



AQL MAKES TRACKS!

MAINTENANCE VAN DELIVERED
By Wayne Boone

On August 17, 1988 UTL met a major milestone on the Army AQL program ... the Maintenance Subsystem (MSS) ... was delivered to the U.S. Government.

Let us regress for a moment for a little bit of history on this particular "van". It first came to UTL in 1976 as GFP for the then Quick Look II "limited Production" contract. Approximately a year later it had been outfitted with all of the test equipment and documentation necessary to maintain the QL II

airborne and operations systems. It was delivered to Ft. Devens, MD, where it was then stripped of all of its equipment. The equipment was relocated to a training lab environment and the "van" was relegated to a back lot somewhere on the post where it sat for six or seven years.

The "old van" was basically forgotten until a new contract came into being. The new contract was known as Advanced Quick Look (AQL) a high technology, lighter weight, faster system, independent of a given airborne platform.

The AQL development contract was awarded to UTL 3 September 1982 for the design and testing of four developmental airborne systems, one set of Ground Mission Test Equipment (MTE), one set of Ground Data Analysis Subsystem (DAS) equipment and a Maintenance Subsystem (MSS). The "old van" was recalled! After years of sitting on the back lot at Ft. Devens it was to be reinstated as a major factor in the ELINT communities roll with a place of importance. Things were looking up for the old 30' green, faded and partially stripped van. It was delivered again to UTL in Dallas, Texas only to sit on the back lot at 4500 West Mockingbird Lane for another five years. The roll that this old van was to play under the basic contract was to haul all of the AQL standard test equipment and the special support (SSE) from UTL to wherever and then once more be stripped.

As the months went by the AQL was designated to become a part of Guard Rail/Common Sensor (GR/CS). A platform had been defined by modification P00015 to the basic contract. Still the "old van" was not to become a part of the total package.

The months proceeded to pass ... new racks were bought, painted and prepared for installation (and still the air conditioners didn't work). Design and redesign took place through about four different mechanical design engineers and still the old van sat ... (and the air conditioners didn't work).

In August of 1986 modification P00019 came into being. Guess what? The "upgraded van" was to be kept intact and would also play another role ... it was to be the maintenance system for the IBM CHAALS system too ... it would not be stripped again, but would go on to be fielded with the GR/CS first deployment (still the air conditioners didn't work).

During the month of June, July and August 1988 (with temperatures of 120~ + inside the "new van") some of UTL's dedicated people spent several sweltering days installing and testing the equipment and cleaning it.

Thanks for a job "well done" go to Bobby Hodgkinson, Production Planning, as he witnessed the signature on the DD Form 250 of Frank Sosa, DCASMA; to John Gray, Shipping, Dale Smith, QA Test, Bob Pierce, Eric Bubei and J.T. George, Test and Validation, (Eric spent so much time in the MSS that for a while it was thought he was a part of it) Frank Sosa, DCASMA, Randy Luster, QA Engineer, worked with DCASMA during the acceptance testing, and all the other contributors to the "deliverance" of the MSS to the USG.

The Army AQL Program management office thanks each of all of you for a job "well done" and wish you to continue your dedicated efforts.



Left to right: Kurt Kovach, EW/RSTA; L.D. Hunt, Director of Army Programs;
Wayne Boone, Army PMO

GOING

GOING



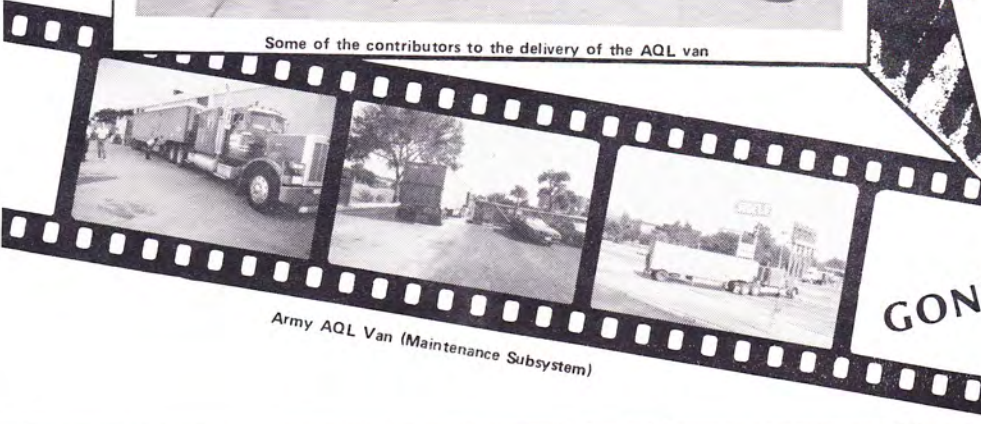
Frank Sosa of DCASMA (left) and Bobby Hodgkinson



Some of the contributors to the delivery of the AQL van

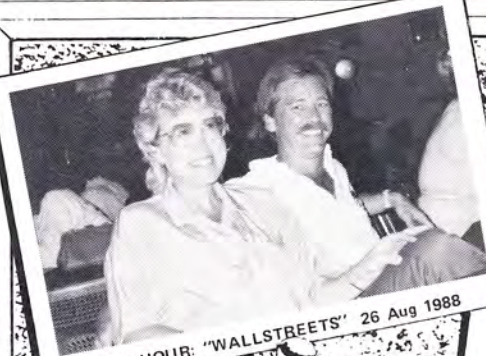


GONE!



Army AQL Van (Maintenance Subsystem)

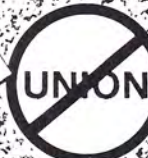
BULLETIN



HAPPY HOUR: "WALLSTREETS" 26 Aug 1988

Evening at the Improv

You are invited to spend an evening at the Improv on Tuesday, October 25th, with other UTLers. Diane Ford '80 Ladies of the Night will be the featured entertainer. NO COVER CHARGE! Dinner 7:30 to 8:30 or choose the Show & Drinks only. Make your reservations by calling 750-5068. The Improv, 9810 N. Central at Walnut Hill.

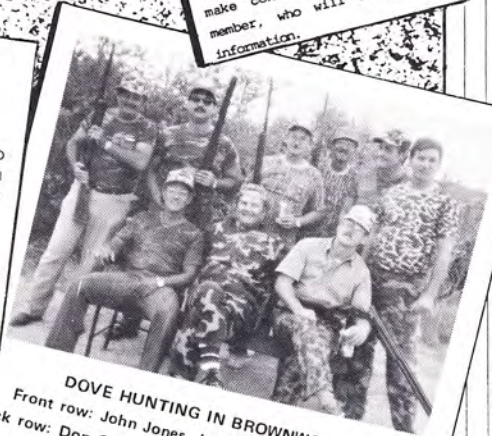


Did You Know

As a service to its membership the Employees Club sends flowers to members or their immediate family when there is an illness or death. Since there is no structured way to know when the need occurs the Board requests that anyone knowing of such a need notify Marsha Saenz #214, or make contact with any Board member, who will forward the information.

UTLers Participate in 88 Arts District Run

Chris Tracey, Gil Miller, Rob Irvin, Don Stone, and Jim Schuster all recently participated in the Run. Proceeds go to benefit Cultural Arts in Dallas. UTLers interested in joining the UTL Runners Club should call Ann Lewis X-326.



DOVE HUNTING IN BROWNWOOD
Front row: John Jones, John Benson, Jim Marshall
Back row: Don Goss, B. Blanchard, Don Cox, Bob Pierce, Bob Owens, Don Stone

State Fair Tickets

UTL Employees Club has discounted the gate price of the State Fair Tickets. You may get your tickets in the lunchroom each day at noon. Adults \$3.50, Children \$1.00. The fair runs Oct. 7-25.



Free Lunches Donated by Cafeteria

A raffle of 5 free lunches was held by the Employees Club. The drawing was held Sept. 23rd and the lucky winner was Gil Miller. Proceeds will subsidize the UTLers Halloween Party. Many thanks to Cafeteria Manager Chuck for the contribution.



Robert McCulloch (left) presents George Albin with a 20th anniversary pin.

SHORT TERM DISABILITY ANNOUNCED

Human Resources announced Friday that short term disability insurance will be available to all regular full time employees. The plan known as "Weekly Income Benefit Plan", will be paid for jointly by UTL and the employee. If you did not receive enrollment forms in your October 8, payroll envelope contact Human Resources, X-116.

UTL GOLF TOURNAMENT

OCT. 16, 1988
INDIAN CREEK LAKE COURSE
CARROLLTON, TEXAS



OCTOBER ANNOUNCEMENTS

Oct. 27 SOLE (Sec. of Logistics Engrs.) "Logistics Support Analysis Record (LSAR) Software" Panel Discussion with Tom Cantrell, Moderator. Wyatt Cafeteria (Story Rm/183). 6:30 p.m. RSVP: Darwin Ray: 214/381-7161.

BOARD

GETTING ACQUAINTED...



**KATRINA
WICKHAM**

NAME: Katrina Wickham
POSITION: Clerk II
SINGLE
FAVORITE FOOD: Mexican food
FAVORITE MUSIC: Country & Western
LAST BOOK READ: Master of the Game,
by Sidney Sheldon
LAST MOVIE SEEN: BIG



**MICHAEL
MOODY**

NAME: Michael Gordon Moody
POSITION: Chef
PREVIOUS POSITION: Cook
GREATEST ACCOMPLISHMENT: Winning a
\$500.00 pot on slot machine in Las
Vegas
SINGLE
CHILDREN: One, 14 year old son
FAVORITE PASTIME OR HOBBY: Sister
Collecting, indian sand paintings and
vases
PERSON YOU MOST ADMIRE: Sister
FAVORITE FOOD: Mine of course!
FAVORITE MUSIC: Country & Western
FAVORITE SAYING OR PHILOSOPHY: "It
can't get any worse, if you don't let
it."
LAST MOVIE SEEN: Good Morning Vietnam
MOST MEMORABLE MOMENT: Loosing the
\$500.00 I just won playing Black Jack



**CAROL
APPEL**

NAME: Carol Appel
POSITION: Administrative Assistant
GREATEST ACCOMPLISHMENT: Raising two
children
SINGLE
CHILDREN: Two
GRANDCHILDREN: One
FAVORITE PASTIME OR HOBBY: Fishing,
swimming, water-skiing, reading,
sewing, and now bowling!
PERSON YOU MOST ADMIRE: A friend who
is in a wheel chair
FAVORITE FOOD: All foods
FAVORITE MUSIC: Anything you can
dance to or read to
FAVORITE SAYING OR PHILOSOPHY: Live
each day as it were your last - Be
Loving
LAST BOOK READ: Anything you can
condensed books
LAST MOVIE SEEN: All Readers Digest
God
MOST MEMORABLE MOMENT: Watching the
volcanic eruption when in Hawaii



**DAN
BRODHEAD**

NAME: Dan Brodhead
POSITION: Manager - Parts, Materials
& Processes
PREVIOUS POSITION: Components
Engineer
GREATEST ACCOMPLISHMENT: Surviving
MARRIED: Arlene
CHILDREN: 2 sons, 3 daughters, 4 step
daughters
GRAND-CHILDREN: Five
FAVORITE PASTIME OR HOBBY: Travel,
Soccer, Movies
PERSON YOU MOST ADMIRE: Anwar Sadat
FAVORITE FOOD: Italian
FAVORITE MUSIC: Anything from Willie
to Wagner
FAVORITE SAYING OF PHILOSOPHY: To
thine oneself be true
LAST BOOK READ: Spy Catcher
LAST MOVIE SEEN: Stealing Home
MOST MEMORABLE MOMENT: Realizing that
I wasn't immortal

...WITH YOUR CO-WORKERS

NO ECHO ECHO ECHO ECHO

NO ECHOES
By Steve Hastings

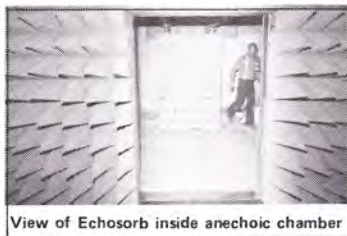
Many companies build antennas for various purposes like television, radio, telephones, and RADAR. Antennas, even the types found on cars, have strict design requirements; like size, shape, and material so that the antenna works properly. If requirements are not met, the signal being received or transmitted may be weak or garbled. Depending on the use of the antenna, the design requirements may need rigorous testing. To test an antenna, it must be isolated from all the millions of signals being sent through the air. Most antennas seen in day to day life are only tested in a functional manner. The first of the model is the unit that goes through all the testing.

Although there are antennas that transmit, receive, and transceive, we will be telling you about UTL receiving antennas and where they are tested. Some receiving antennas can be extremely sensitive and require a special room to test the antenna's characteristics. This room allows no outside signals to interfere with the testing of the antenna. The room is called an anechoic chamber. The word anechoic was invented in the 1940s and it means no echoes. Since there are three anechoic chambers at UTL, a person may be curious as to what goes into building an anechoic chamber and how the chamber works.



Jim Clark inside anechoic chamber

There are some special considerations that have to be looked at when building a chamber; like location, materials, and company assets. The chamber can be built inside or outside depending on the size of the chamber. The chambers at UTL are built inside to reduce structural costs and to take advantage of the ventilation and power supplied by the building. The chamber itself is made up of a normal wood structure with a paneled exterior for aesthetics, but there are parts that are special. The cone at the narrow end of the chamber is precision made for high accuracy, also the



View of Echosorb inside anechoic chamber

foam-like material lining the inside of the chamber is unique. The foam is called Echosorb and is designed to absorb stray transmissions for the emitting antenna located at the cone end of the chamber. The Echosorb only allows a straight path for the signal to follow, thus keeping reflections or "echoes" from striking the antenna under test (located at the large end of the chamber). Large company assets are required to build and operate an anechoic chamber due to costs in material, labor, and support electronics. Special engineers must determine the dimensions of the chamber in order for the chamber to work properly. The Echosorb, which comes in different sizes, is expensive because of size, material, and physical construction. The computers, special test equipment, cabling, and highly skilled technicians make operating the chamber expensive.

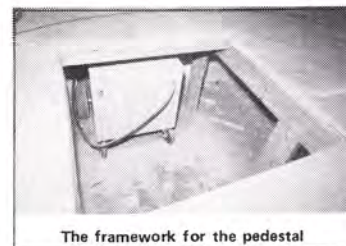
The foundation of the chamber and setup area consist of 2x4s that are bolted to the floor. The frame for the chamber is secured to the foundation, and the chamber engineer will make sure the frame is built to the plan dimensions. If the height, width, and length are not precise the chamber will not be effective in echo reduction.

Another important step in the building process is the pedestal base that the test antenna and equipment support will rest on during the test. The pedestal allows precision positioning of the antenna in both azimuth and elevation.

Starting at the cone end of the chamber and working to the large end of the chamber (the quiet zone), Echosorb is glued in increasing size until at the large end of the chamber, four foot long pyramids are glued to the back wall. With the Echosorb securely in place, the transmitting antenna cone can be bolted into place. The four inch hole in the end of the cone allows for a mast to be inserted down the chamber, which allows the transmitting antenna to be moved closer to the antenna under test if desired.

The area outside the chamber consists of equipment racks which are installed to hold, test, and support equipment. An operator station is built next to the chamber which houses the computers, printers, and graph plotters that control the test equipment and print out test results. Vinyl tile is laid and the chamber is ready for use.

In order to appreciate the work that goes into building a chamber, one should know what it does. A transmitting antenna is mounted in the cone end of the chamber and the antenna is connected to a signal generator which is tuned to a specific frequency at a predetermined power level. The signal leaves the source (transmitting) antenna and travels down the length of the chamber. The material on the inside walls absorbs any signal that strikes the material, thus leaving only one direct path to



The framework for the pedestal

the antenna under test. Knowing the presetting of the source signal and comparing it to the output of the antenna shows the abilities of the antenna under test. By using the pedestal, and changing the azimuth and elevation of the antenna under test, more data is collected on the antenna's characteristics.

The outcome of these tests, which range from two days to two months, are graphs and data sheets that show the exact reception pattern of the antenna, sensitivity of the antenna, and the antenna's sensitivity across its field of view. These characteristics may not be important to someone looking for a good radio for his car, but they are important to a pilot of a fighter who's receiver is designed to pick up RADAR signals from an incoming missile.

UTL has recently completed its third and largest chamber. The use of these chambers is an important factor in the antenna developmental process for which the company has become well known.

20 YEARS
Marjorie Stafford

18 YEARS
John Benson

14 YEARS
Marsha Saenz

10 YEARS
Don Goss

9 YEARS
Mildred Bevers
Pat Newton
Linda Pollock

8 YEARS
L.D. Hunt
Emma McGee

7 YEARS
Mike Cotton
Gary Hughes

6 YEARS
Floyd Parker

4 YEARS
Ed Grannon

3 YEARS
Dawn Bailey
Susan Gracy
Hildegard Held
Edna Kline
Mark Moore
Virginia Nelson
Elida Rodriguez
Larry Sullivan

2 YEARS
David Brown
David Gibbs
Jim Yarbrough

1 YEAR
Donna Allen
William Aranguren
Teresa Comer
Bob Irvin
Walter Jeffries
John Kinzie
Vincent Lee
Paul Mears
Theresa Moore
Donald Wong

WELCOME ABOARD

**AUGUST - SEPTEMBER
NEWCOMERS**

Barbara Adams
Heather Allison
Sheila Barfield
Eugene Brokeshoulder
Dale Claxton
Michael Daly
John Dennis
Kathy Harris
Carol Henager
Gloria Hernandez
Ricardo Hernandez
Charles Hyder
Joe Insall
Wanda Johnson
Charles Kenney
George Lampkin
Wally Lewis

James McDougal
Sherry Manire
Loribio Martinez
David Megarity
Juan Meza
James Newlin
Johnny Pearson
Ulyses Rauls
David Schneider
John Smarz
James Smith
Rick Steele
Mary Whitmore
Mark Williard
Arnold Witt
John Wynn

PROMOTIONS

Daniel Brodhead	FMP Manager
Henry C. Gantt	Supervisor - Test
Dale Smith	Engineer II
John W. Jordon	Mfg. Engineer II
Randall Gray	Supervisor - Calibration Lab
Ed Frazee	Manager - CMO
Richard Smalley	Manager - Materiel QA

CONGRATULATIONS

Irfan and Erum Malik on the birth of their baby boy, Shamus Malik on July 20.

David and Derin Shung on the birth of their baby boy, Dennis Shung on July 25.

Chris and Johnnie Cobb on the birth of Jessica Nicole on September 8.

Greg and Cheryl Summers on the birth of their baby girl, Melissa LaChelle on September 26.