

# MASD NEWSLETTER

*Season's  
Greetings*

December 1990

## FOREWORD

The past year has certainly seen many changes in MASD which, whilst not rivalling the momentous events in Europe, the Gulf and in Downing Street, have had an effect on the working of the Division and those within it. Over the past few months decisions have been made with one aim in mind; to safeguard the future of the Division so that we can compete for the major jobs that lie ahead.

Earlier this year a thorough review of the Division's costs revealed that our Production Department had become too small to be viable. The overhead of running the Department was outweighing the recovery from its activities. This was not because the Production Department was inefficient or incompetent, but because major tasks (i.e, AI Radar, MAPADS etc) were coming to an end. The transition to CACD has been reasonably smooth. The much greater workload in CACD will ensure that the combined level of activity can be handled in a more cost effective manner.

In common with all Divisions at Rochester MASD was not unaffected by the recent redundancies. This was essential to match the level of staff to the projected forward workload. Several major projects, where MASD could reasonably expect to be involved, have been delayed

or cancelled. Thus MASD could no longer sustain its full workforce and reluctantly had to let some staff go. As part of this, the decision was also taken to transfer the majority of the Yeovil office staff to MUSL at Templecombe. The office is temporarily closed while the remaining members are working at Frimley on the Merlin Prime Contractor Proposal. It is intended that the office will re-open and form a centre of systems engineering and WHL support.

I would like to take this opportunity to thank all staff affected by the above mentioned moves and wish them every success in their new ventures.

At the half year MASD's performance against budget is encouraging, profit is slightly up on marginally reduced sales. Sales will improve in the second half of the year as the achievement of some large AQS 903 milestones is attained. The overall position has certainly benefited from the actions mentioned earlier.

In looking forward there are some encouraging signs that prospects for major contract awards in 1991 are improving. The Spanish P3 Update Programme and Merlin Prime Contractor will both be decided next year and MASD is well placed on both counts. You may

be aware that for the latter BAe and GEC Marconi have formed a joint venture company (MHM) to bid for this prestigious contract, whose eventual value could be nearly £2 billion. MASD is a prominent team member and nominated to control the complete Mission System Integration as well as the Sonics. In recognition of its importance, along with 9 other members of the Division, I am spending all my time at Frimley working with the bid team.

Looking further ahead, Nimrod Replacement is starting to evolve into a firmer requirement. MASD is making presentations to the RAF, MOD and European nations on a new Mission System concept (based on Spanish P3). This is receiving favourable comments and I have no doubt it will ensure MASD involvement

when the shape and content of the programme is eventually decided.

It is inevitable that during a time of reduced order intake that the number of bids and proposals will rise. This of course necessitates a high level of activity often late at night, and weekends, which befall a few individuals. On behalf of the Division, I wish to thank these stalwarts for all their efforts throughout the year. I am sure their efforts will not be in vain.

Finally I wish you all and your families a Merry Christmas and a Happy and Prosperous New Year.

Alan Gallagher  
Divisional Manager

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## PROJECT REVIEW

### AQS 901

We have just delivered the last modification sets to enable the RAF and RAAF to update the AQS 901 to OFP 5.0 standard, the end of another successful major update programme. The modification is being incorporated by service personnel.

Notwithstanding the recent changes in the team's personnel, work on the next software update continues to plan and all milestones are being achieved.

During the last six months two of our team, Debbie Soames and Alan Cleghorn, saw our equipment at first hand while flying with 201 Squadron. Their experiences are highlighted elsewhere in the newsletter.

The team is involved in establishing future upgrades to the AQS 901 which will ensure the extension to the Nimrods' in-service life is matched by an increase in capability.

### AQS 903

The AQS 903 development programme continues to progress at a hectic rate. We have continued to achieve our major milestones and keep our heads above water. The Phase 5 Software package has been completed and tested on the seaborne trials on the Colonel Templer and the airborne trials when the equipment was fitted in a BAC I-II aircraft. The latter trial was flown against a live target so we were able to test the system in a true environment. The early results from both trials are promising and the analyses continue a pace.

We now have four systems at Westland Helicopters Ltd which are undergoing various rig and airborne testing. There is every indication that we are meeting the high specification set by MOD(PE).

Unfortunately we cannot relax, who wants a rest anyway, as we have to meet further deadlines for performance test, developing the Operational Flight Programme and maintenance demonstrations. Life is never dull in this project.

## AQS 902

### Sea King Mk 6

Since the last newsletter our field support staff, John Kimber and Phil Barnaba, has been very busy supporting the Sea King Mk 6 both ashore and afloat. This has included assisting with the incorporation of the modified SIU and the Issue 4.0 Software Update. The Royal Navy has expressed its thanks for the support given. We are also receiving positive reports that the system is performing well.

We have many ideas on the table for operational enhancements and a further software update, Issue 5.0, is planned to start in early 91. We are still trying to arrange a visit from crews of the Sea King Squadrons who are keen to exchange ideas and views.

### Sweden

We have received an order from the Royal Swedish Navy for four AQS 928G systems plus spares, training and handbooks. The equipment will be operated off new fast patrol boats. A Swedish representative visited the Division in October and thanks to some sterling efforts we were able to demonstrate the system in its intended configuration, a 19 inch rack. Our visitors were most impressed with the equipment. The first system is due to be installed, tested and operational by the middle of next year.

### Indian Sea King Mk 42B

Most of the aircraft have been delivered and are being deployed in India. Dave Balloch, who was the Yeovil Field Support Representative, is now in India taking over some of the duties previously carried out by John Chappell. Dave reports that the equipment continues to perform well.

As many of you may remember John Chappell, his wife Maureen and two children, John and Jennifer, were caught up in the Middle East affray. I'm pleased to report that Maureen and the two children have been released and are back in the UK safe and well after their ordeal. Even better news is that John is being released with the latest set of hostages.

### Grumman Aerospace

Flight testing of the S2-T aircraft is continuing at Grumman Aerospace. Our team with the AQS 902F has been supporting this activity. The Division is accumulating considerable expertise on the workings of the US customs. Only quick talking and a fast pair of legs kept one of our recent proposals from being impounded. The S2-T is due to be accepted this month and in-service with the end user early in 91.

### Post Design Services

The PDS team continues to roll-along despite a change of driver, Ron Scriven has moved on to become MASD's Production Interface with CACD. His successor, Brian Lloyd, had no sooner sat in the chair when he was hit by the reorganisation. To exacerbate his problems the Ministry decided, much sooner than expected, to put the AQS 902G/DS (NSR 6116 project) to PDS from 1st December. The PDS team is looking forward to the new challenge even if BL looks perplexed!

## **PROJECT MANAGERS**

**SOUTH ASIA, EAST AFRICA**

Private population agency seeks Project Managers for private sector family planning programmes with an emphasis on marketing. Responsibilities include management/supervision of subsidised contraceptive sales programmes in developing countries.

## BUDGET AND COST OFFICE

Tony Baker

To the Engineering fraternity, whose working interface are at Engineering/Project Manager/Contract Officer level, the Budget and Cost Office (BCO) is probably the least known section in the Commercial Department. The BCO called the Bean Counters Office by some miscreants particularly when estimates to complete the Quarterly Work in Progress evaluations are required. Not the most popular job undertaken by Engineering. However, it is a vital and necessary task which allows the Division to keep a regular tap on the health of our various programmes. So next time you receive a request from Budget and Cost please smile and give them priority treatment!!

Why Bean Counters? I suppose the adage is, "if you hadn't been counting you wouldn't be worried!"

You should remember that if programmes are built to cost, and on time, there would be less need for a BCO.

The Budget and Cost Office is situated at the top of the MASD stairwell; next to the ladies toilets. (Come to think of it the DM's office and conference room isn't a million miles from one either). The sound of flushing water is good for Cliff's insomnia. The office is headed by Cliff Walters, Cost Controller, with Nigel Ford, Cost and Budget Officer, as his right hand man. They are ably assisted by Lee Loughran and Michael Jury.

What is the function of the Budget and Cost Office and what service does it provide? Contrary to popular belief it is not there for the sole purpose of correcting timesheets. The BCO provides a financial service for the Division, the staff are happy to assist you whenever they can. Some of the many tasks they undertake are discussed below:

Cost records are maintained on all programmes, the ledgers give periodic and cumulative spends as a worked up sales value. Progress is monitored against the cost of the component parts and item breakdowns which are summarised on

Internal Orders (INOs). The INOs give a breakdown of the customer requirements and are the authority to carry out work. The INO costs are summarised on a total expenditure sheet showing items like overheads, general admin and profit. The information is of great benefit to Programme Managers and used to compile MOD(UK) Quarterly Financial Reports and check Company Certificates of Cost.

Since many of the following tasks are self-explanatory, I do not intend to provide a detailed explanation.

- Maintain Material Commitment Registers
- Provide Cash Flow Forecasts
- Evaluate Work In Progress for management revisions
- Cost of Sales take-up on Sales invoicing
- Provide detailed Overhead Analysis for all departments
- Check and submit Timesheets
- Transfer ex gratia payments, i.e., overtime expenditure, into the appropriate cost buckets
- Produce the financial trend and provisional results sheets for management, i.e., Advanced Sales and Margin results
- Monitor all expenditure against Capital Procurement
- Prepare the Operational Plan and Annual Budgets
- Provide monthly variance information against the detailed budget
- Record DA Expenditure

In summary the Budget and Cost Office is the Divisional housekeeper. However, the housekeeping can only be effective if the information provided at source is accurate and timely. This responsibility lies with each and everyone of us in our day to day functions.



## ROGUES GALLERY



**Peter  
Carrington**  
Technical  
Manager

Peter is not a Man of Kent. In fact, he has some difficulties with his origins as he was born in Woking and brought up in Glasgow. This had some advantages in that it allowed him to support a Scottish Football team when it was winning and to disown it when it was losing. His youthful memories of Glasgow are riding on trams, Third Lanark FC, Gorbals Baths and black pudding suppers.

He attended Hamilton Academy where his grounding in Latin puts him in great demand with the front offices henpeckers crossword syndicate for the more esoteric clues. His school sporting career was short-lived. As goalkeeper for the third eleven, he spent most of his time deciding whether to dive to the left to save the ball or to the right to save his glasses from disappearing in the mud. As the glasses usually won, he spent a lot of time picking the ball out of the back of the net.

He spent 4 years at Glasgow University studying Chemistry which resulted in a 1st Class Honours Degree. Deciding that University was more fun than working for a living, he undertook a PhD in Theoretical Chemistry at Glasgow University followed by two years post doctrine research at Sheffield University. However, thoughts of an academic career soon vanished when he realised that the only lectureships on offer were in Venezuela or Northern Manitoba.

A one year spell in the Computer Centre at Westminster Hospital taught him a lot about program development. For example, if your on-line patient monitoring system appears to have failed, check the patient is still alive before diving into the software.

Commuting to London got the better of him and, in 1973, he joined MASD as a Systems Engineer at the start of the AQS 901 project. He was involved in the design of many signal processing aspects of AQS 901 and became responsible for the analysis and performance testing activities. He participated in the Nimrod flight trials between 1977 and 1979 which he found particularly interesting and rewarding. He was promoted through the ranks to Chief Systems Engineer, Engineering Manager responsible for software, and finally to Technical Manager. During this period the Division expanded from about 250 to over 600 when the Indian Sea King and AQS 903 projects were at their height. As Technical Manager he heads the Business Development Group which covers a wide range of topics including signal processing, human factors, proposals, R&D and operational assessment.

He has two children from his first marriage, Damien and Amanda, who are at Edinburgh University, one studying for a PhD in Geology and the other a BA in Social Anthropology. They've got their priorities right - the Geology field trips (Australia, Antarctica and America) are much better than his Chemistry ones were (Leeds, Sheffield ...).

He now has a young family of three - Matthew (5), Louise (3) and Rachel (1) who keep him busy. He still finds time to play badminton in the Rainham and District League and the MASD singles league, where he just about manages to stay in the 1st Division (against rather younger opposition). He is an eternal optimist, each year taking part in Company Sports Day Veterans 100m and hoping, to no avail, that the extra metre he gains each year will be his passport to fame.

## NIMROD EXCURSION

Debbie Soames

In June two members of the 901 Software Team (Debbie Soames and Alan Cleghorn) were guests on a Nimrod MR Mk2 flight on a Joint Maritime Exercise. We had been invited to RAF Kinloss by Flt Lt Neil Foggo, who commands the Nimrod Software Team. The first time in several years that team members had been given the opportunity to see AQS 901 in action.



Having been fitted out with flying overalls and life jackets, we were introduced to MAEOp Bert Schiavone, our baby sitter for the trip. We were thoroughly briefed on the exercise which would take place in the Orkneys/Shetland gap with a Trafalgar class submarine. We proceeded to the aircraft and were taken through the emergency drills, no overwing exits on the Nimrod, emergency exit is by a knotted rope. We were shown to our seats in the galley and Alan was allowed on the flight deck for take-off.

The aircraft headed off to the exercise area. Choice's of supper were made - Chilli, Vegetable Curry, salad - and the first of numerous rounds of tea. The tea was made by putting the hot water into a large kettle with the tea bags and the milk - a very interesting concoction!

The tea was soon to be regretted as the crew started MAD (Magnetic Anomaly Detector) Compensation runs. This involved seven pitches and seven rolls in each of the four cardinal directions. If you have ever been on a roller coaster four times consecutively in the dark, you'll have some idea of what this felt like. The MAD operator reported that the MAD had not accepted the input data and another compensation was required. The captain very, very politely refused. Well, what he actually said was unprintable.

The submarine was acquired and everyone's stomach was given a chance to settle as Radar targeting runs were performed. Only small antennae were showing above the surface of the water, but the Searchwater radar easily acquired the submarine.

Meanwhile the captain had been in contact with the submarine captain who agreed to remain in a small area of the ocean so a full data investigation pattern could be performed. This involved DIFAR, BARRA and CAMBS buoys processing, the part of the mission we were really interested in. Due to their expense, it is rare for active/BARRA buoys to be deployed, so we were fortunate to be on this flight.

The AQS 901 system performed quite well and the target was visible on the displays. The crew was using an early version of the Flight Program which did not include the new algorithms on our current development program. When the crews get the new OFP 5.0 program they should see a distinct improvement in system performance; even we could see where it will be affective.

Unfortunately, the system crashed once. the system recovered well with only a few problems for the operators to work round.

Having seen our system in operation we retired to the galley to talk to the crew and to feed our now recovered stomachs with Chilli Con Carne and more tea - Alan got through two Chillies and two chocolate mousses.

After landing we handed in our kit and headed to the "Scruff's Bar" for a quick drink with the officers in the crew. This bar is run on an honour system so next day Debbie was chased to ensure she paid for her round of drinks.

Finally, we'd like to thank Neil for arranging the Flight, Bert for baby-sitting and Crew 1 of 201 Squadron for showing us the works.

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### THE MANAGEMENT TREE

The Management structure is often referred to as a tree. It is an accurate simile, for the following reasons:

- It is made almost entirely of wood, parts of it can be dead for years before they drop off.
- If a branch falls, most of the parasites which inhabited it move back to the main structure.
- It takes years to react to any environmental change.
- A large one can transpire hundreds of gallons of liquid a day.
- It sometimes carries a great many nuts.
- If not pruned regularly it will not bear much fruit.
- Small pieces which are chopped off often grow again in a few years.
- It can be fired but usually needs lots of paper to get it going.
- It may provide shelter for those underneath, but also blocks out most of the light.
- From the top, one can see for miles, in all directions, except vertically downward.
- Anything dropped from the top reaches the bottom quickly; the intervening layers merely delay it slightly.
- Parts of it can be used to make boards (of varying thickness) but unless properly seasoned, the quality will be poor.
- Parts of it may be lit up for weeks at a time at Christmas.
- It bends easily in light winds but in storms it is rarely flexible enough to avoid damage.
- It sometimes gets the chop but usually only after it has been dead or rotten for years.
- Monkeys can get to the top with remarkable speed.
- A man falling from the upper levels can often grab a lower branch to break his fall, but a man falling from lower levels goes straight to the ground.
- Sometimes, one can move from tree to tree without touching the ground. One can travel thus for considerable distances, eventually reaching a point at which one has absolutely no knowledge of the ground below.

OPUS 90 -  
Story of the AQS 903 Phase 5 Sea Trials  
Mark Hitchmough

Churning waters hurry by, grey sea merges  
with grey sky;  
The definition slight, in the pale  
afternoon light.  
Crashing through increasing waves,  
scattering wind blown flecks of spray,  
The vessel to the sea she craves, battles  
out of Falmouth Bay.

Enough of the poetry, when the going gets  
rough the Trials team travel by air.

Our first view of the Azores was exactly  
on schedule, I had hoped it might be  
through an aircraft window instead it was  
a postcard on a Boscombe Down notice  
board. After several delays our MOD BAC  
I-II touched down safely and we  
transferred to the mothership Colonel  
Templer.

Problems with the ships' telex gave us a  
day to acclimatise and our first glimpse  
of 'the necklace of diamonds isolated in  
mid Atlantic,' the brochures description.  
No mention was made of their constant  
companions, the heavy clouds. Once on  
the island we undertook a tour of San  
Miguel at a pace that would leave even a  
Japanese tourist breathless.

My home for the trial, shared with Andy  
Sherlock, was a 50 foot square ship's  
cabin. It was remarkably peaceful,  
except for the squeaky bunk, the rattling  
refrigeration unit, the whining generator  
and the constant drone and whistling of  
the air conditioning, I almost couldn't  
hear Andy snore.

Slightly belatedly the trial began, the  
13 snapshots of data gathered on day one  
did not prove portentous. Despite our  
regular 6am early morning calls morale  
remained high. The only real problems  
were ship related. Power cuts in the lab  
during two separate trials caused  
temporary annoyance. Slick work by  
everyone aboard limited the time lost to  
less than 30 minutes even allowing for a  
quick tea break.

A fresh water shortage allowed the ship's  
engineer to demonstrate his desalination  
unit, unfortunately during the night,  
further disturbing my beauty sleep. The  
long days finally began to tell on Mick  
Dollin. During one late evening  
analysis, while the day's data was being  
replayed into the system, he was heard  
arguing with a recording of Terry  
Johnson's earlier comments on the  
intercom.

Away from the work saw the first venture  
into mid Atlantic swimming and an  
excellent evening barbecue. The view,  
though somewhat predictable, would be  
difficult to match. So, after 10 days  
and a run ashore, part one reached its  
conclusion. The 8am fire drill as we  
journeyed back to the trials site was  
most unwelcome, particularly for those of  
us who returned from the night club at  
6am.

Part two began with a Barra trial, and as  
the 3rd Barra buoy of the morning failed  
to operate John Page, the Trials  
Controller, treated us to a chorus of  
"Waltzing Matilda."

The new month September, saw us in Mid-  
Atlantic and the 6 o'clock shakes were  
nothing to do with evening exercises. We  
were well fed, portions being limited  
only by the size of a plate. This  
despite Mark Walden's attempt to  
assassinate the cook by jumping on him  
during an otherwise uneventful evening  
swim. A series of long days on parameter  
estimation were brightened by our first  
whale sightings and frequent meetings  
with dolphin schools.

Mark Walden, resting after working most  
of the night on analysis, produced the  
best broadband for P-Theta work with his  
snoring. Due to the low ambient noise,  
problems were experienced in obtaining  
good parameter estimation data. Targets  
up to sixty miles away producing  
interference signals on the system  
displays.



Part two saw us take our first night time swim in an illuminated patch of sea less than 50 metres in diameter. The following night the crew hooked a 10 foot blue shark and requests for evening swimming suddenly declined.

The Cambs trials went well and were very popular with the team. With a buoy life of around 30 minutes, compared with 8 hours for a passive buoy, natural breaks were far more frequent.

Part two ended with a hyfix trial, necessitating an even earlier start than normal to allow the buoy field to be deployed. Our final day was quite short, only 9½ hours system run time. As the weather in the Atlantic worsened our return to port was brought forward. The highlight of this second run ashore was an all action beach cricket game against the Colonel Templar crew. Nobody managed to work out the scores so as the high tide threatened the pitch, a draw was declared.

Phil Liddiard received a warm welcome as he delivered the emergency newspaper rations. We hope his return to Rochester, with encouraging reports on Phases 1 and 2, was as warm.

This final break saw the arrival of our 'Playmate' the ocean going tug Roysterer. The unfortunate John Cayzer and Tim Sellars, after 5 days at sea with the vessel, were held up for nearly six hours outside the breakwater, stopped from docking by the local harbour master.

Part 3 of the trial started with a rough passage to our corner of a foreign ocean. Remarkably nobody was seasick throughout the entire trial.

As the aircraft was delayed by a farmer's strike in Northern Spain (Honest!), the first two days were used as dress rehearsals with the Roysterer.

The aircraft's arrival heralded the start of the most interesting section of the trial, the co-ordinated tracker tests. I have no intention of usurping the trials report other than to say that apart from problems determining actual buoy positions the system performed well.

Part 3 was characterised by poor weather and high sea states, causing two days of live trials to be lost. The nights were even more upsetting as empty oil drums clattered on the decks and the anchor chain crashed in its sheathing. Its akin to trying to sleep in a bell tower during a camponologists convention. The jaded looks in the mornings were epitaphs to increasingly sleepless nights.

Attempts to cure the buoy position fixing problem went on late into the night. Steve Mann, the main sufferer in these after midnight sessions, suggested it might be best to deploy the unit without any flotation bags!

As the sea states dropped to less than 3 and the end of the trial loomed I almost began to feel at home. Looking out over the quiet, starlit waters the thought of returning to England gradually became a less attractive alternative, I put it down to temporary madness.

The odd thing is that, despite being constantly surrounded by timecode readers and generators, it was very easy to lose track of time. Only fish and chips every Friday kept us in touch with reality.

Then, suddenly, it was all over. The trial complete and the entire team relaxed on deck as the sun came out and the dolphins performed on our bow. Well maybe not quite over; we still had to get home. That episode would fill another two newsletters if anyone has the energy to write it.

## CARNABY 90 - AQS 903 AUTEC TRIAL

(You will believe that a 903 system can fly!!)

So the trials party continued and after a frantic two weeks removing the system from the ship and reinstalling it in our 'skoda' air BAC I-II the team departed for Florida and the AUTEC range. Led again by John Page the team included ground support, provided by John Cayzer and Steve Mann, an analyst, in the form of the dynamic Terry Johnson, Mick Dollin, myself and the deceptively slim Mark Walden. Assistance was also lent by Steve Pagan, our representative at the range.

Due to a 'bad draw' our flying slot over the range was 7am to 10am, this meant a 4.15 start for the team. Already confused by the five hour time difference, the back-to-front orientation of the aircraft seating, the language barrier (can anyone speak American?), and 86°F temperatures in November, this additional disruption meant that most of the trial was spent in a bewildered daze.

Fortunately the system was on its best behaviour and from its first (historic?) operational flight on the 6th November til the completion of sortie 4, the 5th sortie (I said it was confusing), very few of the problems encountered were due to system faults.

The aircraft stood up well to the demands of the trial, and the submarine, acting as our target, also performed an excellent job. Only the repeated sonobuoys problems prevented a successful trial becoming a sensation.

The odd timing of the working day allowed the trials team to visit several local attractions, notably the Everglades and Key West, the southern most point of the United States.

Our major worry, once the system had proved reliable, was the mosquito 'plague' which, on our arrival, had already caused over 40 deaths in the area. The poor quality of suntans on our return being a direct result of a need to keep well covered up.

The trial proved a most enjoyable experience, early morning starts were more than compensated for by Caribbean sunrises and a variety of snacks laid on by the flight engineer to keep body and soul together until breakfast. (The unfortunate timing of one particular snack nearly resulted in the acoustic data for one scenario being recorded on a pizza).

Sadly, the trial had to end. The team returning in 4 different 'groups', John Page by commercial airlines, Steve Pagan, John Cayzer and Terry Johnson by Miami and Washington, and Mick Dollin by most of the Northern Hemisphere on the homeband BAC I-II. The remaining group, myself included, stayed on for a short holiday visiting Orlando, Tampa Bay and Cape Canaveral.

After spending the best part of four months completing the sea and air based Phase 5 Trials, working within a very close knit team, a return to the Rochester environment has come as a shock.



## EXHIBITIONS

The Division has attended only one exhibition during the second half of 1990, namely the Farnborough Air Show, or Farnborough International (FI) as the organisers now prefer to call it.

In keeping with current policy, GEC Avionics was represented at FI as one of eighteen Companies appearing under the GEC-Marconi logo. A total of four indoor stands, one outdoor site and three chalets were occupied by GEC-Marconi companies. GEC Avionics' display was built on three themes, each covering a grouping of avionics systems which did not necessarily reflect an individual Division's product area. However, as the themes were ASW, Flight Controls and Integrated Cockpit Avionics, we were well represented. The graphics for the ASW theme was a pair of very striking water colour prints of RN Sea King and Merlin helicopters with bullet points summarising our capability.

The Division supplied one stand manner on each day of the show, a task which was split between Mile Baxter, Tony Bunn and Nick Stansell. Activities covered the usual range from very slick VIP visits to the full scale assaults by the freebie hunters on public days. Falling into the former category was the Prime Minister's visit. This very nearly came to grief when an unnamed standmanner, obeying instructions to clear the stand of surplus people, only realised at the last instant that the person he was about to usher off the stand was none other than Lord Weinstock. Nearly the end of another promising career.

From our viewpoint a very important visit was that of the NATO Information Exchange Group 4 (IEG4) which is responsible within the NATO Naval Armaments Group for ASW aircraft requirements. We were able to give this group a 60 minute brief on our ASW equipment.

Considerable effort is involved in FI, not only during the show, but also in the 12 months beforehand. During this period the stand design is discussed and agreed, hosting arrangements and facilities finalised, press releases produced, MOD clearances sought and obtained, invitation lists created, rationalised and, from the subsequent replies, guest lists compiled and hosts appointed. Attention to detail in these areas at a very early stage ensures that these stands and chalets operate smoothly during the show. As an example over 4000 invitations are issued and over 2000 guests visit the chalets during the week. All have to be met and hosted in a manner which maintains the company image.

### 1991 Exhibitions

During 1991 the Division expects to be involved in the following exhibitions:

Japan International Aerospace (Feb 14-18)  
Divisional representation by graphics and brochures to support potential sales of ACT2 to the Japanese P3 aircraft fleet (the largest MPA fleet outside of the USA).

Defence Oceanology International (March 6-8, Brighton).  
Demonstration of MASD's advanced ASW techniques including operator aiding.

Sea Air Space (March 26-28, Washington)  
Continuing promotion of ACT2 to the US Navy and maintaining visibility of our acoustic processors in the USA.

Paris Air Show (June 13-23)  
Promotion of acoustics and mission avionics for European P-3C and Atlantic 1 and 2 replacement aircraft.

Royal Naval Equipment Exhibition (September 1-7, Portsmouth).  
Promotion of Acoustic processors and mission systems to Navies worldwide.

## SOCIAL SCENE

### Bat and Trap

The Bat and Trap team had a fairly successful competition narrowly failing to qualify for the semi-finals losing on a countback to GSD. Overall we played 5 matches, each match being decided over the best of 3 legs. We beat TRSL, FCD and CSD, the eventual winners, but lost to ADD and GSD. Thanks to all who turned out and a special mention to Stuart Gray, Stuart Harper and John Foulkes who produced the goods when it mattered.

### Inter Divisional Cricket

We started our campaign on a cool damp June evening with very little confidence following the loss of our stars from last year. Our opening game was against our old rivals ADD and confidence was soon restored with an easy victory by 54 runs. Our heroes were Hutton, Tariq and Oliver. A special mention to Stancliffe who went in for the last ball only to be bowled.

This brought us to the quarter finals against FCD, the "fancied" team this year. We won the toss and elected to field, a good decision since Oliver's first ball brought a wicket. Despite good bowling FCD amassed 97 from 20 overs. MASD also suffered an early loss but Tariq rattled up a quick 50 and we were well up on the required scoring rate. However, with the loss of our star batsman it all changed. With one over to go five runs were needed. A new batsman facing his first ball, tension was high. A four through square leg, scores level but then Hadfield ran himself out putting Burt on strike. The first ball was a perfect defensive shot, the next a glorious bye. Victory but then we should not have been unduly worried, Stancliffe, with memories of his last innings fresh in our minds, had still to bat.

The semi final opponents were SESD who were invited to bat on a very brown wicket. Wickets fell quickly and SESD were skittled out for 46. Bowling honours to Tariq (5 for 5) and Hutton (3

for 11). Our opening pair, Walden (22 No) and Gray (24 No) knocked off the runs with plenty of time and overs to spare. Stancliffe due to bat at number 3 has now played three and still failed to trouble the scorer.

Disaster struck before the final had begun. Of the 16 players registered to play, 9 were either sick, on holiday or on boat trials. Twelve men, brave and true, some had not seen a bat or ball for years, were gathered together to face CACD, the holders. We lost the toss and were invited to bat. A quick game was expected but this all changed as we made a respectable 97 off the 20 overs. Scorers included Hedge (15), Tariq (35), Gray (13) and Gwynne (14 no). As for Stancliffe, well our hero was run out without scoring, quack-quack.

CACD started with a rush, 25 off the first 4 overs. Then Hedge bowled one of the openers and good bowling and all round fielding left CACD needing 3 to win off the last over. The unenviable task of bowling this over fell to Paul. With the fielders up close to save the single, the second ball was struck over the top for four. A good game and hopefully we will go one better next year. A special mention to Tariq, a good captain and all round player.

### Inter Divisional Football

This year the team started its annual quest for the trophy without its longest serving player Harry "Flash" Stewart, who was injured. Despite this serious setback the team was full of confidence until we drew ADD in the first round.

A very unfit side took to the field and due to some fine defending by "Carthorse" Hitchmough and Mark Walden, who kept colliding with each other, we were soon 2-0 down. However, a few tactical switches soon changed the situation and we recovered to win 3-2, Chris "Lineker" Bryant scoring twice.

The second round saw us romping home 8-1 against GSD with hatricks for the two Chris's Rossiter and Bryant.



Up to half time the semi-final against ISD was a tight and fairly played game. However in the second half, a fine team performance saw us score 5 goals, Chris Bryant notching up a double hatrick in a 7-2 victory.

Our opponents in the final were CACD. It was a bad tempered game with CACD represented by GEC allcomers and anybody who knows what CACD means. Overall MASD was the superior side and despite some verbal and physical abuse we won 3-1, Chris Bryant scoring twice.

Congratulations to the Champions and a special mention to Chris Bryant who, if my maths is correct, scored 13 goals in 4 games.

#### Inter Divisional Mixed Hockey

MASD's bid to regain the Inter Divisional Mixed Hockey title, lost so tragically to ADD in 1989, was taken very seriously with a training session and a practice match against a club side - Old Holcombians. Although we lost 2-1 our performance augured well for the competition. Confidence was high, justifiably so as we beat both GAV (Personnel) and MCD 3-0. Consistent scorers being Jon Anderson, married life does you good, and Super-sub Simon Brenchley.

Our third game proved to be very difficult. Our opponents FCD played well and many would have said they deserved to win. But it was not to be. A great reverse stick shot by Super-sub in the closing minutes of the game proved to be the only goal of the game. To qualify for the final we needed to draw our last league game against CACD. The team was shell shocked as CACD scored in the first two minutes but a fight back saw us leading 2-1 at half time. The second half was a revelation as we scored 7 goals. Super-sub adding another 4 to his total and Jon Anderson two.

Safely through to the semi-finals our opponents were GSD. In the other semi-final FCD had defeated ADD 1-0. Knowing our opponents made us determined

to reach the final. It proved to be a tough game. Fortunes fluctuated and with only minutes to go the score was 2-2. Several GSD attacks had brought good saves from the keeper. As extra time loomed, a quick break from defence saw Jon Anderson scoring a fine individual goal. A place in the final was ours.

The final saw the team in an apprehensive but determined mood without the services of Super-sub who decided to go on holiday. FCD soon took the lead from a short corner. However, Sue Wood scored the equaliser and Ken Watkins gave us the lead. Not for long. FCD scored, two all as half time came and went. The second half was closely fought. Many chances fell to our forwards but they were unable to convert them. At full time the score remained two all and extra time faced the tiring teams. Suspense mounted as play flowed from one end to the other. Then in the second period of extra time Phil Carr put us in the lead. FCD surged forward in an attempt to equalise and the last five minutes seemed like an eternity. However, our defence held firm and the final whistle brought relief to tired legs and victory by 3-2.

Another trophy for the cabinet. Our congratulations to FCD for an excellent and sporting final. The team is looking forward to next year, Hannah is interested in anyone who would like a game!

#### Medway Festival

Each year Rochester City Council hold the Medway Festival which includes such activities as swimming, squash, badminton and volleyball at Strood Sports Centre. In the past our budding volleyball players, led by Lee Smith, who play at Strood each Monday have entered a team. This year only two teams entered, Strood Sports Centre and a group of school teachers. The organisers phoned Lee requesting him to raise a team, he did better than that raising four, two from ADD and two from MASD. After a series of round robins three teams were tied for first place, ADD and our two teams. In the playoffs, ADD beat both Divisional

teams and carried off the trophy. Nevertheless we secured a trophy for the Divisional cabinet. Lee would be delighted to welcome any members to the training session at Strood. His object is first place next year.

### Footy Report

On a long awaited night in October the eight colossi of world football gathered for the MASD Five-a-Side Football. The scene was set for a bloody battle at the Casino Amphitheatre, Maidstone Road.

The competition was based on two preliminary leagues of four teams, the top two teams qualifying for the semi-finals.

Under the authoritarian regime of the man in black Mike James, the first round was played at a furious pace. Pre-tournament favourites Roger's Ringers were dumped out of the competition by a glorious last gasp goal by Jabba Hutton, in his figure-hugging kit, they had also lost through a typically well executed own goal by Mark Hitchmough. The Indis, despite a concerted effort to change the draw, never really got to grips with the hectic pace. The RST Rebels and Jenny's Ball Boys, fielding the only female player, also went out in the first round.

The first semi-final brought the College Boy Whoopers and the 903 Marauders together. A grudge match which had been played verbally over the dividers earlier in the week. The Whoopers tactics of head-butting the floor (Andy Coldwell) and Groin Strain pulling (Tariq) never really worked and the Marauders ran out 3-1 winners. The Whoopers were whooped.

The second semi-final between 902 H/W and the Pop Mobility Rejects saw the violent exchanges between Chris (smallest player on the pitch) and Darren (I was going for the ball Ref!) Tilley. However Phil Stancliff's tactics of getting the ball and waiting for the rest of the team to bind on and form a ruck did not pay dividends. 902 H/W reached the final for the 22nd consecutive year.

The Final was between the 903 Marauders, led by Ian (I can last for at least ½ a minute) Atkins and Mark (the Cat) Hadfield, and 902 H/W led by Harry (I've got a knee support and I'm going to use it) Stewart. By this stage, the crowd had turned against the 902 H/W Bully Boy tactics. A glorious Steve Mann goal in the second half gave the Marauders a popular victory. Well popular with the 903 Marauders.

A most enjoyable and hectic evening. The teams would like to thank Hannah, the unbiased reporter, for organising the event and Mike for his ambiguous refereeing.

### Assault Course

Last July the Division entered a team in the Kent Mayors Charity Fun Assault Course competition. We came second in the Company Challenge Cup and fourth overall. All this on only one run across the course. Our six man team had not realised that for a small entry fee (£6) it could have a further attempt. The team is convinced it could have easily bettered the time achieved on the first run. Practice makes perfect even if you are too tired to run.

### Christmas Draw

Roll-up, Roll-up, Roll-up! For the benefit of all a Christmas Draw will be held on 20th December. 1,000 tickets at 50p each will be on sale. If they all go prizes to the value of £500, including one of £50, will be on offer. Tickets can be obtained from Hannah or your Social Committee member. I know you've forgotten who that is, but you will soon remember when he/she digs you in the ribs. Don't be shy, give them your support. It may be your lucky day.

### Pool Tournament

The Division will be holding a Pool Tournament in early 91. The finals will be held in the Warren Wood Club. This is a golden opportunity to turn over a new leaf and demonstrate your mis-spent youth. Competition is open to all. Come

on ladies this is one event you can win. If you are interested contact Terry Everett or add your name to the list on the noticeboard.

### Wine and Wisdom

On Thursday 15th November 17 teams, some 150 people, attended the MASD Wine and Wisdom evening in the Lounge Bar. A day Sue Wood may prefer to forget. A losing semi-finalist in the ladies golf at Bearsted, car broken into and briefcase containing questions for the evening show stolen and a rush around to prepare a new set.

The object of the evening was to answer 10 questions on 9 different subjects ranging from 1940s - 1980s (less than 10 people present were alive in the 40s never mind remember them) through TV, Music and Sport to Geography (Where is Ink Well Hill?). Each team was allowed to play a joker which doubled the score on the chosen subject. Thus a total of 100 points was at stake.

Competition was fierce throughout the night, helped by the wine and the raucous behaviour of the 'Henpeckers plus One.' Guess who finished in the Tiger Moth? Tension mounted as the play progressed. With one round to go only one point separated the top four teams. Geography to come. One would have expected the Shrinks with more than ten 'Honours' degrees between them to win, education is a wonderful thing. But no, the eventual winners were the Scumbag College with 77 points. You might ask who? As the compere was heard to shout during the presentation "Thickos." Yes, QA with a team of 10 plus Bill Rapley. Runners-up were George (can't remember your name) and Co with 76½ points, the Shrinks finished third with 76 points. A special mention to the Fly-by-Nights 46 points but given wooden spoons to stir the pot.

During the evening a raffle on behalf of Children in Need raised £144.00. Thank you for your generosity. Another Pat Warner success.

On behalf of those attending I would like to thank the charming compere for all her hard work, enthusiasm, patience and obscure questions. Overall a most successful evening. I have no doubt a rematch in 1991 will be very welcome. Well done Sue, your efforts were much appreciated.

'ED'

### Children in Need

Thanks to the raffle at the Wine and Wisdom, the sponsored volleyball with ADD and Hannah's heroic effort to fill the bucket we made our target of £500.

Our thanks to all who generously supported the appeal.

### All Saints Hospital, Christopher Ward

The collection and raffle organised by Sharon Geldard for the handicapped children in Christopher Ward raised £137.00. The large Teddy Bear went to Lee Norris (S/W) and is keeping him warm during the cold winter nights. Indu Amin won ET. The hospital has thanked Sharon for her hard work with a most complimentary letter. I'm afraid lack of space prevents the editor printing it in full. Well done Sharon.

### It's a Knockout

Invicta held an 'It's a Knockout' competition at Beltring in August. To qualify for the event teams were required to raise £500 for charity. This we achieved easily but with too many teams wishing to participate we failed at the first hurdle "the knockout draw." At least our donation went to a good cause.



### HATCHES, MATCHES AND DISPATCHES

Congratulations and good wishes on the occasion of their marriage to:

Alison Green (QA) and  
Phil Liddiard (AQS 903)

Nicola Banks and Jon Anderson (Eng)

Donna Newton (Eng) and  
John Reynolds (Production)

Sue Grout and Phil Barnaba (Eng)

Satinder Bansel and  
Gurpul Khambay (Eng)

Sue Burdus and Neil Baker (Eng)

Sue Cooper (ex Purchasing) and  
Simon Forster

Tammé Davis (ex Contracts) and  
Lee Johnson

Karen Hope and Mike Gwynne (Eng)

Linda Hurst and Andy Bulford (Eng)

Congratulations on the occasion of their engagement to:

Natalie Worrell and Jim Shilling (Eng)

Sue Abrahamson (Tech Pubs) and  
Grant Obermaier (Eng)

Nicola Carter (CACD) and  
Paul Watts (Eng)

Sharon Perry (Eng) and  
Chris Acaster (Eng)

Congratulations to:

Sharon and Simon Ainsworth on the birth of their second son, Matthew

Liz and Trevor Hall on the birth of their daughter, Caroline Elizabeth

Trish Kitney and Malcolm Dady on the birth of a daughter, Charlotte

Mike Banner tells me that at long last the honeymoon is over. The dog now fetches his slippers while Liz barks at him.

WARNER PRODUCTIONS

PROUDLY

PRESENTS

"ANOTHER GRANDAUGHTER FOR PAT"

EPISODE 6

### Examination Results

Our congratulations to the undermentioned who, at the end of a three year course, have passed their final examinations in Quality Assurance.

### Supplier Quality Assurance B5

Donna Robinson	Distinction
Steve Gibbins	Credit
David Ford	Pass
Roger Griffin	Pass

### Quality Assurance and the Computer C3

David Ford	Distinction
Roger Griffin	Pass

All are now eligible for Associate membership of the Institute of Quality Assurance.

Well done.

### Ten proverbs which are patently untrue

The best things in life are free  
Barking dogs seldom bite  
You can't judge a book by its cover  
Life begins at 40  
It never rains but it pours  
An apple a day keeps the doctor away  
Ask no questions and you'll be told no lies  
You can't teach an old dog new tricks  
Every cloud has a silver lining  
He who laughs last laughs loudest



## 20 = Q in TQ (QUESTIONS IN THIS QUIZ)

Welcome to this fiendish but fun challenge. Each clue represents a phrase, saying or fact. For example, 1815 = B of W (Battle of Waterloo).

Editor donates 100 pence to the first all correct answer passed to him.

88 = TFL *Two Fat Ladies.*

1912 = S of the T

240 = OP in the P *old pence in the pound.*

7 = D in SW

39 = B in the OT *books - the old testament.*

40 = D and N of the GF *days + nights of the great Flood*

5 = OR

1728 = CI in a CF

16 = S and NBK

24 = B in a P *Black birds - a pie.*

13 = UFS *unlucky for some.*

10 = GB (H on a W) *Green Bottles.*

76 = T in the BP

3 = M in a B *men in a boat?*

081 = DC for GL *display code for Great London.*

180 = MS at D *Maximum score at darts*

206 = B in the HB

7 = C in the W

101 = D(WD)

37 = NBT(DC)

## EDITOR'S NOTE

As Christmas draws near I am impressed once more by the way you help those less fortunate than yourselves. The collection last month of over £500 for the Children-in-Need was a further example of your generosity. It may come as a surprise to most of you to know that over the last three years the Division has raised well over £3000 for various charities or appeals. Most of this has been to help local hospitals and handicapped children. The way the sponsors are able to raise the money says much for the attitude and morale of the Division and reflects great credit on all concerned.

My thanks to those who have dropped articles on my desk and to Caroline McKenzie. Without her help I'd still be typing the first page with my index finger.

I wish you all a joyful Christmas and a prosperous New Year.

As an eternal optimist I hope you make your first 1991 resolution a promise to produce an input for your newsletter.

Ed





*Season's Greetings*