

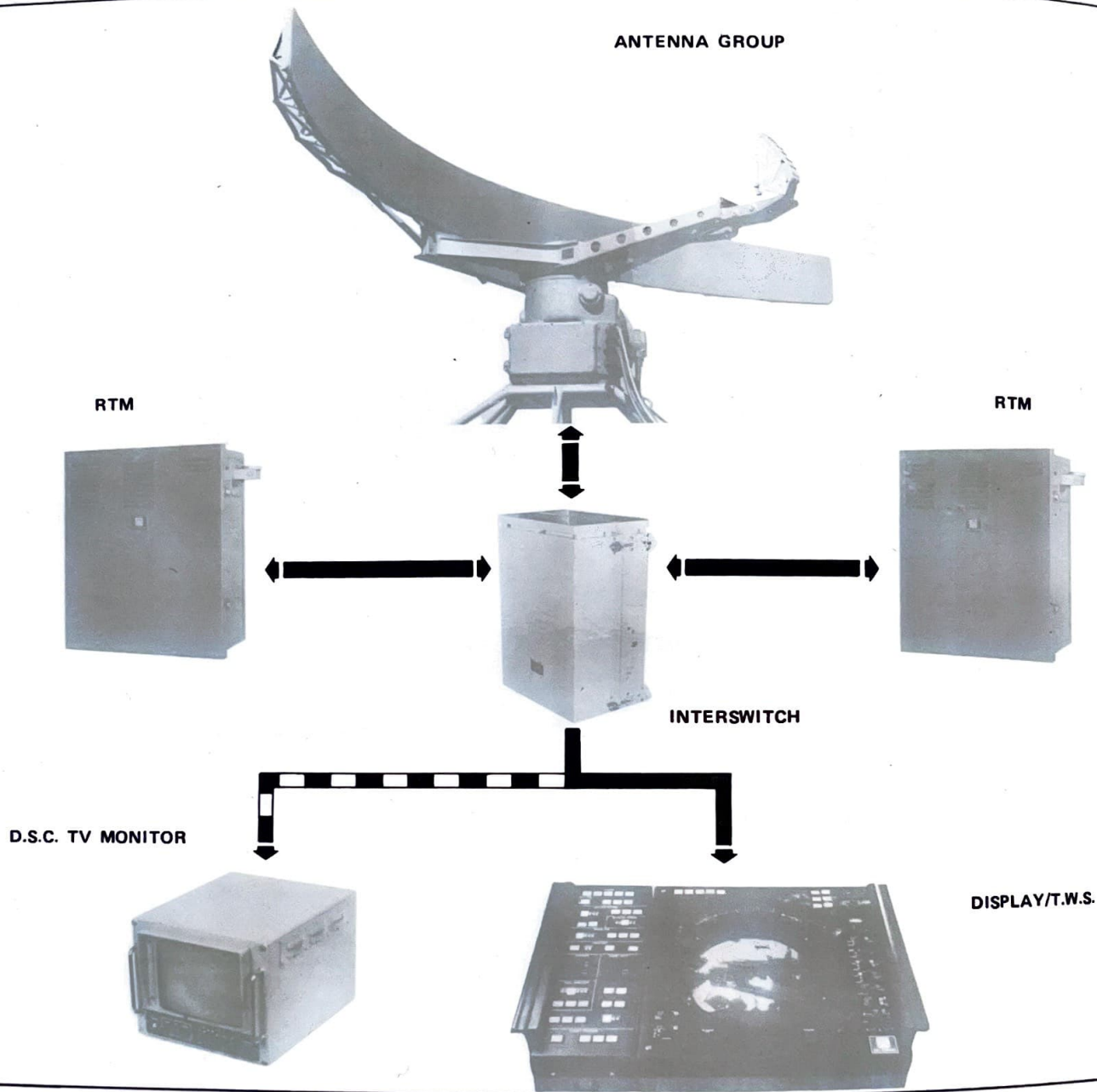
# **CO.RAD 2 COASTAL SURVEILLANCE RADAR**



**SMA**

**SEGNALAMENTO MARITTIMO ED AEREO**

# CO.RAD 2 Typical Configuration



## RADAR TECHNICAL CHARACTERISTICS

- Different antenna sizes (horizontal beamwidth up to 0.35°)
- Two redundant channels of 45 KW power each in X band
- Three pulse lengths (60 - 250 - 800 nsec).
- Sector blanking, logarithmic amplifier, anticlutter devices.
- Various display dimensions available (12"-16") for P.P.I. presentation.
- Digital scan converter technique and T.V. monitor up to 24" available.

## ENVIRONMENTAL CONDITIONS

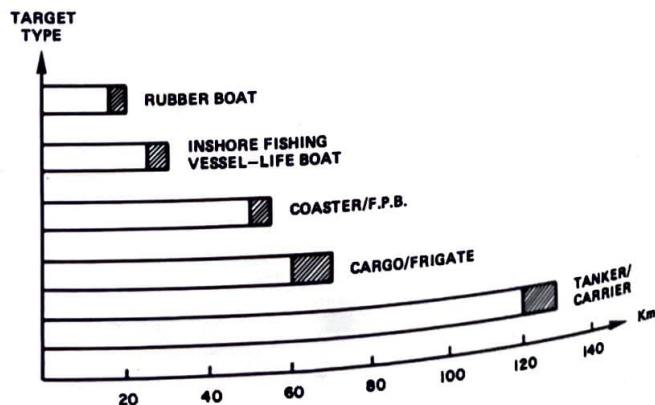
- **ANTENNA:** - 25° - +70°C; wind 55 kts (operative) 85 kts (survival)
- **Internal units:** - 15° - + 55°; humidity up to 95%

## OVERALL POWER CONSUMPTION

- $\leq 9.7$  kVA

## FREE SPACE DETECTION RANGE

- $(P_D = 0.9; P_{FA} = 10^{-6})$





## TECHNICAL DESCRIPTION

The CO.RAD 2 is a very high definition/discrimination radar suitable to maintain a reliable continuous control of coastal waters, harbours, navigation channels, etc.

The radar configuration has been chosen in order to comply with virtually all marine environmental conditions.

In fact obtainable detection ranges are extremely significant due to the employment of high gain antennas, 45 Kw power transmitters, and low noise receivers.

Anticlutler devices together with transmitted pulse length choice permit detection even under adverse weather conditions (sea and rain clutter). Different antenna

sizes are available in order to tailor the radar configuration to the required target resolution while the employment of very narrow pulses lengths permits a very good range discrimination.

The radar configuration contains two transceivers, one working and the other to be used as back up, in order to guarantee continuous operation of the radar.

For the particular task of this type of radar, a special emphasis is given to processing and presentation capabilities.

To this end standard P.P.I. or T.V. monitor presentations are available with various ranges scales, off set, and zoom capabilities.

Automatic target tracking up to 40 targets is possible either by

manual designation or automatic designation by preset guard-rings or guard zones.

The various tracks are then labelled and displayed with their velocity vectors. Other interesting characteristics like video mapping and past position of the tracks are featured by the system while read out of target's bearing, range, course and speed are available.

It has to be pointed out that the CO.RAD 2 can operate in a manned or unmanned station in this last case  $\mu$ -wave links can be provided to exchange video and controls with a Control Center.

Moreover fixed or mobile (shelter) installations can be provided according to the End User needs and/or orographic conditions.



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