}$)
- Antenna connector : Type-N ($50\ \Omega$)
- Power supply requirement : 13.8 V DC $\pm 15\%$ (Negative ground)
- Current drain (at 13.8 V DC) : Transmit Less than 7 A (at 10 W)
Receive Less than 1.5 A (AF max.)
- Dimensions (projections not included) :
 - Main unit 141(W) \times 40(H) \times 165.8(D) mm; $5^{9/16}$ (W) \times $1^{9/16}$ (H) \times $6^{17/32}$ (D) in
 - Remote controller (RC-24) 150(W) \times 50(H) \times 49.5(D) mm; $5^{29/32}$ (W) \times $1^{31/32}$ (H) \times $6^{15/16}$ (D) in
- Weight (Approx.) :
 - Main unit 1.2 kg; 2 lb 10 oz
 - Remote controller (RC-24) 220 g; 7.7 oz

■ TRANSMITTER

- Output power (at 13.8 V DC) : 10/1 W
- Modulation : Variable reactance frequency modulation (FM)
Quadrature modulation (Digital)
- Maximum frequency deviation (FM) : ± 5.0 kHz
- Spurious emissions : Less than -50 dB
- Microphone connector : 8-pin modular jack ($600\ \Omega$)

■ RECEIVER

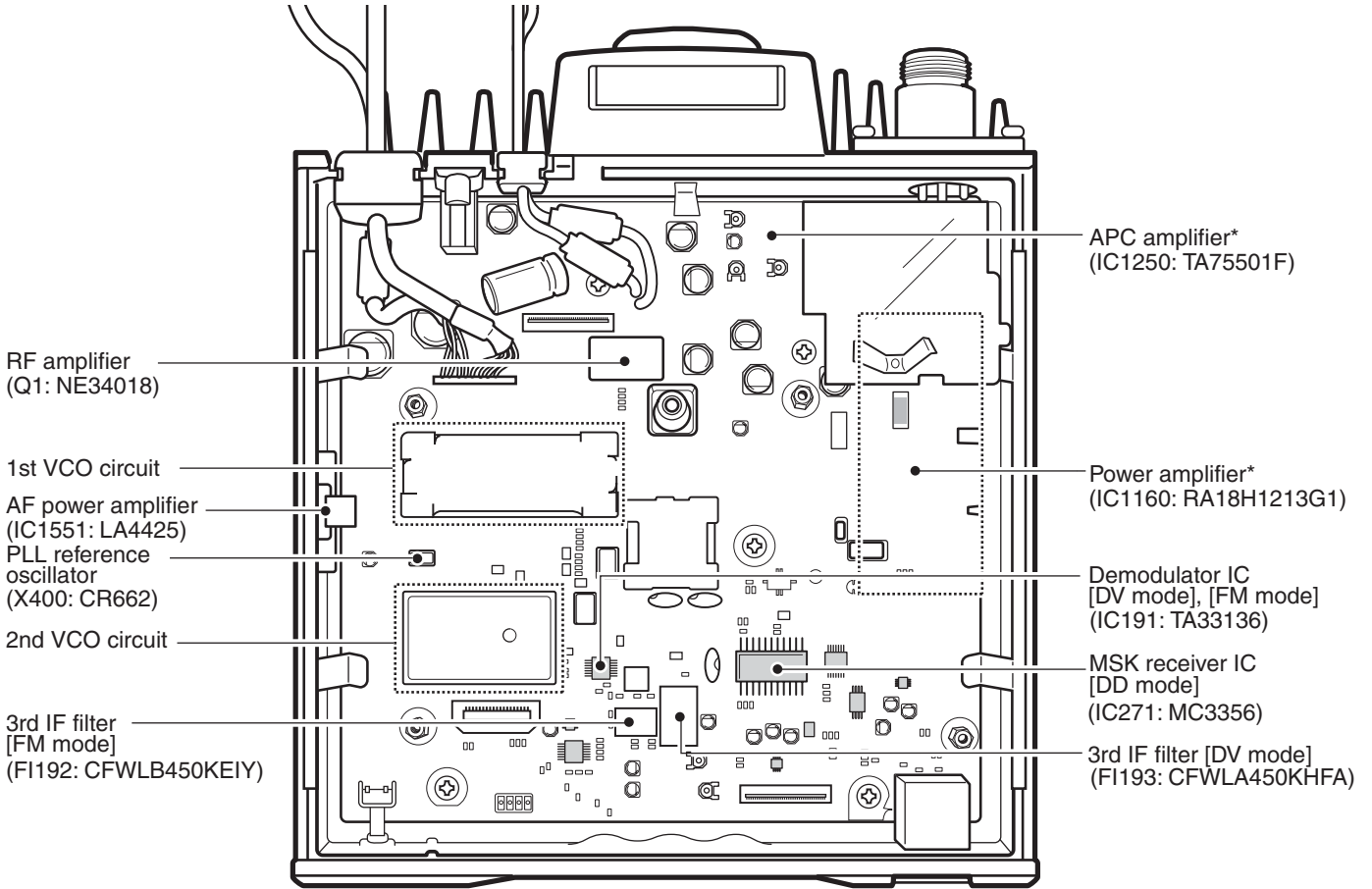
- Receive system : Triple conversion superheterodyne system (FM, DV)
Double conversion superheterodyne (DD)
- Intermediate frequencies : 1st IF: 243.95 MHz, 2nd IF: 31.05 kHz, 3rd IF: 450 kHz (FM, DV)
1st IF: 243.95 MHz, 2nd IF: 10.7 MHz (DD)
- Sensitivity : Less than $0.18\ \mu\text{V}$ (-122 dBm) at 12 dB SINAD (FM)
Less than $0.35\ \mu\text{V}$ (-116 dBm) at BER 1×10^{-2} (DV)
Less than $1.58\ \mu\text{V}$ (-103 dBm) at BER 1×10^{-2} (DD)
- Selectivity (typical) : More than 12 kHz/6dB, Less than 30 kHz/60 dB (FM)
More than 6 kHz/6dB, Less than 18 kHz/50 dB (DV)
More than 140 kHz/6dB, Less than 520 kHz/40 dB (DD)
- Spurious and image rejection : More than 50 dB
- Audio output power (at 13.8 V DC) : 2.0 W at 10% distortion with an $8\ \Omega$ load
- Squelch sensitivity (at threshold) : Less than $0.18\ \mu\text{V}$ (-122 dBm) (FM only)
- Ext. speaker connector : 2-conductor 3.5 (d) mm ($1/8$ ")/ $8\ \Omega$

All stated specifications are subject to change without notice or obligation.

SECTION 2 INSIDE VIEWS

● MAIN UNIT

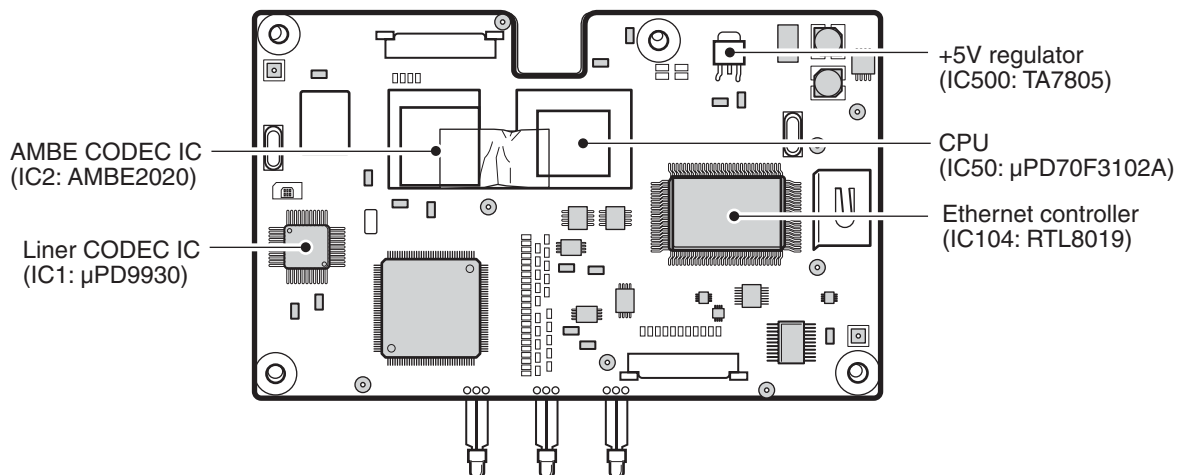
Top view



*: Located under side of this point

● LOGIC-1 UNIT

Top view

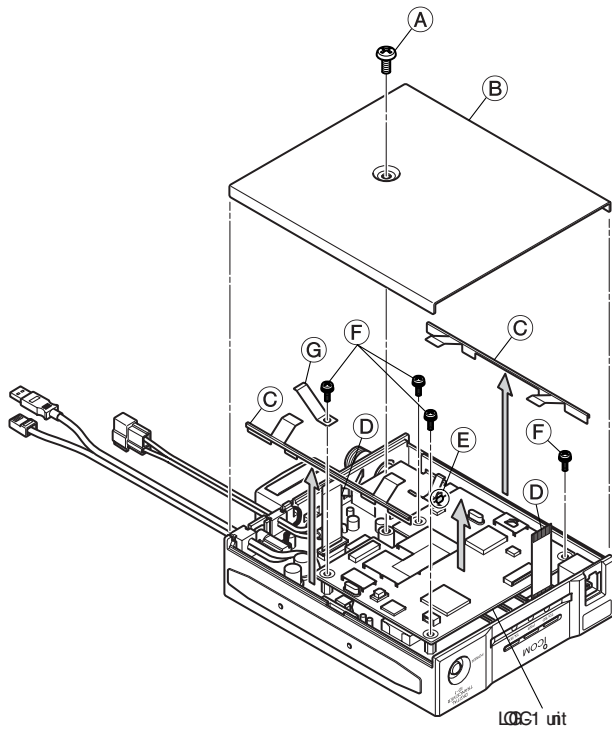


SECTION 3 DISASSEMBLY INSTRUCTIONS

3-1 ID-1

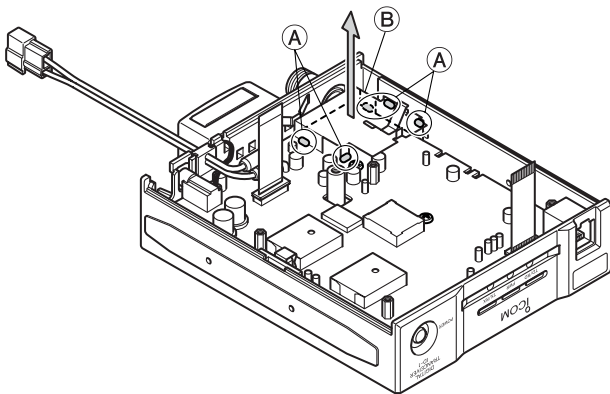
● REMOVING THE LOGIC-1 UNIT

- ① Unscrew 1 screw (A), and remove the cover (B).
- ② Remove 2 main shield plates (C).
- ③ Disconnect 2 cables (D), and unsolder 1 point (E).
- ④ Unscrew 4 screws (F), and remove the earth spring (G).
- ⑤ Take off the LOGIC-1 unit.



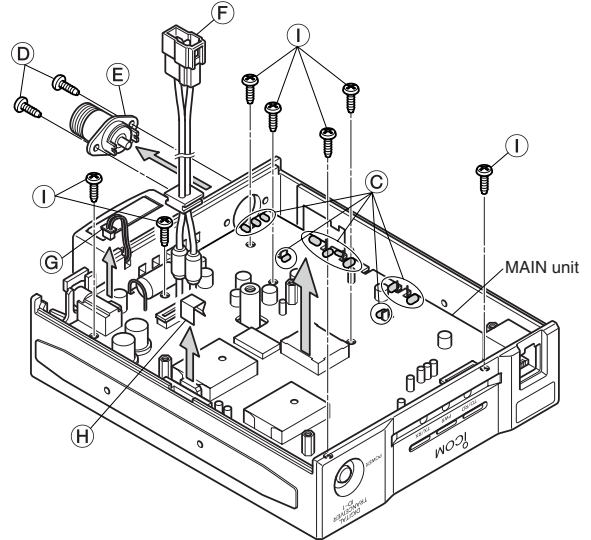
● REMOVING THE MAIN UNIT

- ① Unsolder 5 points (A), and remove the ANT plate (B).



Continue to right above.

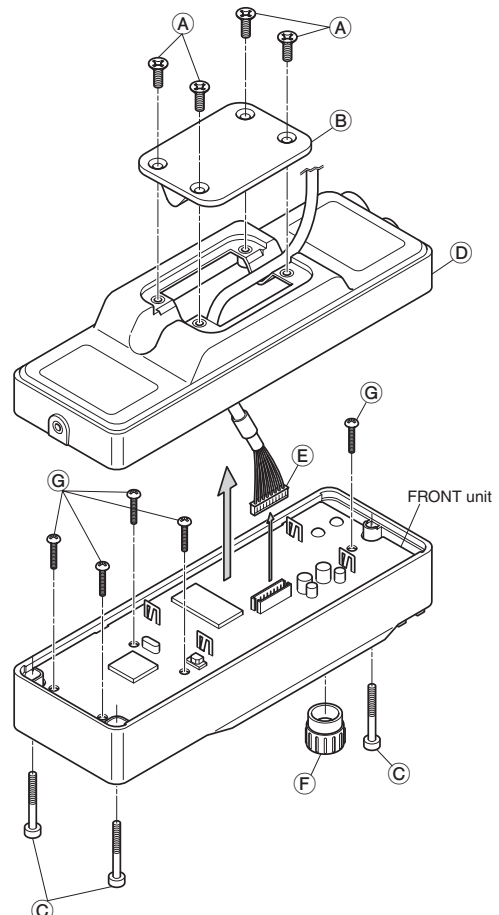
- ② Unsolder 11 points (C).
- ③ Unscrew 2 screws (D), and remove the ANT connector (E).
- ④ Take off the cable (F) from the chassis.
- ⑤ Disconnect the cable (G), and remove the TR-A clip (H).
- ⑥ Unscrew 7 screws (I), and take off the MAIN unit.



3-2 RC-24

● REMOVING THE FRONT UNIT

- ① Unscrew 4 screws (A), and remove the rear plate (B).
- ② Unscrew 3 screws (C), and remove the front panel (D).
- ③ Disconnect the cable (E), and remove the knob (F).
- ④ Unscrew 5 screws (G), and take off the FRONT unit.



SECTION 4 CIRCUIT DESCRIPTION

4-1 RECEIVER CIRCUITS

4-1-1 ANTENNA SWITCHING CIRCUIT (MAIN UNIT)

The antenna switching circuit functions as a low-pass filter while receiving and a resonator circuit while transmitting. This circuit does not allow transmit signals to enter the receiver circuits.

Received signals from the antenna connector (CHASSIS; J1) are passed through the low-pass filter which contains strip-line and C1198, and are then applied to the $\lambda/4$ type antenna switching circuit (D1160–D1162, L1162).

While receiving, no voltage is applied to D1160–D1162. Thus, the receive line and ground are disconnected and received signals are applied to the RF circuit.

4-1-2 RF CIRCUIT (MAIN UNIT)

The RF circuit amplifies signals within the range of frequency coverage and filters out-of-band signals.

The signals from the antenna switching circuit pass through the high-pass filter (L1–L4, C2–C5) and then applied to the RF amplifier (Q1). The amplified signals are passed through the bandpass filter (F11) and then applied to the another RF amplifier (Q2). The amplified signals are passed through the another bandpass filter (F12) to suppress unwanted signals.

The filtered signal is applied to the 1st mixer circuit.

4-1-3 1ST MIXER AND 1ST IF CIRCUITS (MAIN UNIT)

The 1st mixer circuit converts the received signals into fixed frequency of the 1st IF signal with the 1st LO signal. By changing the 1st LO signal, only the desired frequency passes through the bandpass filter at the next stage of the 1st mixer circuit.

The RF signals from the bandpass filter (F12) are mixed with the 1st LO signal, where come from the 1st VCO circuit, at the 1st mixer circuit (IC71) to produce a 243.95 MHz 1st IF signal. The 1st IF signal is passed through the bandpass filter (F171) to suppress unwanted signals and pass only the desired signals.

The filtered signal is applied to the 2nd IF circuit.

4-1-4 2ND MIXER AND 2ND IF CIRCUITS (MAIN UNIT)

The 2nd mixer circuit converts the 1st IF signal into the 2nd IF signal with the 2nd LO signal.

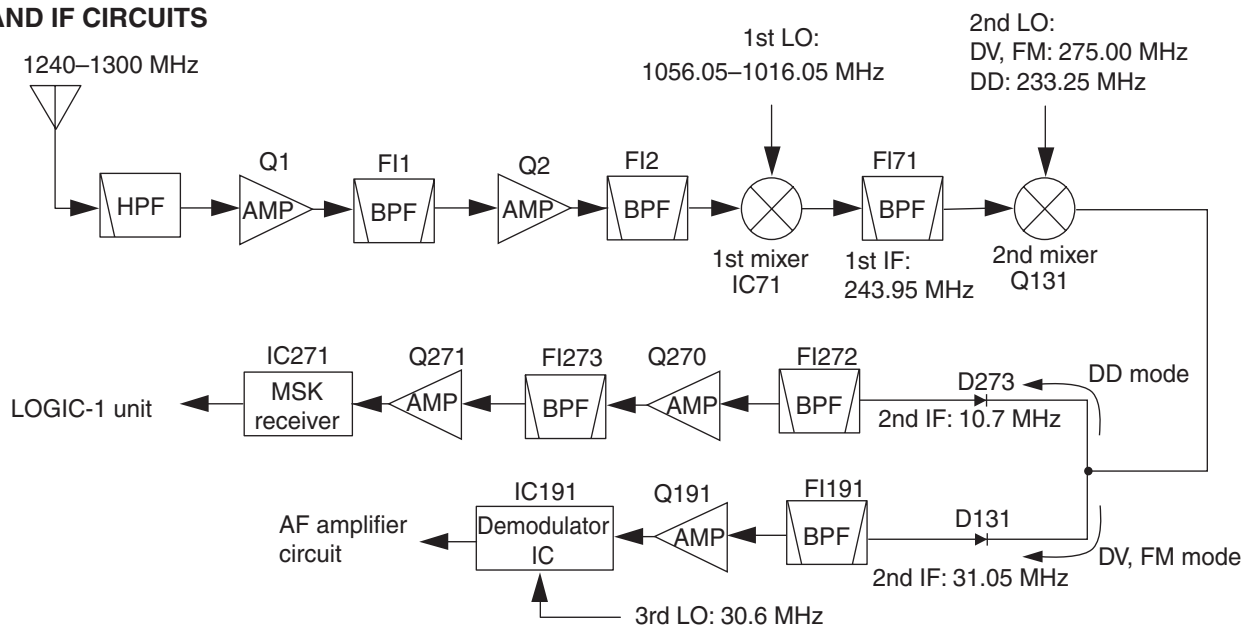
• DV/FM MODE

The filtered 1st IF signal from the bandpass filter (F171) is mixed with the 2nd LO signal (275.00 MHz), where come from 2nd VCO circuit, at the 2nd mixer circuit (Q131) to produce the 2nd IF signal (31.05 MHz). The 2nd IF signal is passed through the MCF (F1191) via the DV/FM switch (D131). The filtered signal is applied to the IF amplifier (Q191) and then applied to the 3rd mixer circuit in the demodulator IC (IC191).

• DD MODE

The filtered 1st IF signal from the bandpass filter (F171) is mixed with the 2nd LO signal (233.25 MHz), where come from the 2nd VCO circuit, at the 2nd mixer circuit (Q131) to produce the 2nd IF signal (10.7 MHz). The 2nd IF signal is passed through the bandpass filter (F1272) to remove unwanted heterodyned frequencies via the DD switch (D273). The filtered signal is amplified at the IF amplifier (Q270) and then passed through the another bandpass filter (F1273). The filtered signal is applied to the another IF amplifier (Q271) and then applied to the MSK receiver IC (IC271).

• RF AND IF CIRCUITS



4-1-5 DEMODULATOR CIRCUITS (MAIN UNIT)

• DV MODE

The demodulator IC (IC191) contains the 3rd mixer, limiter amplifier, quadrature detector, active filter and noise amplifier, etc.

The amplified signal from the IF amplifier (Q191) is applied to the 3rd mixer section of the demodulator IC (IC191, pin 16) and is then mixed with the 3rd LO signal to be converted into the 450 kHz 3rd IF signal. The 3rd IF signal from the 3rd mixer section (IC191, pin 3) passes through the ceramic filter (F1193) via the mode switches (D192, D193) to remove unwanted heterodyned frequencies. The filtered signal is amplified at the limiter amplifier section (IC191, pin 5) and then applied to the quadrature detector section (IC191, pins 10, 11) to demodulate the digital audio signals.

The 3rd LO signal (30.6 MHz) is produced at the 1st PLL circuit by doubling its reference frequency (X400: 15.3 MHz) at the doubler (Q550).

The digital audio signals from the demodulator IC (IC191, pin 9) are amplified at IC343 (pins 6, 7) and then applied to the mode switch (IC342, pins 1, 7).

The switched signals from the mode switch (IC342, pin 1) are applied to the LOGIC-1 unit via J1801 (pin 20).

• DD MODE

The MSK receiver IC (IC271) contains the limiter amplifier, quadrature detector, etc.

The amplified signal from the IF amplifier (Q271) is applied to the limiter amplifier section of the MSK receiver IC (IC271, pin 7) and then applied to the quadrature detector section (IC271, pin 11) to demodulate to the data signals.

The demodulated data signals from the MSK receiver IC (IC271, pin 13) are amplified at IC343 (pins 1, 2) and then applied to the mode switch (IC342, pins 1, 6).

The switched signals from the mode switch (IC342, pin 1) are applied to the LOGIC-1 unit via J1801 (pin 20).

• FM MODE

The same demodulator IC that is used for DV mode operation is used for FM demodulation.

The amplified signal from the IF amplifier (Q191) is applied to the 3rd mixer section of the demodulator IC (IC191, pin 16) and is then mixed with the 3rd LO signal to be converted into the 450 kHz 3rd IF signal. The 3rd IF signal from the 3rd mixer section (IC191, pin 3) passes through the ceramic filter (F1192) via the mode switches (D192, D193) to remove unwanted heterodyned frequencies. The filtered signal is amplified at the limiter amplifier section (IC191, pin 5) and then applied to the quadrature detector section (IC191, pins 10, 11) to demodulate the AF signals.

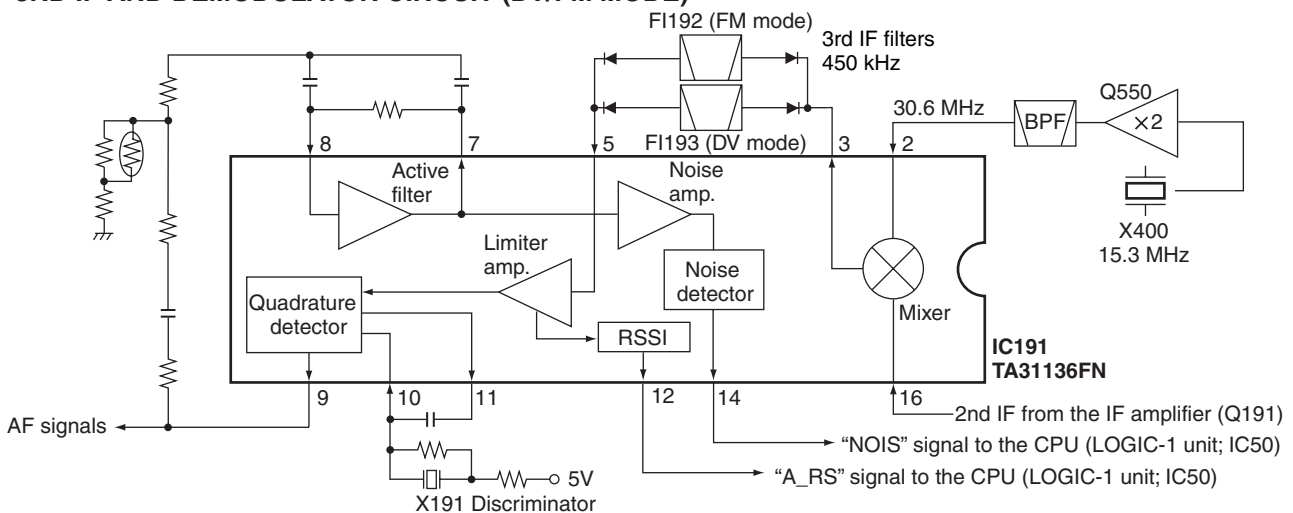
The AF signals are output from the demodulator IC (IC191, pin 9) and are then applied to the AF amplifier circuit.

4-1-6 DIGITAL CIRCUITS (LOGIC-1 UNIT)

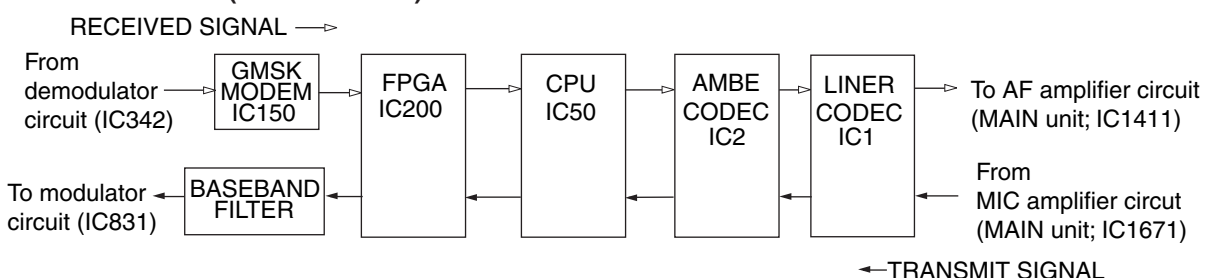
The digital circuits convert the demodulated digital audio signals into the analog audio signals and convert the demodulated data signals format for PC communication via the USB controller (for DV mode: low speed data operation) or Ethernet controller (for DD mode).

The demodulated digital audio or data signals from the mode switch (MAIN unit: IC342, pin 1) are applied to the GMSK MODEM IC (IC150, pin 11). The applied signals are synchronized with the clock signal, then the synchronized

• 3RD IF AND DEMODULATOR CIRCUIT (DV/FM MODE)



• DIGITAL CIRCUITS (LOGIC-1 UNIT)



signals are applied to the CPU (IC50) via the FPGA IC (IC200).

• DV MODE (VOICE OPERATION)

The digital audio signals from the CPU (IC50) are applied to the AMBE CODEC IC (IC2) for code expansion, and are then applied to the linear CODEC IC (IC1). The digital audio signals are converted into analog audio signals at the D/A converter section and then output from pin 34 (IC1)

The analog audio signals are applied to the mode switch (MAIN unit; IC1411, pins 1, 7) via the J101 (pin 30) as "DAF" signal.

• DD MODE/DV MODE (LOW SPEED DATA OPERATION)

While operating in DD mode, the output signals from the CPU (IC50) are applied to the connected PC via the Ethernet controller (IC104).

While operating in DV mode (low speed data operation), the output signals from the CPU (IC50) are applied to the connected PC via the USB controller (IC550).

4-1-7 AF AMPLIFIER CIRCUIT (MAIN UNIT)

The AF amplifier circuit amplifies the demodulated AF signals to a level needed to drive a speaker.

• DV MODE

The AF signals from the LOGIC-1 unit are applied to the mode switch (IC1411, pins 1, 7) and then amplified at the buffer amplifier (IC1460, pins 1, 3). The buffer amplified signals are applied to the filter switch (IC1462, pins 1, 6) to select the appropriate AF filters for DV mode and then passed through the low-pass (IC1461, pins 8, 10) and high-pass (IC1461, pins 12, 14) filters. The filtered signals are passed through the filter switch (IC1463, pins 1, 6) and are then applied to the volume controller (IC1550, pins 2, 9).

• FM MODE

The AF signals from the demodulator IC (IC191, pin 9) are applied to the mode switch (IC1411, pins 1, 6) and then applied to the buffer amplifier (IC1460, pins 1, 3). The buffer amplified signals are applied to the filter switch (IC1462, pins 1, 7) to select the appropriate AF filters for FM mode and then passed through the low-pass (IC1460, pins 6, 7, 8, 9) and high-pass (IC1460, pins 13, 14) filters. The filtered signals are passed through the filter switch (IC1463, pins 1, 7) and are then applied to the volume controller (IC1550, pins 2, 9).

The switched AF signals from the filter switch (IC1463, pin 1) are applied to the volume controller (IC1550, pins 2, 9). The level adjusted AF signals (IC1550, pin 9) are applied to the AF power amplifier (IC1551, pins 1, 4) via the AF mute switch (Q1550).

The AF mute switch is mute the AF signals while digital squelch, call sign squelch, noise squelch, tone squelch are closed, the audio level is set to minimum position or transmitting.

The power amplified AF signals from the AF power amplifier (IC1551, pin 4) are applied to the speaker that is connected to [SP] jack (J1550).

4-1-8 SQUELCH CIRCUITS (MAIN UNIT)

• DIGITAL CODE/CALL SIGN SQUELCH (DV MODE ONLY)

The digital code/call sign squelch circuit detects matched digital code/call sign and opens the squelch only when receiving a signal containing a matching digital code/call sign. When digital code/call sign squelch is in use, and a signal with a unmatched digital code/call sign is received, the digital code/call sign squelch circuit mutes the AF signals.

The detected digital audio signals from IC191 (pin 9) are applied to the CPU (LOGIC-1 unit; IC50) via the mode switch (IC342, pins 1, 7), GMSK MODEM IC (LOGIC-1 unit; IC150) and FPGA IC (LOGIC-1 unit; IC200). Then the CPU analyzes the digital code/call sign and output the AF mute signal as "RMUT" from the pin 102 to the filter switch (IC1463, pin 2) via the mute switch (LOGIC-1 unit; Q155).

• NOISE SQUELCH (FM MODE ONLY)

The noise squelch circuit cuts out AF signals when no RF signals are received. By detecting noise components in the AF signals, the squelch circuit switches the filter switch (IC1463).

Portion of the AF signals from the demodulator IC (IC191, pin 9) are applied to the active filter section in the demodulator IC (IC191, pin 8). The active filter section filters and amplifies noise components only. The amplified noise signals are converted into the pulse-type signals at the noise detector section. The detected signals output from pin 14 (IC191).

The detected signals from the demodulator IC (IC191, pin 14) are amplified at the noise amplifiers (Q192, Q193) and then applied to the noise detector (D195). The detected signals are applied to the CPU (LOGIC-1 unit; IC50, pin 32) as "NOIS" signals. Then the CPU analyzes the noise condition and outputs the AF mute signal as "RMUT" from the pin 102 to the filter switch (IC1463, pin 2) via the mute switch (LOGIC-1 unit; Q155).

• TONE SQUELCH (FM MODE ONLY)

The tone squelch circuit detects tone signals and opens the squelch only when receiving a signal containing a matching subaudible tone (CTCSS). When tone squelch is in use, and a signal with a unmatched or no subaudible tone is received, the tone squelch circuit mutes the AF signals even when noise squelch is open.

A portion of "DEAF" signals from the buffer amplifier (IC1460, pin 1) are applied to the low-pass filters (IC1461, pins 1, 2, 5, 7) to remove AF (voice) signals. The filtered signals are applied to the CTCSS decoder in the CPU (LOGIC-1 unit, IC50, pin 33) as "TONI" signals. Then the CPU analyzes the decoded tone signals and output the AF mute signal as "RMUT" from the pin 102 to the filter switch (IC1463, pin 2) via the mute switch (LOGIC-1 unit; Q155).

4-1-9 S-METER CIRCUITS (MAIN UNIT)

Some of the amplified IF signal is applied to the S-meter detector section in the demodulator IC (IC191) to be converted into DC voltage. The output signal from the demodulator IC (IC191, pin 12) is applied to the mode switch (IC341, pins 10, 11) and then applied to the CPU (LOGIC-1 unit; IC50). The CPU then outputs S-meter control signal to the RC-24 or connected PC via the USB controller (LOGIC-1 unit; IC550).

4-2 TRANSMITTER CIRCUITS

4-2-1 MICROPHONE AMPLIFIER CIRCUIT (MAIN UNIT)

The microphone amplifier circuit amplifies audio signals from the microphone to a level needed for the modulation circuit.

While connecting the microphone to ID-1, the AF signals from the microphone (J1600, pin 6) are applied to the microphone amplifier (Q1673) via the microphone mute switch (Q1670). The amplified AF signals are applied to the mode switch (IC1670, pins 1, 6, 7).

While connecting the microphone to RC-24, the AF signals from the microphone (RC24; J1) are applied to the MAIN unit (J1600, pin 6) via the buffer amplifier (RC-24; Q13).

• DV MODE

The amplified AF signals from microphone amplifier (Q1673) are amplified at the ALC amplifier (IC1672, pins 3, 5) via the mode switch (IC1670, pins 1, 7). The amplified signals are applied to the IDC amplifier (IC1671, pins 6, 7) and then passed through the splatter filter (IC1671, pins 1, 3).

The filtered signals are applied to the LOGIC-1 unit via the J1801 (pin 10).

• FM MODE

The amplified AF signals from microphone amplifier (Q1673) are passed through the mode switch (IC1670, pins 1, 6) and then applied to the IDC amplifier (IC1671, pins 6, 7). The amplified signals are passed through the splatter filter (IC1671, pins 1, 3) and mode switch (IC1673, pins 1, 6).

The CTCSS signals (CTCS) from the CPU (LOGIC-1 unit; IC50) via (LOGIC-1 unit; IC57, pin 1) are mixed with the AF signals from the IDC amplifier (IC1671, pin 7). The mixed signals are passed through the splatter filter (IC1671, pins 1, 3) and mode switch (IC1673, pins 1, 6).

The switched AF signals (IC1673, pin 6) are applied to the modulation circuit.

4-2-2 DIGITAL CIRCUITS (LOGIC-1 UNIT)

• DV MODE (VOICE OPERATION)

The AF signals from the splatter filter (MAIN unit; IC1671, pin 1) are applied to the liner CODEC IC (IC1, pin 24) to convert into digital voice data at the A/D converter section as the "DAMOD" signal. The converted digital audio signals are applied to the AMBE CODEC IC (IC2) for code compression and are then applied to the CPU (IC50).

The digital audio signals are processed at the CPU (IC50) and then applied to the FPGA IC (IC200).

• DD MODE/DV MODE (LOW SPEED DATA OPERATION)

While operating in DD mode the data signal from connected PC are applied to the Ethernet controller (IC104) and then applied to the CPU (IC50)

While operating in DV mode (low speed data operation) the data signal from connected PC are applied to the USB controller (IC550) and then applied to the CPU (IC50)

The applied data signals to the CPU (IC50) are processed and then applied to the FPGA IC (IC200).

The output signals from the CPU (IC50) are applied to the FPGA IC (IC200) to convert to the I/Q baseband signals and then output from pins 75–80, 82–87, 92–99 (IC200). The I/Q baseband signals are mixed at the resistors (R250–R293) and then pass through the baseband filters (IC300, IC301, IC302).

The filtered signals (I/Q baseband signals) are applied to the MAIN unit via J400 (pins 1, 3).

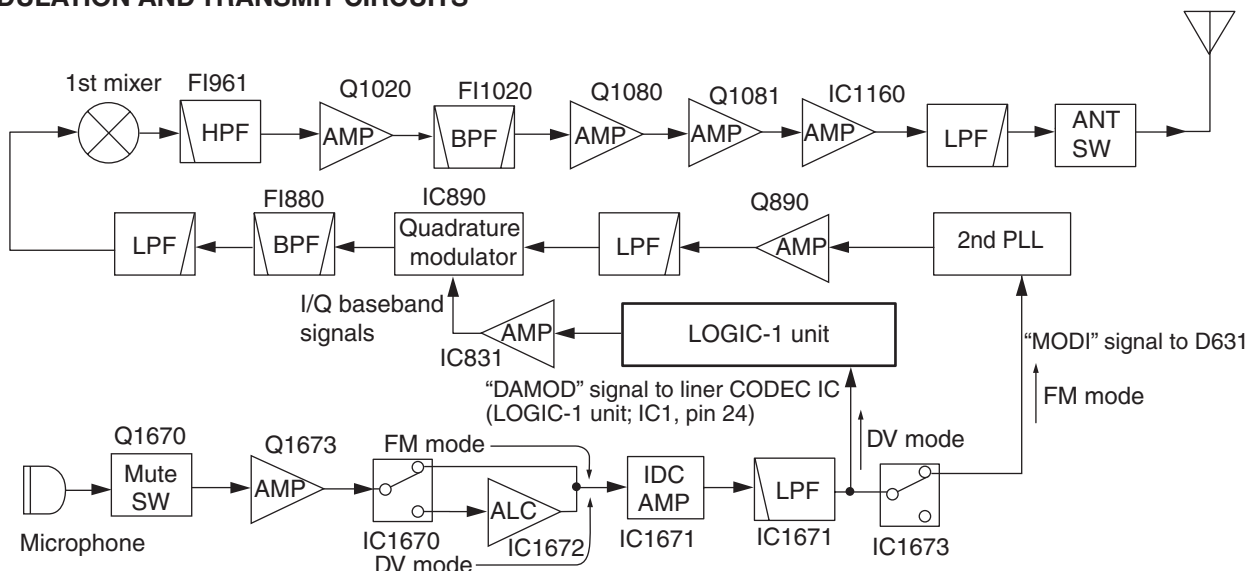
4-2-3 MODULATION CIRCUIT (MAIN UNIT)

• DV/DD MODE

The modulation circuit modulates the 2nd LO signal at the quadrature modulation circuit (IC890) using the I/Q baseband signals from the LOGIC-1 unit.

The I/Q baseband signals from the LOGIC-1 unit are amplified at the I/Q baseband amplifiers (IC832, pins 1, 2, 6, 7) and then applied to amplifier section (pins 4, 7) of the quadrature modulator IC (IC890, pins 4, 7, 14). The 2nd LO signal is applied to the quadrature modulator IC (IC890, pin 8)

• MODULATION AND TRANSMIT CIRCUITS



and then mixed with the amplified I/Q baseband signals. The modulated signal is output from pin 14.

The modulated signal (IC890, pin 14) is passed through the bandpass (F1880) and low-pass (L892, L893, C904–C908) filters and then applied to the 1st mixer circuit.

• FM MODE

The modulation circuit modulates the 2nd LO signal using the microphone audio signals.

The switched AF signals from the mode switch (IC1673, pin 6) change the reactance of varactor diode (D631) to modulate the 2nd LO signal at the 2nd VCO circuit (Q631, D630). The modulated signal from the 2nd VCO circuit is amplified at the buffer amplifiers (Q632, Q771) and is then applied to the T/R switch (D770). The switched signal is applied to the 2nd LO amplifier (Q890) and then passed through the low-pass filter (L891, C896–C898), quadrature modulator IC (IC890), bandpass filter (F1880) and low-pass filter (L892, L893, C904–C908).

The filtered signal is applied to the 1st mixer circuit.

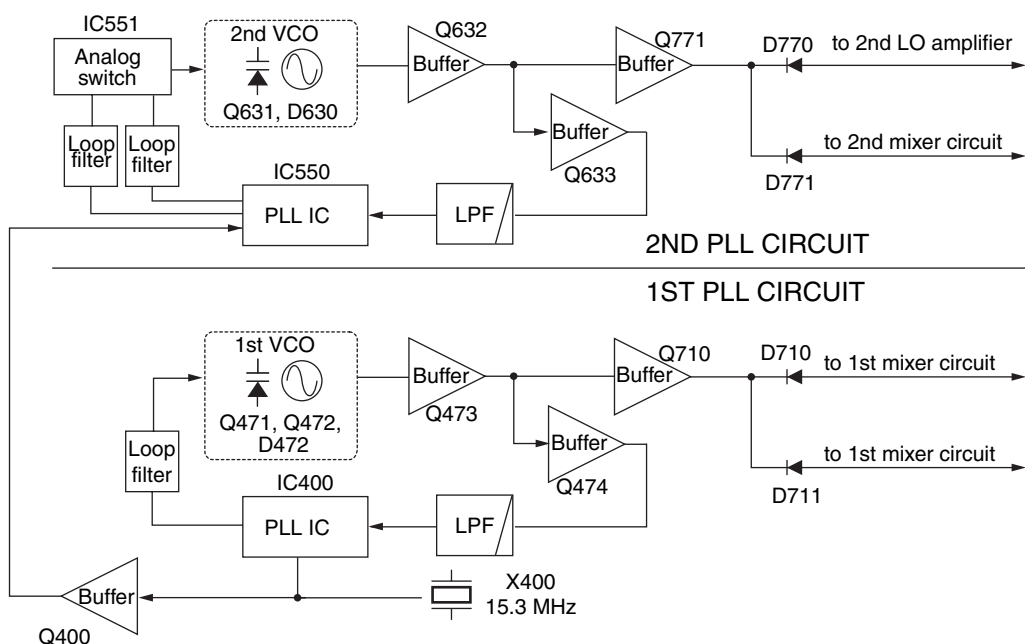
4-2-4 1ST MIXER CIRCUITS (MAIN UNIT)

The filtered signal from the low-pass filter (L892, L893, C904–C908) is mixed with the 1st LO signal, generated at the 1st VCO circuit (Q471, Q472, D472) via the buffer amplifier (Q710), at the 1st mixer circuit (IC960, pin 1, 6) to convert into the RF signal. The RF signal from the 1st mixer circuit (IC960, pin 6) is passed through the bandpass filter (F1961) and then amplified at the RF amplifier (IC1021). The amplified signal is passed through the bandpass filter (F11020) to suppress spurious components.

4-2-5 DRIVE/POWER AMPLIFIER CIRCUITS (MAIN UNIT)

The filtered RF signal from the bandpass filter (F11020) is amplified at the drive (Q1080, Q1081) and power (IC1160) amplifiers to obtain a stable 10 W of output power.

• PLL CIRCUITS



The power amplified signal from the power amplifier (IC1160, pin 4) is passed through the antenna switch (D1160), SWR detector circuit (D1166, D1170), low-pass filter which contains strip-line and C1198, and then applied to the antenna connector (CHASSIS unit: J1).

4-2-6 APC CIRCUIT (MAIN UNIT)

The APC circuit protects the driver and power amplifiers from a mismatched output load and stabilizes the output power.

The SWR detector circuit (D1166, D1170) detects the forward signals and reflection signals, and converts it into DC voltage. The output voltage is at a minimum level when the antenna impedance is matched with 50 Ω and is increased when it is mismatched.

The detected voltage is applied to the APC amplifier (IC1250, pins 3, 4) and is compared with the reference voltage which is supplied from the CPU (LOGIC-1 unit: IC50, pin 38) as "PCON" signal.

When antenna impedance is mismatched, the detected voltage exceeds the power setting voltage. The output voltage of the APC amplifiers (IC1250, IC1251) controls the bias voltage of the drive (Q1080) and power (IC1160) amplifiers to reduce the output power.

4-3 PLL CIRCUITS

4-3-1 PLL CIRCUITS (MAIN UNIT)

The PLL circuit provides stable oscillation of the 1st LO frequencies and 2nd LO frequency. The PLL output compares the phase of the divided VCO frequency to the reference frequency. The PLL output frequency is controlled by the divided ratio (N-data) of a programmable divider.

4-3-2 1ST PLL CIRCUIT (MAIN UNIT)

The 1st PLL circuit oscillates the 1st LO frequencies, and signals are applied to the 1st mixer circuit. The oscillated

signal from the 1st VCO (Q471, Q472, D471) is applied to the buffer amplifiers (Q473, Q474) and is then applied to the PLL IC (IC400, pin 6).

The PLL IC contains a prescaler, programmable counter, programmable divider and phase detector, etc.

The applied signal is divided at the prescaler and programmable counter section by the N-data ratio from the CPU (LOGIC-1 unit; IC50). The divided signal is detected on phase at the phase detector using the reference frequency and output from pin 4. The output signal is passed through the loop filter and is then applied to the 1st VCO circuit.

The oscillated signal at the 1st VCO is buffer amplified at Q473 and then passed through the low-pass (L474, L475, C488–C492) and high-pass (L47–L477, C493–C497) filters. The filtered signal is applied to the buffer amplifier (Q710) and then applied to the T/R switch (D710, D711).

The receive 1st LO signal from the T/R switch (D711) is applied to the 1st mixer circuit (IC71).

The transmit signal from the T/R switch (D710) is applied to the 1st mixer circuit (IC960).

A portion of the signal from the buffer amplifier (Q473) is fed back to the PLL IC (IC400, pin 6) via the buffer amplifier (Q474) as the comparison signal.

4-3-3 2ND PLL CIRCUIT (MAIN UNIT)

The 2nd PLL circuit oscillates the 2nd LO frequency, and the signal is applied to the 2nd mixer circuits.

The signal oscillated at the 2nd VCO circuit (Q631, D630) is amplified at the buffer amplifiers (Q632, Q633), then applied to the PLL IC (IC550, pins 2, 19). The applied signal is divided at the prescaler and programmable counter section by the N-data ratio from the CPU (LOGIC-1 unit; IC50). The divided signal is detected on phase at the phase detector using the reference frequency and output from pins 8, 13 (IC550).

While operating in DV/DD mode, the detected signal from pin 13 (IC550) is passed through the loop filter (R555–R557, C564, C567) and then applied to the 2nd VCO circuit via the mode switch (IC551, pins 1, 7).

While operating in FM mode, the detected signal from pin 8 (IC550) is passed through the loop filter (R559–R561, C571, C574) and then applied to the 2nd VCO circuit via the mode switch (IC551, pins 1, 6).

The oscillated signal at the 2nd VCO is amplified at the buffer amplifiers (Q632 Q771), and is then applied to the T/R switch (D770, D771).

The receive 2nd LO signal from the T/R switch (D771) is applied to the 2nd mixer circuit (Q131).

The transmit signal from the T/R switch (D770) is applied to the 2nd LO amplifier (Q890).

A portion of the signal from the buffer amplifier (Q632) is fed back to the PLL IC (IC550, pins 2, 19) via the buffer amplifier (Q633) and low-pass filter (L631, C653, C654) as the comparison signal.

4-4 POWER SUPPLY CIRCUITS

4-4-1 LOGIC-1 UNIT VOLTAGE LINE

| Line | Description |
|------|--|
| 5V | Common 5 V controlled by the +5 V regulator circuit (Q50 and Q51) using the "PWRS" signal from the CPU (IC50, pins 101). |
| 3.3V | Common 3.3 V converted from the 5V line by the 3.3V regulator circuit (IC502). |
| 3.2V | Common 3.2 V converted from the 5 V line by the 3.2V regulator circuit (IC4). |

4-4-2 MAIN UNIT VOLTAGE LINE

| Line | Description |
|------|---|
| HV | The voltage from a DC power supply. |
| VCC | The same voltage as the HV line which is controlled by the power switching circuit (Q23, Q24). When the power switch is pushed, the CPU outputs the "PWR" control signal to the power switching circuit to turn the circuit ON. |
| +9 | Common 9 V converted from the HV line at the +9 CTRL circuit (IC1330). The output voltage is applied to the volume controller (IC1550), etc. |
| +5 | Common 5 V converted from the +9V line at the 5 V regulator circuit (IC1331). The output voltage is applied to the mode switches (IC1462, IC1463), etc. |
| DM+5 | Common 5 V converted from the +9V line at the 5 V regulator circuit (IC830). The output voltage is applied to the modulation amplifiers (IC831, IC832), etc. |
| T+9 | Transmit 9 V controlled by the T+9 regulator circuit (Q1333, Q1334, D1331) using the "TXS" signal from the CPU (LOGIC-1 unit; IC50, pin 94). The output voltage is applied to the APC amplifier (IC1250), etc. |
| T+5 | Transmit 5 V controlled by the T+5 regulator circuit (Q1336, D1332, D1333) using the "TXS" signal from the CPU (LOGIC-1 unit; IC50, pin 94). The output voltage is applied to the RF amplifier (IC1021), etc. |
| R+5 | Receive 5 V controlled by the R+5 regulator circuit (Q1337) using the "RXS" signal from the CPU (LOGIC-1 unit; IC50, pin 95). The output voltage is applied to the RF amplifier (Q2) and 1st mixer (IC71), etc. |
| T+3 | Transmit 3 V controlled by the T+3 regulator circuit (Q1342) using the "TXS" signal from the CPU (LOGIC-1 unit; IC50, pin 94). The output voltage is applied to the 1st mixer (IC960), etc. |
| R+3 | Receive 3 V controlled by the R+3 regulator circuit (Q1343) using the "RXS" signal from the CPU (LOGIC-1 unit; IC50, pin 95). The output voltage is applied to the RF amplifier (Q1), etc. |

4-5 PORT ALLOCATIONS

4-5-1 CPU (LOGIC-1 UNIT; IC50)

| Pin number | Port name | Description |
|------------|-----------|--|
| 29 | MU/D | Input port for up/down signal from the connected microphone. |
| 32 | NOIS | Input port for the noise signal from the noise detector (MAIN unit; D195). |
| 31 | RSSI | Input port for the S-meter signal from the demodulator IC (MAIN unit; IC191, pin 12). |
| 33 | TONI | Input port for CTCSS signal from the low-pass filter (MAIN unit, IC1461, pin 1). |
| 42 | TXD1 | Output data signals to the USB controller (IC550, pin 24). |
| 43 | RXD1 | Input port for data signals from the USB controller (IC550, pin 25) via the (IC553). |
| 53 | SDA | I/O port for data signals from/to the EEPROM (IC54, pin 5). |
| 54 | SCL | Outputs clock signal to the EEPROM (IC54, pin 6). |
| 61 | BEEP | Outputs beep audio signals. |
| 71 | RESET | Input port for reset signal from the reset IC (IC52, pin 1). |
| 72 | P2RSC | Outputs control signal to the mode switch (MAIN unit; IC551, pin 5) via the level converter (IC55). |
| 73 | P2STC | Outputs strobe signal to the 2nd PLL IC (MAIN unit; IC550, pin 3) via the level converter (IC55). |
| 74 | PDATC | Outputs the data signal to the 1st and 2nd PLL ICs (MAIN unit; IC400, pin 15, IC550, pin 5) via the level converter (IC55). |
| 75 | PSCKC | Outputs clock signal to the 1st and 2nd PLL ICs (MAIN unit; IC400, pin 14, IC550, pin 4) via the level converter (IC55). |
| 76 | P1STC | Outputs strobe signal to the 1st PLL IC (MAIN unit; IC400, pin 16) via the level converter (IC55). |
| 77 | +5AC | Outputs control signal to the 5A (Q1345) and D+5 (Q1347) regulators via the level converter (IC55). Low: While the +5 and D+5 regulators are activated. |
| 78 | W/NSC | Outputs control signal to the DV/FM filter switches (MAIN unit; D192, D193) via the level converter (IC55). High: While DV mode is selected. |
| 79 | ADSWC | Outputs control signal to the mode switches (MAIN unit; IC1411, IC1670, IC1673) via the level converter (IC55). Low: While DV mode is selected. |
| 80 | TXLED | Outputs TX LED control signal. High: During transmit. |
| 82 | RXLED | Outputs RX LED control signal. High: While receiving or squelch is opened. |

| Pin number | Port name | Description |
|------------|-----------|---|
| 85 | PCON | Outputs control signal to the TX power controller (MAIN unit; Q1250). |
| 86 | ULCK | Input port for the PLL unlock signal. High: The PLL circuit is unlocked. |
| 87 | MMUT | Outputs the microphone mute signal to the mute switch (MAIN unit; Q1670). Low: While microphone audio is muted. |
| 93 | SCAN | Outputs scan control signal to the scan switch (Q400). High: While scanning. |
| 94 | TXS | Outputs the T+5, T+3 regulator circuits (MAIN unit; Q1336, Q1342) control signal. High: During transmit. |
| 95 | RXS | Outputs the R+5, R+3 regulator circuits (MAIN unit; Q1337, Q1343) control signal. High: During receive. |
| 96 | AMUT | Outputs the AF mute signal to the AF mute switch (MAIN unit; Q1550). Low: While digital code/call sign/noise/ tone squelch are closed, the audio level is set to minimum position or transmitting. |
| 102 | RMUT | Outputs the SQL mute signal to the AF switch (MAIN unit; IC1463, pin 2). High: While noise or tone squelch is closed. |
| 103 | AFCSW | Outputs AFC switch (IC352, pin 5) control signal. |
| 105 | DACK2 | Outputs clock signal to the D/A converter (IC57, pin 7). |
| 106 | DADAT2 | Outputs the data signal to the D/A converter (IC57, pin 6). |
| 107 | DACK1 | Outputs clock signal to the D/A converter (IC56, pin 7). |
| 108 | DADAT1 | Outputs the data signal to the D/A converter (IC56, pin 6). |
| 128 | FSTB | Outputs strobe signal to the FPGA IC (IC200). |
| 129 | MSTRC | Outputs strobe signal to the liner CODEC IC (IC1) and FPGA IC (IC200). |
| 130 | MDATC | Outputs the data signal to the liner CODEC IC (IC1) and FPGA IC (IC200). |
| 131 | MCLKC | Outputs clock signal to the liner CODEC IC (IC1) and FPGA IC (IC200). |
| 132 | MRESC | Outputs reset signal to the liner CODEC IC (IC1) and FPGA IC (IC200). |

SECTION 5 ADJUSTMENT PROCEDURES

5-1 PREPARATION

When adjusting ID-1, ADJUSTMENT SOFTWARE, JIG CABLE (see illustration on page 5-2) and OPC-1127 USB CABLE are required.

■ REQUIRED TEST EQUIPMENT

| EQUIPMENT | GRADE AND RANGE | EQUIPMENT | GRADE AND RANGE |
|---------------------|--|---------------------------------|---|
| DC power supply | Output voltage : 13.8 V DC Current capacity : 10 A or more | Audio generator | Frequency range : 300–3000 Hz Measuring range : 1–500 mV |
| Modulation analyzer | Frequency range : DC–1500 MHz Measuring range : 0 to ±10 kHz | Attenuator | Power attenuation : 50 or 60 dB Capacity : 20 W |
| Frequency counter | Frequency range : 0.1–1500 MHz Frequency accuracy : ±1 ppm or better Sensitivity : 100 mV or better | Standard signal generator (SSG) | Frequency range : 0.1–1500 MHz Output level : 0.1 μV to 32 mV (–127 to –17 dBm) |
| Digital multimeter | Input impedance : 10 MΩ/V DC or more | AC millivoltmeter | Measuring range : 10 mV to 10 V |
| RF power meter | Measuring range : 1–20 W Frequency range : 1000–1500 MHz Impedance : 50 Ω SWR : Better than 1.2 : 1 | Oscilloscope | Frequency rang : DC–20 MHz Measuring range : 0.01–20 V |
| | | External speaker | Input impedance : 8 Ω Capacity : 10 W or more |
| Spectrum analyzer | Frequency range : At least 1500 MHz Spectrum bandwidth : 100 kHz or more | DC Ammeter | Measuring capacity : 3 A |

■ SYSTEM REQUIREMENTS

- Microsoft® Windows® 98/98SE/Me/2000/XP
- USB port

■ ADJUSTMENT SOFTWARE INSTALLATION

- ① Quit all applications when Windows is running.
- ② Insert the CD into the appropriate CD drive.
- ③ Double-click the “Setup.exe” contained in the adjustment software folder in the CD drive.
- ④ The “Welcome to the InstallShield Wizard for adjustment software screen will appears.
Click [Next>].
- ⑤ The “Choose Destination Location” will appears.
Click [Next>] to install the software into the specified folder.
- ⑥ After the installation is completed, the “InstallShield Wizard Complete” will appears.
Click [Finish].
- ⑦ Eject the CD.
- ⑧ The adjustment software icon appears on the desktop screen.

■ STARTING SOFTWARE ADJUSTMENT

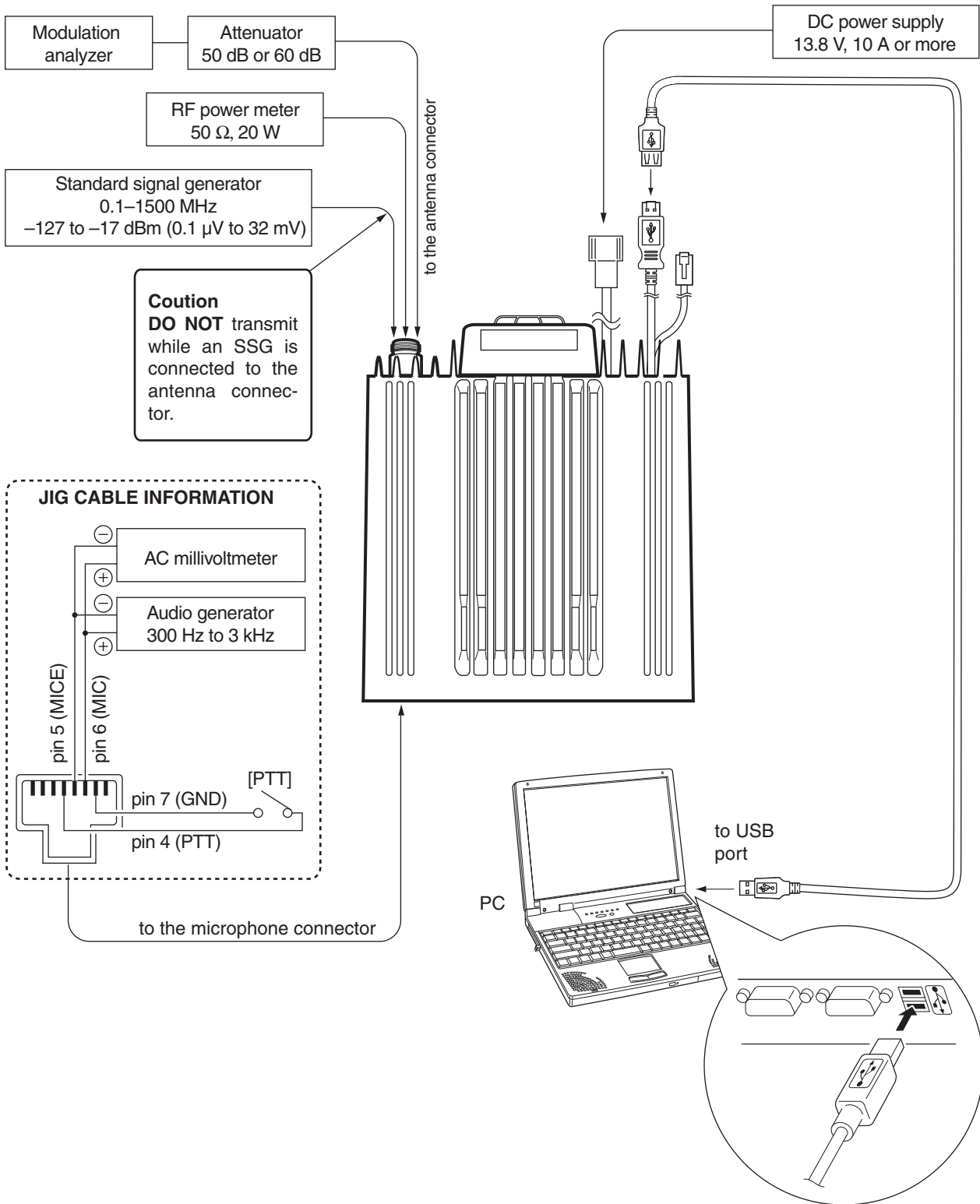
- ① Connect the transceiver and PC with the OPC-1127.
- ② Turn the transceiver power ON.
- ③ Boot up Windows, and double click the adjustment software icon on the desktop screen.
Then the control panel screen will appears.
- ④ Click [Adjustment (A)] in the menu bar and then click [Adjustment panel (F9)] in the pull down menu.
Then the adjustment screen will appears.
- ⑤ Set or modify adjustment data as desired.

■ OPERATING ON THE ADJUSTMENT MODE (CONNECTED COMPUTER KEYBOARD)

- Adjustment item selection* : [↑]/[↓]
- Specified value adjustment : [←]/[→]
- Mode selection : [M]
- PTT control : [T]
- RF power selection : [P]
- AF level control [UP] : [Q]
- AF level control [DOWN] : [W]
- Squelch level control [UP] : [A]
- Squelch level control [DOWN] : [S]
- Read the transceiver's data : [F5]
- All Default setting : [CTRL]+[D]

*When select the adjustment item, the adjustment frequency and operating mode are selected automatically.

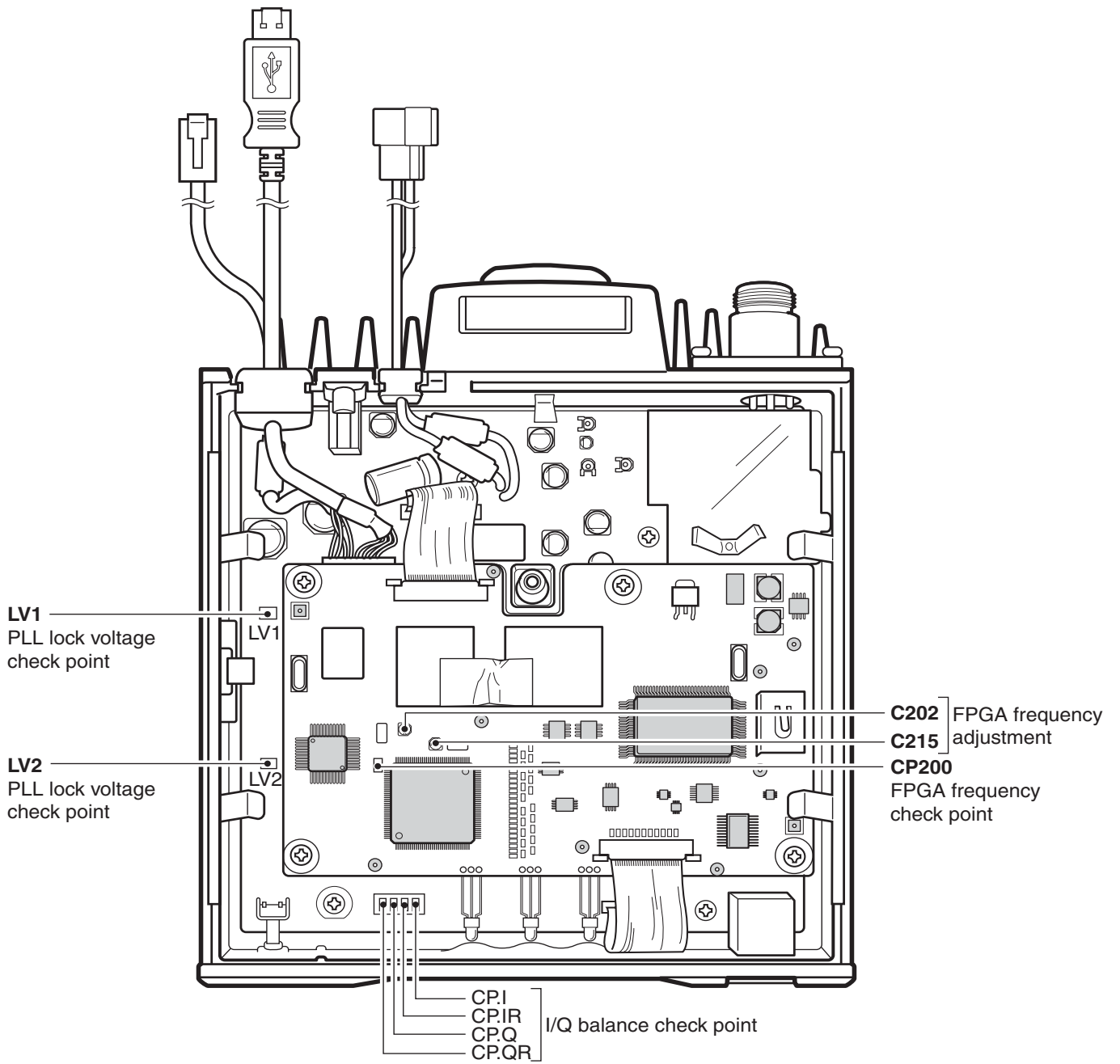
• CONNECTION



5-2 PLL AND CODEC ADJUSTMENT

| ADJUSTMENT | ADJUSTMENT CONDITION | MEASUREMENT | | VALUE | ADJUSTMENT | | |
|---|----------------------|--|--------------|---|--|--------------|---------------------------------------|
| | | UNIT | LOCATION | | UNIT | ADJUST | |
| FPGA FREQUENCY [Set FPGA frequency] | 1 | <ul style="list-style-type: none"> Operating freq. : 1240.00 MHz Mode : DD mode Receiving | LOGIC-1 unit | Connect a frequency counter to the check point "CP200". | 16.3840 MHz | LOGIC-1 unit | C202 |
| | 2 | <ul style="list-style-type: none"> Operating freq. : 1240.00 MHz Mode : DV mode Receiving | | | 9.8304 MHz | LOGIC-1 unit | C215 |
| PLL LOCK VOLTAGE | 1 | <ul style="list-style-type: none"> Operating freq. : 1240.00 MHz Mode : DV mode Connect an RF power meter or 50 Ω dummy load to the antenna connector. Receiving | MAIN unit | Connect a digital multimeter or an oscilloscope to the check point "LV1". | More than 0.9 V | Verify | |
| | 2 | <ul style="list-style-type: none"> Operating freq. : 1300.00 MHz Receiving | | | Less than 4.4 V | | |
| | 3 | <ul style="list-style-type: none"> Mode : FM mode Receiving | MAIN unit | Connect a digital multimeter or an oscilloscope to the check point "LV2". | 3.1–4.0 V | | |
| | 4 | <ul style="list-style-type: none"> Mode : DD mode Receiving | | | 2.6–3.3 V | | |
| | 5 | <ul style="list-style-type: none"> Mode : FM mode Transmitting | | | 3.3–4.0 V | | |
| I/Q BALANCE [FPGA D.C. voltage adjustment /DV I] | 1 | <ul style="list-style-type: none"> Preset "IQ Direct-current output" ON. Operating freq. : 1270.00 MHz Mode : DV mode Connect an RF power meter or 50 Ω dummy load to the antenna connector. Transmitting | MAIN unit | Connect a digital multimeter or an oscilloscope to the check point "CP.I". | The same voltage of the check point "CP.IR". | PC screen | [FPGA D.C. voltage adjustment /DV I] |
| [FPGA D.C. voltage adjustment /DV Q] | 2 | <ul style="list-style-type: none"> Transmitting | MAIN unit | Connect a digital multimeter or an oscilloscope to the check point "CP.Q". | The same voltage of the check point "CP.QR". | PC screen | [FPGA D.C. voltage adjustment /DV Q] |
| [FPGA D.C. voltage adjustment /DV I] | 3 | <ul style="list-style-type: none"> Transmitting | Rear panel | Connect a spectrum analyzer to the antenna connector through an attenuator. | Minimum output level | PC screen | [FPGA D.C. voltage adjustment /DV I], |
| [FPGA D.C. voltage adjustment /DV Q] | 4 | | | | | | [FPGA D.C. voltage adjustment /DV Q] |
| <ul style="list-style-type: none"> Repeat step 3 and step 4 several times. | | | | | | | |

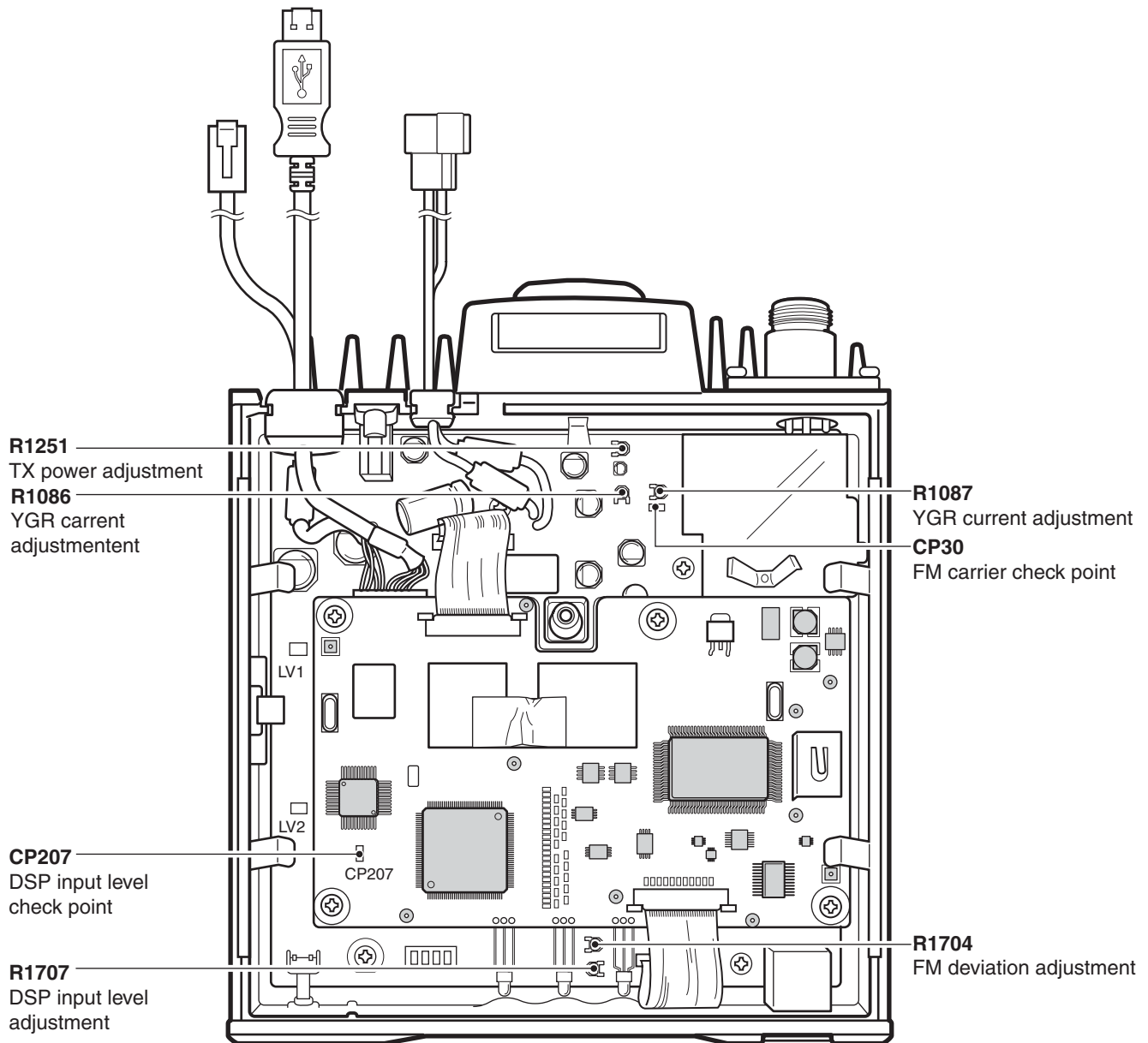
• MAIN AND LOGIC-1 UNITS



5-3 TRANSMITTER ADJUSTMENT

| ADJUSTMENT | ADJUSTMENT CONDITION | MEASUREMENT | | VALUE | ADJUSTMENT | | |
|---|----------------------|---|--------------|---|---|-----------|--------------------------------------|
| | | UNIT | LOCATION | | UNIT | ADJUST | |
| YGR CURRENT [FPGA D.C. voltage ad- justment /DV I] | 1 | <ul style="list-style-type: none"> • Preset R1086 and R1087 maximum counterclockwise. • Preset "IQ Direct-current output" ON. | Rear panel | Connect an ammeter between the DC power supply and ID-1. | 100 mA higher from the pre-set position. | MAIN unit | R1087 |
| | 2 | <ul style="list-style-type: none"> • Operating freq. : 1300.00 MHz • Mode : DV mode • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting | | | 100 mA higher from step 1. | MAIN unit | R1086 |
| REFERENCE FREQUENCY [REF Crystal adjustment] | 1 | <ul style="list-style-type: none"> • Operating freq. : 1300.00 MHz • Mode : FM mode • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting | Rear panel | Loosely couple a frequency counter to the antenna connector. | 1300.0000 MHz | PC screen | [REF Crystal adjustment] |
| FM CARRIER [FPGA D.C. voltage ad- justment /FM I] | 1 | <ul style="list-style-type: none"> • Operating freq. : 1300.00 MHz • Mode : FM mode • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting | MAIN unit | Connect a digital multimeter or an oscilloscope to the check point "CP30". | The same voltage that during in DV mode (TX) at the check point "CP30". | PC screen | [FPGA D.C. voltage adjustment /FM I] |
| [FPGA D.C. voltage ad- justment /FM Q] | 2 | <ul style="list-style-type: none"> • Transmitting | | | The same adjustment as step 1, if need. | PC screen | [FPGA D.C. voltage adjustment /FM Q] |
| OUTPUT POWER [TX output adjustment] | 1 | <ul style="list-style-type: none"> • Operating freq. : 1300.00 MHz • Mode : FM mode • TX power : High • Transmitting | Rear panel | Connect an RF power meter to the antenna connector. | 11 W | MAIN unit | R1251 |
| FM DEVIATION [FM modulation adjustment] | 1 | <ul style="list-style-type: none"> • Operating freq. : 1270.00 MHz • Mode : FM mode • Connect an audio generator to the [MIC] connector and set as : 1.0 kHz/20 mVrms • Set a Modulation analyzer as: HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P-P)/2 • Transmitting | Rear panel | Connect a modulation analyzer to the antenna connector through an attenuator. | ±4.35 kHz | MAIN unit | R1704 |
| DSP INPUT LEVEL [DSP input level adjustment] | 1 | <ul style="list-style-type: none"> • Operating freq. : 1270.00 MHz • Connect an audio generator to the [MIC] connector and set as : 1.0 kHz/20 mVrms • Connect an RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting | LOGIC-1 unit | Connect an oscilloscope to the check point "CP207". | 750 mVp-p | MAIN unit | R1707 |

• MAIN AND LOGIC-1 UNITS



5-4 RECEIVER ADJUSTMENT

| ADJUSTMENT ITEM | ADJUSTMENT CONDITION | OPERATION |
|--|--|---|
| SQUELCH LEVEL [SQL adjustment /FM thresh] | 1 <ul style="list-style-type: none"> • Operating freq. : 1270.00 MHz • Mode : FM mode • Connect an SSG to the antenna connector and set as: <ul style="list-style-type: none"> Level : 0.11 μV* (-126 dBm) Modulation : 1 kHz Deviation : 3.5 kHz • Receiving | • Push [ENTER] on the connected computer keyboard to set to "SQL adjustment/FM thresh" level. |
| [SQL adjustment /FM tight] | 2 <ul style="list-style-type: none"> • Set an SSG as: <ul style="list-style-type: none"> Level : 0.18 μV* (-122 dBm) • Receiving | • Push [ENTER] on the connected computer keyboard to set to "SQL adjustment/FM tight" level. |
| AFC CENTER [AFC center voltage adjustment/FM] | 1 <ul style="list-style-type: none"> • Operating freq. : 1270.00 MHz • Mode : FM mode • Connect an SSG to the antenna connector and set as: <ul style="list-style-type: none"> Level : 1 mV* (-47 dBm) Modulation : OFF • Receiving | • Push [ENTER] on the connected computer's keyboard to set to "AFC center voltage adjustment/FM" level. |
| [AFC center voltage adjustment /DV] | 2 <ul style="list-style-type: none"> • Mode : DV mode • Receiving | • Push [ENTER] on the connected computer keyboard to set to "AFC center voltage/DV" level. |
| S-METER (FM) [S-meter adjustment /FM min] | 1 <ul style="list-style-type: none"> • Operating freq. : 1270.00 MHz • Mode : FM mode • Connect an SSG to the antenna connector and set as: <ul style="list-style-type: none"> Level : 0.18 μV* (-122 dBm) Modulation : OFF • Receiving | • Push [ENTER] on the connected computer keyboard to set to "S-meter adjustment/FM min" level. |
| [S-meter adjustment /FM full] | 2 <ul style="list-style-type: none"> • Set an SSG as: <ul style="list-style-type: none"> Level : 5.6 μV* (-92 dBm) • Receiving | • Push [ENTER] on the connected computer keyboard to set to "S-meter adjustment/FM full" level. |
| S-METER (DV) [S-meter adjustment /DV min] | 1 <ul style="list-style-type: none"> • Operating freq. : 1270.00 MHz • Mode : DV mode • Set an SSG as: <ul style="list-style-type: none"> Level : 0.18 μV* (-122 dBm) Modulation : OFF • Receiving | • Push [ENTER] on the connected computer keyboard to set to "S-meter adjustment/DV min" level. |
| [S-meter adjustment /DV full] | 2 <ul style="list-style-type: none"> • Set an SSG as: <ul style="list-style-type: none"> Level : 5.6 μV* (-92 dBm) • Receiving | • Push [ENTER] on the connected computer keyboard to set to "S-meter adjustment/DV full" level. |
| S-METER (DD) [S-meter adjustment /DD min] | 1 <ul style="list-style-type: none"> • Operating freq. : 1270.00 MHz • Mode : DD mode • Set an SSG as: <ul style="list-style-type: none"> Level : 1.6 μV* (-103 dBm) Modulation : OFF • Receiving | • Push [ENTER] on the connected computer keyboard to set to "S-meter adjustment/DD min" level. |
| [S-meter adjustment /DD full] | 2 <ul style="list-style-type: none"> • Set an SSG as: <ul style="list-style-type: none"> Level : 5.6 μV* (-92 dBm) • Receiving | • Push [ENTER] on the connected computer keyboard to set to "S-meter adjustment/DD full" level. |

*The output level of the standard signal generator (SSG) is indicated as the SSG's open circuit.

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|--------------------------|----|--------------|
| L71 | 6200006990 | S.COL ELJRE 56NG-F | T | 40.4/78.9 |
| L72 | 6200006990 | S.COL ELJRE 56NG-F | T | 47.5/72.2 |
| L73 | 6200006990 | S.COL ELJRE 56NG-F | T | 42.3/68.8 |
| L74 | 6200009350 | S.COL ELJRE R22G-F3 | T | 41.5/61.3 |
| L131 | 6200002710 | S.COL ELJFC 1R8K-F | T | 41.8/55.5 |
| L132 | 6200001980 | S.COL NL 252018T-1R0J | T | 41.8/52.1 |
| L191 | 6200002710 | S.COL ELJFC 1R8K-F | T | 50.6/35.8 |
| L192 | 6200002000 | S.COL NL 252018T-3R3J | T | 44.6/48.8 |
| L390 | 6200006990 | S.COL ELJRE 56NG-F | T | 31.4/53.4 |
| L391 | 6200006990 | S.COL ELJRE 56NG-F | T | 37/51.3 |
| L400 | 6200006990 | S.COL ELJRE 56NG-F | T | 9.4/66.9 |
| L404 | 6200006990 | S.COL ELJRE 56NG-F | B | 14.9/63.7 |
| L415 | 6200006990 | S.COL ELJRE 56NG-F | T | 9.4/49.4 |
| L470 | 6200006990 | S.COL ELJRE 56NG-F | T | 23.5/69.5 |
| L471 | 6200005640 | S.COL ELJRE 6N8Z-F | T | 25.1/71.2 |
| L472 | 6200009390 | S.COL C3328A-8N0J-A | T | 24.6/78.2 |
| L473 | 6200002630 | S.COL NL 252018T-R10J | T | 20/79.4 |
| L474 | 6200005620 | S.COL ELJRE 4N7Z-F | T | 32.2/67.6 |
| L475 | 6200005640 | S.COL ELJRE 6N8Z-F | T | 32.2/70.2 |
| L476 | 6200005650 | S.COL ELJRE 8N2Z-F | T | 35.3/73.4 |
| L477 | 6200005640 | S.COL ELJRE 6N8Z-F | T | 35.3/77.3 |
| L480 | 6200005640 | S.COL ELJRE 6N8Z-F | B | 27.5/74.6 |
| L481 | 6200006990 | S.COL ELJRE 56NG-F | T | 14.3/77.8 |
| L550 | 6200001980 | S.COL NL 252018T-1R0J | B | 21.7/36.1 |
| L551 | 6200001980 | S.COL NL 252018T-1R0J | T | 28.3/51 |
| L552 | 6200001980 | S.COL NL 252018T-1R0J | T | 33.8/49.3 |
| L554 | 6200006990 | S.COL ELJRE 56NG-F | B | 24.9/37.6 |
| L555 | 6200009350 | S.COL ELJRE R22G-F3 | B | 23.7/27.5 |
| L556 | 6200009350 | S.COL ELJRE R22G-F3 | B | 2.5/44.9 |
| L557 | 6200009350 | S.COL ELJRE R22G-F3 | T | 4/29.7 |
| L630 | 6200009700 | S.COL C6328A-28NG-A | T | 17.7/39.1 |
| L631 | 6200005700 | S.COL ELJRE 22NG-F | B | 21.4/30.4 |
| L632 | 6200006990 | S.COL ELJRE 56NG-F | T | 32.8/30.8 |
| L633 | 6200001980 | S.COL NL 252018T-1R0J | T | 17.7/43.9 |
| L634 | 6200006990 | S.COL ELJRE 56NG-F | T | 12.4/30.1 |
| L636 | 6200006990 | S.COL ELJRE 56NG-F | T | 26.7/33.5 |
| L710 | 6200006990 | S.COL ELJRE 56NG-F | B | 38.8/60.3 |
| L712 | 6200006990 | S.COL ELJRE 56NG-F | T | 38.4/76.7 |
| L713 | 6200005620 | S.COL ELJRE 4N7Z-F | B | 36.8/68.7 |
| L714 | 6200005640 | S.COL ELJRE 6N8Z-F | B | 36.4/74.3 |
| L715 | 6200006990 | S.COL ELJRE 56NG-F | B | 32.1/77.1 |
| L717 | 6200006990 | S.COL ELJRE 56NG-F | T | 9.9/69.5 |
| L718 | 6200006990 | S.COL ELJRE 56NG-F | T | 35.3/58.6 |
| L719 | 6200006990 | S.COL ELJRE 56NG-F | T | 39/68.7 |
| L720 | 6200006990 | S.COL ELJRE 56NG-F | T | 36.2/55.9 |
| L770 | 6200005700 | S.COL ELJRE 22NG-F | B | 31/50.4 |
| L880 | 6200006990 | S.COL ELJRE 56NG-F | T | 50.6/46.5 |
| L881 | 6200006990 | S.COL ELJRE 56NG-F | T | 46.2/53.6 |
| L891 | 6200005710 | S.COL ELJRE 27NG-F | B | 40.9/45 |
| L892 | 6200005720 | S.COL ELJRE 33NG-F | T | 47.5/58.8 |
| L893 | 6200005730 | S.COL ELJRE 39NG-F | T | 47.5/61.4 |
| L895 | 6200006990 | S.COL ELJRE 56NG-F | B | 38.2/36.5 |
| L896 | 6200006990 | S.COL ELJRE 56NG-F | B | 37.5/38.6 |
| L897 | 6200006990 | S.COL ELJRE 56NG-F | B | 42.5/41.2 |
| L898 | 6200001980 | S.COL NL 252018T-1R0J | B | 40.7/37.6 |
| L961 | 6200006990 | S.COL ELJRE 56NG-F | B | 52.6/64.6 |
| L962 | 6200005650 | S.COL ELJRE 8N2Z-F | B | 55.5/61.8 |
| L964 | 6200006990 | S.COL ELJRE 56NG-F | B | 43.6/81 |
| L1020 | 6200006990 | S.COL ELJRE 56NG-F | B | 69.1/53.7 |
| L1021 | 6200005660 | S.COL ELJRE 10NG-F | T | 72.8/53.8 |
| L1080 | 6200006770 | S.COL ELJRE 1N5Z-F | B | 100.6/43.6 |
| L1081 | 6200008180 | S.COL 0.25-1.9-10TL 107N | T | 112.1/45.6 |
| L1082 | 6200007740 | S.COL LQW2BHN47N01L | T | 107.3/48.1 |
| L1085 | 6200006990 | S.COL ELJRE 56NG-F | T | 106.5/50.4 |
| L1086 | 6200006990 | S.COL ELJRE 56NG-F | T | 99.8/46.7 |
| L1087 | 6200006990 | S.COL ELJRE 56NG-F | B | 80.9/106.5 |
| L1161 | 6200009700 | S.COL C6328A-28NG-A | T | 105.2/95.9 |
| L1162 | 6200009410 | S.COL C3328A-2N5K-A | T | 85.1/108.6 |
| L1163 | 6200009410 | S.COL C3328A-2N5K-A | T | 73.7/107.3 |
| L1164 | 6200006990 | S.COL ELJRE 56NG-F | B | 97.4/127.1 |
| L1166 | 6200009700 | S.COL C6328A-28NG-A | T | 93/83.6 |
| L1167 | 6200008910 | S.COL 1812CS-122XKB | T | 101.1/84.8 |
| L1169 | 6200006990 | S.COL ELJRE 56NG-F | T | 113.2/69.8 |
| L1170 | 6200006990 | S.COL ELJRE 56NG-F | B | 82.7/114 |
| L1250 | 6200005740 | S.COL ELJRE 47NG-F | B | 60.8/126.1 |
| L1251 | 6200006990 | S.COL ELJRE 56NG-F | B | 76.2/113 |
| L1330 | 6200006990 | S.COL ELJRE 56NG-F | T | 21.2/93.5 |
| L1331 | 6200006990 | S.COL ELJRE 56NG-F | B | 22.9/92.3 |
| L1332 | 6200006990 | S.COL ELJRE 56NG-F | B | 22.5/91 |
| L1333 | 6200006990 | S.COL ELJRE 56NG-F | B | 45.2/81 |
| L1334 | 6200006990 | S.COL ELJRE 56NG-F | B | 53.9/71.6 |
| L1335 | 6200006990 | S.COL ELJRE 56NG-F | B | 62.2/76.6 |
| L1348 | 6200006990 | S.COL ELJRE 56NG-F | B | 51.8/67.2 |
| L1349 | 6200006990 | S.COL ELJRE 56NG-F | B | 58.7/57.8 |
| L1360 | 6200006990 | S.COL ELJRE 56NG-F | T | 37.4/53.2 |
| L1400 | 6200006990 | S.COL ELJRE 56NG-F | T | 12.7/48.8 |
| L1401 | 6200006990 | S.COL ELJRE 56NG-F | T | 59.4/1.4 |
| L1550 | 6200006990 | S.COL ELJRE 56NG-F | B | 17.7/56.8 |
| L1601 | 6200006990 | S.COL ELJRE 56NG-F | T | 114.7/13.9 |
| L1602 | 6200006990 | S.COL ELJRE 56NG-F | T | 106.4/16.7 |
| L1603 | 6200006990 | S.COL ELJRE 56NG-F | T | 106.2/14.3 |
| L1604 | 6200006990 | S.COL ELJRE 56NG-F | T | 112.1/11.8 |

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|-------------------------------|----|--------------|
| L1606 | 6200006990 | S.COL ELJRE 56NG-F | B | 114.8/10.8 |
| L1607 | 6200006990 | S.COL ELJRE 56NG-F | T | 115.8/11.7 |
| L1608 | 6200006990 | S.COL ELJRE 56NG-F | B | 95.2/9 |
| L1609 | 6200006990 | S.COL ELJRE 56NG-F | B | .9/51 |
| L1610 | 6200006990 | S.COL ELJRE 56NG-F | T | 105.3/11.8 |
| L1611 | 6200006990 | S.COL ELJRE 56NG-F | B | 108.3/6.8 |
| L1612 | 6200003590 | S.COL EXCCL3225U1 | B | 1.8/80.4 |
| L1613 | 6200003590 | S.COL EXCCL3225U1 | B | 13.7/124.3 |
| L1614 | 6200003590 | S.COL EXCCL3225U1 | B | 12.9/129.4 |
| L1801 | 6200006990 | S.COL ELJRE 56NG-F | B | 27.4/103.3 |
| L1802 | 6200006990 | S.COL ELJRE 56NG-F | B | 26.6/102 |
| L1803 | 6200006990 | S.COL ELJRE 56NG-F | B | 26.2/100.7 |
| L1804 | 6200006990 | S.COL ELJRE 56NG-F | B | 26.2/99.4 |
| L1805 | 6200006990 | S.COL ELJRE 56NG-F | B | 54.5/108.5 |
| R1 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 55.4/106.3 |
| R2 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 56.6/98.5 |
| R3 | 7030003630 | S.RES ERJ3GEYJ 393 V (39 kΩ) | T | 53.5/93.2 |
| R4 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | T | 49.4/92.8 |
| R5 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 55.2/89.3 |
| R6 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 55.2/88 |
| R7 | 7030003340 | S.RES ERJ3GEYJ 151 V (150 Ω) | B | 47.5/85.1 |
| R8 | 7030003270 | S.RES ERJ3GEYJ 390 V (39 Ω) | B | 47.7/83.1 |
| R9 | 7030003340 | S.RES ERJ3GEYJ 151 V (150 Ω) | B | 49.6/82.3 |
| R70 | 7030003200 | S.RES ERJ3GEYJ 100 V (10 Ω) | T | 40.7/76.6 |
| R71 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 44.4/73.2 |
| R78 | 7030003710 | S.RES ERJ3GEYJ 184 V (180 kΩ) | T | 93.6/27.4 |
| R84 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 91/28.7 |
| R85 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 95.5/27.4 |
| R87 | 7030003790 | S.RES ERJ3GEYJ 824 V (820 kΩ) | T | 98.2/23 |
| R91 | 7030003430 | S.RES ERJ3GEYJ 821 V (820 Ω) | B | 105.3/24.9 |
| R92 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 95.5/30 |
| R93 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 93.6/30 |
| R94 | 7030003620 | S.RES ERJ3GEYJ 333 V (33 kΩ) | T | 98.9/33.3 |
| R131 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | T | 44.2/61.3 |
| R132 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 44.8/60 |
| R133 | 7030003300 | S.RES ERJ3GEYJ 680 V (68 Ω) | T | 44.3/56.1 |
| R134 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 50.9/72.9 |
| R135 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 39.1/54.5 |
| R136 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 40.2/49.8 |
| R144 | 7030003520 | S.RES ERJ3GEYJ 472 V (4.7 kΩ) | T | 37.6/26 |
| R188 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 58.4/43.8 |
| R189 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 53.5/13.8 |
| R190 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 54.8/13.6 |
| R191 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 47.9/36.3 |
| R192 | 7030003460 | S.RES ERJ3GEYJ 152 V (1.5 kΩ) | T | 44.8/37.2 |
| R193 | 7030003400 | S.RES ERJ3GEYJ 471 V (470 Ω) | T | 52.5/36.1 |
| R194 | 7030003280 | S.RES ERJ3GEYJ 470 V (47 Ω) | T | 51.8/33.3 |
| R195 | 7030003450 | S.RES ERJ3GEYJ 122 V (1.2 kΩ) | T | 52.9/27.9 |
| R196 | 7030003460 | S.RES ERJ3GEYJ 152 V (1.5 kΩ) | T | 40.2/32.4 |
| R197 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 51.9/18.7 |
| R198 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 56.7/15.7 |
| R199 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 38.3/50.1 |
| R200 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 56.7/14.4 |
| R201 | 7030003570 | S.RES ERJ3GEYJ 123 V (12 kΩ) | B | 48/27.2 |
| R202 | 7030003570 | S.RES ERJ3GEYJ 123 V (12 kΩ) | B | 45.8/24.9 |
| R203 | 7030003720 | S.RES ERJ3GEYJ 224 V (220 kΩ) | T | 41/27.9 |
| R204 | 7030003740 | S.RES ERJ3GEYJ 334 V (330 kΩ) | T | 39.9/24.7 |
| R205 | 7030003500 | S.RES ERJ3GEYJ 332 V (3.3 kΩ) | T | 43.6/23.8 |
| R206 | 7510001530 | S.TMR NTCG20 3NH 103JT | T | 42/23.8 |
| R207 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 39.9/22.8 |
| R208 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | T | 43.2/26 |
| R209 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 48.5/25.1 |
| R210 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 51.1/26 |
| R211 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 50.3/24.1 |
| R212 | 7030003550 | S.RES ERJ3GEYJ 822 V (8.2 kΩ) | T | 54.5/34.7 |
| R213 | 7030003620 | S.RES ERJ3GEYJ 333 V (33 kΩ) | T | 55.6/36.1 |
| R214 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 54.8/32.8 |
| R215 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | T | 57.5/35.6 |
| R216 | 7030003460 | S.RES ERJ3GEYJ 152 V (1.5 kΩ) | T | 58.9/32.8 |
| R217 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 54.3/37.7 |
| R218 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 62.7/29.9 |
| R219 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 57.4/24 |
| R270 | 7030003490 | S.RES ERJ3GEYJ 272 V (2.7 kΩ) | B | 82.6/30.5 |
| R271 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 78.7/25.6 |
| R272 | 7030003510 | S.RES ERJ3GEYJ 392 V (3.9 kΩ) | B | 84.7/31.3 |
| R273 | 7030003590 | S.RES ERJ3GEYJ 183 V (18 kΩ) | B | 77.9/33 |
| R274 | 7030003590 | S.RES ERJ3GEYJ 183 V (18 kΩ) | B | 80/32.2 |
| R276 | 7030003450 | S.RES ERJ3GEYJ 122 V (1.2 kΩ) | T | 71/35.7 |
| R277 | 7030003280 | S.RES ERJ3GEYJ 470 V (47 Ω) | T | 74.2/38.3 |
| R278 | 7030003380 | S.RES ERJ3GEYJ 331 V (330 Ω) | T | 79.4/40.6 |
| R279 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 63.2/41.1 |
| R280 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 57.6/41.9 |
| R281 | 7030003380 | S.RES ERJ3GEYJ 331 V (330 Ω) | T | 68.1/40.6 |
| R282 | 7030003570 | S.RES ERJ3GEYJ 123 V (12 kΩ) | B | 43.7/53.9 |
| R283 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 66.5/43.5 |
| R284 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 69.4/40.6 |
| R285 | 7030003380 | S.RES ERJ3GEYJ 331 V (330 Ω) | B | 80.3/46.2 |
| R287 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 73.9/41.7 |
| R288 | 7030003360 | S.RES ERJ3GEYJ 221 V (220 Ω) | B | 75.8/41.3 |
| R289 | 7030003580 | S.RES ERJ3GEYJ 153 V (15 kΩ) | B | 77.1/42.1 |

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
 S.=Surface mount

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|-------------------------------|----|--------------|
| R291 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 71.3/22.7 |
| R292 | 7510001670 | S.TMR NTCG16 4BH 103KT | T | 72.1/40.3 |
| R293 | 7030003450 | S.RES ERJ3GEYJ 122 V (1.2 kΩ) | T | 72.1/42.9 |
| R294 | 7030003370 | S.RES ERJ3GEYJ 271 V (270 Ω) | B | 46.3/51.8 |
| R295 | 7030003380 | S.RES ERJ3GEYJ 331 V (330 Ω) | T | 66.6/46.4 |
| R296 | 7030005331 | S.RES ERA3YED 562V | T | 73.4/40.3 |
| R331 | 7030003770 | S.RES ERJ3GEYJ 564 V (560 kΩ) | B | 81.6/124.3 |
| R340 | 7030003520 | S.RES ERJ3GEYJ 472 V (4.7 kΩ) | T | 66.6/35.7 |
| R394 | 7030003360 | S.RES ERJ3GEYJ 221 V (220 Ω) | T | 28.7/53.5 |
| R400 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 25.2/54.9 |
| R401 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 28.4/56.8 |
| R402 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 31.6/68.9 |
| R403 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 29.9/58.6 |
| R404 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 31.5/59.4 |
| R405 | 7030003290 | S.RES ERJ3GEYJ 560 V (56 Ω) | B | 27.9/70.5 |
| R406 | 7030003460 | S.RES ERJ3GEYJ 152 V (1.5 kΩ) | B | 18.8/73.4 |
| R407 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 20.7/74.3 |
| R409 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 23/55.7 |
| R410 | 7030003660 | S.RES ERJ3GEYJ 683 V (68 kΩ) | T | 23/54.4 |
| R411 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 20.8/49.7 |
| R412 | 7030003670 | S.RES ERJ3GEYJ 823 V (82 kΩ) | T | 20.4/51.7 |
| R413 | 7030003360 | S.RES ERJ3GEYJ 221 V (220 Ω) | T | 21/55 |
| R414 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 23/57.1 |
| R415 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 11/50.7 |
| R416 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 20.3/57.1 |
| R417 | 7030003490 | S.RES ERJ3GEYJ 272 V (2.7 kΩ) | B | 25.2/56.4 |
| R418 | 7030003490 | S.RES ERJ3GEYJ 272 V (2.7 kΩ) | B | 27.1/59 |
| R419 | 7030003490 | S.RES ERJ3GEYJ 272 V (2.7 kΩ) | B | 31/61.3 |
| R420 | 7030003460 | S.RES ERJ3GEYJ 152 V (1.5 kΩ) | B | 32.3/64.5 |
| R421 | 7030003350 | S.RES ERJ3GEYJ 181 V (180 Ω) | T | 22/59 |
| R422 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 15.4/78.2 |
| R470 | 7030003360 | S.RES ERJ3GEYJ 221 V (220 Ω) | T | 14.9/71.5 |
| R471 | 7030006571 | S.RES ERA3YED 392V | T | 27.5/74 |
| R472 | 7030005331 | S.RES ERA3YED 562V | T | 27.3/76.7 |
| R473 | 7030005331 | S.RES ERA3YED 562V | T | 21.2/72.7 |
| R474 | 7030003400 | S.RES ERJ3GEYJ 471 V (470 Ω) | T | 21.2/75.3 |
| R475 | 7030003360 | S.RES ERJ3GEYJ 221 V (220 Ω) | T | 26.7/67.6 |
| R476 | 7030003650 | S.RES ERJ3GEYJ 563 V (56 kΩ) | T | 28/67.6 |
| R478 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 27.3/69.5 |
| R479 | 7030003420 | S.RES ERJ3GEYJ 681 V (680 Ω) | T | 35.4/66.8 |
| R480 | 7030003370 | S.RES ERJ3GEYJ 271 V (270 Ω) | B | 36.1/76.5 |
| R481 | 7030003280 | S.RES ERJ3GEYJ 470 V (47 Ω) | T | 29.9/75.7 |
| R483 | 7030003650 | S.RES ERJ3GEYJ 563 V (56 kΩ) | B | 29.3/74.7 |
| R484 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 28.7/78.1 |
| R485 | 7030003240 | S.RES ERJ3GEYJ 220 V (22 Ω) | T | 31.3/65.7 |
| R486 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 14.9/72.8 |
| R487 | 7030007230 | S.RES ERA3YED 102V | T | 21.9/79.9 |
| R550 | 7030003290 | S.RES ERJ3GEYJ 560 V (56 Ω) | B | 18.2/34.1 |
| R551 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 11.1/27.5 |
| R552 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 9.5/26.7 |
| R553 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 7.9/27.5 |
| R554 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 6.3/26.7 |
| R555 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 10.1/40.8 |
| R556 | 7030003460 | S.RES ERJ3GEYJ 152 V (1.5 kΩ) | B | 7.3/40.8 |
| R557 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 10.1/42.4 |
| R558 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 23.3/39.8 |
| R559 | 7030003450 | S.RES ERJ3GEYJ 122 V (1.2 kΩ) | T | 8.6/36.7 |
| R560 | 7030003430 | S.RES ERJ3GEYJ 821 V (820 Ω) | T | 6.7/34.7 |
| R561 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 8.6/34.1 |
| R562 | 7030003780 | S.RES ERJ3GEYJ 684 V (680 kΩ) | T | 25.2/50.3 |
| R630 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 18.6/32 |
| R631 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 15.9/33.2 |
| R632 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 20/42.8 |
| R633 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 14.1/34 |
| R634 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 14.4/37.8 |
| R635 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 12.8/34 |
| R636 | 7030003490 | S.RES ERJ3GEYJ 272 V (2.7 kΩ) | T | 22.6/35.8 |
| R637 | 7030003490 | S.RES ERJ3GEYJ 272 V (2.7 kΩ) | T | 20.9/33.4 |
| R638 | 7030003420 | S.RES ERJ3GEYJ 681 V (680 Ω) | T | 21.3/29.6 |
| R639 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 24.6/35.4 |
| R640 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 25.9/35.4 |
| R642 | 7030003650 | S.RES ERJ3GEYJ 563 V (56 kΩ) | T | 27.1/30.2 |
| R643 | 7030003290 | S.RES ERJ3GEYJ 560 V (56 Ω) | T | 28.6/38.2 |
| R644 | 7030003360 | S.RES ERJ3GEYJ 221 V (220 Ω) | B | 28.7/35.2 |
| R645 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 28.7/31 |
| R646 | 7030003670 | S.RES ERJ3GEYJ 823 V (82 kΩ) | B | 26.3/31.8 |
| R647 | 7030003380 | S.RES ERJ3GEYJ 331 V (330 Ω) | B | 23.8/31.2 |
| R648 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 25.5/33.9 |
| R649 | 7030003360 | S.RES ERJ3GEYJ 221 V (220 Ω) | T | 32/34.8 |
| R650 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 18.2/30.1 |
| R651 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 13.1/32.1 |
| R710 | 7030003370 | S.RES ERJ3GEYJ 271 V (270 Ω) | B | 40.1/61.9 |
| R711 | 7030003370 | S.RES ERJ3GEYJ 271 V (270 Ω) | T | 38.4/73.6 |
| R712 | 7030003340 | S.RES ERJ3GEYJ 151 V (150 Ω) | B | 42.3/67.7 |
| R715 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 32.1/79.9 |
| R716 | 7030003650 | S.RES ERJ3GEYJ 563 V (56 kΩ) | B | 38.6/75.2 |
| R770 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 35.6/34.9 |
| R771 | 7030003520 | S.RES ERJ3GEYJ 472 V (4.7 kΩ) | B | 31.5/35.2 |
| R772 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 33.6/50.7 |
| R773 | 7030003520 | S.RES ERJ3GEYJ 472 V (4.7 kΩ) | B | 31/48.8 |
| R775 | 7030003270 | S.RES ERJ3GEYJ 390 V (39 Ω) | T | 36.2/57.2 |
| R777 | 7030003480 | S.RES ERJ3GEYJ 222 V (2.2 kΩ) | T | 28.6/43.9 |

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|-------------------------------|----|--------------|
| R778 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 26.7/41.8 |
| R779 | 7030003650 | S.RES ERJ3GEYJ 563 V (56 kΩ) | T | 26.4/38 |
| R780 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 24.6/38.9 |
| R781 | 7030003650 | S.RES ERJ3GEYJ 563 V (56 kΩ) | T | 26.7/43.1 |
| R830 | 7030003520 | S.RES ERJ3GEYJ 472 V (4.7 kΩ) | B | 63/29.8 |
| R831 | 7030003520 | S.RES ERJ3GEYJ 472 V (4.7 kΩ) | B | 64.7/33.3 |
| R832 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 66.5/36.2 |
| R833 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 56/27.2 |
| R834 | 7030006091 | S.RES ERA3YED 822V | B | 58.6/37.5 |
| R835 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 57.1/39.1 |
| R836 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 54.3/35.6 |
| R837 | 7030006091 | S.RES ERA3YED 822V | B | 60.5/28.6 |
| R838 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 57.9/26.1 |
| R839 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 44.7/35.5 |
| R842 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 48.2/35.6 |
| R845 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 41.5/30.7 |
| R846 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 42.8/29.9 |
| R847 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 46.2/32.9 |
| R848 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 47.5/32.9 |
| R890 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | B | 35.4/37.5 |
| R891 | 7030003400 | S.RES ERJ3GEYJ 471 V (470 Ω) | B | 38.1/44.3 |
| R892 | 7030003400 | S.RES ERJ3GEYJ 471 V (470 Ω) | B | 35.4/42.6 |
| R893 | 7030003200 | S.RES ERJ3GEYJ 100 V (10 Ω) | B | 38.9/42.2 |
| R895 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 35.6/36.2 |
| R897 | 7030003290 | S.RES ERJ3GEYJ 560 V (56 Ω) | B | 44.7/46.8 |
| R898 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 46.8/35.5 |
| R899 | 7030003290 | S.RES ERJ3GEYJ 560 V (56 Ω) | B | 52.9/47.3 |
| R960 | 7030003370 | S.RES ERJ3GEYJ 271 V (270 Ω) | T | 60.4/60.6 |
| R961 | 7030003340 | S.RES ERJ3GEYJ 151 V (150 Ω) | B | 48.6/64.5 |
| R962 | 7030003290 | S.RES ERJ3GEYJ 560 V (56 Ω) | B | 45.6/58.3 |
| R963 | 7030003370 | S.RES ERJ3GEYJ 271 V (270 Ω) | B | 55.2/64.6 |
| R964 | 7030003230 | S.RES ERJ3GEYJ 180 V (18 Ω) | B | 59.8/63.5 |
| R1020 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 83.2/121.9 |
| R1022 | 7030003300 | S.RES ERJ3GEYJ 680 V (68 Ω) | T | 66.8/58 |
| R1023 | 7030003430 | S.RES ERJ3GEYJ 821 V (820 Ω) | T | 78.6/46.6 |
| R1024 | 7030004030 | S.RES ERJ3GEYJ 5R6 V (5.6 Ω) | T | 79.4/48.5 |
| R1025 | 7030003430 | S.RES ERJ3GEYJ 821 V (820 Ω) | T | 80.2/46.6 |
| R1028 | 7030003430 | S.RES ERJ3GEYJ 821 V (820 Ω) | B | 88.6/41 |
| R1029 | 7030004030 | S.RES ERJ3GEYJ 5R6 V (5.6 Ω) | B | 89.4/43.1 |
| R1030 | 7030003430 | S.RES ERJ3GEYJ 821 V (820 Ω) | B | 90.8/40.9 |
| R1080 | 7030003360 | S.RES ERJ3GEYJ 221 V (220 Ω) | B | 94.6/43.9 |
| R1081 | 7030003460 | S.RES ERJ3GEYJ 152 V (1.5 kΩ) | B | 93/45.5 |
| R1083 | 7030003350 | S.RES ERJ3GEYJ 181 V (180 Ω) | B | 76.3/69.9 |
| R1084 | 7030003300 | S.RES ERJ3GEYJ 680 V (68 Ω) | B | 105.1/43.3 |
| R1085 | 7030003420 | S.RES ERJ3GEYJ 681 V (680 Ω) | T | 107.3/45.9 |
| R1086 | 7310005050 | S.TRI RH03ADC3X 4.7k | T | 73.9/117.4 |
| R1087 | 7310005050 | S.TRI RH03ADC3X 4.7k | T | 79.9/118.3 |
| R1088 | 7030003430 | S.RES ERJ3GEYJ 821 V (820 Ω) | T | 104.6/44 |
| R1090 | 7030010970 | S.RES ERJ1TYJ 151U | B | 121.6/53.8 |
| R1091 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 110.4/69.8 |
| R1160 | 7030010420 | S.RES ERJ1TYJ 560U (56 Ω) | T | 106.4/88.2 |
| R1161 | 7030003520 | S.RES ERJ3GEYJ 472 V (4.7 kΩ) | T | 86.8/119.1 |
| R1163 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 98.6/106.5 |
| R1164 | 7030000260 | S.RES MCR10EZJ 100 Ω (101) | T | 99.8/109.5 |
| R1165 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | B | 95/127.9 |
| R1167 | 7030000340 | S.RES MCR10EZJ 470 Ω (471) | T | 105.8/118 |
| R1169 | 7030000500 | S.RES MCR10EZJ 10 kΩ | B | 120.8/126.2 |
| R1170 | 7030006260 | S.RES ERJ12YJ471U (470 Ω) | B | 67.7/121.7 |
| R1172 | 7030000340 | S.RES MCR10EZJ 470 Ω (471) | T | 102.3/110.6 |
| R1250 | 7030003530 | S.RES ERJ3GEYJ 562 V (5.6 kΩ) | B | 71.6/124.6 |
| R1251 | 7310005140 | S.TRI RH03ADCJ3X 2.2k | T | 73.4/126.7 |
| R1252 | 7030003480 | S.RES ERJ3GEYJ 222 V (2.2 kΩ) | T | 69.7/127.8 |
| R1254 | 7030003410 | S.RES ERJ3GEYJ 561 V (56 Ω) | B | 70.3/127.1 |
| R1255 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 75.9/127.1 |
| R1256 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | B | 87.6/125.1 |
| R1257 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | B | 88.4/127.5 |
| R1258 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 77.6/121 |
| R1259 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 77/115.1 |
| R1260 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 78/117.5 |
| R1330 | 7030003200 | S.RES ERJ3GEYJ 100 V (10 Ω) | B | 64.6/102.8 |
| R1331 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 66/104.9 |
| R1332 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 65.8/75.5 |
| R1333 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 64.1/74.4 |
| R1334 | 7030000410 | S.RES MCR10EZJ 1.8 kΩ | B | 59.5/73.3 |
| R1335 | 7030000410 | S.RES MCR10EZJ 1.8 kΩ | B | 59.5/75.3 |
| R1336 | 7030007180 | S.RES ERJ12YJ150U (15 Ω) | B | 71.5/100 |
| R1338 | 7030003520 | S.RES ERJ3GEYJ 472 V (4.7 kΩ) | T | 25.7/91.3 |
| R1339 | 7030000100 | S.RES MCR10EZJ 4.7 Ω (4R7) | B | 28.8/98.4 |
| R1340 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 25.2/93.2 |
| R1342 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 37.1/91.9 |
| R1343 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 35.4/94 |
| R1344 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 40.2/90.1 |
| R1345 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 42.1/90.1 |
| R1346 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 42.9/91.1 |
| R1347 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 45.7/91.1 |
| R1348 | | | | |

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|-------------------------------|----|--------------|
| R1412 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 43.1/18 |
| R1413 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 40.5/18 |
| R1414 | 7030003800 | S.RES ERJ3GEYJ 105 V (1 MΩ) | T | 46.7/19.6 |
| R1415 | 7030003800 | S.RES ERJ3GEYJ 105 V (1 MΩ) | T | 45.4/19.6 |
| R1460 | 7030003670 | S.RES ERJ3GEYJ 823 V (82 kΩ) | T | 40.5/9.3 |
| R1461 | 7030003670 | S.RES ERJ3GEYJ 823 V (82 kΩ) | T | 42.4/8.6 |
| R1462 | 7030003670 | S.RES ERJ3GEYJ 823 V (82 kΩ) | T | 45.4/8.7 |
| R1463 | 7030003690 | S.RES ERJ3GEYJ 124 V (120 kΩ) | T | 49.4/4.5 |
| R1464 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 50.2/6.4 |
| R1465 | 7030003740 | S.RES ERJ3GEYJ 334 V (330 kΩ) | T | 54.2/5.2 |
| R1466 | 7030003700 | S.RES ERJ3GEYJ 154 V (150 kΩ) | T | 54.1/3.3 |
| R1467 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 52.8/7 |
| R1468 | 7030003760 | S.RES ERJ3GEYJ 474 V (470 kΩ) | T | 51.5/6.4 |
| R1469 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 39.4/13.5 |
| R1470 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 37.8/13.5 |
| R1471 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 39.2/6.9 |
| R1472 | 7030003800 | S.RES ERJ3GEYJ 105 V (1 MΩ) | B | 40/9.3 |
| R1473 | 7030003800 | S.RES ERJ3GEYJ 105 V (1 MΩ) | B | 40/10.9 |
| R1474 | 7030003570 | S.RES ERJ3GEYJ 123 V (12 kΩ) | B | 42.4/8.5 |
| R1475 | 7030003570 | S.RES ERJ3GEYJ 123 V (12 kΩ) | B | 42.4/5.7 |
| R1476 | 7030003570 | S.RES ERJ3GEYJ 123 V (12 kΩ) | B | 44/7.2 |
| R1477 | 7030003570 | S.RES ERJ3GEYJ 123 V (12 kΩ) | B | 44/10.1 |
| R1478 | 7030003670 | S.RES ERJ3GEYJ 823 V (82 kΩ) | B | 45/17.3 |
| R1479 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | B | 49.8/14.1 |
| R1480 | 7030003520 | S.RES ERJ3GEYJ 472 V (47 kΩ) | B | 55/12.7 |
| R1481 | 7030003520 | S.RES ERJ3GEYJ 472 V (47 kΩ) | T | 50.6/16.9 |
| R1482 | 7030003790 | S.RES ERJ3GEYJ 824 V (820 kΩ) | B | 52.2/13.3 |
| R1483 | 7030003690 | S.RES ERJ3GEYJ 124 V (120 kΩ) | T | 35.4/12.4 |
| R1484 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 36.7/13.2 |
| R1485 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 39.8/11.2 |
| R1486 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 42.4/11.2 |
| R1487 | 7030003650 | S.RES ERJ3GEYJ 563 V (56 kΩ) | T | 48.6/11.4 |
| R1488 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | T | 47.3/17.2 |
| R1489 | 7030003750 | S.RES ERJ3GEYJ 394 V (390 kΩ) | T | 47.3/14.6 |
| R1490 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 60.5/10.7 |
| R1491 | 7030003800 | S.RES ERJ3GEYJ 105 V (1 MΩ) | T | 7.5/71.7 |
| R1492 | 7030003480 | S.RES ERJ3GEYJ 222 V (2.2 kΩ) | T | 7.5/73 |
| R1493 | 7030003800 | S.RES ERJ3GEYJ 105 V (1 MΩ) | T | 7.8/75.3 |
| R1494 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 7.1/79.6 |
| R1495 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 62.1/10.7 |
| R1496 | 7030003660 | S.RES ERJ3GEYJ 683 V (68 kΩ) | T | 39.2/6.7 |
| R1550 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | B | 16.5/54.2 |
| R1551 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 6/55 |
| R1552 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | T | 5.3/62.9 |
| R1553 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 17.3/59.1 |
| R1555 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 13.4/67.2 |
| R1556 | 7030003510 | S.RES ERJ3GEYJ 392 V (39 kΩ) | B | 11/66.1 |
| R1557 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 11/67.4 |
| R1558 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 8.5/66.9 |
| R1559 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 7.4/73.7 |
| R1560 | 7030003590 | S.RES ERJ3GEYJ 183 V (18 kΩ) | B | 8.2/77.4 |
| R1561 | 7030003400 | S.RES ERJ3GEYJ 471 V (470 Ω) | T | 16.7/11.5 |
| R1562 | 7030007180 | S.RES ERJ12YJ150U (15 Ω) | B | 42.9/113.9 |
| R1601 | 7030004050 | S.RES ERJ3GEYJ 1R0 V (1 Ω) | B | 113.5/18.1 |
| R1602 | 7030004030 | S.RES ERJ3GEYJ 5R6 V (5.6 Ω) | B | 106.8/21.5 |
| R1603 | 7030003390 | S.RES ERJ3GEYJ 391 V (390 Ω) | B | 106.8/22.8 |
| R1605 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 101.2/21.6 |
| R1606 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | B | 102/17.7 |
| R1607 | 7030003570 | S.RES ERJ3GEYJ 123 V (12 kΩ) | B | 102/19.3 |
| R1608 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | T | 109.5/17.6 |
| R1609 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 110.6/20.3 |
| R1610 | 7030003480 | S.RES ERJ3GEYJ 222 V (2.2 kΩ) | T | 108.2/17.6 |
| R1669 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 97.9/12.8 |
| R1670 | 7030003500 | S.RES ERJ3GEYJ 332 V (33 kΩ) | T | 100.6/16.1 |
| R1671 | 7030005331 | S.RES ERA3YED 562V | T | 100.6/14.8 |
| R1672 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 95.6/14.9 |
| R1674 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 5.3/84.8 |
| R1678 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 100.6/13.5 |
| R1679 | 7030003580 | S.RES ERJ3GEYJ 153 V (15 kΩ) | T | 97/18.9 |
| R1680 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 92.8/14.5 |
| R1681 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 88.9/14.4 |
| R1682 | 7030003420 | S.RES ERJ3GEYJ 681 V (680 Ω) | T | 90.8/15.2 |
| R1683 | 7030003280 | S.RES ERJ3GEYJ 470 V (47 Ω) | T | 94.4/18.9 |
| R1684 | 7030003800 | S.RES ERJ3GEYJ 105 V (1 MΩ) | T | 81.6/15 |
| R1685 | 7030003800 | S.RES ERJ3GEYJ 105 V (1 MΩ) | T | 87/15.2 |
| R1686 | 7030003510 | S.RES ERJ3GEYJ 392 V (39 kΩ) | B | 84.4/13 |
| R1687 | 7030003750 | S.RES ERJ3GEYJ 394 V (390 kΩ) | B | 86.4/17 |
| R1688 | 7030003740 | S.RES ERJ3GEYJ 334 V (330 kΩ) | B | 82/12.2 |
| R1689 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 79.2/12.2 |
| R1690 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 79.4/10.6 |
| R1691 | 7030003550 | S.RES ERJ3GEYJ 822 V (82 kΩ) | B | 86.4/13 |
| R1693 | 7030003650 | S.RES ERJ3GEYJ 563 V (56 kΩ) | B | 86.8/18.8 |
| R1695 | 7030003790 | S.RES ERJ3GEYJ 824 V (820 kΩ) | B | 80.4/13.8 |
| R1696 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | B | 84/18.6 |
| R1697 | 7030003670 | S.RES ERJ3GEYJ 823 V (82 kΩ) | B | 84.3/24.2 |
| R1698 | 7030003720 | S.RES ERJ3GEYJ 224 V (220 kΩ) | B | 84.3/21.5 |
| R1699 | 7030003670 | S.RES ERJ3GEYJ 823 V (82 kΩ) | B | 83.4/27.3 |
| R1700 | 7030003670 | S.RES ERJ3GEYJ 823 V (82 kΩ) | B | 81/26 |
| R1704 | 7310005050 | S.TRI RH03ADCS3X 4.7k | T | 69.4/10.8 |
| R1705 | 7030003520 | S.RES ERJ3GEYJ 472 V (4.7 kΩ) | B | 76.4/24.8 |
| R1706 | 7030003450 | S.RES ERJ3GEYJ 122 V (1.2 kΩ) | B | 73.6/24.8 |
| R1707 | 7310002800 | S.TRI RH03ADCS5X 220 k | T | 69.4/6.8 |

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|-------------------------------|----|--------------|
| R1708 | 7030003480 | S.RES ERJ3GEYJ 222 V (2.2 kΩ) | T | 79/13.1 |
| R1709 | 7030005331 | S.RES ERA3YED 562V | T | 79/14.4 |
| R1710 | 7030003800 | S.RES ERJ3GEYJ 105 V (1 MΩ) | T | 79/15.7 |
| R1711 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 72.9/15.2 |
| R1712 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | B | 73.6/19.9 |
| R1713 | 7030003750 | S.RES ERJ3GEYJ 394 V (390 kΩ) | B | 73.6/18.3 |
| R1714 | 7030003800 | S.RES ERJ3GEYJ 105 V (1 MΩ) | B | 76.4/18.3 |
| R1715 | 7030003560 | S.RES ERJ3GEYJ 103 V (10 kΩ) | T | 6.1/82.8 |
| R1716 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 5.6/87.9 |
| R1717 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 6.3/85.7 |
| R1718 | 7030003740 | S.RES ERJ3GEYJ 334 V (330 kΩ) | B | |
| | only | B 6.3/83.5 | | |
| R1750 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | T | 25.3/115.6 |
| R1751 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | T | 29.4/121.3 |
| R1800 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | T | 9.5/20.2 |
| R1801 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | B | 4.2/25.9 |
| R1802 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | T | 13.7/24.8 |
| R1803 | 7030003320 | S.RES ERJ3GEYJ 101 V (100 Ω) | T | 61.9/6.9 |
| C2 | 4030009530 | S.CER C1608 CH 1H 030B-T | T | 67.6/107.5 |
| C3 | 4030009540 | S.CER C1608 CH 1H 1R5B-T | T | 65/107.5 |
| C4 | 4030009540 | S.CER C1608 CH 1H 1R5B-T | T | 62.4/107.2 |
| C5 | 4030009510 | S.CER C1608 CH 1H 010B-T | T | 59.7/107.2 |
| C6 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 54.1/106.3 |
| C7 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 54.3/108.2 |
| C8 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 57.5/108 |
| C9 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 58.8/103.2 |
| C10 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 58.8/101.9 |
| C11 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 58.100/6 |
| C12 | 4030009910 | S.CER C1608 CH 1H 040B-T | T | 54.8/104.4 |
| C13 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 58.8/99.3 |
| C14 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 58.8/98 |
| C15 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 58.8/96.7 |
| C16 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 51.3/96.2 |
| C17 | 4030011770 | S.CER C1608 CH 1H 060B-T | T | 51.3/93.6 |
| C18 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 55.2/91.9 |
| C19 | 4030006850 | S.CER C1608 JB 1H 102K-T | T | 57/89.8 |
| C21 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 55.2/86.7 |
| C22 | 4030009550 | S.CER C1608 CH 1H 2R5B-T | T | 53.2/87.4 |
| C23 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 48.4/79.5 |
| C70 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 39.9/73.6 |
| C72 | 4030007050 | S.CER C1608 CH 1H 220J-T | T | 42.5/73.6 |
| C74 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 43/79.4 |
| C75 | 4030009500 | S.CER C1608 CH 1H 0R5B-T | T | 45.5/79.5 |
| C76 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 50.3/78 |
| C77 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 50.3/76.7 |
| C78 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 50.2/75.2 |
| C79 | 4030009910 | S.CER C1608 CH 1H 040B-T | T | 49.6/72.9 |
| C80 | 4030009510 | S.CER C1608 CH 1H 010B-T | T | 47.5/73.6 |
| C81 | 4030009550 | S.CER C1608 CH 1H 2R5B-T | T | 41/68.8 |
| C82 | 4030009910 | S.CER C1608 CH 1H 040B-T | T | 42.3/66.1 |
| C131 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 38.9/57.5 |
| C132 | 4030010760 | S.CER C1608 CH 1H 331J-T | T | 44.3/54.8 |
| C133 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 44.9/58.7 |
| C134 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 44.7/57.4 |
| C136 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 44.3/53.5 |
| C137 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 44.3/52.2 |
| C138 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 44.3/50.9 |
| C140 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 38.5/55.5 |
| C141 | 4030007050 | S.CER C1608 CH 1H 220J-T | T | 41.6/48.5 |
| C191 | 4030011770 | S.CER C1608 CH 1H 060B-T | T | 46.9/48.9 |
| C192 | 4030009540 | S.CER C1608 CH 1H 1R5B-T | T | 50.3/43.1 |
| C195 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 47.4/34.4 |
| C196 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 39.7/47.9 |
| C197 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 48.7/34.4 |
| C198 | 4030007120 | S.CER C1608 CH 1H 820J-T | T | 51.6/29.2 |
| C199 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 47.3/26.4 |
| C200 | 4550006250 | S.TAN TEESVA 1A 106M8L | T | 41.4/34.1 |
| C201 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 52.9/31.8 |
| C202 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 40.2/31.1 |
| C203 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 40.2/29.8 |
| C204 | 4030007160 | S.CER C1608 CH 1H 181J-T | T | 39.4/27.9 |
| C205 | 4030007160 | S.CER C1608 CH 1H 181J-T | T | 40.2/26 |
| C206 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 45/27.3 |
| C207 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 63.2/39.8 |
| C208 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 48.2/29.1 |
| C209 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 45.9/25.1 |
| C210 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 51.9/24.1 |
| C211 | 4030011810 | S.CER C1608 JB 1A 224K-T | T | 57.7/38.8 |
| C212 | 4030006880 | S.CER C1608 JB 1H 472K-T | T | 60.8/33.6 |
| C213 | 4030011810 | S.CER C1608 JB 1A 224K-T | T | 62.7/31.2 |
| C214 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 54.8/24 |
| C215 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 51.9/21.3 |
| C216 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 60.7/15.7 |
| C217 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 61.2/24.2 |
| C218 | 4030011600 | S.CER C1608 JB 1E 104K-T | | |

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|--------------------------|----|--------------|
| C273 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 82/40.6 |
| C274 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 76.3/42.5 |
| C275 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 77.6/42.5 |
| C276 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 76.8/40.6 |
| C277 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 81.9/41.5 |
| C278 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 74/43.1 |
| C279 | 4030009550 | S.CER C1608 CH 1H 2R5B-T | T | 69.7/35.7 |
| C281 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 80/25.6 |
| C282 | 4030007130 | S.CER C1608 CH 1H 101J-T | T | 77.4/25.6 |
| C283 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 75.5/23.3 |
| C286 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 81.2/43.4 |
| C287 | 4030006900 | S.CER C1608 JB 1H 103K-T | B | 78.4/45.4 |
| C288 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 78.9/40.5 |
| C291 | 4030007140 | S.CER C1608 CH 1H 121J-T | B | 43.7/51.8 |
| C293 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 45.6/54.7 |
| C295 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 64.1/43 |
| C296 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 66.1/39.7 |
| C297 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 68.9/43.2 |
| C341 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 91/25.5 |
| C342 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 95.9/35.9 |
| C343 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 108/31.4 |
| C344 | 4030011810 | S.CER C1608 JB 1A 224K-T | T | 91/27.4 |
| C346 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 102.4/25.9 |
| C347 | 4510005600 | S.ELE ECEV1CS100SR | T | 104.8/28.8 |
| C348 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 98.9/35.9 |
| C349 | 4030011810 | S.CER C1608 JB 1A 224K-T | T | 91/30 |
| C350 | 4030017490 | S.CER C1608 JB 1A 105K-T | T | 67.9/30.5 |
| C390 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 35.7/51.3 |
| C400 | 4030006900 | S.CER C1608 JB 1H 103K-T | B | 24.5/58.9 |
| C402 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 23.2/69.5 |
| C403 | 4030011810 | S.CER C1608 JB 1A 224K-T | B | 20.5/68.5 |
| C404 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 24.9/70.5 |
| C405 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 26.6/71.8 |
| C406 | 4550000270 | S.TAN TEESVA 1E 474M8L | B | 15.8/74.8 |
| C408 | 4030008880 | S.CER C1608 JB 1H 223K-T | B | 21.4/70.9 |
| C409 | 4030008900 | S.CER C1608 JB 1H 333K-T | B | 19.9/76.1 |
| C410 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 17.3/77.5 |
| C411 | 4030017490 | S.CER C1608 JB 1A 105K-T | T | 22/61.6 |
| C412 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 14.5/58.5 |
| C414 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 26.6/57.7 |
| C416 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 12.6/59.6 |
| C417 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 12.6/60.9 |
| C418 | 4030006880 | S.CER C1608 JB 1H 472K-T | T | 24.9/55.2 |
| C419 | 4030017490 | S.CER C1608 JB 1A 105K-T | T | 14/50.4 |
| C420 | 4030006880 | S.CER C1608 JB 1H 472K-T | B | 19.4/60.5 |
| C421 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 19.7/55 |
| C422 | 4030006880 | S.CER C1608 JB 1H 472K-T | T | 20.4/53 |
| C423 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 19.5/49.7 |
| C424 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 29.8/69.8 |
| C425 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 33.6/62.6 |
| C426 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 27.1/60.4 |
| C427 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 31/62.6 |
| C429 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 16.5/67.6 |
| C430 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 20.1/61.5 |
| C431 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 20.9/59 |
| C432 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 26.2/56.8 |
| C433 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 31.8/56 |
| C435 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 27.5/57.7 |
| C436 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 23.7/67.1 |
| C437 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 26.7/69.2 |
| C467 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 13.6/77.5 |
| C468 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 11/82 |
| C469 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 12.9/80.3 |
| C470 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 17.2/73.7 |
| C471 | 4550006760 | S.TAN TEESVB21A336M8R | T | 16.6/78.5 |
| C472 | 4030017490 | S.CER C1608 JB 1A 105K-T | T | 14.8/65.6 |
| C473 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 14.8/66.9 |
| C474 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 18.5/66.4 |
| C475 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 17.2/66.4 |
| C476 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 17.1/70.6 |
| C478 | 4030009570 | S.CER C1608 CH 1H 0R3B-T | T | 28.6/76.7 |
| C479 | 4030009920 | S.CER C1608 CH 1H 050B-T | T | 27.3/79.3 |
| C480 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 22.7/80.9 |
| C481 | 4030009530 | S.CER C1608 CH 1H 030B-T | T | 23.8/75 |
| C482 | 4030009910 | S.CER C1608 CH 1H 040B-T | T | 21.2/74 |
| C483 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 21.2/71.4 |
| C484 | 4030009510 | S.CER C1608 CH 1H 010B-T | T | 27.5/71.4 |
| C485 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 30.1/70.1 |
| C486 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 30.1/71.4 |
| C488 | 4030009540 | S.CER C1608 CH 1H 1R5B-T | T | 35.4/68.1 |
| C489 | 4030009510 | S.CER C1608 CH 1H 010B-T | T | 33.5/67.6 |
| C490 | 4030009530 | S.CER C1608 CH 1H 030B-T | T | 35.4/69.4 |
| C491 | 4030009500 | S.CER C1608 CH 1H 0R5B-T | T | 33.5/70.2 |
| C492 | 4030009520 | S.CER C1608 CH 1H 020B-T | T | 34.3/72.1 |
| C493 | 4030009920 | S.CER C1608 CH 1H 050B-T | T | 32.2/72.8 |
| C494 | 4030007020 | S.CER C1608 CH 1H 120J-T | T | 34.1/74.7 |
| C495 | 4030009520 | S.CER C1608 CH 1H 020B-T | T | 32.2/75.4 |
| C496 | 4030007070 | S.CER C1608 CH 1H 330J-T | T | 34.1/76 |
| C497 | 4030009530 | S.CER C1608 CH 1H 030B-T | T | 33.7/78.6 |
| C498 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 29.9/76 |
| C500 | 4030006900 | S.CER C1608 CH 1H 080D-T | T | 29.4/73.1 |
| C501 | 4030009910 | S.CER C1608 CH 1H 040B-T | B | 25.6/73.3 |

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|-------------|---------------------------|----|--------------|
| C503 | 4550006250 | S.TAN TEESVA 1A 106M8L | T | 18.8/70.3 |
| C504 | 4030009560 | S.CER C1608 CH 1H R75B-T | T | 28.6/79.3 |
| C550 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 19/32.2 |
| C551 | 4030007030 | S.CER C1608 CH 1H 150J-T | B | 19.2/38.9 |
| C552 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 21.1/38.9 |
| C553 | 4030007030 | S.CER C1608 CH 1H 150J-T | B | 17.4/29.6 |
| C554 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 18.2/35.7 |
| C555 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 13.2/40.3 |
| C556 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 26.7/40.2 |
| C558 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 13.2/41.6 |
| C559 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 23.4/42.6 |
| C561 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 27/20.5 |
| C562 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 12.7/27.5 |
| C564 | 4550000270 | S.TAN TEESVA 1E 474M8L | B | 5/39.2 |
| C567 | 4550000520 | S.TAN TEESVA 1V 683M8R | B | 17.5/40.4 |
| C569 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 17.1/44.8 |
| C570 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 24.7/43.4 |
| C571 | 4550000530 | S.TAN TEESVA 1V 224K8L | B | 6.9/34.3 |
| C574 | 45500003080 | S.TAN TEESVA 1A 335M8L | T | 5.7/37.8 |
| C575 | 4030006880 | S.CER C1608 JB 1H 472K-T | T | 18.2/49.7 |
| C576 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 22.6/50.4 |
| C577 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 27.9/48.5 |
| C578 | 4030007040 | S.CER C1608 CH 1H 180J-T | T | 30.5/45.5 |
| C579 | 4030009520 | S.CER C1608 CH 1H 020B-T | T | 31.3/50.4 |
| C580 | 4030007040 | S.CER C1608 CH 1H 180J-T | T | 31.8/48.5 |
| C581 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 36.3/49 |
| C582 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 7.1/30.3 |
| C583 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 8.4/30.3 |
| C584 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 4.3/28.2 |
| C585 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 25.5/20.5 |
| C586 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 28.3/51.4 |
| C587 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 26.8/44.1 |
| C588 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 26.4/38.9 |
| C630 | 4030011810 | S.CER C1608 JB 1A 224K-T | T | 13.7/30.2 |
| C631 | 4030009570 | S.CER C1608 CH 1H 0R3B-T | T | 17.8/34 |
| C632 | 4030007030 | S.CER C1608 CH 1H 150J-T | T | 15.9/34.8 |
| C634 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 12.8/37.8 |
| C635 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 15/31.3 |
| C637 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 20.6/20.5 |
| C638 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 20.3/34.7 |
| C639 | 4030007050 | S.CER C1608 CH 1H 220J-T | T | 21.7/31.5 |
| C640 | 4030007050 | S.CER C1608 CH 1H 220J-T | T | 23.8/30.9 |
| C641 | 4030009500 | S.CER C1608 CH 1H 0R5B-T | T | 23.9/29.6 |
| C642 | 4550006250 | S.TAN TEESVA 1A 106M8L | T | 22.9/39.2 |
| C643 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 20.6/37.6 |
| C644 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 20.6/38.9 |
| C645 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 26.7/32.2 |
| C646 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 30.9/30.2 |
| C647 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 25.8/30.2 |
| C648 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 28.6/33 |
| C649 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 28.6/35.6 |
| C650 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 27.9/33.1 |
| C651 | 4030007050 | S.CER C1608 CH 1H 220J-T | B | 23/28.8 |
| C652 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 26.3/27.6 |
| C653 | 4030007020 | S.CER C1608 CH 1H 120J-T | B | 20.6/28 |
| C654 | 4030007020 | S.CER C1608 CH 1H 120J-T | B | 19/29.6 |
| C655 | 4030017490 | S.CER C1608 JB 1A 105K-T | T | 32/32.5 |
| C656 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 33.9/35.5 |
| C657 | 4550006770 | S.TAN TEESVD2 1C 476M-12R | T | 31.8/40.6 |
| C658 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 33.9/34.2 |
| C659 | 4030009530 | S.CER C1608 CH 1H 030B-T | B | 21.4/32 |
| C660 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 19.5/30.1 |
| C661 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 3.5/23.2 |
| C662 | 4550006250 | S.TAN TEESVA 1A 106M8L | T | 5.7/26.7 |
| C710 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 35.6/61 |
| C711 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 38.2/66.6 |
| C712 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 38.4/79.6 |
| C713 | 4030009520 | S.CER C1608 CH 1H 020B-T | B | 38.6/68.2 |
| C714 | 4030009510 | S.CER C1608 CH 1H 010B-T | B | 35.5/68.7 |
| C715 | 4030009520 | S.CER C1608 CH 1H 020B-T | B | 38.6/69.5 |
| C716 | 4030011770 | S.CER C1608 CH 1H 060B-T | B | 36.2/71.4 |
| C718 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 34/75.9 |
| C719 | 4030007030 | S.CER C1608 CH 1H 150J-T | B | 38.6/76.5 |
| C720 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 37.6/78.1 |
| C721 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 32.5/55.7 |
| C722 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 38.4/64.3 |
| C723 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 38.3/82.1 |
| C770 | 4030011770 | S.CER C1608 CH 1H 060B-T | B | 32.3/37.3 |
| C772 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 32.6/33.2 |
| C773 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 34.4/48.8 |
| C774 | 4030007020 | S.CER C1608 CH 1H 120J-T | B | 31.8/53.9 |
| C775 | 4030009530 | S.CER C1608 CH 1H 030B-T | B | 31/52 |
| C776 | 4030007020 | S.CER C1608 CH 1H 120J-T | B | 28.2/50.1 |
| C777 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 29/47.5 |
| C778 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 28.6/41.2 |
| C779 | 4030006850 | | | |

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|--------------------------|----|--------------|
| C835 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 52.5/30.5 |
| C836 | 4550006250 | S.TAN TEESVA 1A 106M8L | B | 54.5/31.3 |
| C837 | 4030007130 | S.CER C1608 CH 1H 101J-T | B | 56/37.5 |
| C838 | 4030007130 | S.CER C1608 CH 1H 101J-T | B | 57.9/27.7 |
| C839 | 4030007030 | S.CER C1608 CH 1H 150J-T | B | 64.4/37 |
| C840 | 4030007030 | S.CER C1608 CH 1H 150J-T | B | 66/33.3 |
| C841 | 4030007030 | S.CER C1608 CH 1H 150J-T | B | 49.8/36.2 |
| C880 | 4030009910 | S.CER C1608 CH 1H 040B-T | T | 52.5/47 |
| C881 | 4030009510 | S.CER C1608 CH 1H 010B-T | T | 50.6/47.8 |
| C882 | 4030009510 | S.CER C1608 CH 1H 010B-T | T | 47.5/53.6 |
| C883 | 4030009910 | S.CER C1608 CH 1H 040B-T | T | 47.5/56.2 |
| C887 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 34/4.9 |
| C888 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 32.2/4.9 |
| C889 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 30.4/4.9 |
| C890 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 28.6/4.9 |
| C891 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 54.2/44.9 |
| C893 | 4030007030 | S.CER C1608 CH 1H 150J-T | B | 45.2/37.4 |
| C894 | 4030007030 | S.CER C1608 CH 1H 150J-T | B | 43.1/36.3 |
| C895 | 4030007030 | S.CER C1608 CH 1H 150J-T | B | 51.1/36.2 |
| C896 | 4030007020 | S.CER C1608 CH 1H 120J-T | B | 42.8/45.2 |
| C897 | 4030009530 | S.CER C1608 CH 1H 030B-T | B | 40.9/46.3 |
| C898 | 4030007020 | S.CER C1608 CH 1H 120J-T | B | 40.1/48.2 |
| C899 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 35/41.3 |
| C900 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 37.5/41.4 |
| C901 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 53.9/42.4 |
| C902 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 55.2/42.4 |
| C904 | 4030007020 | S.CER C1608 CH 1H 120J-T | T | 50.7/58 |
| C905 | 4030009530 | S.CER C1608 CH 1H 030B-T | T | 48.8/58.8 |
| C906 | 4030007050 | S.CER C1608 CH 1H 220J-T | T | 50.7/60.6 |
| C907 | 4030009510 | S.CER C1608 CH 1H 010B-T | T | 48.8/61.4 |
| C908 | 4030007030 | S.CER C1608 CH 1H 150J-T | T | 50.7/62.2 |
| C909 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 56.5/42.4 |
| C910 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 61/38.6 |
| C912 | 4030009910 | S.CER C1608 CH 1H 040B-T | B | 38.8/38.6 |
| C913 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 33.1/39.4 |
| C914 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 43.3/59.9 |
| C915 | 4030009510 | S.CER C1608 CH 1H 010B-T | B | 52.3/58.6 |
| C916 | 4030009530 | S.CER C1608 CH 1H 030B-T | B | 49/59.4 |
| C917 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 49.4/62.6 |
| C918 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 56.8/59.2 |
| C919 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 54.7/59.9 |
| C920 | 4030009510 | S.CER C1608 CH 1H 010B-T | B | 58.1/62.7 |
| C921 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 53.9/64.6 |
| C922 | 4030009560 | S.CER C1608 CH 1H R75B-T | B | 56.5/64.6 |
| C923 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 53.7/66.5 |
| C1022 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 65.5/58 |
| C1023 | 4030006880 | S.CER C1608 JB 1H 472K-T | T | 70.7/58 |
| C1024 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 68.1/58 |
| C1025 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 69.4/58 |
| C1026 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 72.8/51.2 |
| C1029 | 4030011770 | S.CER C1608 CH 1H 060B-T | B | 92.2/43.1 |
| C1030 | 4030009920 | S.CER C1608 CH 1H 050B-T | B | 97/43.1 |
| C1031 | 4030009530 | S.CER C1608 CH 1H 030B-T | B | 93/41 |
| C1081 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 97/44.7 |
| C1082 | 4030007130 | S.CER C1608 CH 1H 101J-T | B | 97/46.3 |
| C1083 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 96.2/49.9 |
| C1088 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 98.7/51.8 |
| C1090 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 82.8/65.7 |
| C1091 | 4550003220 | S.TAN TEESVA 1E 105M8L | B | 84/69.9 |
| C1092 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 66.9/68.4 |
| C1094 | 4030009520 | S.CER C1608 CH 1H 020B-T | B | 101.9/38 |
| C1095 | 4030009910 | S.CER C1608 CH 1H 040B-T | B | 102.7/39.9 |
| C1096 | 4030006970 | S.CER C1608 CH 1H 060D-T | B | 105.1/39.2 |
| C1098 | 4030009920 | S.CER C1608 CH 1H 050B-T | B | 107.7/41.9 |
| C1099 | 4030007130 | S.CER C1608 CH 1H 101J-T | T | 104.6/45.3 |
| C1100 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 106.5/46.1 |
| C1101 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 105.1/46.1 |
| C1102 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 96.6/49.6 |
| C1105 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 112.1/48.9 |
| C1106 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 110.8/48.9 |
| C1107 | 4030007130 | S.CER C1608 CH 1H 101J-T | T | 109.5/48.9 |
| C1108 | 4030009520 | S.CER C1608 CH 1H 020B-T | B | 112.1/37.6 |
| C1110 | 4030011770 | S.CER C1608 CH 1H 060B-T | B | 110.1/42.7 |
| C1113 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 100.6/47.4 |
| C1114 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 79.9/60.6 |
| C1115 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 79.9/61.9 |
| C1116 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 101.9/47.4 |
| C1118 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 79.2/109.5 |
| C1120 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 95.3/49.6 |
| C1121 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 78.6/121.7 |
| C1123 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 82.8/114.9 |
| C1161 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 112.9/41.6 |
| C1162 | 4030009520 | S.CER C1608 CH 1H 020B-T | B | 115.7/41.6 |
| C1167 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 113.2/65.9 |
| C1168 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 113.2/67.2 |
| C1172 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 120.8/87.7 |
| C1173 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 122.1/87.7 |
| C1174 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 119.4/87.7 |
| C1176 | 4510006220 | S.ELE ECEV1CA101UP | T | 93.7/91.8 |
| C1186 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 109.1/91.9 |
| C1187 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 110.4/91.9 |
| C1188 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 111.7/91.9 |

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|--------------------------|----|--------------|
| C1189 | 4030009510 | S.CER C1608 CH 1H 010B-T | T | 77.8/107.8 |
| C1191 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 86.8/121.8 |
| C1192 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 91.2/125.9 |
| C1193 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 86.4/119.3 |
| C1196 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 97.3/107.6 |
| C1197 | 4030000810 | S.CER GRM2164C1HR50CD01D | T | 104.8/112.3 |
| C1198 | 4030011030 | S.CER GRM31M4C2H1R5CY21L | T | 90.9/116.3 |
| C1199 | 4030017200 | S.CER GRM31BR32J102KY01L | T | 117.5/121.2 |
| C1200 | 4030000810 | S.CER GRM2164C1HR50CD01D | B | 120.8/124.4 |
| C1201 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 111.1/120.2 |
| C1204 | 4030011070 | S.CER GRM31M2C2H5R0CY21L | T | 116.1/100.4 |
| C1207 | 4030000810 | S.CER GRM2164C1HR50CD01D | B | 114.2/124.4 |
| C1250 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 69.1/121.2 |
| C1251 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 68.3/125.2 |
| C1252 | 4030006900 | S.CER C1608 JB 1H 103K-T | B | 73.5/122.8 |
| C1253 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 75/116.4 |
| C1255 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 62.7/127.1 |
| C1256 | 4030012610 | S.CER C2012 JB 1C 474K-T | B | 72.8/128.7 |
| C1259 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 50.4/126.8 |
| C1260 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 45.8/112.2 |
| C1261 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 77.9/127.5 |
| C1262 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 86.8/127.5 |
| C1263 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 76.2/124.4 |
| C1264 | 4510005600 | S.ELE ECEV1CS100SR | T | 73.5/121.8 |
| C1265 | 4030006860 | S.CER C1608 JB 1H 472K-T | B | 83.2/124.3 |
| C1267 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 79.3/113.5 |
| C1268 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 83.2/120 |
| C1269 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 81.3/120.7 |
| C1329 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 67.7/109.5 |
| C1330 | 4510004600 | ELE 16 MV 1000 HC | T | 47.3/121.2 |
| C1331 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 56.8/105.6 |
| C1332 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 56.8/104.1 |
| C1333 | 4510004640 | S.ELE ECEV1CA470SP | T | 64.5/121.1 |
| C1334 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 67.6/104.9 |
| C1335 | 4510004640 | S.ELE ECEV1CA470SP | T | 69.1/97.8 |
| C1336 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 73.9/94.7 |
| C1337 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 76.7/94.7 |
| C1338 | 4510006220 | S.ELE ECEV1CA101UP | T | 78.1/92.3 |
| C1339 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 70.4/106.6 |
| C1340 | 4510004640 | S.ELE ECEV1CA470SP | T | 68.7/113.5 |
| C1341 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 75.6/108.1 |
| C1342 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 78.4/108.1 |
| C1343 | 4510006220 | S.ELE ECEV1CA101UP | T | 77/101.1 |
| C1344 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 62.3/117.3 |
| C1345 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 39.8/100.6 |
| C1346 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 43.5/89.5 |
| C1347 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 56.8/109.7 |
| C1348 | 4550006760 | S.TAN TEESVB21A336M8R | T | 42.6/97.2 |
| C1349 | 4510005600 | S.ELE ECEV1CS100SR | T | 76.3/84.2 |
| C1350 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 34/87.7 |
| C1351 | 4030017490 | S.CER C1608 JB 1A 105K-T | B | 29.6/90.9 |
| C1352 | 4030012610 | S.CER C2012 JB 1C 474K-T | B | 37.1/86 |
| C1353 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 31.2/92.9 |
| C1355 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 38.3/94.7 |
| C1356 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 39.3/85.1 |
| C1357 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 42.9/97.3 |
| C1358 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 8.2/92.2 |
| C1359 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 19.1/99.4 |
| C1360 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 20.4/99.8 |
| C1361 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 42.9/86.4 |
| C1362 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 8.8/94.8 |
| C1366 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 27.4/91.7 |
| C1367 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 57.8/65.4 |
| C1368 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 35.4/98.8 |
| C1369 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 25/97.2 |
| C1370 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 51.7/72.4 |
| C1371 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 53.1/85.3 |
| C1372 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 55.5/107.1 |
| C1373 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 62.1/108.8 |
| C1374 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 62.2/115.4 |
| C1375 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 63.8/112.1 |
| C1376 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 58.1/122.8 |
| C1410 | 4510005600 | S.ELE ECEV1CS100SR | T | 36.2/20 |
| C1411 | 4030017490 | S.CER C1608 JB 1A 105K-T | T | 45.2/22.6 |
| C1412 | 4030017490 | S.CER C1608 JB 1A 105K-T | T | 48.5/22.9 |
| C1460 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 41.6/7.7 |
| C1461 | 4030008870 | S.CER C1608 JB 1H 183K-T | T | 45.4/7.2 |
| C1462 | 4030008770 | S.CER C1608 JB 1H 562K-T | T | 47.3/10.5 |
| C1463 | 4030011810 | S.CER C1608 JB 1A 224K-T | T | 47.5/3.3 |
| C1464 | 4030008910 | S.CER C1608 JB 1H 393K-T | T | 50.2/2.6 |
| C1465 | 4510005600 | S.ELE ECEV1CS100SR | T | 57.9/6.1 |
| C1466 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 55.3/3.3 |
| C1467 | 4030011280 | S.CER C1608 CH 1H 271 | | |

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|--------------------------|----|--------------|
| C1477 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 35.2/15.5 |
| C1478 | 4030008470 | S.CER C1608 JB 1H 272K-T | T | 42.4/9.9 |
| C1479 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 45/11.2 |
| C1480 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 47.3/13.3 |
| C1481 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 49.2/14.1 |
| C1482 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 47.3/15.9 |
| C1483 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 58.2/10.9 |
| C1484 | 4510005600 | S.ELE ECEV1CS100SR | T | 59.3/11 |
| C1485 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 5.7/72.5 |
| C1486 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 5.8/78.1 |
| C1487 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 4/20.2 |
| C1488 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 6.1/81.5 |
| C1500 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 118.4/12.8 |
| C1501 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 117.6/10.8 |
| C1502 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 115.2/4.2 |
| C1503 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 117.6/13.2 |
| C1504 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 111.1/4.1 |
| C1505 | 4030007010 | S.CER C1608 CH 1H 100D-T | B | 108.3/10.2 |
| C1506 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 105.3/9.5 |
| C1507 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 30.2/23.5 |
| C1509 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 17.3/23.4 |
| C1510 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 50.6/107.2 |
| C1511 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 80.6/5.7 |
| C1512 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 79.5/4.1 |
| C1514 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 81/7.9 |
| C1515 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 83.7/6.8 |
| C1516 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 88.3/10.2 |
| C1517 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 89.5/6.9 |
| C1518 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 91/6.9 |
| C1519 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 93.2/9.3 |
| C1520 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 97.7/12 |
| C1521 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 93.4/2.4 |
| C1522 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 92.1/1.9 |
| C1523 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 91.7/4.1 |
| C1524 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 89.4/2.3 |
| C1525 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 84.4/3.4 |
| C1526 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 83.2/1 |
| C1527 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 65.6/6.2 |
| C1529 | 4030007010 | S.CER C1608 CH 1H 100D-T | T | 103.5/9.7 |
| C1548 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 6.5/88.1 |
| C1549 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 1.7/53.2 |
| C1550 | 4550006250 | S.TAN TEESVA 1A 106M8L | T | 4.8/50.2 |
| C1551 | 4030007170 | S.CER C1608 CH 1H 221J-T | B | 7.6/55 |
| C1552 | 4550006250 | S.TAN TEESVA 1A 106M8L | T | 5.3/59.1 |
| C1553 | 4550006300 | S.TAN ECST1AY475R | B | 4/55.8 |
| C1554 | 4510005600 | S.ELE ECEV1CS100SR | T | 4.8/54.1 |
| C1555 | 4550006250 | S.TAN TEESVA 1A 106M8L | T | 9.4/61.7 |
| C1556 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 12/62.9 |
| C1557 | 4030017490 | S.CER C1608 JB 1A 105K-T | B | 7.4/75.3 |
| C1558 | 4030008920 | S.CER C1608 JB 1H 473K-T | B | 7.1/66.9 |
| C1559 | 4030017490 | S.CER C1608 JB 1A 105K-T | B | 7.7/63.9 |
| C1560 | 4510006670 | S.ELE ECEV1CA471P | T | 6.2/99.2 |
| C1561 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 1.8/74.8 |
| C1562 | 4510006670 | S.ELE ECEV1CA471P | T | 21.6/105.6 |
| C1563 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 7.4/72.2 |
| C1564 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 1.8/76.4 |
| C1565 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 19.6/57.3 |
| C1566 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 3.3/98.5 |
| C1567 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 4.6/62.8 |
| C1568 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 8.2/52.1 |
| C1569 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 14.4/121.7 |
| C1571 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 13.9/101.5 |
| C1572 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 7.9/55.5 |
| C1600 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 4.4/21.6 |
| C1601 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 3.3/20 |
| C1602 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 20.9/15.5 |
| C1603 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 22.4/15.5 |
| C1604 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 39.7/2.2 |
| C1605 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 67.2/1.7 |
| C1607 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 110.1/23.6 |
| C1608 | 4510005600 | S.ELE ECEV1CS100SR | T | 108.6/27.3 |
| C1609 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 102.1/19.8 |
| C1610 | 4510005600 | S.ELE ECEV1CS100SR | T | 102/22.4 |
| C1611 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 111.1/15.8 |
| C1612 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 110.2/12.1 |
| C1613 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 103.5/12 |
| C1614 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 110.3/13.6 |
| C1615 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 111.9/20.3 |
| C1617 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 99.2/11 |
| C1619 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 108.7/22 |
| C1620 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 104.2/22.8 |
| C1621 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 14.2/1.7 |
| C1622 | 4550006920 | S.TAN TEESVB2 1E 335M-8R | B | 106.1/15.5 |
| C1623 | 4550006920 | S.TAN TEESVB2 1E 335M-8R | B | 116.7/24.1 |
| C1624 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 28.9/16.6 |
| C1625 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 30.2/16.6 |
| C1626 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 31.5/16.6 |
| C1669 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 93.2/11.9 |
| C1670 | 4030017490 | S.CER C1608 JB 1A 105K-T | T | 102.1/18.2 |
| C1672 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 95.6/16.2 |
| C1673 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 95.7/18.9 |
| C1674 | 4030011810 | S.CER C1608 JB 1A 224K-T | T | 88.9/16 |

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|---------------------------|----|--------------|
| C1675 | 4550006760 | S.TAN TEESVB21A336M8R | T | 92/20.5 |
| C1676 | 4510005600 | S.ELE ECEV1CS100SR | T | 88.4/19.7 |
| C1677 | 4030008850 | S.CER C1608 JB 1H 123K-T | B | 83.6/15.4 |
| C1678 | 4510005600 | S.ELE ECEV1CS100SR | T | 84.6/20.2 |
| C1679 | 4030007020 | S.CER C1608 CH 1H 120J-T | B | 80.4/15.4 |
| C1680 | 4030017490 | S.CER C1608 JB 1A 105K-T | B | 86.2/21.5 |
| C1681 | 4030009490 | S.CER C1608 JB 1H 821K-T | B | 86.2/27.3 |
| C1682 | 4030008470 | S.CER C1608 JB 1H 272K-T | B | 79.4/26 |
| C1683 | 4030007120 | S.CER C1608 CH 1H 820J-T | B | 83.4/25.8 |
| C1684 | 4030008890 | S.CER C1608 JB 1H 273K-T | B | 87.7/10.6 |
| C1685 | 4510005600 | S.ELE ECEV1CS100SR | T | 80.8/19.7 |
| C1686 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 88.9/21.5 |
| C1687 | 4550006250 | S.TAN TEESVA 1A 106M8L | B | 72.6/14.2 |
| C1688 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 81.6/13.1 |
| C1689 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 77.1/12.5 |
| C1690 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 73.7/9.3 |
| C1691 | 4550006250 | S.TAN TEESVA 1A 106M8L | T | 76.7/17.2 |
| C1692 | 4510005600 | S.ELE ECEV1CS100SR | T | 73.7/18.4 |
| C1693 | 4550006250 | S.TAN TEESVA 1A 106M8L | T | 69.3/3.9 |
| C1694 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 76.4/19.9 |
| C1695 | 4030008890 | S.CER C1608 JB 1H 273K-T | B | 89.8/3 |
| C1696 | 4030011600 | S.CER C1608 JB 1E 104K-T | T | 1.6/11.4 |
| C1697 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 40.2/2.5 |
| C1698 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 1.6/12.6 |
| C1699 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 25/1.7 |
| C1700 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 5.4/91.6 |
| C1750 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 27.9/12.2 |
| C1751 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 54.5/123.7 |
| C1752 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 28.6/119.3 |
| C1753 | 4030006860 | S.CER C1608 JB 1H 102K-T | T | 24.2/120.5 |
| C1754 | 4510004640 | S.ELE ECEV1CA470SP | T | 31.8/127.5 |
| C1755 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 25.8/113.2 |
| C1800 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 24/20.5 |
| C1801 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 42/103.6 |
| C1802 | 4030006900 | S.CER C1608 JB 1H 103K-T | T | 42.5/112.3 |
| C1803 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 28.6/104.1 |
| C1804 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 32.4/103.3 |
| C1805 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 27.8/101.5 |
| C1806 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 32.4/99.7 |
| C1807 | 4030006850 | S.CER C1608 JB 1H 471K-T | T | 42/101.4 |
| C1808 | 4030007090 | S.CER C1608 CH 1H 470J-T | T | 38.8/112 |
| J1550 | 6450001440 | CNR HSJ1403-01-010 | T | 18.9/124.7 |
| J1600 | 6510016480 | CNR 52018-8845 | T | 113.7/4 |
| J1602 | 6510021970 | S.CNR AXN330C130P | T | 26.2/21.8 |
| J1750 | 6510009350 | CNR B2B-ZR | T | 25.4/125.5 |
| J1800 | 6510021720 | S.CNR 30FLT-SM1-TB | T | 44/107.5 |
| J1801 | 6510021720 | S.CNR 30FLT-SM1-TB | T | 87/5.8 |
| S1601 | 2260002590 | SW SKHHLU | T | 8.7/5.9 |
| W11 | 7030008240 | S.RES ERJ12YJ0R00U | T | 78.2/78.7 |
| W296 | 7030003860 | S.RES ERJ3GE JPW V | T | 71/38.3 |
| W340 | 7030003860 | S.RES ERJ3GE JPW V | B | 67.1/9.8 |
| W404 | 7030003860 | S.RES ERJ3GE JPW V | T | 17.5/59.6 |
| W428 | 7030003860 | S.RES ERJ3GE JPW V | B | 13.6/94.8 |
| W429 | 7030003860 | S.RES ERJ3GE JPW V | B | 33.6/61.3 |
| W480 | 7030003860 | S.RES ERJ3GE JPW V | T | 20.5/69.2 |
| W550 | 7030003860 | S.RES ERJ3GE JPW V | B | 26/42.3 |
| W700 | 7030003860 | S.RES ERJ3GE JPW V | T | 39/70.7 |
| W840 | 7030003860 | S.RES ERJ3GE JPW V | B | 49.8/33.6 |
| W841 | 7030003860 | S.RES ERJ3GE JPW V | B | 42.5/39.9 |
| W896 | 7030000010 | S.RES MCR10EZHH JPW (000) | B | 42.4/85.8 |
| W1021 | 7030003860 | S.RES ERJ3GE JPW V | T | 66.8/60.6 |
| W1022 | 7030003860 | S.RES ERJ3GE JPW V | T | 33.3/53.5 |
| W1026 | 7030003860 | S.RES ERJ3GE JPW V | T | 18.1/26 |
| W1029 | 7030008240 | S.RES ERJ12YJ0R00U | B | 68.9/113 |
| W1030 | 7030000010 | S.RES MCR10EZHH JPW (000) | B | 112.2/1.7 |
| W1032 | 7030000010 | S.RES MCR10EZHH JPW (000) | B | 98.3/33.6 |
| W1033 | 7030008240 | S.RES ERJ12YJ0R00U | B | 21.6/53.5 |
| W1083 | 7030003860 | S.RES ERJ3GE JPW V | B | 104.3/41.2 |
| W1084 | 7030003860 | S.RES ERJ3GE JPW V | B | 101.9/42 |
| W1089 | 7030003860 | S.RES ERJ3GE JPW V | T | 81.6/114.1 |
| W1161 | 7030003860 | S.RES ERJ3GE JPW V | T | 36.1/23.8 |
| W1164 | 7120000490 | JMP ERD25T0 | B | 86.4/116.7 |
| W1166 | 7030003860 | S.RES ERJ3GE JPW V | T | 111.1/125.4 |
| W1261 | 7030003860 | S.RES ERJ3GE JPW V | B | 73.1/127.1 |
| W1262 | 7030003860 | S.RES ERJ3GE JPW V | T | 69.7/126.5 |
| W1330 | 8900011960 | CBL OPC-1216 | | |
| W1601 | 7030003860 | S.RES ERJ3GE JPW V | T | 86.8/23.9 |
| W1670 | 7030003860 | S.RES ERJ3GE JPW V | B | 86/7.3 |
| W1701 | 7030003860 | S.RES ERJ3GE JPW V | B | 76.4/23.1 |
| W1750 | 7030003860 | S.RES ERJ3GE JPW V | B | 88/5 |
| EP5 | 6910000630 | BEA FSRH070140RN000B | | |
| EP6 | 6910000630 | BEA FSRH070140RN000B | | |
| EP271 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 74.9/41.2 |
| EP401 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 16.5/70.2 |

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
S.=Surface mount

[MAIN UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|----------------------|----|--------------|
| EP403 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 20.8/63 |
| EP404 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 14.4/60.4 |
| EP405 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 21.3/66.3 |
| EP470 | 6910012350 | S.BEA MMZ1608Y 102BT | T | 16.4/68.2 |
| EP482 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 12.9/82.8 |
| EP550 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 24.6/39.8 |
| EP551 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 35.1/26.6 |
| EP552 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.1/48.7 |
| EP553 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 18/48.1 |
| EP721 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 32.1/85.5 |
| EP1601 | 6910014690 | S.BEA MPZ1608S221A-T | T | 114.3/16.4 |
| EP1602 | 6910014690 | S.BEA MPZ1608S221A-T | T | 105.3/18.2 |
| EP1603 | 6910014690 | S.BEA MPZ1608S221A-T | T | 104.4/14 |
| EP1604 | 6910014690 | S.BEA MPZ1608S221A-T | T | 109/12.4 |
| EP1606 | 6910014690 | S.BEA MPZ1608S221A-T | B | 114.3/12.3 |
| EP1607 | 6910014690 | S.BEA MPZ1608S221A-T | T | 113.4/13.9 |
| EP1608 | 6910014690 | S.BEA MPZ1608S221A-T | T | 102.7/11.8 |
| EP1609 | 6910014690 | S.BEA MPZ1608S221A-T | B | 107.4/8.6 |
| EP1750 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.8/124 |
| EP1751 | 6910012350 | S.BEA MMZ1608Y 102BT | B | 27.8/125.5 |

[LOGIC-1 UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|--------------------------------|----|--------------|
| IC1 | 1130010030 | S.IC μ PD9930G-22 | T | 8.5/32.4 |
| IC2 | 1130010920 | S.IC AMBE-2020 | T | 31.8/51 |
| IC3 | 1130006890 | S.IC TC7S04FU (TE85R) | B | 30.7/46.1 |
| IC4 | 1180002370 | S.REG R1111N321B-TR | T | 33.2/38.7 |
| IC50 | 1140010090 | S.IC μ PD70F3102AGJ-33-8EU | T | 61.6/54 |
| IC51 | 1130007280 | S.IC TC7S32FU (TE85R) | T | 45.3/65.2 |
| IC52 | 1110005730 | S.IC S-80928CNMC-G8Y-T2 | B | 54.3/42.2 |
| IC53 | 1130007110 | S.IC TC7W04FU (TE12L) | T | 44.6/62.1 |
| IC54 | 1140008650 | S.IC HN58X2464TI | T | 45.2/56.4 |
| IC55 | 1130010630 | S.IC SN74AHC541PWR | B | 43/36.3 |
| IC56 | 1190001340 | S.IC M62334FP 600C | T | 59.8/37.1 |
| IC57 | 1190001340 | S.IC M62334FP 600C | T | 68.2/37 |
| IC58 | 1110002860 | S.IC TA75S393F (TE85R) | B | 4/48.1 |
| IC100 | 1130010620 | S.IC SN74AHC541PWR | B | 109.6/49.6 |
| IC101 | 1130007110 | S.IC TC7W04FU (TE12L) | T | 106.1/56.2 |
| IC102 | 1130008710 | S.IC TC7SET04FU (TE85L) | T | 110.9/55.3 |
| IC103 | 1130010630 | S.IC SN74AHC541PWR | T | 108.9/49.3 |
| IC104 | 1120002840 | S.IC RTL8019AS | T | 87.7/39.1 |
| IC105 | 1130010580 | S.IC μ PD43256BGW-70LL-9JL | T | 108.7/37.2 |
| IC150 | 1110005430 | S.IC CMX589AD5 | T | 98.2/11.4 |
| IC151 | 1130008710 | S.IC TC7SET04FU (TE85L) | T | 89.1/16.9 |
| IC152 | 1130004200 | S.IC TC4566F (TE85R) | B | 103.9/7.5 |
| IC153 | 1130004200 | S.IC TC4566F (TE85R) | B | 100.9/13 |
| IC200 | 1120002870 | S.IC XCS20XL-4TQ144I | T | 32.1/18.9 |
| IC201 | 1130006890 | S.IC TC7S04FU (TE85R) | B | 36.5/54.2 |
| IC202 | 1130008360 | S.IC TC7SHU04FU (TE85L) | T | 25.6/32.9 |
| IC203 | 1130006890 | S.IC TC7S04FU (TE85R) | B | 35.4/31.1 |
| IC300 | 1110005290 | S.IC NJM2115V-TE1 | T | 58.6/19.4 |
| IC301 | 1110005290 | S.IC NJM2115V-TE1 | T | 57.2/30.5 |
| IC302 | 1110005290 | S.IC NJM2115V-TE1 | T | 68.4/20.7 |
| IC350 | 1130006220 | S.IC TC4W53FU (TE12L) | T | 84.4/19.1 |
| IC351 | 1110003780 | S.IC NJM2902V-TE1 | T | 90.6/23.1 |
| IC352 | 1130006220 | S.IC TC4W53FU (TE12L) | T | 81.2/23.6 |
| IC353 | 1130008560 | S.IC TC7S51F (TE85L) | T | 100.8/23.8 |
| IC354 | 1130006220 | S.IC TC4W53FU (TE12L) | T | 104.8/18.8 |
| IC355 | 1110002750 | S.IC TA75S01F (TE85R) | B | 87.5/17.5 |
| IC500 | 1180001070 | S.IC TA7805F (TE16L) | T | 86.3/73.9 |
| IC502 | 1180002390 | S.REG S-812C33AMC-C2N-T2 | T | 92.8/66 |
| IC503 | 1110005440 | S.IC NJM2374AM-TE1 | T | 110.5/70.6 |
| IC504 | 1180002390 | S.REG S-812C33AMC-C2N-T2 | T | 64.3/74.8 |
| IC550 | 1130010570 | S.IC FT8U232AM | T | 11.8/61.4 |
| IC551 | 1130009570 | S.IC BR93LC46F-WE2 | T | 12.8/52.2 |
| IC552 | 1110005820 | S.IC R3112N281A-TR | T | 20.9/60 |
| IC553 | 1130007280 | S.IC TC7S32FU (TE85R) | B | 10.4/49 |
| Q50 | 1530002280 | S.TR 2SC4081 T106 S | B | 8.3/43.6 |
| Q51 | 1510000770 | S.TR 2SA1586-GR (TE85R) | B | 5.7/43.9 |
| Q52 | 1590000430 | S.TR DTC144EUA T106 | B | 7.9/47.6 |
| Q100 | 1590000430 | S.TR DTC144EUA T106 | T | 79/26.4 |
| Q101 | 1590001980 | S.TR XP4315 (TX) | B | 42/7.9 |
| Q102 | 1590001980 | S.TR XP4315 (TX) | B | 39.5/7.9 |
| Q103 | 1590000430 | S.TR DTC144EUA T106 | B | 67.7/6.4 |
| Q150 | 1590001400 | S.TR XP1214 (TX) | T | 91.3/12.8 |
| Q151 | 1590001400 | S.TR XP1214 (TX) | B | 97.2/6.4 |
| Q153 | 1590000430 | S.TR DTC144EUA T106 | B | 76.3/24.3 |
| Q154 | 1590000430 | S.TR DTC144EUA T106 | B | 106.3/12.5 |
| Q155 | 1590000430 | S.TR DTC144EUA T106 | B | 74.5/20.6 |
| Q156 | 1590000430 | S.TR DTC144EUA T106 | B | 72/22.4 |
| Q400 | 1590000430 | S.TR DTC144EUA T106 | B | 73.3/14.4 |
| Q500 | 1520000200 | S.TR 2SB798-T2 DK | T | 80.3/63.6 |

[LOGIC-1 UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|---|----|--------------|
| Q501 | 1590000430 | S.TR DTC144EUA T106 | T | 76.6/66.1 |
| Q502 | 1530002280 | S.TR 2SC4081 T106 S | T | 67.9/72.3 |
| Q503 | 1520000200 | S.TR 2SB798-T2 DK | B | 74.3/68.5 |
| Q504 | 1530002280 | S.TR 2SC4081 T106 S | B | 70/74.5 |
| Q550 | 1590000430 | S.TR DTC144EUA T106 | B | 15.5/49.9 |
| Q551 | 1530002280 | S.TR 2SC4081 T106 S | B | 15.7/64.1 |
| D50 | 1790001240 | S.DIO MA2S728-(TX) | T | 59.3/66.6 |
| D51 | 1750000550 | S.DIO 1SS355 TE-17 | B | 1.4/48.1 |
| D52 | 1750000550 | S.DIO 1SS355 TE-17 | B | 50.1/60.5 |
| D53 | 1750000550 | S.DIO 1SS355 TE-17 | T | 46.6/59.5 |
| D54 | 1750000550 | S.DIO 1SS355 TE-17 | B | 48.1/66.7 |
| D55 | 1730002280 | S.ZEN MA8091-M (TX) | T | 12.7/43.9 |
| D201 | 1790001240 | S.DIO MA2S728-(TX) | B | 39.6/51.4 |
| D350 | 1720000360 | S.DIO HSU88TRF | T | 85.3/24.3 |
| D351 | 1720000360 | S.DIO HSU88TRF | T | 87.7/19.4 |
| D501 | 1790000670 | S.DIO SB07-03C-TB | T | 72.2/69.6 |
| D502 | 1750000550 | S.DIO 1SS355 TE-17 | T | 71.2/72.3 |
| D503 | 1790000670 | S.DIO SB07-03C-TB | T | 99.4/65.9 |
| D504 | 1790000670 | S.DIO SB07-03C-TB | B | 110.2/74.1 |
| X50 | 6050011290 | S.XTL CR-715 (6 MHz) | T | 44.4/47.2 |
| X100 | 6050011300 | S.XTL CR-716 (20 MHz) | T | 99.1/55.5 |
| X200 | 6050011240 | S.XTL CR-708 (16.384 MHz) | T | 19/34.3 |
| X201 | 6050011700 | S.XTL CR-760 (9.8304 MHz) | T | 37.2/33.3 |
| X550 | 6050011290 | S.XTL CR-715 (6 MHz) | T | 3.4/55.5 |
| L50 | 6200005740 | S.COL ELJRE 47NG-F | T | 65.2/67.6 |
| L51 | 6200005740 | S.COL ELJRE 47NG-F | B | 48.4/46 |
| L100 | 6200005740 | S.COL ELJRE 47NG-F | B | 111.3/56 |
| L101 | 6200005740 | S.COL ELJRE 47NG-F | B | 111.3/57.3 |
| L102 | 6200005740 | S.COL ELJRE 47NG-F | T | 87/52.4 |
| L103 | 6200005740 | S.COL ELJRE 47NG-F | B | 108.5/27.6 |
| L114 | 6200006990 | S.COL ELJRE 56NG-F | B | 11.9/70.6 |
| L115 | 6200006990 | S.COL ELJRE 56NG-F | B | 13.4/70.6 |
| L116 | 6200006990 | S.COL ELJRE 56NG-F | B | 14.9/70.6 |
| L117 | 6200006990 | S.COL ELJRE 56NG-F | B | 16.2/70.6 |
| L119 | 6200006990 | S.COL ELJRE 56NG-F | B | 19.5/70.6 |
| L120 | 6200006990 | S.COL ELJRE 56NG-F | B | 20.9/70.6 |
| L121 | 6200006990 | S.COL ELJRE 56NG-F | B | 22.7/70.6 |
| L150 | 6200002040 | S.COL NL 252018T-101J | T | 99.7/17 |
| L210 | 6200005740 | S.COL ELJRE 47NG-F | T | 70.6/67.4 |
| L211 | 6200005740 | S.COL ELJRE 47NG-F | B | 47.7/53.7 |
| L214 | 6200005740 | S.COL ELJRE 47NG-F | B | 49/56.4 |
| L420 | 6200003590 | S.COL EXCCL3225U1 | B | 30.9/74 |
| L421 | 6200003590 | S.COL EXCCL3225U1 | B | 38.8/73.9 |
| L500 | 6190001560 | S.COL CDRH5D18-101NC | T | 104.3/74 |
| L501 | 6190001560 | S.COL CDRH5D18-101NC | T | 104.3/66.8 |
| L510 | 6200003590 | S.COL EXCCL3225U1 | B | 108.8/70.7 |
| L550 | 6200002040 | S.COL NL 252018T-101J | T | 12.5/70.5 |
| L551 | 6200005740 | S.COL ELJRE 47NG-F | T | 15.6/71.3 |
| L552 | 6200006990 | S.COL ELJRE 56NG-F | B | 14.6/55.8 |
| R1 | 7030003670 | S.RES ERJ3GGEYJ 823 V (82 k Ω) | T | 2.9/20.9 |
| R2 | 7030003670 | S.RES ERJ3GGEYJ 823 V (82 k Ω) | T | 2.9/23.5 |
| R12 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 k Ω) | B | 37.4/57.5 |
| R13 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 k Ω) | T | 37.1/61.8 |
| R14 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 k Ω) | T | 35.8/61.8 |
| R15 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 k Ω) | T | 34.5/61.8 |
| R16 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 k Ω) | T | 33.2/61.8 |
| R17 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 k Ω) | B | 35.3/57.5 |
| R18 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 k Ω) | T | 35.5/40.5 |
| R25 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 14.8/22.7 |
| R50 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 k Ω) | B | 44.4/69.8 |
| R51 | 7030003620 | S.RES ERJ3GGEYJ 333 V (33 k Ω) | T | 47.2/65 |
| R53 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 k Ω) | T | 48.5/62.4 |
| R54 | 7030003560 | S.RES ERJ3GGEYJ 103 V (10 k Ω) | T | 15.5/44.4 |
| R55 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 k Ω) | T | 15.5/43 |
| R57 | 7030003520 | S.RES ERJ3GGEYJ 472 V (4.7 k Ω) | B | 3.7/43.9 |
| R58 | 7030003680 | S.RES ERJ3GGEYJ 104 V (100 k Ω) | T | 15.4/46.2 |
| R59 | 7030003500 | S.RES ERJ3GGEYJ 332 V (3.3 k Ω) | B | 2.4/43.9 |
| R60 | 7030003570 | S.RES ERJ3GGEYJ 123 V (12 k Ω) | B | 47.7/56.4 |
| R61 | 7030003570 | S.RES ERJ3GGEYJ 123 V (12 k Ω) | B | 45.8/56.4 |
| R62 | 7030003620 | S.RES ERJ3GGEYJ 333 V (33 k Ω) | B | 49.3/45.1 |
| R63 | 7030003520 | S.RES ERJ3GGEYJ 472 V (4.7 k Ω) | B | 53.9/44.5 |
| R64 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 61.5/39.7 |
| R65 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 62.8/39.7 |
| R66 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 72.5/35.1 |
| R67 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 72.5/37.7 |
| R68 | 7030003600 | S.RES ERJ3GGEYJ 223 V (22 k Ω) | B | 9.1/45.6 |
| R69 | 7030003490 | S.RES ERJ3GGEYJ 272 V (2.7 k Ω) | T | 8.2/46.7 |
| R70 | 7030003620 | S.RES ERJ3GGEYJ 333 V (33 k Ω) | B | 4.4/45.8 |
| R71 | 7030003620 | S.RES ERJ3GGEYJ 333 V (33 k Ω) | B | 4/50.5 |
| R72 | 7030003620 | S.RES ERJ3GGEYJ 333 V (33 k Ω) | B | 6.3/51.4 |
| R73 | 7030003530 | S.RES ERJ3GGEYJ 562 V (5.6 k Ω) | B | 7.1/49.6 |
| R74 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 k Ω) | B | 46.3/68.7 |
| R75 | 7030003570 | S.RES ERJ3GGEYJ 123 V (12 k Ω) | B | 48.1/69 |
| R76 | 7030003510 | S.RES ERJ3GGEYJ 392 V (3.9 k Ω) | B | 67.9/38.3 |

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
S.=Surface mount

[LOGIC-1 UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|--------------------------------|----|--------------|
| R78 | 7030003360 | S.RES ERJ3GGEYJ 221 V (220 Ω) | T | 50.9/43.3 |
| R79 | 7030003340 | S.RES ERJ3GGEYJ 151 V (150 Ω) | T | 48.6/50.2 |
| R100 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | T | 76.5/26.2 |
| R101 | 7030003560 | S.RES ERJ3GGEYJ 103 V (10 kΩ) | T | 88/27.8 |
| R102 | 7030003560 | S.RES ERJ3GGEYJ 103 V (10 kΩ) | T | 88/26.5 |
| R105 | 7030003380 | S.RES ERJ3GGEYJ 331 V (330 Ω) | T | 95.8/55.9 |
| R106 | 7030003800 | S.RES ERJ3GGEYJ 105 V (1 MΩ) | T | 95.8/53.1 |
| R107 | 7030003360 | S.RES ERJ3GGEYJ 221 V (220 Ω) | T | 81.7/53.1 |
| R108 | 7030003560 | S.RES ERJ3GGEYJ 103 V (10 kΩ) | T | 87.5/50.6 |
| R110 | 7030003370 | S.RES ERJ3GGEYJ 271 V (270 Ω) | B | 52.3/8 |
| R111 | 7030003410 | S.RES ERJ3GGEYJ 561 V (560 Ω) | B | 90.3/44.5 |
| R112 | 7030003410 | S.RES ERJ3GGEYJ 561 V (560 Ω) | B | 89/44.5 |
| R113 | 7030003370 | S.RES ERJ3GGEYJ 271 V (270 Ω) | B | 42.1/5.9 |
| R114 | 7030003420 | S.RES ERJ3GGEYJ 681 V (680 Ω) | B | 39.5/5.9 |
| R115 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 110.9/54.7 |
| R116 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 106.3/57.8 |
| R146 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 79.1/23.5 |
| R148 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 105.5/9.9 |
| R149 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 88.4/14.2 |
| R150 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 97.9/11 |
| R151 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 97.9/9.7 |
| R152 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 97.9/12.3 |
| R153 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 97.9/14.9 |
| R154 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 97.9/13.6 |
| R155 | 7030003800 | S.RES ERJ3GGEYJ 105 V (1 MΩ) | T | 92.4/15.3 |
| R156 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 90.7/8.2 |
| R157 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 95.3/8.8 |
| R158 | 7030003750 | S.RES ERJ3GGEYJ 394 V (390 kΩ) | B | 100.8/7.5 |
| R159 | 7030009340 | S.RES ERJ3GGEYJ 275V (2.7 MΩ) | B | 99.7/10.1 |
| R199 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 32.7/53.4 |
| R200 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 28.1/32 |
| R201 | 7030003800 | S.RES ERJ3GGEYJ 105 V (1 MΩ) | T | 22.4/32.8 |
| R202 | 7030003520 | S.RES ERJ3GGEYJ 472 V (4.7 kΩ) | T | 45.2/9.4 |
| R203 | 7030003520 | S.RES ERJ3GGEYJ 472 V (4.7 kΩ) | T | 31.6/5.8 |
| R204 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | T | 39/5.8 |
| R205 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 24.3/23.2 |
| R206 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | T | 18.2/24.7 |
| R207 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | T | 18.9/26.1 |
| R208 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 34.8/34.8 |
| R209 | 7030003800 | S.RES ERJ3GGEYJ 105 V (1 MΩ) | B | 35.6/33 |
| R210 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | T | 41.5/33.3 |
| R211 | 7030003400 | S.RES ERJ3GGEYJ 471 V (470 Ω) | B | 37.8/52 |
| R250 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 52.9/5.8 |
| R251 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/5.8 |
| R252 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 50.8/6.6 |
| R253 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/17.1 |
| R254 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 52.5/7.9 |
| R255 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/8.4 |
| R256 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 50.8/9.2 |
| R257 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/9.7 |
| R258 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 52.5/10.5 |
| R259 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/11 |
| R260 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 50.8/11.8 |
| R261 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/12.3 |
| R262 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 52.5/13.1 |
| R263 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/13.6 |
| R264 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 50.8/14.4 |
| R265 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/14.9 |
| R266 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 52.5/15.7 |
| R267 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/16.2 |
| R268 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 50.8/17 |
| R269 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/17.5 |
| R270 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 52.5/18.3 |
| R271 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/18.8 |
| R272 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 52.7/20.2 |
| R273 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/20.2 |
| R274 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 50.8/20.7 |
| R275 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/21.5 |
| R276 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 52.1/22.1 |
| R277 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/22.8 |
| R278 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 50.8/23.3 |
| R279 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/24.1 |
| R280 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 52.1/24.7 |
| R281 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/25.4 |
| R282 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 50.8/25.9 |
| R283 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/26.7 |
| R284 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 52.1/27.3 |
| R285 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/28 |
| R286 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 50.8/28.5 |
| R287 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/29.3 |
| R288 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 52.1/29.9 |
| R289 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/30.6 |
| R290 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 50.8/31.1 |
| R291 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/31.9 |
| R292 | 7030005321 | S.RES ERA3YED 103V (10 kΩ) | T | 52.1/32.7 |
| R293 | 7030005661 | S.RES ERA3YED 203V (20 kΩ) | T | 48.9/33.2 |
| R300 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 60.7/14.9 |
| R301 | 7030003520 | S.RES ERJ3GGEYJ 472 V (4.7 kΩ) | T | 56.4/22.1 |
| R302 | 7030003530 | S.RES ERJ3GGEYJ 562 V (5.6 kΩ) | T | 61.8/22.1 |
| R303 | 7030003530 | S.RES ERJ3GGEYJ 562 V (5.6 kΩ) | T | 63.7/19.4 |
| R304 | 7030003480 | S.RES ERJ3GGEYJ 222 V (2.2 kΩ) | T | 67.4/11.7 |

[LOGIC-1 UNIT]

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|--------------------------------|----|--------------|
| R305 | 7030003480 | S.RES ERJ3GGEYJ 222 V (2.2 kΩ) | T | 67.4/13 |
| R306 | 7030003480 | S.RES ERJ3GGEYJ 222 V (2.2 kΩ) | T | 63.7/16.8 |
| R307 | 7030003480 | S.RES ERJ3GGEYJ 222 V (2.2 kΩ) | T | 63.7/14.2 |
| R308 | 7030003600 | S.RES ERJ3GGEYJ 223 V (22 kΩ) | T | 64.2/12.1 |
| R310 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 59.3/26 |
| R311 | 7030003520 | S.RES ERJ3GGEYJ 472 V (4.7 kΩ) | T | 55/33.2 |
| R312 | 7030003530 | S.RES ERJ3GGEYJ 562 V (5.6 kΩ) | T | 60.4/33.2 |
| R313 | 7030003530 | S.RES ERJ3GGEYJ 562 V (5.6 kΩ) | T | 62.3/30.5 |
| R314 | 7030003480 | S.RES ERJ3GGEYJ 222 V (2.2 kΩ) | T | 68.1/28.4 |
| R315 | 7030003480 | S.RES ERJ3GGEYJ 222 V (2.2 kΩ) | T | 68.1/27.1 |
| R316 | 7030003480 | S.RES ERJ3GGEYJ 222 V (2.2 kΩ) | T | 65.5/31 |
| R317 | 7030003480 | S.RES ERJ3GGEYJ 222 V (2.2 kΩ) | T | 68.1/31 |
| R318 | 7030003600 | S.RES ERJ3GGEYJ 223 V (22 kΩ) | T | 67.3/25.8 |
| R320 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 61.5/18.3 |
| R348 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 101.4/24 |
| R349 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 77.5/20.4 |
| R350 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 80.1/21.2 |
| R351 | 7030003730 | S.RES ERJ3GGEYJ 274 V (270 kΩ) | T | 96.5/25 |
| R352 | 7030004710 | S.RES ERJ3GGEYJ 475 V (4.7 MΩ) | T | 98.4/24.4 |
| R353 | 7030003730 | S.RES ERJ3GGEYJ 274 V (270 kΩ) | T | 96.5/21.1 |
| R354 | 7030004710 | S.RES ERJ3GGEYJ 475 V (4.7 MΩ) | T | 98.4/21.8 |
| R355 | 7030003680 | S.RES ERJ3GGEYJ 104 V (100 kΩ) | T | 103.2/21.8 |
| R356 | 7030003680 | S.RES ERJ3GGEYJ 104 V (100 kΩ) | B | 84.1/22.7 |
| R357 | 7030003680 | S.RES ERJ3GGEYJ 104 V (100 kΩ) | B | 84.9/20.8 |
| R358 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 99.7/18.9 |
| R359 | 7030003560 | S.RES ERJ3GGEYJ 103 V (10 kΩ) | B | 84/14.3 |
| R360 | 7030003560 | S.RES ERJ3GGEYJ 103 V (10 kΩ) | B | 86.6/15.2 |
| R361 | 7030003600 | S.RES ERJ3GGEYJ 223 V (22 kΩ) | B | 87.9/19.9 |
| R362 | 7030003560 | S.RES ERJ3GGEYJ 103 V (10 kΩ) | B | 90/19.1 |
| R363 | 7030003800 | S.RES ERJ3GGEYJ 105 V (1 MΩ) | B | 90.6/22.9 |
| R364 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 92.4/23.6 |
| R365 | 7030003480 | S.RES ERJ3GGEYJ 222 V (2.2 kΩ) | T | 90.7/19.7 |
| R368 | 7030003520 | S.RES ERJ3GGEYJ 472 V (4.7 kΩ) | B | 82.8/22.7 |
| R400 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 86.1/10.2 |
| R402 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 12.2/15 |
| R403 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 15/5.9 |
| R405 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | T | 15/7.2 |
| R406 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 82/14.2 |
| R407 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | T | 83.3/14.2 |
| R408 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 84.6/14.2 |
| R410 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 16.7/15 |
| R411 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 18/15 |
| R412 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 15.4/15 |
| R413 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 14.1/15 |
| R414 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 10.9/15 |
| R415 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | T | 40.7/68.9 |
| R416 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 82.2/77.9 |
| R417 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 83.5/7.3 |
| R418 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 29.3/68.9 |
| R419 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | T | 28.5/68.9 |
| R420 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | T | 29.8/68.9 |
| R421 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | T | 31.1/68.9 |
| R422 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 75.5/14.2 |
| R423 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | B | 28/68.9 |
| R424 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | T | 42/68.9 |
| R425 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 74.2/14.2 |
| R426 | 7030003560 | S.RES ERJ3GGEYJ 103 V (10 kΩ) | T | 71.5/14.2 |
| R427 | 7030003560 | S.RES ERJ3GGEYJ 103 V (10 kΩ) | B | 80.9/10.8 |
| R428 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 72.9/14.2 |
| R429 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 78.1/14.2 |
| R430 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 80.7/14.2 |
| R431 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 76.8/14.2 |
| R432 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 75.3/13.4 |
| R433 | 7030003440 | S.RES ERJ3GGEYJ 102 V (1 kΩ) | T | 27.2/68.9 |
| R434 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 85.4/8 |
| R435 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | T | 79.4/14.2 |
| R436 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 22/15 |
| R437 | 7030003320 | S.RES ERJ3GGEYJ 101 V (100 Ω) | B | 73.4/12.5 |
| R438 | 7030003480 | S.RES ERJ3GGEYJ 222 V (2.2 kΩ) | B | 87.4/10.8 |
| R439 | 7030003680 | S.RES ERJ3GGEYJ 104 V (100 kΩ) | T | 86.5/13.4 |
| R440 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | T | 71.5/17.4 |
| R500 | 7030003560 | S.RES ERJ3GGEYJ 103 V (10 kΩ) | T | 80.4/66.8 |
| R501 | 7030000420 | S.RES MCR10EZJH 2.2 kΩ | T | 78.1/70.1 |
| R502 | 7030003470 | S.RES ERJ3GGEYJ 182 V (1.8 kΩ) | B | 72/73.7 |
| R503 | 7030003530 | S.RES ERJ3GGEYJ 562 V (5.6 kΩ) | T | 108.4/65.2 |
| R504 | 7030003500 | S.RES ERJ3GGEYJ 332 V (3.3 kΩ) | T | 111/65.2 |
| R505 | 7030000020 | S.RES MCR10EZJH 1 Ω (010) | B | 112.2/71.7 |
| R506 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 66.7/71.9 |
| R507 | 7030003570 | S.RES ERJ3GGEYJ 123 V (12 kΩ) | B | 68/71.9 |
| R508 | 7030003640 | S.RES ERJ3GGEYJ 473 V (47 kΩ) | B | 68/74.5 |
| R509 | 7030003600 | S.RES ERJ3GGEYJ 223 V (22 kΩ) | T | 109.7/65.2 |
| R510 | 7030003520 | S.RES ERJ3GGEYJ 472 V (4.7 kΩ) | T | 69.8/70.1 |
| R511 | 7030000180 | S.RES MCR10EZJH 22 Ω (220) | T | 81.4/68.4 |
| R512 | 7030000180 | S.RES MCR10EZJH 22 Ω (220) | T | 81.4/70.1 |
| R513 | 7030000420 | S.RES MCR10EZJH 2.2 kΩ | T | 78.1/68.4 |
| R550 | 7030003550 | | | |

[RC-24] (Optional for some version)

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|------------|-------------------------------|----|--------------|
| R38 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 124.2/25.8 |
| R39 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 124.2/12.8 |
| R40 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 124.2/14.1 |
| R41 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 124.2/15.4 |
| R42 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 124.2/16.7 |
| R43 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 124.2/19.3 |
| R44 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 124.2/21.9 |
| R45 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 124.2/20.6 |
| R48 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 134.6/10.1 |
| R49 | 7030003600 | S.RES ERJ3GEYJ 223 V (22 kΩ) | B | 114.3/5.3 |
| R51 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | B | 109.8/9.3 |
| R52 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | B | 11.2/36.2 |
| R53 | 7030003640 | S.RES ERJ3GEYJ 473 V (47 kΩ) | B | 7.8/36.2 |
| R54 | 7030003480 | S.RES ERJ3GEYJ 222 V (2.2 kΩ) | B | 129.4/3.8 |
| R55 | 7030003440 | S.RES ERJ3GEYJ 102 V (1 kΩ) | B | 131.6/4.6 |
| R56 | 7030003620 | S.RES ERJ3GEYJ 333 V (33 kΩ) | B | 88/7.9 |
| R57 | 7030003470 | S.RES ERJ3GEYJ 182 V (1.8 kΩ) | B | 81.9/7.3 |
| R58 | 7030003680 | S.RES ERJ3GEYJ 104 V (100 kΩ) | B | 83.2/7.9 |
| R59 | 7030003500 | S.RES ERJ3GEYJ 332 V (3.3 kΩ) | B | 90.8/8.5 |
| R60 | 7030003400 | S.RES ERJ3GEYJ 471 V (470 Ω) | B | 37.3/16.7 |
| R61 | 7030003620 | S.RES ERJ3GEYJ 333 V (33 kΩ) | B | 32.1/7.6 |
| R62 | 7030003620 | S.RES ERJ3GEYJ 333 V (33 kΩ) | B | 30.8/7.6 |
| R63 | 7030003390 | S.RES ERJ3GEYJ 391 V (390 Ω) | B | 36.1/7.6 |
| R64 | 7030005420 | S.RES ERJ3GEYJ 202 V (2 kΩ) | B | 21.6/9.5 |
| R65 | 7030003500 | S.RES ERJ3GEYJ 332 V (3.3 kΩ) | B | 36.8/9.9 |
| | | | | |
| C1 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 79.2/40.5 |
| C2 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 80.5/40.5 |
| C3 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 81.8/40.5 |
| C4 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 83.1/40.5 |
| C5 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 84.4/40.5 |
| C6 | 4030012600 | S.CER C2012 JB 1A 105M-T | B | 86.1/30.9 |
| C7 | 4030012600 | S.CER C2012 JB 1A 105M-T | B | 82.4/31.2 |
| C8 | 4030008630 | S.CER C1608 JF 1H 104Z-T | B | 77.4/40.5 |
| C9 | 4030008660 | S.CER C1608 JB 1H 102K-T | B | 81.4/28.8 |
| C10 | 4030009000 | S.CER C2012 JB 1C 224K-T | B | 130.9/23.1 |
| C11 | 4030006900 | S.CER C1608 JB 1H 103K-T | B | 100.1/15.1 |
| C12 | 4550003220 | S.TAN TEESVA 1E 105M8L | B | 97.4/14.8 |
| C13 | 4030007030 | S.CER C1608 CH 1H 150J-T | B | 100.8/25.6 |
| C14 | 4030007030 | S.CER C1608 CH 1H 150J-T | B | 100.8/19.5 |
| C15 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 107.8/9.7 |
| C16 | 4030006900 | S.CER C1608 JB 1H 103K-T | B | 109.8/8.1 |
| C17 | 4030008630 | S.CER C1608 JF 1H 104Z-T | B | 119.7/28.3 |
| C18 | 4030008630 | S.CER C1608 JF 1H 104Z-T | B | 74.5/11.5 |
| C19 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 73.2/11.5 |
| C20 | 4550006250 | S.TAN TEESVA 1A 106M8L | B | 71.5/12.3 |
| C21 | 4550003220 | S.TAN TEESVA 1E 105M8L | B | 64.4/12.1 |
| C22 | 4030008630 | S.CER C1608 JF 1H 104Z-T | B | 62.7/11.3 |
| C23 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 61.4/11.3 |
| C24 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 60.1/11.3 |
| C25 | 4030006850 | S.CER C1608 JB 1H 471K-T | B | 51.9/7.6 |
| C26 | 4030008630 | S.CER C1608 JF 1H 104Z-T | B | 117.1/5.4 |
| C27 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 5.2/9.8 |
| C28 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 6.5/9.8 |
| C30 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 9.1/9.8 |
| C32 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 92.1/4.3 |
| C34 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 28.8/3.2 |
| C35 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 41.9/4.2 |
| C36 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 54.9/4.2 |
| C37 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 67.9/4.2 |
| C38 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 77.3/4.2 |
| C39 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 94.1/30.2 |
| C40 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 99.5/16.8 |
| C41 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 110/35.9 |
| C42 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 114.3/31.2 |
| C43 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 116.9/31.2 |
| C44 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 109.5/5.4 |
| C45 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 118/36.9 |
| C46 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 115.6/31.2 |
| C47 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 118.2/31.2 |
| C48 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 115.7/6.2 |
| C49 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 128.6/36.9 |
| C50 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 126.9/28.1 |
| C51 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 127.2/17.6 |
| C52 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 128.7/5.4 |
| C53 | 4510004440 | S.ELE ECEV1HA010SR | B | 26.8/7 |
| C54 | 4510004440 | S.ELE ECEV1HA010SR | B | 41.9/8.8 |
| C55 | 4510005300 | S.ELE ECEV1AA330SR | B | 41.2/14.2 |
| C56 | 4510005300 | S.ELE ECEV1AA330SR | B | 32/12.7 |
| C57 | 4030006860 | S.CER C1608 JB 1H 102K-T | B | 21.6/7.8 |
| C59 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 53.9/10.3 |
| C60 | 4030007090 | S.CER C1608 CH 1H 470J-T | B | 72.1/7.8 |
| C61 | 4030011600 | S.CER C1608 JB 1E 104K-T | B | 80.6/9.1 |
| C62 | 4030007130 | S.CER C1608 CH 1H 101J-T | B | 85.6/5.6 |
| C63 | 4030006900 | S.CER C1608 JB 1H 103K-T | B | 34.1/9.1 |
| C64 | 4030006900 | S.CER C1608 JB 1H 103K-T | B | 38.4/7.4 |
| | | | | |
| J1 | 6450001470 | CNR 95003-2881 | T | 9.7/6.1 |
| J2 | 6510019420 | S.CNR B8B-ZR-SM3-TF | B | 53.4/16.7 |
| J3 | 6510019270 | S.CNR 52365-0691 | B | 94.5/10.5 |

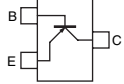
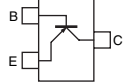
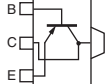
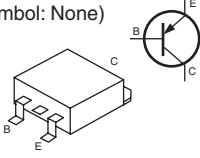
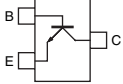
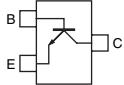
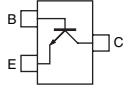
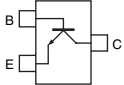
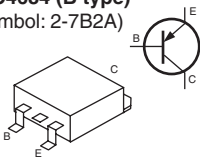
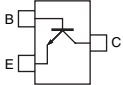
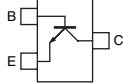
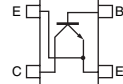
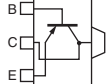
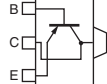
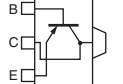
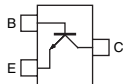
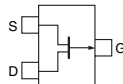
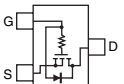
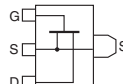
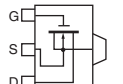
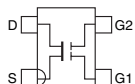
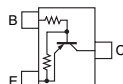
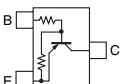
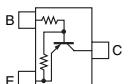
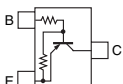
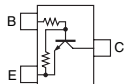
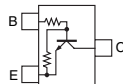
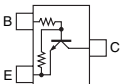
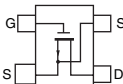
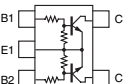
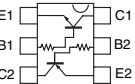
[RC-24] (Optional for some versions)

| REF NO. | ORDER NO. | DESCRIPTION | M. | H/V LOCATION |
|---------|-------------|---------------------------|----|--------------|
| DS2 | 50400002470 | S.LED FY1112H | T | 31/26.4 |
| DS3 | 50400002470 | S.LED FY1112H | T | 42.5/26.4 |
| DS4 | 50400002470 | S.LED FY1112H | T | 54/26.4 |
| DS5 | 50400002470 | S.LED FY1112H | T | 65.5/26.4 |
| DS6 | 50400002470 | S.LED FY1112H | T | 77/26.4 |
| DS7 | 50400002030 | S.LED CL-170Y-CD-T | T | 94/26.4 |
| DS8 | 50400002030 | S.LED CL-170Y-CD-T | T | 124.7/31.6 |
| DS10 | 50400002030 | S.LED CL-170Y-CD-T | T | 124.7/10.6 |
| DS11 | 50400002030 | S.LED CL-170Y-CD-T | T | 113.7/31.6 |
| DS13 | 50400002030 | S.LED CL-170Y-CD-T | T | 113.7/10.6 |
| DS14 | 50400002030 | S.LED CL-170Y-CD-T | T | 34.5/4.2 |
| DS15 | 50400002030 | S.LED CL-170Y-CD-T | T | 60.5/4.2 |
| DS16 | 50400002030 | S.LED CL-170Y-CD-T | T | 86.5/4.2 |
| | | | | |
| S21 | 2250000270 | ECR RH90N74E20-16F-1738 | T | 9.5/32.2 |
| | | | | |
| W3 | 7030000010 | S.RES MCR10EZHZ JPW (000) | T | 124.7/21.1 |
| W4 | 7030000010 | S.RES MCR10EZHZ JPW (000) | T | 113.7/21.1 |
| | | | | |
| EP20 | 6910014690 | S.BEA MPZ1608S221A-T | B | 49.6/11 |
| EP21 | 6910014690 | S.BEA MPZ1608S221A-T | B | 51.1/11 |
| EP22 | 6910014690 | S.BEA MPZ1608S221A-T | B | 53.4/11.6 |
| EP23 | 6910014690 | S.BEA MPZ1608S221A-T | B | 29.9/20 |
| EP24 | 6910014690 | S.BEA MPZ1608S221A-T | B | 26.5/20.8 |
| EP25 | 6910014690 | S.BEA MPZ1608S221A-T | B | 58.6/11.1 |
| EP26 | 6910014690 | S.BEA MPZ1608S221A-T | B | 48.2/11 |
| EP27 | 6910014690 | S.BEA MPZ1608S221A-T | B | 55.7/11 |


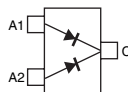
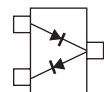


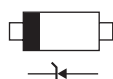

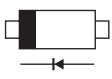

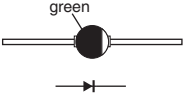

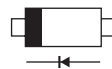



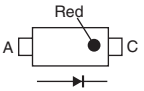




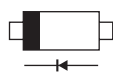
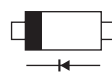
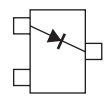
M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
S.=Surface mount

SECTION 7 SEMI-CONDUCTOR INFORMATION

• TRANSISTORS AND FET's

| | | | | |
|---|--|---|---|---|
| 2SA1362 GR (Symbol: AEG)  | 2SA1586 GR (Symbol: SG)  | 2SB798 DK (Symbol: DK)  | 2SB934 P (Symbol: None)  | 2SC4081 R (Symbol: BR)  |
| 2SC4081 S (Symbol: BS)  | 2SC4215 O (Symbol: QO)  | 2SC4226 R25 (Symbol: R25)  | 2SC4684 (B type) (Symbol: 2-7B2A)  | 2SC5107 O (Symbol: MFO)  |
| 2SC5195 (Symbol: 88)  | 2SC5454 R54 (Symbol: R54)  | 2SD999 CK (Symbol: CK)  | 2SD1619 T (Symbol: DB)  | 2SD1801 S (Symbol: CE)  |
| 2SD2216J S (Symbol: Y)  | 2SJ144 GR (Symbol: VG)  | 2SK2036 (Symbol: KJ)  | 2SK2854 (Symbol: UP)  | 2SK2855 (Symbol: UT)  |
| 3SK241 R (Symbol: DU)  | DTA114 EU (Symbol: 16)  | DTA143 TUA (Symbol: 113)  | DTA143 ZU (Symbol: 113)  | DTA144 EU (Symbol: 16)  |
| DTC114 EU (Symbol: 14)  | DTC143 ZU (Symbol: 123)  | DTC144 EU (Symbol: 26)  | NE34018 (Symbol: V63)  | XP1214 (Symbol: 9H)  |
| XP4315 (Symbol: CB)  | | | | |

• DIODES

| | | | | |
|--|--|--|--|--|
| <p>1SS355 (Symbol: A)</p>  | <p>1SS364 (Symbol: BF)</p>  | <p>1SS372 (Symbol: N9)</p>  | <p>1SV239 (Symbol: TC)</p>  | <p>1SV245 (Symbol: T3)</p>  |
| <p>1SV282 (Symbol: TD)</p>  | <p>1SV307 (Symbol: TX)</p>  | <p>1SV308 (Symbol: TX)</p>  | <p>DA204 U (Symbol: K)</p>  | <p>DSA3A1 (Symbol: Green)</p>  |
| <p>HSM88AS (Symbol: C1)</p>  | <p>HSU88TRF (Symbol: 9)</p>  | <p>MA2S077 (Symbol: S)</p>  | <p>MA2S728 (Symbol: B)</p>  | <p>MA111 (Symbol: 1B)</p>  |
| <p>MA4PH224 (Symbol: Red)</p>  | <p>MA728 (Symbol: 2A)</p>  | <p>MA8030 H (Symbol: 3^0)</p>  | <p>MA8033 L (Symbol: 3_3)</p>  | <p>MA8062 M (Symbol: 6-2)</p>  |
| <p>MA8082 M (Symbol: 8-2)</p>  | <p>MA8091 M (Symbol: 9-1)</p>  | <p>SB07-03C (Symbol: J)</p>  | | |

SECTION 8 MECHANICAL PARTS AND DISASSEMBLY

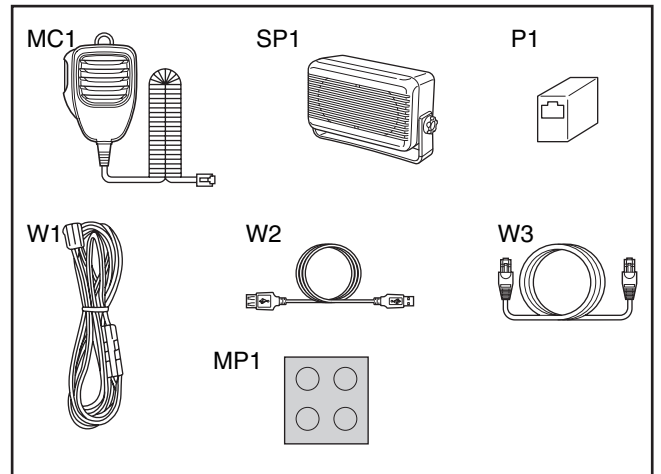
8-1 ID-1

[CHASSIS PARTS]

| REF.NO. | ODER NO. | DESCRIPTION | QTY. |
|---------|------------|---------------------------------------|------|
| EP1160 | 6910000970 | DL-20P 2.6-3-1.2H | 1 |
| EP1162 | 6910000970 | DL-20P 2.6-3-1.2H | 1 |
| IC1160 | 1150002190 | RA18H1213G1-21 | 1 |
| J1 | 6510004910 | NR-DS-E 01 | 1 |
| MF1 | 2710000590 | MF40D-12H-001 | 1 |
| MP1 | 8010018711 | 2506 Chassis-1 | 1 |
| MP2 | 8810008660 | Screw PH BT M3x8 NI-ZU | 2 |
| MP3 | 8810008660 | Screw PH BT M3x8 NI-ZU | 2 |
| MP4 | 8810008660 | Screw PH BT M3x8 NI-ZU | 7 |
| MP5 | 8110006640 | 2047 Cover | 1 |
| MP6 | 8810008450 | Screw M4x8 ZK | 1 |
| MP9 | 8110005751 | 1729 Fan Cover-1 | 1 |
| MP10 | 8810009110 | Screw M2.6x16 ZK | 4 |
| MP13 | 8930035230 | 1546 TR-A Clip | 1 |
| MP14 | 8510012210 | 2047 Main Shield Y445 | 2 |
| MP15 | 8930043710 | 1562 EMER Button (A) | 1 |
| MP17 | 8810007130 | Screw H M3x6 | 4 |
| MP19 | 8930048350 | 2146 Lens | 3 |
| MP21 | 8930039612 | Thermally Sheet (C)-2 TC100HS (10X10) | 1 |
| MP22 | 8930049650 | Thermally Sheet (H) | 2 |
| MP23 | 8930053472 | Thermally Sheet (R)-2 TC200HS (10X10) | 3 |
| MP24 | 8930055051 | Thermally Sheet (V)-1 TC400HS (10X15) | 1 |
| MP26 | 8510014251 | 2506 M-Plate-1 | 1 |
| MP27 | 8930037120 | 1647 M-Holder | 1 |
| MP28 | 8930056781 | 2506 YGR Plate-1 Y938A | 1 |
| MP29 | 8510014241 | 2506 ANT Plate-1 | 1 |
| MP36 | 8310053110 | 2506 NAME PLATE | 1 |
| W1 | 8900010890 | OPC-1115 | 1 |
| W2 | 8900010890 | OPC-1115 | 1 |
| W3 | 8900011950 | OPC-1224 | 1 |

[ACCESSORIES]

| REF. | ORDER. NO. | DESCRIPTION | QTY. |
|------|------------------|---------------------------|------|
| MC1 | Optional product | Microphone HM-118N | 1 |
| SP1 | Optional product | Speaker SP-22 | 1 |
| P1 | 5610000270 | Connector ALA651B | 1 |
| W1 | Optional product | Cable OPC-345 | 1 |
| W2 | 8900010930 | Cable OPC-1127 | 1 |
| W3 | 8900010550 | Cable OPC-1069 | 1 |
| MP1 | 8930055180 | Self-adhesive rubber feet | 1 |



[MAIN UNIT]

| REF.NO. | ODER NO. | DESCRIPTION | QTY. |
|---------|------------|------------------------|------|
| MP30 | 8930014140 | Earth Spring (D) | 1 |
| MP39 | 8930054521 | Shield Sponge (E)-1 | 1 |
| MP64 | 8930056580 | Spacer (AD) | 4 |
| MP65 | 8810007130 | Screw H M3x6 | 4 |
| MP70 | 8930001170 | Earth Spring (A) FX294 | 1 |
| W1330 | 8900011960 | OPC-1216 | 1 |

[LOGIC-1 UNIT]

| REF.NO. | ORDER. NO. | DESCRIPTION | QTY. |
|---------|------------|------------------|------|
| MP6 | 8930001170 | Earth Spring (A) | 1 |

Screw abbreviations BT: Self-tapping
 NI-ZU: Nickel-zinc
 ZK : Black

8-2 RC-24

[CHASSIS PARTS]

| REF.NO. | ODER NO. | DESCRIPTION | QTY. |
|---------|------------|------------------------|------|
| DS1 | 5030002180 | TSC0712-UFTDHW | 1 |
| EP2 | 8930048320 | SRCN-2140-SP-N-W | 2 |
| MP1 | 8210015740 | 2140 Front Panel | 1 |
| MP2 | 8930047980 | 2140 LCD Holder | 1 |
| MP3 | 8930048290 | 2140 LCD Filter | 1 |
| MP4 | 8210015770 | 2140 Reflector | 1 |
| MP7 | 8610009840 | Knob N234 | 1 |
| MP9 | 8810008760 | Screw PH BT M2x8 NI-ZU | 5 |
| MP10 | 8930038230 | 1765 Rear Seal | 1 |
| MP12 | 8810009060 | Screw M3x6 ZK | 4 |
| MP13 | 8210013160 | 1765 Front Panel | 1 |
| MP16 | 8820000871 | 1705 Cap Screw-1 | 3 |
| MP18 | 8310053110 | 2506 NAME PLATE | 1 |
| MP19 | 8930059370 | 2140 Front Key (C) | 1 |
| W1 | 8900010940 | OPC-1119 | 1 |

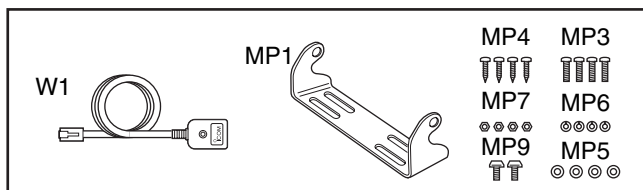
[FRONT UNIT]

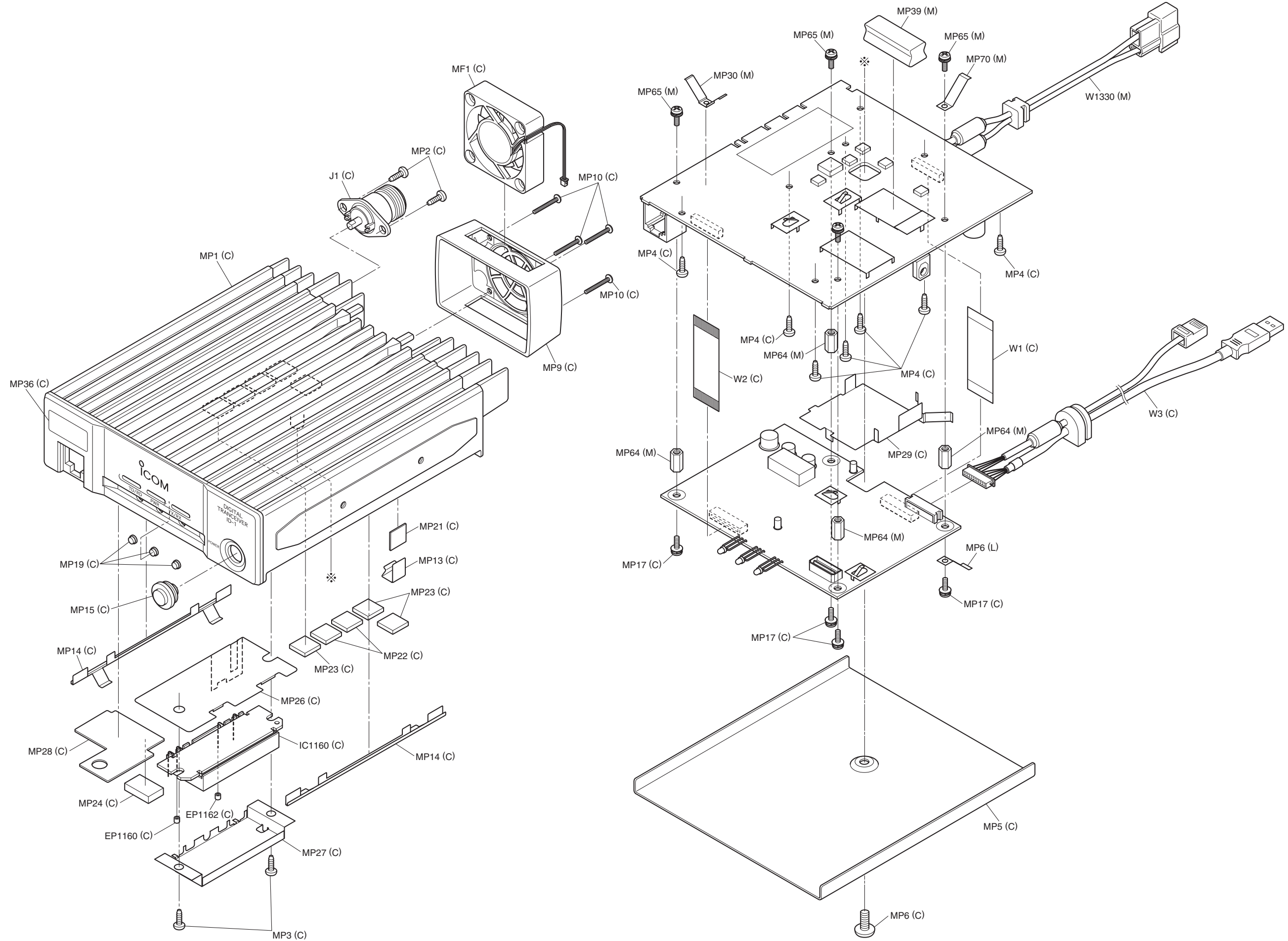
| REF.NO. | ODER NO. | DESCRIPTION | QTY. |
|---------|------------|---------------------|------|
| J1 | 6450001470 | 95003-2881 | 1 |
| S21 | 2250000270 | RH90N74E20-16F-1738 | 1 |

Screw abbreviations BT: Self-tapping
 NI-ZU: Nickel-zinc
 ZK : Black

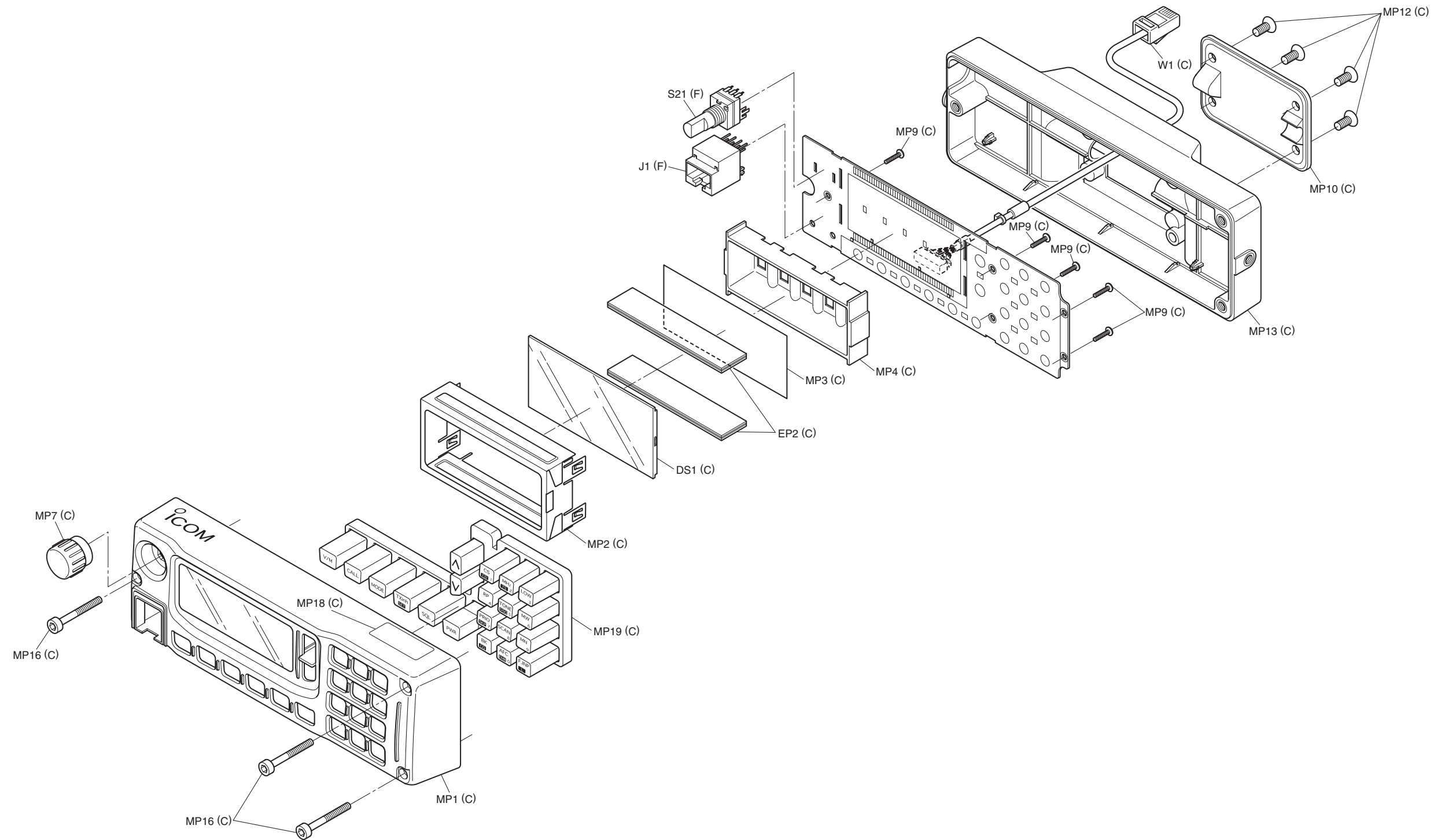
[ACCESSORIES]

| REF. | ORDER. NO. | DESCRIPTION | QTY. |
|------|------------------|----------------------|------|
| W1 | Optional product | Cable OPC-647 | 1 |
| MP1 | 8010016470 | 1765 mounting braket | 1 |
| MP3 | 8810000470 | Screw PH M5x12(+/-) | 4 |
| MP4 | 8810000950 | Screw AO M5x16 | 4 |
| MP5 | 8850000150 | Flat washer M5 NI BS | 4 |
| MP6 | 8850000390 | Spring washer M5 | 4 |
| MP7 | 8830000120 | Nut M5 | 4 |
| MP9 | 8820000910 | Screw 1765 SCREW | 2 |





• RC-24



SECTION 9 BOARD LAYOUTS

9-1 MAIN UNIT

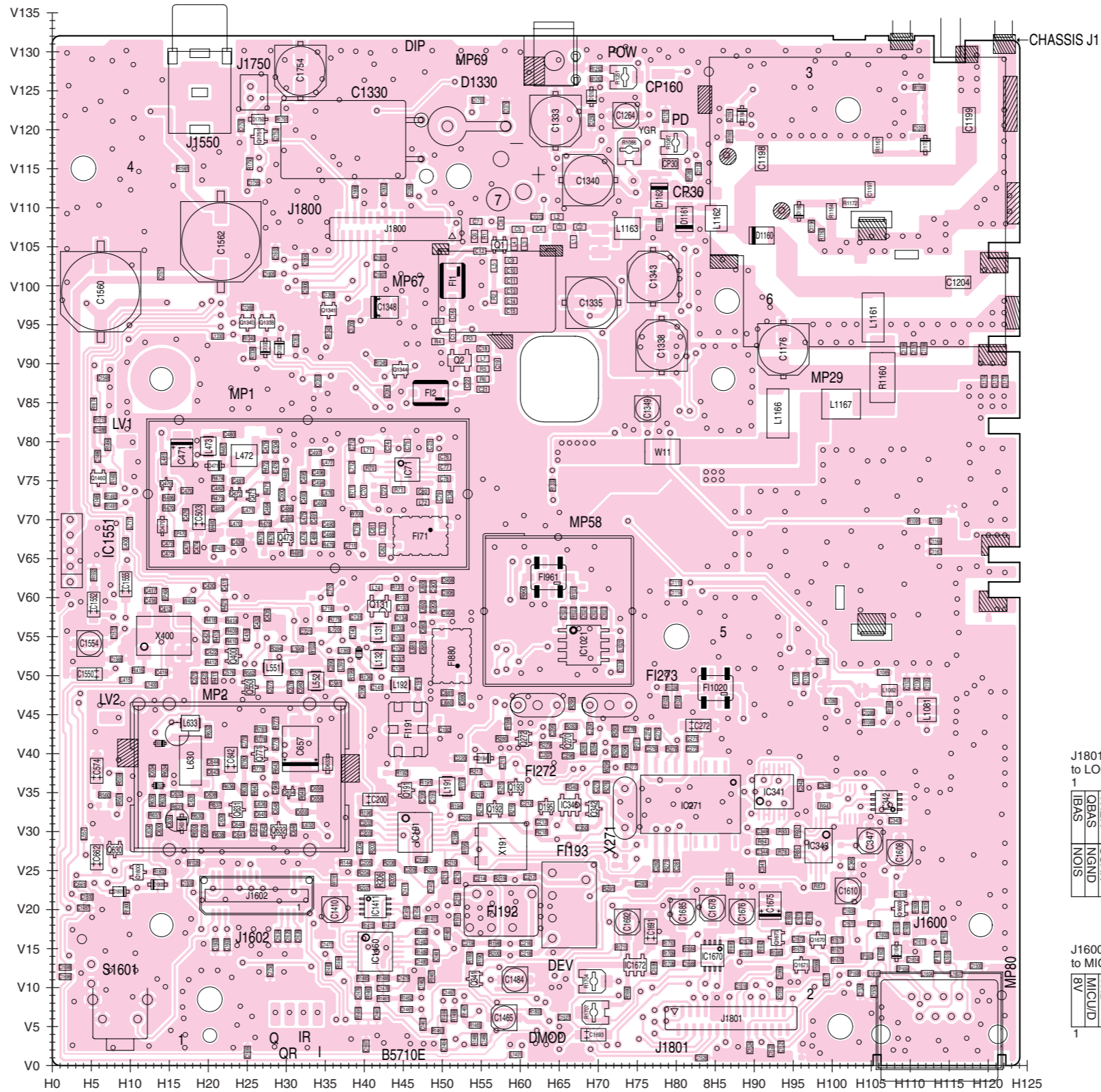
• TOP VIEW

J1800
to LOGIC-1 unit J401
30

| | | |
|------|-------|---|
| PCON | PWR/S | 1 |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| NC | NC | |
| HV L | +3 | |
| HV L | +3 | |
| HV L | NC | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| FXS | TXS | |
| GND | GND | |
| FANC | VC/TL | |
| BEEP | AM/UL | |

J1602
to LOGIC-1 unit J101
16

| | | |
|-------|-------|----|
| DAF | GND | 30 |
| TXSW | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| GND | GND | |
| P2ST | GND | |
| P2RS | GND | |
| PDAT | GND | |
| PSCK | GND | |
| GND | GND | |
| GND | GND | |
| UNLK | 1CON | |
| SHIFT | PWR/S | 1 |



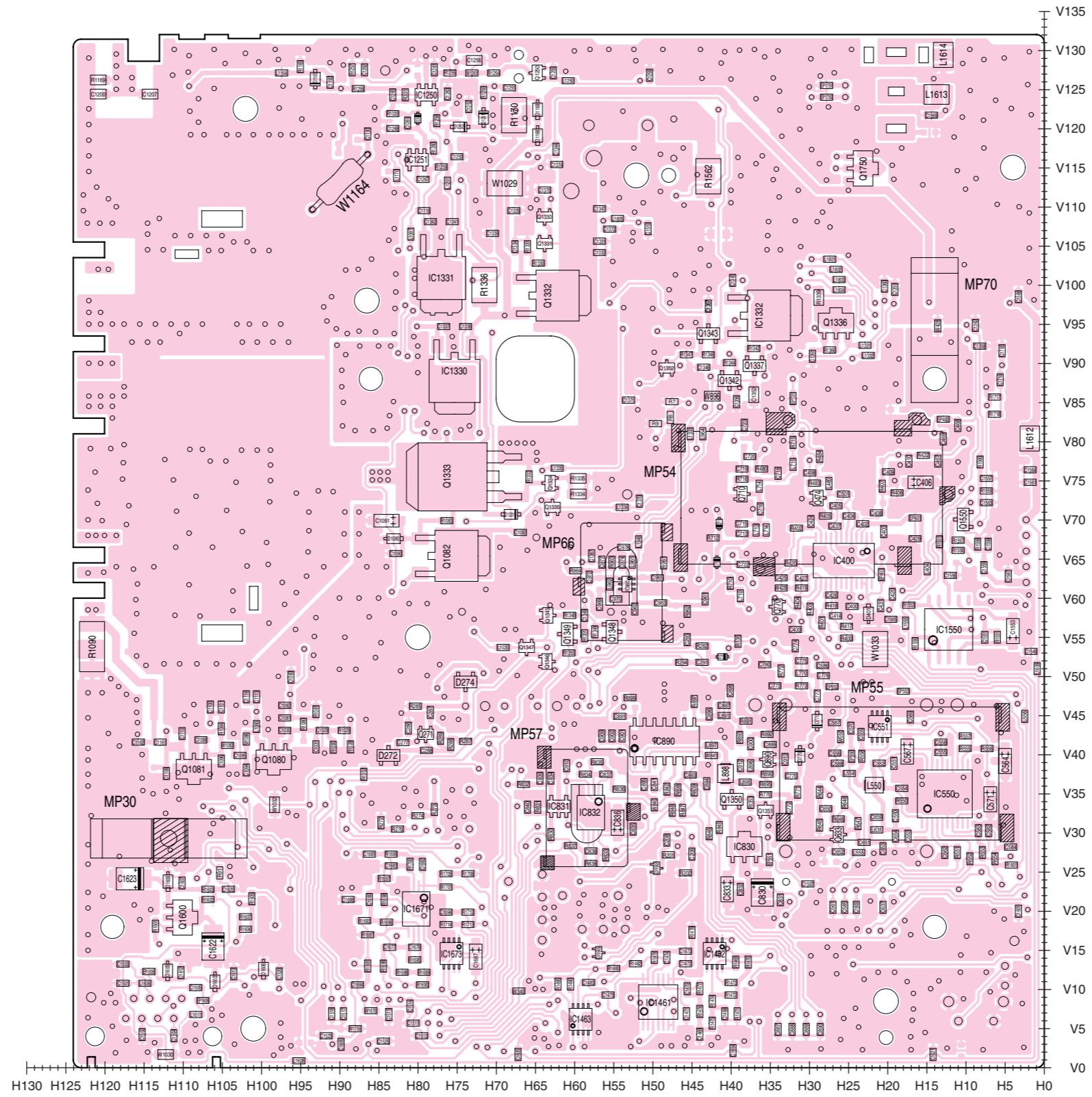
J1801
to LOGIC-1 unit J400
1

| | | |
|--------|--------|----|
| PTT | MUD | 30 |
| NC | NC | |
| GENV | RXD | |
| RSSI | TXD | |
| +5A | CTOS | |
| M/E | MIN | |
| M/MULT | GND | |
| M/GND | GND | |
| GND | W/S | |
| GND | TONI | |
| ADSW | DAMOD | |
| THE | R/MULT | |
| THE | SCAN | |
| OBAS | NGND | |
| IBAS | NOIS | |

J1600
to MIC
8V

| | |
|--------|---|
| RXD | 8 |
| GND | |
| MIC | |
| MICE | |
| PTT | |
| TXD | |
| MIC/UD | |
| 8V | |

● BOTTOM VIEW



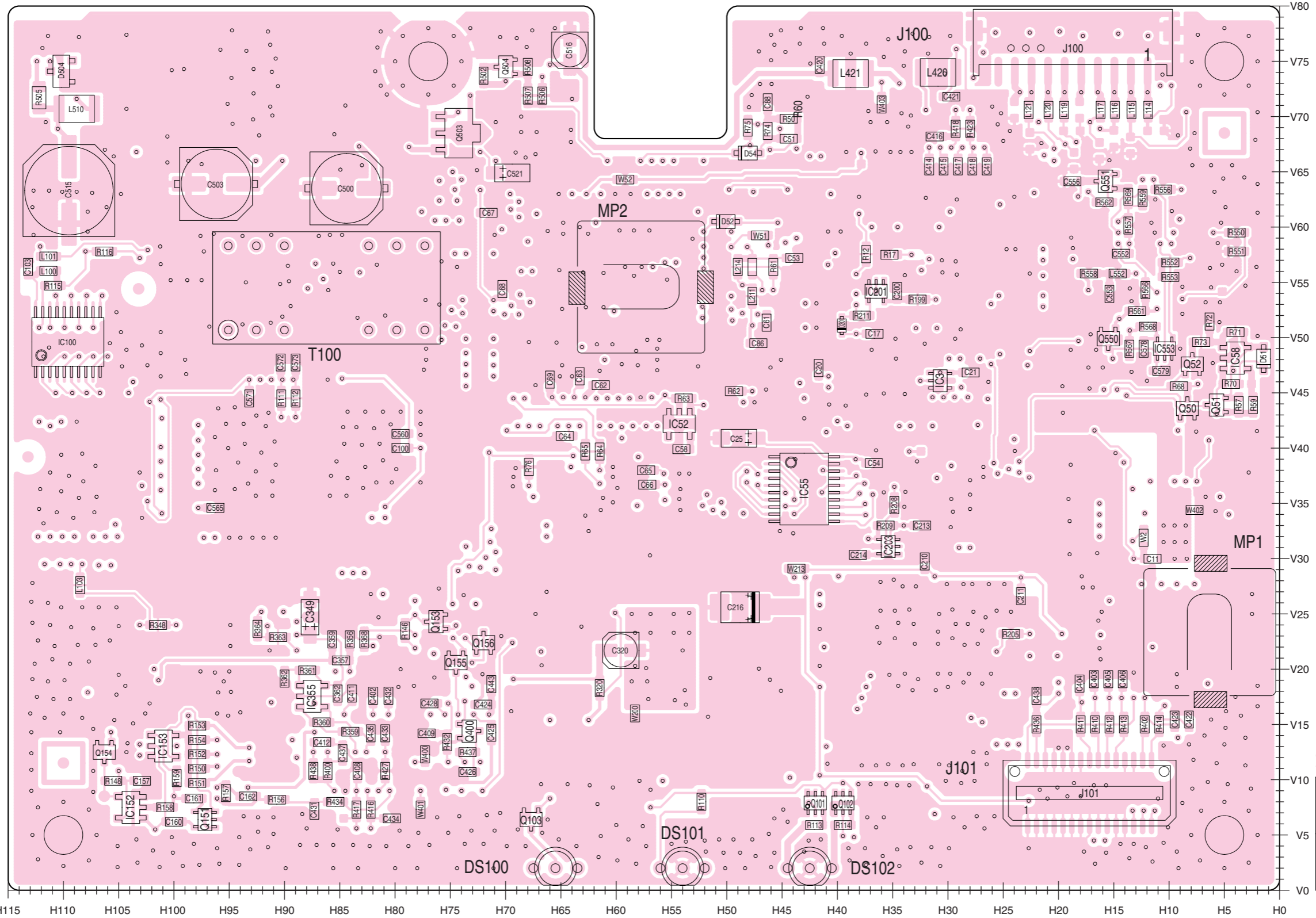
● BOTTOM VIEW

J100
to ETHERNET/USB connector

| | |
|--------|----|
| NC | 10 |
| USBGPD | |
| USBBDP | |
| USBDM | |
| USBV | |
| GND | |
| TD- | |
| RD+ | |
| TD+ | 1 |

10

1

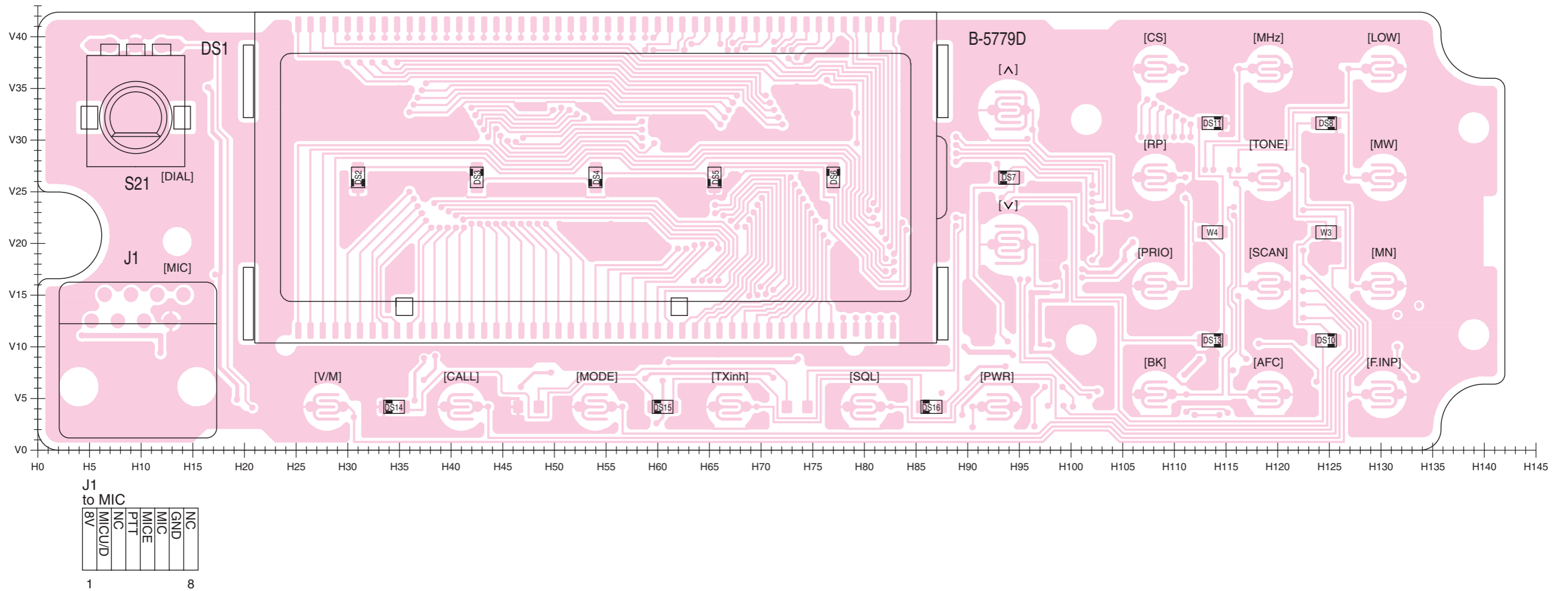


J101
to MAIN unit J1602

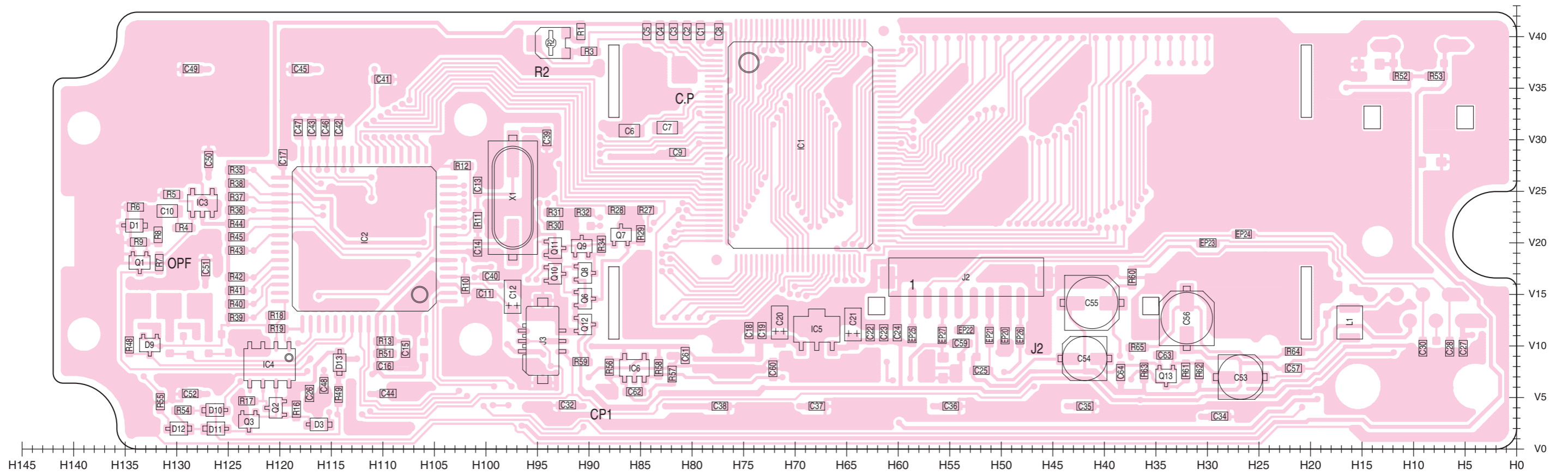
| | |
|-------|----|
| GND | 1 |
| DAF | |
| GND | |
| TXSW | |
| GND | |
| GND | |
| GND | |
| GND | |
| GND | |
| GND | |
| P2ST | |
| GND | |
| P2RS | |
| GND | |
| PDAT | |
| GND | |
| PCK | |
| GND | |
| GND | |
| P1ST | |
| GND | |
| UNLK | |
| POWRS | |
| SHIFT | 30 |

9-3 RC-24

• TOP VIEW



● BOTTOM VIEW

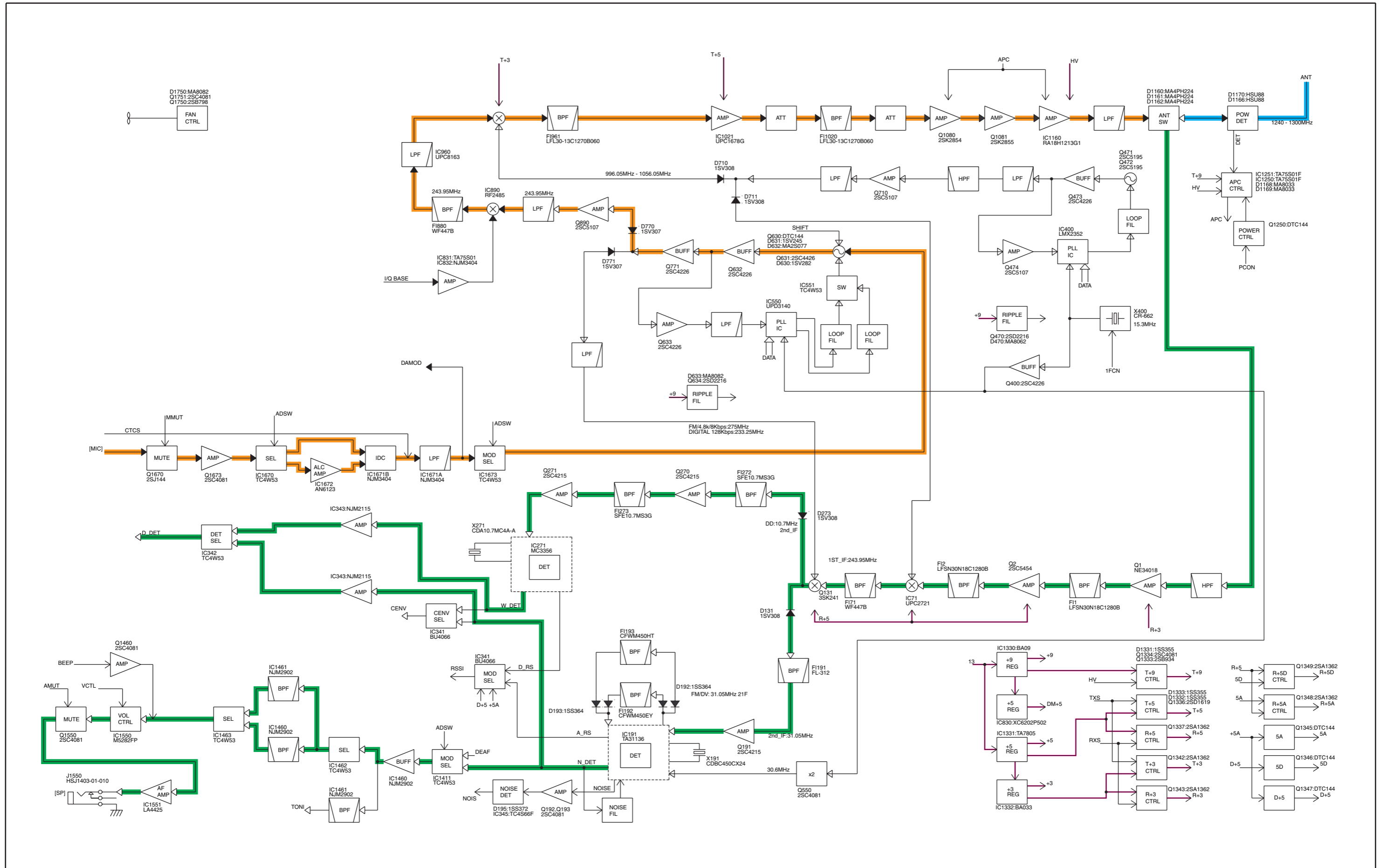


J2
to ID-1 MP80

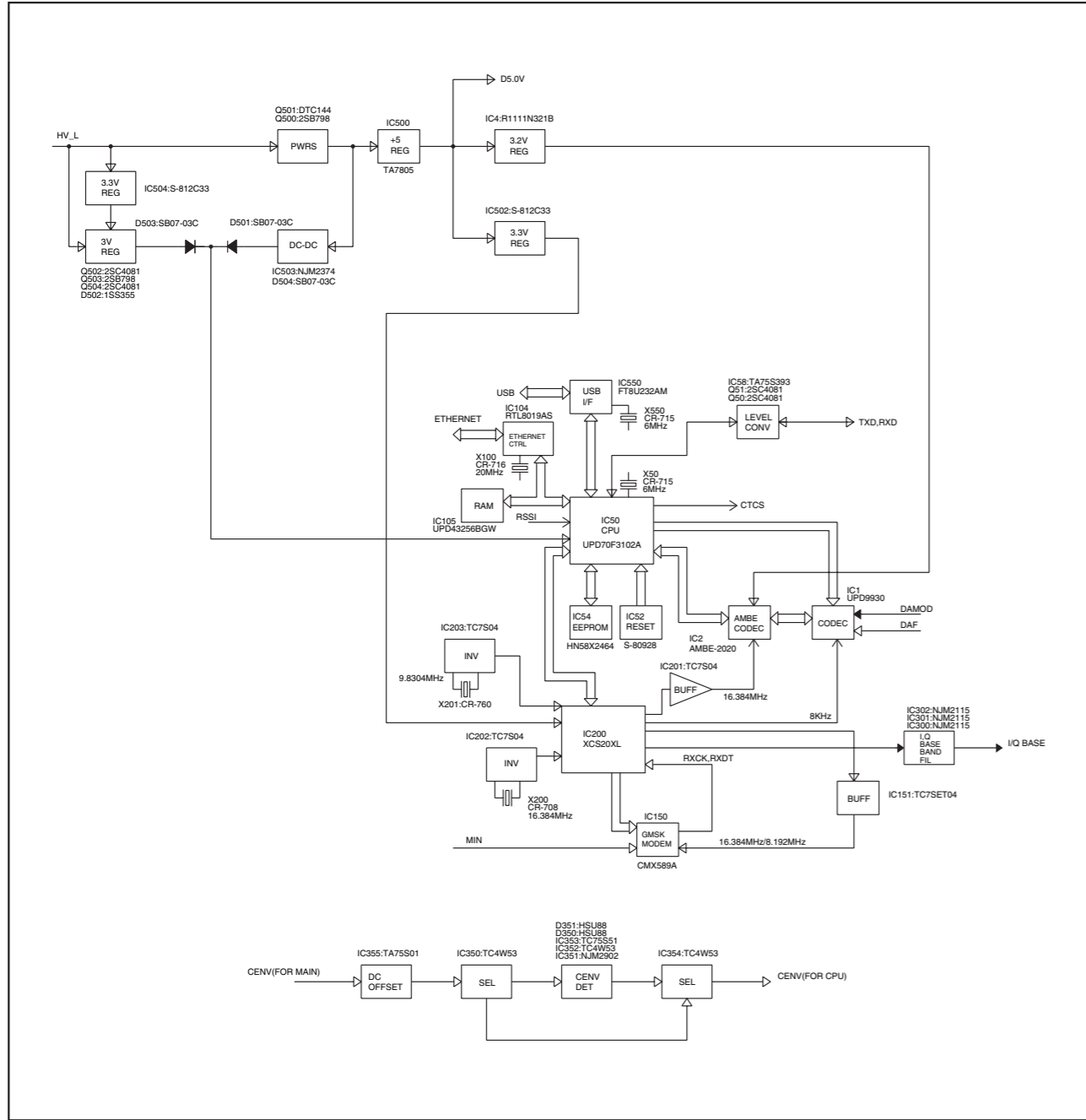
| | |
|---|-------|
| 1 | RXD |
| | GND |
| | MIC |
| | MICE |
| | PTT |
| | TXD |
| | MIC/D |
| | 8V |
| 8 | |

SECTION 10 BLOCK DIAGRAM

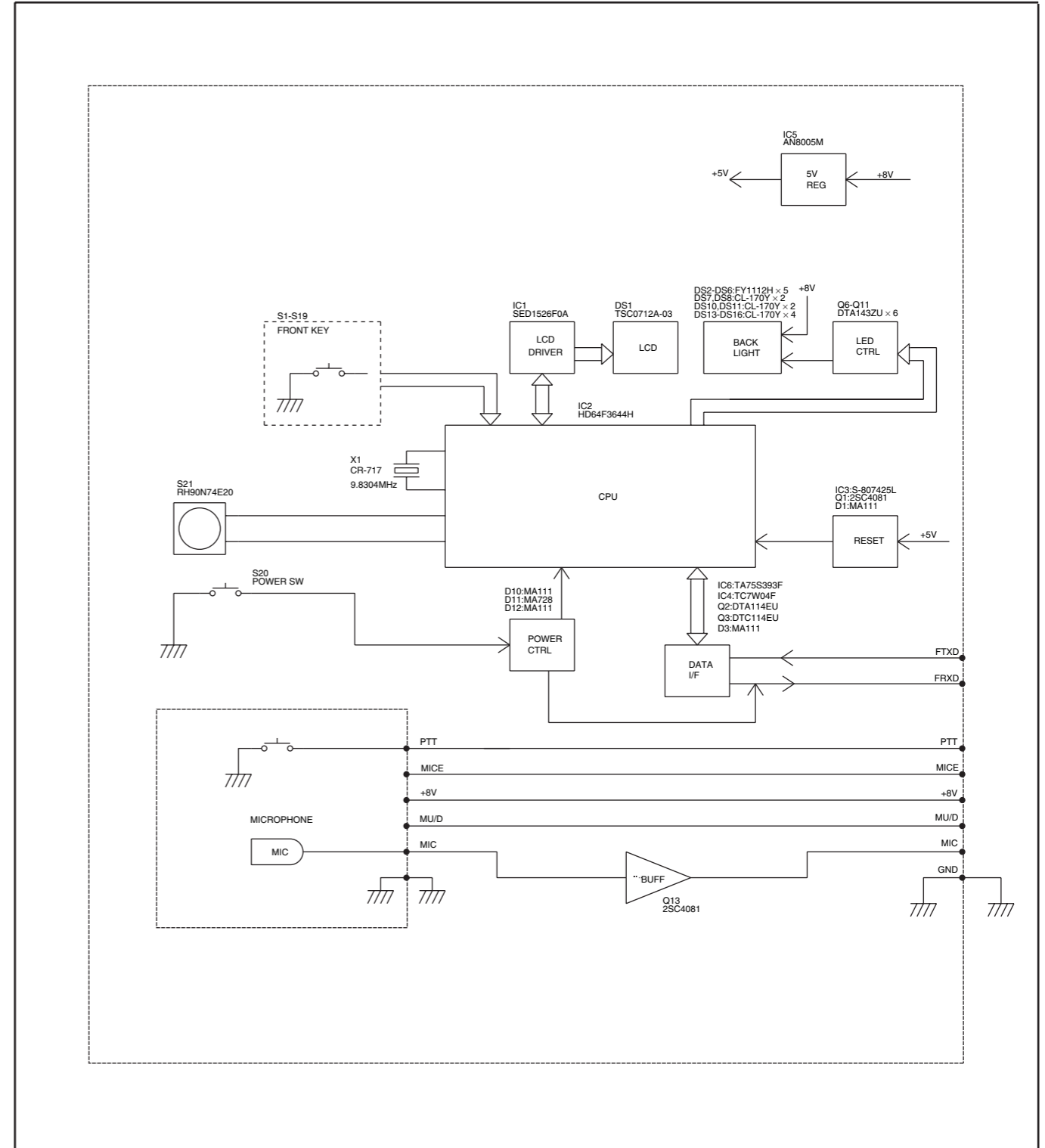
10-1 MAIN UNIT



10-2 LOGIC-1 UNIT

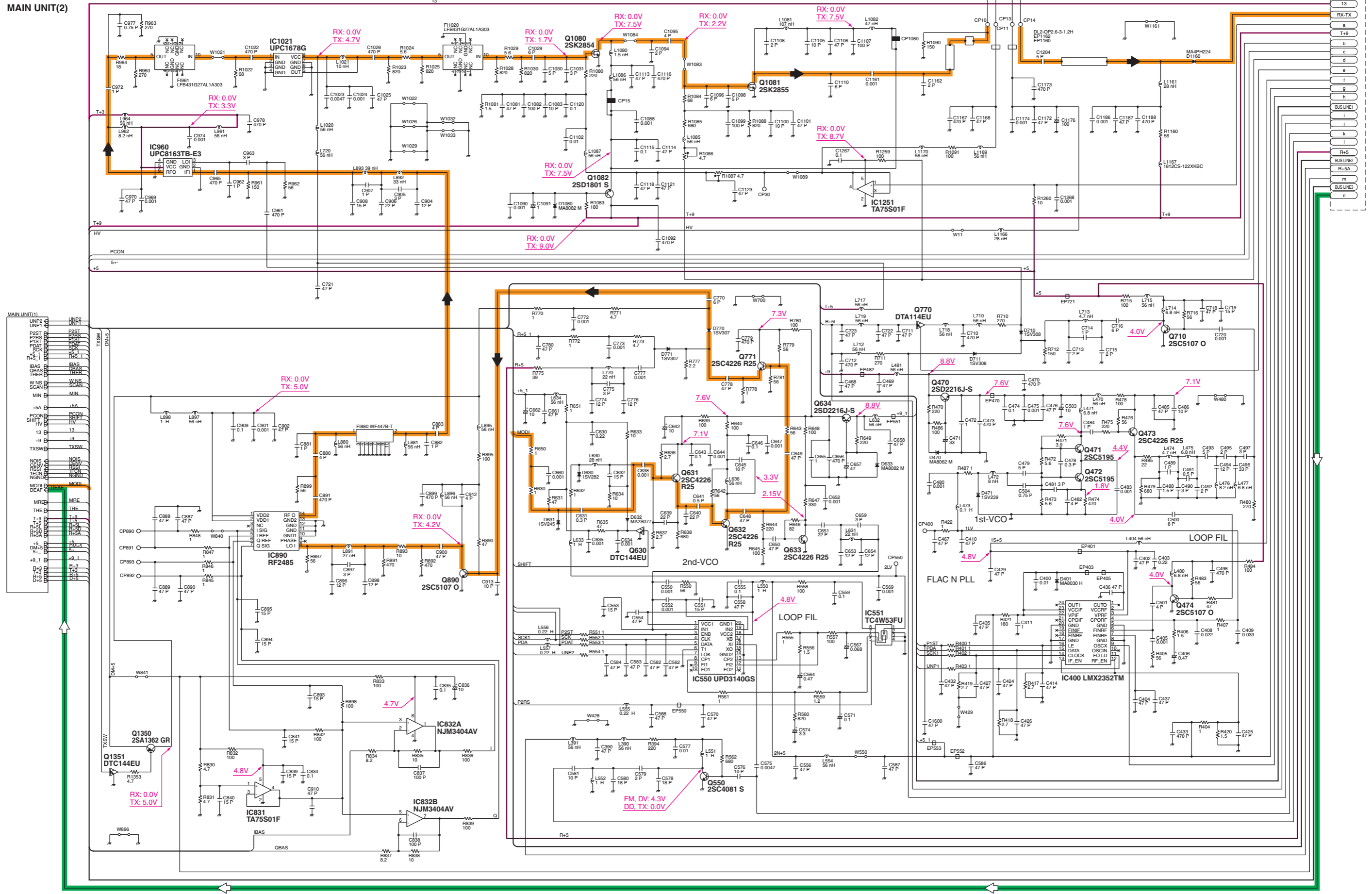


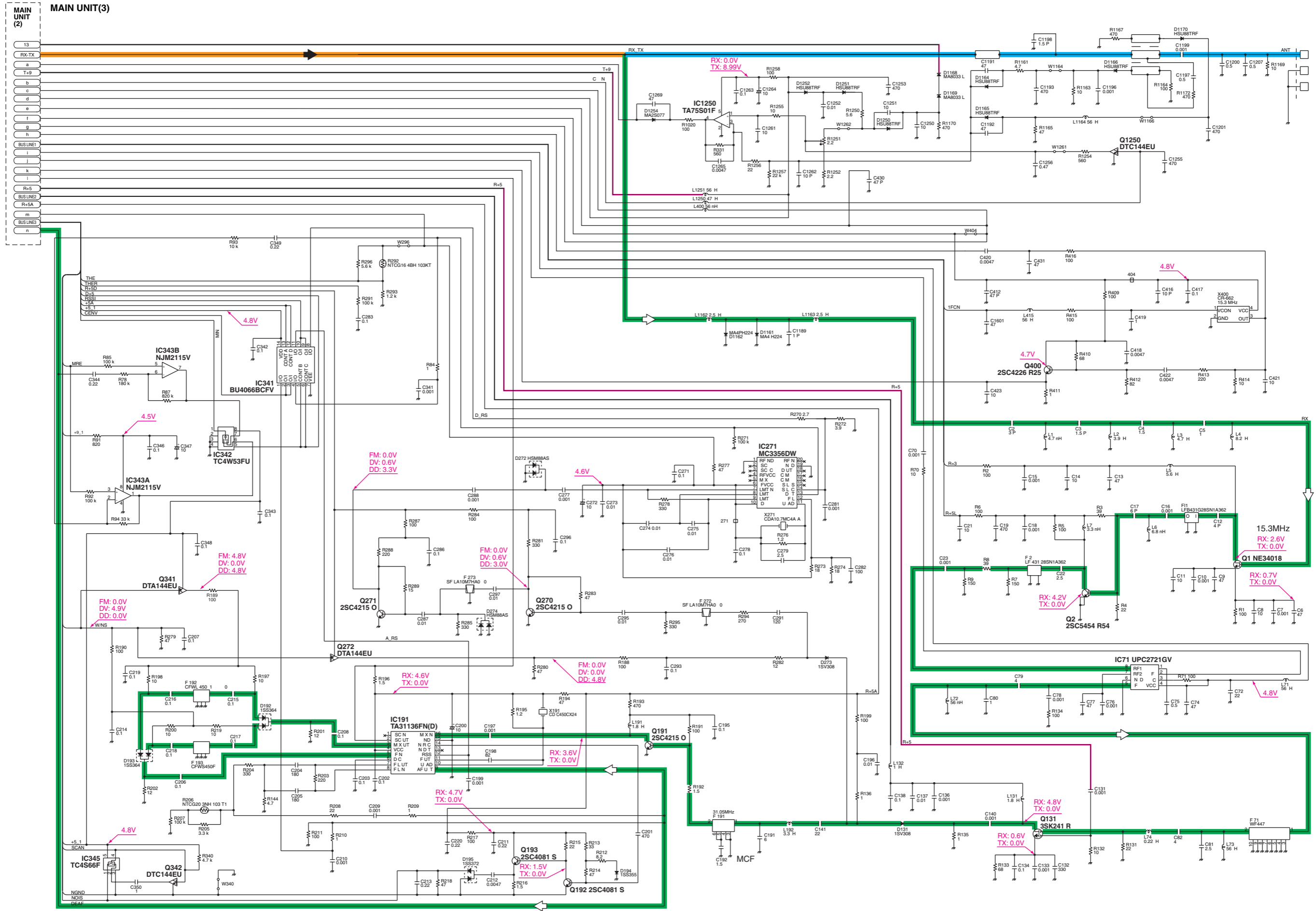
10-3 RC-24



MAIN UNIT(2)

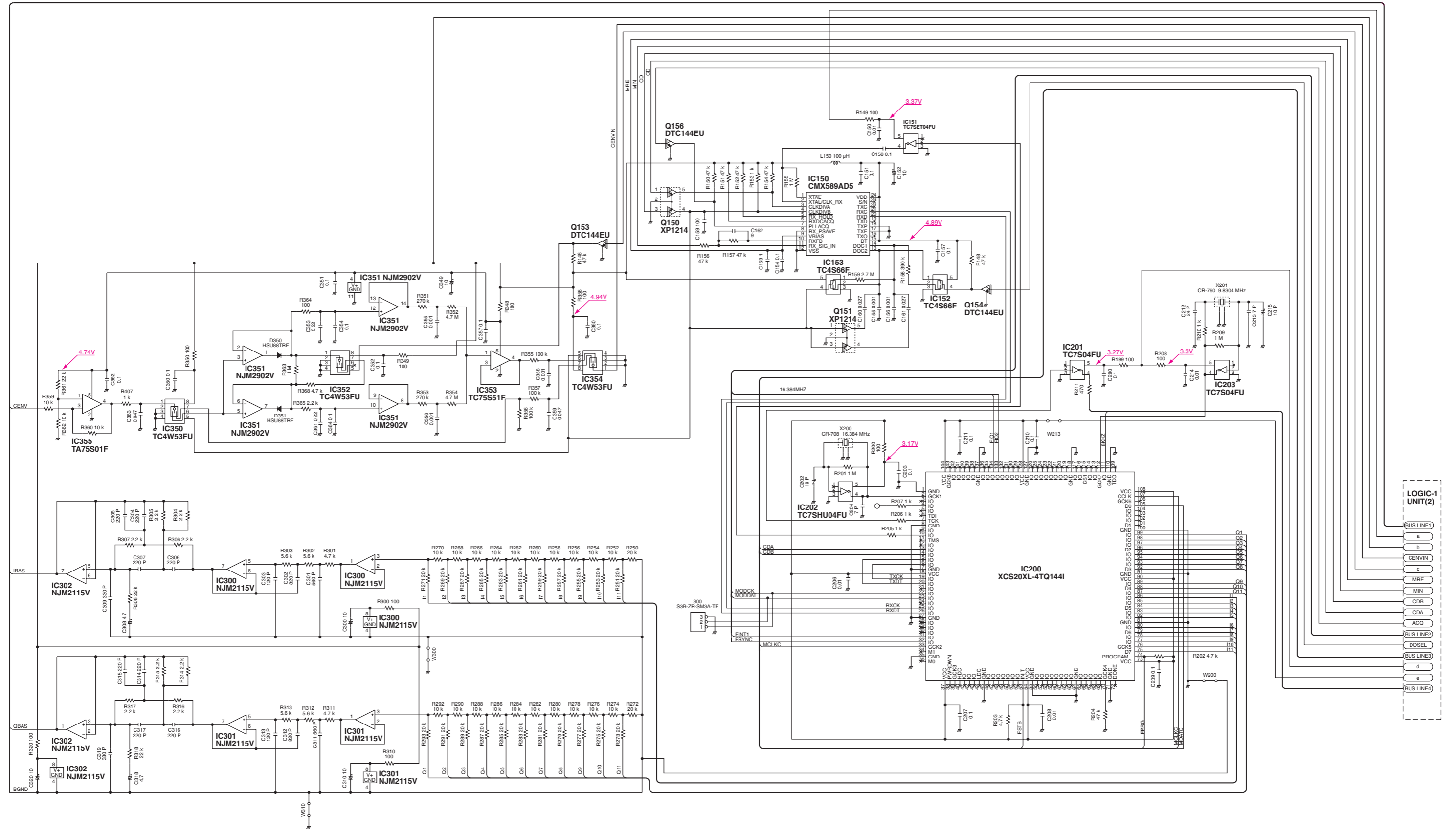
MAIN UNIT (3)



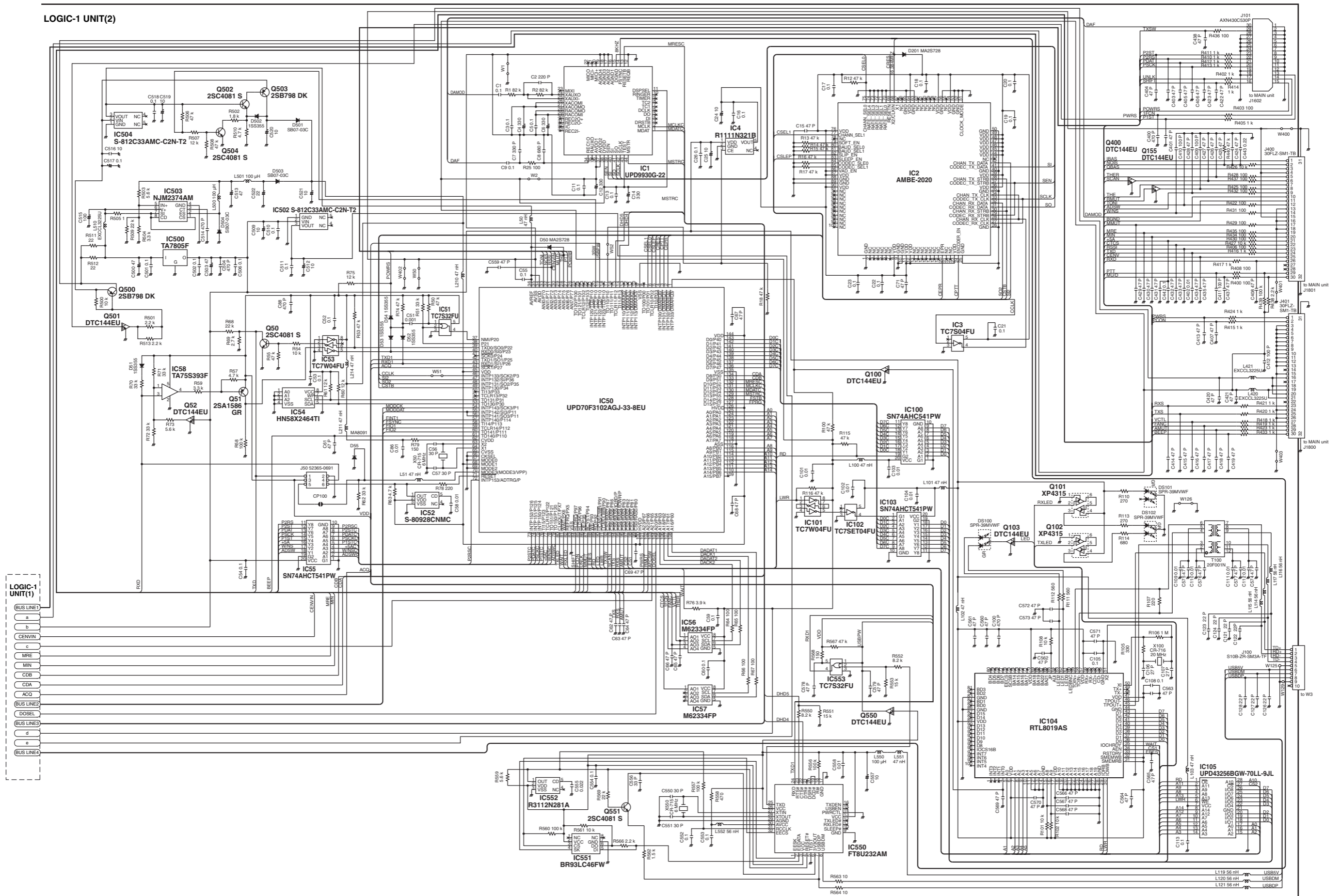


11-2 LOGIC-1 UNIT

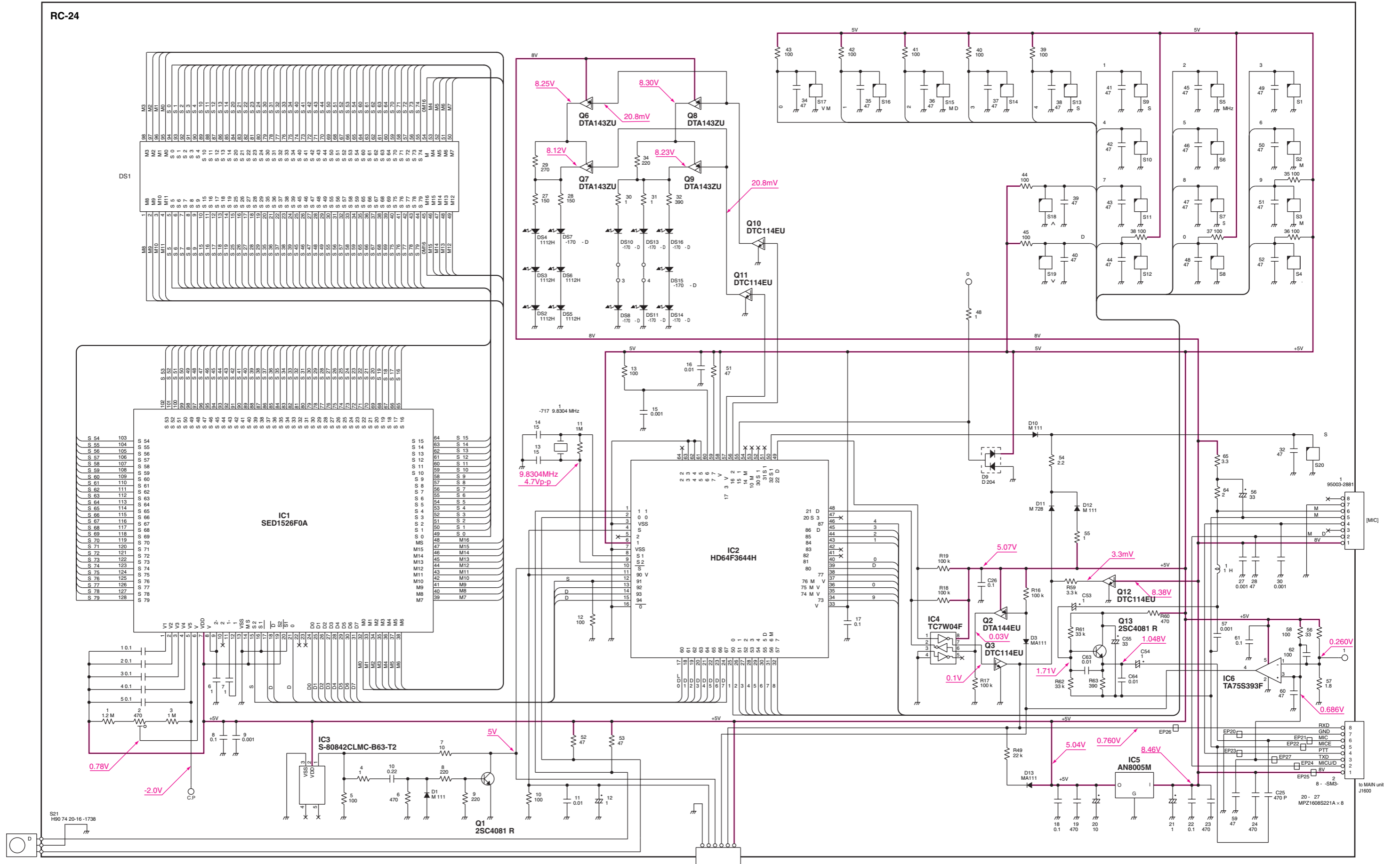
LOGIC-1 UNIT(1)



LOGIC-1 UNIT(2)



RC-24



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