New HP Series

TeleSwitch® HP

Wireless Switch Control

High Power

MADE IN THE USA

FEATURES

- High Power Capability 5-30 Watts
- 2 Built-In, DTMF Controlled, 1A Dry-Contact Relay Outputs
- "Decoder Acknowledgment Tone"
- 3 Types of Relay Response: Close, Open, Momentary
- Narrow Band@12.5 kHz (Wide Band @25KHz)*
- NXDN™ Digital, Very Narrow Band@6.25 kHz Coming Soon!
- Broadband TX/RX Design:
- 38 MHz@VHF, 28 MHz@220 MHz, 20MHz@UHF
- Frequency Ranges:
  136 -174 MHz
  217-245 MHz***
  450-470 MHz***
- Frequency Stability Standard @ 1.0 ppm
- Ultra Fast TX/RX Attack Times
- Controlled Envelope^{sm} TX Keying
- Meets FCC and IC (Canada) Standards ***
- Programmable Output Power
- Dual Color TX/RX LED Indicator
- Internal .5W Audio Amp for Optional Channel Monitoring (spkr required)
- SMD Component Design
- Custom Frequency Ranges Available
- Designed and Manufactured in the USA

The TeleSwitch**HP** is a versatile, purpose-built radio designed for use in the railroad industry. It can be used as the radio transceiver in a wayside defect detection announcement system along with the added feature in the radio which allows the locomotive engineer to initiate "on-demand" the re-broadcast of a recent defect detector announcement message.

The TeleSwitch**HP** (High-Power) is a 30W (adj. down to 5W), PC programmable transceiver with the added functionality of two built-in DTMF decoder-controlled 1A dry-contact relays.

Each relay can be independently controlled by a unique DTMF command consisting of up to 12 characters. Based on the specific transmitted DTMF command, each relay can be programmed to respond in the following way: close the relay, open the relay, or perform a momentary closure. The "Acknowledgment Tone" feature is an audible tone transmitted by the radio whenever a command is correctly decoded. The dual-color (red/green) LED indicator will light to indicate that the unit is transmitting or receiving.

Other uses include remote-control of lights, track heaters, pin-pullers, pumps, motors and other non-vital signal or crossing activations.

For versatile, high-performance and cost-effective wireless solutions, call Ritron at **800.USA.1.USA** (800-872-1872).

* Wideband (25KHz) model available by special order only and where allowed by appropriate regulatory authorities.

*** Certain models listed have not been approved by the FCC. This device is not, and may not be offered for sale.

Need a High Power Telemetry Radio?

Ask about the DTX+HP

AVAILABLE MODELS		FCC ID
DTX-165 RR-SIG	136-174MHz	AIERIT42-165
DTX-265-RR-SIG	217-245MHz	Pending
DTX-365-RR-SIG	380-400MHZ	Pending
DTX-465-G-RR-SIG	400-430MHz	Pending
DTX-465-0-RR-SIG	450-470MHz	Pending
General Relay Contacts:	1A @ 120VAC	

TELESWITCH HP SPECIFICATIONS

GENERAL	VHF	220 MHz	UHF
FCC Identifier	AIERIT42-165	PENDING	PENDING
Industry Canada Identifier	PENDING	PENDING	PENDING
Number of Channels	8	8	8
Signaling	DTMF Decode, 1-9, # * (up to 12 characters)		
TX/RX Spacing (w/in frequency range)	38 MHz max.	28 MHz max.	20 MHz max.
Mode of Operation	— — Simplex/Half Duplex — —		
Channel Increment (Synthesizer step size)	2.5 kHz	2.5/3.125 kHz	5/6.25 kHz
Emissions Bandwidth			
Wide Mode*	16kHz	16kHz	16kHz
Narrow Mode	11 kHz	11 kHz	11 kHz
Very Narrow Mode	4 kHz	4 kHz	4 kHz
Frequency Stability (-30° to +60° C)	1.0 ppm	1.0 ppm	1.0 ppm
Frequency Stability (-30° to +65° C)	1.5 ppm	1.5 ppm	1.5 ppm
Supply Voltage (VDC)	11-16	11-16	11-16
RF Input/Output Connector	BNC	BNC	BNC
Accessory Connector	15 pin sub D	15 pin sub D	15 pin sub D
Operating Temperature	-30° to +65° C	-30° to +65° C	-30° to +65° C
Maximum Dimensions (L x W x H)		6.56" x 5.1" x 2.38"	
Weight	33 oz	33 oz	33 oz
Power Interface	2 pin Molex	2 pin Molex	2 pin Molex
Relay Contacts (2)	1A @ 120VAC	1A @ 120VAC	1A @ 120VAC

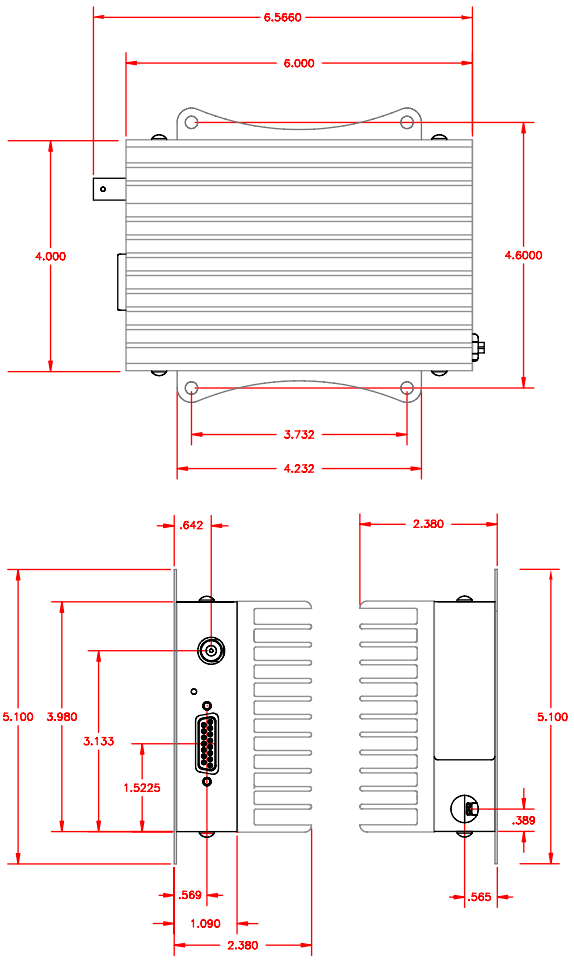
TRANSMITTER	VHF	220 MHz	UHF
Operating Bandwidth	38 MHz	28 MHz	20 MHz
RF Output Power	5-30 watts	5-30 watts	5-30 watts
Duty Cycle @ 25° C			
@30 Watts	75%	75%	75%
@15 Watts	100%	100%	100%
Key-Down Time (minutes)	6 m	6 m	6 m
RF Load Impedance	50 ohms	50 ohms	50 ohms
Transmitter Attack Time:	<10 ms	<10 ms	<10 ms
Spurious and Harmonics:	<-25 dBm	<-25 dBm	<-25 dBm
FM Hum and Noise			
12.5 kHz channel operation	>40 dB	>40 dB	>40 dB
6.25 kHz channel operation	>35 dB	>35 dB	>35 dB
Current Drain@12VDC			
5 watt	<2.5 A	<2.2 A	<2.0 A
15 watt	<4.0 A	<4.0 A	<2.9 A
30 watt	< 6.0A	< 5.8A	<5.8 A

RECEIVER			
Operating Bandwidth	38 MHz	28 MHz	20 MHz
Sensitivity (12 dB SINAD)	<0.25 uV	<0.25 uV	<0.25 uV
RF Input Impedance	50 ohms	50 ohms	50 ohms
Adjacent Channel Selectivity			
+/- 12.5 kHz	>60 dB	>60 dB	>60 dB
+/- 6.25 kHz	>45 dB	>45 dB	>45dB
Spurious and Image Rejection	>60 dB	>60 dB	>60 dB
Intermodulation Rejection	>67 dB	>67 dB	>67 dB
FM Hum and Noise			
12.5 kHz channel operation	>40 dB	>40 dB	>40 dB
6.25 kHz channel operation	>35 dB	>35 dB	>35 dB
Conducted Spurious	<-57 dBm	<-57 dBm	<-57 dBm
Receive Attack Time	<10 ms	<10 ms	<10 ms
Squelch Attack Time	<5 ms	<5 ms	<5 ms
Receive Current Drain	<200	<200	<200

* Wideband (25KHz) model available by special order only and where allowed by appropriate regulatory authorities.

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

TeleSwitch**HP**



DB-15 CONNECTOR PINOUT

PIN #	Name	Description	Comments
1	CS0	Channel Select low bit	Channel 1 – 8 selection.
2	CS1	Channel Select mid bit	Channel 1 – 8 selection.
3	CS2	Channel Select high bit	Channel 1 – 8 selection.
4	AUDIO IN	Microphone Input	Input for microphone type signals to be transmitted. Signals at this input are pre-emphasized, limited, and filtered.
5	HI/LO	RF Power Output	High/Low Power selection.
6	RELAY 1	Relay 1 Contact	NO (Default) Output for Relay 1, paired with Pin 7. Can be configured as NC Output.
7	RELAY 1	Relay 1 Contact	NO (Default) Output for Relay 1
8	RELAY 2	Relay 2 Contact	NO (Default) Output for Relay 2
9	PGN IN/OUT	Programming I/O	External PC Programmer connection.
10.	RELAY 2	Relay 2 Contact	NO (Default) Output for Relay 2, paired with Pin 8. Can be configured as NC Output.
11.	RX MON	Monitor	Breaks squelch in receive.
12.	AUDIO OUT	Audio PA Output	Audio PA output.
13.	DCD	Carrier Detect	Carrier detect output.
14.	PTT	Push to Talk	External PTT input.
15.	GND	Ground	Negative supply point and reference for all inputs.

2-PIN MOLEX CONNECTOR

1	+Vsupply	DC Supply Input	External +10–16VDC Input.
2	GND	Ground	Negative supply point andreference for all inputs.

Go Beyond Normal Limits...℠

RITRON®
WIRELESS SOLUTIONS

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