

the industry's foremost and complete line of quality communications equipment



NORTHERN RADIO

## MULTI-CHANNEL FREQUENCY SHIFT TELEGRAPH SYSTEMS

*Today's constantly growing demand for greater, faster, more dependable communications has made the need for improved Multiplex equipment more acute than ever before. In response to this need, Northern Radio Company now makes available several new Frequency Shift Multi-Channel Telegraph Systems. Reflecting the heritage of Northern Radio's constant research and precision manufacture over the years, these multi-channel systems display novel concepts of design together with outstanding performance, fidelity and operating economy.*

**The Northern Radio Multi-Channel Telegraph Systems** are audio carrier systems capable of multiplexing such circuits as telephone lines, VHF, UHF, or radio frequency links—or practically any type circuit from which a two-wire audio circuit can be derived.

**Designed to meet any speed requirements,** these systems are fully electronic, without relays or moving parts to wear. They can be used for high-speed printer, Morse or time division Multiplex circuits, as well as in such applications as Telemetry, Control Circuits and Servo-Mechanisms.

**Instantaneous and complete sending end channel control** permits any binary code groups, either "Clear Text" or "Cryptographic", to be channelized without need for additional phasing or synchronizing equipment, while paralleling of channels will allow for transmission of other type codes, such as 3 element cable code.

**The completely independent operation of each channel,** including its own power supply, localizes faults to one channel only, leaving other channels unaffected.

**Individual channel separation filters** are used at both transmitting and receiving ends. This arrangement allows for sending telegraph or control signals over a circuit carrying, simultaneously, other forms of intelligence; or for two-way communications on the same line.

MONITORS  
TONE FILTERS  
MASTER OSCILLATORS  
RADIO MULTIPLEX SYSTEMS  
FREQUENCY SHIFT CONVERTERS  
MULTI-CHANNEL TONE SYSTEMS  
FREQUENCY SHIFT KEYS  
DIVERSITY RECEIVERS  
LINE AMPLIFIERS  
DEMODULATORS  
TONE KEYS

**NORTHERN RADIO COMPANY, inc.**  
143-7 WEST 22nd ST., NEW YORK 11, NEW YORK

Pace-Setters in Quality  
Communication Equipment

