

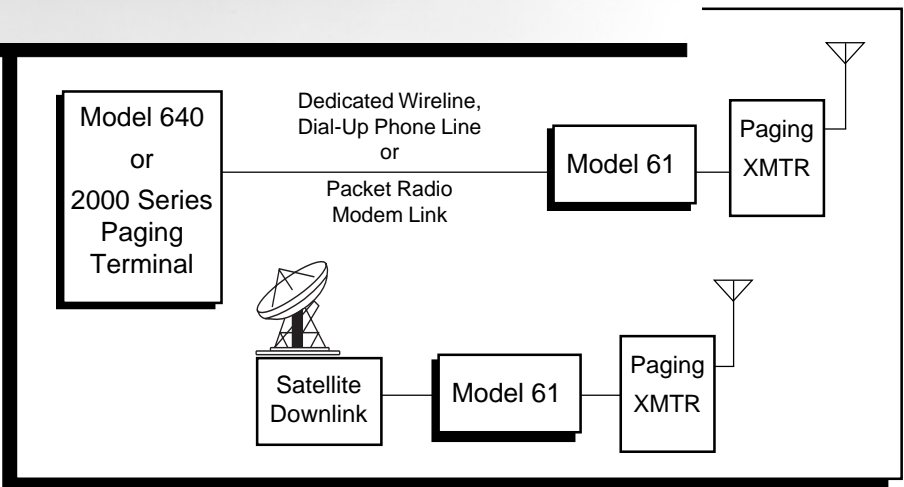
TNPP Node Receiver

Network Access Paging Encoder



FEATURES

- Available in two models:
 - Model 61F - Encodes FLEX™ (1600 baud) and POCSAG (512, 1200, 2400 baud)
 - Model 61 - Encodes POCSAG (512, 1200, 2400 baud) and Golay
- Makes any digital transmitter a simple and inexpensive TNPP network node
- Can receive network transmissions over a variety of link media
- Supports full handshaking and error detection in bidirectional mode
- Includes Tone Remote Control (PURC®) for remote paging transmitters
- Multitasking batching organization for:
 - Simultaneous transmission and storage of paging data
 - Pager battery saver operation
 - Minimal transmission airtime
- Supports the FLEX Mail Drop message mode
- Periodically transmits Morse Code station identification for FCC compliance
- Easily programmed using a dumb terminal or PC running terminal emulation software
- Uses full node addressing for selective, regional paging



INTRODUCTION

The Model 61 and 61F are particularly suitable for the commercial paging operator looking for a cost-effective transmitter controller. The Model 61 accepts a TNPP input and can encode FLEX, POCSAG, and Golay formats for tone-only, numeric, and alphanumeric pages.

The Model 61 can be used in a variety of ways. It can be used in conjunction with Zetron's ZAPP! operator entry software to build a complete commercial operator alphanumeric entry paging company. The Model 61 is also used to add additional fill-in coverage areas which can be reached by satellite, wireline, or RF link.

The Model 61/61F Network Access Paging Encoder receives RS-232 data on a satellite downlink or data circuit, sorts the TNPP packets, encodes pages into FLEX, POCSAG, or Golay format, and batches them for transmission. The encoder can store a substantial number of TNPP packets in several large buffers.

TNPP MODES

The Model 61 supports two different modes of the TNPP protocol. The first mode is one-way, or "blind send", transmission, where no handshaking or error correction occurs. This is most often used with a satellite downlink to support nationwide paging, but can also be used with any simplex link. The Model 61 also supports the bidirectional networking mode. Even though the Model 61 cannot initiate and send TNPP pages to other network nodes, it can communicate with the nodes that send pages to it. The encoder provides verification to the sending terminal that the

packets were received correctly and that the link is in operation. The bidirectional mode requires a full-duplex link, such as a dedicated wireline or packet radio modem.

TRANSMITTER INTERFACE

The Model 61 has all the connections necessary to fully control a digital paging transmitter. A built-in modem generates remote control tones to operate a remotely located PURC® capable transmitter.

The Model 61's COR input continually monitors the paging channel for other traffic. When the channel is busy, the unit buffers pages until the channel clears.

SPECIFICATIONS

PHYSICAL

Size	1.75"H x 19"W x 10.25"D rack-mountable
Weight	4 lbs.
Temperature Range	0 to +65 degrees C. +32 to +149 degrees F.
Power Input	11-15 VDC or 9-12 VAC, internally fused, 700 mA, optional 110-120 VAC power adapter

NETWORK LINK INTERFACE

Connector	Female DB9 RS-232: DTR, TXD, RXD, GND, RTS, CTS
Speed	300, 1200, 2400, 4800, and 9600 baud
TNPP Node Addresses	32
TNPP Modes	Unidirectional ("blind send") Bidirectional (full handshaking)

BUFFERS

Initial Input Buffer	2,500 bytes
TNPP Buffer	2,000 bytes (minimum of two 1,000 byte packets; TNPP packets are typically 20-50 bytes)
Paging Encoder Packets	10,000 bytes

TRANSMITTER INTERFACE

Digital Data Stability	+ or - 2 ppm
Connector	Screw-down terminal strip
RTS	RS-232C, + or - 5V into 3000 ohms
Digital Data	RS-232, + or - 5V into 3000 ohms
PTT	SPDT relay, 150 VDC at 0.5A
COR	Channel busy input relay closure or TTL
BUSY IN	Channel busy input relay closure or TTL
Audio (for tone remote control)	TX High and TX Low, -9 dBm into 600 ohm load
Paging Formats	Available in models that support either 1) FLEX (1600 baud) and POCSAG (512, 1200, and 2400 baud) or 2) POCSAG and Golay Sequential Code
Message Length	500 character maximum

PROGRAMMABLE PARAMETERS

TNPP	Node address (0-31), acceptable channel and zone
Transmitter	Automatic station ID (up to 8 characters, 15- or 30-minute intervals), batch period (0 - 2550 seconds), input/output polarities, hold times and key up delay (0 - 25.5 seconds), remote tone control HLGT time (120 - 1920 ms), max keyed up time (0 - 2550 seconds), periodic POCSAG out of range transmissions
Model 61F	Supports FLEX (1600 baud), POCSAG (512, 1200, and 2400) and Mail Drop message mode
Model 61	Supports POCSAG and Golay Sequential Code

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