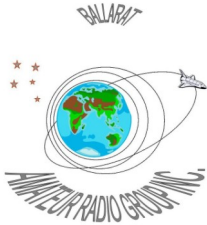


BARG News



Official Newsletter of the Ballarat Amateur Radio Group Inc. # 6953T
ABN 44 247 200 143

VOLUME 35 ISSUE 4 APRIL 2012



President:	Craig Cook	VK3CMC
Secretary:	Doug Ellery	VK3FDRE
Treasurer:	Bill Wells	VK3PAL

NEXT MEETING - FRIDAY April 27, 2012
At 7.30 pm

Contacting us

You can write to the club at the address below, or e-mail the secretary.

The Secretary : B.A.R.G. Inc.
Box 1261
Mail Centre
Ballarat. Vic. 3354.



Or E-Mail: vk3bml@barg.org.au

BARG INC. LIFE MEMBERS

Maurie Batt *	
Gordon Cornell	VK3FGC
Norm D'Angri	VK3LBA
Harry Hekkema	VK3KGL
Kevin Hughes	VK3WN
Ian McDonald	VK3AXH
Phil Seddon	VK3AQM
Charlie Stewart	VK3DCS
Bob Terrill	VK3BNC
Stan Widgery *	
Jim Wright *	

CLUB INFORMATION

REPEATERS and BEACON

VK3RWA*	(2 m Voice Repeater) (Uses CTCSS of 91.5 Hz to access)	147.100 MHz	Mt Ben Nevis
VK3RPC	(2 m Packet Repeater)	144.750 MHz	Mt Warrenheip
VK3RBU	(70 cm Voice Repeater)	438.475 MHz	Mt Hollowback
VK3RMB	(70 cm Beacon)	432.535 MHz	Mt Buninyong
VK3RBU-1	(2 m APRS Repeater)	145.175 MHz	Mt Hollowback
VK3RBT	(2 m Voice Repeater) (Uses CTCSS of 91.5 Hz to access)	146.650 MHz	Green Hill

* **IRLP** Node 6310 using VK3RWA

CLUB e-mail vk3bml@barg.org.au.

CLUB NET VK3BML 3.608+/- QRM Thursday Nights at 8 pm E.S.T (Summer & Winter)

WIA Broadcast Sunday 11.00 am via VK3RWA (IRLP Node 6310)

NEWS ITEMS Send to Harry VK3KGL

Or mail to Box 1261 Mail Centre BALLARAT 3354 or e-mail membermember member.vk3kgl@barg.org.au

Broadcast Times and Dates on VK3RWA Repeater

Every Sunday at 11.00 am, WIA National News.

Every Monday night at 9.30 pm, ARRL News

Every Tuesday night at 9.30 pm, WIA National News Repeat

The Advent of the MultiMedia System..

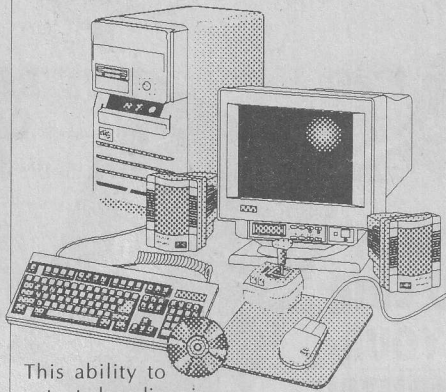
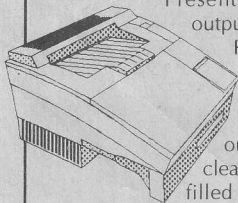
The popularity of multimedia is a fast growing trend. Many experts predict that within couple of years, **CD ROM Drives** will be a standard feature in systems being sold. It is already more than just a possibility, with CD ROM Drives costing no more than \$300.00 for a quality dual speed drive. Coupled with the nose-diving trend in pre-Pentium CPU pricing this concept is becoming more and more a reality. Not forgetting to mention the CD ROM exploding software base- the ever increasing Educational, Informational and Games Titles being published on CD ROMs.

At **RIE** we hope to set the trend with our multimedia system configuration (see page 4 for full details). The package consists of all the associated **VESA LOCAL BUS** components to output fast Graphics, Data Transfer throughput, larger storage capacity- **255MB HDD** and of course a CD ROM Drive. Thrown in, are the Creative **SB-30** speakers, 16Bit Sound Card (compatible with Sound Blaster Card), Microsoft Works on CD ROM and a couple of useful CD ROM titles - The Microsoft Bookshelf and the Australian Phonedisk. Yes, and there's more- a joystick is also included! Wait, there's more (starting to sound like Tim Shaw of Demtel here!) we are now able to offer you as part of this configuration - the **486DX2-66MHZ CPU** in a motherboard that is upgradable to the **486DX4-100MHZ CPU** for the same price of our previous 486DX-40 Multimedia System offer!

Among our new product range worth having a look, include the **EPSON Stylus Colour Inkjet Printer** and the **EPSON EPL 5600 Laser Printer**. You can now have affordable full-colour desktop publishing with the EPSON Stylus Colour Inkjet Printer. It prints at an amazing **720DPI**, 16.7 million colour output capability (with special paper) on paper or transparencies and will no doubt prove its worth for overhead projections in business meetings or educational training courses. Priced at just **\$1,375.00**, the EPSON Stylus is a printer that meets the general public wish list- great colour output with a reasonable price tag and running cost at only 20c per A4 page! *Free colour print samples are available for your assessment. Just send us your business card.*

Have you ever wished that your complex text-laden and graphics-packed page layout effort would hurry up and spits out of the printer within 30 seconds or less! Now your wish have come true! Just get an **EPSON EPL 5600 600 dpi Laser Printer!** The amazing processing speed is achieved by the heart of the printer- a **SPARCLite RISC CPU**.

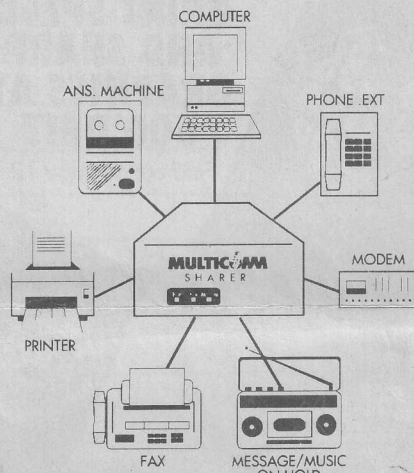
Presently the EPSON EPL 5600 output in its generic print modes- **RASTER** or **GLE**, with postscript option to be available by August. Even without postscript, the output is impressive, lines are cleaner, sharper and raster dots filled patterns are more clearly defined than on a postscript output.



This ability to output clean lines is achieved with **RET** (resolution enhancement technology) built into the printer. This entire newsletter was produced on it! Refer to page 12 for full details.

Our software range have been recently expanded. We carry the most recent updated versions. Our pricing is always competitive. So check out our range before you buy! See page 6 for the full range.

We are constantly acquiring new products in our endeavour to stay ahead of the swift technological changes and products implementations. An interesting new product is the **MULTICOM SHARER** device. The **MULTICOM SHARER** (see page 17) allows you to connect your fax, answering machine, modem and even your printer & computer on one single phone line. More amazing is its ability to turn your fax into a scanner, your printer into an online fax printer and uses your PC memory to hold faxes. Should your computer or modem fails your fax will automatically back



up. Save your business heaps over the next 10 years on individual telephone lines installation cost of value up to \$3,000.00! And all this for only \$399.00.

SCSI - "The Small Computer System Interface" that offers faster data transfer throughput than a standard parallel or serial port set-up. We have acquired a range of **SCSI Cards** (see page 7 for full details) that allow you to chain-connect up to 7 SCSI devices such as - scanner, external hard drive, printer and other devices that you care to connect

up to. Connecting devices in this manner will save you heaps in interface cards. To start the "SCSI ball rolling" we now have the **SCSI Sound Blaster 16** and **Sony CD-ROM DRIVE**.

Among our new products range includes the **Sony Dual Speed CD ROM Drive**, and a practical **Cleaning Kit** that caters for your CD ROM, Video and Cassette Recorder all in one package (see page 10).

Printer Galores at last! Now you can have almost the whole range of **Hewlett Packard Deskjet and Laser Printers** to choose from (see page 22 for full range). The wide range of 6 Deskjets and 6 Laser Printers have all the pricing and quality features to suit the every budget.

Never get caught with a dead mobile phone any more! Just carry one of our battery packs and you will not have to experience the frustration of missing out on an important phone call. Our range includes battery for **Motorola, NEC, Novatel and Audiovox mobile phones** (see page 23 for full details). We also carry the **Cordless Telephone Battery** and the **NICAD rechargeable** range.



In this edition of Communicate we are offering some truly valued pack items, including The **Microsoft Home Pack** - A three in one pack including *MS Works, **MS Creative Writer and ***MS Entertainment that offers *Word Processing, Financial Analysis, Database management, Spreadsheet, Charting, Illustrations, **Creative Writing and ***Entertainment (see page 13). The Complete Idiot's Guide to Internet, that comes with a free disk packed with Utilities E-Mail and Internet stuff (see page 4).

Finally, (nearly out of charge!) remember that you can go to any of our Melbourne, Sydney and Adelaide Stores to see the EPSON Stylus Colour Inkjet and EPSON EPL 5600 Laser Printer in action. You can also order through our Mail Order Dept, or ring our Hot-Line for more info on any of the products that have grabbed your attention (such as the MULTICOM SHARER device!)

Happy computing!

Sammy Pui
Editor

CONTENTS	
Communicate! Team	Products Page No
MANAGING DIRECTOR Rod Irving	Editorial..... 2
OPERATIONS MANAGER Hugh Goodyer	CPU Speed Chart..... 3
CHIEF TECHNICIAN/ADVISER Gary Kicic	Green Guide..... 4
GRAPHICS/PRODUCTION EDITOR Sammy Pui	Syquest Drive..... 5
	Software Range..... 6
	SCSI Products Range..... 7
	Quicken Software Range..... 8
	New Printer Ribbon Prices..... 9
	New Products..... 10
	Learning Electronic Books..... 11
	EPSON EPL 5600/Stylus Inkjet..... 12
	EPSON Printers Range..... 13
	Microsoft Home Pack..... 14
	New Hardware Range..... 15
	Latest Creative Products..... 16
	MultiCom Sharer..... 17
	CD ROM Specials..... 18
	Miscellaneous Products..... 19
	Kits Range..... 20
	Electronic Assembly Products..... 21
	HP Deskjet & Laser Printers..... 22
	Batteries Range..... 23
	Mail Order Form..... 24

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August 1994 ERRORS & OMISSION EXCEPTED. PRICES CHANGES WITHOUT NOTICE.

Communicate!

BARG'S FIELD DAY!

Another Field Day has come and gone with lots of good comments. We couldn't have got better weather even if we had ordered it. With up to eight portable club stations including one mobile and two "F" calls participating. It's particularly good to see the "F" calls from our club and also those that joined in to make the day a success.

Activity on the band was high as our activity doubled up with the National Field Day run by the WIA. These guys were pleased to see our club members enjoying the day and swapping numbers with them.

I'm sure we will chew over the pros and cons of our sites, antennas and other experiences of the day and already planning changes and ways to do things better next November.

Absent were two of our "old sages" Clem and Ted and whilst Clem has had an excuse we are not sure about Ted but perhaps he has lost his microphone "again"! We hope that you are planning for the next field day Clem, good luck from us all.

John VK3CFH disappeared for a while out in the Creswick Forrest and came back some time later muttering about his Saab. Hope you didn't really dump it down that mine shaft John!

Darren VK3FAOE was a bit on and off but I think he was actually fishing in Lake Burrumbeet between contacts so he could have had a lot of catches!

Thanks to those club home stations who came up on frequency to support the days fun.

The rules for the contest we supposed to have had a couple of minor changes but they have been done now and gives the portable field station a slightly better score to reflect his effort in going portable.

Hopefully every one will get their logs in and thanks to Harry VK3KGL for acting as the adjudicator (Harry won't take cheques!) and also for going out to the club station and activating VK3BML. In future contests we will be looking for volunteers to man the club station or operate it remotely please!

The date for the next event has been set for 25th November which gives us recovery time from the Hamvention and not too close to Christmas.

To everyone who joined in a very big thank you.

Bob VK3BNC. Field Day Co-ordinator.



Bob, VK3BNC, operating portable from a Creswick paddock.



QST Report with Craig, VK3CMC

Content review of current QST in
library



QST Review March 2012

- P4-5 Index.
- P9 BPL Rears its head again in the US.
- P24 Correspondence.
- P30 Coaxial Vertical for 160 and 80 Metres.
- P33 Remote Tune for a 43 foot Monopole. [160-80-40]
- P37 or Review a MFJ Remote Automatic tuner. www.mfjenterprises.com
- P38 Webcam Microscope for the Amateur. Use it for SMD work.
- P40 Three Wrong Assumptions about the Ionosphere.
- P43 Best mounting position for your 2M Mobile Antenna.
- P46 Reviews: Four Antenna Analysers.
Comet CAA-500
MFJ-266
RigExpert AA-54
Youkits FG-01
- P52 Review: Bravo -7K Portable Vertical Dipole.[40-10M incl WARC]
- P54 Technical Correspondence: Covers the following topics.
Antenna idea for Restricted communities. Nov 2011 article.
Hands on Radio "Rotary Encoders" Jun 2011 article
A 2W Logic chip Transmitter Dec 2011.
- P57 The Doctor is In: With a Bunch of Antenna questions.
- P59 Hands on Radio: Ex 110. PCB Layout – Part 4.
- P61 Short Takes: MP Super Classic Mobile Antenna. [25-1300Mhz] www.mpantenna.com
- P62 Hints & Kinks: DIY Open Wire line. Measure unk coax traps. Ladder line stand offs.
Burying radials in the grass. Fix shorted connectors. Tower horses.
- P64 Mercy Ship Dxpediton to 9LMS Sierra Leone.
- P67 Where is DX now? Use a Spotting or DX Cluster.
- P68 Amateur Radio in Ethiopia.
- P69 Selecting a Commercial HF Vertical for your station.
Butternut, Diamond, Hy-Gain, Hustler, Moseley, SteppIR, Cushcraft, MFJ, Gap.
- P71 Woodstock. Memories & Morse. How to run a Special Event station.
- P90 Hows DX: Temotu H40KJ. In the Solomons group.
- P92 World above 50Mhz. A Sporadic E winter.
- P97 Eclectic Technology: Looks again at Reverse Beacons. PSKimmer.
- P98 Vintage Radio: Pauline Raser, W2QCC [SK]
- P102 Index of QST 75, 50 and 25 years ago.
- P164 QST Index of Advertisers.

73, CRAIG, VK3CMC



QST Report with Craig, VK3CMC

Content review of current QST in
library



QST Review April 2012

- P4-5 Index.
- P9 A new band is born. 472 to 479 Khz known as the 630 metre band.
- P24 Letters from Members
- P30 Radios Role in the Titanic Disaster.
- P32 Homebrew Challenge.
- P34 Adventures in Adaptive Mobile Operations
- P38 Level convertor to allow Full Control of Peripherals by Computer or Radio.
All done with the MAX232 chip and 5V regulator.
- P40 Review of Coaxial Surge Arrestors from Array Solutions.
- P41 A Tube Tester for High Power Transmitting Tubes. [or valves]
- P46 Balanced Line SWR Measurement.
- P48 A Transceiver to Amplifier Interface. Safely switch the older linear amps.
- P49 Whats in the March edition of QEX from the ARRL.
- P50 Short Takes. A RF Step Attenuation Kit set. www.midnightscience.com
- P51 Review: ICOM IC-9100 MF_UHF Transceiver. www.icomamerica.com
- P58 The Doctor: Answers questions about antennas on various bands. Doctor@arrl.org
- P60 Eclectic Technology: Managing Power in the AM Carrier and saving money.
- P61 Hands on Radio Ex 111. Coiled Coax Chokes..
- P63 Hints and Kinks: Novel way to service RF transistor stages, and other hints.
- P66 DX Pedition to South Orkney Island.
- P70 Use the IRLP and be topical.!
- P72 All The Time in the World. www.nist.gov
- P74 New Priveleges on 60Metres. [Not for Aus]
- P76 Frequency Measurement Test April 2012-04-09
- P77 Amateur Radio gets secondary MF Allocation at WARC -12 see pp9 also.
- P81 Emcomm at ARRL and what it can do for Amateur Radio operations.
- P86 How's DX? Financing and expedition to VP8ORK
- P88 World above 50Mhz. F2 Forward Scatter. .
- P93 Vintage Radio: An Operator to Remember. Harold Cottam of the Carpathia.
Link article to p 30 on the Titanic.
- P95 Microwavelengths Looks at Microwave Beacons.
- P100 QST Index for 75, 50 and 25 years ago.
- P156 QST list of Advertisers.

Look at the Contests look at www.arrl.org/contests

ARRL Fd Day June 23-24 2012. www.arrl.org/fieldday

73, CRAIG, VK3CMC



George Fowler Memorial Auction



**The “George Fowler Memorial Auction”
Will take place on Sunday 29th of May
At the clubrooms.....**

**Come along and enjoy this great day
DON'T FORGET your junk....
Soups and bread rolls supplied for lunch starting at midday...**

ATTORNEY: ALL your responses MUST be oral, OK/ What school did you go to?

WITNESS: Oral...

ATTORNEY: Can you describe the individual?

WITNESS: He was about medium height and had a beard.

ATTORNEY: Was this male or female?

WITNESS: Unless the Circus was in town I'm going with male.

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BARG Equipment Loan Book.

Please fill out book as you borrow items.

Maximum duration for loan is four weeks (meeting to meeting) and must be signed in and out again if you wish to re-borrow item for a further period.

Please report any malfunction or damage to the Secretary, preferably in writing or e-mail thank you.

This book is not for recording Library borrowings!

B.A.R.G Items for Loan.

Antenna Analyser MFJ269 HF-VHF-UHF

Antenna Analyser MFJ249 HF/VHF

Antenna Analyser VHF. Autek.

Receiver Drake SSR-1.

Receiver FRG-7.

Transceiver TS-530.

Oscilloscope BWD 509.

Grid Dip Oscillator.

Safety Belt.

Antenna Gin Pole.



Craig - VK3CMC

Presidents Report

Well another month has come around as the weather cycle does also. Just as we think the summer has gone there are some great days with the weather being kind to us. For those who last weekend ventured out for the clubs Field day that was also the case. Great weather with fine breeze [at least where I was] and the band was full of signals. Coincidentally this was the weekend of the WIA's field day activity and it was probably this that drew the extra crowd.

Whatever it was, the day proved to be a great day and although not official at this time I think the winner was obvious by the last number I heard passed near the cutoff time at 3.30. Hopefully we can get some more members out for our next one on Sunday 25th of November. Mark up the diary now. While at it include the clubs Hamvention date which is Sun 21st Oct, and for those of a naval interest that's Trafalgar day.

Theres not much to report around the club at the moment but we have just run a course for Foundation licence and have three people waiting for issue of a callsign, Hopefully we will see more of them at meetings and eventually on the air.

Our club nets on Tue and Thurs evenings are still held but I would like to see some more pop up on the 2M net via the clubs repeater VK3RBT on the Tuesday which is running under the direction of John VK3AIG. Unfortunately the numbers are not very high even though it's a very quick whip around net. The HF net still runs with the regular participants. I should like to thank Reg VK3CAZ for holding the reins of that net while Clem was unavailable. He did a sterling job. Thanks Reg.

On a sad note now Bud Foley ex VK3AAP passed away and a number of the clubs members attended his service last week. He was ex RAAF but he had not been active on the bands lately.

We have been given a fair selection of books and magazines for the clubs library and I have been re organizing the library. We now have replaced some of our missing series of QST magazines along with some volumes that we didn't have.

There are also some bundles of magazines that will be excess to clubs requirement and they will appear on the GF Auction table.

We will have a speaker at this months meeting who will talk and demonstrate how metal detectors work and in particular applied to the search for gold.

Hopefully we may find a gold mine in the clubs back yard. !!!

Finally remember the George Fowler memorial auction on Sunday 27 May. Come along for lunch of bread rolls and home made soups. Bring some of your favorite in a thermos and share with members. The club will supply the rolls.

Any preloved gear you would like to move on or just donate to the clubs use. A small premium will be charged for commission of gear sold.

That's all for this month.

73

Craig VK3CMC

'SLIM JIM'

REVISITED

2-METRE AERIAL

F.C. JUDD FISTC, 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.

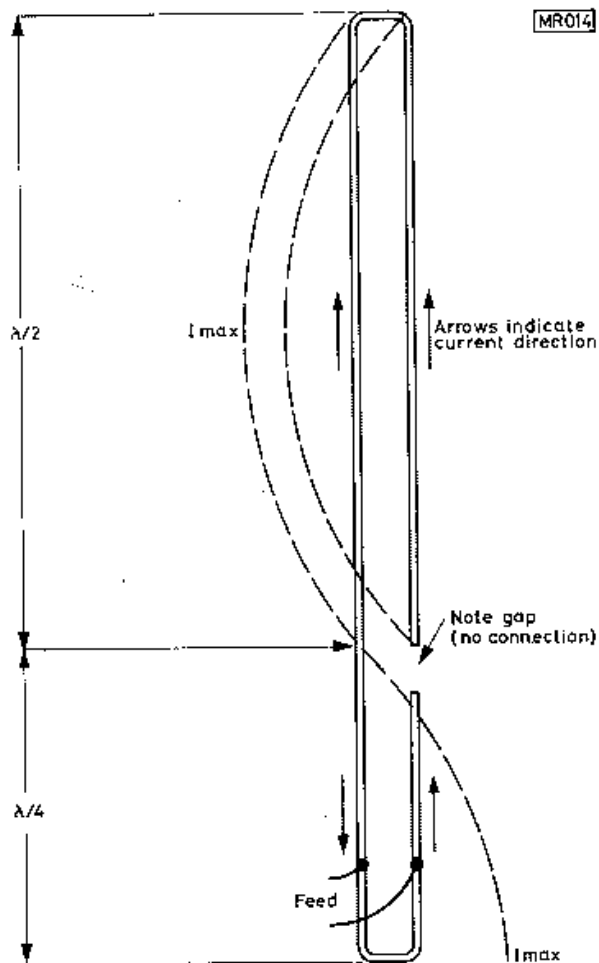
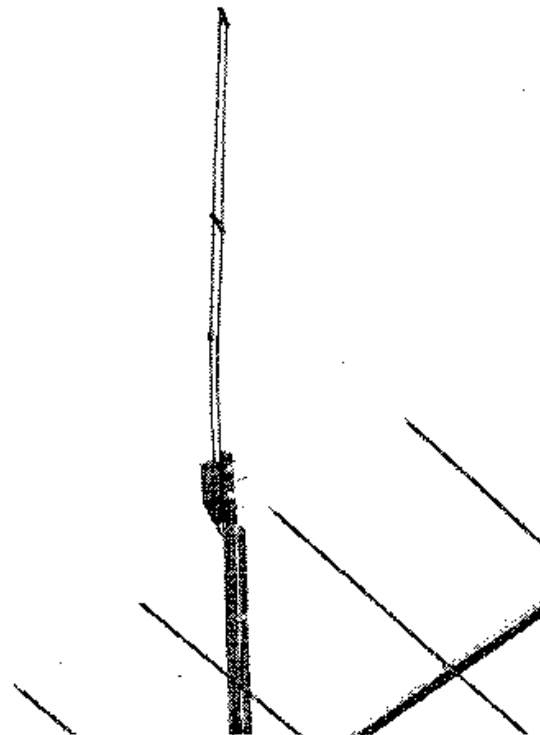


Fig. 1: The basic aerial, showing direction of current flow and phase reversal in matching stub.



How the 2BCX "Slim Jim" operates

Basically it is an end-fed, vertically operated, folded dipole (Fig. 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 $\frac{1}{4}$ or $\frac{3}{8}$ inch diameter aluminium tube, stiff coathanger (galvanised iron) 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 $\pm 1/4$ 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 Araldite.

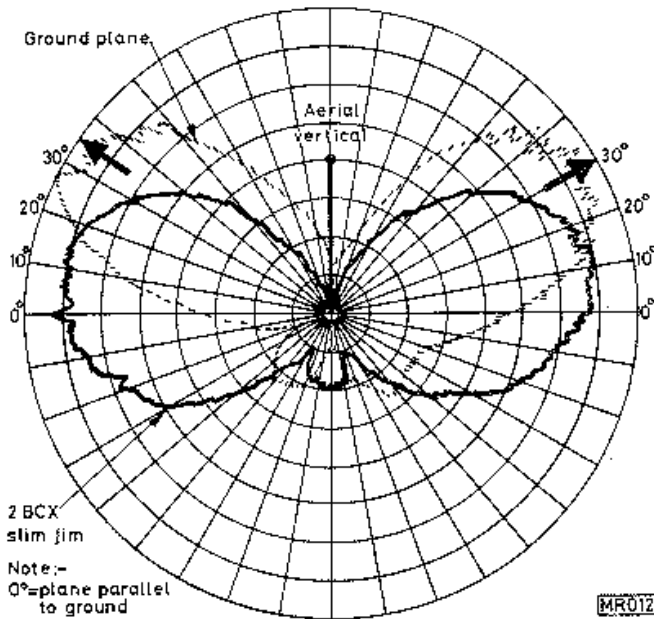
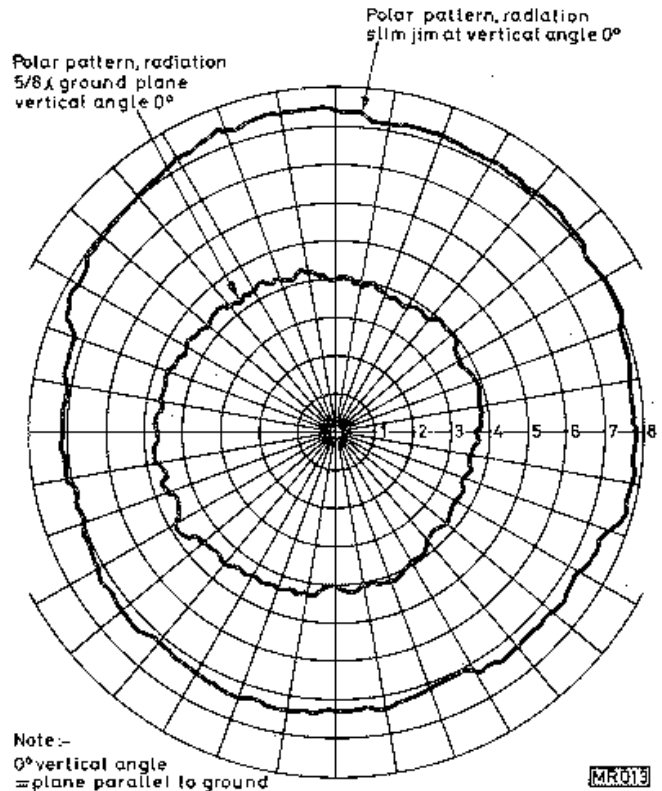


Fig. 3, above, where the $5/8$ wavelength ground plane radiation angle is 30° or more (dotted line), and the "Slim Jim's" at virtually 0° . Fig. 4, top right, providing omnidirectional patterns of a $5/8$ gr.p. at 0° vertical angle. Both patterns from models at 650MHz.

Response

The polar diagrams shown in Figs. 3 and 4 explain the "Slim Jim's" improved efficiency over the $5/8$ wavelength ground plane, 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° or more. The dotted line in Fig. 3 is that from a $5/8$ wavelength Gr.P aerial 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° 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 writer's 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 completed aerial and feed protector box can be given a 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 Antiference.

Positioning of the "Slim Jim"

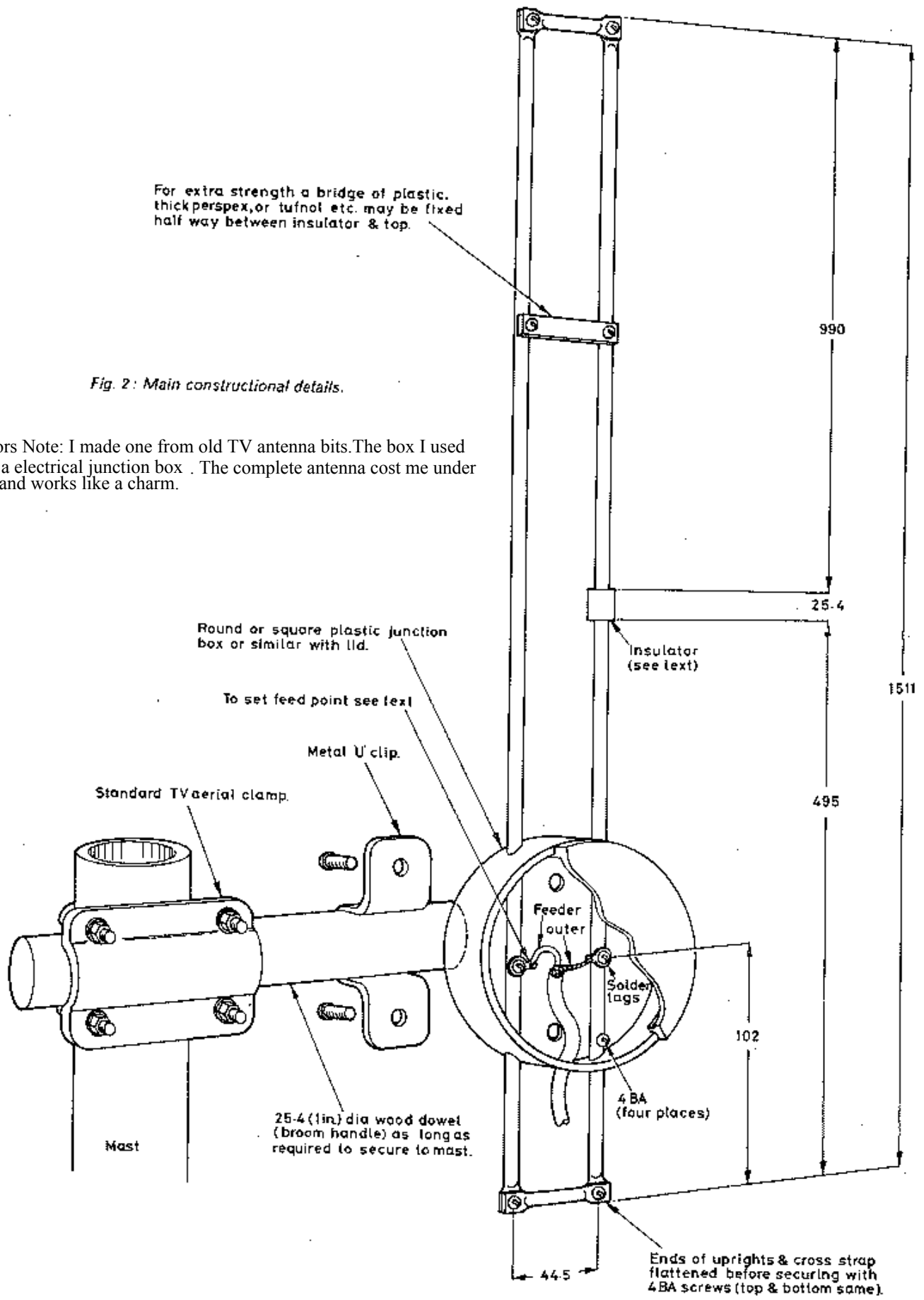
Ideally the aerial should be as high as possible and clear of other aerials or conductors. It will, however, operate quite well indoors in the loft, or even in a living room, but obviously with a lower range.

If the "Slim Jim" is constructed from coathanger wire, galvanised iron 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.

For extra strength a bridge of plastic, thick perspex, or tufnol etc. may be fixed half way between insulator & top.

Fig. 2: Main constructional details.

Editors Note: I made one from old TV antenna bits. The box I used was a electrical junction box. The complete antenna cost me under \$10 and works like a charm.



All dims in mm.