

# TECHNICAL CHARACTERISTICS

## 1 TECHNICAL CHARACTERISTICS

The following paragraphs list the technical characteristics of the XDD-350C transmitter/receiver.

### 1.1 TRANSMITTER TECHNICAL CHARACTERISTICS

Magnetron Type	PM-350C								
Operating Frequency	9100 to 9600 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 usec</td><td>250</td></tr><tr><td>1.0 usec</td><td>500</td></tr><tr><td>0.4 usec</td><td>1180</td></tr></tbody></table> <p>(All pulse width's and PRF'S are variable within duty cycle limits)</p>	<u>Pulsewidth</u>	<u>PRF</u>	2.0 usec	250	1.0 usec	500	0.4 usec	1180
<u>Pulsewidth</u>	<u>PRF</u>								
2.0 usec	250								
1.0 usec	500								
0.4 usec	1180								
Peak Power	350 kW								
TR Switching	Ferrite Duplexer with 5 usec 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)	3dB 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

-114 dBm @ .060 MHz Bandwidth

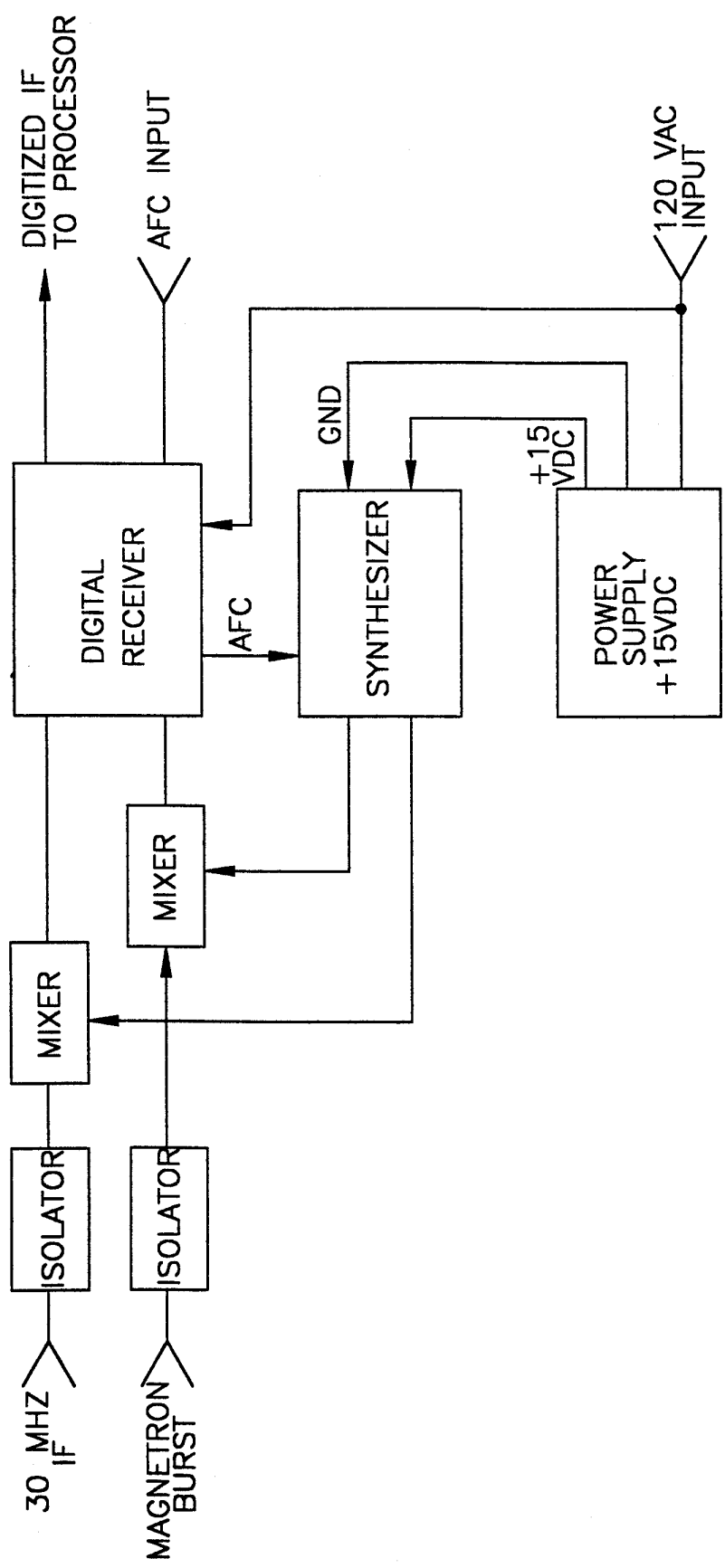
Range Normalization

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

DWG NO. BSI-104155 SH 1

REVISIONS		DATE	APPROVED
ZONE	REV	DESCRIPTION	

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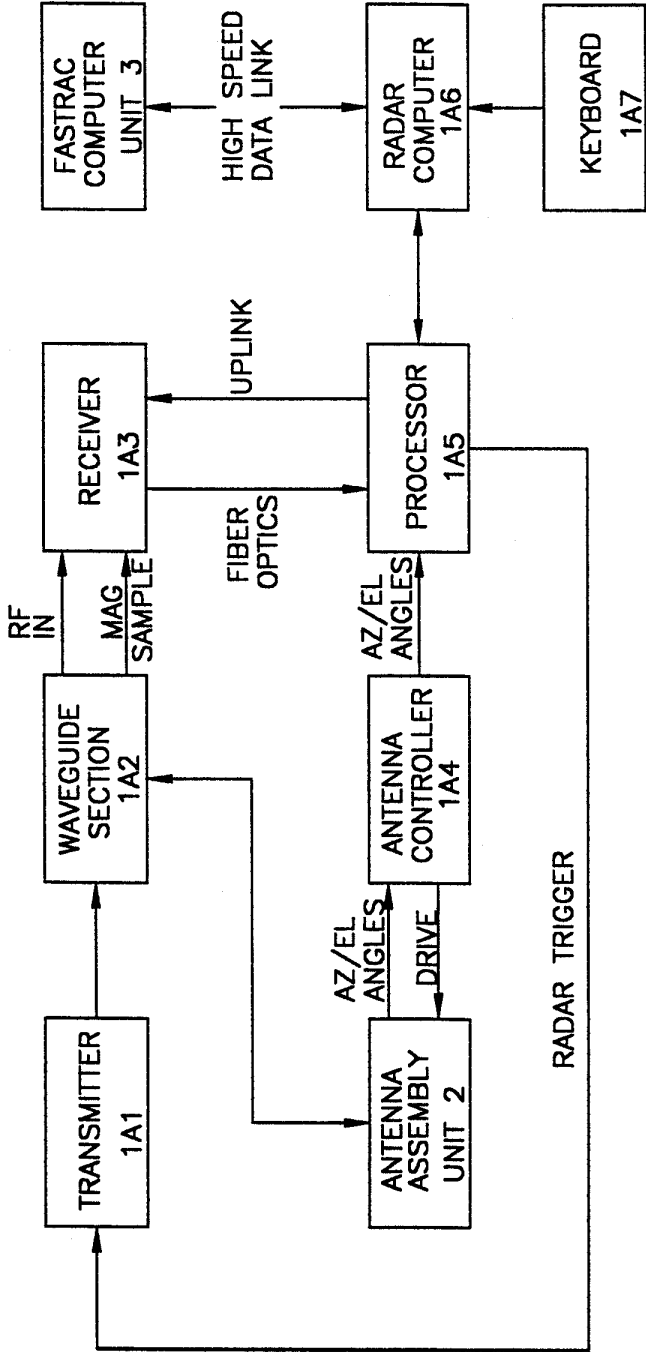


DRAWN		BO	DATE	3/20/98
CHECKED				
DESIGN ENGINEER				
PROD ENGINEER				
QUALITY ASSURANCE				
CONTRACT NO.				
APPROVAL				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				
TOLERANCES ON:				
FRACTIONS	DECIMALS	ANGLES		
±	±	±		
±	±	±		
HOLE DIA				
UP TO .500	{	+ .005		
		- .003		
.501 TO 1.000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

DWG NO. BSI-104159 SH 1

REVISIONS		DATE	APPROVED
ZONE	REV	DESCRIPTION	

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DRAWN		BO	DATE	4/28/98
CHECKED				
DESIGN ENGINEER				
PROJ ENGINEER				
QUALITY ASSURANCE				
CONTRACT NO.				
APPROVAL				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				
TOLERANCES UNLESS OTHERWISE SPECIFIED				
FRACTIONS	DECIMALS	ANGLES		
±	±	±		
1/2	.03	± 1/2°		
1/4	.010			
HOLE DIA				
UP TO .500	+ .005			
	- .003			
.501 TO 1.000	+ .008			
	- .003			
OVER 1.000	+ .010			
	- .003			

**Baron Services Inc.**  
HUNTSVILLE, AL

DESCRIPTION: HDX BLOCK DIAGRAM

MATERIAL:

SIZE: A

DRAWING NO.: BSI-104159

SCALE: NA

UNIT WT:

SHEET 1 OF 1