Antenna Authority, Inc.

DF Antennas Our Specialty!
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Product Code --- RFDF-3131 DF Monitoring System

FIG 1: DASA-3131 DF MONITORING ANTENNA

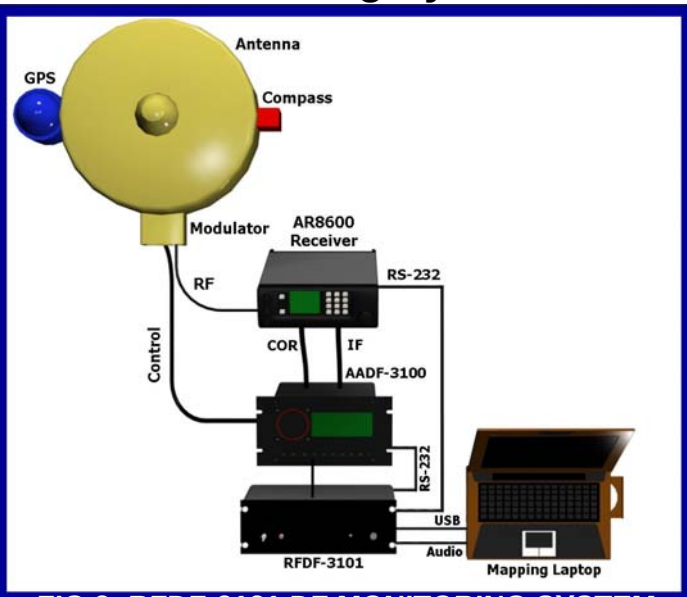


FIG 2: RFDF-3131 DF MONITORING SYSTEM

An Accurate Compact Remote DF Monitoring System

The remote monitoring system is intended to be left running unattended to monitor and to take bearings on an intermittent, possibly clandestine RF radiator. The receiver is set to log bearings and audio data when a signal is active on the frequency of interest. That information can be retrieved either directly or via remote access (if internet or phone is available) at a later date. The files are stored on a one minute basis to make retrieval easier and reduce the amount of lost time listening to unneeded audio. When an incident happens, the local people on-site need to record the time so the bearing and audio data can be retrieved efficiently.

The RFDF 3131 System consists of the following equipment:

AADF-3101 DF processor
DASA-3131 antenna
AADF-3131 Chassis including all required cables
AR-8600 receiver
Laptop computer
Custom Control and mapping software – for both acquisition and retrieval
Uninterruptable Power Supply
Shipping Case(s) for deployment

The antenna is affixed on a mast - normally atop a building or a pole. The controls are mounted close by, ideally in an elevator shaft or somewhere secure, dry and close to the antenna. Fifty feet of shielded, coaxial and control cable is provided with each system.

FIG 3: RFDF-3131 DF SYSTEM AND MAPPING LAPTOP

The antenna is a dual band annular slot type enclosed in a vacuum formed, ruggedized, and lightweight abrasive resistant plastic cover with UV protection. The antenna is intended to be mounted on a 1.5" metal pipe (2' aluminum section provided). All power and control signals to the antenna are provided through one 12 conductor control cable via the DF processor. The received signal with bearing information encoded is routed to the receiver through an RF coaxial cable. The GPS receiver is located in the antenna and provides LAT/LON for the mapping and timestamp for the bearings and audio. There is a compass mounted in the antenna for setting the original orientation on startup. The unit comes with shipping cases to make it convenient for shipping out for remote installation.

Software

The software provided runs on the laptop and is intended to control the receiver and the DF which is monitoring the frequency of interest. When a signal is detected the audio and bearing information are logged. It may be played back later on the same or a different computer to show the direction of the signal on a map. A licensed copy of Microsoft Mappoint is included.

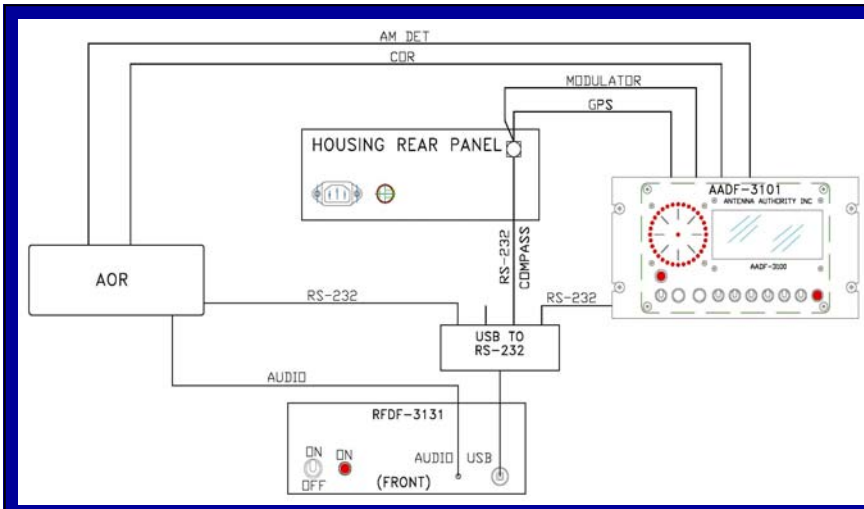


FIG 4: RFDF-3131 INTERNAL WIRING

Electrical Specifications

Frequency Coverage:	20 MHz - 1.0 GHz	Azimuth Coverage:	360° in azimuth
DF Technique:	Watson Watt Phase	Antenna:	Dual Annular Slot
Bearing Accuracy:	6° rms	Polarization:	Vertical
Power:	Voltage:	115 VAC 300 watts Max	

AOR 350 ma
DF 450 MA
Laptop AC 110 250 Watts

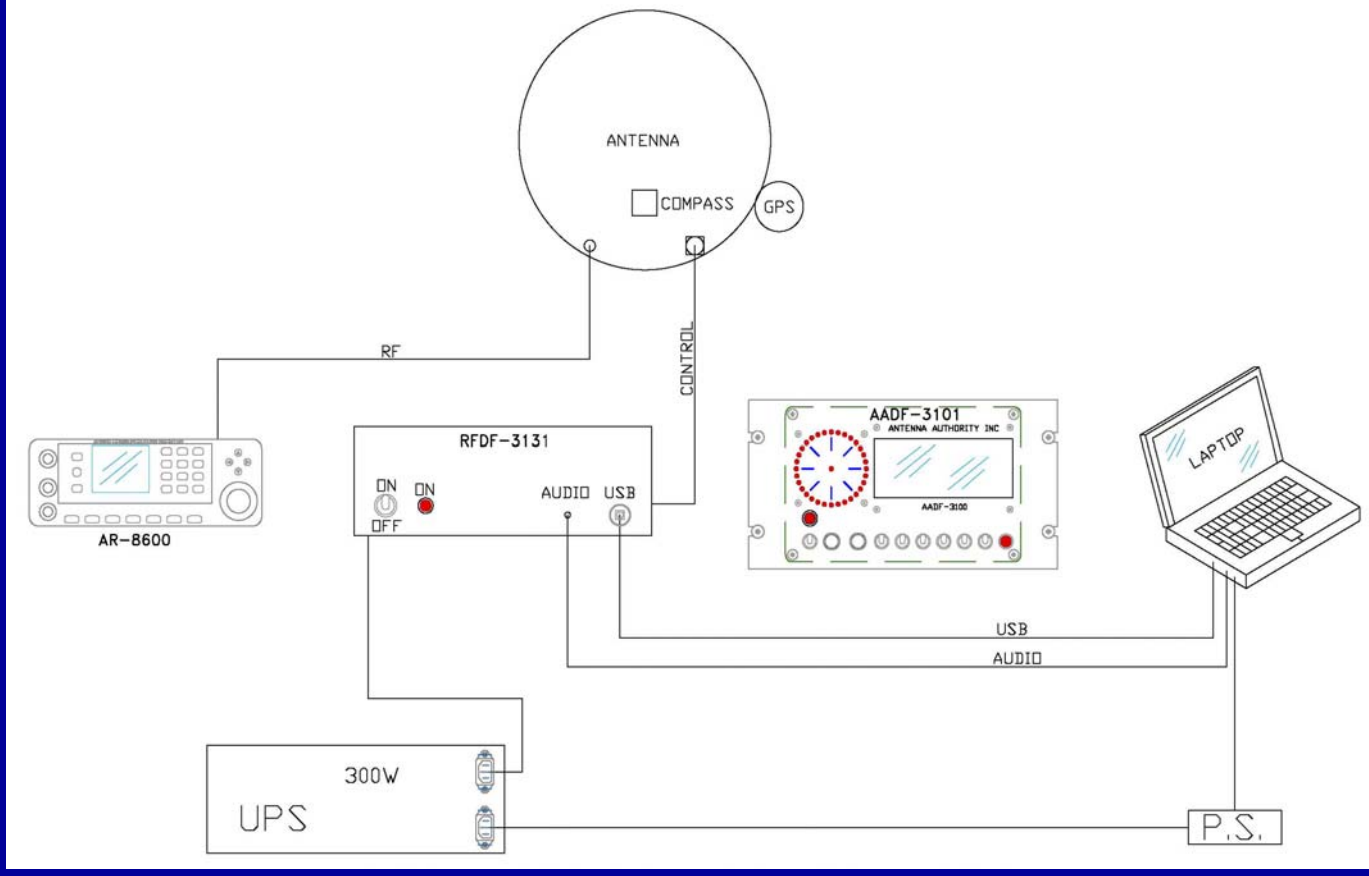
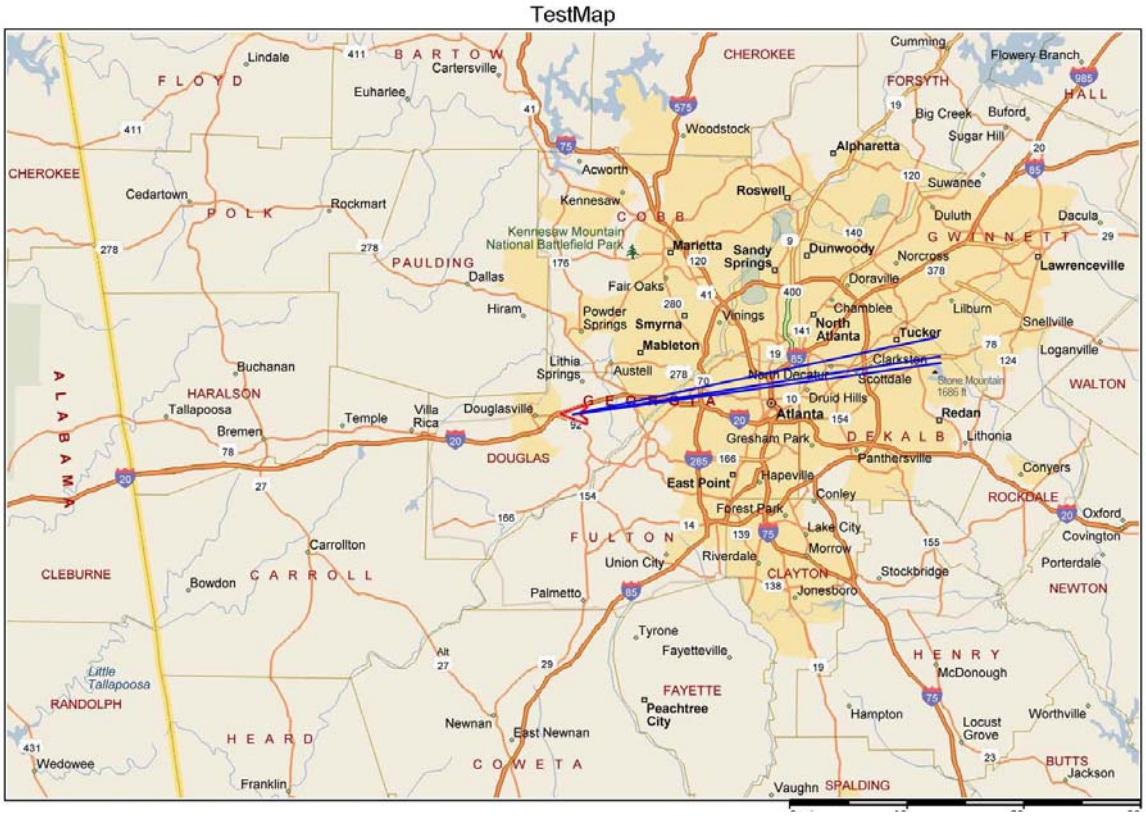


FIG 5: RFDF-3131 EXTERNAL WIRING

Map of bearing LOBs for typical Weather station at 162.55 on Stone Mountain from Douglasville - 32 miles.



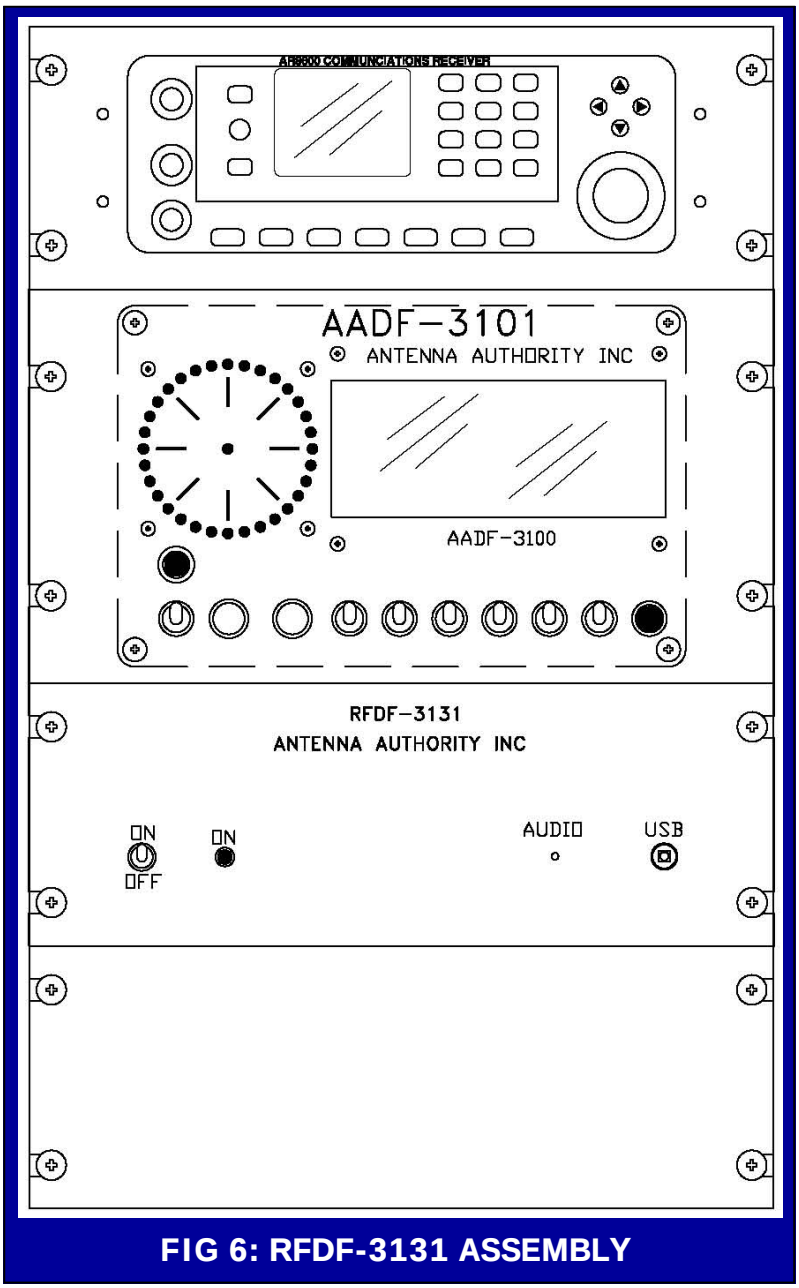


FIG 6: RFDF-3131 ASSEMBLY

Mechanical Specifications

Antenna Dimensions: Diameter 24", Height: 5", Weight: 35 lbs

Environments: Operating Temp.: -40°C to +60°C, Storage Temp.: -40°C to +70°C

Ordering Information Model No. RFDF-3131

Specifications subject to change without notice