



MODEL **R-K11/R-K11L**

STEREO RECEIVER

SERVICE MANUAL

SUPPLEMENT

No. 2647B APR. 1983

This service manual provides you with information on the tuner printed circuit board, tuner alignment procedures and the main amplifier circuit board.

In addition and alteration to using the ENA-002 tuner and the ENH-003 main amplifier.

You may also refer to the R-K11/R-K11L service manual No. 2647 for servicing information.

1. Tuner P.C. Board Assembly

ENA-002 : with printed resistor board

ENA-014 : with carbon resistor board

Parts List of Carbon Resistors only

Resistors

| Item No. | Parts Number | Rating | | Description |
|----------|--------------|--------|-------|-------------|
| R104 | QRD148J-102S | 1 kΩ | 1/4 W | Carbon |
| R105 | QRD148J-102S | 1 kΩ | " | " |
| R120 | QRD148J-271S | 270 Ω | " | " |
| R121 | QRD148J-101S | 100 Ω | " | " |
| R124 | QRD148J-102S | 1 kΩ | " | " |
| R125 | QRD148J-101S | 100 Ω | " | " |
| R131 | QRD148J-331S | 330 Ω | " | " |
| R140 | QRD148J-103S | 10 kΩ | " | " |
| R149 | QRD148J-123S | 12 kΩ | " | " |
| R163 | QRD148J-683S | 68 kΩ | " | " |
| R166 | QRD148J-102S | 1 kΩ | " | " |
| R173 | QRD148J-363S | 36 kΩ | " | " |
| R174 | QRD148J-363S | 36 kΩ | " | " |
| R191 | QRD148J-332S | 3.3 kΩ | " | " |
| R192 | QRD148J-332S | 3.3 kΩ | " | " |
| R193 | QRD148J-103S | 10 kΩ | " | " |

| Item No. | Parts Number | Rating | | Description |
|----------|--------------|--------|-------|-------------|
| R194 | QRD148J-103S | 10 kΩ | 1/4 W | Carbon |
| R195 | QRD148J-472S | 4.7 kΩ | " | " |
| R202 | QRD148J-103S | 10 kΩ | " | " |
| R203 | QRD148J-103S | 10 kΩ | " | " |
| R210 | QRD148J-104S | 100 kΩ | " | " |
| R211 | QRD148J-152S | 1.5 kΩ | " | " |
| R303 | QRD148J-222S | 2.2 kΩ | " | " |
| R304 | QRD148J-222S | 2.2 kΩ | " | " |
| R307 | QRD148J-102S | 1 kΩ | " | " |
| R308 | QRD148J-102S | 1 kΩ | " | " |
| R309 | QRD148J-911S | 910 Ω | " | " |
| R310 | QRD148J-911S | 910 Ω | " | " |
| R311 | QRD148J-104S | 100 kΩ | " | " |
| R312 | QRD148J-104S | 100 kΩ | " | " |
| R320 | QRD148J-104S | 100 kΩ | " | " |

2. Specified Numbers in ENA-002/ENA-014 for Designated Areas

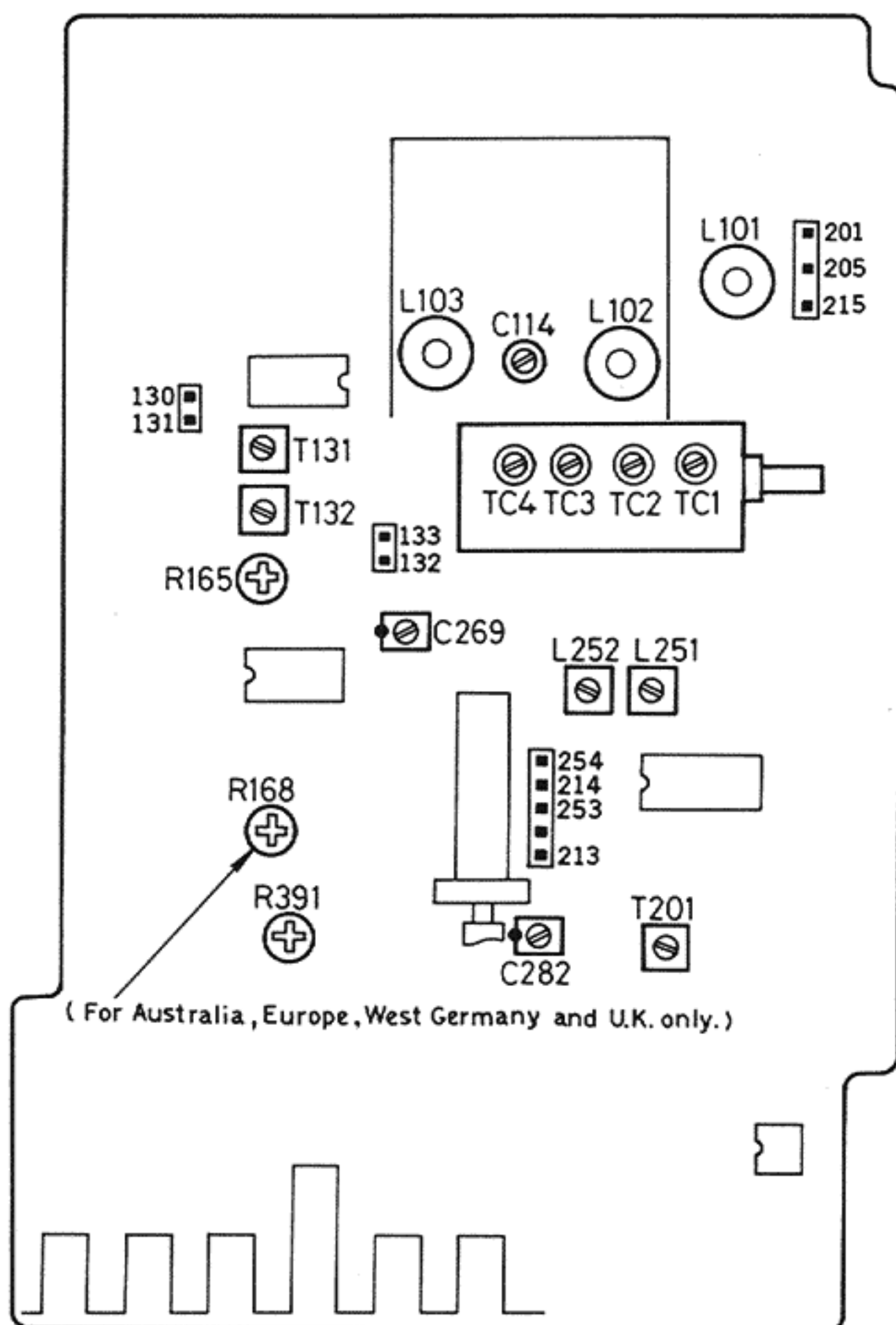
| Item No. | Description | U.S.A. & Canada A | Australia & Europe B | West Germany C | U.K. & Europe (with LW) D | Republic of South Africa E | U.S. Military Market & Other Countries A |
|----------|-------------|----------------------|-------------------------|-------------------|------------------------------|-------------------------------|---|
| L101 | RF Coil | EQR2306-013 | EQR2306-013 | EQR2306-017 | EQR2306-013 | EQR2306-013 | EQR2306-013 |
| L103 | RF Coil | EQR2406-001 | EQR2406-001 | EQR2406-001 | EQR2406-001 | EQR2406-005 | EQR2406-001 |
| R168 | Resistor | QRD148J-364S | EVP314-7-B55 | EVP314-7-B55 | EVP314-7-B55 | QRD148J-364S | QRD148J-364S |
| R234 | Resistor | QRD149J-101S | QRZ0052-680 | QRZ0052-680 | QRZ0052-680 | QRD149J-101S | QRD141J-101S |

Note: QRD148J-364S Carbon Resistor 360 k Ω 1/4 W
EVP314-7-B55 Semi-Fixed Resistor 500 k Ω

3. FM/MW (LW) Tuner Alignment Procedures

3-(1) FM Section

Alignment Location on ENA-002/ENA-014 Tuner P.C. Board Assembly



Discriminator, Center Meter, Distortion and Signal Gain

1. Set to FM.
2. Connect an RF generator, 1 kHz modulation and 75 kHz deviation, to the antenna terminals on the rear panel through a dummy antenna.
3. Connect an Oscilloscope, Distortion Meter and VTVM to the Rec. Out jacks on the rear panel.
4. Tune to a frequency where there is no broadcasting.
5. Connect a DC VTVM between TP130 and 131.
6. Adjust the core of T131 for DC VTVM reading of 0 (zero) mV.
7. Set the RF generator to 98 MHz.
8. Set the dial pointer to 98 MHz.
9. Adjust the core of T132 so that the distortion is minimized at a value less than 0.4%.

Tracking and Sensitivity

Precaution: No adjustment is necessary. The tracking and sensitivity have been adjusted properly and completely at the factory. If any special reason occasioned, take the following procedures carefully.

Low Frequency

1. Connect an RF generator to the antenna terminals on the rear panel through a dummy antenna.
2. Set the RF generator to 88 MHz, a modulation of 1 kHz and a deviation of 75 kHz to provide an input of 2 μ V.
3. Connect a VTVM and an Oscilloscope to the Rec. Out jacks on the rear panel.
4. Set the dial pointer to 88 MHz.
5. Adjust the three coils L103, L102 and L101 in the tuning gang to maximize the output.

High Frequency

6. Set the RF generator to 108 MHz, a modulation of 1 kHz and a deviation of 75 kHz, to provide an input of 2 μ V.
7. Set the dial pointer to 108 MHz.
8. Adjust the FM trimmers C114, TC1 and TC3 in the tuning gang to maximize the output.
9. Repeat these high and low frequency adjustments alternately until maximum sensitivity is obtained.

Note: After adjustment, confirm that the band cover is as follows: (for West Germany only)
FM: Lower 87.5 MHz -300 kHz, Higher 108.0 MHz $+500$ kHz

Multiplex, QSC (quieting slope control) and Separation Multiplex

1. Set the Stereo signal generator as follows: 400 Hz modulation frequency, 7.5 kHz deviation pilot, 67.5 kHz main and sub carriers. Connect its output to an RF generator.
2. Connect an RF generator to the antenna terminals through a dummy antenna.
3. Connect a VTVM, an Oscilloscope and a Distortion Meter to the Rec. Out jacks on the rear panel.
4. Set the RF generator to 98 MHz and output of 1 mV.
5. Set the dial pointer to 98 MHz.
6. Connect the Frequency Counter to 19 kHz Test Point (TP132 and TP133).
7. Switch off the pilot signal of Stereo Modulator.
8. Adjust R165 so that the frequency counter indicates 19 kHz (0 ~ -50 Hz).

QSC

9. Provide an input of 28 μ V.
10. Adjust R391 so that the separation is obtained.

Separation (for Australia, Europe, West Germany and U.K. only)

11. Adjust R168 so that the separation is maximized.

Muting Level

Note: No adjustment is necessary. However, if the check-up is required, take the following steps.

1. Release the FM MONO/MUTE OFF pushbutton during this adjustment procedures.
2. Connect a VTVM and an Oscilloscope to the Rec. Out jacks on the rear panel.
3. Set the RF generator to 108 MHz, a modulation of 1 kHz and a deviation of 75 kHz, to check the muting to be released by increasing the input level to the antenna terminals.

6-(2) MW (LW) Section

Note: () shows LW Alignment Procedures.

Tracking and Sensitivity

Low Frequency

1. Connect the RF generator to the antenna terminals on the rear panel, set this to 600 kHz (160 kHz) with 30 % modulation at 400 Hz.
2. Connect an AC VTVM and an oscilloscope to the Rec. out jacks on the rear panel.
3. Adjust OSC coil L251 (L252) and the ferrite bar antenna core to maximize the output signal. Left ferrite bar is for MW (right ferrite bar is for LW).

High Frequency

5. Set the RF generator to 1400 kHz (350 kHz) with 30 % modulation at 400 Hz.
6. Set the dial pointer to 1400 kHz (350 kHz).
7. Adjust the trimmers TC4 (C269) and TC2 (C282) in the tuning gang so that the output signal is maximized.
8. Repeat these high and low frequency adjustment procedures alternately until maximum sensitivity is obtained.

4. Main Amplifier P.C. Board Assembly

| Item No. | Description | U.S.A. <input type="checkbox"/> A & Canada <input type="checkbox"/> B | Europe & Australia <input type="checkbox"/> D | West Germany <input type="checkbox"/> G | Europe (with LW) <input type="checkbox"/> E | U.K. <input type="checkbox"/> F <input type="checkbox"/> B <input type="checkbox"/> S | U.S. Military Market & Other Countries <input type="checkbox"/> C |
|----------|-------------|---|---|--|---|--|---|
| Q725 | Transistor | — | Elimination | Elimination | Elimination | Elimination | — |
| Q726 | Transistor | — | Elimination | Elimination | Elimination | Elimination | — |
| R773 | Thermistor | — | SDT250 | SDT250 | SDT250 | SDT250 | — |
| R774 | Thermistor | — | SDT250 | SDT250 | SDT250 | SDT250 | — |
| R915 | Resistor | QRG017J-471S | QRG022J-391AM | QRG022J-391AM | QRG022J-391AM | QRG022J-391AM | QRG017J-471S |
| R922 | Resistor | QRD148J-330S | QRD148J-121S | QRD148J-121S | QRD148J-121S | QRD148J-121S | QRD148J-330S |

JVC

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