

AM/SIDEBAND RADIO RECEIVING SYSTEM, CODAN-OPERATED

COR-4B

The COR-4B Radio Receiving System (shown at the right in its three channel configuration) has been developed specifically for use in the coastal harbor radio telephone service as a completely solid state replacement for the Western Electric Model 23 series of radio receiving equipments currently in use in that service. It has the ability to identify the received signal as being AM/AME or SSB making it ideally suited for application on frequencies containing both types of transmission. The many advantages of solid state circuitry in the way of low power drain, efficient heat dissipation, compact size and a vastly improved reliability, are fully exploited in the COR system

Each COR-4B system, which consists of one to four channels each with its associated CODAN unit, test oscillator and antenna multicoupler, may be mounted in standard 19" equipment cabinets for indoor applications or may be enclosed in weatherproof fiberglass cases designed for outdoor service. A thermostatic control is used to regulate an integral fan which prevents overheating due to absorption of heat from the sun. As an aid in keeping down the radiant heat effect, the case is painted white for minimum absorption. A companion case for housing four Western Electric KS5361 batteries or equivalent is also available as an optional accessory. The system normally operates on AC power with instantaneous changeover to battery operation achieved without interruption of service. During periods of AC operation, the batteries are kept fully charged by an internal trickle charge. Due to extremely low power drain, each channel will operate continuously for a period of approximately five days on an 85 ampere-hour storage battery.



Revised 1 August 1971
Supersedes Y-3019B



THE TECHNICAL MATERIEL CORPORATION

AND SUBSIDIARIES

TECHNICAL SPECIFICATIONS

FREQUENCY INFORMATION

Range

2 to 16 MHz
2 to 32 MHz available on request

Stability

One part in 10^6

Control

Oven crystal oscillators

OPERATING PARAMETERS

Modes

AM(6A3); AME(A3H); USB(A3A,A3J)

Input Impedance

50 ohms nominal, antenna coupler
High impedance vertical antenna

Tuning

Fixed tuned plug-in RF modules

Sensitivity

SSB 1 uv input, 15db [S+N]/N
AM 3 uv input, 10db [S+N]/N

IF Bandwidth (Selectivity)

SSB 3 KHz, +/-2db
AM 6 KHz, +/-2db symmetrical

AGC Characteristics

Output will not vary more than 10db
for 100db change of input from 1 uv

IF Rejection

Better than 120db

Conversion Capability

By changing the appropriate plug-in
RF module at the front panel, any
number of new operating frequencies
may be selected.

Remote Control

12 VDC at 9 ma for each of the system
test oscillators

Additional Channels

System may be expanded for additional
channel operation.

Remote Indications

AC power failure, dry contact to grnd
SSB signal, dry contact to ground
AM signal, dry contact to ground

AUDIO

Outputs

Adjustable to +10uv into 600 ohm line
High impedance monitor jacks for each
channel on front panel.

RF Bandwidth

7500 Hz at 3db points.

CHARACTERISTICS

Hum Level

Min. 40db below full PEP output

Intermodulation

Min. 40db below either tone of a two
tone test.

Image Rejection

Greater than 120db.

ENVIRONMENTAL AND INSTALLATION

Primary Power

115/230 VAC, 50/60 Hz, 1 ph, 10 watts
OPTIONAL: 24VDC 12 watts/channel

Operating Conditions

0 to +50°C; up to 90% relative humidity

Size and Weight

1 channel: 10½" high X 19" wide
2 channel: 17½" high X 19" wide
3 channel: 26¼" high X 19" wide
4 channel: 33¼" high X 19" wide
All versions 18" deep.

Loose Items

Mating RF connectors
Two copies of Instruction Manuals

OPTIONAL ACCESSORIES

Model THRA-1 RF Module Storage Panel

Maintains ovens at operating temperature

Model TOC-8 Operating Case

Designed to house four KS5361 batteries

Model CAB-40 Equipment Cabinet

Designed for multiple-channel systems

PRINTED IN U.S.A.



THE TECHNICAL MATERIEL CORPORATION

700 FENIMORE ROAD • MAMARONECK, NEW YORK 10543

SPRINGFIELD, VIRGINIA • OTTAWA, CANADA • LUZERN, SWITZERLAND • TEMPE, ARIZONA

(914) 698-4800 • (613) 822-0244 • twx 710-566-1100 • telex 013-446