

# Chapter I OPERATION MANUAL

## 1. OUTLINE

### 1.1 General Descriptions

TD-L1550A is an automatic direction finder, designed for reception and direction measurement of radio waves in international VHF band and U. S. weather channels (or Scandinavian fishing channels). Though it is light and handy in size, a large character display and a linear indicator are provided.

Its main functions and displays are :

- Quartz-locked synthesizer, controlled by a one-chip microprocessor, enables simple, precise and stable reception.
- Manual, spot and scan reception are selectable and all operations are made with keys its front panel.
- The channel number with the type of station, ship, coast or weather, can be stored in 100 addresses with two code numbers, from 00 to 99.
- The direction of incoming radio signal with respect to bow direction of own ship is shown with two displays, a linear indicator for quick recognition and a numeric display.
- H type Adcock antenna allows precise direction measurement with high sensitivity.
- As a power source, DC 10 V ~16 V is suitable and adapters are prepared for DC 10 V~16 V or AC (option).

## 1.2 Specifications

### (1) Antenna

Adcock antenna                      H type 4-element Adcock antenna, EA-351A

### (2) Signal

Frequency                      International VHF band (spot reception)  
U.S. weather channel (or Scandinavian fishing channel)  
Distress frequency, 121.5 MHz

Wave form                      F3E, A3E(121.5 MHz only)

### (3) Receiver

a. Reception type              Double superheterodyne with PLL synthesizer

b. IF                              21.4 MHz and 455 kHz

c. Sensitivity                   0.5  $\mu$ V/m (12 dB SINAD, except 121.5 MHz)

d. Image ratio                   55 dB or more(except 121.5 MHz)

e. Selectivity                   - 6 dB at  $\pm$  5 kHz and - 40 dB at  $\pm$  12.5 kHz

### (4) Display

a. Direction                    Numeric display 1° step for direction  
It is also used for address number of memory

b. Linear indicator              10° , 20° or 30 ° step and a green center light

c. Channel                        Numeric display

d. Level indicator               6 steps for signal strength

e. Type indicator                Ship, coast or weather, fishing, EPIRB (121.5MHz)

f. Scan indicator                Red light

(5) Audio output                2 W (4 $\Omega$ )

### (6) Control

a. Memory                        100 sets of channel and type of station

b. Scanning                       Max. 10 groups, each consisting of upto 10 channels

### (7) Power, size and environment

a. Power source                DC 10 V  $\sim$  16 V, minus side grounded  
(DC 10 V $\sim$  16 V or AC, option)

b. Size                            213(H) $\times$ 205(W) $\times$ 95(D) mm, 2.7 kg

c. Environment                   0 °  $\sim$  45 ° C