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TEXAS UNIV AT AUSTIN APPLIED RESEARCH LABS  
SONAR TEST AND TEST INSTRUMENTATION SUPPORT, (U)  
OCT 80 D D BAKER, B O MOSES, J L SHOREY

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Prepared for:

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## I. INTRODUCTION

Applied Research Laboratories, The University of Texas at Austin (ARL:UT), was awarded Contract N00140-76-C-6487, sponsored by New London Laboratory, Naval Underwater Systems Center (NLONLAB NUSC), effective 1 June 1976. Some of the work under this contract represents a follow-on effort to previous work sponsored by NLONLAB NUSC under Contract N00140-74-C-6316.

The work under Contract N00140-76-C-6487 was originally divided into six task areas that focused on technical support in areas of sonar technology.

- I. AN/FQM-10(V) Sonar Test Set Field Support
- II. Transducer Repair Facility Test Site Field Support
- III. AN/WQM-5 Sonar Test Set Field Support
- IV. Special Purpose Passive Sonar Systems Support
- V. Sonar Instrumentation Test and Evaluation
- VI. Study of Towed Line Array Acoustical Testing at Transducer Repair Facilities

Additional tasks were added by contract modifications, as follows.

- VII. AN/SQM-( ) Sonar Noise Measuring Set Development (Mod P00019)
- VIII. AN/WQM-5( ) Sonar Test Set Development (P00019)
- IX. Sonar Dome Maintenance Documentation Support (P00019)
- X. AN/BQQ-5 Power Supply Development (P00019) (follow-on work under Contracts N00024-77-C-6035 and similar effort under N00123-79-C-0459)
- XI. AN/BQQ-6 Test Instrumentation (P00035)
- XII. AN/WLR-12 Calibration (P00033)

This report is Quarterly Progress Report No. 14 under Contract  
N00140-76-C-6487, for the period 1 September - 30 November 1979.

## II. SPECIAL PURPOSE PASSIVE SONAR SYSTEMS SUPPORT

No work was performed on this task during the report period.

### III. SONAR INSTRUMENTATION TEST AND EVALUATION

The remaining AN/GQM-2 Transducer Test Set was shipped to NAVSHIPYD PTSMH on 26 November 1979. An improved user calibration procedure for the test set has been completed and was mailed to all the TRFs on 1 October 1979. Work has begun on software to automate the user calibration procedure. Work is continuing on improvement of the operating system software.

#### IV. AN/WQM-5( ) PROGRAM

##### A. Field Change Program

During this report period, ARL:UT delivered the following modified AN/WQM-5( ) Test Sets.

AN/WQM-5B, Ser A7            MOTU 1 (PEARL)

AN/WQM-5B, Ser B3            NAVSEACEN FSO PEARL

Thus far, a total of 15 modified sets have been delivered. As of the end of the last report period 13 modified sets had been delivered, not 14 as stated in Quarterly Progress Report No. 13.

##### B. Field Support Services

During this report period, ARL:UT provided support for AN/WQM-5 test sets in the following manner.

On 28 September 1979, one circuit card 3A3 was sent to NAVSHIPYD PEARL to effect the repair of unit 3.

On 15 October, ARL:UT sent one readout monitor and one sensor calibration unit Ser A1 to MOTU 4 as loaners to be used while the MOTU 4 units were being repaired.

On 30 October, ARL:UT returned a repaired OS-237/WQM-5, model 434 oscilloscope to MOTU 4, New London, CT.

On 14 November, ARL:UT sent one cable W28, one 6 ft ground strap, and one 3 ft ground strap as replacements for failed cables to MOTU 4, New London, CT.

1 October 1980

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