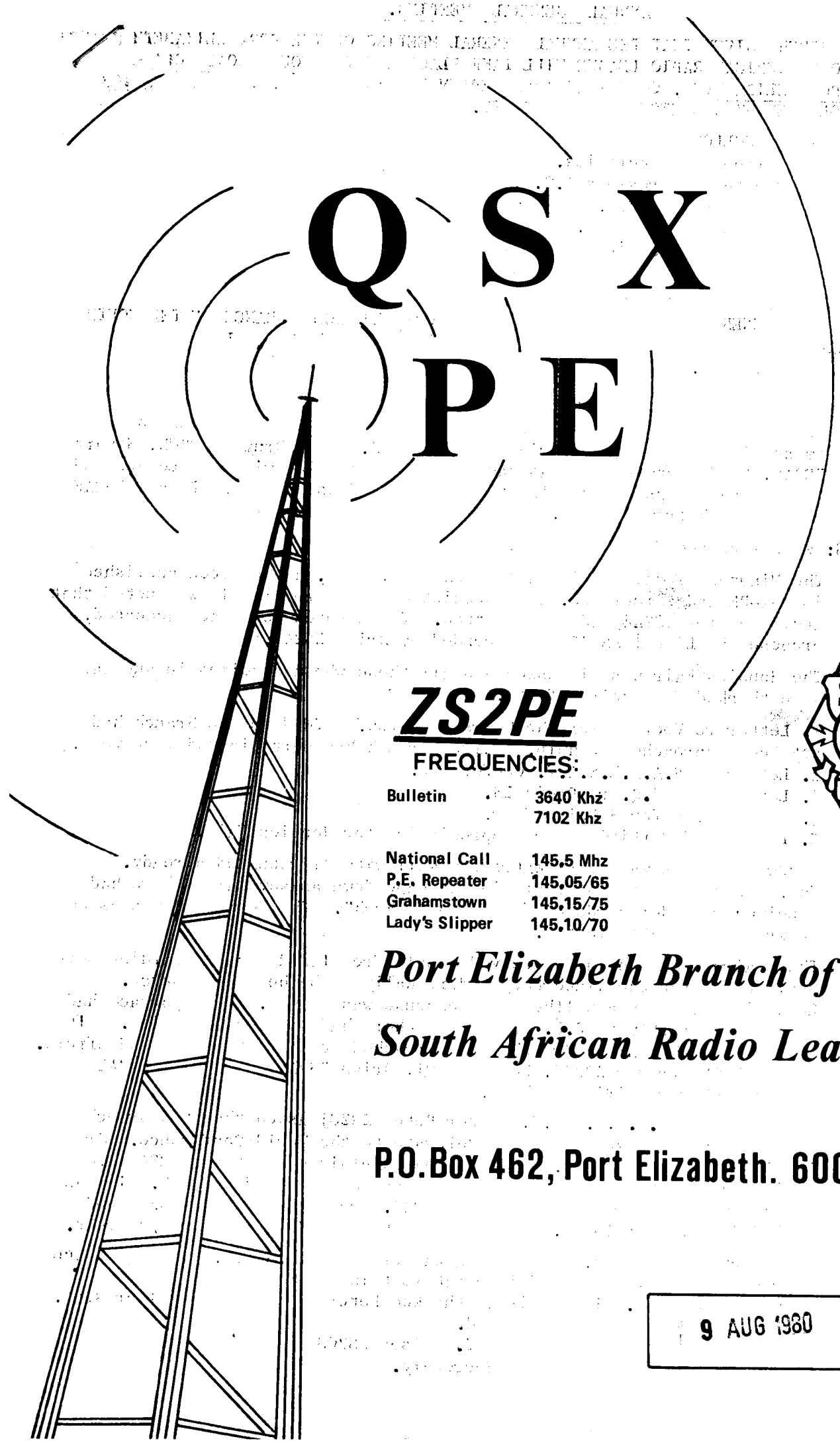
Q S X
P E



ZS2PE

FREQUENCIES:

Bulletin	3640 Khz
	7102 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.

ANNUAL GENERAL MEETING.

NOTICE IS HEREBY GIVEN THAT THE ANNUAL GENERAL MEETING OF THE PORT ELIZABETH BR OF THE SOUTH AFRICAN RADIO LEAGUE WILL TAKE PLACE AT THE MOUNT ROAD POLICE STATION, PORT ELIZABETH , ON FRIDAY 19th SEPTEMBER, 1980 AT 8p.m. THE MEETING WILL BE FOLLOWED BY A CHEESE AND WINE PARTY.

THE AGENDA IS AS FOLLOWS:

1. Welcome and Apologies.
2. Minutes of previous A.G.M.
3. Presidents Report.
4. Financial Statement.
5. Election of Office Bearers.
6.

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MINUTES OF THE GENERAL MONTHLY MEETING OF THE PORT ELIZABETH BRANCH OF THE SOUTH AFRICAN RADIO LEAGUE HELD AT THE Y.M.C.A., HAVELOCK STREET, PORT ELIZABETH ON FRIDAY 18th JULY, 1980.

PRESENT: 21 members and visitors.

The Chairman extended a welcome to all, especially to Colin Tebbutt ZS2CT on holiday from studies in Cape Town, Brian Weller ZS2AB, Athol Bruyns ZR2CN, Stuart Fergusson ZR2AS, Fred Bonthuys who has had a long association with the League and is attending the exam classes; and also to the four ladies present. Trevor ZS2AE was also welcomed back from holiday.

APOLOGIES: were received from 4 members.

MINUTES: The Minutes of the meeting held 20th June, 1980, having been published in QSX-PE and circulated, were submitted for approval. It was noted that apologies for ZS2AE had been omitted. The minutes were then accepted, proposed by Lionel ZS2DD and seconded by Brian ZS2AB.

ARISING: The Hobbies Fair was discussed and all those who had helped in any way were thanked for their efforts.

CORRES:
1. Letter re Voortrekkers Houkoers Saamtrek. To date the Branch had not been approached to help. Algoa Branch had participated last year.
2. Letter re S.A.A.M.S.A.T. Conference.
3. Letter from H.Q. re Radio ZS.
4. 2 QSL cards for Hobbies Fair.
5. Letter and Certificate of appreciation for Hobbies Fair.

FINANCE: Renewal of subs was going extremely well with 41 returned already. There seemed to be some confusion in Cape Town as several members had received reminder cards marked "Algoa Branch". The Secretary was asked to write a suitable letter.

GENERAL: The Chairman said he had received a call from Ian Ritchie regarding communications for the Winterberg Enduro Rally to be held 1/2 August. Enthusiasm and not a halfhearted response was needed. The approach had been made directly to P.E. Branch and there had been no confusion. It was decided that Algoa Branch ben approached to make it a combined effort. Athol ZR2CNm Trevor ZR2CT, Peter ZR2CJ, Brian ZS2AB and Trevor ZS2AE stated they were willing to help.

Regarding the S.A.A.M.S.A.T. letter Peter ZR2CJ asked that the Branch donate a suitable sum to send a Delegate to the World Conference. Greg ZS2BI had been appointed. The Chairman explained about the AMSAT organisation which was very enthusiastic and did tremendous work. It was decided that the Branch would donate R25, proposed by Peter ZR2CJ and seconded by Trevor ZS2AE. The Chairman thanked Peter for his interest.

There being no further business, the meeting was closed at 8.50p.m. Tea was taken and thereafter a very interesting and informative talk on Oscar Satellites, illustrated by a slide show. The Chairman thanked Peter on behalf of all present.

sgd.
R.W. Schönborn ZS2RS
Chairman

sgd.
M.T. Colson ZS2OB
Secretary.

NOTICE IS HEREBY GIVEN THAT THE NEXT MEETING OF THE PORT ELIZABETH BRANCH OF THE S.A.R.L. WILL BE HELD AT THE Y.M.C.A., HAVELOCK STREET, PORT ELIZABETH ON FRIDAY 15th AUGUST, 1980 AT 8P.M. ALL ARE WELCOME.

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ROUND AND ABOUT.

We are very sorry to have to annouce the death of one of our members, ZS2HC, Hugh de la Harpe of Cradock, and we offer our deepest sympathies and condolences to his family and friends.

Congratulations are due this month to quite a few members:
To James Crichton of Grahamstown who has now acquired the call ZR2CZ and will be heard on the air as soon as he gets hold of a rig. James listens quite a lot.

Congratulations to Brian ZS2AB, who together with Lionel ZS2DD, worked as a multi-operator station in the recent R.T.T.Y. worldwide competition. They did very well to come 18th, with 80 contacts on 4 different continents. Well done.

Also to Peter ZR2CJ for the first SSB contact on 2 meters with Barry ZR0CQ in Grahamstown.

Dick ZS2RS and Gay have sold their house and will be moving shortly to another suburb in Port Elizabeth. Consequently Dick will have to take down and move his antennas and may be off the air for a while. Hope we have some bulletins during that time Dick!!

Talking of antennas, Athol ZR2CN has now a 5/8 mobile whip which he uses on his trips around the countryside, and is building up a Slim Jim for homebase operation. Selwyn ZS2SS has plans for a beam but is intending to do the building up himself. We wish you lots of luck Selwyn, and may you get those 300 countries soon. Also on the subject of antennas, we were sorry to hear that Norman ZS2RI had a bit of bad luck with his beam during a strong wind recently. One of the elements was quite badly bent and will have to be replaced. There was also some minor damage to the other bits and pieces.

Peter ZS2PD is now the proud owner of a new synthesised 2 meter walkie talkie, a TR2400 which he will be using on his trips around also. Peter ZR2CJ acquired his original walkie-talkie, or -rather loop-en-skinder!

Also congratulations to Breda ZR2BW, now living in Grahamstown, who recently passed his Morse test and is awaiting his ZS call. He has ordered a TS120S. Good luck Breda.

We would like to welcome the following new members to the Branch and wish them a long, happy and successful stay in the League:
Cliff Barrow from Bluewater Bay. He is attending the classes at the moment.
Max Levin ZS2HR from Queenstown. Attie Barnard from Port Elizabeth.
Fred Bonthuys from Port Elizabeth. OM Mak, W.A.H. Makkink from Grahamstown, and Stuart Ferguson ZR2AS as a social member.

Apologies to Neil ZS2AI for giving you a different XYL last month! Hope Heather didn't mind too much.

PLEASE REMEMBER THAT SUBS ARE NOW DUE. KINDLY DISREGARD ANY ERRORS THAT MAY BE ON YOUR REMINDER CARD FROM HEADQUARTERS - IF YOU ARE A MEMBER OF THE P.E. BRANCH STAY THAT WAY!

****

WHAT THOSE LATIN MOTTOES POSSIBLY MEAN?

Ad nauseam - These TV ads make me sick.
Ad infinitum - These ads seem to go on for ever.
Adsum - General sales tax.
Infra dig - a cheap boarding house.

More next time.

About RF Transmission Lines

The purpose of an RF (Radio Frequency) transmission line is to carry RF power from one RF device to another. For example, from the transmitter to the antenna or from the antenna to the receiver, introducing as little distortion and consuming as little power as possible during the process.

Multi-conductor transmission lines have long been used to transfer electrical energy from a source of power (battery or generator) to a load or consumer of power (light bulb, motor, heating element, etc.). With the development of the telephone system and the transmission of many circuits on a single transmission line, interference from other electrical devices became a serious problem. The solution to this problem by Bell Telephone Laboratories (in the 1930's) was the development of a shielded transmission line in which one (inner) conductor was mounted coaxially inside the other (outer) conductor. A coaxial transmission line or cable is used at radio frequencies where the energy penetrates only the surface of the conductor. This phenomenon is called skin effect and permits the outer surface of the outer conductor to be grounded. All the current is carried on the outside surface of the inner conductor and the inside surface of the outer conductor. Thus, the energy within the cable can't escape except through terminal connections at the ends.

Three basic types of cables are used in two-way radio communications. These are solid dielectric cables, foam dielectric cables, and air dielectric cables.

Solid Dielectric Cables were developed in the 1940's. They were used extensively by the military. They generally employ a stranded inner conductor for flexibility, solid extruded polyethylene insulation, and a braided outer conductor which is covered by a plastic jacket. These cables are easy to install and are low in cost. Disadvantages were relatively high loss, deterioration with age, and RF leakage through the braid.

Air Dielectric Cables for two-way radio service were introduced in the 1940's. Space between the conductors is mostly air with insulators at intervals to maintain proper spacing. Advantages of air dielectric cables are low loss and long term stability. The disadvantages are the initial cost and the need to pressurize the space with dry air or nitrogen to keep moisture out. Air dielectrics are the best choice when long lengths, high frequencies, or high power is involved.

Foam Dielectric Cables were introduced in the 1950's for two-way radio installations. In this construction, copper inner conductors and smooth aluminum, corrugated copper, or corrugated aluminum outer conductors are employed. The space between the conductors is filled by a foam plastic dielectric. This combines the most desirable features of both air and solid dielectric. Pressurization is not required because the space between conductors is completely filled. Loss is between that for air and solid dielectric. Thin wall, corrugated outer conductors bring the cost to an acceptable level and provide flexibility and resistance to crushing forces.

Mechanical Elements of a Coaxial Cable

Numerous possible materials are available for both of the conductors and for the dielectric. The actual choices represent compromises based on economics and system needs. The basic flexible solid dielectric coaxial line is shown in Figure 1.

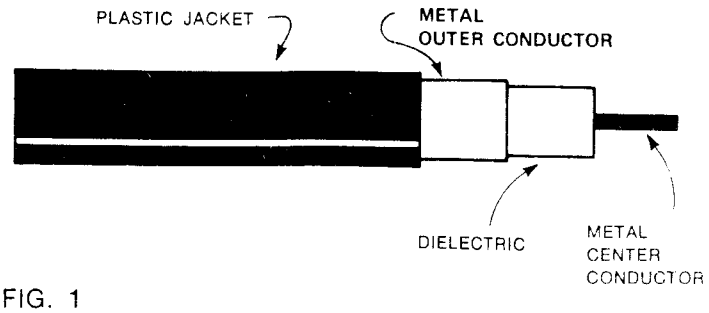


FIG. 1

Since both conductors carry all of the current, and the available conducting surface on the inner conductor is small compared to that of the outer conductor, it follows that high conductivity is most important in the inner conductor. For this reason, copper is almost invariably the choice of material for the inner conductor. This may be in the form of a stranded wire, for greater flexibility in the case of solid dielectric cable, copper tubing, copper clad aluminum, or silver plated steel wire.

Copper braid is used as the outer conductor on most solid dielectric cables. Copper is used to achieve high conductivity. Braid is employed to increase flexibility. Aluminum or copper tubing, either smooth wall or corrugated, is used for foam or air dielectric cables. Generally, aluminum costs less per pound but has lower conductivity and less corrosion resistance and strength. If employed in thin wall construction, aluminum is susceptible to highly damaging corrosion in salt atmospheres. Copper costs more per pound, has higher conductivity, and generally has greater corrosion resistance. Thus, copper is the usual choice for permanent installations. However, both types are available with plastic covering.

Polyethylene Dielectric is the usual choice for two-way radio cables. It is the most economical and has both low loss and long life. It can be used in either solid or foam construction, or as a spiral spacer in air dielectric cables. Teflon is sometimes used as an insulation for high power service. It is capable of operation at substantially higher temperatures than polyethylene but it is much more expensive. Other plastics with intermediate temperature ranges and costs are also used for special purposes.

Electrical Properties of Coaxial Cable

RF energy is lost in the cable. This is due to the attenuation of the cable. It is comprised of two parts. These are conductor losses and insulation losses. Losses are dependent upon size of the cable, conductivity of the conductors, loss factor of the insulation, and frequency.

For a cable of given construction, attenuation is a function of size. The larger the cable, the less the attenuation or loss. This is because there is more cross sectional area of conductor material to carry the current.

Conductor losses are a direct function of the conductivity of the conductors.

Insulation loss is a function of the dielectric constant and the loss-power factor of the dielectric. Air is the best with a dielectric constant of 1.0. Polyethylene and Teflon have dielectric constants of approximately 2. Foam, as a mixture of air and dielectric, has an effective dielectric constant of approximately 1.6.

Conductor and insulation losses increase with an increase in frequency. Curves showing attenuation as a function of frequency and including the cumulative effects described above for some cables are shown on the inside back cover.

Attenuation loss is usually stated in decibels per 100 feet (dB/100 Ft.) of cable.

Characteristic Impedance usually called cable impedance, is a complex function of the ratio of the diameters of the conductors. The standard impedance of cables for two-way radio service is 50 ohms which is the same impedance used for antennas, transmitters, receivers, etc. A deep dent or other local defect causes a discontinuity in impedance. The effect of discontinuities is the same as a mismatched antenna, namely reflections which result in higher VSWR.

Velocity of Propagation in a coaxial cable is the velocity (speed) with which the signal travels through the cable. Velocity is a function of the amount and type of dielectric used in the cable. It is expressed as a percentage of the velocity of light varying from about 67 percent for solid dielectric cables to as much as 92 percent for air dielectric. Velocity is not usually considered a significant factor in the choice of a coaxial cable for the two-way radio base station transmission line. However, it is important because of its effect on the wavelength in the cable when resonant lengths of line are used for impedance transformers, cavity and duplexer interconnect cable, etc.

Power Handling Capability of a coaxial cable is limited by ambient temperature and the cable temperature *rise* for average power, and by conductor spacing and dielectric strength for peak power. Peak power is rarely a factor in two-way systems. Average power is frequently a factor. The temperature rises with the loss in the cable. Since loss increases with frequency, average power rating *decreases* with frequency. Most foam polyethylene dielectrics begin to soften at about 180 degrees F. Thus, a cable should be chosen to assure that the sum of temperature rise and ambient temperature does not exceed the maximum recommended temperature. Otherwise the center conductor could creep through the softened dielectric and short to the outer conductor.

RF Leakage is a function of the porosity or number of openings in the cable system. In the case of braided cables, there are thousands of minute openings. With high signal levels, significant leakage can occur. When a number of braided cables are located close together with all of them carrying high level signals, the interference resulting from leakage can be serious. In the case of solid sheath foam or air insulated cable, leakage occurs only at the ends or openings. Leakage problems in two-way radio installations generally occur in the connections between multicouplers, duplexers, filters, etc., when two or more braided cables are in close proximity.

Environmental Considerations

Coaxial cables must frequently be installed in hostile environments. There are a variety of corrosive atmospheres in industrial areas. Coastal area atmospheres are heavily saline. Wind forces induce vibration. Rain or even humidity eventually permeate jacketing materials. (More about this later.) Temperature changes cause differential expansion of the conductors, as well as differential expansion between the cable and its support structure. All of these factors are destructive to coaxial cables.

Life Expectancy of a coaxial cable is dependent in part upon the environment in which it is installed. However, life expectancy of the cable can be maximized through proper choice of materials and construction. The effects of the more common destructive forces are discussed below and should help in making an optimum choice.

The jacketing material employed on semi-flexible and flexible coaxial lines is usually polyethylene. Polypropylene and polyvinyl chloride are also used. All of these materials deteriorate somewhat under long exposure to sunlight. Carbon black, blended into the resin prior to processing inhibits the aging effect of sunlight. This is the reason that black jacketing is usually used for outside cables.

Humidity ultimately causes substantial degradation in braided cables. This is because moisture gradually permeates the plastics used in jacketing and insulation if continuously exposed. Permeating the jacket itself is actually pretty harmless. However, in a braided cable, once the moisture has penetrated the jacket it continues on into the insulation causing an increase in loss. Moisture inside of an air or foam insulated cable will also increase the loss in the cable. However, moisture can be kept out of these cables by simply sealing the ends properly.

Moisture and other external impurities may enter the cable through cuts or scratches in the outer jacket or through improperly installed connectors. Minute amounts of water vapor will condense into water and, if available in sufficient quantity, can migrate along the braid. Water will attack the copper braid and contaminate the entire length of cable, especially if the water contains impurities as found in a polluted atmosphere. Moisture will usually cause a short circuit between the inner and outer conductors, especially at the connector. A high percentage of radiation system problems are caused by moisture.

To be continued.

GAAN DIE 80"s TEGEMOET - ELEKTRONIES.

In 1916 het OK's Brattain, Bardeen en Schockley die eerste transistor gemaak en het later die Nobel prys hiervoor gekry. Dit word beweer dat dierdie glo 'n belangriker uitvinding vir die mens was as selfs die wiel of vuur. Voorheen het alle elektroniese goeters buise in gehad wat die werk moes doen. Buise het enorme hoeveelhede energie gemors. Dink maar aan die huidige draradio teenoor eergister se buisradios. Die eerste behoorlike elektroniese rekenaar, die ENIAC wat gedurende 1946 gebou was, het 18000 buise gehad wat 150kW vermors het. Vandag kan 'n mens 'n programeerbare handrekenaar vir R60,00 koop wat meer as ENIAC kan doen en 0,75 watts verbruik. ENIAC het gedurende 1946 ongeveer $9 miljoen gekos en dit was fantasties as dit meer as 'n uur gewerk het sonder dat 'n buis gekalf het.

Vir die OKs wat te veel eet, rook, drink (RF) en te vinnig lewe, het die Hart-pasaangeër - "Pacemaker" na vore gekom om vele lewens nuttig te verleng - natuurlik nadat hulle opgehou rook en drink het!

Die X-straal tegnologie en Ultra-soniese diagnostiese metodes het nou ook al so gevorder dat 'n OK al 2 maande voor die tyd kan weet of hy 'n seun, dogter, tweeling of sesling gaan kry - om solank die advertensie en TV regte te "organise".

Die Oks reken dat teen 1985 sowat 15% van die koste van 'n mobiel die van die elektronika sisteem sal wees. Anti-stamp Radar, anti-sluit remme sal glo standaard wees. Wonder net of die boffins transistors in die remskoene insit of wat? Die rekenaar onder die enjinkap gaan ook toesien dat ons 'n paar km verder gaan ry met 'n liter - as dit te kry is.

Nou ja as die HF nie meer wil skiep nie dan wag jy maar 'n uur of so en praat met jou maat deur die OSCAR sattelliet. So van sattelliete gepraat - nadaat OK Kruschev se SPUTNIK slegs 'n enkele sendertjie aan boord gehad het, het die YANKS besluit hulle kan beter doen. Die eerste kommunikasie sattelliet EARLY BIRD kon 240 twee-rigting spraak kanale hanteer of een TV kanaal - m.a.w. jy kon praat of kyk. Die nuwe Intelsat V het glo 12000 twee-rigting kanale en twee TV kanale - nou kan 'n ou praat en kyk. Die sisteem het meer as 100 grondstasies in 70 lande ons s'n is hier anderkant wes van Pretoria waar daar min QRM is.

Nou die dag so 'n plat boksie gesien. Jy "spel" 'n woord op sy sleutelbord en dan "speak" die boksie vir jou wat jy geskryf het. Hoor die Poskantoor beweeg ook saam met die tyd. Een van die dae kan jy by hulle 'n kassie koop wat jy (of liewer hulle tegnikus, nadat hy eers koffie gemaak het) aan jou TV stel sal koppel. As jy te lui is om jou koerant by die Griek te gaan koop, dan tik jy op HKP-kassie en die nuutste nuus verskyn op jou TV stel in Technicolor. Hulle sorteer ook lankal die pos met 'n masjien - dit gaan glo te stadig word en nou wil die masjien die briewe oopmaak, hulle lees en dan sê hy vir broermasjien in Kaapstad om 'n nuwe brief te tik en aan skoonma te adresseer. Glo elektroniese pos. Nou sal die Railway ook nie meer die possak kan wegsmyt nie! Hulle is ook reeds besig met die eerste elektroniese sentrale en hier is geen "relays" wat skakel en knetter en vuilgoed onder die kontakte kry nie. Hoor jy kan vir hierdie sentrale sê om jou by skoonma te bel as jy Sondagmiddag gaan kuier. Hy sal jou ook glo wakkerlui in die oggend sodat jy betyds by die soutmyn kan opdaag. Jy kan ook nog vir hom sê om jou op-roepe liewer by die Vorie te laat lui Sondagmiddae.

Nou lees ek nog dat die Spoorweë (dit is die SAR) 9070 km van koaks kabels gebruik g'n wonder mens kan die goed nie meer koop nie. Hulle gebruik ook nie meer die seinlanterns soos in die ou dae nie. Die treine is nou so lank dat as die arme kondukteur vir die masjienis wil waai dat hy moet afslêk dan is hy (die masjienis in die enjin) binne in 'n leegte of 'n draai, nou gebruik hulle liewer UHF loop en skinders - werk glo baie goed. Die trokke het ook nou sulke snaakse strepies op geverf en dan kyk 'n elektroniese oog (wat nooit traan nie) daarna, soos elke trok verby beweeg - sodoende weet hoofrekenaar, nie meer hoofklerk nie, waar trok 11031 hom bevind.

Klein rekenaars gaan glo in die 80's te sien wees in meeste huishoudings. Die Vorie het seker gemaak dat hy voor is en het reeds syne aangeskaf. Nou hoor ek die goeters, (mikroprosesseerders) wat glo so klein soos 'n uitveër is word reeds in wasmajiene, yskaste en allerhande "appliances" ingebou. Werk glo beter, hou langer en kos minder om te vervang - seker nie van toepassing in Suid-Afrika nie. Die gepeupel in die 80's gaan glo meer vrye tyd hê en minder geld om daaraan te spandeer. Nou probeer die OKs om allerhande speletjies (elektronies natuurlik) te ontwikkel om die OK van die 80's tuis besig te hou." Jammer vir julle maar die dae van brugspel met buurvrou is verby.

Hulle sê my dat selfs LV se "sewing machine" gaan 'n geheue kry - altyd gedink dit het een! Sy sê net vir die masjien dat hy hemp moet 'heelmaak, broek moet lap, knoop aanwerk. Al wat jy nou moet doen as sy by Ma kuier is om hemp op regte plek in te druk en reg met "sewing machine" te praat, dan werk hy knoop aan.

Die dae van knoppiesdruk gaan ook verby - die ouens vorder fluks met spraak en bevelsherkenning. Jy staan voor die hysbak met jou hande in jou broeksakke en sê vir hom jou twaalfde vloer toe te vat. Hopelik doen hy dit.

Beste 80's.

Thanks to Tak Protea Newsletter.

****

Slide Show Stopper

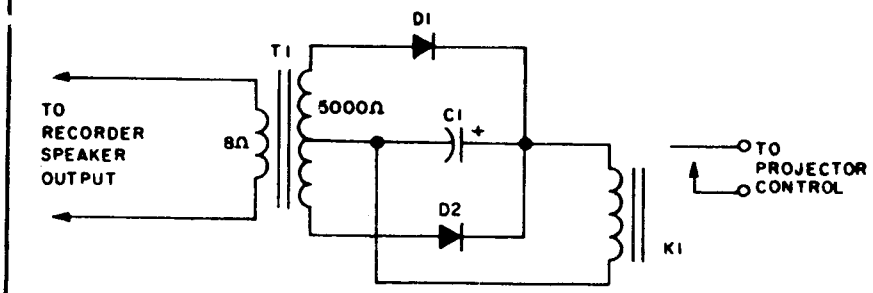
☐ Soundless slide shows are dull, dull, dull! But a stereo recorder can automate the whole show so slides change automatically in step with the commentary.

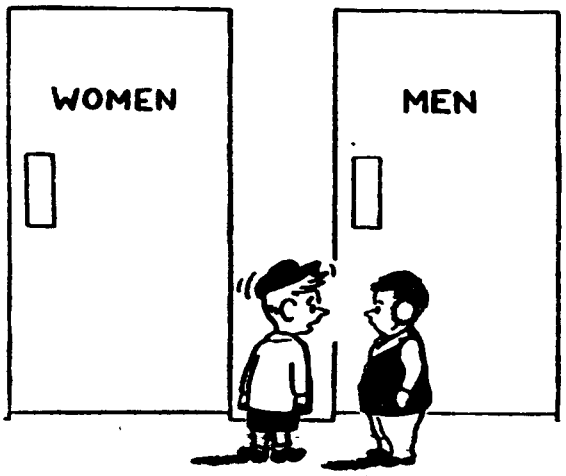
Record your commentary on the left track. At the instant you want slides to change, record a one-second noise or tone burst on the right track. Connect the programmer between the recorder's right speaker output and the projector's remote control cable. Make a test run to determine the right-track volume setting to make noise or tone bursts activate relay K1. No fancy tone generators needed here. Just give a hearty Bronx cheer into the mike of the left channel only!

Then start the tape from the beginning. The audience will hear your commentary or spectacular music-and-sound reproduction through a speaker connected to the recorder's left channel, while the signal on the right channel automatically changes the slides.

PARTS LIST FOR SLIDE SHOW STOPPER

C1—22-uF, 50-VDC electrolytic capacitor (Calectro A1-152)
D1, D2—Calectro K4-555
K1—2500-ohm coil plate-type relay
T1—4000 to 5000-ohm CT audio output transformer (Calectro D1-740 or equiv.)





"Can you read?"

Radio onslaught

Between 800 and 1 000 pages of anti-South African propaganda, altogether about 300 000 words, were broadcast weekly from 20 radio stations around the world, according to the Deputy Minister of Defence and National Security, Mr Kobie Coetsee.

Propaganda from Moscow, which occupied 50 hours a week, was 95 to 100 per cent negative, while Western stations transmitted up to 40 per cent negative anti-South African propaganda.

According to Mr Coetsee, South Africans still did not realise the value of propaganda, reports *Die Burger*.

MICROWAVE MODULES LTD

RTTY TO TV CONVERTER: MM 2000

FEATURES

- ★ **Complete terminal unit/TV interface**
- ★ **Latest state of the art microprocessor system**
- ★ **Automatic speed sensing**
- ★ **Automatic carriage return/line feed**
- ★ **Includes modulator to enable direct connection to a standard UHF TV set**
- ★ **Automatic letter shift facility**

SPECIFICATION

POWER REQUIREMENTS	:	12.5V at 1 Amp nominal
POWER SOCKET	:	5 pin DIN
AUDIO INPUT SOCKET	:	Phono
TV (UHF OUTPUT) SOCKET	:	Phono
MODES OF RECEPTION	:	(i) Amateur Standard ASCII, 300 baud (ii) Murray Coded RTTY, 45.5 baud (iii) Murray Coded RTTY, 50 baud (iv) Murray Coded RTTY, 75 baud IN EACH OF THESE FOUR MODES, THE CONVERTER WILL ACCEPT FSK AND AFSK SIGNALS
WEIGHT	:	1 Kg (2lb 2oz)
OVERALL SIZE	:	187 x 120 x 53 mm ($7\frac{3}{8}$ x $4\frac{3}{4}$ x $2\frac{1}{16}$ inches).

R295

DESCRIPTION

This converter, MM 2000, contains a terminal unit and a microprocessor controlled TV interface, and requires only an audio input from a short-wave receiver, and a 12 volt DC supply, to enable a live display of "Off-air" RTTY and ASCII on a domestic UHF standard TV set.

The converter can accept the following modes of reception:-

(i) Amateur standard ASCII (1.2/2.4 KHz, 300 baud)
(ii) Murray coded RTTY, 45.5 baud
(iii) Murray coded RTTY, 50 baud
(iv) Murray coded RTTY, 75 baud

IN EACH OF THESE CASES, THE CONVERTER WILL ACCEPT BOTH FSK AND ASFK SIGNALS

The converter automatically senses the speed in use, when the front panel mounted "auto" switch is in the "on" position.

LED status lights provide a visual indication of correct "centre-tuning" and the RTTY or ASCII speed being received.

The inclusion of automatic software routines eliminates the possibility of information being corrupted or over-written, by the incorporation of automatic carriage return/line feed (RTTY signals only).

After 15 different characters in figure shift have elapsed, the converter will automatically return to letter shift. This feature alleviates the problem caused by a corrupt character forcing figure shift, but allows for repetitive underline characters.

This facility may be overriden when the front-panel mounted "auto" switch is in the "off" position. This enables reception of continuous figure shift characters, e.g., Oscar prediction tables (RTTY signals only).

The converter utilises two microprocessors and 21 integrated circuits, and all circuitry is constructed on two, high quality glass-fibre printed circuit boards, coupled with edge connectors.

The unit is housed in a highly durable black diecast enclosure, and plugs for the DC power socket, audio input and TV UHF output sockets are provided.

The Murray/ASCII conversion program is contained in a user interchangeable E-PROM, facilitating re-programming should software modification be required (e.g., alternative code/speed etc.).

SUMMIT DISTRIBUTORS (Pty.) Ltd.

25/27 Reed Street

PORT ELIZABETH

P.O. Box 500

Telephones:
541461/2
Telegraphic Address:
"SUMMIT"