

PT7000

Paging Transmitter

PT7000 is one of the industry's leading simulcast transmitters. This coordinated systems package offers the flexibility, efficiency, reliability and performance you need to gain an advantage in a highly competitive business environment.

- ▶ Direct Digital Synthesis
- ▶ Remote control maintenance
- ▶ Remotely adjustable modulation amplitudes, offsets and delays.
- ▶ Power output from 10 to 500 watts.
- ▶ Microprocessor control throughout.
- ▶ Most or various modes of digital and analog modes are supported.
- ▶ Compatible with virtually all simulcast controllers.
- ▶ Optional Purc link demodulator.



"Innovative products to handle your needs."

Featuring one of the industry's leading paging transmitters, the PT7000 is designed with your business goals in mind. This coordinated systems package offers the flexibility, efficiency, reliability and performance you need to gain an advantage in a highly competitive business environment.

Flexibility

Your profitability depends on getting more of your subscriber's messages, both digital and analog - through the system faster, with greater accuracy, and at a competitive cost.

The PT7000 Smart Paging Transmitter allows the simulcast system operator greater control over each paging transmitter. Each transmitter is a stand alone transmitter - a "smart" transmitter. SPT capabilities include both advanced automatic station parameter monitoring and remote maintenance and adjustments.

PT7000 Features

- All bi-level digital formats transmitted up to 2400 baud standard.
- Remote control, maintenance and monitoring via radio link or wire line. Allows user-friendly PC video display control.
- Microprocessor control through out. Allows remote monitoring (including alarm level adjustments) of 17 functions throughout the system.
- Auxiliary computer port allows for communication with other transmitters, including Hot Standby systems. (Option) The result is maximum capacity, fast response times and a system that keeps on working.



Reliability

The PT7000 paging transmitter is 100% solid-state, designed to meet the demands of continuous duty commercial service, and backed by years of experience.

Network reliability may be ensured by station redundancy and an optional hot standby feature.

Should the unexpected occur, you can count on a team of factory experts to provide you with comprehensive customer service as long as your own PT7000 Smart Paging system. At your request, a factory engineer can dial up your system and provide a real time analysis of any operating problems.

Efficiency

Once the system is up, you don't want maintenance repair costs eating away at your bottom line. It costs you every time someone goes to your remote sites for maintenance, alignment or testing.

The Smart Paging Transmitter Controller at each site has built-in software which provides full access to all functions using a notebook computer.

The SPT's automatic remote control function increases the productivity of your system by reducing downtime. When station maintenance is required, the control center is informed either via land line or RF link. The technician can monitor the transmitter through a video display terminal at the control center or at any remote location equipped with a modem and computer.

If the problem is remotely repairable, the technician may then repair it from the control center. If the problem requires on-site repair, the technician can use the remote diagnosis, anticipate the service needs, and reduce unnecessary trips to the site.

An auxiliary computer may also be placed in any strategic location to further enhance the technicians effectiveness and eliminate routine trips to the control center. The system incorporates two levels of password protection to prevent unauthorized access.

This offers economical site management and control with:

- Alarm reporting (with user-programmable site location and alarm function names) and interactive system diagnostics.

Terminal control site providing operator generated and programmable site integration, and system parameter downloads including:

- Status of transmitter system,
- Audio and digital deviation,
- Simulcast delay.

• Alarm status reports generated at the remote site and returned to the controller by either wireline or RF link.

• Paging transmitters with their individual databases protected in non-volatile memory.

Centralized control and command keeps your profits to a maximum by keeping unnecessary trips to the remote sites to a minimum.

Performance

The PT7000 Smart Paging system paging and link transmitters give you the capability you need for VHF and UHF networks. Paging transmitters designed to meet your toughest demands are available with RF power output ranges up to 500 watts.

This paging powerhouse gives you:

- Direct processing of tone and binary digital (NEC, GOLAY, POCSAG, bi-level Flex) signaling for:
 - tone only,
 - tone and voice,
 - alphanumeric display paging.
- High-speed and analog/digital switching.
- Standard remotely adjustable modulation delay.
- Matched frequency response and equalization vital to analog and digital transmission within overlapping coverage areas.

Stability and frequency agility needed for system spares and multichannel applications with a 0.02 ppm time base and specially designed transmitter frequency synthesis.

Features

- Direct Digital Synthesis: the latest integrated technology for frequency control and modulation.
- Remote control, maintenance, adjustment and monitoring via radio link or wireline. Allows user-friendly PC video display control. Alarm messages are available at the control center.
- Remotely adjustable digital and analog modulation amplitudes and delays.
- One of the industry's most compact high power paging transmitter in the industry.
- Power outputs from 10 watts to 500 Watts.
- Microprocessor control throughout. Allows remote monitoring (including alarm level adjustments) of 17 functions throughout the system.
- Auxiliary computer port can optionally allow for communication with other transmitters, including Hot Standby systems.
- High stability reference oscillator, .02 ppm standard, .002 ppm available.
- All bi-level modes of digital and analog paging are supported, upgradable to four level digital

- Compatible with virtually all simulcast system controllers.

Alarms

The PT7000 automatically monitors the following alarm conditions and parameters:

- Forward power (Watts)
- Reflected power (Watts)
- High reflected power alarm
- Over temperature cutback alarm
- Low forward power alarm
- Synthesizer out-of-lock alarm

The limits on all of these alarms are user programmable. The user determines the point at which an alarm should be generated. Ten other functions throughout the transmitter systems are monitored, each with programmable diagnostic and alarm limits.

ALARM MANAGEMENT - Scheduled maintenance of a paging transmitter or system is vital. The SPT enables the operator to plan routine maintenance and replacement operations more efficiently and eliminate potential problems before they occur. The SPT constantly monitors the operation of its system and can send an alarm as soon as a problem develops.

The operator may access any transmitter via RF link or wireline path at any time for a status report. Utilizing SPT's alarm status management capability allows the operator to monitor each transmitter, detect potential problems, and correct those problems before they become alarms or lost pages.

ALARM REPORTING - The SPT's features immediate alarm reporting by wireline or RF link. This substantially reduces downtime and response time.

ALARM REPORT MANAGEMENT - The SPT's alarm log contains statistics on alarm conditions, station locations and station addresses. Error logs may be transferred to floppy disk for future reference and analysis, or a hard copy can be created using any standard printer.

CUSTOMIZING ALARMS - The SPT allows the user to set cut-off levels for alarms, as well as indicate if the alarms is minor or major.

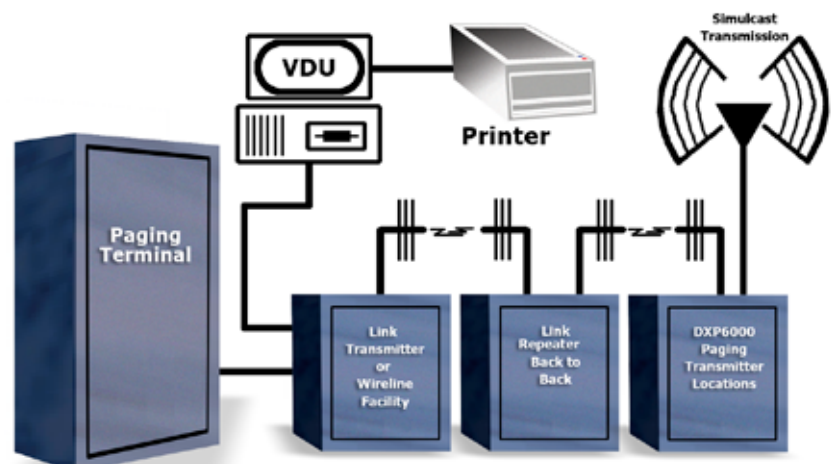
OPTIONS - Link receiver and transmitter modules are plugin compatible at remote sites and are offered in 148 to 174 MHz, 403 to 513 MHz, and 66 to 88 MHz.

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The PT7000 is a complete, integrated analog/digital simulcast paging system designed for maximum efficiency, reliability, flexibility and performance in commercial applications.



PT7000 SERIES SPECIFICATIONS

Power Output:	10 - 100, 250 - 500 Watts (through specified PAs)
Tuning Range:	66-88; 136-174; 216-245; 350-521; 928-942 MHz in various sub-band
Emission Designator(s):	16K0F3E, 20K0F2D, 16K0F2D, 11K0F2E, 11K0F3E & 11K0F2D
Maximum Bit Rate:	2400 Baud; 2-Level FSK NRZ
Pre Emphasis:	Selectable Flat or Pre-emphasized
Selectable Flat or Pre-emphasized:	Transistor or FET (power & band dependent)
FCC Type Acceptance No:	KRET 150B; 500B; 800; 800C
Transmitter Type:	Direct FM
Method of Tuning:	Synthesized
Pulse Characteristics:	Compliant with requirements of Emission Designators
Frequency Stability:	0.02 PPM, All Bands
Emission Bandwidth:	Compliant with rules of Emission Designators
Max Modulation Frequency:	3000 Hz
Deviation Ratio:	Programmable to comply with Emission Designator(s)
Audio Distortion:	< 2%
Digital Formats:	All bi-level modes to 2400 baud standard
FM Signal to Noise:	> 55 dB Psophometric below 3 KHz deviation
Channel Spacing:	25 KHz, 30 KHz, 12.5 KHz, 7.5 KHz
Channel Selection:	Binary Coded Select Lines
Spurious Emissions:	-75 dBc or Lower
Harmonic Output:	2nd: -80 dBc - 3rd: -80 dBc - Others: -80 dBc
Metering/ Ext Monitoring:	OPTIONAL. RF Power - Forward/Reverse, DC Amperes, DC Voltage-Driver/Final, Input Power (above 150 Watt model)
External Monitoring:	Remote monitoring, output connector std (above 150 Watt model)
Power Supply:	115/230 VAC, 50-60 Hz
Alarm Indicators:	OPTIONAL. RF on, SWR, Over temp, Low Power (above 150 Watt model)
STD Cabinet Dimensions:	23" W x 30" H x 24" D
Optional Cabinets:	46" Tall, 72" Tall, 84" Tall
Link RX & TX:	72 MHz, VHF, UHF, 800 & 900 MHz
Others:	VHF transmitter for narrow band operation requires the optional 1 PPM (-30 to +60 deg. C) TCXO

NTIA APPROVED



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