DUKANE CORPORATION
SEACOM DIVISION

TECHNICAL MANUAL
ULTRASONIC TEST SET
MODEL TS300

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REV 01

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This manual should be read in its entirety prior to operation of the TS300 Test Set

SECTION I
GENERAL INFORMATION

1.1. INTRODUCTION

1.1.1. GENERAL. This manual contains the description, operation and maintenance of the TS300 Ultrasonic Test Set manufactured by Dukane Corporation, Seacom Division, 2900 Dukane Drive, St. Charles, Illinois 60174. See Figure 1.

1.1.2. SYMBOLS AND ABBREVIATIONS. All symbols and abbreviations used in this manual are in accordance with the ANSI Y14.15 and MIL-STD-12, respectively.

1.2. GENERAL DESCRIPTION

1.2.1. FUNCTION. The test set was designed primarily as a self-contained, hand-held functional tester for testing the DK480 Underwater Acoustic Beacons. Utilizing the internal microphone and loudspeaker, the Test Set can perform an operational test on the Dukane Corporation DK480 Beacon without removing the beacon from its mount. The test set can also be used to perform a voltage measurement to test the battery in the underwater beacon.

1.2.2. SPECIFICATIONS. The specifications for the TS300 are given in Table 1.

TABLE 1. TS300
ULTRASONIC TEST SET SPECIFICATIONS

Size.....3.3" (8.4 cm) x 6.5"
(16.5 cm) x 1.2" (3.0 cm)

Weight.....13 ounces (368 grams)

Battery*.....9 Volt

* NEDA Type 1604A.

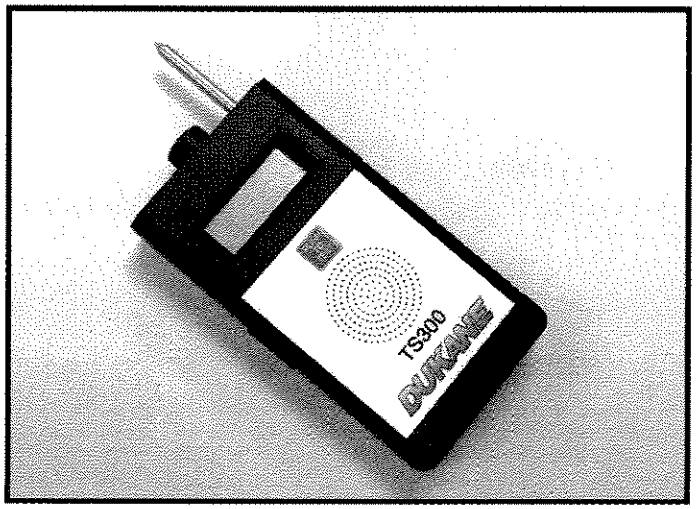

Figure 1. Ultrasonic Test Set Model TS300

SECTION II
OPERATION

2.1. OPERATION

A. Turn the test set ON using the small slide switch located on the left side of the housing.

B. If the display reads LO BAT the TS300 battery voltage has fallen below the level required for operation of the test set and the 9 Volt battery should be replaced. See Maintenance Section 3.2.

C. Testing Beacon Voltage. Place the test probes in contact with the beacon water switch pins. Observe the correct polarity by referring to Figure 2. The display will show the battery voltage of the beacon. Refer to the DK480 Beacon manual for the acceptable range of the beacon battery voltage.

D. Operational Test. Place the probes on the beacon as described above and press the red button on the TS300 (the test set display will be blank during this operation). The beacon should activate and a pinging sound will be audible from the TS300. Please note that high levels of background noise can interfere with this test. If difficulty is experienced in hearing the beacon the operator should repeat the test in a quieter area.

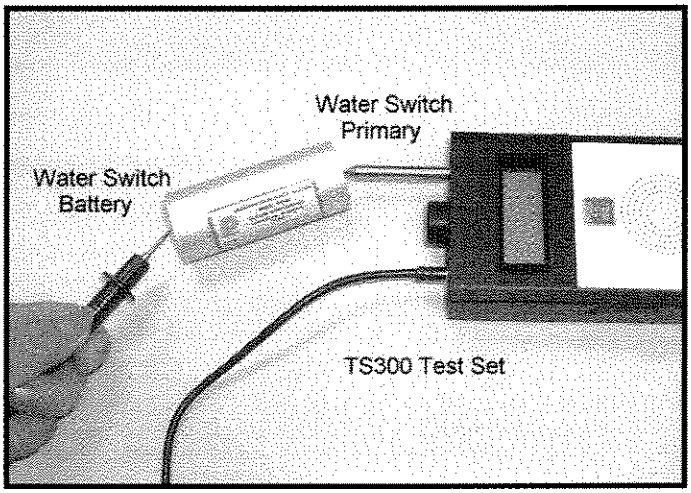

Figure 2. Testing The Beacon

SECTION III
MAINTENANCE

3.1. BATTERY LIFE

3.1.1. The test set battery should be replaced when its load voltage has dropped to 7 volts or the display reads LB when the test set is turned on.

3.2. BATTERY REPLACEMENT

3.2.1. Any 9 Volt battery may be used but longer service will be obtained by the use of premium batteries such as NEDA Type 1604A. The battery is accessible in the Test Set by removing the battery access door on the bottom rear of the case and dropping out the old battery. A snap type connector facilitates change of battery and prevents reversal of polarity, but as an additional precaution, always turn the test set off before making the battery change.

3.3. TEST SET CALIBRATION

3.3.1. The TS300 Test Set is calibrated at the factory during manufacture. Under normal operating conditions the test set will not require calibration for a period of one year. The calibration due date is shown on the back of the test set.

3.3.2. For calibration procedures, please contact Dukane Corporation or refer to the calibration procedures in the CT200 manual.

SECTION IV
WARRANTY TEST SETS

Dukane Corporation warrants that the Test Set (referred to as the unit) will be free from defects in materials and workmanship, when used under normal operating conditions as determined solely by Dukane Corporation, for a period of one (1) year from the date of shipment from Dukane Corporation.

As the sole remedy for breach of the foregoing warranty, Dukane Corporation shall repair or replace, at Dukane Corporation's option, any unit, component or part thereof found defective or nonconforming within said one (1) year period from the date of shipment. Customer shall give Dukane Corporation notice of any defect or nonconformity and, if so instructed by Dukane Corporation, customer shall, at its expense, ship the unit, component or part to Dukane Corporation. If Dukane Corporation determines that the unit, component or part is actually defective or nonconforming, it shall, at its expense, ship a new or a rebuilt unit, component or part to the customer. The customer shall be responsible to perform, at its own expense, any necessary installation work related to any defective or nonworking unit, component or part. The functionality and operational aspects of the unit is determined by the unit operating within the specifications and is dependent of proper maintenance as required to be performed by the customer.

Dukane Corporation shall not be liable for any expense or damages resulting from interruptions in the operation of the unit.

Dukane Corporation shall not be liable for the cost of any repairs undertaken by the customer or any third party without Dukane Corporation prior written authorization.

Dukane Corporation shall not be liable for any incidental, special consequential or exemplary damages arising out of the installation, use, testing, servicing or maintenance of any unit, component or part. This warranty is given in lieu of all other warranties, express or implied, included the warranties of merchantability or fitness for a particular purpose.

Dukane Corporation's total liability under this warranty is limited to the remanufacture or replacement of the unit, component or part.