

MEASUREMENT/TECHNICAL REPORT

COMPANY NAME: **Radio Systems Corporation**

MODEL: **TC-100**

FCC ID: **KE3TC100**

DATE: **August 30, 1999**

This report concerns (check one): Original grant X
Class II change

Equipment type: **Low Power Transmitter**

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? yes No X

If yes, defer until:
date

N.A. agrees to notify the Commission by N.A.
date

of the intended date of announcement of the product so that the grant can be issued on that date.

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GENERAL INFORMATION

Product Description

The Equipment Under Test (EUT) is a Radio Systems Corporation, Model TC-100 Pet Training and Containment System. The EUT incorporates a 303.825 MHz receiver and a 10.7 kHz dog fence transmitter. The receiver accepts commands from a small handheld transmitter. This report covers only the transmitter (dog fence) portion of the device.

Related Submittal(s) Grant(s)

The EUT is subject to the following authorizations:

- a) Certification as a low power receiver (10.7 kHz)
- b) Certification or DoC, as a low power receiver (303.825 MHz)

The information contained in this report is presented for the Certification authorization for the transmitter portion of the EUT. A separate report has been generated for the DoC authorization of the receiver portion of the EUT.

The EUT will also be used with a hand-held transmitter submitted and previously approved under FCC ID: PPT101.

TESTS AND MEASUREMENTS

Configuration of Tested System

The sample was tested per ANSI C63.4, Methods of Measurement from Low-Voltage Electrical and Electronic Equipment in the Range of 30 MHz -1 GHz (1992). Conducted and radiated emissions data were taken with the test receiver or spectrum analyzer's resolution bandwidth adjusted to 100 Hz (9 kHz – 150 kHz), 9kHz (150 kHz - 30 MHz), and 120 kHz (30 MHz - 1 GHz) respectively. All measurements are peak unless stated otherwise. The video filter associated with the spectrum analyzer was off throughout the evaluation process. Interconnecting cables were manipulated as necessary to maximize emissions. A block diagram of the tested system is shown in Figure 1. Test configuration photographs for spurious and fundamental emissions are shown in Figure 2.

The EUT was set up with a 300' length of wire connected to it, to simulate a typical installation. The wire was not buried, as it would be in a typical installation (approximately 2 -3 inches). Measurements were taken at all three antenna polarities on each side of the square and intervals in between, at a distance of 3 meters. The side with the worst case results was re-measured at a distance of 10 meters. Results between 100 kHz and 30 MHz were corrected to 30 meters by the following $40 \log(300/10) = 59.1$ dB. Those results below 100 kHz were corrected to 300 meters by the following $60 \log(300/10) = 88.6$ dB (which is allowed per previous discussion with Greg Czumak at the FCC).

Test Facility

Conducted testing was performed at US Tech's measurement facility as described to the FCC and acknowledged in their letter marked 31040/SIT/USTECH.

Additional radiated testing was performed at a vacant area that would allow measurements to be made 10 meters away from the EUT with the 300' length of wire connected to it.

Test Equipment

Table 2 describes test equipment used to evaluate this product.

Modifications

No modifications were made to bring the EUT into compliance with FCC Part 15, Class B Requirements:

FIGURE 1
TEST CONFIGURATION

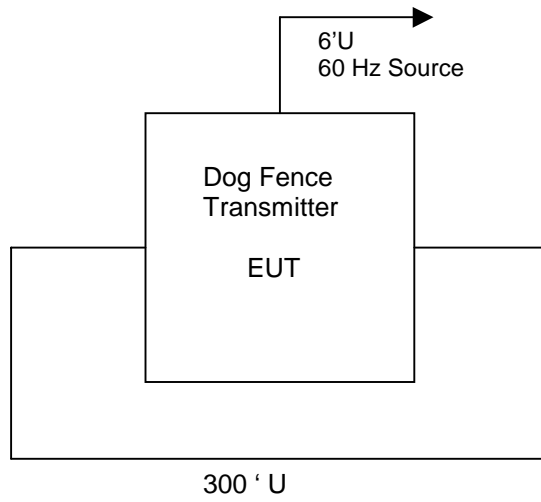


FIGURE 2

Photograph(s) for Spurious and Fundamental Emissions



FIGURE 2

Photograph(s) for Spurious and Fundamental Emissions



