

Project p0940018, Kenwood radio – TK-390-1

1. Please update the table on page 8 of the test report to include the units of measurement.

The test report has been edited to include the measurement units.

2. The conducted power is listed as peak in the test report. However, the power sensor used (i.e. 8482A) is an average power sensor. Please clarify this discrepancy. Also, the RF power output has to be measured as radiated as well (ERP). Please update the test report to show ERP values as well.

Narrow band FM power will be the same value for peak and average measurements as the signal is practically CW.

Radiated Output Power is recorded on pages 18 thru 20 of the test report.

3. On page 9 of the test report, the spurious frequency (i.e. column 2) of the table states MHz as the frequency. However, the subsequent plots state the spurs as GHz. This maybe a typo in the table. Please correct this discrepancy.

The table on page 10 of the test report has been corrected to read GHz.

4. Some of the spurious radiated emissions listed on the tables in the test report appear to be over the limits. For instance, for the KRA-15K antenna on page 18, the corrected value is -19.2 dBm and the limit is -20 dBm. Please address this discrepancy.

All the original data was recorded without a notch filter at the spectrum analyzer and the fundamental signal forced the spectram analyzer into compression providing erroneous spurious readings. The measurements were retaken with the inclusion of a tunable notch filter.

5. SAR testing appears to have been addressed only for one antenna (i.e. KRA-15K). The part 90 test report lists two. Please justify why the second antenna was not used to perform SAR testing.

Manufacturer only wanted SAR and radio performance testing performed with one antenna, KRA-15K. The test data for KRA-23M and KRA-27M has been removed from the test report.

6. Please clarify which bandwidth was used for measuring conducted and radiated spurs and justify why both bandwidths were not used.

The 12.5 KHz OBW was used for both sets of measurements due to the more restrictive limit for Industry Canada in this bandwidth.

7. Please provide antenna data sheets for the two antennas.

Antenna datasheets are not required.

8. Please clarify if scrambling is employed by the transmitter and if so if it complies with 90.212 of the commissions rules.

There is no scrambling associated with this radio.

9. Please clarify during testing that the dimensions of the flat phantom were appropriate for measurements at 450 MHz.

The phantom is described in appendix f of the report. The size of the phantom is 600 mm x 450 mm x 200 mm. There is an ellipse in the center of the area which is 350 mm x 200 mm which is 2 mm thick. This is the dimension which are needed for 450 MHz testing.

10. Please clarify when the microphone is being used that the antenna on the radio is being by-passed.

When the antenna is used on the microphone the antenna on the radio is by-passed.

11. Please identify to exactly what specific rule parts the device is being certified to. For example, in FCC part 95, which section of 95 is the device being certified to (i.e. A, C, D)?

If the device is being certified to part 74H (i.e. low power auxiliary stations) the maximum conducted power is 1 Watt. Please clarify how this will be insured since the max output of the device, as stated in the test report, is 1Watt.

Part 22 - 22 Part E (Paging and Radiotelephone Service)
Part 74 – 74 part D (Remote Pickup Broadcast Station)
Part 95 - 95 part A (General Mobile Radio Service)

12. Please provide detailed internal photos.

Additional photos have been provided.

Industry Canada RSS 119

1. RSS 119 required that a 2.5 kHz sine wave at an input level of 16dB greater than the necessary to produce a 50% deviation be when making conducted power measurements. This does not appear to be the case from reviewing the test report. Please address this discrepancy.

Transmitter Output Power per RSS-119.4.1(a) has been added to the test report.

2. Emission mask B must be made with the same detector as used for making power measurements. Since it appears the power was measured as an average value, emissions mask B should have been made with an average detector.

The Reference plot for Output Power and the Emission mask plot are both recorded using a peak detector.

3. Emissions mask D requires the use of a 100 Hz RBW for up to and including 50 kHz removed from the edge of the authorized bandwidth. This does not appear to be the case in the test report.

Report has been updated with new test data for Emission Mask D with RBW = 100 Hz.

4. Adjacent channel power does not appear to have been performed.

Adjacent Channel Power is only required for the frequency bands of 764 – 770 MHz and 794 – 800 MHz. Refer to RSS-119 section 5.8.10.1 for more details.