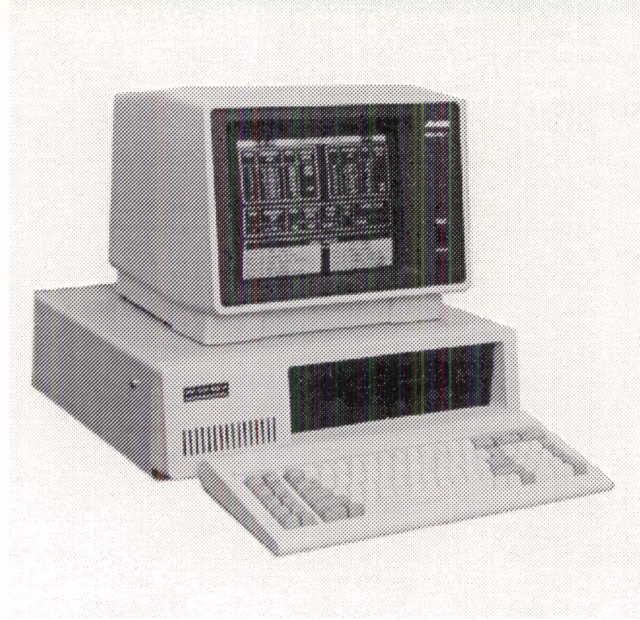WORLD WIDE SUPPLIERS OF ELECTRONIC COMMUNICATIONS EQUIPMENT

- **Multiple Transmitter Control**
- **Integrated Solid State**
- **Full-Function Monitoring**
- **Modular Construction**
- **Modem or Hardwire Remote**
- **Programmable 99 Channels**

Model TCS-12
(Tabletop configuration)

The TCS-12 remote control terminal is a complete microprocessor-based digital control system. Primarily used in transmitting stations that process high-volume multi-channel voice, teletype and data traffic, the TCS-12 features rapid selection of synthesized frequencies, operating modes and power output levels. Control of up to 99 co-located transmitters is shared at the operations center, thereby eliminating the need for dedicated facilities or duplicate equipment. Readback and display of functions, including frequency, operating mode, carrier suppression level, power output level, high voltage ON/OFF, TUNE/READY indications and real-time FAULT alarms are standard features.

Optional software modules enable an operator to graphically display building plans and transmitter outlines, which are then overlayed with the actual status of the facilities monitored. Remote measurement and test of selected transmitters is also available along with a full range of modules that customize reports, record or modify the site operating procedures, and create the circuit layout records for use in a map of the complete network topology. Since the system is microcomputer-based, standard software can be added in.

The TCS-12 enables programming of up to 99 synthesized channels for each transmitter. Digital information is captured and stored in non-volatile memory under a channel number assigned by the operator. When a channel is selected, complete operating data is retrieved from memory, reducing the chance of error in transmitter setup.

The TCS-12 can be used with any synthesized TMC transmitter in the GPT, MFT and LFT series. It uses full-duplex, asynchronous serial transmission for both control and readback signalling. ASCII (American Standard Code for Information Interchange) is the data format set at the factory, although other formats are available to match the site's host computer system. Each remote transmitter is assigned a unique two-digit address which is set by a thumbwheel switch located behind the front panel of the exciter. An alternate method allows an address change from the TCS-12 which can override the switch setting.

The TCS-12 uses totally solid state components to assure dependable performance over a long service life. The modular construction of the unit with its plug-in circuit cards, simplifies servicing and provides complete access by the technician from the front panel. A removeable wrap-around chassis allows access to internal circuits while providing additional RF shielding. Normally, the terminal is configured for mounting in a standard 19-inch equipment rack or console. It is cooled by a single fan since the solid state components used generate relatively little heat.

The software modules are installed at the factory when the equipment is delivered. However, updates to the modules are recorded to floppy diskettes and sent into the field for installation by site engineers. Based on the configuration, hardware and software changes are easily applied given the modular design of the TCS-12.

THE TECHNICAL MATERIEL CORPORATION

DIGITAL SPECIFICATIONS
Data Format Asynchronous serial ASCII
Signalling Full-duplex EIA RS-232C serial.
Auxilliary serial port on all units for printer/display.
Data Rate 1200 baud pre-set at factory.
    Optional: Others to 9600bps on request.

COMMAND FUNCTIONS
Frequency Select Any frequency in 100Hz steps.
    Optional: 10Hz steps
Frequency Range Standard 2.0 to 29.9999MHz
    Optional: 10.0KHz to 29.9999MHz
Mode Select

NON	Absence of any modulation
A1A	Continuous wave (CW) telegraphy
A2A	Modulated CW telegraphy
A3E	Amplitude modulated (AM) telephony
H3E	Compatible AM telephony (AME)
R3E	Single sideband, reduced carrier
J3E	Single sideband, suppressed carrier
B8E	Two independent sidebands
F1B	Frequency shift keying (FSK)
F1C	Facsimilie (FAX)

Carrier Select Reinsertion selectable in four steps:
Full suppression/-30dB/-20dB/-6dB
RF Output Power Four programmable levels
Standby/Operate High voltage ON/OFF controlled

READBACK INDICATIONS
Control Function Displayed after verification
Status Function Continuous readback of status with display of all indications. Fault activates audible alarm. Transmitter BITE readout optional.

OPTIONAL FEATURES
Graphics Overlaying windows for display of floor plans, transmitter frames, etc.
Database Automatic collection and structuring of data with customized reporting of all activities.
Multi-User Enhanced capability allows several users to access transmitters remotely.
Networking Compatible with Local Area Networks when multiple computers require access.

MECHANICAL and ENVIRONMENTAL
Primary Power 115/230VAC, 50/60Hz, 210 watts
Operating 0°C to +55°C, 90% R.H.
Storage -30°C to +75°C; 90% R.H.
Cooling Internal muffin fan
Size and Weight 5.25H x 19W x 15D inches, 24 lbs.
13.3H x 48.3W x 38.1D cm, 10.9Kg. (less monitor)
Construction Modular, totally solid state

ORDERING INFORMATION and OPTIONS
**TCS-12 Transmitter Control Terminal**
    Options:

	/Dx	Distribution Frame, x-channel (x=10....100)
	/M12	Internal asynchronous 1200-baud modem
	/M24	Internal asynchronous 2400-baud modem

Operating Software Modules:

TMS-100	Network Management
TMS-200	Command and Control
TMS-300	Security Monitoring
TMS-400	Site Management
TMS-500	BITE Maintenance

Specifications are subject to change without notice - Please verify with TMC before ordering

TYPICAL INSTALLATION
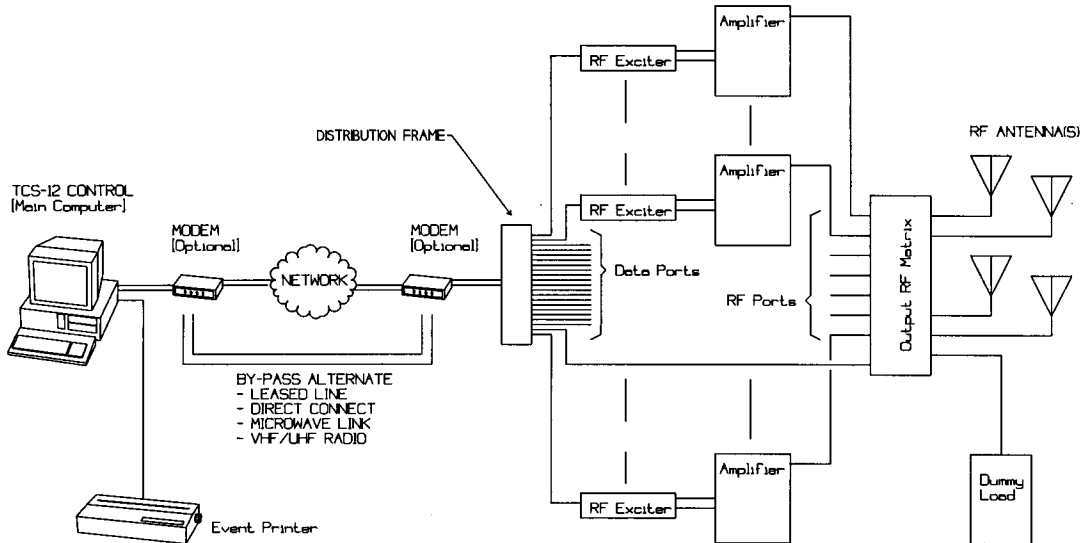
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