

Item 4 -- Particulars of Operation

(A)	(B)	(C)	(D)	(E)	(F)	(G)
225.000 MHz to 399.375 MHz	2.7 Watts	2.7 Watts	PEAK	F3E, A3E, F1E	Voice, 16 Kbit/sec Data	25 kHz channel spacing, $\pm$ 9 kHz peak deviation
30.000 MHz to 89.975 MHz	10 Watts	10 Watts	PEAK	F3	Voice, Data	25 kHz channel spacing, 3 kHz modulation bandwidth
1.600 MHz to 29.999 MHz	20 Watts (max)	20 Watts	PEAK	A2, A3	Voice	3 kHz modulation bandwidth

(G) Description of how the necessary bandwidth was determined:

The necessary bandwidths were selected because of the signal characteristics that are required to be analyzed. These signals are somewhat unique to the particular transceivers that were selected for signal transmission. *See* Item 13, below. Therefore, the necessary bandwidths were chosen to match the published bandwidth characteristics of these transceivers.

Item 10 - Narrative Statement Describing Proposed Experimentation

ARGOSystems, Inc. is developing a special radio receiver that is designed to receive a special communications emission, perform a DF bearing to this emitter (determine the azimuth direction of the emitter with respect to the radio receiver), and process the emission to measure various technical parameters.

This equipment uses miniature receivers with special low noise circuits and phase matched tracking modules. It is operated and controlled by a proprietary digital processing system. The receiver is a broadband system designed to find the special emissions transmitted anywhere in the electromagnetic spectrum from the low High Frequency (HF) bands to the Ultra High Frequency (UHF) bands.

The receiving unit is designed to be very small and capable of being used in difficult physical environments. There are no moving parts on the receiver except for the power (on/off) switch.

The specific objectives sought to be accomplished include:

- Receiving several different forms of the special communications emission,
- Rapid acquisition of and accurate DF bearings, and
- Rapid response in measuring and analyzing technical parameters.

The primary experiment the program seeks to conduct is to determine if the particular, unique, proprietary processing and engineering designs are capable of performing as theoretically expected in a physically small unit in a rugged operational environment. All testing will be conducted within a remote, sparsely populated agricultural area in the Central California valley.