

Pretoria Branch address -

air rally - 11 Sept. all day

Q S X P E

ZS2PE

FREQUENCIES:

Bulletin	3640 Khz
	7098 Khz

National Call	145.5 Mhz
P.E. Repeater	145.05/65
Grahamstown	145.15/75
Lady's Slipper	145.10/70



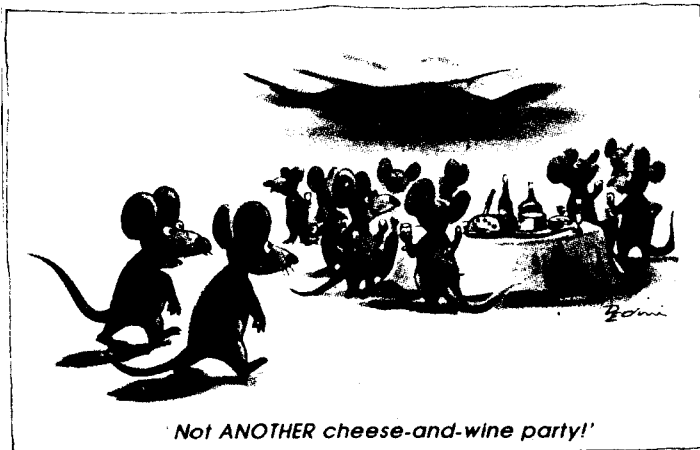
*Port Elizabeth Branch of the
South African Radio League*

P.O.Box 462, Port Elizabeth. 6000.

14 AUG

›NOTICE OF MONTHLY MEETING‹

THE MONTHLY MEETING OF THE PORT ELIZABETH BRANCH WILL BE HELD AT THE Y.M.C.A., HAVELOCK STREET, PORT ELIZABETH ON FRIDAY 20th AUGUST 1982 AT 8p.m. ANYONE WISHING TO ENTER FOR THE CONSTRUCTION, DX OR VHF TROPHIES IS ASKED TO BRING ALONG THE DETAILS TO THE MEETING.



BRANCH A.G.M.

NOTICE IS HEREBY GIVEN THAT THE ANNUAL GENERAL MEETING OF THE PORT ELIZABETH BRANCH WILL BE HELD ON SATURDAY 18th SEPTEMBER 1982, AT 4p.m. AT THE SCOUT HALL, CORNER OF 10th AVENUE AND HEUGH ROAD, WALMER (ENTRANCE IN VILLIERS ROAD). AFTER THE BUSINESS OF THE MEETING, THERE WILL BE A VIDEO MOVIE FOR THE YOUNGSTERS (OF ALL AGES) FOLLOWED BY A BRAAI, FOR WHICH THE BRANCH WILL BE PROVIDING THE MEAT - BY KIND COURTESY OF A DONATION FROM THE SALT-MINE OF DICK ZS2RS. KEEP THIS DATE IN MIND. MORE DETAILS NEXT MONTH.

NEWS

CONGRATULATIONS: to Kevin Eastwood who was one of the very few who managed to pass a tricky P.M.G. exam in May and has the callsign ZR2EH and can be heard on 2 meters.

CONGRATULATIONS: to Brian Weller ZS2AB who entered the World wide RTTY contest in March this year and came 37th overall and FIRST on the African continent.

WELCOME: to the following new members and we hope their association with the Branch is a long and happy one: Mitch ZS2DK, Ben ZS2QR, Andy ZS2CC, Mike Robertson and Gordon Knapp all from Port Elizabeth and Chas Thwaites ex ZS6BUC and now ZS2PA from Port Alfred.

All members of the Branch will be most upset to hear that Audrey xyl of Frank ZS2CY suffered a cerebral spasm a few weeks ago and that the two of them have moved up to Graaff Reinet to stay with their son Tony and family for a while. We hope you will be up and about soon Audrey and hope to see both of you back here soon.

John ZS2JR our intrepid world traveller, once again has taken wings, this time to England, Paris and the U.S.A. and will be away for about 3 weeks. We would like to wish the following very **HAPPY BIRTHDAY** and very many more:

11th John Watson ZS2KD	15th Anna Marie Barnard (ZR2DY)
12th Trevor Elliott ZS2TJ	19th Chas. Thwaites ZS2PA
13th Yvonne Bonthuys (ZS2EQ)	20th Pete Fourie
13th Colin Ward ZR2AT	23rd Norman Perelson ZS2RI
15th Kevin Eastwood ZR2EH	27th Alan Smith ZS6BTI

HAPPY WEDDING ANNIVERSARY To the following happy couples with best wishes for many more:

5th Tom (ZS2TC) and Shirley Cockbain
9th Attie (ZR2DY) and Anna Marie Barnard
19th Chas and Irene Thwaites (ZS2PA)

PAGE 2.

MINUTES OF THE MONTHLY MEETING OF THE PORT ELIZABETH BRANCH OF THE
S.A.R.L. HELD AT THE Y.M.C.A., HAVELOCK STREET ON FRIDAY 16th JULY 1982.

PRESENT: 18 members and visitors.

APOLOGIES: ZS2AB.

The Chairman welcomed all to the meeting, especially Daphne, Vicky, Gay and Audrey. Piet van der Berg, a member who was attending his first meeting, was also welcomed.

MINUTES: The Minutes of the meeting of 18th June, 1982, having been published and circulated in QSX-PE were taken as read, proposed by Gus ZS2MC and seconded by Attie ZR2DY.

ARISING: -

FINANCE: The Treasurer reported that subs were coming in well.

CORRES: The following correspondence was tabled:

Letter from Algoa Branch
Letter from ZS2KX and ZS2LO
Letter from HQ re operation of club station
Letter from Dave Perry ZS1SG re Band Plan.
Letter from HQ re 10 MHz band plan
Letter from Contest Committee
Minutes and financial statement from HQ

GENERAL: The Chairman reported that the Flying Club Navigation Rally had gone off well and thanks to all those who helped with the communications. A donation of R50 towards AGM funds had been received.

With regard to the Hobbies Fair, the Chairman thanked all the members of the Algoa Branch who had assisted and to all the P.E. members who had assisted so tremendously with the erection and manning of the stand and for the use of their equipment. Special thanks to Brian ZS2AB who had done all the prior organisation. All equipment had been insured for R8000 for the very cheap rate of R25 for the week.

The Chairman said that at a previous meeting he had called for nominations for the post of Regional Co-ordinator for Hamnet and the Branch had voted unanimously for ZS2AP. The Chairman had since received a call from ZS1LM saying that this was not acceptable to the organiser and therefore it was necessary to vote again. The nominees were ZS2AP, ZS2KU and ZS2U. After a show of hands, the decision went unanimously to ZS2AP again. The Chairman reminded members to pay their subs before they were struck off the list by HQ.

The August meeting would be the last before the Branch A.G.M. and all those who wished to enter for the competitions for Home Construction, HF DX and also VHF trophies, were asked to let ZS2AB and ZS2OB have their logs or information regarding their entries.

Congratulations were extended to Gay Schönborn for her winning entry in the caption contest. Unfortunately the prize was a rolling pin!

There being no further business, the meeting was closed and tea was taken. Colin was thanked for the eats. Thereafter, three films from the F.B.I. now being circulated by the S.A.P. were shown, and these dealt with crime to persons and property.

sgd:
R.W. Schönborn ZS2RS
Chairman

sgd:
M.T. Weller ZS2OB
Secretary

setting up a

- PAGE 3



Jeff MAYNARD G4EJA

WORKSHOP



Not all readers will be able (or even willing) to embark on a workshop project of the style outlined below. But you should all take heed of the remarks about safety—when was the last time you checked the mains supply? Do you have adequate earthing? Can the supply to your bench be isolated? Where is your fire extinguisher?

Choosing a Location

The major limitation in siting a workshop/lab is likely to be the views of other members of the family! Taking a spare room full time or using the dining room table occasionally might seem like a poor choice to a working wife. But the use of a permanent base does have advantages beyond those to the user—if only that the door can be closed on the mess!

There are some stalwarts who continue to use the kitchen table for developing complex electronic gadgetry; but a serious effort to find a suitable location is worthwhile. So what are the choices open?

A garage is often the only spare space available (or at least available and having the family's blessing). An integral garage will usually be well equipped with lighting and power, perhaps even housing the main fuse board for the premises, and should be free from damp if not draughts. A separate garage may only have a light, and if so, will require a separate power feed from the appropriate

ring main. More on power feeds later, but do use mineral insulated—Pyrotex—type cable for external and/or underground routes.

From experience there are two main disadvantages with the use of a garage for electronic hobby work

- it can be very cold during the winter months, and is not easy to heat effectively
- dust tends to settle over the equipment, a problem exacerbated by the use of the bench for woodwork and so on.

These problems can be overcome by partitioning one end of the garage. Ideally this can be done as a permanent feature if space permits. A framework of 50 x 50mm timber will support a wall of fibreboard or similar material. If the wall is not possible, a curtain will provide some protection from dust and make heating easier.

The traditional ham 'shack' being a converted garden shed adjacent to the mulch heap is a consideration—but only just. The combined effects of cold and damp, with large resulting changes in humidity, can spell death to sensitive electronic equipment.

Even if you can provide environmental control a shed is not a very secure place to store valuable, and portable, electronic equipment.

A loft is a prime candidate in most households simply because it is available. Many modern houses have very shallow roofs or use factory made A-frames in the construction, both of which tend to limit space severely. If this is the case it may be necessary to consider a 'loft extension' of the type advertised in Sunday newspapers.

Whichever approach is adopted, or if sufficient space exists, the loft usually requires only access, a floor and walls. Access for a workshop must be improved from the traditional bedroom chair and strong arms. Sunday newspapers again provide sources of do-it-yourself loft ladders. Tongued and grooved floorboarding gives the best finish to the loft floor area but is rather expensive. Chipboard designed for flooring is cheaper but may require cutting up to get through the loft opening as it is sold in 8 x 4ft sheets. (Metrication has not yet got to chipboard.)



Walls can be of any convenient material such as fibreboard which also provides a ready made pin-board. A coat of white paint on all the walls and the roof will increase the illumination level from whatever bulbs are installed.

Do not forget your loft next time a new carpet is laid elsewhere in the house; the old carpet laid on the loft floor will add a touch of warmth and is easier on the feet.

The Spare Room

Perhaps the best choice for a workshop is a spare bedroom, or indeed any spare room, for obvious reasons. For equally obvious reasons this might be the most difficult space to acquire. If the main obstacle to you taking over the room vacated by your recently married daughter is your better half, then a good old British compromise might be an idea. If your wife is interested in sewing or pottery or anything that would benefit from a permanent home, why not suggest a joint workroom? With plenty of worktops and cupboard space, two activities can happily co-exist. Who knows—you might end up with a convert—or take up sewing yourself!

Furniture

The key item for any workshop or lab is a bench. The bigger the better of course, particularly in width, but all the various domestic problems already discussed will combine to restrict the size. Assuming that you will install the largest practical size, what are the other considerations? Height of worktop is the main one.

If you are to spend many hours sitting poring over multi-function breadboarding it is important that you are comfortable. For which reason it is worth finding a good chair—try the commercial salerooms selling off redundant office equipment. A desk is typically 710 to 760mm high and this is the approximate figure to aim for. However, unless you are buying a ready made desk or bench, it is worth experimenting with varying heights.

The Bench

Having determined a comfortable height the easiest method of producing a bench is to lay a piece of Melamine kitchen worktop over a wooden frame. In doing this, it is important to make a sound frame. Not only will you be leaning on the bench top later, but it could well be loaded with heavy and expensive equipment. Whether or not you incorporate cupboards into the framework depends very much on how much woodworking skill you have. If this is low then take a trip to MFI, or similar, warehouse and buy some bedside cupboards. These can be used both as supports and as storage.

Beware of being too tempted to buy a desk. A dark coloured bench top is not conducive to safety and a clean white surface is much easier to keep tidy. A tidy worktop is a safer worktop.

Storage

Whether or not cupboards are installed under the main bench some form of storage is essential. Shelves gather dust but drawers and drawer units cost money. As ever, a trade off is necessary between what you would like and what you can afford.

It is sometimes better to keep certain tasks to areas of their own. When working with electronics this is particularly so with p.c.b. production and case fabrication. The chemicals associated with making p.c.b.s and the dust from cutting and filing p.c.b.s and metal cases should all be kept well away from the development bench. If there is insufficient room for two benches then make p.c.b.s in the garage or only when the current electronic project is cleared away. It is a good idea to acquire a vice and a drill stand that can be moved about. The multi-purpose type of vice with a bench clamp and a choice of heads is most useful.

Component storage becomes a problem with increasing stocks. There is nothing more annoying than not being able to find a particular i.c. that you remember buying only a week ago. Office equipment sale rooms again offer some useful bargains. A typist's drawer unit, designed to hold paper in drawers about 50mm deep, can often be picked up for about £5.00, particularly if scratched, and makes an ideal store for components. Drawers can be lined with polystyrene for i.c.s and transistors—but obviously not c.m.o.s. devices.

Power

Before using any location as a permanent workshop consider the power supply arrangements.

Attending a lecture on safety, a beginner asked the question "Do people often electrocute themselves?" To which the cynical lecturer replied "No, only once". He was of course making a very good point: electricity can and does kill.

The work bench should have its own fused supply with an isolator prominently available. The installation of an e.l.c.b. (earth leakage circuit breaker) will provide a measure of protection. It will trip the supply within 30ms of a short from Live to Earth or Live to Neutral.

When working on mains powered equipment there are a number of points to remember—

- TV chassis are usually at mains potential
- the most common shock risk arises from inadvertent contact between an earthed chassis and mains voltage components
- do not use test equipment in such a position that leaning over the equipment under test is necessary
- do not use metal benches
- do not work on equipment from which the earth terminal is disconnected without the use of an isolating transformer
- use an unearthed low-voltage soldering iron
- discharge large storage capacitors

The final point on electricity is to provide good lighting. If the workshop is in a loft make sure a torch is kept to hand. It can be difficult to find the ladder in the dark if you trip the e.l.c.b.!

Safety

A few other considerations beyond those already mentioned are worthwhile under the heading of safety. Any exposed metal (bench, chassis etc.) should be maintained at ground potential; if necessary run an earth wire to an outside ground stake. If you need to be earthed, when handling c.m.o.s. for example, a metal bracelet can be worn but this must only be connected to earth via a high value resistor (1M Ω). This will provide an earth leakage path to protect the c.m.o.s. but will not be a potential source of electrocution.

A rubber mat underfoot will ensure an electrically isolated environment if necessary.

Finally don't forget to keep a suitable fire extinguisher and/or fire blanket readily to hand. The aerosol type of extinguisher supplied for use in cars is ideal for this application.

Organisation

Even the constructor buying precisely from published parts lists will accumulate a selection of odd resistors and fuses and so on. The experimenter will need to build up a large stock of these passive and other, active, devices. Such a collection is of little use if a particular item cannot be found to complete the latest project. It always seems to be the small items, like resistors, that cause the trouble.

Spending time organising the workshop stocks is a worthwhile investment. Resistors, organised by E12 or E24 value, nuts and bolts, capacitors, transistors, fuses and other small items can be sorted into compartmented boxes bought or borrowed. Integrated circuits are best kept plugged into polystyrene sheets in a thin drawer. (But not c.m.o.s. which should be kept in the conducting foam or metal foil in which they should have been supplied.)

It would be a costly exercise to dash out and buy all the other 'useful' items one could think of. But buying each item, adhesives, insulating tape, Letraset, freezer aerosol, masking tape, solvent cleaner etc, etc, as it is needed soon builds up a good working stock.

Finally, think of reference material. Pin-out diagrams for integrated circuits and transistors are vital. Wallcharts for these are helpful but a manufacturer's data book will provide much more information. If these data books are considered too costly remember that many component catalogues including those from RS, Maplin and Electrovalue include some pin-out information and brief specifications of the devices offered.

Other reference works can be chosen according to the particular branch of the hobby to be pursued whether it be radio, power, computing and so on.

Tools

Again the decision on what tools to acquire will be influenced more by cost than by need. The absolute minimum includes—

- soldering iron (low voltage)
- assortment of screwdrivers
- sidecutters and pliers

There is little doubt in the author's mind that a small selection of high quality (Swedish steel) tools is to be preferred to a large selection of inferior items.

Beyond the basic toolkit, one can acquire those items for which a particular need is felt, and the cash available.

These can include—

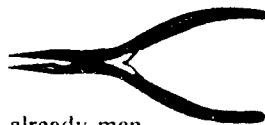
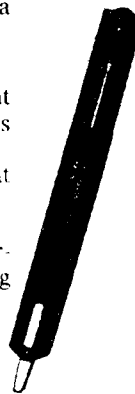
- | | |
|--------------|--------------------|
| p.c.b. drill | specialist cutters |
| multi-vice | files |

Some pieces of test gear are essential for any electronics or radio hobbyist. The two most useful, and mandatory, are a multimeter and a continuity tester. Digital multimeters (d.m.m.s) are now available at quite reasonable cost or can be built using l.s.i. chips and liquid crystal displays with low component count circuits. Analogue meters also have their place, particularly for obtaining a null or peak indication. If a d.m.m. is owned then a cheap low sensitivity analogue multimeter is sufficient. A continuity tester can be put together very quickly from a 555 timer and telephone earpiece (a circuit was given in the January 1982 issue of *Practical Wireless*). When starting to put together items such as this it is a good idea to standardise on plugs and sockets. A selection of connecting leads of different lengths with an assortment of terminations is useful.

Bench power supplies, signal generators and pulse generators can all be put together from circuits in this and other magazines. An oscilloscope represents a much more advanced home construction project and is therefore most likely to be purchased. However the *PW* Purbeck has proved to be very useful. A 'scope is a valuable diagnostic tool for almost all branches of radio and electronics. When you decide to invest in one always go for the best possible—a minimum specification should be for a twin beam, 15MHz variety.



Practical Wireless, April 1982



AMATEUR RADIO STAND AT THE 1982 HOBBIES FAIR , JULY 12 - 17.



The above photo was taken of our stand during the 1982 Hobbies Fair, held in the Feather Market Hall in Port Elizabeth this year. The stand was manned at all times by at least one and more often than not two or three hams, a total of some 20-odd being involved in some way with the setting-up of the stand on the Sunday before the Fair opened, manning it from noon to 10pm each day, and removing all the gear on the Saturday evening. On the stand we had a computer with video display unit, a full Slow-scan TV outfit, HF rig, VHF rig, and a display of equipment from earlier days of ham radio, as well as components, maps, satellite pictures and posters depicting some of the equipment available. It seems that a fair amount of interest was shown by members of the public, and several enquiries about the process of obtaining a licence were received. The arrangement of the hall was somewhat better from an interference point of view than in years past, and we did not suffer too much from power-tool and musical competition. We would like to thank everyone who assisted in any way, however small, in making the stand what it was. (Brian ZS2AB)

BRANCH ANNUAL GENERAL MEETING 1982.

As we intend to have a rather different form of AGM this year, taking place on the third SATURDAY of September, at the Scout Hall at 10th Avenue Walmer, and being more directed towards the social get-together than the usual dreary business-oriented meeting, with a braai, video-film for the kids, etc., we will certainly need YOUR help with making it a success. As there will be meat and a certain amount of liquid refreshment provided by the Branch, members will be getting most of it for nothing, but we would like as many members as possible to make themselves available for some of the tasks which will have to be performed, tending fires, for instance. PLEASE LET US KNOW VERY SOON if you are willing to help. We will be asking various ladies to provide a bowl of salad, and this will be arranged shortly. Please make every effort to give us your support.



HAPPY BIRTHDAY AND
FAREWELL.

This photograph was taken at the June Branch meeting when the members wished a very special happy birthday to Cyril Goodman ZS2KX who celebrated his 80th birthday on 4th June.

We also sadly bid farewell to Brian and Sheila Gruss ZS2TY and ZS2BF who are moving to ZS6 prior to a stay in the U.S.A. where Brian takes up a bursary. Peter ZS2PS also left P.E. to live in Div 5. A special cake was iced and brought to the meeting to commemorate the event.



BULLETIN ROSTER.

22nd August Dick ZS2RS 322111
29th August Brian ZS2AB 303498
5th September Marge ZS2OB 303498
12th September Colin ZS2AO 312471.

Somehow, someone somewhere must have some bits of news for the bulletin readers, so just give them a call and let them know - it'll help a lot. Thanks!

VERY IMPORTANT NOTICE.

As you will have read elsewhere in this Newsletter, our Treasurer has moved to Graaff Reinett for a while, so all money matters will be dealt with by Brian ZS2AB. Stickers at R4 per sheet and League badges at R1.50 are on sale, as well as log books at R1 each. Please continue to send subs to Box 462 and not to Headquarters. Thanks a lot.

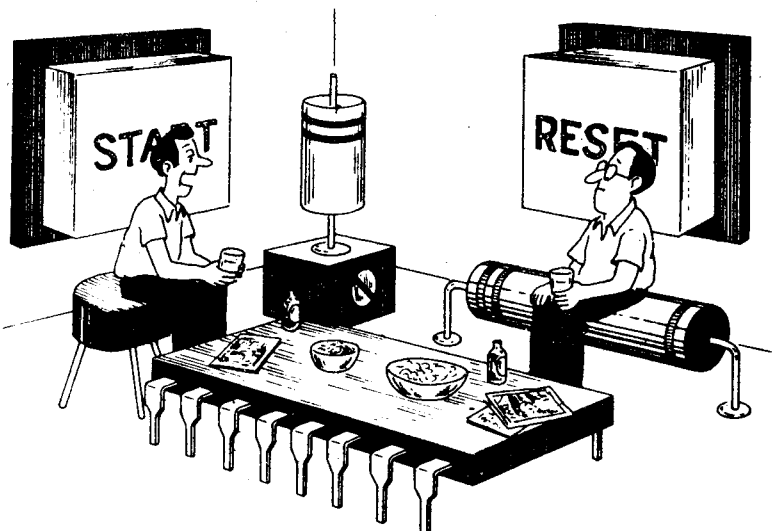
Many thanks to all those who have donated to the A.G.M. fund. Full details will appear in a later issue.

Strangers show up when they need you. Friends show up when you need them.

Some people spread happiness wherever they go. Other people, whenever they go....

You never know the strength of a woman until she is in hot water.

(Thanks to K8EMI and S.A.R.A. Newsbulletin for the first two quotes)



"Making my own furniture helps me get away from electronics for awhile."

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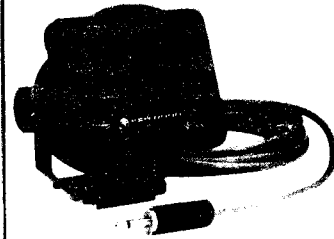


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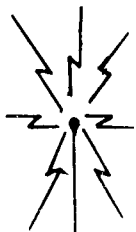
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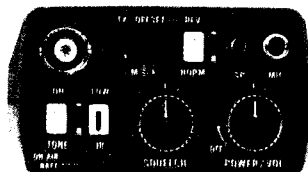
BIG performance, small size, smaller price!



The TR-2500 is a compact 2 meter FM handheld transceiver featuring an LCD readout, 10 channel memory, lithium battery memory back-up, memory scan, programmable automatic band-scan, Hi/Lo power switch and built-in sub-tone encoder.

Extremely compact size and light weight 66 (2-5/8) W x 168 (6-5/8) H x 40 (1-5/8) D, mm (inches). 540 g. (1.2 lbs) with Ni-Cd pack.
LCD digital frequency readout, with memory channel and function indication.
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UP/DOWN manual scan in 5 KHz steps.
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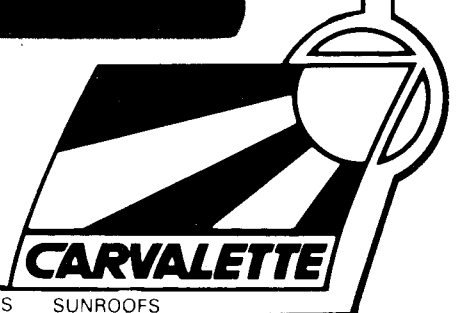
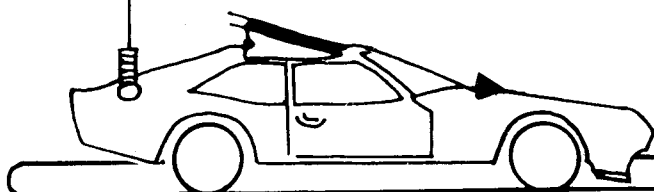
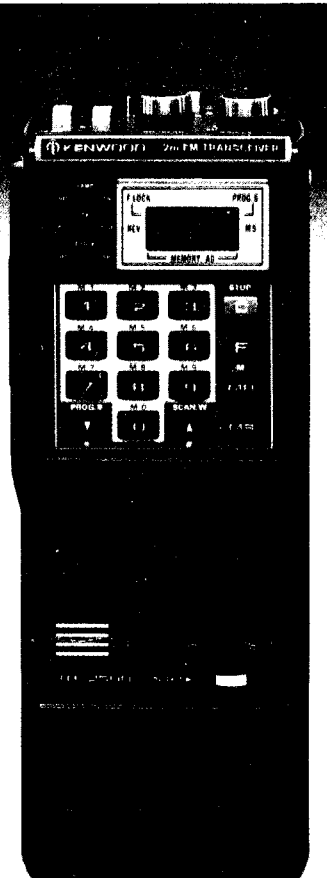
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Built-in tuneable (with variable resistor) sub-tone encoder.
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