SECRET

TECHNICAL PROPOSAL

BEACON TRANSMITTER

INTRODUCTION:

[redacted] is pleased to submit a proposal to develop and build a battery powered, transistorized, medium frequency transmitter. 50X1

GENERAL DESCRIPTION:

The transmitter [redacted] proposes to build will be approximately "cigar box" size. Most of the volume and weight will be due to the batteries. The unit will be as simple as possible consistent with the requirements of the customer. It will be designed to transmit continuously at temperatures of up to 70°C. At periodic intervals the carrier will be interrupted a few times to identify it. 50X1

The transmitter portion will consist of a crystal controlled power oscillator driving an output stage capable of delivering at least 10 watts of medium frequency power output in the 1500kc to 1800kc region.

An electronic timer will be used to switch the carrier off for a number of brief intervals once in about every 30 seconds to enable identification of the carrier. This will be done with the simplest possible circuit which will provide a recognizable signal.

The battery will consist of a number of flashlight sized ("D") mercury cells in series providing most of the weight and size of the unit.

A collapsible antenna which will extend from 15 inches to 16 feet will be used with a loading coil. The antenna will mount to the transmitter case as a base. Extenders will be provided if the case does not prove to be sufficiently heavy to form a stable mounting platform.

The only external control will be an on-off switch. A connector will be provided to hold the loading coil and antenna. It is desired that all tuning of the unit be done before operation and no field tuning or trimming be necessary. This will be done if electrically feasible. If adjustment should be required, equipment will be provided.

50X1

[redacted]

DOCUMENT NUMBER

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Time is important to the customer and [redacted] will make every effort to provide a well designed, thoroughly tested unit at the soonest possible date. 50X1

The following goals will be used during the design of the transmitter:

Power Output:	Greater than 10 watts
Frequency Range:	1500 to 1800 kc
Power Input:	Approximately 25 watts
Operating Temperature:	-30°C to +70°C with less than 3db change in output exclusive of power supply. With the mercury pack provided, +20° to +70°C operation.
Operate Time:	Continuous transmission for over 3 hours
Size:	Approximately 9" x 5" x 2 1/2"

PLAN OF ATTACK:

As soon as the project commences, parts will be ordered to cover long delivery items. Circuit design will start immediately. Close scheduling will provide the customer with two well designed thoroughly tested units in 45 days. At the conclusion of the project a final report combined with a basic instruction manual will be supplied the customer.

SCHEDULE OF DELIVERABLE ITEMS:

Item	Description	Quantity	Delivery
1	Beacon Transmitter	2	45 days after start
2	Extra Battery Pack	2	45 days
3	Antenna and Loading Coil	2	45 days
4	Final Report & Instruction Manual	10	45 days
5	Reproducible Engineering drawings	1 set	75 days after start

COST ANALYSIS

BEACON TRANSMITTER

Material		50X1
Travel		
Telephone		
Labor		
Overhead		
Total Prime Cost		
G. and A. Expense		50X1
Total Cost		
Fee		50X1
Selling Price		