

MNx Communications Control System

Integrate control of radios, telephones, intercoms, PBX circuits, microwave channels, fiber optic lines and consoles with a single, compact, cost-effective system.

Designed to offer the same flexibility in dispatching, yard control, public address, and other communications management applications as the larger PCx, Penta Corporation's MNx Communications Control System integrates the control of radios, telephones, intercoms, PBX circuits, microwave channels, fiber optic lines, and consoles into a single, compact and very affordable system. Custom software can facilitate networking, multi-tasking, voter steering, and a host of other specific system requirements.

Overview:

The MNx Communications Control System is based on Penta's proprietary PCx network switch. The system is user-programmable and offers outstanding flexibility and ease of operation.

The non-blocking switch can control up to 32 lines and consoles. It uses the same line and console interfaces, host software, and control consoles as the PCx, giving users universal modularity, flexibility, and familiarity of operation.

Penta's Windows-based control consoles provide touch-screen, mouse, trackball, or keyboard control over any or all circuits connected to the network switch. The password-



Modular architecture provides for easy additions and expansion.

Custom software can facilitate networking, multi-tasking, voter steering, and other specific system requirements.

Operator consoles are PC-based units available with touch-screen, mouse, trackball, or keyboard control.

Console software runs in both DOS and Windows environments. Operator console units are PC based and are available with touch screen, mouse, trackball, or keyboard control.

Console software is available in both DOS and Windows versions.

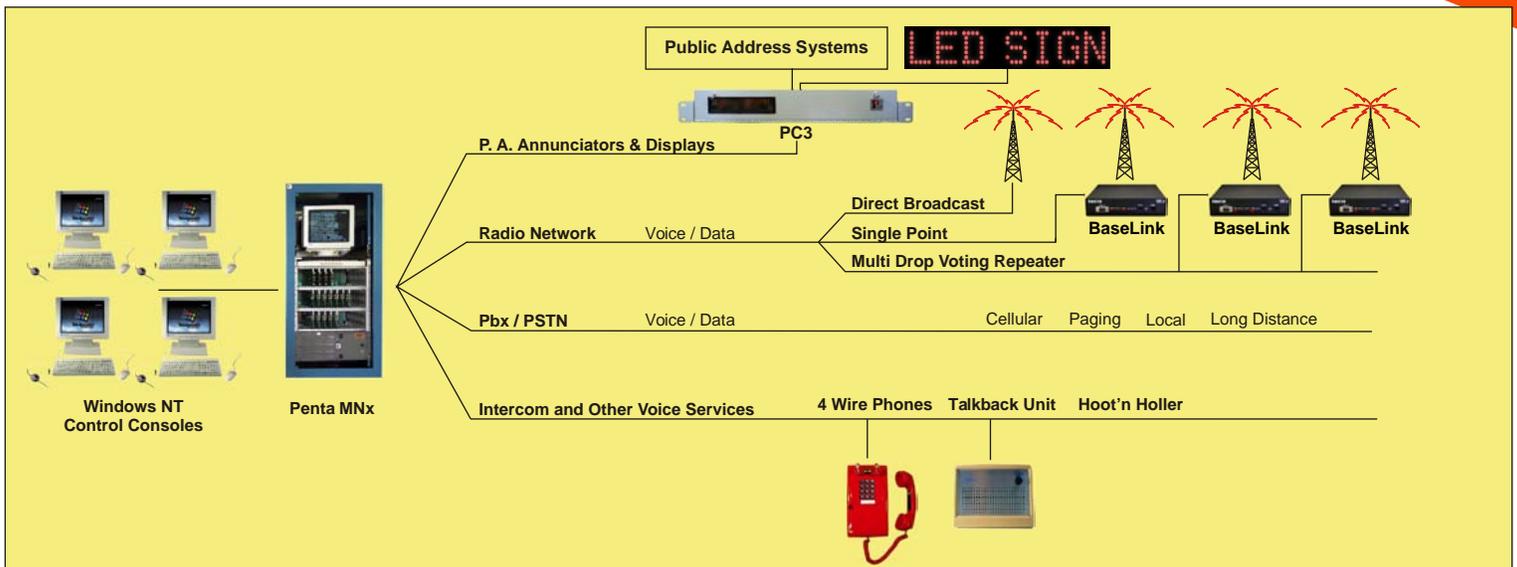
Applications:

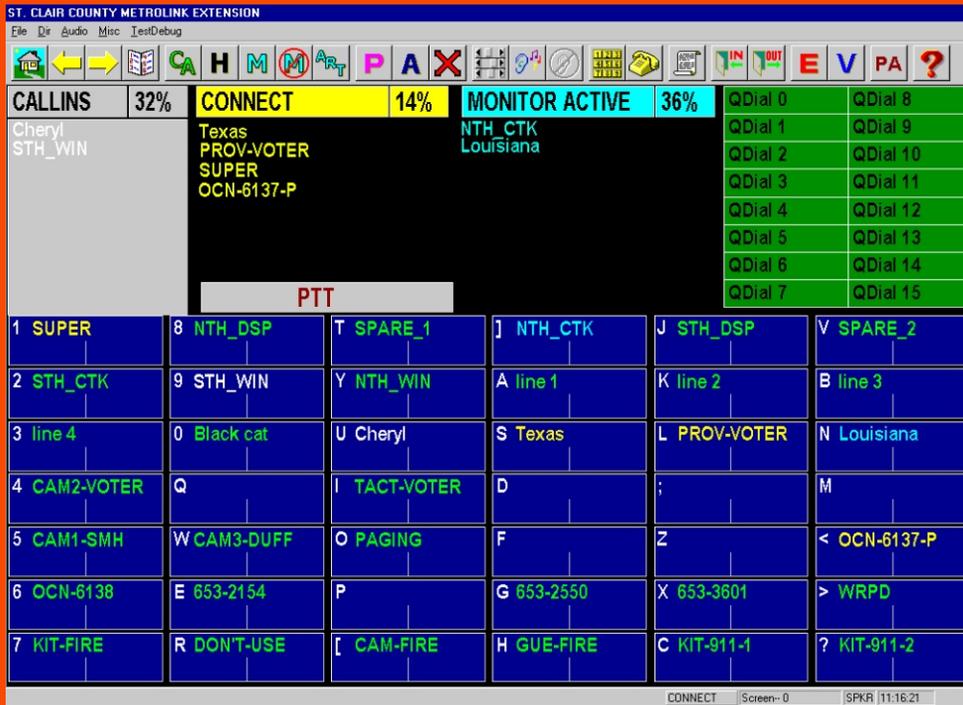
Penta has designed the system for maximum flexibility so customers receive the most efficiently integrated system available. The MNx system is fully capable of networking, multi-tasking, and interfacing to other subsystems (such as ATS, CAD, CTC, GPS, and SCADA systems). The console software may be modified to run in tandem with other subsystem programs to combine dispatching and public address control functions in the same system.

protected consoles provide operators with instant connection to radios, telephones, and other consoles. Unlimited numbers of circuits may be conferenced.

Features

- Integrates the control of all types of electronic communication.
- Offers unlimited patching and conferencing capabilities.
- Employs a non-blocking audio switch matrix design.





Innovative Technologies

Operators can now complete forms and generate faxes from their consoles without exiting the Penta software. Penta's consoles can send and receive data via e-mail and on-line communications services.

Data also can be employed to control radios (using ANI and other selective call protocols).

Interface Cards

Microprocessor-based line interface cards provide the interface between the MNx system and most types of two and four-wire communications circuits. Only one type of line card is used in the system; no special interface boards or control modules are required to communicate with various types of lines. Additionally, user programmability and configurability have been designed into the card to permit field adjustment of signaling and line designations.

Other unique features of the interface card include adjustable transmit and receive levels, DTMF in and out, transformer isolation, voice activity detection (VOX), and receive-line compression.

Line cards are also available with optional modules that incorporate a modem, a logging recorder output, a digital front end, or other options.

Operator consoles communicate with the MNx system via console interface cards and console audio cards. The console interface card provides the mechanism by which the console communicates with the switch. The console audio card supports the audio portion of the console's operation with isolation, filtration, amplification, and compression capabilities.

Console Configurations

A variety of console configurations are available with the MNx system. Typical console hardware consists of a fully equipped Pentium PC, a color VGA monitor, a Penta MNx interface, and associated audio components. Screens are well organized and facilitate quick access to all functions using mouse, trackball, keyboard, or touch-screen systems.

Penta console software is Windows compatible to provide a level of systems integration unattainable with any other communications control system on the market. Desktop, phone-type consoles are also available with the MNx system.

Specifications:

Line Types
Two-Wire
Four-Wire
Six-Wire (E/M)

Systems

PBX/Key
Radio (VHF, UHF, Individual Multi-Dropped, Voted)
Microwave
Fiber Optic
Private Line
Metallic Pair
Trunked Radio
iDEN™ Networks

Signalling

DTMF In/Out
Pulse/Tone Dial
E/M Lead
Voltage In/Out
Current In/Out
2175 Hz Tone
EIA Tones
20 Hz Ringout
VOX (Voice Activated)
CDRC
TRC
FSK, PSK, MSK
*/#
Penta Code
Loop/Ground Start
User-Defined DTMF Codes
TTY/TDD

Environment

0°C to +50°C, 90% humidity, non-condensing

Power

120 Volts (60 Hz)

Configuration Options

32 Devices (including lines and consoles)

Technical

Total Harmonic Distortion of any audio path in the MNx < 2%
Frequency response 300-3300 Hz +/-1 dB
Crosstalk < -60 dB
Maximum system connection time: 50 ms
Maximum PTT time: < 50 ms
DTMF Decode: Dynamic Range = 30 dB, Twist = +10 dB
Acceptable signal to noise ratio = 14 dB
Tone Encode Resolution = +.75 Hz, Mic input range to -80 dB
Compatible with FSK, PSK, MSK, ANI, and ALI protocols.

Specifications subject to change without notice.
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