

## APPENDIX C - SPECIFICATIONS

### Transponder

#### Interrogations Output:

Mode:	A/C, Altitude or Pilot code, 2:1 interlace, or mode A (B mode available upon request)
Pulse Spacing:	P <sub>2</sub> and P <sub>3</sub> variable with respect to P <sub>1</sub> ( $\pm 1 \mu\text{s}$ ) from nominal for input decoder tests
PRF:	235 Hz Nominal
SLS Test:	$\pm 1.0$ dB P <sub>2</sub> inserted at 0 dB or -9 dB relative to P <sub>1</sub>
Power:	-66 to -79 dBm direct with 34 dB pad ( $\pm 1.5$ dB)

#### Reply Measurements:

Power (UUT):	10 W to 1.5 kW peak ( $\pm 20\%$ ), direct with 34 dB pad
Accuracy:	$\pm 3$ dB radiated with properly spaced antenna
Frequency Check:	1086 to 1093 MHz ( $\pm 0.3$ MHz)
Altitude Code:	Binary and Numerical Readout, -1.0 to +126.7 thousand feet
Pilot Code:	Binary and Numerical Readout, 0000 to 7777
Percent Reply:	0 to 100%, either A/C or A(B) modes
F2 Pulse Position:	Measurement of rising and falling edge ( $\pm 0.5 \mu\text{s}$ ) from nominal
Status Lamps:	Ident Pulses, Invalid Altitude Code and No Altitude Code
Encoder Test:	Direct connection accepts altitude encoder

### DME

#### Interrogations Measurements:

PRF:	0 to 30 and 0 to 300 Hz
Power (UUT):	10 W to 1.5 kW ( $\pm 20\%$ ), direct with 34 dB pad
Accuracy:	$\pm 3$ dB radiated with properly spaced antenna
Frequency Check:	1038 to 1045 MHz ( $\pm 0.3$ MHz)

#### Reply Output:

Frequency:	Paired with VOR: 108.00 MHz (17X channel) or 108.05 MHz (17y channel) standard; 108.10 MHz (18X channel) standard
Output Power:	$\approx -45$ dBm direct with 34 dB pad or radiated with properly spaced antenna

**Reply Output (cont):**

Range:	0 to 399 NM in 1 NM steps
Accuracy:	±0.07 NM (±0.02%)
Range Steps:	0.025 NM (system), 0.1 NM displayed
Velocity:	Crystal controlled digital velocity with rates of 50, 75, 100, 150, 200, 300, 400, 600, 800, 1200, 1600 and 2400 knots (±0.02% of setting); Inbound or outbound starting from any selected range
Percent Reply:	100% or 50%
Ident Tone:	1350 Hz (±8 Hz) with equalizing pulses

**Battery Operation**

Type:	2.0 AH NiCad
Duration:	≈2 hours continuous operation

**AC Power Requirements**

Source Voltage and Frequency:	100 to 120 VAC at 60 Hz 220 to 240 VAC at 50 Hz
Power Consumption:	Maximum: 24 W for 100 to 120VAC at 60 Hz 16 W for 220 to 240 VAC at 50 Hz Nominal: 19 W for 115 VAC at 60 Hz 13 W for 230 VAC at 50 Hz
Nominal Input Current:	0.26 A at 115 VAC 0.14 A at 230 VAC

**Fuse Requirements**

F1 and F2:	1.0 A, Type F, 100 to 120 VAC 0.5 A, Type F, 220 to 240 VAC
Internal	10.0 A, Type F, 32V (Not Servicable by Operator)

**Safety**

This instrument is designed to comply with the requirements of EN61010-1/IEC1010-1, for Class 1 portable equipment and is for use in a pollution degree 2 environment. The equipment is designed to operate from an installation category II supply, to environmental conditions specified in paragraph 1.4 of EN61010-1.

**Operational Environmental Conditions**

This instrument operates over temperature extremes of -20° to +50° C.

**Physical Characteristics**

Weight:	≈18 lbs. (8.18 kg)
Width:	≈11.5 in (29.21 cm)
Height:	≈5.0 in (12.7 cm)
Depth:	≈16.25 in (41.275 cm)