

TECHNICAL CHARACTERISTICS

1.0 Technical Characteristics

The following paragraphs list the technical characteristics of the XDD-250C transmitter/receiver:

1.1 Transmitter Technical Characteristics

Magnetron Type: SFD-373

Operating Frequency: 5400 to 5700 MHz

Pulse Repetition Frequency (PRF) and Pulse Duration (Pulsewidth):	<u>Pulsewidth</u>	<u>PRF</u>
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	2.0 μ sec	250
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	1.0 μ sec	500
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	0.4 μ sec	1180
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All pulsewidths and PRFs are variable within the duty-cycle limits.

Peak Power: 250 kW

TR Switching: Ferrite Duplexer, with 5 μ sec recovery time. Isolation of 20 dB, minimum, with a solid-state, single long-life TR limiter.

1.2 Receiver Technical Characteristics

RF Frequency: 5400 to 5700 MHz (see transmitter frequency).

Noise Figure (input to receiver): 3 dB maximum, using low noise GaAsFET amplifier.

Mixer: Balanced Coaxial

Local Oscillator: Frequency synthesizer with AFC.

IF Amplifiers: Digital

Intermediate Frequency: 30 MHz

IF Bandwidth: Intensity – 0.60 MHz +/- 250 KHz
Velocity – 1.20 MHz +/- 250 KHz
3.00 MHz +/- 250 KHz

Dynamic Range: 90 dB nominal

Sensitivity:

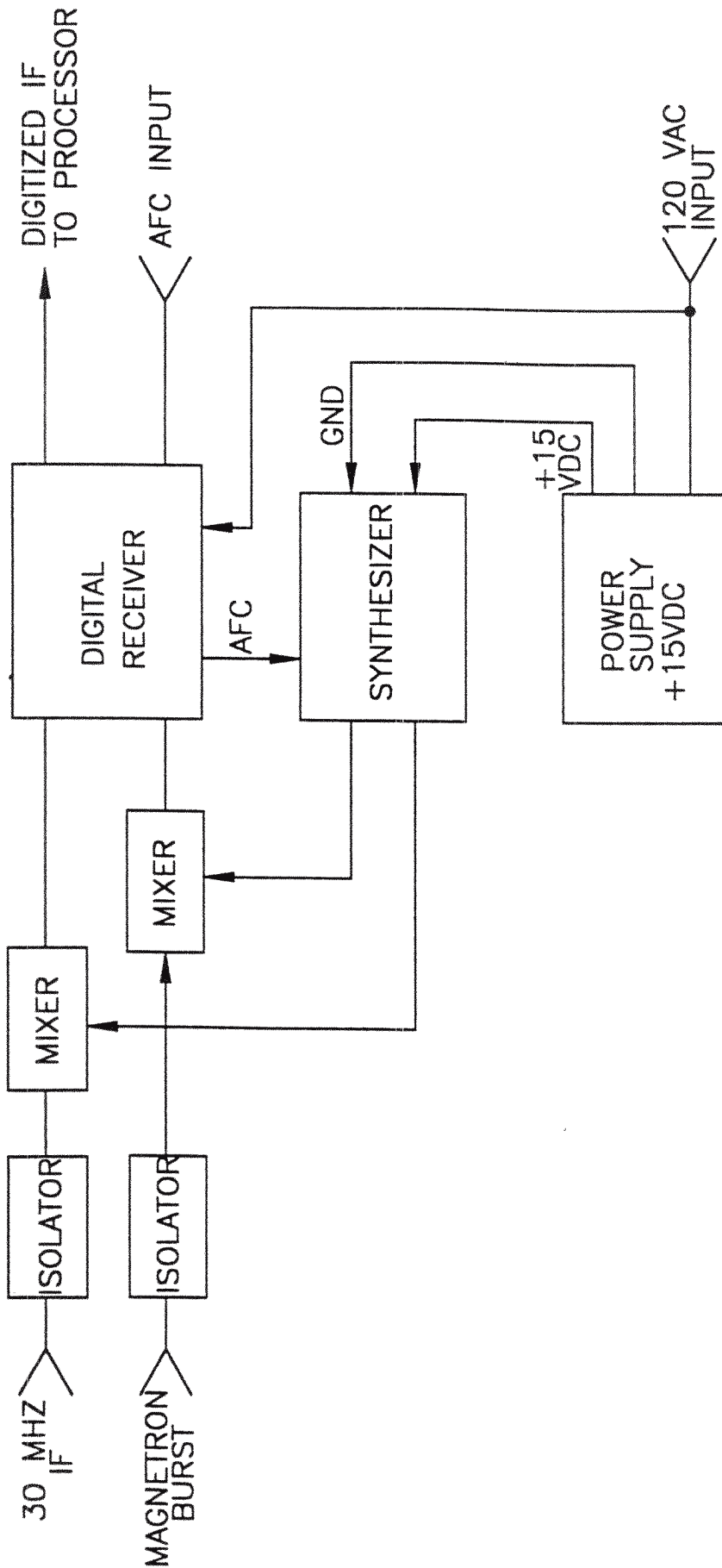
-120 dBm @ 0.060 MHz Bandwidth

Range Normalization:

Provided by the radar control processor,
with one over range squared or with other
values downloaded from the host
computer.

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REVISIONS			
ZONE	REV	DESCRIPTION	APPROVED



DWG NO. BSI-104155 SH 1

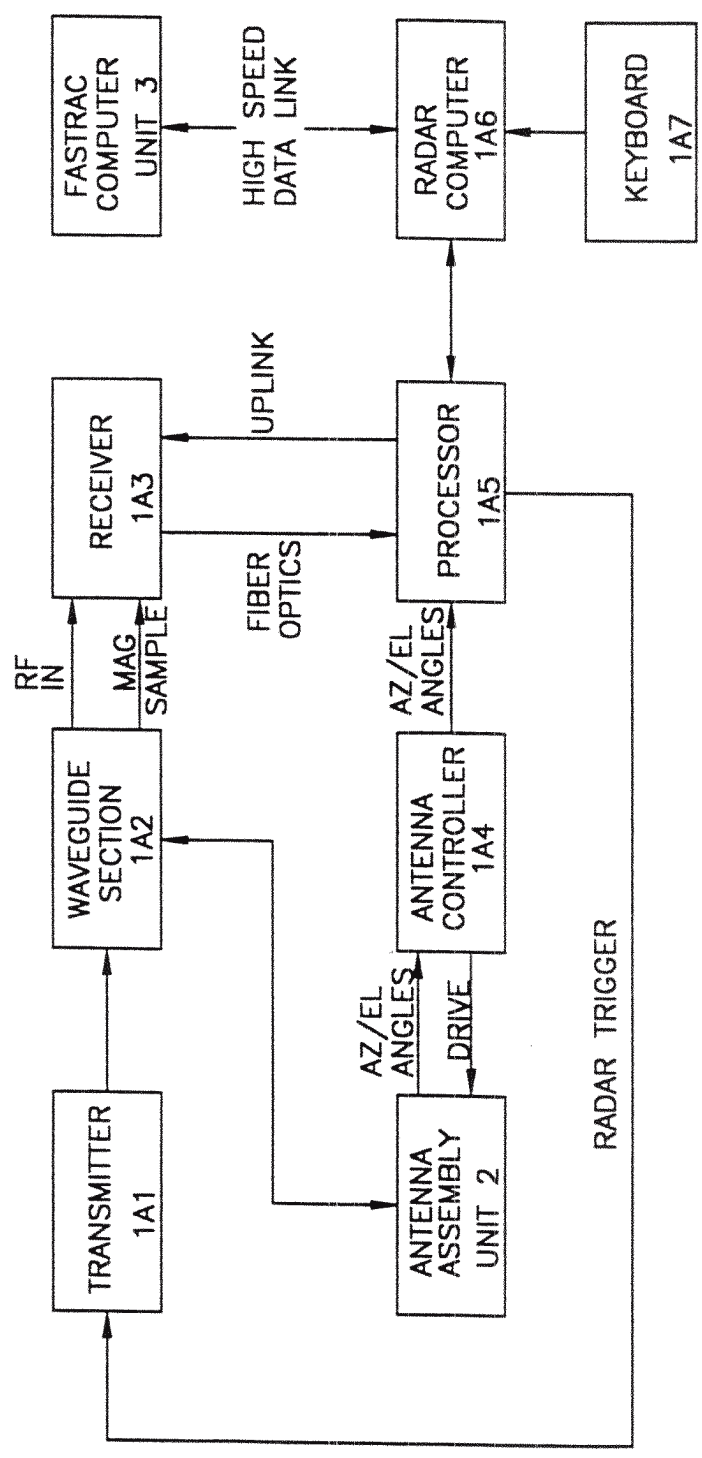
DRAWN		BO	DATE	Baron Services Inc. HUNTSVILLE, AL	
CHECKED			3/20/98	DESCRIPTION RECEIVER BLOCK DIAGRAM	
DESIGN ENGINEER				MATERIAL	
PROD ENGINEER				SIZE A	
QUALITY ASSURANCE				DRAWING NO. BSI-104155	
CONTRACT NO.				SCALE NONE	
APPROVAL				UNIT WT	
				SHEET 1 OF 1	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
FRACTIONS	DECIMALS	ANGLES	
±	± .004, .03	± 1/2°	
HOLE DIA			
UP TO .500	± .005		
.501 TO 1.000	± .008		
OVER 1.000	± .010		

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REVISIONS		
ZONE	REV	DESCRIPTION
		APPROVED
		DATE

DWG NO. BSI-104159 1



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAWN BO	DATE 4/28/88
FRACTIONS ±	DECIMALS .001, .002, .003, .005, .010	CHECKED DESIGN ENGINEER	DESCRIPTION HDX BLOCK DIAGRAM
TOLERANCES ON ANGLES ± 1/2°		PROJ ENGINEER	MATERIAL
HOLE DIA UP TO .500 +.005 .501 TO 1.000 +.008 1.001 TO 1.500 +.010		QUALITY ASSURANCE	SIZE A
CONTRACT NO.		DRAWING NO. BSI-104159	
APPROVAL		DATE	

Baron Services Inc.
HUNTSVILLE, AL