

MIUW-SU Newsletter



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FROM THE PROGRAM MANAGER

This has been an eventful three months at the MIUW-SU Program Office! The first of the new patrol boats was delivered to NCW Group One in March and we are still on track for delivery of the first of the MIUW-SU (V)4 in June, 2001. Once the new (V)4 system has been turned over to the Navy, the Program Office and Space and Naval Warfare Systems Center San Diego will subject it to a thorough inspection and rigorous testing before delivering it to the Fleet.

We are continuing to improve the reliability and capabilities of the MIUW-SU and have actively pursued several ongoing upgrade and re-baseline efforts. The MIUW ISEA is currently in the process of providing a communications re-baseline of the Radar Sonar Surveillance Center, replacement of cameras and monitors to the MSP SAU, and upgrades to the MSP generator set. This work has taken place around the world from Korea and Bahrain to Puerto Rico! Other ongoing efforts include LASS training in San Diego and active participation in the PPBS funding process.

We appreciate your continued participation in the Maintenance and Training working groups and all of your calls and emails. Your input is invaluable and lets us know how we can better serve you. Our goal is to provide you, the MIUW-SU customer and user, with the best system possible.

V4 ENVIRONMENTAL TESTING

The first production shelterized HMMWV MIUW V4 system is proceeding smoothly under the new contract with SAIC. Prior to delivery, the first V4 system will be put through a series of environmental tests. The purpose of these tests are to ensure the V4 design will be able to operate in the extreme environments that MIUW encounters on a routine basis. Testing will take place in April at Yuma Proving Grounds (YPG) in Yuma, Arizona. The V4 system will be required to pass several tests. First, it must demonstrate that it can operate continuously with outside temperatures of 130°F. Next it will be subjected to heavy rain with high winds to verify there is no water penetration. A Washdown Test will be done on the system including transit cases to verify there is no water penetration. The system will be driven over a variety of terrain environments to verify the shock isolators provide sufficient equipment protection. Selected transit cases will undergo rough handling tests to ensure the equipment inside is well protected. An accessibility demonstration will be conducted on randomly selected pieces of equipment to show that the equipment can be removed and replaced within thirty minutes. The additional mobility and transportability will be a big improvement over the current van based system.

INSHORE BOAT PROGRAM

Naval Coastal Warfare Group ONE took delivery of the first of the powerful new Patrol Boats in March, 2001. The boat is currently undergoing electronic and weapons installations and is expected to enter service with IBU 17 in April, 2001. The boat will have a Furuno radar installed along with an ICOM VHF Marine Band Radio, PRC-117 radio, PRC-138 radio, a Furuno 1650 Color Plotter with GPS receiver and heavy machine guns. Three additional boats are expected to be delivered to Naval Coastal Warfare Group ONE in April and early May. A final boat will be delivered to Commander, Naval Surface Force, Atlantic Fleet. APLs and Preventive Maintenance packages are being prepared for the new boat by Combatant Craft Department. When complete, these packages will help to ensure logistic support and effective maintenance schedules for the boats and trailers.



IMPORTANT DATES

May—Three boats due to be delivered to NCWG ONE

June—First MIUW System Upgrade AN/TSQ-108A (V) 4 to be delivered to SPAWAR.

Aug—First MIUW (V)4 to be delivered to Group

MMF ISEA HAPPENINGS

The MIUW Maintenance Facility (MMF) has ISEA responsibility to support our MIUW-SU system users in the fleet. We accomplish that primarily via the MMF Helpdesk toll-free phone number, which is (888) 571-6388. Information is also available at the MMF technical support website located at <http://www.spawar.navy.mil/fleet/miuw-help> where you will find technical bulletins, safety advisories, setup/shutdown procedures, and other pertinent information.

The MMF has daily contact with various MIUW Units about CASREPs and other equipment support issues. One of the latest support functions has been updating Fly Away Kits (FAKs) with the latest equipment, and then packaging them so that they are ready to support two upcoming overseas operations.

LASS Training Support

The MIUW ISEA has been heavily involved with maintenance, winding, and configuration of fiber optic cable onto reels for the upcoming Lightweight Acoustic SubSystem (LASS) training class here in San Diego. Three 15 kilometer reels of fiber optic cable and one reel with 20 km of cable were prepared for deployment using the Small Boat Deployment System (SBDS). A LASS array, with battery in place, is pictured in its storage case below:



To gather the fiber optic cable resources needed for this training class, cable that was previously used in Exercises Foal Eagle and Seahawk was inspected for damage and attenuation loss with an optical time domain reflectometer (OTDR). SSC San Diego has developed procedures for cable management functions in order to maintain the cables and associated winding equipment. The goal is to reuse fiber optic cables as much as possible. Reused cable segments will make up the bulk of the material to be deployed in support of the upcoming classroom training. Some cable segments now wound on a test reel are using a newly developed connectorless fiber optic cable splicing technique, and the real world performance of the new splices will be evaluated during training.

System Rebaseline

The MIUW System Upgrade Rebaseline has been underway since April, 2000. This effort involves upgrading the communications systems in the RSSC. IAMPS is replaced with NAVMACS II, the WSC-3s and TD-1271 are removed and replaced with the AN/USC-54 VICS radio and the remaining communication equipment is overhauled. This work takes place at Battery Humphry at Point Loma and takes approximately six weeks. Five System Upgrade RSSC's have received the communications rebaseline.

The ESM system has now been installed on all MIUW systems and will continue to be a part of all future system deliveries. We have recently received new operating software for the ESM and will be distributing it to the fleet in the upcoming weeks. As each unit receives the new software, they will install the new hard drive and return their current hard drive to SSC San Diego for upgrade. Once SSC San Diego has upgraded the unit's hard drive, it will return it to the unit for use as a spare.

The AN/SQR-17A sonar system has also been upgraded. This upgrade gives the RSSC the latest DPU, PPU, Instructor Terminal, Windows NT Sonar Control laptops, and the latest operating system software. The biggest change with this upgrade is that it provides fiber optic connectivity and allows the system to process acoustic information from the LASS hydrophone arrays. The RSSC's owned by Units 106, 208, and 212 have been the latest to receive this upgrade.

MSP Generator upgrades and TIS/VIS (thermal/visual) camera upgrades have been implemented in a number of units. The Mobile Sensor Platforms in Puerto Rico were the latest to receive the new generators and cameras. In conjunction with the installation of color cameras on the MSPs, each RSSC receives 9" color monitors. One of the new MSP generators (without its protective cover) is pictured below:



Acoustic Surveillance Operations Course

The second Acoustic Surveillance Operations Course covering acoustic surveillance operations with the Lightweight Acoustic SubSystem (LASS) will be held March 19-30, 2001, at North Island Naval Air Station, Coronado, California. Mr. Tom Pastore (SSC) and Mr. Tony Wheeler (MIUW Acoustic Specialist) will once again provide instruction for 12 sonar technicians. Since no Inshore Boat Unit craft are available there will be no Small Boat Deployment Systems Course for IBU personnel. Dr. Roy Yumori (SSC) and Mr. Scott Endo (SAIC) will deploy and recover the arrays using a boat furnished by EOD Mobile Unit Seven for the course.

Course Description

This course will emphasize procedures and processes designed for deployed systems. The course is **not** designed to teach basic acoustic analysis. Trainees will be expected to possess NEC 0445, be familiar with the SQR-17A processor and possess a SECRET security clearance. Special consideration will be given to providing training on actual array deployments, surveillance, and recovery of multiple arrays. During the course of training considerable practical application training on the equipment will be provided. The level of realism achieved provides the sonar technicians with an appreciation of the complexity of the MIUW acoustic surveillance problem. Multiple array surveillance techniques (new to the NCW community) will be taught during the weeklong “live” operations. Three LASS arrays will provide an appropriate level of search realism to approximate actual surveillance requirements during most deployments.

Week 1



The first week will consist of classroom training in the morning with van operations in the afternoon. During this first week, training will primarily concentrate on system knowledge and contact management procedures. Lab operations will reinforce search doctrines and contact management procedures

taught in the classroom. All contacts during this week will be simulated (using the Readiness Training System) to provide un-fragmented practice on search, detection and tracking procedures. The instructors will ensure correct procedures are followed. Watch-Teams not involved in van operations will receive classroom training.



Week 2

The second week of training will emphasize “live” system operations in the RSSC utilizing multiple arrays and DIFAR sonobuoys. Acoustic surveillance operations will be conducted using the three deployed arrays to provide the basis for two-operator search coordination, multiple sensor analysis, and multiple sensor target motion analysis. Full radar coverage will be used to correlate surface and subsurface contacts. The operators will perform target motion analysis and then use radar to determine if their target motion analysis has been correct in determining the target’s bearing, range, course and speed.

The trainees will receive exacting levels of realism by tracking both targets of opportunity and a dedicated target platform. The target platform (towing an acoustic source) provides controlled target services for four days during the second week. This will be the best part of the training effort as it provides target geometries and acoustic characteristics that non-dedicated targets (i.e. targets of opportunity) can not provide.

The Program Office would like to thank the following individuals and organizations in advance: Mr. Pastore, Mr. Wheeler, Dr. Yumori, Mr. Endo, Mr. Howard McManus (SSC-TRANSDEC) for providing the towed acoustic, EODMU-7 for providing their mini-SWATH boat and highly skilled crew for long days of array deployment, recovery and towed source operations, MIUWU 106 for use of their van, associated equipment and personnel and NCWG ONE for additional support.

**Space and Naval Warfare System
4301 Pacific Highway, OT-1, PMW 183M
San Diego, CA 92110-3217**

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Mailing
Address
Goes
Here

