TYPE OF EXHIBIT: TABLE OF CONTENTS

FCC PART: 2.1033(c)(14)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

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TYPE OF EXHIBIT: LIST OF TEST EQUIPMENT USED

FCC PART: 2.947(d)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

ITEM	MAKE/MODEL	SERIAL NO.	CAL.	NEXT CAL.
DC Power Supply	ASTRON VS-20M	9201017	N/A	
Multimeter	HP3466A	N/A	N/A	
RF Test Set	HP8920A	3352A03633	10/31/2014	10/31/2017
RF Test Set	HP 3920B	1000681480	10/31/2014	10/31/2017
Signal Generator	Agilent N5181A	MY46240065	10/31/2014	10/31/2017
Spectrum Analyzer	Agilent E4407B	MY45112636	06/20/2016	06/20/2017
Storage Scope	Fluke PM3335	DM630034	N/A	N/A
Temp. Chamber	Delta Design 3900	0-52-R	N/A	N/A
Thermocouple	Triplett 320-G/P		N/A	N/A
Log Periodic	Electo-Metrics LPA-25	8-102	04/30/2014	04/30/2017
Adjustable Dipoles	Ritron Inc.		04/30/2014	04/30/2017
Gain Horn	Emco #3105	2034	04/30/2014	04/30/2017

TYPE OF EXHIBIT: MEASUREMENT METHODS

FCC PART: 2.947

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: September 12, 2016

All of the measurements made on this device and included in this report were made per ANSI/TIA-603-D-2010.

Kevin G. Matson
Senior Project Manager
RITRON, Inc.

TYPE OF EXHIBIT: DESCRIPTION OF MEASUREMENT FACILITY

FCC PART: 2.948

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 30, 2016

The Field Strength measurements filed with this application were made on a site certified by RITRON, Inc. Data pertaining to this side are on file with the FCC and Industry Canada and are current.

This site is used on a continuing basis exclusively by RITRON, Inc. and is utilized only for RF Field Strength measurements of equipment designed and manufactured by RITRON, Inc. It is not used for measurements by, or for, any other party on a contract basis or otherwise.

All other measurements were taken at RITRON's Engineering Laboratory in Carmel, IN.

Kevin G. Matson
Senior Project Manager
RITRON, Inc.

TYPE OF EXHIBIT: RADIO FREQUENCY OUTPUT POWER

FCC PART: 2.1046(a)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

PROCEDURE:

1. The DTX-965 was aligned for transmitter operation at three power levels per the tune-up procedure outlined in the Maintenance manual for frequencies at the lower and upper band edges.

2. Power was supplied to the DTX-965 by an Astron VS-20M Power Supply. The DTX-965 was connected to a HP3920B Test Set used to measure the RF carrier power. The input to the Test Set provides a resistive 50-ohm termination at the frequencies and power levels used for this test.

3. The voltage across an internal shunt in series with the power supply lead of the RF Power Module was used with an Fluke 45 Digital Multimeter to measure current (Id). A B&K 2704A was used to measure the RF Power Module output stage power control voltage (Vcon) and drain voltage (Vd).

4. Measurements were taken at power levels 5 watts, 15 watts, and 30 watts.

TYPE OF EXHIBIT: RADIO FREQUENCY OUTPUT POWER

FCC PART: 2.1046(a)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

RESULTS:

896.8875 MHz:

Pout(W)	Con1(V)	Con2(V)	Vd(V)	Id(A)	Eff (%)
5	3.2	0.0	12.5	3.6	11.1
15	3.2	1.3	12.5	5.3	22.6
30	3.2	3.5	12.5	8.1	29.7

900.8875 MHz:

Pout(W)	Con1(V)	Con2(V)	Vd(V)	Id(A)	Eff (%)
5	3.2	0.0	12.5	3.4	11.8
16	3.2	1.8	12.5	5.5	23.3
30	3.2	3.8	12.5	8.1	29.6

TYPE OF EXHIBIT: MODULATOR RESPONSE-12.5 kHz CHANNELS

FCC PART: 2.1047(a)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

PROCEDURE:

1. The DTX-965 modulator response was measured from the audio input to the modulator input.

2. The unit was swept in frequency from 100 Hz to 10 kHz and the results noted. Plots are shown for 12.5 kHz channel spacing operation for both flat and pre-emphasized modes. The frequency response is independent of carrier frequency.

TYPE OF EXHIBIT: MODULATOR RESPONSE-12.5 kHz CHANNELS

FCC PART: 2.1047(a)

MANUFACTURER: RITRON, Inc.

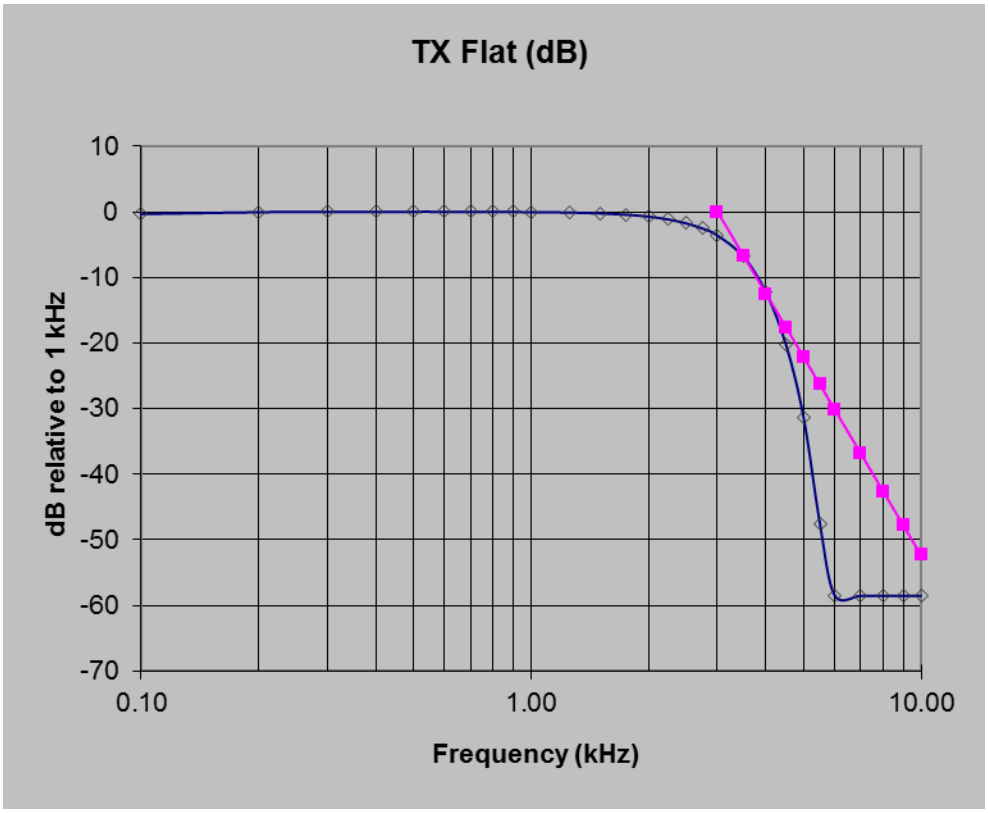
MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

RESULTS: Flat audio input



TYPE OF EXHIBIT: MODULATOR RESPONSE-12.5 kHz CHANNELS

FCC PART: 2.1047(a)

MANUFACTURER: RITRON, Inc.

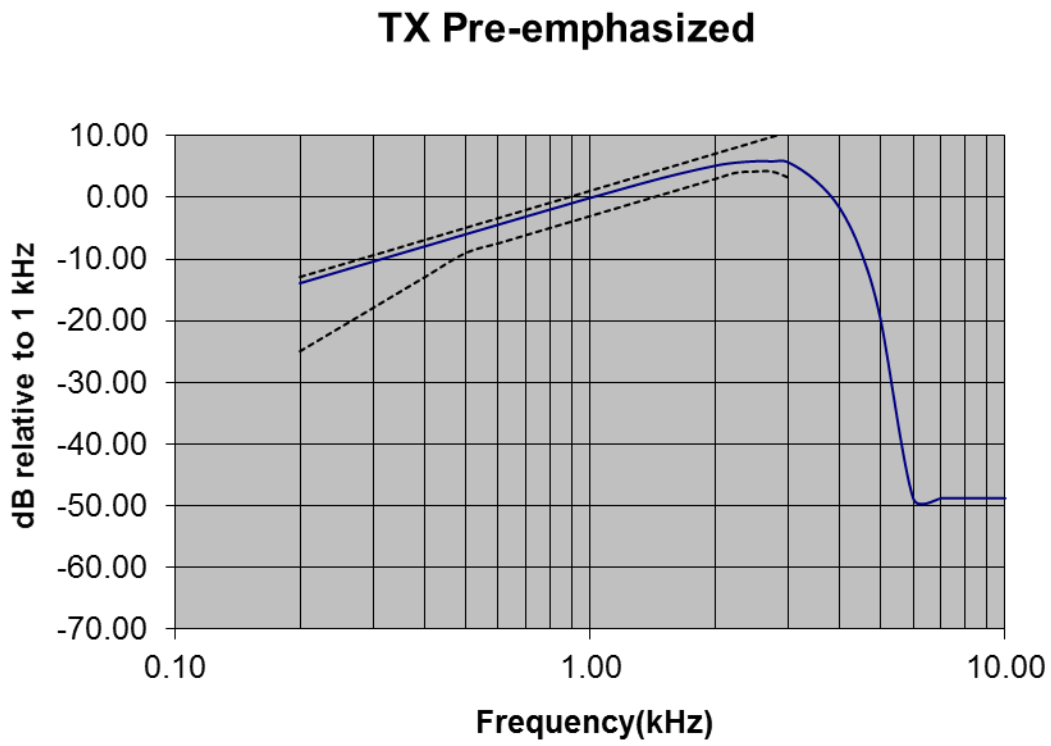
MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

RESULTS: Pre-emphasized audio



TYPE OF EXHIBIT: CLIPPER FILTER RESPONSE

FCC PART: 2.1047(a)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

PROCEDURE:

1. The audio output of the audio test set was coupled into the audio input of the DTX-965. The flat input mode was selected. The audio input of the test set was connected to the input of the modulator.

2. The audio generator frequency was swept from 100 Hz to 10 kHz and the response for 12.5 kHz channel spacing operation was noted and plotted. The frequency response is independent of carrier frequency.

TYPE OF EXHIBIT: CLIPPER FILTER RESPONSE-12.5 kHz CHANNELS

FCC PART: 2.1047(a)

MANUFACTURER: RITRON, Inc.

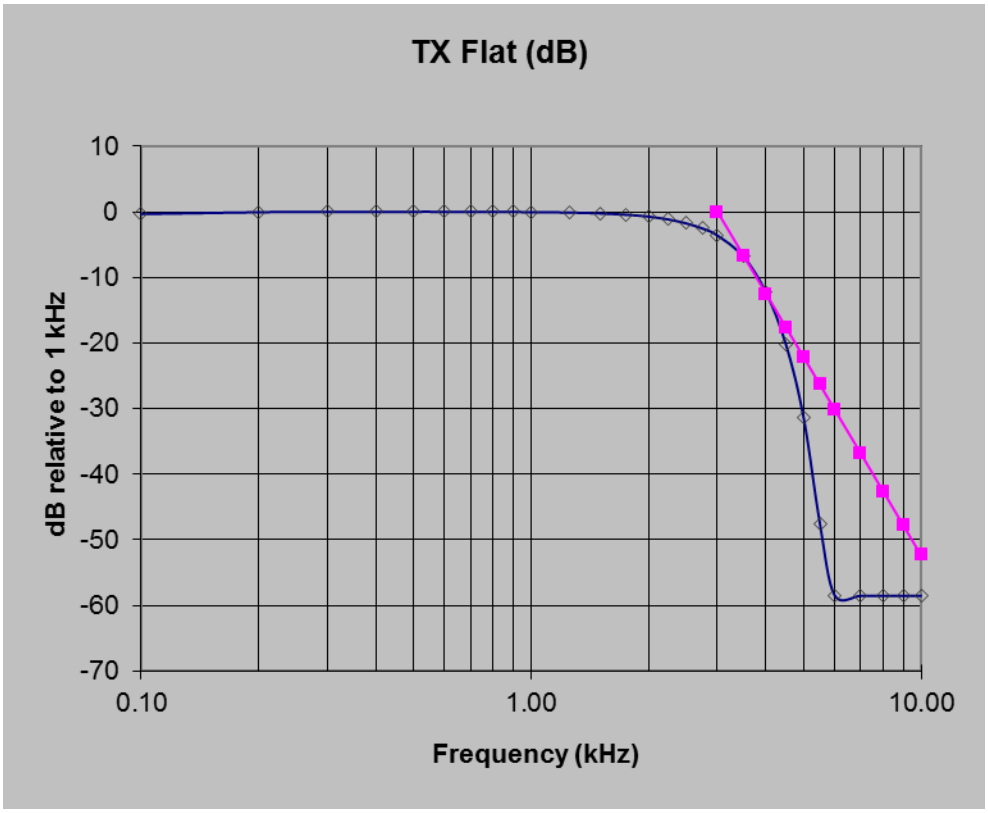
MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

RESULTS:



TYPE OF EXHIBIT: MODULATION LIMITING CURVES

FCC PART: 2.1047(b)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 16, 2016

PROCEDURE:

1. The DTX-965 was aligned for transmitter operation on 896.8875 MHz per the tune-up procedure outlined in the Maintenance manual.

2. The RF output was connected to the RF input of a radio Test Set configured to measure FM deviation. The audio generator output of the audio test set was routed to the audio input of the DTX-965.

3. The frequency of the audio generator was adjusted to find the frequency of maximum response and percentage modulated deviation was calculated relative to this. The DTX-965 transmit deviation was adjusted for 2.4 kHz maximum deviation for 12.5 kHz channel spacing.

4. Percentage modulation plots are given for the narrowband transmitter filter for both flat and pre-emphasized input for all but the super narrowband.
5. Three varying audio frequencies with increasing input level were used in each plot to show the limiting characteristics.

TYPE OF EXHIBIT: MODULATION LIMITING CURVES-12.5 kHz CHANNELS

FCC PART: 2.1047(b)

MANUFACTURER: RITRON, Inc.

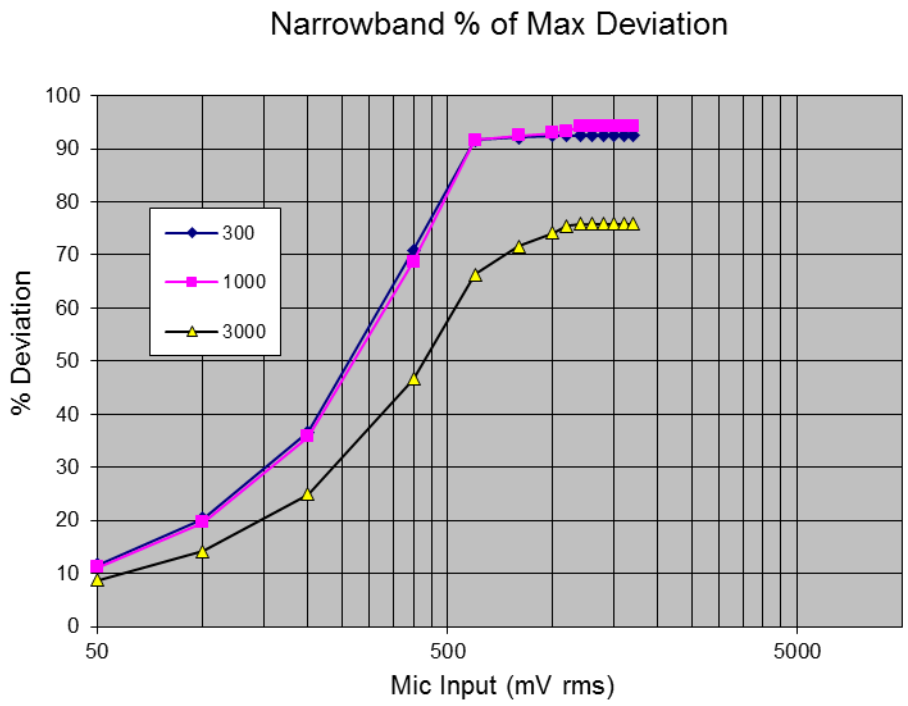
MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 16, 2016

RESULTS: Flat audio input



TYPE OF EXHIBIT: MODULATION LIMITING CURVES-12.5 kHz CHANNELS

FCC PART: 2.1047(b)

MANUFACTURER: RITRON, Inc.

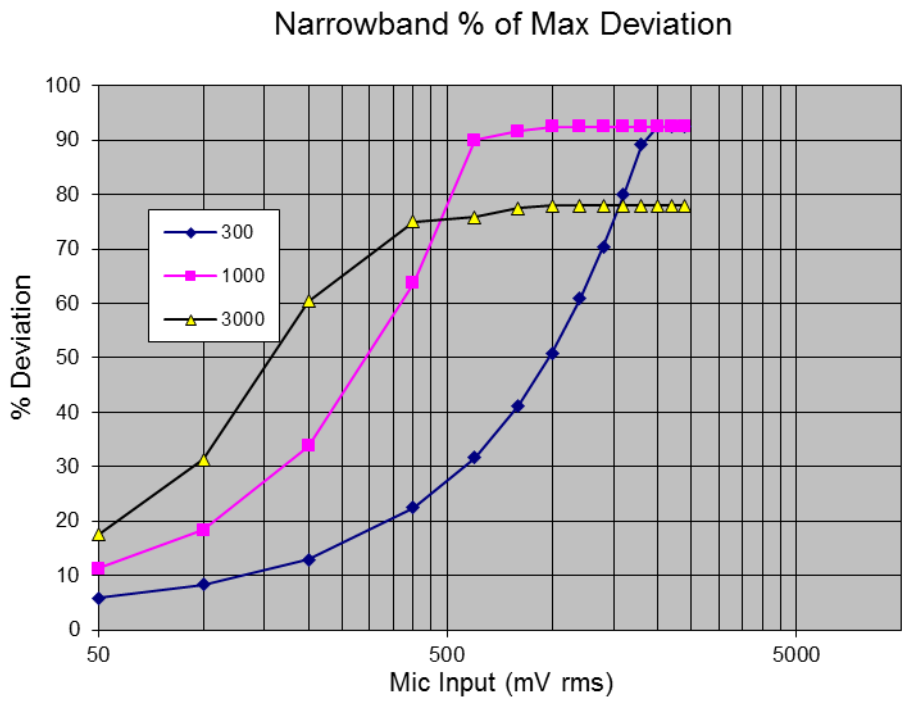
MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 16, 2016

RESULTS: Pre-emphasized audio input



TYPE OF EXHIBIT: OCCUPIED BANDWIDTH

FCC PART: 2.1049(c)(1), 90.210(i)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 15, 2016

PROCEDURE:

1. For 12.5 kHz channel voice operation, a 2.5 kHz audio signal was applied to the microphone input of the unit. Its level was adjusted to be 16 dB above that required to produce 50% of peak deviation at the frequency of maximum deviation. The deviation adjustment was set for 2.4 kHz maximum deviation for 12.5 kHz channel voice operation and 2.1 kHz deviation for data and a spectrum analyzer was connected to the RF output through an RF power attenuator. The analyzer was set to sweep +/-50 kHz of carrier with a reference level set to that observed when the resolution bandwidth and video bandwidth were set to 100 Hz.

2. The occupied bandwidth plots are independent of carrier frequency, therefore, only the plots for 896.8875 MHz are shown.

TYPE OF EXHIBIT: OCCUPIED BANDWIDTH

FCC PART: 2.1049(c)(1), 90.210(i)

MANUFACTURER: RITRON, Inc.

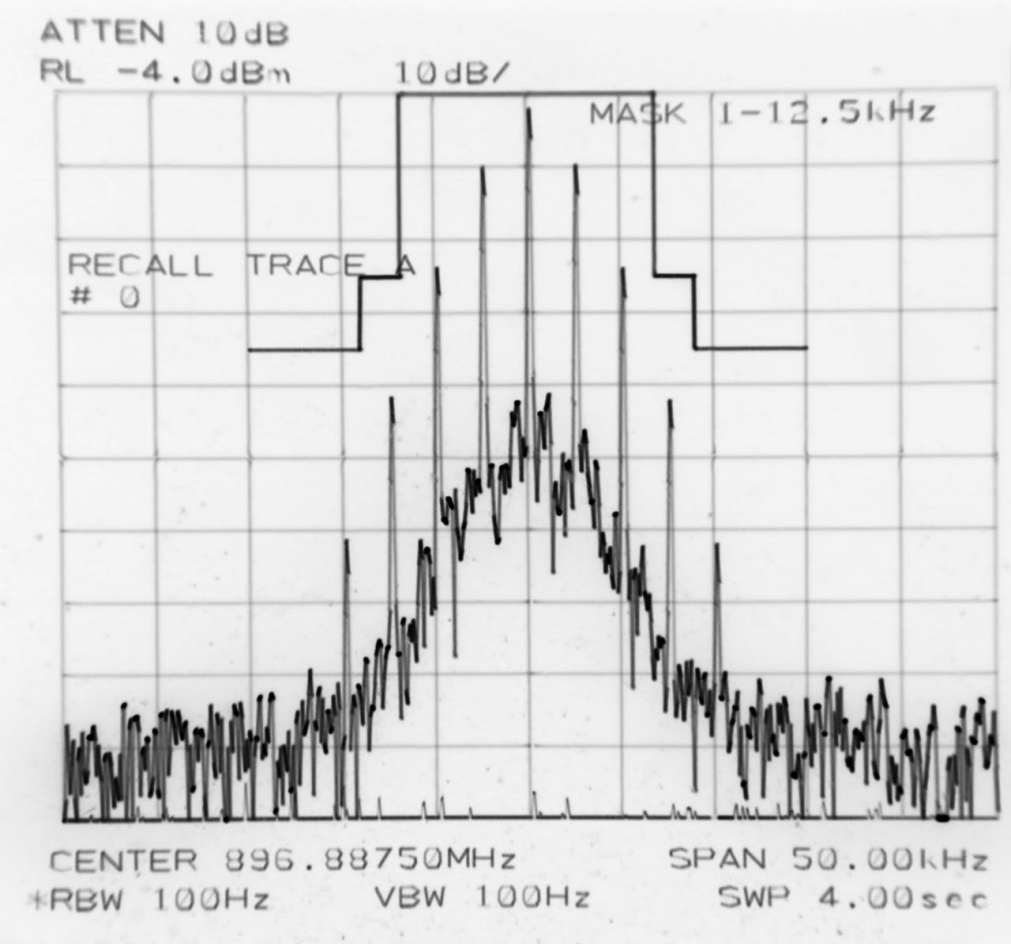
MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 15, 2016

RESULTS: Analog Voice Modulation (12.5 kHz)



TYPE OF EXHIBIT: OCCUPIED BANDWIDTH-

FCC PART: 2.1049(c)(1), 90.210(i)

MANUFACTURER: RITRON, Inc.

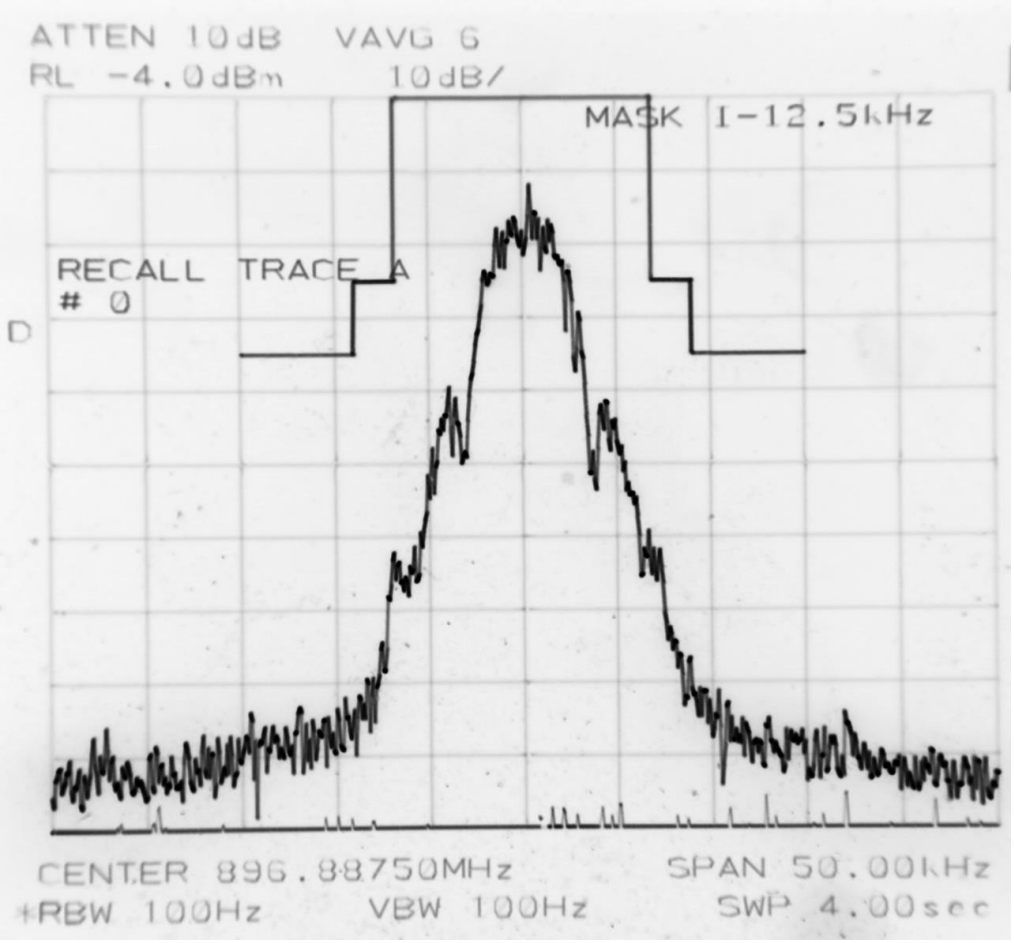
MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 15, 2016

RESULTS: FSK Data Modulation (4800bps)



TYPE OF EXHIBIT: BANDWIDTH CALCULATION/MODULATION TYPE

FCC PART: 2.1049(c)(1), 90.210(i)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

RESULTS:

Modulation:

Voice

Analog voice signals directly modulate the transmitter carrier with a maximum peak deviation which is dependant upon the channel spacing. Voice signals are pre-emphasized, limited, and filtered prior to being sent to the modulator.

Data-FSK

The FSK data stream is encoded into dibits at half the original data rate and used to create a 2-level audio signal which passes through a gaussian filter and is then used to directly modulate the transmitter carrier. The maximum deviation is dependent upon the channel spacing.

TYPE OF EXHIBIT: BANDWIDTH CALCULATION/MODULATION TYPE

FCC PART: 2.1049(c)(1), 90.210(i)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

RESULTS:

By Carson's rule, the occupied bandwidth for an FM signal may be calculated by:

$BW = 2(f_\Delta + f_m)$ where f_Δ is the frequency deviation and f_m is the modulating frequency.

Modulation	f_Δ	f_m	BW	Emissions Designator
Analog Voice				
12.5 kHz	2.5	2.5	10.0	10K0F3E
FSK Data				
12.5 kHz	2.10	1.90	8.0	8K00F1D

TYPE OF EXHIBIT: CONDUCTED SPURIOUS EMISSIONS

FCC PART: 2.1051, 90.210(i)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 17, 2016

PROCEDURE:

1. The DTX-965 was aligned for transmitter operation at the band edges at power levels 5, 15, and 30 watts per the tune-up procedure outlined in the Maintenance manual. The transmitter was modulated in a manner consistent with the type of signal to be transmitted.

2. The RF output was connected to an Agilent E4407B spectrum analyzer through a 30 dB, 100 watt and 20dB, or 10dB 50 ohm RF attenuator depending on the measured power. The center frequency of the spectrum analyzer was set to the transmitter frequency. The frequency span and resolution and video bandwidths were set to show spurious emissions at least 80 dB below the unmodulated carrier level. The transmitter was keyed and the reference level on the analyzer noted.

3. For the transmitter harmonics, an RF highpass filter was inserted into the path from the attenuator to the spectrum analyzer.

4. The transmitter was keyed and the output spectrum was examined from 9 kHz to 10 times the operating frequency, except within 100 kHz of the operating frequency. The attenuation of the highpass filter at the transmitter harmonic frequencies was measured and factored into the absolute dBm results.

5. Spurious harmonics 20 dB below the FCC specification of -13dBm were not reported.

TYPE OF EXHIBIT: CONDUCTED SPURIOUS EMISSIONS

FCC PART: 2.1051, 90.210(i)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 17, 2016

RESULTS:

896.8875 MHz (5 Watts)

Spur Freq(MHz)	Harmonic	Spur level(dBm)	Rel. Spur(dBc)	Limit(dBc)
896.8875	fund.	37.5	NA	NA

All unreported Spurious Harmonics were greater than 20db below FCC Limit

900.8875 MHz (5 Watts)

Spur Freq(MHz)	Harmonic	Spur level(dBm)	Rel. Spur(dBc)	Limit(dBc)
900.8875	fund.	37.5	NA	NA

All unreported Spurious Harmonics were greater than 20db below FCC Limit

TYPE OF EXHIBIT: CONDUCTED SPURIOUS EMISSIONS

FCC PART: 2.1051, 90.210(i)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 17, 2016

RESULTS:

896.8875 MHz (15 Watts)

Spur Freq(MHz)	Harmonic	Spur level(dBm)	Rel. Spur(dBc)	Limit(dBc)
896.8875	fund.	42.0	NA	NA
2690.6625	3rd	-32.0	-74.0	-55

All unreported Spurious Harmonics were greater than 20dB below FCC Limit

900.8875 MHz (15 Watts)

Spur Freq(MHz)	Harmonic	Spur level(dBm)	Rel. Spur(dBc)	Limit(dBc)
900.8875	fund.	42.0	NA	NA
2702.6625	3rd	-30.5	-72.5	-55

All unreported Spurious Harmonics were greater than 20dB below FCC Limit

TYPE OF EXHIBIT: CONDUCTED SPURIOUS EMISSIONS

FCC PART: 2.1051, 90.210(i)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 17, 2016

RESULTS:

896.8875 MHz (30 Watts)

Spur Freq(MHz)	Harmonic	Spur level(dBm)	Rel. Spur(dBc)	Limit(dBc)
896.8875	fund.	45.0	NA	NA
1793.7750	2nd	-32.5	-77.5	-58
2690.6625	3rd	-31.0	-76.0	-58
3587.5500	4th	-31.5	-76.5	-58

All unreported Spurious Harmonics were greater than 20dB below FCC Limit

900.8875 MHz (30 Watts)

Spur Freq(MHz)	Harmonic	Spur level(dBm)	Rel. Spur(dBc)	Limit(dBc)
900.8875	fund.	45.0	NA	NA
2702.6625	3rd	-30.5	-75.5	-58
3603.5500	4th	-31.5	-76.5	-58

All unreported Spurious Harmonics were greater than 20dB below FCC Limit

TYPE OF EXHIBIT: FIELD STRENGTH OF SPURIOUS EMISSIONS-TRANSMITTER

FCC PART: 2.1053(a), (b)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 30, 2016

PROCEDURE:

1. The measurements for field strength of spurious emissions were taken at the RITRON, Inc. 3-meter test site, details of which are on file with the FCC and Industry Canada.

2. The DTX-965 was aligned and programmed for transmitter operation at the band edges of 896 MHz to 901 MHz at a 30 watt power level per the tune-up procedure outlined in the Maintenance manual.

3. The unit was then terminated at the antenna port with a non-radiating 50-ohm load.

4. All field strength measurements were made with the Agilent E4407B Spectrum Analyzer and a microwave gain horn antenna.

5. The transmitter was keyed and the spectrum searched from 9 kHz to the 10^{th} harmonic of the transmit carrier. When a spurious emission was found, the height and polarization of the field strength measurement antenna and orientation of the DTX-965 were varied to provide maximum field strength.

6. A substitution antenna, a calibrated dipole, was substituted for the DTX-965 at the DTX-965's location. An RF signal generator was set for the frequency of the DTX-965 with the level at the substitution antenna noted.

7. The polarization of the substitution antenna was adjusted for maximum signal strength at the field strength measuring antenna. The level at the field strength antenna was noted.

8. Since the radiated harmonics are worst case at 30 watts, only the data for 30 watts is recorded.

TYPE OF EXHIBIT: FIELD STRENGTH OF SPURIOUS EMISSIONS-TRANSMITTER

FCC PART: 2.1053(a), (b)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 30, 2016

EQUATIONS:

The spurious level is referenced to the carrier level of the transmitter, which for 30 watts is (44.8 dBm), maximum. The equation for spurious levels relative to carrier level is:

Pspur (dBc) = Pcarr (dBm) – Pspur (dBm)

For radiated emissions testing, Pspur (dBm) is the spurious emissions level as measured at the range receiving antenna. The reference level at the range receiving antenna for a 30 watt transmitter is:

Pcarr (dBm) = 44.8 dBm – Pgen (dBm) + Lcab (dB) + Pref (dBm)

Where:

Pcarr is the calculated level of a 30 watt transmitter into the substitution antenna.

Pgen is the RF signal generator level at the substitution antenna input.

Lcab is the cable loss from the substitution signal generator to the substitution antenna.

Pref is the power level of the substitution antenna emission at the receiving antenna output.

The overall equation thus becomes:

Pspur (dBc) = -44.8 dBm + Pgen (dBm) - Lcab (dB) - Pref (dBm)+ Pspur (dBm)

For an absolute level of the spur, the equation is:

Spur Level(dBm) = Pspur (dBm) - Pref (dBm) + Pgen (dBm) - Lcab (dB)

TYPE OF EXHIBIT: FIELD STRENGTH OF SPURIOUS EMISSIONS-TRANSMITTER

FCC PART: 2.1053(a), (b)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 30, 2016

RESULTS:

For the two frequencies tested, the spurious response within 20 dB of the absolute FCC limit of -13 dBm (relative level of -57.8 dBc) are stated below:

896.8875MHz: 30 Watts

	Horizontal				**Vertical**		
	Max Spur	FCC	FCC		Max Spur	FCC	FCC
Freq(MHz)	ERP(dBm)	Limit(dBm)	Margin(dB)	Freq(MHz)	ERP(dBm)	Limit(dBm)	Margin(dB)
1793.7750	-27.5	-13	14.5	1793.7750	-18.5	-13	5.5
2690.6625	-26.0	-13	13.0	2690.6625	-14.0	-13	1.0
3587.5500	-32.0	-13	19.0	3587.5500	-25.0	-13	12.0

TYPE OF EXHIBIT: FIELD STRENGTH OF SPURIOUS EMISSIONS-TRANSMITTER

FCC PART: 2.1053(a), (b)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 30, 2016

RESULTS:

900.8875MHz: 30 Watts

	Horizontal				Vertical		
	Max Spur	FCC	FCC		Max Spur	FCC	FCC
Freq(MHz)	ERP(dBm)	Limit(dBm)	Margin(dB)	Freq(MHz)	ERP(dBm)	Limit(dBm)	Margin(dB)
1801.7750	-25.0	-13	12.0	1801.7750	-22.0	-13	9.0
2702.6625	-25.0	-13	12.0	2702.6625	-19.0	-13	6.0
3603.5500	-29.5	-13	16.5	3603.5500	-24.5	-13	11.5

TYPE OF EXHIBIT: FREQUENCY STABILITY VS TEMPERATURE

FCC PART: 2.1055(a)(1), 90.213

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

PROCEDURE:

1. The DTX-965 was aligned for transmitter operation at 900.8875 MHz at full rated power per the tune-up procedure outlined in the Maintenance manual.

2. The DTX-965 was placed in a Delta Design Model 3900 CL Temperature Chamber. The RF output of the DTX-965 was connected to an HP3920B Test Set to monitor the transmitter frequency. An Astron VS-20M Power Supply was adjusted for a nominal voltage of 12.5 VDC and connected to the DC power supply input of the DTX-965. A Triplett Model 320-G/P Thermocouple was used to monitor the temperature inside the chamber.

3. The chamber and the DTX-965 were heated to 60 degrees C and allowed to stabilize for 60 minutes for the first measurement and then cooled for 30 minutes for each 10 degree increment in temperature until the unit reached a temperature of -30 degrees C.

4. The RF frequency at each temperature was recorded and compared with the frequency at 20 degrees C.

5. The DTX-965 was set for +/-12.5 kHz(narrow) mode and the carrier was unmodulated. The frequency stability remained unchanged at different emission modes, therefore, only the unmodulated data is shown.

TYPE OF EXHIBIT: FREQUENCY STABILITY VS TEMPERATURE

FCC PART: 2.1055(a)(1), 90.213

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

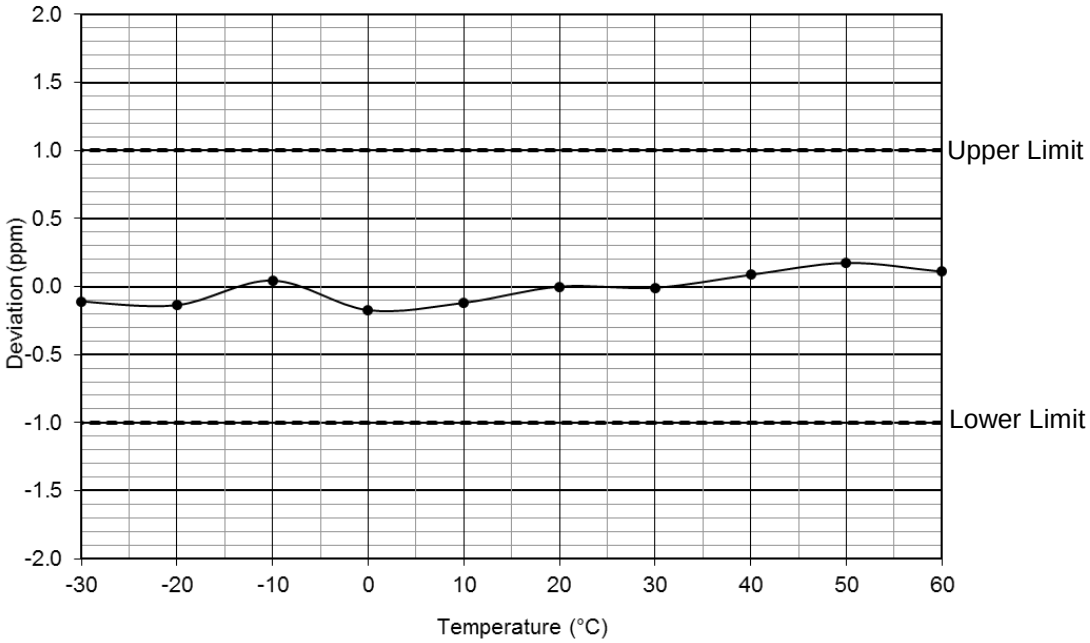
TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

RESULTS:

Temperature (°C)	Frequency (MHz)	Deviation (Hz)	Deviation (ppm)
60	900.887599	99	0.11
50	900.887657	157	0.17
40	900.887578	78	0.09
30	900.887493	-7	-0.01
20	900.887500	0	0.00
10	900.887393	-107	-0.12
0	900.887344	-156	-0.17
-10	900.887540	40	0.04
-20	900.887377	-123	-0.14
-30	900.887402	-98	-0.11



TYPE OF EXHIBIT: FREQUENCY STABILITY VS SUPPLY VOLTAGE

FCC PART: 2.1055(d)(1)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

PROCEDURE:

1. The DTX-965 was aligned for transmitter operation at 896.8875 MHz at full rated power per the tune-up procedure outlined in the Maintenance manual.

2. The RF output of the DTX-965 was connected to an HP3920B Test Set to monitor the transmitter frequency. An Astron VS-20M Supply was adjusted for a nominal voltage of 12.5 VDC and connected to the DC power supply input of the DTX-965. The output frequency of the DTX-965 was noted and used as the reference for the results in paragraph 3 below.

3. The power supply voltage was set to 85% nominal and 115% nominal and the frequency noted.

4. The DTX-965 was set for +/-12.5 kHz(narrow) mode and the carrier was unmodulated. The frequency stability remained unchanged at different emission modes, therefore, only the unmodulated data is shown.

TYPE OF EXHIBIT: FREQUENCY STABILITY VS SUPPLY VOLTAGE

FCC PART: 2.1055(d)(1)

MANUFACTURER: RITRON, Inc.

MODEL: DTX-965

TYPE OF UNIT: 900MHz Transceiver Module

FCC ID: AIERIT34-9650

DATE: August 22, 2016

RESULTS:

% Nominal(%)	Voltage(VDC)	ΔF(Hz)	ΔF(ppm)
85	10.6	-3.0	-0.0033
100	12.5	0.0	0.00
115	14.4	-4.0	-0.0045