

APPENDIX "Z-5"Ultra Sonics

The National Research Council has granted assistance to Prof. E. W. Boyle, Dean of the Faculty of Applied Science of the University of Alberta, to assist him to continue important investigations on Ultra Sonics which he made during the World War for the British Admiralty. The University of Alberta is also contributing to this investigation.

Ultra Sonics are sound vibrations of a pitch higher than those which are audible, that is to say above 20,000 vibrations per second.

These researches include experiments in the transmission through water of elastic (acoustic) waves of very high periodicity and short wave lengths for two primary purposes.

- (1) To signal secretly under water from boat to boat in either surface or underwater craft.
- (2) To locate submerged objects, whether fixed as rocks, or in motion like submarines, also icebergs and shores obscured by fog.

A great deal of extremely important work has already been done in connection with this investigation, which indicates that Ultra Sonics may be used to great advantage in increasing the safety of navigation on the Atlantic coast of Canada, where accidents from icebergs, rocks, etc., have exacted a heavy toll in life and shipping. The work is well in progress and it is expected that it will be possible to issue a complete report in the near future showing that very material progress has been made in connection with this research. Prof. Boyle and an assistant through the kindness of the Marine Dept., have carried out practical tests on one of the Government boats