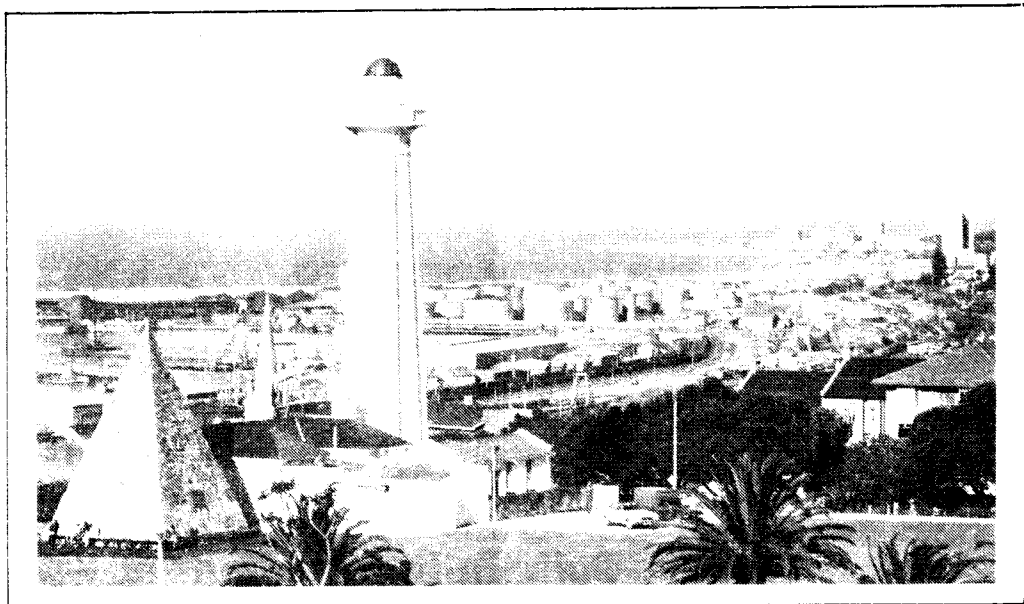


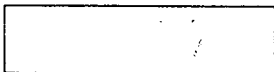


# Q S X P E



**THIS NEWSLETTER IS PUBLISHED BY THE  
PORT ELIZABETH BRANCH OF THE SOUTH  
AFRICAN RADIO LEAGUE.**

**P.O. BOX 10402  
LINTON GRANGE  
6015**



# Port Elizabeth Branch

## NOTICE OF MONTHLY MEETING

MEMBERS ARE REMINDED THAT THE MONTHLY GENERAL MEETING OF THE PORT ELIZABETH BRANCH OF THE SOUTH AFRICAN RADIO LEAGUE WILL BE HELD AT St. MARTINS CHURCH, GREAT WEST WAY, KABEGA ON FRIDAY 16th OCTOBER 1987 AT 8:15 P.M.

## COMMITTEE

CHAIRMAN:	BRIAN WELLER ZS2AB	30-3498
VICE CHAIRMAN:	LIONEL COOMBE-DAVIS ZS2DD	32-1770
SECRETARY:	MARGE WELLER ZS2OB	30-3498
TREASURER:	LYNNE CROTHALL ZS2MM	35-4671
SPECIAL/SOCIAL EVENTS:	BEAVAN GWILT ZS2RL	30-6968
AWARDS:	BILL HODGES ZR2AAN	51-2580
EDITOR QSX-PE:	MARGE WELLER ZS2OB	30-3498
MEMBERS:	DICK SCHONBORN ZS2RS	32-2111
LIBRARIAN:	COLIN ASHWELL ZS2AO	31-2471
(NON-COMMITTEE POST)		

## BULLETIN ROSTER.

DATE	COMPILER	40M NET	80M NET	2M NET
18 OCT.	BILL ZR2AAN	ZS2AB	ZS2RL	ZR2AAN
25 OCT.	BEAVAN ZS2RL	ZS2RL	ZS2DD	ZS2AB
1 NOV.	DICK ZS2RS	ZS2RS	ZS2AB	ZS2MM
8 NOV.	BRIAN ZS2AB	ZS2AB	ZS2RL	ZR2AAN
15 NOV.	LIONEL ZS2DD	ZS2DD	ZS2AB	ZS2RL

## Sunday Bulletin Information

PRIMARY FREQUENCIES FOR BULLETINS AT APPROXIMATELY 08:40  
 H.F. 7098 KHz IN 40 METRE BAND  
 V.H.F. 145.650 MHz VIA TOWN REPEATER  
 RELAYS PROVIDED:  
 H.F. 3640 KHz BY STATIONS AS LISTED IN BULLETIN ROSTER

### BRANCH V.H.F. SERVICES PROVIDED

TOWN REPEATER (P.E. CENTRAL)	145,050 / 145,650 MHz
GRAHAMSTOWN REPEATER	145,150 / 145,750 MHz
LADY'S SLIPPER REPEATER	145,100 / 145,700 MHz
COCKSCOMB REPEATER	145,000 / 145,600 MHz
R.T.T.Y. BULLETIN BOARD	145,150 / 145,750 MHz
BEACON (C.W. ID ZS2PE)	144,910 MHz

\*\*\*\*WE LIKE BEING YOUR BRANCH\*\*\*\*

# THIS AND THAT.

**CONGRATULATIONS** TO ANDRE ZS2BK WHO WAS PRESENTED WITH THE 1987 HAM SPIRIT TROPHY AT THE ANNUAL GENERAL MEETING FOR HIS CONTRIBUTION TO THE BRANCH FUNDS AND ACTIVITIES DURING THE YEAR.

TO OWEN ZS2HZ WHO HAS BEEN AWARDED THE V.H.F. TROPHY FOR TAKING SECOND PLACE IN THE HOME STATION/SINGLE OPERATOR SECTION OF THE LEAGUE V.H.F. CONTEST.

TO JULIAN S83M WHO WAS LUCKY ENOUGH TO WIN AN ALL-EXPENSES PAID TRIP TO LUXEMBOURG. JULIAN WAS ATTENDING A CONFERENCE IN CAPE TOWN AND WAS ONE OF SEVERAL WHO DECIDED TO DINE ON PRAWNS ONE EVENING AND WHOSE NAMES WERE PUT INTO A LUCKY DRAW. LUCKY JULIAN-NOT SO LUCKY PRAWNS! ENJOY YOUR TRIP JULIAN.

## SICKLIST

WE WERE VERY PLEASED TO HEAR THAT VICKY ANSELL XYL OF ALLAN ZS2AJ IS WELL ON THE MEND AFTER HER RECENT OPERATION AND WE HOPE THAT YOU WILL SOON BE OUT AND DANCING THE NIGHT AWAY VICKY.

HOWEVER, WE WERE VERY SORRY TO HAVE MISSED THE PLEASURE OF THE COMPANY OF BARRY ZR2DN AND AVRIL ZS2NU AT THE BRANCH A.G.M. DUE TO BARRY'S BEING INDISPOSED WITH FLEURISY AND WE HOPE THAT YOU WILL SOON BE WELL AGAIN BARRY. PERHAPS WE'LL SEE YOU AT THE BRANCH PARTY.

## ON HOLIDAY

TRAVELLING AROUND IN SWITZERLAND AT THE MOMENT ARE BILL ZS2BY AND WINNIE AND PROBABLY HAVING A SUPER TIME. HOPE YOU TOOK YOUR SKIS ALONG TOO AND THAT YOU BRING BACK LOTS OF PICTURES AND MEMORIES TO TELL US ALL.

ALSO HAVING ENJOYED A REST (UNFORTUNATELY NOT SWITZERLAND, BUT KASOUGA - BET MOST OF YOU HAVE ASKED "WHERE?") WERE BRIAN ZS2AB AND MARGE ZS2OB. TAKEN ALONG WERE COMPUTER, HF AND VHF RIG AND FISHING RODS!

## LAST COPY !!

THIS WILL BE THE LAST COPY OF QSX-PE (DO I HEAR "HOORAY?") FOR THOSE WHO HAVE NOT RENEWED THEIR SUBS. HEADQUARTERS HAVE SAID THAT OCTOBER RADIO ZS WOULD ONLY BE POSTED TO THOSE WHO HAVE RENEWED BY THE END OF SEPTEMBER.

## WANTED

HY-GAIN 14 AVG VERTICAL ANTENNA. CONTACT EWAN MATHIESON, 80X 139 GRAHAMSTOWN 6140 OR PHONE 0461-26170 (HOME) OR 22140 (WORK).

## FOR SALE

LLOYDS COMPUTER-COMPATIBLE CASSETTE RECORDER, BRAND NEW, TESTED BUT NEVER PUT INTO SERVICE. VALUE R55. CONTACT GRAHAM VINCENT 041-353982, 58 MOWBRAY ST, NEWTON PARK, 6045.

## PACKET RADIO

HENRY OREDSON WØRLI, THE ORIGINATOR OF THE PROGRAMME ON WHICH ALL PACKET BULLETIN 'BOARDS' ALL OVER THE WORLD ARE BASED WAS PRESENTED WITH THE PRIZE FOR THE BEST TECHNICAL CONTRIBUTION TO AMATEUR RADIO DURING THE PAST FEW YEARS AT THE RECENT DAYTON HAMVENTION IN THE U.S.A. ALL USERS OF FBBS SYSTEMS WILL PROBABLY AGREE WITH THE PRESENTATION.

## THANKS

TO MITCH ZS2DK FOR THE GIFT OF A BEAUTIFUL HAND-MADE GAVEL WHICH WILL SAVE OUR CHAIRMAN THE TROUBLE OF CARRYING A 4-POUND HAMMER TO THE MEETINGS.

**ALSO** TO MIKE ROBERTSON WHO HAS CONTRIBUTED A BATCH OF ABOUT 750 BIRTHDAY/ ANNIVERSARY CARDS. THIS WILL KEEP US GOING FOR A LONG TIME.

MINUTES OF GENERAL MEETING OF THE PORT ELIZABETH BRANCH OF THE SOUTH AFRICAN RADIO LEAGUE HELD AT ST. MARTIN'S CHURCH, PORT ELIZABETH ON FRIDAY 21ST AUGUST, 1987.

PRESENT: 23 MEMBERS AND VISITORS.

APOLOGIES: ZS2s FM, RB, MC, MF, HZ, RS, RL, JS, DT, RU, DO, R AND ZR2AAN.

THE CHAIRMAN WELCOMED ALL TO THE MEETING AND EXTENDED A SPECIAL WELCOME TO ONE OF OUR NEWEST MEMBERS, JULIAN S83M WHO HAD TRAVELLED TO PORT ELIZABETH ESPECIALLY TO ATTEND THE MEETING, ALSO TO THE LADIES, MAGDA KUS OUR VERY NEWEST JUNIOR MEMBER AND TREVOR ZS2TJ WHOM WE SEE TOO SELDOM.

MINUTES: THE MINUTES OF THE GENERAL MEETING HELD 17TH JULY, 1987, HAVING BEEN PUBLISHED AND CIRCULATED IN QSX-FE WERE TAKEN AS READ, PROPOSED BY BILL ZS2BY AND SECONDED BY CLIVE ZS2RT.

ARISING: (1) BRIAN APOLOGISED FOR THE QUALITY OF THE PRINTING IN THE LATEST NEWSLETTER, AND SAID THAT A NEW RIBBON IN THE PRINTER HAD PROVED TO BE OF POOR QUALITY AND WOULD BE REPLACED.

(2) PETE SMITH G0ETR EX ZS2PJ PASSED HIS REGARDS TO ALL. HE NOW HAD HIS BEAM UP AND HAD A SKED WITH BRIAN. HE WOULD PROBABLY BE BACK IN ZS EARLY NEXT YEAR BUT WOULD BE BASED IN DIV. 6.

(3) MENTION WAS MADE OF THE ADVERT FOR OUR COMPONENT LIST PRINTED IN RADIO ZS. THIS WOULD BE THE LAST SUCH ADVERT, BUT COPIES OF THE LIST HAD BEEN SENT TO ALL BRANCHES AND ANY INDIVIDUAL INTERESTED COULD GET A COPY AS WELL.

FINANCE: A FURTHER R500 HAD BEEN RECEIVED FROM CHICKS FOR SCRAP METAL. THE SECOND LOAD HAD WEIGHED 33 600g.

45 MEMBERS HAD AS YET NOT RENEWED SUBS. AN AMOUNT OF R380.20 HAD ACCRUED TO THE BRANCH AS A RESULT OF THE ALGOA/VW RALLY. R144 HAD BEEN PAID FOR LICENCES, TRAVELLING EXPENSES AMOUNTED TO R275.80 AND SEVERAL MEMBERS HAD DONATED THEIR SHARES TO BRANCH FUNDS. THE AMOUNT IN THE SAVINGS ACCOUNT STOOD AT R1168.50.

GENERAL: (1) BRIAN SAID THAT MORE PARTS WOULD BE ARRIVING SOON AND SINCERE THANKS WERE DUE TO ANDRE ZS2BK FOR HIS EFFORTS IN ARRANGING THIS.

(2) A CHALLENGE HAD BEEN ISSUED TO THE PORT ELIZABETH BRANCH TO ACHIEVE THE BRANCH PARTICIPATION AWARD IN THE LEAGUE CONTESTS TO BE HELD SOON. SEVERAL MEMBERS SAID THEY WOULD BE TAKING PART AND BRIAN WOULD OPERATE AS ZS2PE THE BRANCH STATION IN THE PHONE CONTEST.

(3) THIS YEAR THE FIELD DAY CONTEST HAD BEEN ARRANGED TO CO-INCIDE WITH THE REGION 1 FIELD DAY. WE WOULD BE USING THE SAME SITE AS LAST YEAR AND THE CARAVAN WAS AGAIN AVAILABLE. OWEN WOULD ARRANGE FOR TRANSPORT AND SEVERAL MEMBERS VOLUNTEERED THEIR HELP IN SETTING UP THE STATION AND OPERATING DURING THE CONTEST PERIOD.

(4) THE BRANCH A.G.M. WAS DUE TO BE HELD IN SEPTEMBER AND ONCE AGAIN A SPIT BRAAI WOULD BE HELD AFTER THE MEETING. OWEN ZS2HZ HAD OFFERED TO DO THE BRAAI AND MEMBERS WOULD BE ASKED TO BRING THEIR OWN SALADS. ICECREAM AND COLDDRINKS WOULD BE PROVIDED. THE SCOUT HALL IN VAN PLETTENBERG STREET WOULD BE THE VENUE.

(5) THANKS WERE EXTENDED FROM MARLENE ZR2ED FOR THE GET-WELL CARD. IT WAS STATED THAT FRED ZS2JS WAS IN HOSPITAL AND HE WOULD ALSO BE SENT A CARD.

(6) BRIAN MENTIONED THE TROPHIES WHICH WERE AVAILABLE TO BRANCH MEMBERS AND SAID THAT IF THESE WERE CLAIMED, THEY WOULD BE PRESENTED AT THE A.G.M.

THERE BEING NO FURTHER BUSINESS THE MEETING WAS CLOSED AND TEA WAS TAKEN FOLLOWED BY A RAG-CHEW.

SGD: B.A.WELLER ZS2AB  
CHAIRMAN

SGD: M.T.WELLER ZS2OB  
SECRETARY

## ELECTRONICS AT SEA. (CONCLUSION)

OUR CLASS II SHIP WILL ALMOST CERTAINLY HAVE A V.H.F. RADIOTELEPHONE FOR SHORT-RANGE SPEECH COMMUNICATION WITH PORT FACILITIES SUCH AS PILOTS, TUGS AND HARBOURMASTERS AND THIS MAY HAVE REMOTE CONTROL EXTENSION UNITS IN BOTH WINGS OF THE BRIDGE AND ALSO IN THE RADIO OFFICE. THE WHEELHOUSE WILL CONTAIN THE MASTER CONTROL PANEL OF A CREW-CALL AND TALK-BACK SYSTEM PROVIDING INTERNAL TWO-WAY COMMUNICATION WITH WORKING AREAS ON AND BELOW DECKS AND WITH LOUDHAILING FACILITIES AS WELL, WHILE AN INTERNAL TELEPHONE NETWORK WILL ALSO BE PROVIDED.

LOUDSPEAKERS IN CREW QUARTERS WILL BE ACCESSIBLE TO THE CREW-CALL SYSTEM AND WILL ALSO BE LINKED TO A BROADCAST RECEIVER AND AMPLIFIER INSTALLATION TO ENABLE PERSONNEL TO LISTEN TO NEWS AND ENTERTAINMENT DURING THEIR OFF-DUTY TIMES. OUTLET POINTS FROM A COMMUNAL AERIAL SYSTEM WILL BE FITTED IN CREW'S CABINS SO THAT THEY CAN USE THEIR OWN PERSONAL BROADCAST RECEIVERS IF THEY WISH. BROADCAST RADIO ENTERTAINMENT IS NOT ALL THAT SHIP'S CREWS CAN ENJOY AT SEA - TELEVISION PROGRAMMES, TOO, CAN BE WATCHED THROUGH THE PROVISION OF MULTI-STANDARD RECEIVERS WHICH MORE AND MORE SHIPS ARE FITTING AS PERMANENT INSTALLATIONS IN CREW'S AND OFFICER'S MESS-ROOMS.

### CCTV AND ELECTRONIC MONITORING.

ON MANY LARGE PASSENGER LINERS TODAY TELEVISION IS A "MUST" AND AN INSTALLATION CAN BE VERY COMPREHENSIVE ONE INDEED, WITH HUNDREDS OF RECEIVERS OR MONITORS IN PUBLIC ROOMS AND CABINS, OFFERING A CHOICE OF FOUR PROGRAMMES OR MORE. SUCH A SYSTEM WILL BE A COMBINATION OF CLOSED-CIRCUIT AND OFF-AIR TV, TAKING THE LATTER WHEN WITHIN RANGE OF SUITABLE SHORE TRANSMISSIONS AND ALSO GENERATING ITS OWN ON-BOARD PROGRAMMES WITH TELECINE, VIDEOTAPE AND FROM THE SHIP'S OWN STUDIO AND CAMERAS.

CLOSED-CIRCUIT TELEVISION HAS ANOTHER MARINE APPLICATION. IF THE SHIP IS A LARGE OIL-TANKER, BULK CARRIER OR CONTAINER VESSEL WITH THE BRIDGE AFT AND PERHAPS AS MUCH AS 1000 FEET DISTANT FROM THE BOWS, SHE MAY WELL HAVE A CCTV INSTALLATION FOR NAVIGATIONAL PURPOSES. IN SUCH AN INSTALLATION THE TV CAMERA IS MOUNTED IN THE BOWS OR UP ON THE FOREMAST AND A MONITOR IS FITTED IN THE WHEELHOUSE TO GIVE HER OFFICERS A CLOSE-UP VIEW OF OBJECTS IMMEDIATELY AHEAD WHICH WOULD OTHERWISE BE OBTAINED BY HUMAN-EYE OBSERVATION. PROVIDED WITH A REMOTE-CONTROLLED STEERABLE CAMERA AND FACILITIES FOR MEASURING THE RANGE AND BEARING OF BUOYS, TUGS OR OTHER COMPARATIVELY SMALL OBJECTS CLOSE AHEAD OF THE SHIP, SUCH A SYSTEM CAN BE INVALUABLE WHEN A VERY LARGE VESSEL HAS TO MANOEUVRE IN RESTRICTED OR BUSY WATERWAYS OR HAS TO NEGOTIATE CANAL LOCKS AND DOCK ENTRANCES.

AGAIN, CCTV CAMERAS ARE SOMETIMES USED TO OBSERVE MACHINERY OPERATION IN THE ENGINE ROOM, WHERE A DIFFERENT KIND OF ELECTRONIC WATCHKEEPER IN THE FORM OF A DATA LOGGER IS OFTEN USED TO MONITOR HUNDREDS OF POINTS OF MAIN ENGINE AND AUXILIARIES PERFORMANCE, SUCH AS OIL PRESSURES, FUEL FLOW, TEMPERATURES OF BEARINGS AND FLUIDS, AS WELL AS TEMPERATURES AND HUMIDITY LEVELS IN CARGO HOLDS AND COLD STORES - IN FACT, ANY DATA WHICH HAVE TO BE CHECKED REGULARLY.

DATA LOGGERS OR ALARM MONITORING SYSTEMS OF THIS KIND ARE CAPABLE OF PRODUCING A COMPLETE CHECK ON 400 PARAMETERS, WITH COMPARISONS AND OFF-LIMITS ALARM WARNINGS, EVERY THREE MINUTES, AND WILL PRODUCE AN INSTANT READOUT ON DEMAND. THE SAME ROUND OF TASKS LABORIOUSLY PERFORMED BY HUMAN AGENCY WOULD KEEP SEVERAL MEN FULLY OCCUPIED FOR A COMPLETE DAY'S WORK.

### SATELLITE AND HYPERBOLIC NAVIGATION SYSTEM.

SO FAR IN USE ON ONLY A VERY FEW SHIPS IS A SYSTEM OF NAVIGATION, OR MORE PROPERLY POSITION-FINDING, WHICH DERIVES INFORMATION FROM UNITED STATES NAVY SATELLITES IN POLAR ORBIT. THESE CIRCLE THE EARTH EVERY 108 MINUTES AT AN ALTITUDE OF 600 MILES, PASSING OVER THE NORTH AND SOUTH POLES, AND BROADCASTING SIGNALS WHICH ANNOUNCE THEIR POSITION EVERY TWO MINUTES. THE

SPECIAL SHIPBORNE OBSERVATION EQUIPMENT COMPRISES A RECEIVER, A DATA HANDLER AND A TELEPRINTER. THE SYSTEM OPERATES BY MEASURING THE DOPPLER EFFECT VARIATIONS IN THE BROADCAST FREQUENCY RECEIVED FROM EACH SATELLITE AS IT PASSES, BUT THE SHIPBOARD INSTALLATION IS COSTLY AND CUMBERSOME AND THE SYSTEM IS AT PRESENT IN USE ON ONLY A FEW HIGH-PRESTIGE SHIPS. IN MUCH MORE COMMON USE ARE THE DECCA AND LORAN HYPERBOLIC POSITION-FIXING SYSTEMS WHICH REQUIRE ONLY RELATIVELY SIMPLE AND INEXPENSIVE RECEIVING AND METERING EQUIPMENT ON BOARD SHIPS THAT WISH TO USE THEM. DECCA IS VERY ACCURATE BUT IS RELATIVELY SHORT-RANGE AND GLOBAL COVERAGE WOULD THEREFORE REQUIRE A CONSIDERABLE NUMBER OF SHORE STATION "CHAINS". LORAN, PERHAPS LESS ACCURATE, WILL OPERATE OVER GREATER DISTANCES FROM THE SHORE TRANSMITTERS. THE SYSTEM OF THIS TYPE WHICH HOLDS MOST PROMISE IS OMEGA, THE V.L.F. HYPERBOLIC SYSTEM FIRST DEVELOPED FOR UNITED STATES MILITARY USE AND SINCE MADE AVAILABLE TO COMMERCIAL SHIPS AND AIRCRAFT. TRANSMITTING ON 10,2KHZ AND 13,6 KHZ, OMEGA WILL GIVE COMPLETE GLOBAL COVERAGE WITH A TOTAL OF EIGHT SHORE STATIONS.

#### WEATHER CHARTS.

IT GOES WITHOUT SAYING THAT KNOWLEDGE OF THE WEATHER CONDITIONS THAT LIE AHEAD OF A SHIP IS OF THE GREATEST VALUE, NOT ONLY FROM THE POINT OF VIEW OF SAFETY, BUT ALSO BECAUSE ANY DELAY IN A VOYAGE IS NOWADAYS A VERY EXPENSIVE BUSINESS. WEATHER FORECASTS AND ICE WARNINGS HAVE BEEN A REGULAR FEATURE OF INTERNATIONAL AND MARITIME RADIO COMMUNICATIONS FOR MANY YEARS - INDEED, THE TITANIC RECEIVED A NUMBER OF WARNINGS OF ICE BEFORE SHE STRUCK THE FATAL BERG.

UNTIL A FEW YEARS AGO SHIPS AT SEA HAD TO RELY ON THE RECEPTION OF VERY LENGTHY CODED MORSE BROADCASTS FOR THEIR ADVANCE WEATHER INFORMATION. ON BOARD SHIP THIS INVOLVED THE TIME-CONSUMING AND LABORIOUS TASK OF DECODING EACH TRANSMISSION AFTER THE RADIO OFFICER HAD COPIED IT DOWN, AND THEN TRANSFERRING THE VERBAL INFORMATION INTO SYMBOLS AND FIGURES ON A CHART, ALWAYS WITH THE POSSIBILITY OF ERROR. TODAY MANY WEATHER FACSIMILE TRANSMITTING STATIONS HAVE BEEN ESTABLISHED THROUGHOUT THE WORLD BY THE WORLD METEOROLOGICAL ORGANISATION, AND THESE BROADCAST SYNOPTIC CHARTS AT REGULAR SCHEDULED TIMES. THESE CHARTS, COMPILED BY THE METEOROLOGISTS AND COMPLETE WITH ALL ISOBARS AND SYMBOLS, MAY BE RECEIVED IN FULL FACSIMILE BY ANY SUITABLY EQUIPPED SHIP, FREE OF CHARGE.

THE SUITABLE EQUIPMENT CONSISTS ONLY OF A SPECIAL RECEIVER COVERING 51 SPOT FREQUENCIES AND COMBINED WITH A FACSIMILE CHART RECORDER WHICH PRODUCES A PERMANENT IMAGE OF THE CHART PRINTED IN BLACK OR BROWN ON WHITE PAPER.

#### MANDATORY - THE MINIMUM.

IT WILL BE SEEN THAT IN THE MAJORITY OF WELL-RUN SHIPS THE MANDATORY REQUIREMENT IS REGARDED AS THE MINIMUM, AND ANY OR ALL OF THE ADDITIONAL AIDS WE HAVE DISCUSSED MAY ALSO BE FOUND IN USE ON BOARD SHIPS FOR WHICH THEY ARE SUITED.

LARGE PASSENGER VESSELS MAY BE EXPECTED TO CARRY A WIDER RANGE OF EQUIPMENT, SOMETIMES WITH DUPLICATED COMMUNICATIONS INSTALLATIONS, WHILE IN SUCH SHIPS HIGH-FREQUENCY LONG-RANGE RADIOTELEPHONY, NOWADAYS USING SINGLE-SIDEBAND IS THE RULE RATHER THAN THE EXCEPTION. INDEED, MANY CARGO SHIPS ALSO MAKE CONSIDERABLE USE OF HIGH FREQUENCY RADIO TELEPHONE AND SOME PASSENGER SHIPS AND TANKERS ARE NOW FITTED WITH HIGH-SPEED AUTOMATIC TRANSMISSION AND RECEPTION WITH AUTOMATIC ERROR-CORRECTING FACILITIES AND TELEPRINTERS LINKED INTO THE SHORE TELEX SYSTEM.

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#### BRANCH SOCIAL

Members and their wives are invited to attend a get-together at the LITTLE SWALLOW RESTAURANT in the CAPE VIEW SHOPPING CENTRE on SATURDAY EVENING 24 OCTOBER 1987.

# "SLIM JIM"

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## 2 - METRE AERIAL

F.C. JUDD F1STC, MIOA, Assoc. IPRE, A.Inst.E (G2BCX)

THIS IS A VERTICALLY POLARISED OMNIDIRECTIONAL FREE SPACE AERIAL FOR TWO METRES BUT WHICH WILL OPERATE IN THE SAME WAY FOR HIGHER OR LOWER FREQUENCY BANDS BY SCALING THE DIMENSIONS ACCORDINGLY. IT HAS A RADIATION EFFICIENCY 50% BETTER THAN A CONVENTIONAL GROUND PLANE DUE TO ITS LOW ANGLE RADIATION, IS UNOBTRUSIVE, HAS NO GROUND PLANE RADIALS AND THEREFORE HAS LOW WIND RESISTANCE. THE NAME "SLIM JIM" STEMS FROM ITS SLENDER CONSTRUCTION (IT IS ONLY 60 INCHES LONG FOR 2 METRE OPERATION) AND THE USE OF A J TYPE INTEGRATED MATCHING STUB (JIM) THAT FACILITATES FEEDING THE AERIAL AT THE BASE, THUS OVERCOMING ANY PROBLEM OF INTERACTION BETWEEN FEEDER AND AERIAL. THE FEED IMPEDANCE IS 50 OHMS.

### HOW THE 2BCX "SLIM JIM" OPERATES

BASICALLY IT IS AN END-FED, VERTICALLY OPERATED, FOLDED DIPOLE (FIGURE 1). AS WITH ALL FOLDED DIPOLES, THE CURRENTS IN EACH LEG ARE IN PHASE WHEREAS IN THE MATCHING SECTION THEY ARE IN PHASE OPPOSITION, SO LITTLE OR NO RADIATION OCCURS FROM THE MATCHING STUBS. CORRECTLY MATCHED THE VSWR WILL BE LESS THAN 1.5 TO 1 AND WILL REMAIN SO ACROSS THE BAND. IT CAN BE CONSTRUCTED FOR USE AS A FIXED HOME STATION "OMNI" OR FOR PORTABLE OPERATION, AND THE AERIAL HAS BEEN USED FOR MOBILE OPERATION MOUNTED ON A SHORT STUB MAST ATTACHED TO A REAR BUMPER; AT SEA A SPECIAL VERSION IS USED, COMPLETELY ENCLOSED IN A PLASTIC TUBE FOR PROTECTION AGAINST SALT WATER.

### CONSTRUCTION.

THE "SLIM JIM" MAY BE CONSTRUCTED FROM 1/4 OR 3/8 INCH DIAMETER ALUMINIUM TUBE, STIFF COTWATHER (GALVANISED IRON)

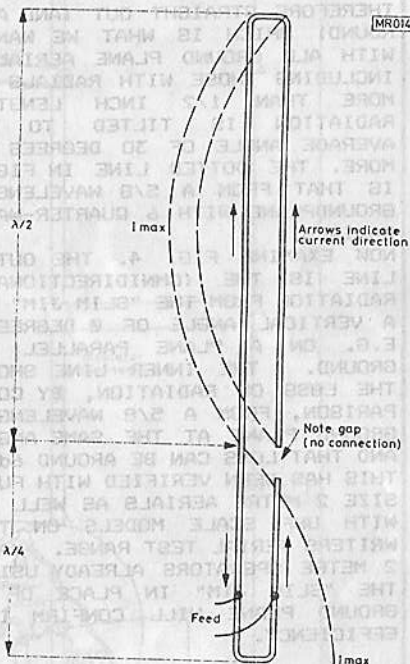


Fig. 1: The basic aerial, showing direction of current flow and phase reversal in matching stub.

WIRE OR 300 OHM RIBBON FEED. THE SPACING BETWEEN THE PARALLEL ELEMENTS IS NOT CRITICAL AND NEITHER IS THE OVERALL LENGTH, PROVIDING THIS IS WITHIN +/- 1/4 INCH.

DETAILS FOR A STRONGLY MADE VERSION FOR FIXED STATION USE OUTDOORS ARE GIVEN IN FIG. 2, IN WHICH THE DIAGRAMS ARE SELF-EXPLANATORY AND DIMENSIONS ARE INCLUDED. THE ONLY COMMENT CALLED FOR IS ON THE INSULATION BETWEEN THE RETURN HALF OF THE FOLDED RADIATOR AND THE TOP OF ONE SIDE OF THE MATCHING STUB. THIS MAY BE A PIECE OF THICK PERSPEX, TUFNOL OR P.T.F.E. DRILLED TO TAKE THE RODS (THEY MUST NOT TOUCH), WHICH CAN BE SET IN WITH ARLDITE.

## GE 8 RESPONSE.

THE POLAR DIAGRAMS SHOWN IN FIGS. 3 AND 4 EXPLAIN THE "SLIM JIM'S" IMPROVED EFFICIENCY OVER THE 5/8 WAVELENGTH GROUNDPLANE, IN SPITE OF ITS CLAIMED 3dB GAIN OVER A DIPOLE OR SIMILAR GROUND PLANE. FIG. 3 SHOWS THAT THE "SLIM JIM" VERTICAL ANGLE OF RADIATION IS ALMOST PARALLEL TO GROUND, SO MAXIMUM RADIATION IS THEREFORE STRAIGHT OUT (AND ALL ROUND) WHICH IS WHAT WE WANT. WITH ALL GROUND PLANE AERIALS, INCLUDING THOSE WITH RADIALS OF MORE THAN 1/2 INCH LENGTH, RADIATION IS TILTED TO AN AVERAGE ANGLE OF 30 DEGREES OR MORE. THE DOTTED LINE IN FIG. 3 IS THAT FROM A 5/8 WAVELENGTH GROUNDPLANE WITH 6 QUARTER-WAVE RADIALS.

NOW EXAMINE FIG. 4. THE OUTER LINE IS THE (OMNIDIRECTIONAL) RADIATION FROM THE "SLIM JIM" AT A VERTICAL ANGLE OF 0 DEGREES, E.G. ON A PLANE PARALLEL TO GROUND. THE INNER LINE SHOWS THE LOSS OF RADIATION, BY COMPARISON, FROM A 5/8 WAVELENGTH GROUND PLANE AT THE SAME ANGLE AND THAT LOSS CAN BE AROUND 6dB! THIS HAS BEEN VERIFIED WITH FULL SIZE 2 METRE AERIALS AS WELL AS WITH UHF SCALE MODELS ON THE WRITERS AERIAL TEST RANGE. MANY 2 METRE OPERATORS ALREADY USING THE "SLIM JIM" IN PLACE OF A GROUND PLANE WILL CONFIRM ITS EFFICIENCY.

### SETTING UP...

THE FEED POINT MAY BE PROTECTED FROM RAIN AS SHOWN IN FIG. 2 BY A CIRCULAR PLASTIC JUNCTION BOX, WITH A SCREW-ON LID, BUT THE CORRECT FEED POINT MUST BE FOUND FIRST. THE BEST WAY OF DOING THIS IS TO COMPLETE THE CONSTRUCTION OF THE AERIAL AND

STAND IT UPRIGHT IN THE ROOM NEAR THE TRANSMITTER BUT CLEAR OF OTHER CONDUCTORS. USE THE FULL LENGTH OF FEEDER REQUIRED TO REACH THE AERIAL WHEN FINALLY IN SITU. CLIP ON AT ABOUT 4 INCHES UP FROM THE BOTTOM AS IN FIG. 2. ADJUST SLIGHTLY UP OR DOWN FOR MINIMUM S.W.R. AND MAXIMUM POWER INTO THE AERIAL. NOTE POINTS OF CONTACT AND THEN FIT SOLDER TAGS AS SHOWN READY FOR THE FEEDER SOLDERED CONNECTIONS. THE PLASTIC BOX MAY NOW BE FITTED AND THE COM-

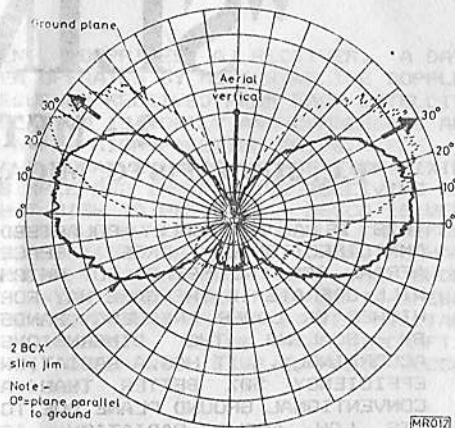
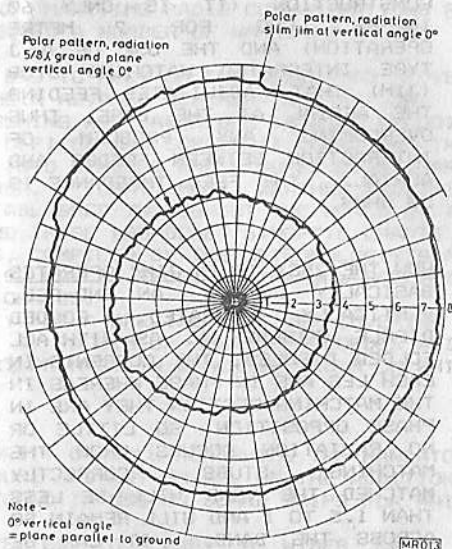


Fig. 3, above, where the 5/8 wavelength ground plane radiation angle is 30° or more (dotted line), and the "Slim Jim's" at virtually 0°. Fig. 4, top right, providing omnidirectional patterns of a 5/8 gr.p. at 0° vertical angle. Both patterns from models at 650MHz.

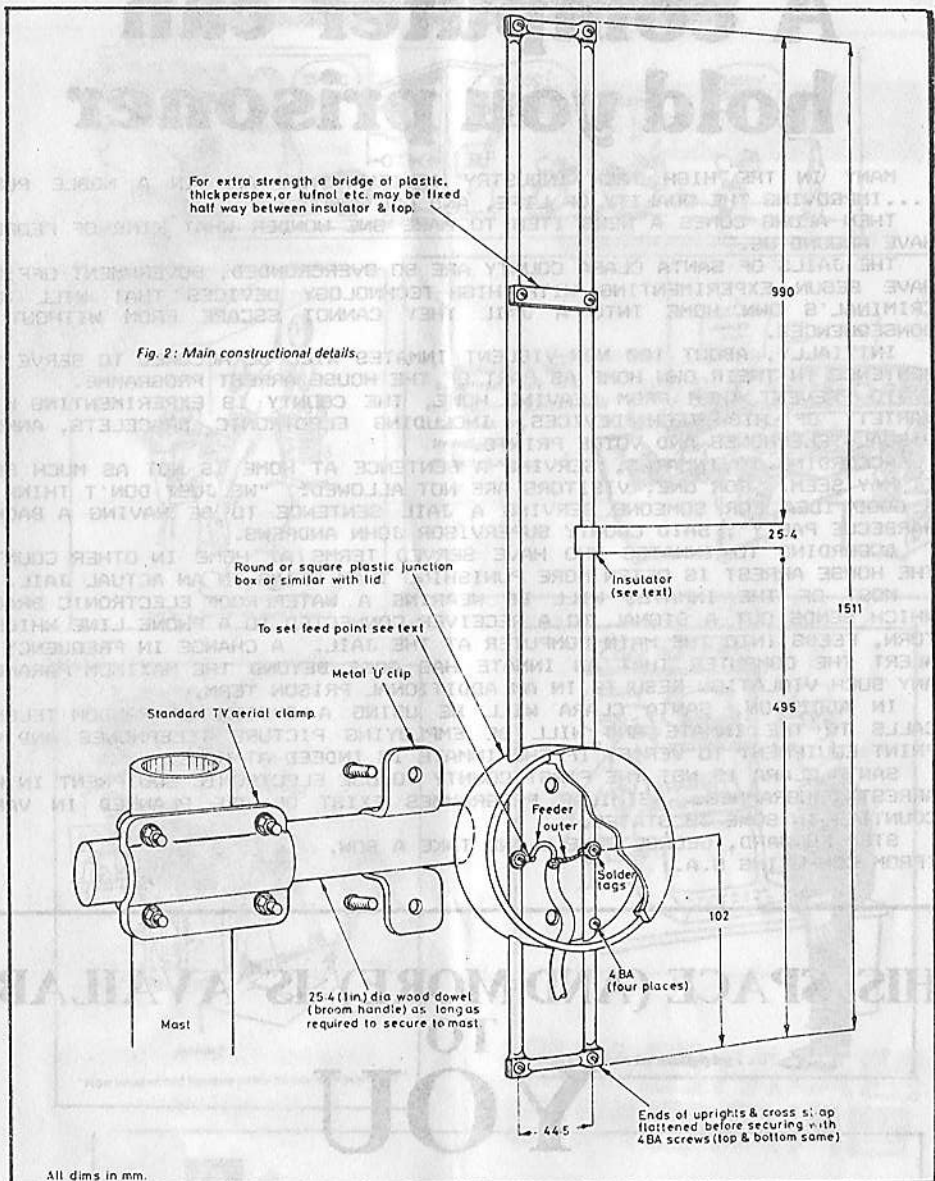


PLETED AERIAL AND FEED PROTECTOR BOX CAN BE GIVEN A FINAL COAT OR TWO OF POLYURETHANE VARNISH BEFORE FINAL INSTALLATION. FIG. 2 SHOWS METHODS OF MOUNTING ON A MAST WITH A TV AERIAL CLAW CLAMP SUCH AS THOSE MADE BY ANTIFERRE.

### POSITIONING OF THE "SLIM JIM".

IDEALLY THE AERIAL SHOULD BE AS HIGH AS POSSIBLE AND CLEAR OF OTHER AERIALS OR CONDUCTORS. IT WILL HOWEVER OPERATE QUITE WELL INDOORS IN THE LOFT OR EVEN IN A LIVING ROOM, BUT OBVIOUSLY WITH





#### A LOWER RANGE.

IF THE "SLIM JIM" IS CONSTRUCTED FROM COATHANGER WIRE OR 300 OHM RIBBON FEEDER, WHILE OTHER CONSIDERATIONS REMAIN THE SAME, THE SPACE BETWEEN THE ELEMENTS MAY BE REDUCED TO ABOUT 1 INCH. THE WHOLE OF THE AERIAL, MADE LIKE THIS, COULD BE HOUSED IN PLASTIC WATER PIPE. BEING COMPACT, THE

"SLIM JIM" CAN BE CARRIED AROUND QUITE EASILY FOR PORTABLE OPERATION ON HOLIDAYS ETC. PLEASE NOTE THE NAME "2BCX SLIM JIM" IS COPYRIGHT AND THE DESIGN IS EXCLUSIVELY THAT OF THE WRITER.

(FROM "OUT OF THIN AIR" WITH THANKS TO JOHAN WEPENER.)

# A computer can hold you prisoner

MANY IN THE HIGH TECH INDUSTRY BELIEVE THEY ARE IN A NOBLE PURSUIT ....IMPROVING THE QUALITY OF LIFE, AND ALL THAT.

THEN ALONG COMES A NEWS ITEM TO MAKE ONE WONDER WHAT KIND OF PEOPLE WE HAVE AROUND US.

THE JAILS OF SANTA CLARA COUNTY ARE SO OVERCROWDED, GOVERNMENT OFFICIALS HAVE BEGUN EXPERIMENTING WITH HIGH-TECHNOLOGY DEVICES THAT WILL TURN A CRIMINAL'S OWN HOME INTO A JAIL THEY CANNOT ESCAPE FROM WITHOUT DIRE CONSEQUENCES.

INITIALLY, ABOUT 100 NON-VIOLENT INMATES WILL BE ALLOWED TO SERVE THEIR SENTENCE IN THEIR OWN HOME AS PART OF THE HOUSE ARREST PROGRAMME.

TO PREVENT THEM FROM LEAVING HOME, THE COUNTY IS EXPERIMENTING WITH A VARIETY OF HIGH-TECH DEVICES, INCLUDING ELECTRONIC BRACELETS, ANKLETS, VISUAL TELEPHONES AND VOICE PRINTS.

ACCORDING TO INMATES, SERVING A SENTENCE AT HOME IS NOT AS MUCH FUN AS IT MAY SEEM. FOR ONE, VISITORS ARE NOT ALLOWED. "WE JUST DON'T THINK IT'S A GOOD IDEA FOR SOMEONE SERVING A JAIL SENTENCE TO BE HAVING A BACKYARD BARBECUE PARTY", SAID COUNTY SUPERVISOR JOHN ANDREWS.

ACCORDING TO INMATES WHO HAVE SERVED TERMS AT HOME IN OTHER COUNTIES, THE HOUSE ARREST IS OFTEN MORE PUNISHING THAN BEING IN AN ACTUAL JAIL.

MOST OF THE INMATES WILL BE WEARING A WATERPROOF ELECTRONIC BRACELET WHICH SENDS OUT A SIGNAL TO A RECEIVER CONNECTED TO A PHONE LINE WHICH, IN TURN, FEEDS INTO THE MAIN COMPUTER AT THE JAIL. A CHANGE IN FREQUENCY WILL ALERT THE COMPUTER THAT AN INMATE HAS GONE BEYOND THE MAXIMUM PARAMETER. ANY SUCH VIOLATION RESULTS IN AN ADDITIONAL PRISON TERM.

IN ADDITION, SANTA CLARA WILL BE USING A SYSTEM OF RANDOM TELEPHONE CALLS TO THE INMATE AND WILL BE EMPLOYING PICTURE TELEPHONES AND VOICE PRINT EQUIPMENT TO VERIFY IF THE INMATE IS INDEED AT HOME.

SANTA CLARA IS NOT THE FIRST COUNTY TO USE ELECTRONIC EQUIPMENT IN HOUSE ARREST PROGRAMMES. SIMILAR PROGRAMMES EXIST OR ARE PLANNED IN VARIOUS COUNTIES IN SOME 30 STATES.

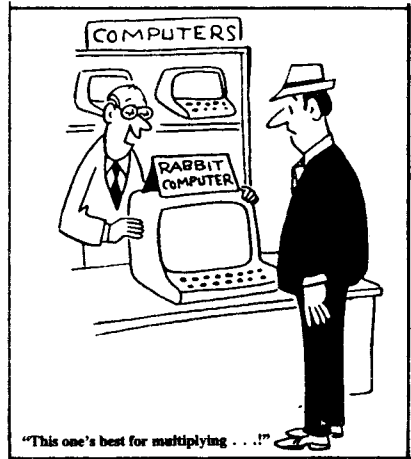
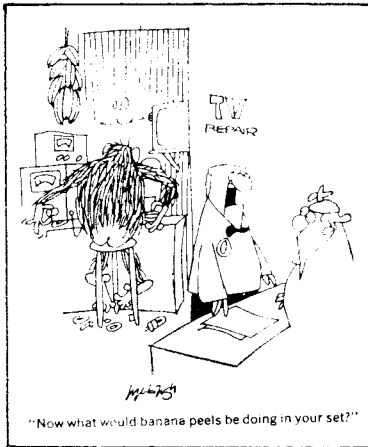
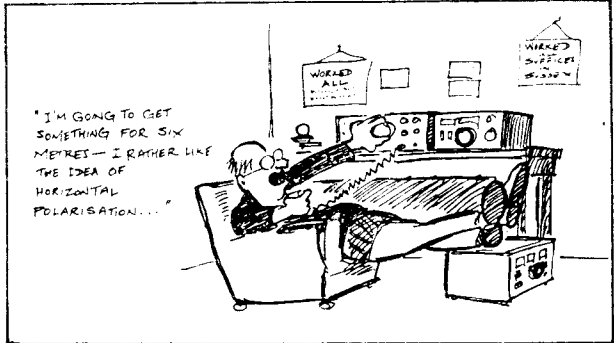
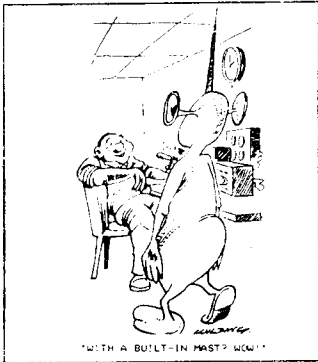
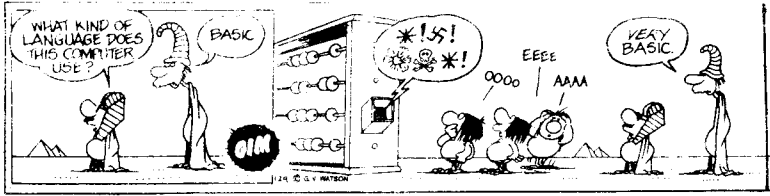
STEP FORWARD, GEORGE ORWELL AND TAKE A BOW.  
(FROM COMPUTING S.A.)

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