

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):	<table><thead><tr><th><u>Pulsewidth</u></th><th><u>PRF</u></th></tr></thead><tbody><tr><td>2.0 μsec</td><td>250</td></tr><tr><td>1.0 μsec</td><td>500</td></tr><tr><td>0.4 μsec</td><td>1180</td></tr></tbody></table>	<u>Pulsewidth</u>	<u>PRF</u>	2.0 μ sec	250	1.0 μ sec	500	0.4 μ sec	1180
<u>Pulsewidth</u>	<u>PRF</u>								
2.0 μ sec	250								
1.0 μ sec	500								
0.4 μ sec	1180								
	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:

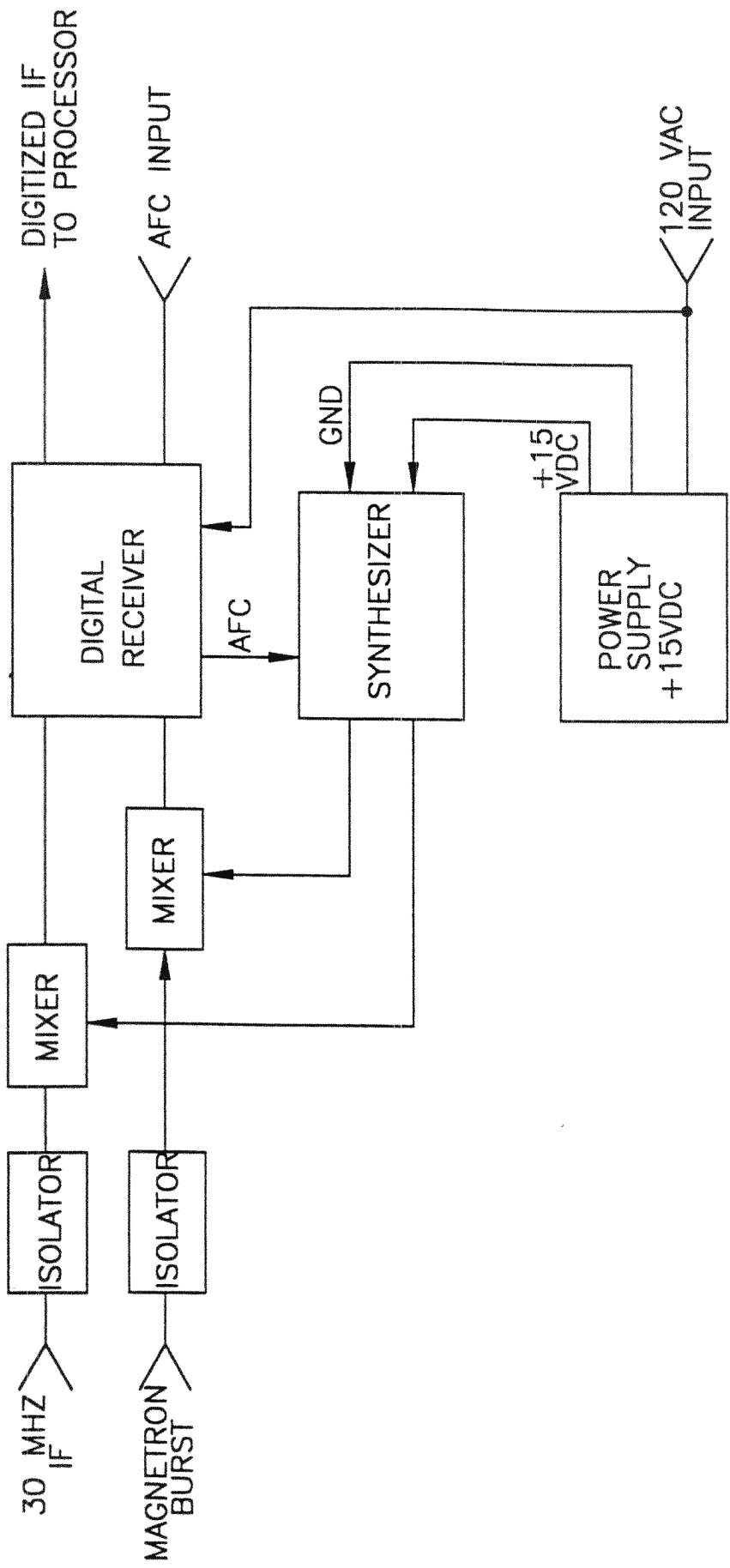
-120 dBm @ 0.060 MHz Bandwidth

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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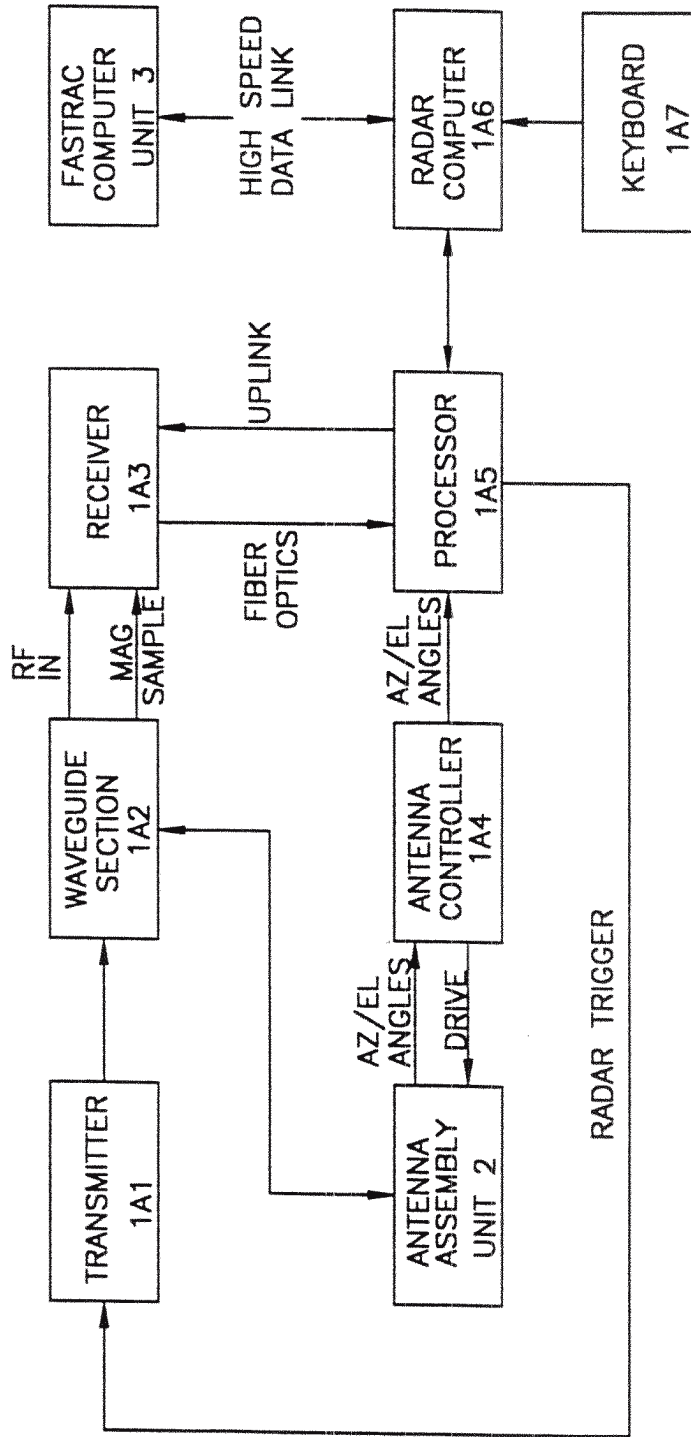
REVISIONS		DATE	APPROVED
ZONE	REV		
DESCRIPTION			



DRAWN		BO	DATE	3/20/98
CHECKED				
DESIGN ENGINEER				
PROD ENGINEER				
QUALITY ASSURANCE				
CONTRACT NO.				
APPROVAL				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: FRACTIONS DECIMALS ANGLES ± .004 .03 ± 1/2° .0005 .010 ± 1/2° HOLE DIA UP TO .500 { +.005 / -.003 } .501 TO 1.000 { +.008 / -.003 } OVER 1.000 { +.010 / -.010 }				
Baron Services Inc. HARTSVILLE, AL			RECEIVER BLOCK DIAGRAM	
MATERIAL			SIZE DRAWING NO.	
A			BSI-104155	
SCALE NONE			UNIT WT	
			SHEET 1 OF 1	

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REVISIONS		DATE	APPROVED
ZONE	REV		
DESCRIPTION			



DRAWN BO		DATE	4/28/88
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DESIGN ENGINEER			
PROJ ENGINEER			
QUALITY ASSURANCE			
CONTRACT NO.			
APPROVAL			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
TOLERANCES ON			
FRACTIONS	DECIMALS	ANGLES	
±	.005	± 1/2°	
	.0005		
	.010		
HOLE DIA			
UP TO .500	+ .005		
	- .003		
.501 TO 1.000	+ .008		
	- .003		
	+ .010		
	- .010		

Baron Services Inc.
HARTSVILLE, AL

DESCRIPTION: HDX BLOCK DIAGRAM

MATERIAL:

SIZE: A

DRAWING NO.: BSI-104159