A rail yard is a busy place, often operating 24/7, 365 days a year. Technology that works with existing infrastructure and will increase the efficiency and safety of railroad personnel is quickly embraced by the industry and will pay for itself in a very short time. Let the Ritron TeleSwitch, the radio-controlled remote switch, help you manage lights, gates/crossings, motors, track heaters, or any other device that can be turned on or off.

**Features:**
- VHF and UHF Models
- Narrow Band Analog Compliant
- 5/2 Watt Transmitter, PC Programmable
- Two 10 Amp Relay Outputs, Each Independently Controlled
- Compatible with DTMF Equipped-Radios
- Bright LED Indicators for Power & Relay Status
- 12VDC Operation
- Rugged, Weather Tight Enclosure
- DTMF Decode Acknowledgement Tone

**Benefits:**
- Long-Range Radio Control
- Wireless –No Trenching, Eliminates Hard Wiring
- Easy Add-On to Existing Radio Systems
- Self-Contained, All-In-One Solution
- Even Works Through Repeaters

**Call 800-USA-1-USA (872-1872)**
with your application or email us at sales_info@ritron.com
Easy to use, affordable 2-way radio system to remotely turn on/off rail yard equipment.

These Ritron radios can be used to activate the TeleSwitch.

**GENERAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>UHF DTX-445</th>
<th>VHF DTX-145</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCC ID:</td>
<td>AIERIT17-445</td>
</tr>
<tr>
<td>Industry Canada ID:</td>
<td>1084A-RIT17445</td>
</tr>
<tr>
<td>FCC Rule Parts:</td>
<td>90</td>
</tr>
<tr>
<td>Industry Canada Rule Parts:</td>
<td>RSS-119</td>
</tr>
<tr>
<td>Frequency Range:</td>
<td>400.6 – 416.5 MHz, 411 – 429 MHz, or 450 – 470 MHz</td>
</tr>
<tr>
<td>RF Channels:</td>
<td>8 Independent TX/RX frequencies</td>
</tr>
<tr>
<td>Synthesizer Step:</td>
<td>6.25 kHz</td>
</tr>
<tr>
<td>Channel Spacing:</td>
<td>12.5 kHz</td>
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<tr>
<td>Frequencies usable:</td>
<td>TBD</td>
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<tr>
<td>Frequency Stability:</td>
<td>+/-1.5 PPM (-30° to +60° C)</td>
</tr>
<tr>
<td>Tone/Code Signaling:</td>
<td>DTCS (Quiet Call) and DCSS</td>
</tr>
<tr>
<td>Power Supply:</td>
<td>9 to 17 VDC</td>
</tr>
<tr>
<td>Dimensions &amp; weight:</td>
<td>Board only version: 4.75&quot; x 2.8&quot; x .625&quot; / 2.1 oz</td>
</tr>
<tr>
<td>Antenna Fitting:</td>
<td>BNC Female</td>
</tr>
</tbody>
</table>

**RECEIVER**

- **25 kHz Wide band** 12.5 kHz Narrow band
- **25 kHz Wide band** 12.5 kHz Narrow band

- **Sensitivity (12 dB SINAD):** 0.25 µV 0.25 µV 250uV 250uV
- **Adjacent channel:** -67 dB -60 dB -67dB -60dB
- **Spurious rejection:** -70 dB -70 dB -65dB -65dB
- **Image rejection:** -70 dB -70 dB -70dB -70dB
- **Intermodulation:** -67 dB -67 dB -67dB -67dB
- **FM hum and noise:** -37 dB -37 dB -37dB -37dB
- **Conducted spurious:** -57 dB -57 dB -57dB -57dB
- **Receiver attack time (TX to RX):** < 5 ms < 5 ms < 5 ms < 5 ms
- **Noise squelch attack time:** < 5 ms < 5 ms < 5 ms < 5 ms
- **RSSI squelch attack time:** < 5 ms < 5 ms < 5 ms < 5 ms
- **RSSI squelch sensitivity:** PC adjustable; factory set for –121 dBm
- **Noise squelch sensitivity:** PC adjustable; factory set for –12 dBm
- **Aux In frequency response:** 8 Hz to 2500 Hz @ +/- 3 dB
- **Audio Speaker freq response:** de-emphasized 6 dB/octave from 400 to 2500 Hz
- **Audio Speaker Output:** >700 mW into 8 Ω
- **AUX OUT frequency response:** > 700 mW into 8 Ω, with less than 5 % THD (0 to 2.5 Vrms)
- **AUX OUT level range:** 12 – 2500 Hz @ +1 / -3 dB
- **Current Drain:** 2.0 Watts @ 12.5 VDC < .9 A (TX to RX):< 15 ms
- **Audio Distortion:** < 5 %
- **FM Hum and Noise:** -45 dB -40 dB -45 dB -40 dB
- **Sensitivity (12 dB SINAD):** 0.25 µV 0.25 µV 250uV 250uV
- **Spurious rejection:** -25 dB max -25 dB max
- **Image rejection:** -25 dB max -25 dB max
- **Intermodulation:** -25 dB max -25 dB max
- **Audio Speaker Output:** >700 mW into 8 Ω
- **AUX OUT frequency response:** 8 Hz to 2500 Hz @ +/- 3 dB
- **Audio Distortion:** < 5 %
- **Current Drain:** 2.0 Watts @ 12.5 VDC < .9 A
- **Audio Speaker Output:** >700 mW into 8 Ω
- **AUX OUT frequency response:** 8 Hz to 2500 Hz @ +/- 3 dB

**TRANSMITTER**

- **Voice Emission Designator:** *15K0F3E 10K0F3E 15K0F3E 10K0F3E
- **RF Power Output:** 2.0 Watts @ 12.5 VDC < .9 A 2.0 Watts @ 12.5 VDC < .9 A 8.0 Watts @ 12.5 VDC < 1.8 A 5.0 Watts @ 12.5 VDC < .9 A 10.0 Watts @ 14 VDC < 1.8 A 5.0 Watts @ 12.5 VDC < 1.2 A
- **Transmitter Duty Cycle:** With supply below 13.5 volts: 8 W board only model - 100 % with added heat sink*** maintained at 25° C 8 W encased model - 33 % with case end cap*** maintained at 25° C 5 W encased model - 50 % with case end cap*** maintained at 25° C (with heat sink or case end cap above 25° C, degrades linearly to 0% at 60° C)

- **FM Hum and Noise:** -45 dB -40 dB -45 dB -40 dB
- **Spurious and Harmonics:** -25 dB max -25 dB max
- **Aux In frequency response:** 8 Hz to 2500 Hz @ +/- 3 dB
- **AUX OUT level range:** 1084A-RIT17445 1084A-RIT17145
- **Microphone freq response:** pre-emphasized 6 dB/octave from 300 to 2500 Hz
- **Microphone level:** 25 mV/m at nominal +/- 3 kHz deviation on wideband channel
- **Current Drain:** 2.0 Watts @ 12.5 VDC < .9 A 2.0 Watts @ 12.5 VDC < .9 A 8.0 Watts @ 12.5 VDC < 1.8 A 5.0 Watts @ 12.5 VDC < .9 A 10.0 Watts @ 14 VDC < 1.8 A 5.0 Watts @ 12.5 VDC < 1.2 A

**Note:** The TeleSwitch Transceiver requires the Ritron PC programming kit.

**Includes:**
- TeleSwitch radio transceiver, with (2) DTMF controlled 10 Amp relays, (1) BNC dual band flexible antenna, (2) Flush Mount Brackets, (1) 110VAC to 12VDC @ 1.25 amps cube power supply.

**Accessories:**
- RPS-TS spare cube power supply.
- AFB-1545 spare flexible antenna.
- RAM-1545 optional remote mount magnetic mount antenna (25ft of cable).
- For remote applications use the Ritron RSS-100 Solar Kit.

Call 800-USA-1-USA (872-1872) with your application or email us at sales_info@ritron.com.

Go Beyond Normal Limits...~

Founded in 1977, Ritron, Inc. specializes in the design and manufacture of commercial and industrial-grade wireless voice and data communication equipment.