

## TS21 CRAFT TEST SET DESCRIPTION AND USE

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### WARNING

Good safety practices prohibit the connection of the TS21 and similar test sets to 117 volts AC commercial electrical power; and should the TS21 be connected to commercial power, all warranties are immediately voided.

### 1. GENERAL

**1.01** The Harris Corporation's Dracon Brand TS21 Craft Test Set employs the latest technology in integrated circuit design to provide both DTMF (Touch Tone) and dial pulse output. The TS21 also provides last number redial, and field replaceable line cords and belt clips. This Test Set, often called a "butt-in," is a self-contained, line-powered, portable handset used by installers, repair technicians, and other authorized personnel for line testing and temporary communications.

### 2. DESCRIPTION

#### 2.01 Physical Characteristics (Figure 1):

- (a) The housing (A) is injection molded of high impact polycarbonate which provides excellent insulating properties. The case is designed to give rugged service and withstand the rough handling and shocks normally associated with craft tools.
- (b) The back of the hand grip (B) is contoured and has a non-slip surface, freeing both hands while the Test Set rests on the shoulder.
- (c) The keypad (C) has 12 buttons on a black plastic bezel that is recessed into the receiver end of the housing. The recessed bezel provides physical protection to the keypad and prevents accidental button operation.
- (d) The spring-loaded belt clip (D), located on the transmitter end of the housing, ensures a secure connection to a belt loop or D-ring. The belt clip may be replaced in the field (see section 6.01).

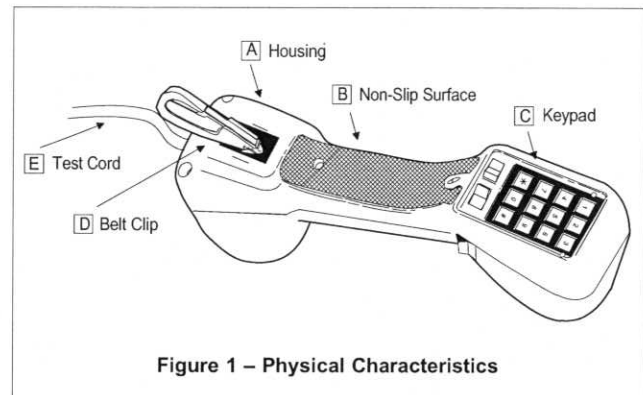


Figure 1 – Physical Characteristics

- (e) The test sets are equipped with several different cord configurations (E). The line cords may be replaced in the field (see sections 4 and 6.02).

#### 2.02 Specifications:

##### (a) Electrical

Loop Limit	2 k $\Omega$ maximum at 48 VDC (nominal 20 mA minimum loop current)
DC Resistance (Talk Mode)	<300 $\Omega$ (similar to WECO 10131A and BECO 801)
Monitor Impedance	6 k $\Omega$ minimum at 1 kHz
Rotary Dial Output	
Pulsing Rate	10 pps + 0.5 pps
Percent Break	61% $\pm$ 2%
Interdigit Interval	1000 ms typical
Leakage During Break	>50 k $\Omega$
DTMF Output	
Tone Frequency Error	$\pm$ 1% maximum
Level per Tone Pair	+1 dBm maximum -9 dBm minimum
High versus Low Tone Difference	4 dB maximum

##### (b) Physical

Length	9-11/16 inches (24.6 cm)
Width	2-11/16 inches (6.83 cm)
Height	3-11/16 inches (9.37 cm)
Weight	21 ounces (.600 kg) typical

##### (c) Environmental

Temperature	Operating: -34 to 60 $^{\circ}$ C Storage: -40 to 66 $^{\circ}$ C
Altitude	To 10,000 feet
Relative Humidity	5 to 95%

*Specifications subject to change without notice.*