

RER

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LIGHTING

RADIO-TV-AUDIO

● AERIALS

● PREVIEW LIGHTSHOW '68

THE LEADING TRADE MONTHLY



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Hi-fi dealers! 150 opportunities for a SANSUI exclusive — and on very favourable profit terms!

Technical Ceramics Limited are the sole UK distributors for the entire range of Sansui audio equipment, which is right at the top end of the market for quality engineering and styling. The range comprises stereo tuner/amplifiers, amplifiers, tuners, headphones, and loudspeakers.

To ensure a big demand, Technical Ceramics Limited will be launching a press advertising campaign, starting in September. There will be 12 double-page spreads, and 17 single pages in the Hi-Fi enthusiasts' press with editorial write-ups and reviews in the specialist journals.

Prospective dealers should be exclusively (or at least essentially) Hi-Fi stockists. Your sales assistants should be able to explain the advantages of Sansui equipment to even the least knowledgeable members of the public, and talk technicalities with the experts. You must have a set-up with qualified or experienced staff to check and service equipment and your premises must have a professional 'feel' about them.

Remember, that only one Sansui stockist will be appointed in each area.

If your business measures up to this specification, then write in confidence to:

The Sales Manager, Technical Ceramics Limited, Cheney Manor, Swindon, Wiltshire.

For those who are really busy—just complete this coupon and attach it to your letterhead. Owners, managing directors or managers only please.

To: Technical Ceramics Limited,
Cheney Manor, Swindon, Wiltshire.
I am interested in becoming a stockist for
Sansui audio equipment and would like to
discuss the idea with your representative.

Name _____

Company _____

(or trade name) _____

Address _____

I am the owner/managing director/manager of
this organisation. RER 4

Signed _____ Date _____

Sansui

RER

**RADIO &
ELECTRICAL
RETAILING**

Vol. XXIII

No. 1

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NEXT MONTH:

PREVIEW OF EDA EXHIBITION

Radio and Electrical Retailing is published on or about the first of each month. It reaches Radio, Television and Electrical Retailers, Installation Contractors, Music Shops, Electricity Boards, Service Managers and Engineers, Wholesalers and Manufacturers.

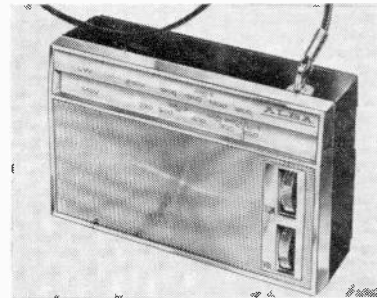
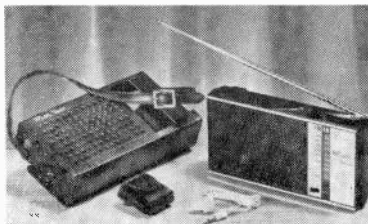
Subscribers to *R.E.R.* also receive the supplement *Service Engineer* including 3 Data Sheets.



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RECENT RELEASES

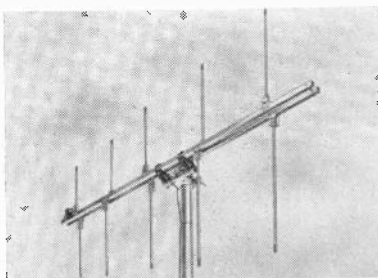
Recently introduced by **ALBA**, the ▶ Starlet model 222 personal radio is finished in black and silver and covers med'um and long wavebands. It incorporates six transistors and uses PP3 batteries or equivalent. Size $4\frac{3}{4} \times 3 \times 1\frac{1}{2}$ in, weight 11oz. Price £6 19s 6d. **E1**



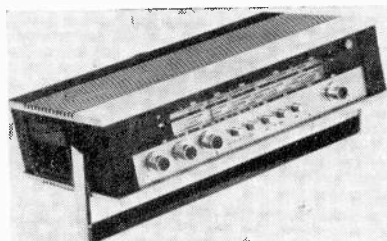
A new portable 9-transistor receiver is announced by **H. O. THOMAS ELECTRONICS**. The Wien Tourist ◀ covers medium waveband and f.m. and the price of £8 8s. includes telescopic aerial, leather case, earplug and battery. **E4**

HIGHGATE ACOUSTICS are distributing two new Arena models. The TA10 9-transistor radio covering l.w., ▶ m.w. and f.m., has telescopic antenna, sockets for loudspeaker, recorder and other antenna, and is finished in a choice of Brazilian rosewood, teak or a combination of maple/wenge. The new model is provided on a turntable for easy location of Stations. Price £35 2s. 2d. The second model is an f.m. stereo tuner model F211, which is module built in teak or Brazilian rosewood and costs £29 15s. 9d.

HIGHGATE also announce that they have appointed as sole distributors of Arena merchandise for Scotland, Bryter-lite Electrical Co. (Glasgow) Ltd. of Glasgow. **E2**



The **HACKER** Helmsman model RP36 is basically the Herald model to which has been added three short wave bands, which with m.w. and l.w. bands gives complete coverage from 190m to the amateur band at 10m. Band spread tuning is provided on s.w. Three aerials include a separate internal aerial for the marine band. Operation is from eight U2 cells. Price is £33. **E3**



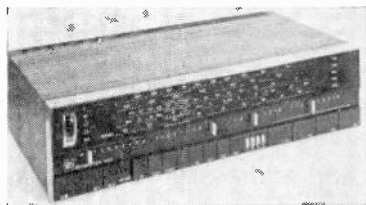
BELLING-LEE AERIALS are producing a new combined Band III-Band V array to meet the requirements for simultaneous reception of v.h.f. and u.h.f. signals from co-sited transmitters. The new SU12/C array comprises a five element semi-broadband Yagi covering channels 9 to 12 vertical polarisation, and a twelve element u.h.f. aerial covering channels 52 to 66 (Group C) horizontal polarisation. Each aerial has been designed to give high forward gain, narrow beam width, and accurate impedance matching to the 75Ω down-lead. **E5**

◀ New from **ANTIFERENCE**, the Log Periodic range of Band III aerials, each consisting entirely of driven dipoles which are related to each other by length and spacing in a logarithmic sense. Each dipole is fed in correct phase by means of a transmission line. The LP array is particularly suitable for areas with both BBC and ITV stations in Band III. A single LP array gives the equivalent performance of single channel arrays over a very wide band width. The LP5 5-element costs £3 6s., the LP7 7-element £4 8s. and the DLP7 Broadside 2x7-element £9 19s. **E**

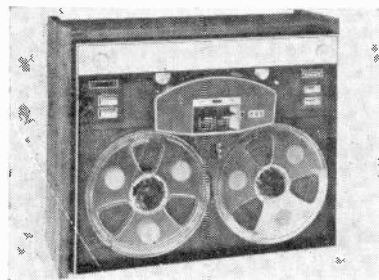
RECENT RELEASES

Two models are added to the **BANG & OLUFSEN** range of audio equipment. The Beomaster 1400K table radio combines a 5 waveband radio — f.m., long, medium, shortwave (66-200 metres) and shortwave 2 (16-49 metres) with bandspread — with a powerful stereo amplifier. There is a choice of teak or rosewood cabinets, and the K model incorporates a pressure chamber loudspeaker at either end of the cabinet. Four f.m. pre-sets are provided for pushbutton selection, and a stereo decoder is included. Model 1400M is technically identical to the 1400K but does not include the two pressure chamber loudspeakers. The 1400K retails at 103gn, the 1400M at 95gn. (picture below)

Also available from B & O is the new Mark II version of the Beomaster 900RG de Luxe stereogram, containing the Beomaster 900M, a solid state f.m. radio combined with a high performance stereo amplifier. Price 169gn. ▼ in teak, 173gn. in rosewood. **E7**



The Publites 203, a new portable public address system from Bouyer of France marketed in this country by **DOUGLAS A. LYONS & ASSOCIATES**, comprises the transistorised amplifier, 7W rating, mounted in a compact pressed steel portable case, with compartment for the dry batteries, together with the hand microphone — a special anti-feedback type — included with the equipment. One or two speakers, column or horn type, can be added as required to form a complete convenient equipment for moderate powered indoor or outdoor requirements. Price, including microphone, 31gn. **E8**

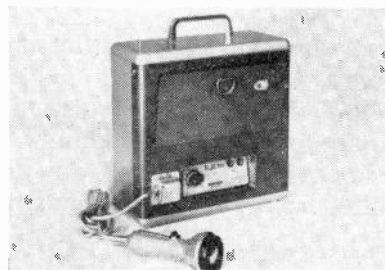


The 'Popamp' miniature public address system distributed by **F. W. REYNOLDS** incorporates a 1½in diameter microphone connected by a 3ft lead to the case which houses the battery, loudspeaker and mini-amplifier. The latter is completely transistorised and encapsulated in a thermo-setting resin. Price £6 6s. **E9**



The No. 800 stereo magnetic cartridge recently introduced by **GOLDRING MANUFACTURING CO.** is a free field stereo cartridge. Due to the low mass, the mechanical impedance is reduced and the resonance of the system is over 20kc/s. Tracking weight is 1-3gm. Output is 1mV/cm/sec. Inductance is 300mH. **E10**

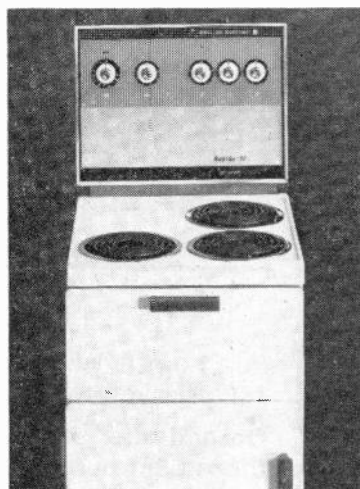
A new Heathkit 12+12W stereo amplifier from **DAYSTROM**, model TSA-12, is available as a kit at £30 10s. or factory assembled at £42 10s. Walnut veneered cabinet is £2 5s extra, and mounting trim and brackets £1 18s. extra. This is a 17-transistor unit with 6-diode circuit and matches the Heathkit tuners models TFM-1 and AFM-2. **E11**



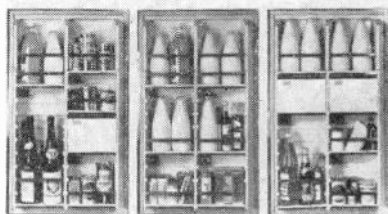
The new **AMPEX** model 753 stereo tape deck, while smaller than previous models in the Ampex range, yet offers a number of new features. It measures 15½ wide x 13in deep x 6½in high and has three heads for record, playback and erase which permit precise monitoring and sound-on-sound recording and playback, and eliminate any possibility of cross-talk. Price 79gn. A solid teak case with plexiglass cover is available for 6gn. **E12**

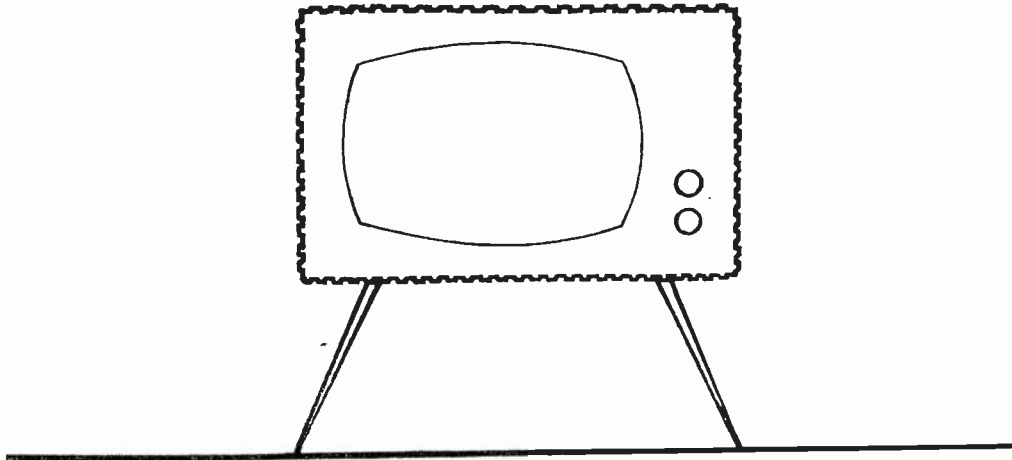
Two new items from **S. D. RAND.** The multi-purpose Tricolour torch No. 137 (main beam white, red or green) has a press button for Morse signalling and also a red flasher light operated from an independent switch. Operating from two U2 batteries, it costs 9s. 6d. The Randor working lantern No. 142 has a non-corrodible, unbreakable plastic body and swivel head, with pre-focusing bulb for front light and blinking control for top flasher. Using U2 batteries, it is priced at £1 1s. **E13**

The Rapide 51 electric cooker, the latest addition to the **ENGLISH ELECTRIC** Rapide series, is only 18in wide by 22in deep by 50½in. Height can be adjusted by 2in as required. It has 3 7in radiant hot-plates. Total loading is 10kW. ▼ Price £39 19s. 6d. **E14**



Important selling features of the new Polarfrost refrigerators from **TRICITY** are the new type defrosting arrangement and the 'Plan-it-yourself' door storage. A plate located under the freezer attracts all the frost. The plate is simply removed from the cabinet and the frost washed away under a tap. There is no need to empty the cabinet. The interior of the door comprises two vertical areas which can be subdivided at nine levels according to the users requirements. Three star freezers are fitted. The Polarfrost model 3538, 5 cu ft is priced ▼ at 47gn; the model 3738, Polarfrost 6.8, 6.8 cu ft, at 56gn. **E15**





Wireless Telegraphy Act 1967

DEALERS' RESPONSIBILITY

Part I of the Wireless Telegraphy Act 1967 which came into force on January 1st, asks you to register with the Post Office before 29th January, 1968.

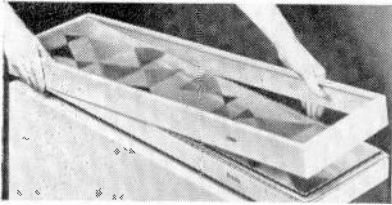
On and after this date you will have to notify the names and addresses of all those who purchase or rent a radio or television set from you. This is to help the Post Office check on whether the licence has been bought or not. It is only fair to those of your customers who do pay up. *Because they are subsidising those who do not.* And millions annually have been lost to broadcasting in this way. Millions which could have helped to improve programmes—which, in turn helps to develop your business.

TO ASSIST YOU advertisements will appear in the national press telling people this is being done and why. Announcements will also be made on BBC-TV about licence evasion. If you haven't already registered the necessary forms can be obtained from your Head Postmaster. Remember too, that the new dealers' special receiving licence to cover monochrome and colour television as well as sound radio is also available from 1st January, cost five shillings and valid for 7 years.

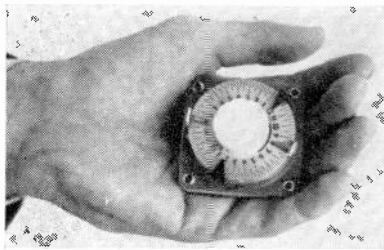


Please register and help all your customers get a square deal

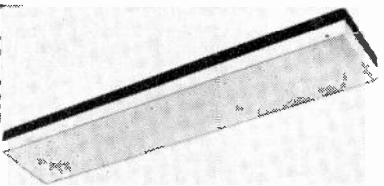
RECENT RELEASES



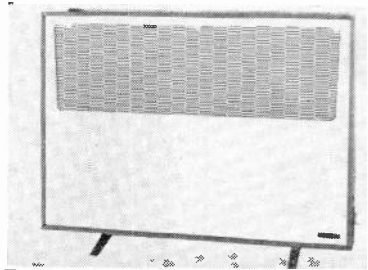
Decor-Tops are now available from **SIMPLEX ELECTRIC** for Creda Confortaire storage radiators. These tops enable the owner to match the heaters to the room decor, by inserting fabric, wallpaper, fablon, formica, etc., onto an asbestos insulating sheet which is held in position by a metal frame and a sheet of polished glass (see illustration above). Tops for the 2½kW and 3kW radiators are priced at 65s. and 69s. 6d. respectively. **E16**



Now added to the **KANGOL** range ▲ of electric timing mechanisms is the Timac VI, a precision made 24-hour timer. Without system switches, indicator lamps or external mouldings, its small size enables it to be integrated into the design and styling of a wide range of appliances and equipment. The standard mechanism is fitted with 2 on/off switching sequences per 24 hours — 3 or more can be supplied to order. **E17**

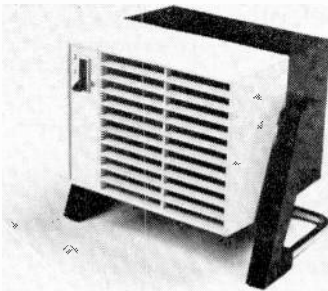


Now available from **CROMPTON PARKINSON** is the "Contrast" range of close ceiling mounted lighting fittings. Depth is 4½in, and the exterior metalwork has a black stain finish and the plastics diffuser has white opal sides and clear prismatic base. Fittings are available in sizes 2ft x 2ft (4 x 20W), 4ft x 1ft (2 x 40W) and 5ft x 1ft (2 x 65W). (see illustration above) **E18**

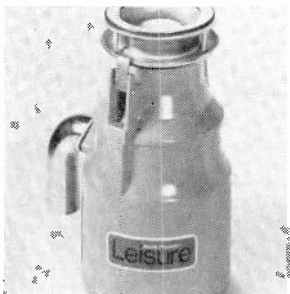


The Sunhouse Sovereign Model 560 ▲ 2kW convector heater newly introduced by **H. FROST & CO.** can be used as a portable heater or as a wall-mounted panel, by removing the feet and using the three wall brackets supplied. It measures 27½in wide x 21¼in high and 6in deep (including feet) when portable. The variable heat output is supplied by open coil elements mounted on ceramic formers using 200/220, 230/250V a.c. only and controlled by an adjustable thermostat. The heater is finished in silver birch and coral beige stove enamel. It complies with BS safety regulations, and BEAB approval is awaited. Price £10 15s. 0d. **E10**

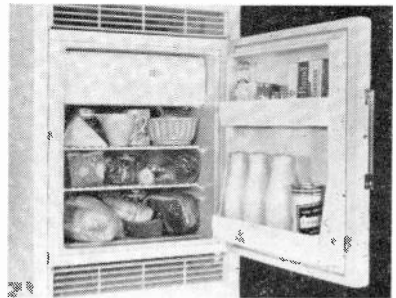
Added to the **THERMAIR** range of fans is the Minilux Executive specially designed for desk top use. The unit is completely enclosed and double-insulated and has 2-speed operation — 1,900 and 2,500rev/min. Rated 10W 200/250V a.c. only. Price £4 9s. 6d. **E20**



The Leisure waste disposal unit, from **ALLIED IRONFOUNDERS**, is an accessory to Leisure stainless steel and vitreous enamelled cast iron sinks and is designed to grind food waste, fibrous and certain synthetic materials into tiny particles which can be washed directly into the drain. Supplied complete with a 1½in diameter downset chromium plated copper waste pipe. Price £29 9s. 5d. **E21**



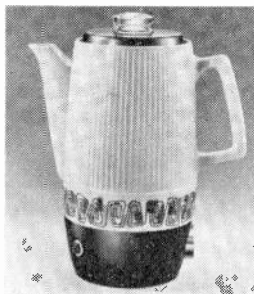
ELECTROLUX have introduced a version of the 1.9cu ft model 21 refrigerator to supersede the 1.5cu ft model MB16 as the smaller of the three cabinets in their range of built-in refrigerators. Others in the range are the 2.8cu ft MC28 and the 4cu ft MC40. The LC21 measures 28½in high, 18½in wide and 19½in deep, and weighs 57lb. It has 4sq ft of shelf space and full width one star frozen food compartment to hold up to 6lb of food. Available with left- or right-hand opening doors, it is priced at £32 11s. 2d. **E22**



The new **VIDOR** Continental signal torch, model 9704, styled in Italy, has a five position switch for red, green, clear, flashing and off. It is in two tone grey with a red dome and is made of plastic covered metal. Packaged in a five colour display carton, it retails at 15s. **E23**

PIFCO have introduced the model 1555 Queen Curl electric roller kit. It includes a full set of 16 heat retaining rollers — 8 large, 4 medium and 4 small — and heats eight at one time on thermostatically controlled heating rods. In pink and cream, the retail price complete is £10 10s. **E24**

A new 2 pint ceramic percolator (CRM) from **MORPHY RICHARDS** will percolate automatically via an expansion pump system within 45sec of switching on. Coffee will not over-percolate, and a red pilot lamp indicates when the cycle is complete. A continuously operating thermostat holds the coffee at the right temperature. The ceramic body is in white or deep brown with matching motif; metal base and lid are in toning bronze. Loading is 600W at 240V a.c. only; voltage 230/250V. BEAB approval is applied for. Price £7 17s. 6d. **E25**



For further details about products mentioned on these pages use the prepaid enquiry form on page 40 quoting reference number.

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 plugs etc. (nearly 100
 diff. items)

Handle the goods—feel the quality and then check the prices for yourself.



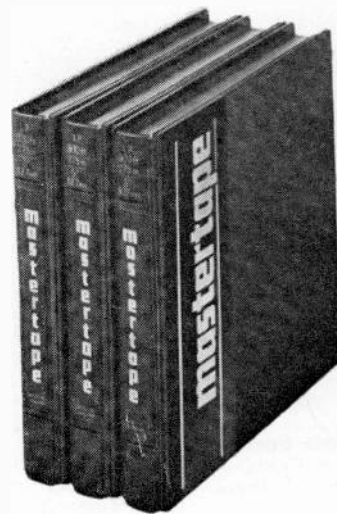
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 Phone 061-483 1113.

Please send AJAX CATALOGUE to address attached

Please send address of nearest AJAX distributor

We are *wholesalers/retailers

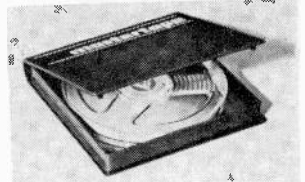
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Mastertape Tape Books are bound to sell so contact your nearest supplier now and be ready to meet the demand — extensive publicity now appearing — free showcards and price lists available to boost your sales.

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LEONARD HEYS LTD.,
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HOLIDAY & HEMMERDINGER LTD.,
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MUNE BROTHERS,
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 Suffolk.
RADIO COMPONENTS & SOUND EQUIPMENT LTD.,
 Lincoln House, Westcliff-on-Sea,
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J. RIVLIN & CO. LTD.,
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WOODHALL & PARTNERS (1929) LTD.,
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 Note: Additional names will be announced later.

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mastertape

IN THE TERRIFIC NEW TAPE BOOKS

Manufactured in England by
 Mastertape (Magnetic) Limited. Colnbrook, Slough, Bucks.

Ref. Ad. No. 325



This is Louise Walker. She just saw red. *So why is she smiling?*

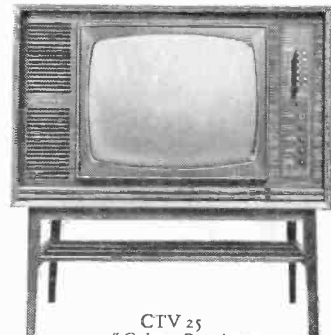
Louise Walker just saw red and blue and green and purple, for real, on a Deccacolour screen, at a Deccacolour dealers. No wonder she's smiling!

Louise liked what she learned about Deccacolour reliability, too. And so will you. Because every Deccacolour set is craftsman made, you'll not have to waste a lot of valuable time on irritating service calls.

We've got plenty to say about Deccacolour. And we're saying it with big campaigns in the Sunday supplements, glossy magazines and national press.

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DECCACOLOUR
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CTV 25
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Get the **BEST** of both worlds

Shave with the

LIGHT'nSHAVE IN THE BATHROOM



The first and only shaver-socket-strip-light for the bathroom produced to conform to the stringent safety requirements of B.S.S.3052 and I.E.E. regulations. Shaver socket takes English, Continental and American plugs — special safety double wound built in transformer. Complete with opal 60 watt 284 m/m lamp, cord operated switch and diffusing shade. Also available in Dual Voltage (115v/230v) version.

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LIGHTSHOW

Shave, read—and hairdry with the

CLASSIC IN THE BEDROOM

The all-safety Shaver-Striplight



The all-insulated wall striplight, ideal for over-the-bed lighting. With built-in double pole safety switches and universal shaver-socket recessed and shuttered for safety. Complete with opal 60 watt lamp, cord operated switch and diffusing shade.

Cat. 7068A 58/- (Plus P.T.)

Cat. 7068B (Less Socket. Plain End Cap)
50/- (Plus P.T.)

'Clip-on Kit' optional — for bed-heads and mirrors, etc. 5/-.



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H. H. ELECTRICAL (London) LTD.

Send for illustrated leaflets.

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DEALING WITH LIGHT

LIGHTSHOW '68

The **DOMESTIC & DECORATIVE LIGHTSHOW** provides an occasion for us to take stock of the state of the art. What are the current trends in home lighting and have any significant changes occurred in the past year or so?

ONE CLUE IS TO BE FOUND in the title of the exhibition. Presumably it is not to be taken as meaning that domestic lighting is not decorative. Many would argue that it is too much so, or rather that the emphasis is too much on fittings as decorative objects themselves, without relation to the lighting job they are doing — or not doing.

Go into any large store and look at the list of departments by the liftshaft. You may see *Lighting* but it is more likely to be *Lamps and Lampshades*. You may be reminded of the CoD film *Deadly Lampshade* mentioned by Paul Reilly in his speech at last year's Lightshow. Naturally enough, retailers regard anything that sells well as a rather pleasant kind of poison.

The implication in the name is probably that lighting in many fields outside the domestic uses decorative fittings which are not essentially different from those we might find in the home. The boundary between domestic lighting and much commercial lighting is softening. It borrows freely, in both fittings and techniques, from shops, hotels, and restaurants.

The trend is most marked in houses lit by the architects who designed them, particularly if they are their own homes. Thumb through a group of photographs of such a house and you will probably not see a single orthodox domestic fitting — the downlighters, wall-washers, adjustable spots, the recessed fittings for fluorescents or filament lamps all come from the commercial catalogue. It would be reassuring to ascribe this to an appreciation of the importance of the performance of the fitting, but it is more likely to be that many commercial fittings have a design to which the contemporary architectural taste responds — the high standard of finish, the use of aluminium and steel, the sophisticated colours, and the stark, functional simplicity appeal to the modern designer in the same way that fringed silk appeals to his grandmother.

The importance of this to the retailer is that what is way out today is frequently

popular tomorrow — trends have to be set.

People are likely to use spotlighting in their homes increasingly not only because the effect can be attractive and relevant, but also because the spotlight itself is a fashionable fitting. This particular trend has been inhibited by two factors: the relatively high lamp replacement cost, and the fact that adjustable display fittings do not carry purchase tax, and so should not knowingly be sold for domestic applications. Recently spotlights designed for the home (and carrying tax) have appeared — some using normal g.l.s. lamps.

An outstanding example of the spread of commercial lighting into the home is that of fluorescent lighting. With latter-day wisdom we can see some of the mistakes made in early attempts to accelerate this move. Commercial fittings were decorated with applied ornament, while the basic needs of domestic lighting — good colour rendering and ease of installation were largely ignored. (Look back at last May's *RER* and you will see some of these early designs.)

Today most kitchen fittings have a single point suspension so that the existing ceiling point can be used. Many, however, still include a high efficiency tube, White or Warm White, which achieves its remarkable output by having a disproportionately high yellow/green content and being short of red. It may well be that experience of this colour effect stops people using fluorescents in other rooms.

However, here too there is reason for optimism in the continued influence of commercial practice, where the proportion of tubes with good colour rendering increases year by year.

What is needed in the home is a fluorescent colour which is as close as possible to the familiar effect of tungsten lighting. A major advance towards this



Scene at Olympia during Lightshow 1967 when more than 6,900 visitors were admitted.

state came ten years ago with De Luxe Warm White. More recently we have had Colour 32 and Warmtone, and now with Softone, Colour 27 launched by Philips in September, we have a tube with a colour rendering virtually indistinguishable from filament lighting. It is interesting that the domestic promotion campaign for this lamp puts little emphasis on conventional fittings. Instead there is a kit of lamp, ready wired control gear, lamp holders and so on for building in. This may well be an approach with considerable potential in living rooms and bedrooms.

There is, however, a parallel possibility. Just as the functional simplicity of many commercial fittings has made them acceptable, and welcome, in modern homes, so progressive taste may come to accept the more elegant fluorescent fittings, particularly where sympathetic materials are used. Wall mounted types and those for circular tubes are obviously appropriate, but ceiling mounted fittings with, say, a prismatic light control plate supported in a wooden frame make a happy contribution to a modern domestic interior.

To return to present realism the majority of the exhibits in Lightshow '68 confirm the established pattern of home lighting equipment. There are pendants, wall fittings and portables to suit all tastes and bring appropriate light to traditional interiors in almost any style.

It is not to be expected that an overnight revolution will banish the fittings we know so well, and on which so many people's bread and butter depends. Nor is it implied that this continuity is unwelcome. But in the natural and gradual shift of taste and fashion the predominant influence on domestic lighting today is from the commercial sphere. So if the Domestic & Decorative Lightshow has one foot in each camp this merely reflects their interaction.

LIGHTSHOW '68 — Round the Stands

The more than sixty companies exhibiting at Olympia, London, from January 22 to 26 represent a cross section of the British domestic and decorative lighting industry. More than 24,000sq ft of floor space will be occupied and overseas representation comes from France, Italy, Scandinavia, and U.S.A. British agents represent altogether some dozen European countries.

I. M. ALLEN & CO. LTD.

C8

The company concentrates on all-British fittings, including gold plated Louis, Adam and Regency style wall brackets. Also to be seen will be a competitively priced range of brass fittings, and a fine selection of individually designed crystal fittings. B.C. Metalcrafts will show on this stand a selection of genuine French antiques.

ATLAS LIGHTING LTD. C24

The equipment, which will be displayed against a background of the company's new display units, includes the popular Modern and Chelsea decorative fittings, Nova flush and suspended units, the Diffuser Light, Arrowslim and Minipak and the Mazda Circline, a 40W circular fluorescent with a range of four diffusers. Recent additions include the WAM rise and fall unit, the Scatterlight pendant with polyester fitting, and the Link Lite with finned crystal styrene diffusers. There will be a separate section for outdoor lighting.

T. A. AUSTIN DESIGNS LTD.

B6

The display will include a number of new lines to complement the well known Sheerlite range of glass fibre fittings.

AUTOMATIC WOODTURNING CO. LTD.

B14

New models in standard and table lamps to be seen reflect the trend back to all-wood fittings, which has always been a speciality of the company. New this year will be a range of attractive wall lights.

BAYADA BROS & CO. LTD.

C27

All the fittings on this stand come from Italy. Included are brass and crystal chandeliers and wall brackets, ceramic and Venetian glass pendants, and ceramic table lamps.

BITO OF COPENHAGEN LTD.

D22

Bito is a modern firm with modern ideas. Its team of Danish designers will be showing several new models of attractive design at prices to suit the average pocket.

BRANNART LTD.

C32

Will be showing their extensive range of onyx and alabaster fittings.

NINA BREDDAL LTD. B38

From Scandinavia the company has assembled a range of new fittings, including glass units in a new 'tobacco' shade. The well known electrical version of the Oline oil lamps, as well as new oil lamps and candleholders from Hans Agne Jacobsson, will be shown.

OSCAR BRUNO LTD. D16

Floor standards, table lamps, and lampshades.

BY CRAFTS (FURNISHINGS) CO. LTD.

D4

In the exhibition for the first time, the company will be showing hand turned bases and wall fittings, hand turned pottery bases, and a number of shades of exclusive design. The company was formed some two years ago and produces quality shades in the medium price range. A number of their designs have been accepted for the Design Index.

CASCADE AUTOMATIC LTD.

D28

Already well established as the originators of Luminart lampshade material, the company is showing at Lightshow for the first time. They are specialists in the marrying of unusual materials to create new effects.

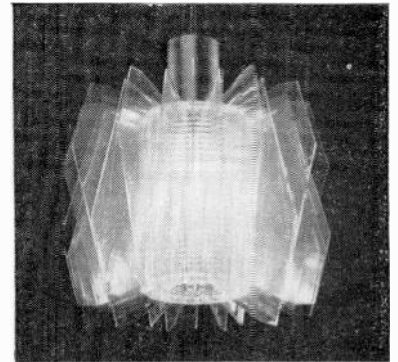
R. J. CHELSOM & CO. B18

One of the largest ranges of traditional light fittings in the field. Approximately 35 new and exclusive models will be seen for the first time, many of them in the lower price group. Included are Italian gilt and crystal fittings, crystal close ceiling fittings and onyx lamps, tables and columns.

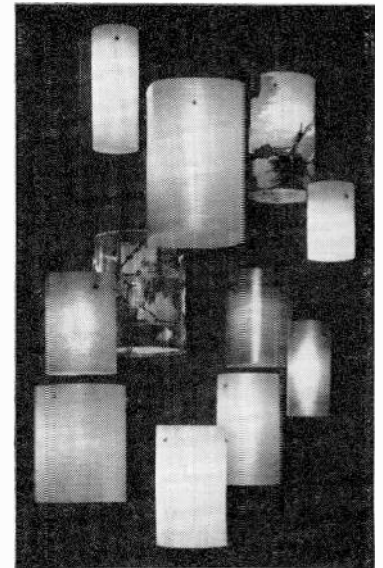
CHRYSALINE LTD.

B4

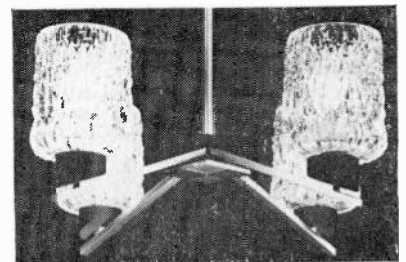
On show will be many attractive designs in metal, glass and other materials. The company specialises in contract work, and were the first company to create the decorative lighting schemes for London's West End at Christmastime.



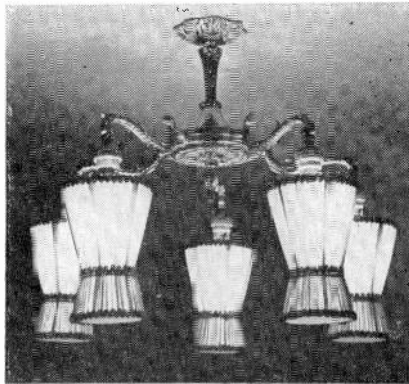
Atlas—Linklite



Austin—Sheer range



Clarke—Harlequin



LR Products—AC417;5J0

**CLARKE (ELECTRICAL)
CO. LTD. B20**

Clarkelite and H.H. Electrical will be showing a comprehensive range of decorative lighting and Striplights, which are all proven top sellers. To be seen for the first time will be a range of lead crystal pendants and wall brackets. Also making its debut is a new Striplight from the same designers as the award winning Light 'N Shave.

CONELIGHT LTD. C20

On show for the first time will be additions to the successful Conelight range. Special attention has been paid in the new range to simplifying the installation of wall lights and the on-site assembly of pendants.

**W. CORDELL ANTIQUES
LTD. D26**

An original display of antique lamps, clocks, wall brackets, chandeliers, small furniture and pedestals.

COSMO DESIGNS LTD. D10

Pack-flat pendant fittings imported from Denmark are made in washable polystyrol in many different shapes. The attractive packs are ideal for in-store display. New models will include Easy Lights and Cosmo Lights in colour.

**COTTRELL & PATTINSON
LTD. D2**

Marking their expansion into the domestic field the company is exhibiting for the first time with a wide range of table lamps, shades and ceiling lights. Also to be seen will be a new range of Continental glass table lamps.

CRESTWORTH LTD. D32

See the new Astro lamp, one of Britain's latest export booms to the U.S.A. This unique lighting effect with its ever changing colour effects is made by Crestworth. Other new items will be the Astro lantern, the Princess lamp and the contemporary Nordic lamp.

C. CUNNINGTON B16

On display will be a range of brass chandeliers, wall brackets, table lamps, lanterns and floor standards. Of special interest will be the new range of green onyx table lamps and floor standards.

**DAVEEN MANFG.
CO. LTD. C37**

The range includes floral and pleated shades, onyx table and floor standards, onyx and brass fittings, alabaster table lamps, Italian brass framed mirrors and onyx occasional tables and sculptured figurines.

ELLIOTT & SPEAR LTD. B34

The company makes and imports an extensive range in a diversity of styling. Inexpensive satin shades are now accompanied by a nine-colour crushed taffeta range. A selection of novelty table lighting completes the display.

**EMESS MANUFACTURING
CO. C38**

A new range of Avalux and modern single pendants in real crystal glass is included in the display of over 300 models. Other models include single and multiple pendants, table and floor lamps, surface mounted fittings and outdoor lanterns.

**EMMRICH & SCHONNING
GMBH. D30**

This German firm will be making its first appearance at Lightshow.

**FANCY METAL GOODS
LTD. A6**

Matching suites of wall brackets and pendants. Attractively styled teak, rosewood and polished brass fittings. Exclusive glassware. The newly introduced Decor-Match suite. Also Famego Magni-lites — illuminated make-up and shaving mirrors.

**ANTHONY FEBLAND &
CO. LTD. C4**

Last year's enthusiastic welcome for their unique range of capo-di-monte figurines converted into table lamps has encouraged the company to display an even wider range this year. A new set of six British Cavalry officers of the 17/18th centuries, standing nine inches high will complement last year's Napoleonic range. There will also be variations of the popular neo-grotesque school of tramps, urchins, buskers, etc.

FOCUS LIGHTING LTD. B12

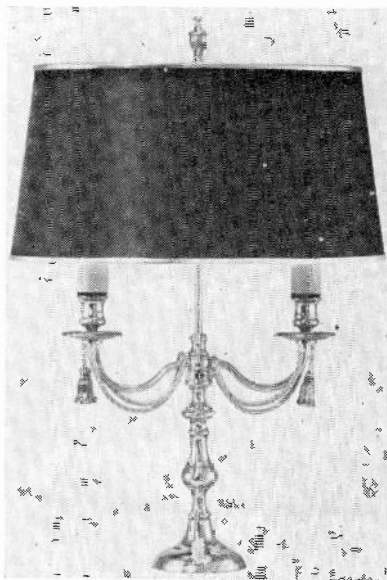
A collection of fine chandeliers ensuite wall brackets, standard and table lamps in crystal, onyx and other traditional finishes will be seen. The crystal chandeliers come from Bohemia and are made by the finest Czechoslovakian craftsmen. Skiros-Africano, a material new to this country, supplements the onyx range.

DEREK FOWLER STUDIO D34

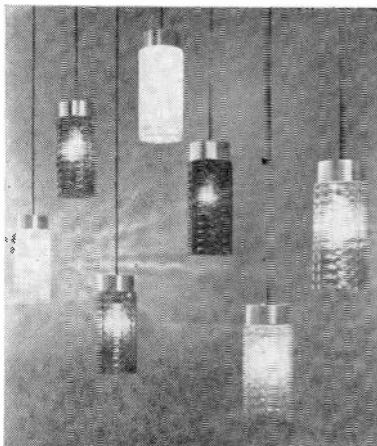
A range of high quality earthenware using fine white clay and colourful glazes which will grace a modern or an antique interior. A range of hand-painted children's nightlights. This is the company's first time at Lightshow.

GALLEON LIGHTS LTD. B30

A new range of Italian chandeliers, with 3, 5 or 8 lights, will be seen. The vast range of chandeliers in gilt, silver and bronze will be complemented by a selection of table lamps, floor standards, candelabra and wall lights.



Pearson Page—Student's Lamp



Osrar-GEC—Colour Cabaret

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material now.**



PHILIPS LAMPS

Philips Electrical Ltd., Lighting Division,
Century House, Shaftesbury Avenue, London W.C.2.

LIGHTSHOW '68 — Round the Stands

GIM METAL PRODUCTS INC. D15

This leading American manufacturer of alloy castings introduces its products to the British market. Featured is a display of easy-to-assemble components using high strength zinc alloy. The company will also produce high quality castings on contract with fast delivery and reasonable prices.

GRUBERT OF COPENHAGEN LTD. C16

The range of fittings, from the Copenhagen factory, will be seen. A new material — copper annealed into glass — is used for some of the newest fittings.

HOMESHADE CO. LTD. C28

A range of Czechoslovakian and Austrian chandeliers, wall brackets, baskets and waterfalls. Jewel crystal fittings from Vienna. Italian hand-carved alabaster table lamps. An extended range of crystal Brilliant glass.

IMPEX (GLASSWARE) LTD. B2

Brass, brass and crystal and all-crystal chandeliers are the speciality of this old established company.

JACKSON & KING LTD. D12

From Japan comes the Oriental Dream Lighting range. Made of rice paper and bamboo, individually boxed, these shades are available in plain white paper, or leaf paper and in three colours. Many can be used as complete table lamps in themselves or as pendant shades. Also to be seen is a range of over sixty Italian alabaster table lamps, and for the first time competitively priced crystal bases.

JASON & LAWRENCE LTD. C12

Central feature will be a new range of contemporary floor standards and table lamps, in solid teak and walnut with matching designs. The subsidiary company, Embassy Shades will be showing a large new collection of shades in a variety of materials.

ROBERT JOSEPH & CO. LTD. D26

High quality hand-made lamp shades in a variety of shapes and colours will be seen. Robert Joseph design two collections a year but can at any time produce special designs to order.

KNIVETON & SON LTD C.10
Manufacturers and importers of high quality onyx and ormolu traditional fittings.

E. & H. LEWY C18

Exclusive new designs in table lamps and floor stands styled to blend with modern decor.

LITA D6

The LITA company of France exports its lighting equipment to 71 countries. The range includes fittings for: shops, monuments and architecture, factories, gardens, interior decoration, photography, cinema, etc.

L.R. PRODUCTS B26

On show for the first time will be a range of table lamps made in hand engraved brass and incorporating semi-precious stones exclusive to the company. Other new lines will include 3-, 5- and 6-light pendants, hall and porch lanterns, hand painted porcelain wall brackets and a range of green onyx table and floor standard lamps.

Due to increasing business the company has acquired new premises in Leeds which they intend to transform into the most up-to-date lighting show-rooms in the north of England.

J. MILLET (ELECTRICAL) LTD. C26

Over 3,000 different items are to be shown on this stand. Included are lampshades in many new materials in both stretch and hard varieties. 200 models of period table lamps are priced from 16s. to 30s. There will be a selection of over 300 modern fittings and wall brackets. Period fittings cover the Flemish, Louis, Adam and Regency styles. Modern single pendant glasses vary in price from 6s. for a 6in. model to 21s. for a 16in. unit. There will be 80 models of small cutaway and cylinder glasses.

E. N. MORGAN LTD. C14

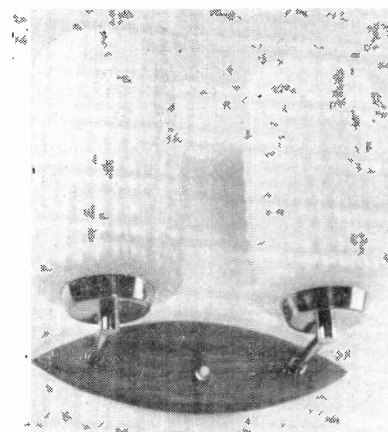
On show will be a comprehensive range of Rustic, Reproduction, Scandinavian and Contemporary style fittings, as well as wooden components. Fittings are made to specification for contract work.

OSRAM-GEC LTD. C2

More than 100 fittings for domestic applications will be seen. Featured are the Sovereign range of pendant and ceiling fittings. Seen for the first time will be additions to the Cabaret range of wall and pendant versions in a choice of colours. There will be a selection from the Conquest Copper, Carousel, Conquest Satin Aluminium and Raak series. Also on show will be the Tip-Top kitchen fluorescent fitting and the Porchlight and Pathlite.



J. Millet—Table Lamps



E. N. Morgan—M143 Wall Bracket



Rotaflex—Superjet

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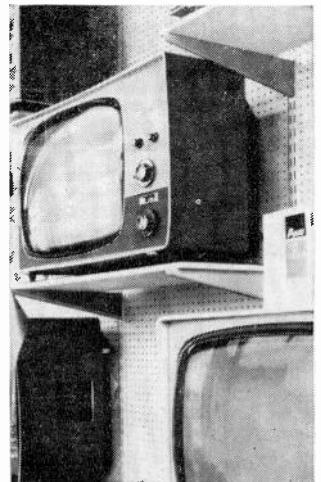
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SPUR

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LIGHTSHOW '68 — Round the Stands

OTMEROD LTD. B10

On show will be the complete range of Danish Lyfa fittings including many new designs. The popular Boff range has been extended in natural Siberian pine with many attractive new styles.

PEARSON PAGE JEWELRY CO. LTD. B17

Peerage, makers of the renowned brass ware, will present their range of electrical fittings. To be seen will be table and standard lamps, lanterns, wall brackets and coach lamps. Complete matching sets are available. All Peerage products are made from solid brass, highly polished and stove lacquered.

PLUS LIGHTING LTD. B32

New for this year will be ranges of coloured Reeded cylinders in three sizes of flush to ceiling fittings, a comprehensive range of pendants, together with wall brackets and table lamps. The successful Pop-Spot will be seen in six colours, together with the established range of opal and opal decorated cylinder pendants, table lamps and floor standards.

PROCESS UNITS (HALIFAX) LTD. D23

The Zodion lighting control unit is an automatic device using three cadmium sulphide cells which will automatically switch off lighting at dusk and switch on at dawn. It is a plug-in unit and can easily be installed into existing wiring. It can be used in or out of doors. It will switch from 4 to 7.5A.

RINGWAY LIGHTING LTD. B22

Breaking away from the usual trend in decorative lighting, on show will be a new range of commercial fittings ideally suitable for the home. This Burma range of fluorescents have teak bases with diffusers in opal or clear prismatic styles. Also to be seen will be the full range of coloured Swedish glass, varying types of copper and black spinings, optical glass and copper strip.

ROTAFLEX (GB) LTD. C22

A selection from the wide Rotaflex range includes pendants, ceiling fittings, wall brackets, table lamps, spotlights, outdoor fittings and high-intensity lamps. New will be the Super Jet, and additions to the Moonstone and the Silverspan fluorescent ranges. Lytespan lighting track will be used throughout the display.

RUSSELL ELECTRICS LTD. C36

New to the range this year will be the 1-, 3- and 5-light hanging cord pendant fittings in copper and crystal or chrome and crystal, as well as a range of hand hammered copper with blown amber glass pendants. Also to be seen will be Bohemian crystal chandeliers and pendants, Spanish chandeliers, wall brackets and table lamps.

W. G. RUSSELL (LAMP SHADES) LTD. B28

A comprehensive range of lampshades includes laminated fabrics on card or plastic backing, produced in the company's own factory. Styles include drum, cylinder and louvre shapes. Pleated shades in various fabrics will be shown. Pottery bases from Holkham Pottery will be amongst the range of table and standard lamps. All the company's products are competitively priced and their delivery service covers a large part of the country.

SAMOLS LATIMER LTD. A2

The company manufacture glass fibre fittings and have recently developed the Scintalite table lamp. This embodies a coloured cylinder containing multi-coloured broken crystals. It is stated to be unique in the world.

SASHA PRODUCTS A4

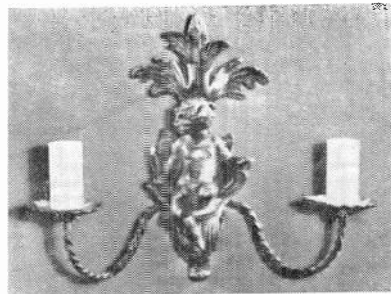
Lampshade manufacturers to the trade. See the latest range in various fabrics with constant width, butt-welded seams and washable highly reflective backing.

SCANDESIGN APPLIED ART C30

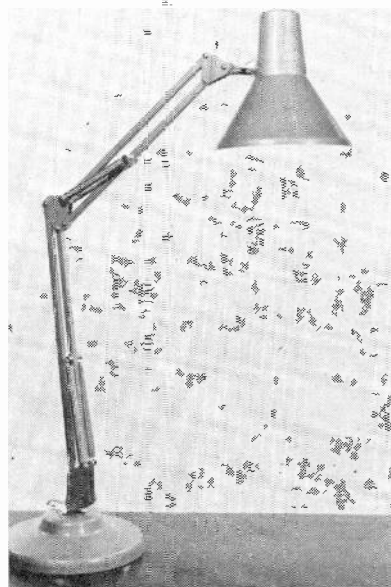
On show from Sweden will be the Fura cottage style in pine, with glass shades and the Charleston range—a jazzy adaptation of granny's pendant. Also the low priced Pyrola acrylic range. From Ellysett of Sweden come the pine veneer lamps. Denmark is represented by Scholm stoneware lamps in blue, brown and turquoise slip-glazes.

HANK SCHWIMMER STUDIOS A8

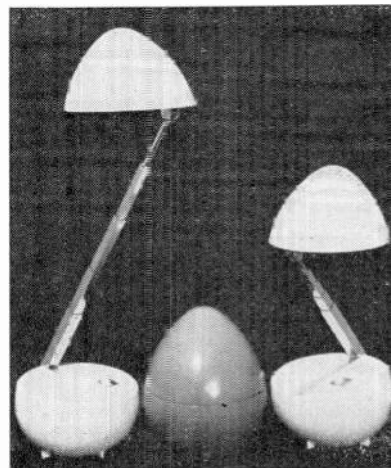
New this year will be extensions to the popular range of inexpensive paper print shades and new Colorblok lamps in a very wide range of shapes and colours. The established range of laminated silk and moire, strawware and hessian cork and linens will be seen in a large choice of colours. Designs incorporating real flowers and plants will again be on show.



B. Szeps—Regency wall bracket



Thousand and one lamps



Visual Control—Egg lamp

No wonder
other electric kettles get
so steamed up

The Russell Hobbs Rapide

(which never gets steamed up)

is pinching their market



*- The kettle that
watches itself.*


Other electric kettles lumber with a 'Free Steam' promotion.

Not the Russell Hobbs Rapide. It boils fast—then switches itself off **before** it gets all steamed up.

There are two models to choose from now, the original in shining chrome on copper and the new Rapide in Satin Finish Stainless Steel (on right). Both boil three pints fast and both have the unique Russell Hobbs switch-off control as well as an extra safety cut-out should they inadvertently be switched on dry.



SATIN FINISH STAINLESS STEEL OR SHINING CHROME ON COPPER

RUSSELL HOBBS 

Tube Investments Ltd. an advanced engineering group

And both carry the B.E.A.B. approval.

We're backing the Rapides with peak period advertisements in Woman's Own, Woman's Realm, Radio Times, T.V. Times, The Viewer and Weekly News.

So make sure you've plenty in stock. Before your customers steam off to someone else.

RUSSELL HOBBS LTD. WHARFESTATE
EALING RD, ALPERTON, MIDDX.

LIGHTSHOW '68 — Round the Stands

J. SEGAL (ELECTRICAL) LTD. B24

Founded 50 years ago as suppliers to the trade the company now claim to be the largest importers of lighting glass.

SKANDESCO LTD. C34

Importers and licensed manufacturers of Swedish lighting fittings. The range to be seen will include many new designs in domestic and architectural units, using glass, copper, stainless steel and teak.

ANNE STORM LTD. C21

The company represents three Scandinavian lighting manufacturers: Nordisk Solar for competitively priced domestic and commercial fittings; Folsgaard for architectural fittings; and Holm Sorensen with designs usable in almost any interior, domestic or commercial.

SUPERSWITCH ELECTRIC APPLIANCES LTD. C29

Superswitch is designed to permit the user to control the level of lighting. It directly replaces on/off switches conforming to BS.3676 and is easily installed. Fully suppressed against radio and TV interference, it is available as model SS.300 (up to 300W) at £4 9s. 6d or model SS.1000 (up to 1kW) at £6 9s. 6d.

B. SZEPS LTD. D24

Manufacturers of traditional and distinctive bases in gold, silver, bronze, verdigris, ivory or white finishes. Also English alabaster lamps.

THOUSAND & ONE LAMPS LTD. D21

New for Lightshow will be two table lamps with four springs for complete control. The lamps can be neatly folded when not in use. Available in seven colours. Also to be seen will be the luxury model LS/2 table lamp.

VISUAL CONTROL LTD. D14

Three new gift lamps will be seen for the first time: Egg-Lamp—in the shape of an egg, with a swivel head extending to 17½ in. Fitted with bright/dim switch and built-in 12V transformer; the Clipper-Lamp has a heavy clip-fitting, telescopic arm and will operate from a car cigarette lighter socket; the Radiolite is a combined high-intensity lamp and transistor radio.

WALTER WEINBERGER & CO. LTD. D8

Lighting for all occasions and all tastes in porcelain, hardstone carvings, onyx, paper and bamboo.

XLON PRODUCTS C33

The Tiffany paper pendant light comes flat and is easily erected on site. There is a variety of designs. Fibreglass table lamps in brilliant shades and simple shapes can be teamed with a new range of rep shades which look like corduroy in six colours. Also on show will be an elegant range of versatile brass lamps.

YUBIDO LTD. B8

This will be Yubido's third appearance at Lightshow, and the display will include over twenty white and ten coloured styles. New this year will be a lacy double-walled sphere with coloured exterior and white interior.

STAND NUMBERS

- | | |
|-----|--------------------------------------|
| A2 | Samols Latimer Ltd. |
| A4 | Sasha Products |
| A6 | Fancy Metal Goods Ltd. |
| A8 | Henk Schwimmer Studios |
| B2 | Impex Glassware Ltd. |
| B4 | Chrysaline Ltd. |
| B6 | T. A. Austin Designs Ltd. |
| B8 | Yubido Ltd. |
| B10 | Otmerod Ltd. |
| B12 | Focus Lighting Ltd. |
| B14 | Automatic Woodturning Co. Ltd. |
| B16 | C. Cunnington |
| B17 | Pearson Page Jewsbury Co. Ltd. |
| B18 | R. J. Chelsom & Co. |
| B20 | Clarke (Electrical) Ltd. |
| B22 | Ringway Lighting Ltd. |
| B24 | J. Segal (Electrical) Co. |
| B26 | L.R. Products |
| B28 | W. G. Russell Lampshades Ltd. |
| B30 | Galleon Lights Ltd. |
| B32 | Plus Lighting Ltd. |
| B34 | Elliott & Spear Ltd. |
| B36 | Westminster Bank Ltd. |
| B38 | Nina Breddal Ltd. |
| C2 | Osram (G.E.C.) Ltd. |
| C4 | Anthony Febland & Co. Ltd. |
| C8 | I. M. Allen & Co. Ltd. |
| C10 | Kniveton & Son Ltd. |
| C12 | Jason & Lawrence Ltd. |
| C14 | E. N. Morgan Ltd. |
| C16 | Grubert of Copenhagen Ltd. |
| C18 | E. & H. Lewy |
| C20 | Conelight Ltd. |
| C21 | Anne Storm Ltd. |
| C22 | Rotaflex (Great Britain) Ltd. |
| C24 | Atlas Lighting Ltd. |
| C26 | J. Millet (Electrical) Ltd. |
| C27 | Bayada Bros. & Co. Ltd. |
| C28 | Homeshade Co. Ltd. |
| C29 | Superswitch Electric Appliances Ltd. |
| C30 | Scandesign Applied Art |
| C32 | Brannart Ltd. |
| C33 | Xlon Products |
| C34 | Skandesco Ltd. |
| C36 | Russell Electrics Ltd. |
| C37 | Daveen Manufacturing Co. |
| C38 | Emess Manufacturing Co. Ltd. |
| D2 | Cottrell & Pattinson Ltd. |
| D4 | By Crafts (Furnishings) Co. Ltd. |
| D6 | LITA |
| D8 | Walter Weinberger & Co. Ltd. |
| D10 | Cosmo Designs Ltd. |
| D12 | Jackson & King Ltd. |
| D14 | Visual Control Ltd. |
| D15 | Gim Metal Products |
| D16 | Oscar Bruno Ltd. |
| D21 | Thousand & One Lamps Ltd. |
| D22 | Bitto of Copenhagen Ltd. |
| D23 | Process Units (Halifax) Ltd. |
| D24 | Bernard Szeps Ltd. |
| D26 | W. Cordell Antiques Ltd. |
| D26 | Robert Joseph & Co. Ltd. |
| D28 | Cascade Automatics Ltd. |
| D30 | Emmrich & Schöning G.M.B.H. |
| D32 | Crestworth Ltd. |
| D34 | Derek Fowler Studio |

TRAVEL LIGHT . . .

'Join the Light Brigade . . . in the Sun at Lightshow' — will be the theme of a trade competition designed to enable visitors to test their judgment of value in light fittings.

Every visitor to Lightshow will be eligible to enter and will be invited to assess the total trade value of the thousands of fittings which are on display at Olympia. The first two correct, or most accurate, entries will be the winners. The successful entries will qualify for holidays for two — to be chosen from a selection offered by four well known travel agencies.

Announcement of the names of the winners will be made during the week commencing January 29th.

Philip Hickson

TALKING ABOUT...

SOME STAFF PROBLEMS

Staff is one factor that can make or break your business. The two most important categories of people in any business are: Customers and Staff. All selling is, after all, human relations. These relations can be enhanced or wrecked by the wrong choice of a word, a surly expression, a cigarette dangling at the lip, bad breath or just plain ignorance.

Relations between staff and your customers have always been important, but will be even more so in the highly competitive days that lie ahead.

NO COMPRIT?

Are you, in fact, employing the right kind of staff to suit the customers in your district? I know of one dealer in the South of England who employed an eager and willing youngster from Glasgow. Poor boy, he got completely disheartened and his employer had quite serious doubts about his ability until eventually it dawned upon him that the main trouble was a lack of communication between salesman and customer. They just could not understand his broad Scots accent and North of the Border expressions . . . he in his turn, could not make out what they were asking for in the rather slurred speech of the Southerner. A course of elocution and enunciation might have helped him, but as it was the boy left although he had the makings of a good salesman.

The right staff for the area does make a difference; a Cockney would be at home in the Mile End Road, but would he be acceptable in Mayfair or Hampstead? Manners, customs, phrases vary very much indeed from district to district. The tough, hard-sell approach that might get results in London, would not be tolerated in Taunton.

I am not saying that one cannot employ staff who come from other areas — it would be ridiculous to assert this. All I am saying is that for those staff members who come from other districts where strong regional accents prevail and different ideas on selling approach are current, then an organised period of re-training and indoctrination is vital. You cannot just "throw the chap in at the deep end" and expect him to surface easily without help . . . and this help has to come from the dealer himself.

A tape-recorder used intelligently during training sessions can make a world of difference by letting the trainee

hear how he is improving his enunciation and phraseology. A short phrase notebook of the commoner expressions used in your area, together with the "translation" of the same phrases commonly used in the employee's area will certainly help. It will also show that a real interest is being taken in him. If you take an interest in people, they respond in the majority of cases by taking an interest in you . . . and the job.

DO THEY STAY?

Talking about interest, what about your staff turnover? The national average for retailing is 10-15% per annum, but some shops and stores have a higher figure — even up to 40%. Does this indicate a lack of interest in staff by management? There are many other causes, but lack of interest is a negative stimulus and automatically brings about a lack of interest in the job.

Management who cannot lead, are perhaps showing symptoms of small-mindedness and are reflecting the way they themselves were treated when they were new to the job and going through their formative period.

THE OLD 'UNS

What about the old retainer who has been with the firm for many years and has given good, loyal and faithful service? Now well past his prime, slow in the uptake, perhaps also a bit hard-of-hearing, a little careless about his personal appearance and a little out of touch in some aspects. He can also engender customer irritation by his slowness and over-anxiety. What does one do with him?

Well, of course, many firms have pension schemes, and pensioned off he can make room for younger staff. Some firms hold on to him out of sympathy

and a feeling that a good job done in the past merits retention. This is good sentiment, but why not utilise the knowledge and experience gained over the years by the old retainer to train the younger staff and new intake? Freed from day-to-day rush and pressures, he could well put his years of know-how to practical use. Training the younger shop staff in two or three sessions a week and perhaps dealing with correspondence and so on would keep him out of contact with the public, off his tired feet but still make good use of his services.

THE YOUNG 'UNS

At the other end of the scale, there is the eager youngster who is obviously trying hard, but through sheer inexperience and lack of basic, practical knowledge keeps putting his foot in it and upsetting the customers in all sort of ways. Full of enthusiasm, he forgets to take names and addresses properly, disregards stock-control arrangements and over-sells, makes wild promises about deliveries and service. We all know him. Because he has not been told the reasons underlying the business procedures of the shop, he tends to view them as unnecessary red-tape.

TRAINING

The answer here is proper sales training. The pick-it-up-yourself type of training does not work properly and takes a long time. A properly organised training course, both on the job and off it, must be designed and should cover all the aspects of the business that the eager-beaver is intended to cover.

Here is where the old retainer can be of inestimable value. More and more proprietors and traders in the many diverse trades in retailing are coming to realise that the word TRAINING is actually spelt P-R-O-F-I-T.

THANK YOU VERY MUCH . . .

WE HAVE BEEN pleasantly surprised by the number of letters we have received from readers expressing their appreciation of the Directory of Imported Equipment which we published last month. It seems to meet, in the words of one dealer, 'a long felt need in these days of proliferating brand names'. For a number of reasons we were unable to publish the complete list of brand names/distributors known to us, but this information is available to readers who care to write to us with a specific enquiry.

Whilst talking about ourselves, do you realise that features in *RER* are often backed up by technical articles in *Service Engineer*? This month, for instance, *SE* carries an article dealing with Servicing Equipment which is relevant to the article on aerials in this issue. If you do not receive regular copies of *Service Engineer* why not use the order form on page 39 right away.

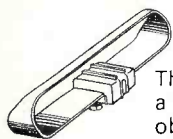
FOR BLACK & WHITE OR COLOUR

IT ALL DEPENDS UPON THE AERIAL

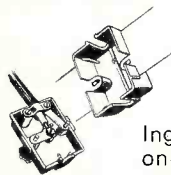


Despite all the attention paid to the design of receivers and the quality of transmissions, a television programme can only appear by courtesy of the aerial. So much depends upon the correct choice, siting and erection of this modest aluminium structure. Of course, conscientious dealers are well aware of this and are most careful to recommend and install the best aerial available.

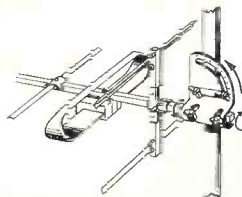
Take the aerial illustrated above for instance, the Belling-Lee Aerials UHF 10. A triumph of good design and skilful manufacture. We don't claim that it has 85% more gain than a barn door, or that we sold more of these on one Easter Monday than did everybody else, but we do insist that it is very good value for money – an efficient, well made, thoroughly reliable aerial. Look at some of its features:—



The graduated dipole makes a balun unnecessary and obsolete. This patented device is unique to Belling-Lee Aerials, cutting costs and minimising failures.



Ingenious junction box aids on-the-ground assembly and speeds installation.



A three way tilting clamp allows infinite adjustment of direction, elevation, and roll. An invaluable aid to UHF aerial erection it is included as a standard item in all UHF aerial packs of up to 10 elements.

And delivery? Our distribution is well organised too. You can get them when and where you want them.

New 1968 catalogue NOW AVAILABLE



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Belling-Lee Aerials Ltd. Heysham Road, Netherton, Bootle 10, Lancs.
Telephone: 051-525-1736

for
first class
colour reception
the right aerial
is essential

In support of the combined BBC and BREMA Exhibition which has visited many principal centres throughout the country. J. Beam are organising Trade Shows for Dealers and Installers to give information and guidance on all aerial problems to ensure that UHF and Colour Television reception in this country will be of the highest possible standards.

Full details of Trade venues and dates for J. Beam Dealer Meetings will be announced shortly.

J
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The photograph shows the patented "PARABEAM" 2 x 12 Element Model 2PBM12 used by the B.B.C. Engineering Division's mobile Colour Demonstration Unit outside Alexandra Palace, London. This aerial provided reception for all the Colour Television Receivers in the "Colour Comes to Town Exhibition" designed to show the Public the excellencies of Colour Television.

Antiference's mobile TV aerial research unit. Recently used for field tests of Log-Periodic aerials for Band III. See this page for details of this new development in domestic TV aerials.



AERIALS AT LARGE

GORDON J. KING, the well known authority on Aerials, writes this month on aerials of all types, but principally of course on TV aerials. He discusses some of the reasons behind their design, points out some of the important details to be observed in erection, and discusses some new developments.

BEGINNING OF THE END?

The coming duplication of the 405-line v.h.f. programmes in the 625-u.h.f. standards may be said to mark the beginning of the end of the v.h.f. aerial as the main collector of TV signals. This does not mean that the v.h.f. aerial will disappear entirely. Although BBC1, BBC2, ITV1 and ITV2 are all scheduled for the u.h.f. bands, it will be a long time before every u.h.f. group area is adequately served.

It is not unlikely that some areas of difficult topography will remain for ever barren of a proper u.h.f. signal, and will have to rely on v.h.f. for 625 and colour programmes. These bands will have to be re-engineered to handle the higher definition 625-line standards.

Groups of local u.h.f. stations, plus boosters where required, will bring satisfactory u.h.f. signals to most households, so that the u.h.f. aerial will predominate until such times as the v.h.f. channels are re-engineered.

Nevertheless, while 405-line v.h.f. TV exists (perhaps for another ten years) there will continue to be a call for v.h.f. aerials. These will mostly be as replacements, since new viewers will want to exploit the 625 channels with the less costly and complex single-standard sets then available.

WIDE BAND V.H.F.

The trend today, especially on Band III, is towards the wideband v.h.f. aerial, a typical example being the Astrabeam by J-Beam Aerials.

This five-element array covers all Band III channels pretty evenly, and is useful in those areas where owing to propagation adversities in Band I, the BBC1 programme has been shifted to Band III, where these effects may be less severe.

In such cases the shift is often to the far end of the band, several channels away from the local ITV channel, making it impossible to cover both on an existing single-channel ITV aerial. The solution is either to use an additional Band III aerial for BBC1 coupled to the common downlead through a special filter (diplexer), or to scrap the existing ITV aerial and install a wide band version to cover both programmes. This is the least expensive and most satisfactory solution and is made possible by co-siting of the two transmitters.

Even if the existing ITV aerial does give a good signal from the BBC's co-sited Band III transmitter, vision sidebands are bound to be attenuated and the picture will not be as good as with a new wide-band aerial.

The wideband aerial will have additional applications in the future when v.h.f. channels are reorganised to carry 625-line programmes, for then the channel width will be 8MHz as against 5MHz for 405. When this time arrives the single-channel v.h.f. aerial will be virtually obsolete due to its response

roll-off in the 625 channel, brought about by peaked elements (and spacing) and impedance changes outside the designed-for channel.

ATTENUATED COLOUR

Using a narrow-band aerial would then be tantamount to trying to obtain good 625 definition and colour from a u.h.f. aerial having a similarly restricted response. Apart from the serious effect this would have on the definition of a monochrome picture, the colour sub-carriers and their sideband components would be removed or seriously attenuated rendering colour reception virtually impossible. The effect is much the same as detuning a colour set.

It seems logical, therefore, when installing a Band III aerial during this interim period to employ one to suit the pending v.h.f. developments.

LOG PERIODIC DIPOLE SYSTEM

While the majority of v.h.f. and u.h.f. aerials adopt the well-known Yagi principle, where the driven element is a single dipole, or sometimes two in parallel, or a skeleton slot, an arrangement new to the domestic field consists of a series of driven dipoles, accurately spaced and tapered in an in-line formation. This system is called Log Periodic from the mathematical law governing the tapering off of the dipole lengths and the spacing between them.

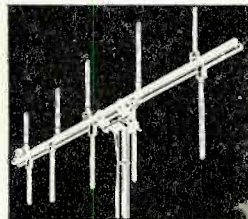
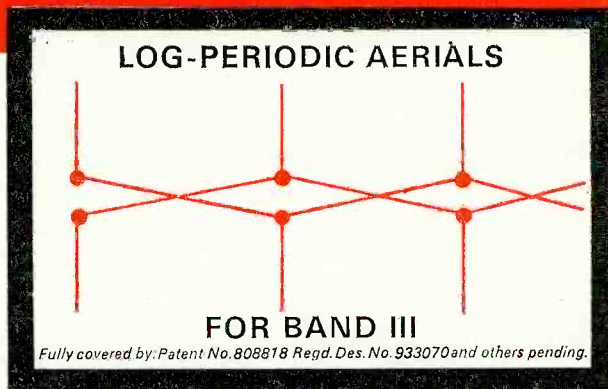
One advantage of this type of aerial for TV applications is that its impedance and directivity pattern can be held relatively constant over a range of frequencies

NOW FROM Antiference

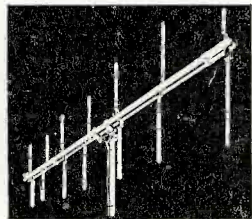
IMPROVED RECEPTION AND
A VITAL BREAKTHROUGH
FOR THE FUTURE



DLP7



LP5



LP7

Antiference are first with wide-band tv aerials using the 'log-periodic' principle. Here are aerials with incredibly even response throughout the whole of Band III — not just in respect of forward gain — the front/back ratio, beamwidth and impedance are constant too *No other aerials have cleaner polar diagrams!* The sophisticated technical design has been cleverly matched by uncomplicated aerial engineering. The transmission line feeding the elements is incorporated in the double boom. Because transmission line theory is an integral part of the log-periodic design these aerials stack more efficiently than Yagi's. No compromise has to be made electrically or mechanically. The result No present reception problem is too tough for the L.P. and for the future? No matter what changes are made to Band III channels or standards, Antiference log-periodic aerials can cope better than any other. *Naturally L.P.'s cost a little more than ordinary Band III aerials — but they're worth it! Send for further details.*

Antiference

Antiference Limited Aylesbury Bucks Tel:2511



Remember 'Antex'... 'Hilo'... 'Trumatch'

AERIALS AT LARGE

continued

within the design limits of the aerial structure. A similar effect, of course, can be obtained with the Yagi by careful tailoring of the parasitic elements and their spacing.

The driven elements are all connected in parallel to a balanced, constant impedance transmission line, and connection to each dipole is such that the top rod of the first is connected to the bottom rod of the next, to the top rod of the next and so on, while the same alternate manner of connection is adopted on the partnering rods of the dipoles.

This design has now been exploited commercially by Antiference in their new range of wideband aerials for Band III. Five- and seven-element arrays, called LP5 and LP7 are available. For greater gain, a broadside array, DLP7, using a pair of LP7's is also available. (See *Recent Releases* this month.)

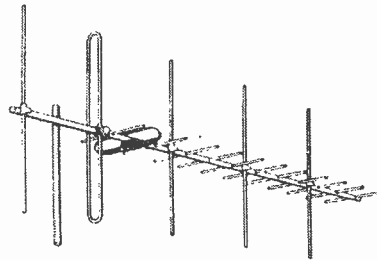
Log periodic aerials hold their matching to the downlead admirably over a spectrum of 174 to 216MHz (Band III), and the standing wave ratio is well within a 1.3:1 limit over the whole of the band.

This then, is another make of aerial which will serve the future demands of 625 line v.h.f. and the present BBC1/ITV requirements in Band III, using a single aerial system.

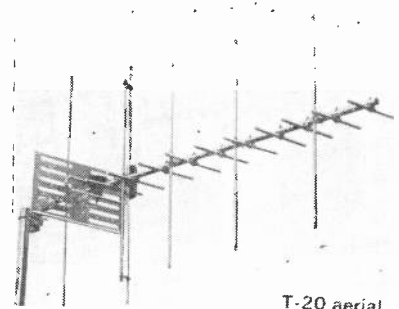
In the fairly near future existing u.h.f. aerials will be called upon to deliver adequate signals from duplicated BBC1 and ITV1 (and later ITV2) programmes. Aerials of reputable design will cope with this situation since their bandwidth will embrace the whole group of local channels, spreading at least over 88MHz.

Dealers whose efforts have been directed towards peaking the sole BBC2 channel of the group — at the expense of system bandwidth — may well find themselves in trouble with the opening of other channels in the local group. Dealers who heeded the intimations of bandwidth demands, which were current earlier on, will not experience the embarrassing situation of having originally satisfied BBC2 viewers complaining of weak sound and noisy pictures on the BBC1 and ITV1 channels.

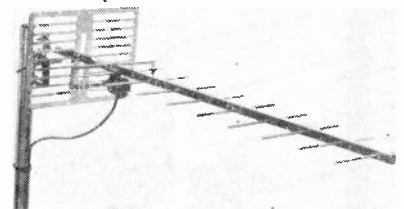
BBC2 viewers needing u.h.f. amplifiers to achieve noise-free pictures could be in difficulty on the other channels in the group if the amplifier is peaked for BBC2. The solution here is either to retune for a gain compromise over the group, or to increase the coupling co-efficient from the tuned output circuit of the amplifier to the coaxial feeder. This latter artifice



Above: Belling-Lee 5012-C;
Right top: Telerection T-20 for Bands III/IV; bottom: Aerialite Golden Gain model 45/11 Super for u.h.f.



T-20 aerial



increases the bandwidth at the cost of a slight loss of gain.

U.H.F. CHANNEL GROUPS

All u.h.f. aerials in current production for domestic use are designed for group-band working, in accordance with the accompanying table. The two new groups, D and E, cover channel combinations for those areas which embrace a wider spectrum than A, B, or C. Aerials in groups D or E should only be used where an aerial from one of the other groups cannot be used, since, other things being equal, they have lower gain.

Most current production masthead amplifiers are also wideband, but their tuning may need altering to give optimum results for the group as a whole. This tuning can be tricky as some amplifiers are almost integral to the dipole, and it may be necessary to adjust the

turns spacing of the main output inductor whilst altering capacitance by adjusting a plate near to the coil.

Set-side amplifiers, on the other hand, might be single channel, but the trend now is for channel group-width design. In any case, they are more accessible, and it is usually possible to tune for gain/bandwidth compromise. My own UHF Telebooster uses a quarter-wave cavity with an easily accessible trimmer. Transistor changes have been made since the original single-channel design and tests indicate that a group of channels can be received in fair balance when the trimmer is tuned to the group mean.

MORE SIGNAL FOR COLOUR

As a rough guide, it is true that an aerial system capable of producing a good, noise-free monochrome picture is also suitable for colour pictures. It is equally

COLOUR CODING FOR UHF AERIALS

R.E.C.M.F. Panel K (Aerials) has added groups D and E to its colour coding for u.h.f. aerials. It is thought that the following groupings will cover all future eventualities:

Group	Channels	Colour Code
A	21-34	Red
B	39-51	Yellow
C	50-66	Green
D	49-68	Blue
E	39-68	Brown

YOUR BIG PROFITS RIGHT HERE IN BLACK & WHITE

not to mention

COLOUR
TV

TS



GT 17 Aerial

GT 17, the big-profit UHF aerial. Receives colour as excellently as black and white.

- * High performance UHF reception including critical colour signals.
- * Meets the exacting standards of the BBC, GPO, CCIR.
- * Strongly constructed for excellent reception even in the worst weather.
- * Stove-enamelled for longer first-class reception.
- * Simple to install.
- * Three versions: GT17—Group A, Channels 21-34. GT18—Group B, Channels 39-51. GT19—Group C, Channels 50-66.

ALSO AVAILABLE:

T 20 aerial In-line Bands III and IV.

Basically the same as the GT 17, plus broad band III elements. For use where Band III and UHF are transmitted from same mast. Same critical reception for colour and black and white.

Three versions: T 20—UHF Group A. T 21—UHF Group B. T 22—UHF Group C.

HERE'S YOUR PROFIT NEWS

We call it **Quantity Discount**. You'll call it *big profits*. The more you buy, the less you pay for each one. Send for details of **Quantity Discounts** on our complete range of profit-boosting aerials.

LEG KITS

Boxed sets with fittings for TV tables and sets, radiograms, etc. In aluminium, steel or ebonised wood finishes. We're offering low, low prices on our complete range. That's **QUANTITY DISCOUNT** for you!

YOUR PROFIT'S OUR BUSINESS

JOIN OUR SATISFIED CUSTOMERS. SEND FOR DETAILS NOW OF QUANTITY DISCOUNTS ON GT 17 AND T20 AERIALS PLUS OUR COMPLETE RANGE OF PROFIT-BOOSTING TELERECTION AERIALS AND LEG KITS.

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A Member of the
Radio Rentals Group

AERIALS AT LARGE

continued

true that a system giving a noisy background on a mono picture is not good enough for colour.

This is because for a comparable subjective noise performance under similar conditions, a colour set needs almost 50 per cent more aerial signal voltage than a monochrome set of similar sensitivity and noise factor.

The maxim, then, is that for colour special attention must be given to the choice and erection of the aerial system.

Only a detailed knowledge of the signal conditions (shielding, reflection, absorption, etc.) in the area can lead to a correct choice of aerial. When a dealer is using an out-of-area aerial erecting contractor it is highly important that he acquaints him with the special problems of his area. One cannot leave the aerial system to chance now that the receiver itself is so expensive. Every effort must be made to ensure that the best possible signal voltage is presented to the set. There can be no excuse for poor pictures, especially in colour, being caused by a bad choice of aerial or by bad installation.

Since the mid-future of TV lies in the u.h.f. bands, it is desirable to treat u.h.f. in terms of an entirely independent installation, removed as far as possible from the v.h.f. installation, with the array mounted on its own mast in its own clear sky.

PANEL K RECOMMENDATIONS

Panel K of the RECMF has evolved various standards to which aerials must conform.

One requirement is that the maximum variation of gain over the u.h.f. band shall not exceed 3dB. Another is that the in-channel variation shall not exceed 1dB.

Aerial designers take great pains to ensure that their products meet these standards. It must be appreciated, however, that these carefully tailored parameters can be negated in practice by bad installation.

For instance, siting a critically designed aerial next to a v.h.f. aerial could well alter the tuning and phasing of signals and put troughs and peaks into the overall (and possibly channel) response characteristic.

DESIGN FACTORS

Signal over a certain spectrum can be 'sucked' away from a u.h.f. aerial due to the close proximity of metal items which have some relationship to the tuned frequency in length or size generally. This could put a trough into the response within the width of an active channel, and could delete or badly distort colour

subcarriers. Good colour pictures would be impossible from such an array.

The dipole feed to the download must always appear as a pure resistance over the whole bandwidth of the aerial. If the loading goes inductive or capacitive, curious loading effects result which can boost or attenuate certain frequencies. Colour subcarriers could be boosted or attenuated, impairing colour response, in spite of PAL. The loading can change from resistive to reactive due to the proximity effects mentioned above, or when an aerial is used for a group of channels for which it was not designed. It is most important that aerials correct for the local grouping are always used.

Wideband, resistive characteristics are achieved by integrated design, with carefully computed element and spacing dimensions. There are various ways of arriving at the required end result, which is why aerials of comparable performance differ in make-up.

There is a limit to the amount of signal that an aerial will abstract from the ether, but generally speaking, the more sophisticated the design, the greater will be the signal voltage fed to the set, other factors being equal.

The polar response of an aerial influences gain in various ways. One design may produce a technically ideal response, while another may produce much the same response but with a greater number of subsidiary lobes. The former design could have greater gain than the other at one frequency. The second may retain its polar response over the whole spectrum, whilst the former develops lobes at different frequencies. There are many interdependent factors involved.

Some makers claim that a balun is essential to couple the balanced dipole to the unbalanced coaxial download; others take almost the opposite view. Some designs are less sensitive to coaxial unbalance than others, and it would be wrong to conclude that aerials without baluns are less efficient than those with.

Another Panel K standard says that aerials with five or more elements should have a minimum front-to-back ratio of 16dB to ensure maximum rejection of signals arriving at the rear of the array. This requirement will become more important as more u.h.f. stations come into use.

U.H.F. CO-CHANNEL

It has been said that co-channel interference will not give trouble in the u.h.f. bands due to the rapid fall-off of signal with distance and because ionospheric

and tropospheric reception freaks are rarely encountered in these bands.

I should like to kill this myth once and for all!

Since the opening of channel 33 I have been checking u.h.f. signals at a site 200ft up on the south side of Devon. Using a ten-director Parabeam I have from time to time received signals from all over the country, and from Europe, often of amplitudes up to 1mV at the feeder end. Whilst writing this article I was able to receive four BBC2 stations, plus two European stations (in colour!). One of the latter caused bad co-channel interference on my local (100 mile distant) Isle of Wight Channel 24 programme. Enough to prove, I think, that co-channel interference does exist on u.h.f. and a good reason why aerials must have a good front-to-back ratio.

In areas up to 30 or so miles from a powerful u.h.f. station less elaborate arrays will often suffice, and to balance this article the trend towards v.h.f./u.h.f. aerials must be reported.

I am pleased to note the introduction of a system of this type from Belling-Lee Aerials called 5U12/C. (See *Recent Releases* this month.) It has a Band III section covering Channels 9 to 12 for vertically polarised signals, and a u.h.f. section with 12 elements in group C horizontal polarisation.

Composite aerials are made by most major aerial firms, and are designed essentially for use in areas served by co-sited v.h.f. and u.h.f. transmitters.

For more distant reception, the u.h.f. aerial should be outdoor, roof mounted as high as possible. Roof-space u.h.f. arrays should be used only where the signal is more than twice that required for a good picture — this usually means within 30 miles of the main station.

Much publicity has recently been focused on the set-top aerial. This type of aerial must be technically undesirable when the half wave length is of similar dimensions to objects in the room, and because of the low altitude of the set. People moving about near the set can affect the signal in various ways. One could never recommend an aerial of such variable parameters for colour, though. Definitely not.

RADIO AERIALS

Some mention of the neglected v.h.f./f.m. aerial may be useful. Now that stereo radio broadcasts are being put out, and with the advent of local town programmes in Band II, f.m. aerials are coming into prominence again.

Normally a simple 5ft dipole is all that is required, but in cases of impulsive interference more signal should be fed into the set. This will push it harder into a.m. limiting and make for even better reception.

Stereo reception may need an array comparable to that used for v.h.f. TV, since the overall signal/noise ratio is cut by about 20dB. Even on mono, a stereo signal yields a 4dB worse signal/noise ratio performance than the same set-up running mono, with a mono signal.

'Golden Gain' aerials - still Britain's best-sellers

It's 'Golden Gains' for golden profits. Sales-chart toppers right from the earliest UHF days, Aerialite 'Golden Gain' Aerials have also led the BBC2 field since the opening of the service. They have a great future in colour, too. Outstanding features for perfect reception . . . proven durability . . . handsome golden finish. A combinator that will dominate the TV skyline until Aerialite think up a better aerial - though that hardly seems possible!

'Golden Gain' - Britain's best-selling aerials
'Aeraxial' - Britain's best-selling coaxials
Send for comprehensive literature on both

Aerialite Ltd

Hargreaves Works, Congleton, Cheshire
Tel: Congleton 3892



CW15264

AERIALS AT LARGE

continued

And what of ordinary steam radio? In most parts of the country the internal ferrite rod copes adequately. In the few spots of poor signal a 25ft length of wire connected to the external aerial socket often does the trick, if the station can then be separated from all the others close by. This may solve daytime problems but after dark, or for those sets which do not respond to the simple wire aerial (due to mismatching, lack of coupling coefficient, etc.) I have found that a wide band m.f. amplifier, such as the Karad, solves the problem.

AGREED PROCEDURE

I have just finished reading the RTRA/RECMF Agreed Procedure* on the installation of TV aerials and feeders, and have no hesitation in commending its authors in all respects.

I would have liked to see the section

in Checking and Alignment which deals with the use of a signal strength meter amplified. It is my view that any aerial erector operating without a signal strength meter — especially in u.h.f. areas — can be considered akin to trying to get the best results from a repair without having a multi-meter.

A signal strength meter is a bread-and-butter u.h.f. and colour installation/servicing instrument. The extra 4dB signal required to make the difference between fair and good colour can easily be lost in aerial mal-orientation. It is impossible to detect a change of 4dB by looking at a picture either b & w or colour and translating any difference in terms of directions to the man on the roof.

An article in this month's issue of *Service Engineer* gives details of some of the meters which are at present available.

MINIMUM SIGNALS

The Agreed Procedure does not specify a minimum level of feeder signal for satisfactory noise performance, since the noise factor increases with the channel number and can differ between sets, depending on the nature of their tuners.

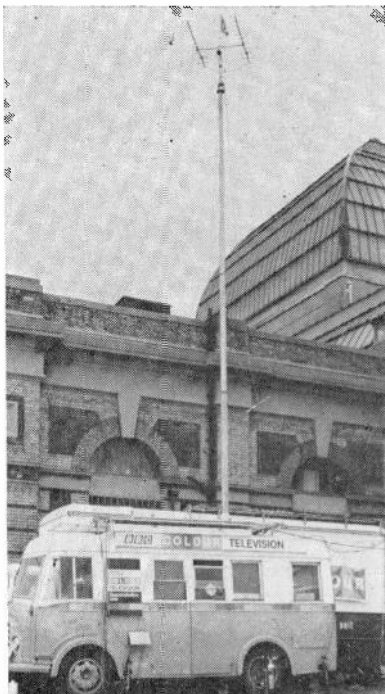
Nevertheless, a good working minimum signal for v.h.f. is 0.5mV, and for u.h.f. 1mV on Band IV to 1.5mV on Band V monochrome, and 1.5mV to 2mV respectively for colour.

There will be areas where signals below these levels will have to be tolerated, but some compensation can be achieved by using a low-loss transistorised preamplifier. Unless the feeder exceeds about 50ft there is little advantage in siting the amplifier at the aerial.

The Agreed Procedure is well worth reading. It covers such aspects as Preparation, Assembly and Installation, installation of the Feeder, Checking and Alignment. Dealers subcontracting their aerial work should certainly insist that their subcontractor is familiar with the Procedure.

Gordon King's latest book, *THE PRACTICAL AERIAL HANDBOOK*, is reviewed in this month's issue of *Service Engineer*.

*Agreed Procedure on the installation of Television Aerials and Feeders: R.T.R.A. at 9d. a single copy.



A 2 x 12-element J Beam Parabeam array was used by the BBC on the mobile colour TV demonstration unit which was part of the Colour Comes to Town Exhibition.

BBC SURVEY shows that half the complaints are due to FAULTY AERIAL INSTALLATIONS

In a BBC survey of u.h.f. television reception in the service areas of the Crystal Palace, Sutton Coldfield and Winter Hill transmitters it was found that in more than 50% of the cases of unsatisfactory BBC2 reception the major cause was the use of inadequate or badly installed aerials. If suitable aerials were installed in these cases it was concluded that more than 90% of viewers in the large sample of households investigated would assess their BBC2 reception as being satisfactory.

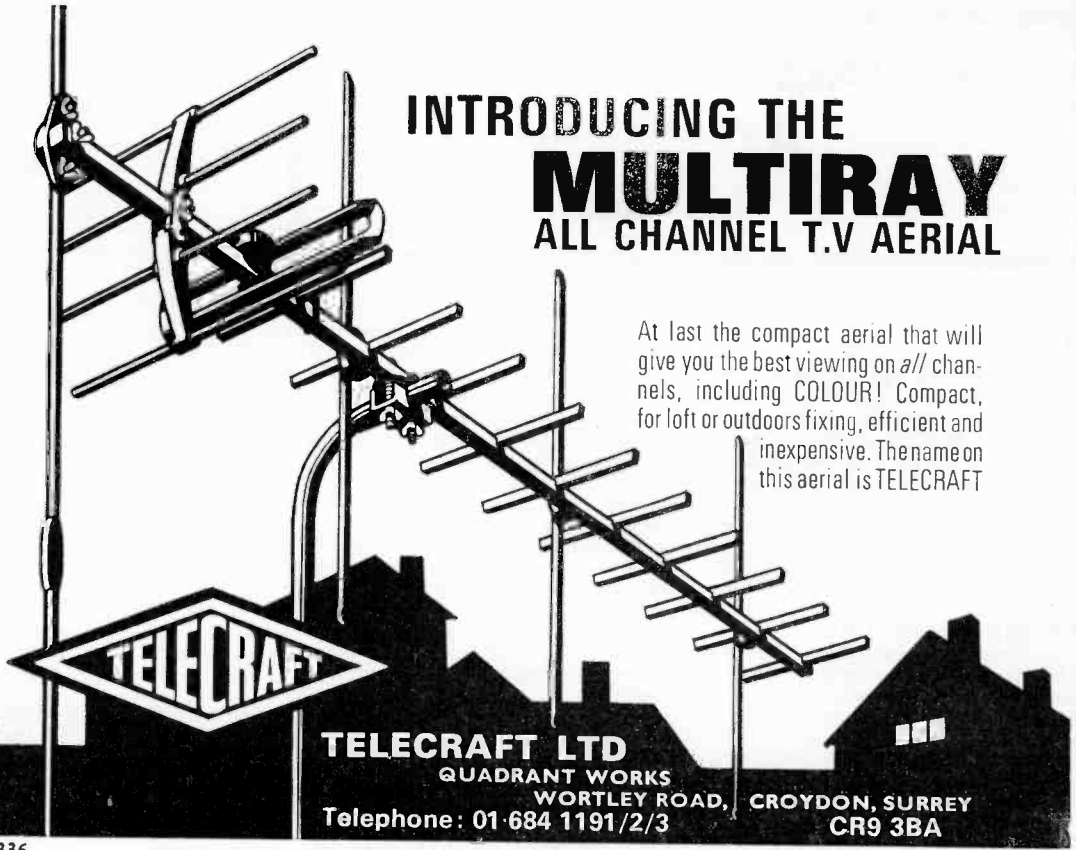
In a supplementary survey of a random selection of 122 homes in the Crystal Palace service area, where BBC2 reception has been reported as being unsatisfactory, it was found that satisfactory reception could in fact be obtained in 98% of the cases by using an ordinary domestic 10 or 12 element aerial.

In the course of further investigations which have been carried out by the Engineering Information Department of the BBC into complaints of poor BBC2 reception, it has been demonstrated that in two-thirds of these cases the difficulties could be overcome by using an ordinary 10- or 12-element domestic aerial carefully installed on the roof and connected through low-loss feeder to a receiver in good working order. The reception difficulties have been found invariably to be due to aerials of insufficient gain and/or directivity for local reception conditions and to incorrectly positioned aerials.

For best results u.h.f. aerials should in general be erected as high as possible well clear of the roof tops but there are always exceptions. For example, in one case where the viewer had complained of a varying BBC2 picture and ghosting the BBC investigators found that a good aerial had been installed well clear of the roof top but was directed 180° off the true bearing of the transmitter and was pointing towards a local gasholder which was providing a strong but variable reflected signal. The aerial contractors had apparently spent two days on this particular installation. The BBC engineers found that with an aerial fixed at eaves height, correctly directed towards the transmitter and using the house as a screen against the reflected signals, a satisfactory picture was obtained.

INTRODUCING THE **MULTIRAY** ALL CHANNEL T.V AERIAL

At last the compact aerial that will give you the best viewing on *all* channels, including COLOUR! Compact, for loft or outdoors fixing, efficient and inexpensive. The name on this aerial is TELECRAFT



TELECRAFT LTD
QUADRANT WORKS
WORTLEY ROAD, CROYDON, SURREY
Telephone: 01-684 1191/2/3 CR9 3BA

Ref. Ad. No. 336



AERIAL INSTALLATIONS

- COMPETITIVE PRICES
- FULL TRADE DISCOUNTS
- SPECIALISTS IN COMMUNAL TELEVISION DISTRIBUTION SYSTEMS

Contractors to Municipal Authorities, Government Departments, etc.

Belcher's 22 Service Centres are staffed by fully-trained personnel and, at branches marked *, a complete TV aerial installation service is available. This is a special division of Belcher's—the most comprehensive trade servicing organisation in the country.

*BATH	23141	*MAIDSTONE	26022
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*BOLTON	21724	PENRITH	2887
CARDIFF	37420	PERIVALE	Alperton 1731
CHELMSFORD	57158	*READING	84584
*DERBY	40537	REDRUTH	5656
EDINBURGH Waverley	6373	*SOUTHAMPTON	73034
*EXETER	66141	STOCKTON-ON-TEES	68576
*LEICESTER	Oadby 3368	*STOKE-ON-TRENT	88617
*LEWES	3241	*WORCESTER	26373
*LINCOLN	20403	*YORK	25242



Head Office: Kings Mill, Loudwater, High Wycombe, Bucks.
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Ref. Ad. No. 337



ON THE CLUB

Have you ever mused as to how nice it would be to have a spell of sick leave with some malady which doesn't hurt and doesn't confine you to bed, and where you had to do as little as possible for as long as they could make you? I know some people who find that their conditions of employment entitle them to 14 days' sick leave per annum make sure that they get it, but I consider myself too healthy to work that sort of fiddle. Imagine my surprise therefore to find myself sitting in front of the fire with boxes of pills, bunches of grapes, and strict instructions to do as little as possible. 'The more you do, the longer I shall keep you off', said the man with the little black bag. Being a born fidget by nature, and in a trade where yesterday is the right time to do your next job, this came as a bit of a shock at first. The family were all for equipping the arm-chair with a seat belt and padlock until I gave them my assurance that I would take the medicine as prescribed and surrendered the keys to car, shop and garden shed as a gesture of goodwill.

The first week was agonising, I had only to consider the amount of paper work accumulating in my file (most of it from suppliers with automated systems that make you do their work for them) and to wonder what was happening to all those difficult sales I had just been about to finalise, and my blood pressure shot up fit to convert a sphygmomanometer into a garden fountain. The tablets didn't seem to influence me much and, having read that same Sunday of people with incorrect prescriptions, I casually mentioned to the doctor that I didn't think much of those little green pills. 'They are pink, and you know it, and they are doing you the world of good!' he said.

The second week was much nicer. They are bound to have made a start on my backlog now, I thought, especially since the doctor, when asked about my

return to work was as non-committal as you are when asked to give a part exchange value on an unseen twin-tub. I even ventured out into the world to do a little light shopping, which was a mistake. Everybody I knew seemed to be in the High Street at once. 'Have you forgotten my legs?' said one. I looked down and saw that she possessed the statutory pair needed for perambulation, and that they looked in pretty good shape.

'Eh?' I said blankly. 'It's still on the kitchen chair,' she added. 'Oh,' said I, and mumbled something about you can't get the wood. I should have told her that I was on sick leave and that the shop was the place to enquire, but I didn't have the courage somehow. The truth seemed such a lame excuse. 'It still isn't right' said another. 'Nipping out for a quiet bit of shopping whilst the boss isn't looking?' said a third. A fourth, who knew I was on the sick list insisted upon telling me about her brother, who had not only had the acute form of it twice, but that they had had him in for it and dare not operate! 'Very sad,' I said, and felt slightly dizzy at the prospect. If life was snakes and ladders, I had just landed on the square marked 'Go back three spaces'.

Things were not improved by my lack of success in my quest for merchandise. For once I found myself looking at shopkeepers from the other side of the counter. I had been sent out for ½lb of dried apricots. Being a reasonable man I would have settled for a whole pound if necessary. First I tried visual inspection of the shelves in the Supermarkets. No luck. Then I tried the little grocers in the side streets. Still no luck, but the variety of excuses proffered was entertainment in itself. Finally I went back to the Supermarket and asked somebody. This proved more wasteful and more entertaining than before. Supermarkets just do not want to know. Later my wife walked straight up to the shelf where the girl said there wasn't any and helped herself to the very thing I had sought all day. I have carefully listed the excuses proffered: 'We have some on order . . .' 'The other girl is at lunch . . .' 'Would figs do?' 'It's the dock strike.' 'Not many people ask for them nowadays.' 'They found something wrong with them and called them all back.' I mentally substituted 'Pink hair dryer' for dried apricots, and find that in my time I have been guilty of all those excuses and more. I returned home to sit and ponder as prescribed.

Happily I am now back at work sobered by the thought that to be comfortably sick these days, one must have at least a fortnight's housekeeping tucked away somewhere, and the patience of Job. The joy of being back amongst ones mates and of being able to start a clean sheet was short lived. 'We left these for you to follow up' they said, 'Having regard to the interest that you showed in them.' You guessed it—all the sticky ones!

POSTAL CODES

Talking about doing other people's work for them as soon as they become automated, how do you get on with the new postal codes? I do not allude to the well known London areas such as W.C.2 etc., which are self-explanatory and easy to remember, but the new CR8 4DP type of thing which is difficult to remember, and impossible to pronounce, and which only a computer's mother could love. It wouldn't be so bad if, having put CR8 4DP or whatever on the letter one could omit the 'Purley Way, CROYDON, Surrey' bit, but as Ted Short still has a few human beings left working for him, this cannot be just yet. My own solution would be a slight discount to the sender to offset the work he does for the P.M.G. It would be nice to see the cancelling machines message changed from 'Norwich Addresses Need Postal Codes' to 'Postal Codes Need ½d. less postage'. I doubt if this will happen. Nothing apart from television ever goes down in price. I shudder to think how we shall communicate one with another in the future. With a S.T.D. telephone system giving us the means to dial our own wrong numbers, we shall turn back in despair to the old fashioned letter post to find two classes of mail available: an expensive service for first class mail at least as fast as the present one, and a more leisurely second class mail at least as cheap as the present one. Those little Japanese Walkie Talkies we dare not sell might come in useful after all.

THE STRONG MAN

There is a whole page ad. in the current edition of *Radio Times* which shows a man carrying a television set. The caption reads: 'This man feels very strongly about giving you a better picture—he's from Bush'. The small print is all about quality control, black level clamping, and colour television, and reads a lot of sense. The picture is the important thing, however. Try and get hold of a copy and look at it. Take from your stock a model similar to the one illustrated, and pick it up just like the man is doing with your hands half-way down the woodwork, the screen facing outwards, and the cardboard back pressing into your tummy. Got it? Now take it somewhere and put it gently down. How do you feel? Weakly? The Bush man feels strongly. Doubtless they breed them tough in the Bush country, but I think it's only fair to tell him that provided he keeps his buttons out of the way it's a lot easier to carry the set the other way round. He will never get it through a customer's door the way he carries it.

Post Script

Since I wrote the bit about the strong man another *Radio Times* has appeared. In it is another ad. from Bush, showing the same man and the same set but taken from a different angle. The headline reads 'Now and again someone drops a Bush TV!'

by a
Provincial Dealer

Out of 720 entries in this year's annual Ever Ready window display contest, the Challenge Cup and title of National (non-professional) winner was awarded to the display shown here. The entry was from U. F. Hawton of Lawson Ltd. Plymouth. On the opposite page is shown the winning professional entry from B. Revell of Le Lievres St. Heller, Jersey.

WHERE DOES ALL THE P.O.S. GO?

A MAN WHOSE WORDS are always worth listening to, E. G. Marshall, marketing director of Abbey Goodman Display, recently spoke his mind about some aspects of the display material provided for shops.

He was talking at the BEAMA conference. What he had to say about the attitude of the manufacturers to the point of sale material they supply to the retailers was interesting and revealing.

It is well known that in practically every trade there is a tremendous wastage of expensive display material. It is produced and distributed to the shops, but for a variety of reasons, often simply because it is too large or the wrong shape, it is frequently never used.

The only companies using point of sale material effectively are the chains. They get exactly what they want, and because they employ everyone in their retail outlets, ensure that it is used to best advantage.

Next in efficiency are the voluntary groups of retailers. They are not forced to use the material but, because it is specially tailored—really effectively—for their needs, they use it on a large scale.

RESEARCH

In his remarks, Mr. Marshall devoted himself mainly to commenting on the position of market research in relation to display material, pointing out modestly that he was not himself a professional market researcher. He was also careful to explain fairly that at that stage he could not give the official views of the Association of Point of Sale Advertising (APSA) except to say that they certainly agreed research into the effectiveness of point of sale material was needed and would do all they could to help see that it was provided.

Mr. Marshall is not afraid of speaking out. I quote: '... what really needs looking at, irrespective of the product, are the cobwebs which over the years

have accumulated in the basements, the cobwebs of muddled thinking, acceptance of traditional limitations and obstacles, and in general a negative attitude to the whole conception of P.O.S. display and its function.'

Those words could well be framed and hang in the office of the managing director of almost every consumer manufacturing company in the country.

WASTE

Mr. Marshall got down to cases. 'In spite of a declining trend in expenditure,' he said, 'your industry, excluding the Area Boards, spends around £6 million a year on press and television advertising. No figures of expenditure on P.O.S. are available but experience plus a realistic projection of figures from sources such as the I.A.A. and the P.O.P.A.I. of America would seem to suggest that of this quite formidable sum of £6,000,000, at least 12½ per cent or three-quarters of a million pounds, is spent by you on all forms of P.O.S.'

He went on, 'Not surprisingly, no figures exist to prove how much of the £½ million is wasted. I once suggested in a talk to the F.B.I. that the waste factor of P.O.S. might be as high as 70 per cent, but one irate gentleman corrected me by saying that he had never had more than 60 per cent of his P.O.S. wasted. How strange that by implication he should feel this to be a satisfactory

state of affairs.'

Mr. Marshall believes in his own remedies. His own company commissioned a Gallup survey into the buying and distribution habits of the national advertiser and said: 'I believe that this research threw up some pretty damning indictments.'

FACTS WITH FIGURES

It was found that very few companies in Great Britain have a specialist controlling all aspects of P.O.S. activities and one company in twenty has no executive responsible at all. In 26 per cent of the companies the advertising manager was responsible, which is reasonable, and in 9 per cent the marketing manager.

It was clear that, while a lot of people with various titles had responsibility for P.O.S., there was no P.O.S. manager as such, which Mr. Marshall appeared sensibly to feel would be the right kind of appointment for many large companies.

To come nearer home, the research showed that 'Two in every three companies are dissipating the potential impact of their P.O.S. by using untrained personnel and methods to "sell in" to the retailer.' How well retailers know this!

Only 38 per cent of the companies used a trained company sales force or special merchandising force for the purpose; the other 62 per cent either



used an untrained company sales force, wholesalers, or simply distributed the stuff by post, delivery van or other means.

Even worse, 64 per cent of the companies did not even see the point that 'selling in' of P.O.S. material should be 'a field for particular training or expertise'.

Mr. Marshall, like me, is far from being an uncritical believer in market research, at any rate at its present stage of development, but he believes as I do, that there must be some significance in those figures.

DESIGN OF DISPLAYS

The survey showed that 61 per cent of manufacturers never took any steps to assess the effectiveness of their point-of-sale material, and many others used what Mr Marshall described as 'transparently ineffective methods'. As a result, he concluded, 'At least 76 per cent of national advertisers have made no effort to justify either the money they spend on P.O.S. or the efficacy of the material they spend it on.'

It is therefore not surprising that manufacturers tend to plan and design their P.O.S. for the retailer inadequately and inefficiently. A total of 38 per cent are motivated by the appearance of the material as compared with 30 per cent who are influenced by its merchandising function. To be fair, 22 per cent are influenced by size (we are sure because they have been told to be by retailers). One manufacturer in twenty simply does not know what influences him in planning his P.O.S. material.

Thus manufacturers have a variety of generalised views on what the qualities of good display material should be. But these are just opinions—they are not based on what the retailer actually wants or needs. As mentioned above, most manufacturers take no steps to find out the effectiveness of their point of sale material.

CO-OPERATION

Mr Marshall asks: 'Would it be a revolutionary step to bring retail outlets more into the picture at the planning stage rather than present them with a



fait accompli?

It would. Every progressive retailer would agree. It could not fail to benefit both manufacturer and retailer.

Mr Marshall went on to make a remark that will gladden every dealer's heart. He said, 'I suggest that those responsible for P.O.S. planning should set their policy within the framework of a serious and realistic consideration of how their ideas will be looked upon by the dealer. You have not a hope of ramming things down a dealer's neck, and if you have not taken the same trouble to sell him on your display material as on your product, you can hardly expect maximum acceptance. I firmly believe that a greater investment of management time in presenting P.O.S. programmes to retail outlets would reap a rich reward.'

I might possibly query the use of the word 'sell' because I do not believe that a retailer needs to be, or should be, sold display material. If the material is right it will increase the dealer's sales and profits just as it will the manufacturer's.

What the dealer needs is someone to put him fully in the picture when point-of-sale material is to be produced, or has been produced, and convincingly show him that it will work and work hard on his behalf.

If the display material will not do a selling job to the public, it would be hopeless to sell the retailer on it.

If it will do a good job, then the retailer wants a helpful merchandiser, or expert by any other name, to talk to him about it and assist him in using it in his shop to the best advantage of everybody concerned.

Mr. Marshall certainly believes that the manufacturer should ask the retailers' advice. In his summing up he states, 'You can individually make better use, under professional guidance, of your customers' enquiries so as to assess what factors sparked off their interest. After all, you have there an ideal sample, full—we hope—of enthusiasm for *your* product, and surely articulate enough to respond to carefully planned research.'

WHERE IT HURTS

THIS is not a political column; but recent economic developments inevitably will hit every television and electrical retailer where it hurts most—in his pocket.

The government's folly, started the moment they took office, and persisted in, was to defend the pound, keep Britain an international banker, and defer to the Treasury. It cannot surprise anyone that Mr Wilson's background (of which he is proud) is that of an economist.

As a nation we should have cut our coat according to our cloth. This could have been done simultaneously with

creating and maintaining boom home market conditions. We should have let the pound find its own level, given up our international currency pretensions, told the Old Lady of Threadneedle Street to speak only when spoken to, and sacked at least half of the civil servants in the Treasury.

The pitiful thing about the present situation is that there is no sign what-

soever that the government have yet given up their policies despite being forced to eat all their words and devalue.

There is no need whatsoever for a new, harsh freeze and squeeze to accompany devaluation. On the contrary it should have led to a flourishing, bouncing time on the home market. We should be looking forward to selling far more of our products instead of far fewer.

Not only is the government continuing to pursue wrong policies, but it is pursuing policies which it cannot control. Everybody else has the economic initiative except the government. Going the way it is going, it can at best only pretend to be in charge of events. In practice, it has put itself in the position of being their slave.

PEOPLE IN THE PICTURE



E. Ouaknin
Fidelity Radio

J. S. Batty
Stanley-Bridges



J. Prange
Grundig

V. P. Marciandi
Englehard
Hanovia



EDMOND OUAKNIN has been appointed a director of Fidelity Radio three years after joining the company as company secretary.

The BBC announces the retirement in April 1968, of **T. H. BRIDGEWATER** as chief engineer, television. He is to be succeeded by **S. N. WATSON**. Mr Bridgewater joined the BBC in 1932 at which time he was engaged on the experimental 30-line TV system. Mr Watson is at present head of designs department.

ROGER MORGAN, for many years a senior sales executive with Morphy Richards, and more recently with Rima Electric, has joined Saltire Electric as sales manager.

J. S. BATTY, since 1966 manufacturing manager for Stanley-Bridges, has now been appointed director of manufacturing for the company. **C. F. WHEELER**, rejoins the company as managing director after a spell with a South American subsidiary, the Collins Group.

J. PRANGE, for the last two years Grundig's southern area manager, has been appointed sales manager of the company's newly created accessory division.

DERICK REFFOLD has been appointed director and secretary of the Electrical Wholesalers Federation as from the beginning of the year. He succeeds **P. ETHERIDGE**.

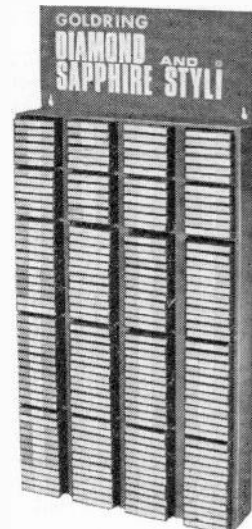
V. P. MARCIANDI, previously director and general manager of Wilson & Mathiesons, has been appointed general manager of Englehard Hanovia Lamps.

New eastern area manager for BRC is **C. M. FRASER**, until now the company's Ferguson representative for Yorkshire. He is succeeded by **G. BEAUMONT**, lately with Murphy Radio. **J. M. WEIR** has retired as Ferguson representative for south west Scotland and is succeeded by **J. E. B. POLLOCK**, who also comes from Murphy.

Heading a new division of Ronson Products set up to handle sales to major multiples is **KEN LAWRENCE**, for the last 13 years sales manager of the company's electrical division. His old post

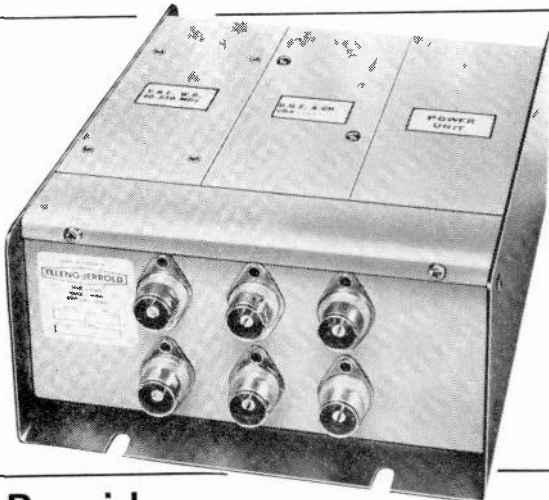
As long as you're out to make profits, you might as well do it in **STYLI**

Goldring's approach to Styli sales means you'll get more out of it than just goodwill. The new Goldring Stylus Selector System does away with guesswork and groping, lets you deal with styli sales instantly and efficiently. The wall-mounted dispenser (a boon to dealers with limited counter space) holds a complete selection of up to 16 dozen fine Goldring Diamond and Sapphire Styli in neat, quickly accessible position. Packaged in rigid plastic for greater protection, the styli are rapidly identifiable from the leading edge, and your customer's specific requirements are determined at a glance from the easy-to-read wall chart. Couldn't be more simple! Order your Goldring Stylus Dispenser System today.



GOLDRING MANUFACTURING CO. (GREAT BRITAIN) LIMITED
486-488 High Road, Leytonstone, London E.11. Tel: Leytonstone 8343.

Teleng's new transistorised Mini-Essex distribution amplifiers



Provide (Up to 6 outlets)
Unbeatable value
 for small blocks of flats, retail showrooms, workshops, etc.

- Designed on a simple modular basis, series comprises:
1. Power unit, complete on base tray and including output diplexer and six-way splitter.
 2. Two amplifier modules—broad band VHF unit, single channel UHF unit. Available separately so unit bought for VHF, say, could easily be converted later on to a complete assembly.
 3. UHF amplifier has provision for powering a Mast Head amplifier.

SPECIFICATION (complete assembly)

Gain..... Greater than unity into all six outputs
Frequency..... 40-230 MHz + one 8 MHz channel in 470-860 MHz
Output level..... 6.0mV max. into each outlet (rms on Peaks) (2VHF + FM + 1 UHF channel)
Power..... 200-250V, 1.5 watts

Post coupon now for further details.

TELENG LIMITED

Church Road, Harold Wood, Essex
 Tel: Ingrebourne (IL) 42976

keep in touch with Teleng



(it pays!)

*Please send me details of the MINI-ESSEX amplifiers R E R 2

Name _____
 Company _____
 Address _____

PEOPLE in the PICTURE

(continued)

is to be filled by COLIN COOKMAN, who joined Ronson in 1964 as sales promotion and public relations manager. Taking over from Mr Cookman is A. B. ROBINSON.

Hoover have appointed J. WARD, previously marketing manager of GEC Domestic Equipment, to the position of product manager with responsibility for small appliances.

Newly appointed as south west area manager for the Creda division of Simplex Electric is I. L. FREWER.

F. JARZEMBSKI, formerly a director of the Dal International Trade Enterprise in Warsaw, has been appointed managing director of Daltrade.

Rank Bush Murphy announce the appointment of O. G. JONES as general sales manager responsible for Bush and Murphy sales activities in the UK. He has been with the company since June 1966. P. L. W. TURNER, who recently joined the company, has been named product manager for radio and audio equipment.

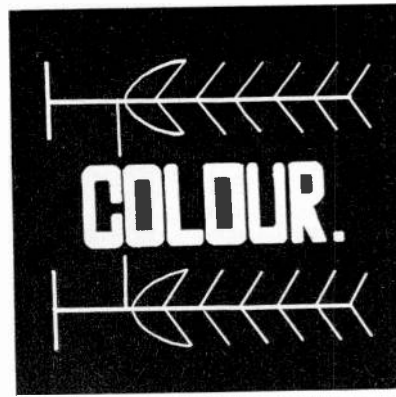
Morphy Richards have made several new appointments in their marketing department. R. CORFIELD, for the past four years a marketing executive with the *Sunday Times*, has been appointed a product group manager. S. BROOKES, who comes from Ideal-Standard, is a new assistant product group manager, as is J. CUMBERLAND. G. McBRIDE, previously the company's assistant merchandising manager, now becomes merchandising manager. New regional sales managers are: D. J. SPENCER for the west Midlands; L. J. GREEN for the north west, and R. A. WHITE for the east Midlands.

B. E. GRAY has been appointed director and secretary of the Electrical Contractors' Association and Allied Associations. He succeeds G. T. KING. Mr Gray has been secretary of the Association since 1964.

J. M. PAGDIN has been appointed sales manager of Electrolube, taking over the responsibilities of former sales director T. BORK who recently retired for health reasons.

R. W. FARLEY, who has been associated with the wholesale trade for many years, has joined Multicore Solders as representative to cover the southern part of the country.

What's better than a 'C' AERIAL? —



Why, two of course

STACKED ARRAYS FOR COLOUR

'C' Aerials Ltd.,
 14-15 Quarry St.,
 Guildford, Surrey.
 Tel: 67704

HAVE YOU HEARD ABOUT

WHOLESALE DINE E26

THE ANNUAL General Meeting of the Electrical Wholesalers Federation will be held on Thursday March 28th, at the Park Lane Hotel, London. On the evening of the same day the Federation's Annual Dinner will be held at the Dorchester Hotel.

GOING DECIMAL E27

ADWEL/REGNA announce that they are now fully equipped to undertake the pre-conversion of all Adwel/Regna machines in use in the UK. It is estimated that more than 100,000 machines are involved. To cope with the additional work the company has moved to larger premises at Armadale Road, Feltham, Middlesex.

FOUR YEARS FOR COLOUR E28

THE ALTERNATIVE 4 year guarantee on Mazda colour picture tubes will now be offered on 19 in. tubes, starting with type CTA1950. The dealer price will be £6 5s. with a recommended retail price of £7 15s. An explanatory leaflet for dealers giving full details of Mazda colour tube guarantees is available.

DEBT COLLECTION E29

NOW THAT the bank rate has risen to eight per cent the introduction of a new debt collection service by Cheque Guarantee (Insurances) is timely, since many small companies can no longer afford bad debts. The service is available to CGI policyholders at a special charge, and is also available to non-policyholders at an annual premium from 10gn. The only additional charge is a percentage deduction from debts recovered.

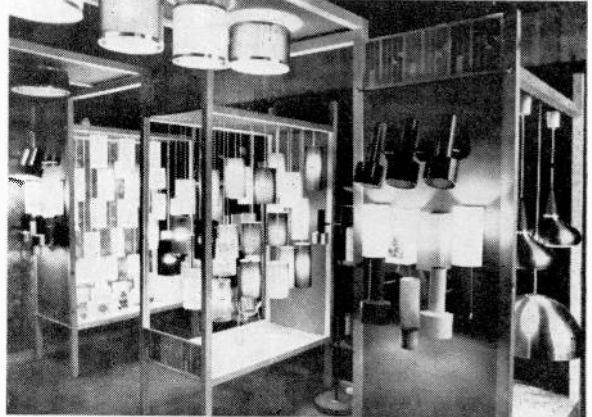
BICC EDINBURGH BRANCH E30

THE EDINBURGH BRANCH of BICC has moved to new and larger premises at 2 Bankhead Avenue, Sighthill, Edinburgh, 11. Tel: 031-443 5311. Manager is J. R. Duncan.

RETAIL ALLIANCE E31

LEADING RETAIL TRADE ASSOCIATIONS repr: senting important interests throughout the UK have agreed to form the Retail Alliance. Membership is limited to those Associations with a national membership of shopkeepers within specialised fields. Founder members include RTRA and the National Federation of Ironmongers. Objects of the Alliance are, 1) to express, and where

Plus Lighting have opened a show and stock room for the trade at 444 St. Vincent Street, Glasgow, C3. Their full range, designed by John Brown, MSIA, is on display.



appropriate, to take collective action on, matters of common interest; 2) to cooperate with other retail organisations; 3) to keep members informed and consulted on matters of policy affecting them; 4) to work for the ultimate creation of a permanent Confederation of the retail trades.

CONTRACTORS DINE E32

THE 1968 Annual Dinner of the ECA will be held at Grosvenor House, London on Monday, April 1st. The traditional second Tuesday in February has been abandoned in favour of linking the event with the Electrical Engineers Exhibition which is being held from March 27th to April 3rd. The Annual Conference of the Association will be held at Torquay from May 19th to 22nd.

TELEPHONE AMPLIFIER E33

THE NEW Fonadek Globemaster G-4 telephone amplifier uses silicone planar devices to give greater volume and better



quality reproduction. It can be used on any type of telephone and allows the user free use of both hands. It is available in two tone colours to match the new GPO instruments. A special offer is made to Fonadek users wishing to trade in old models for the G-4.

RTRA EXHIBITION E34

IN CONJUNCTION with the Annual Conference of RTRA to be held at Bournemouth from May 5th to 8th will be held an exhibition of radio, TV and electrical appliances in the Pavilion, Bournemouth. As a result of experience last year there will this year be three days on which the public will be admitted.

FACE-TO-FACE IN RETAILING E35

THIS IS THE TITLE of a new series of training programme produced by Training Techniques of Marple, designed to train managers and supervisors in the difficult skills of managing people and communicating effectively. The course challenges the traditional reliance on character and personality as the manager's chief qualification. It seeks to replace a management attitude that operates by criticism from a base of moral judgment by one that uses specific social skills to achieve well-defined objectives. There are six programmes in the complete course, each of which comprises a number of programmed instruction books, real life scenes recorded on four tapes, and comprehensive trainer's notes. The total cost of the six programmes is £450. The first programme, *Giving Orders and Getting Things Done*, is available immediately and is being made available at a special price of £50. Purchasers are entitled to a free place at a one-day seminar which will provide training in the correct use and application of the course. The company can also provide residential weekend seminars or off-the-job training sessions to augment the courses and ensure maximum benefits from their usage.

HAVE YOU HEARD ABOUT

SWITCH TO SAFETY E36

AN EXHIBITION under the above name outlining the work of BEAB and describing some of the tests BEAB undertakes before approving domestic appliances will open at the Design Centre in London on January 1st and continue until February 10th. On show will be a representative selection of appliances which carry the BEAB Mark of Safety.

TEMPO LIGHTING E37

A NEW BRAND NAME Tempo will appear on the domestic lighting scene as a result of the formation of the company Tempo Lighting at 70 Charlotte Street London, W1. (Tel: 01-580 6272). First products will be a range of pendants in the modern style. Retailers or wholesalers wishing to distribute the range are invited to contact the managing director.

ROTEL DISTRIBUTORS E38

ROTEL (GREAT BRITAIN) inform us that they wish to appoint distributors in this country for the Swiss made Rotel hand mixer. Interested dealers should contact the managing director.

STOP THAT FIRE E39

TAPED COMMENTARIES are now available for two of the training filmstrips produced by the Fire Protection Association—*Causes of Fire in Industry and Commerce* and *Structural Fire Protection*. The filmstrips cost £3 each, the commentaries £2 each.

GDS APPOINTMENTS E40

POWER SEMICONDUCTORS made by Westinghouse are now being distributed by Gawi Distributor Services. The company has also recently been appointed sole southern area distributors for the electrolytic capacitors made by Daly Condensers.

LABELLING COSTS CUT

E41 HANDY ANGLE announce a 30 per cent average cut in the price of their range of Vibracolor and Superflex printing tapes for use with their Handy Labelmakers. The tapes, which will adhere to practically any clean dry surface are supplied in boxes of six of any one colour from a wide variety, and in $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{8}$ in. widths.

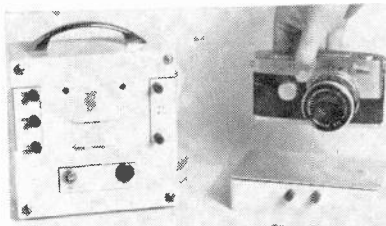
TELTAGS FOR MIXERS E42

FOOD PREPARATION machines are now included in the Teltag scheme. The first such licence has been issued to Philips for their HM 3060 mixer. The first section of the Teltag deals with safety and gives details of plug and fuse sizes and input wattage. The second section gives mixing speeds and lists the attachments avail-

able. It also gives the maximum time for continuous running. The final section gives performance measurements.

PROTECT YOUR DISPLAYS E43

A NEW, low cost, reliable alarm unit designed to eliminate theft from valuable display stock has been introduced by the Sentrycom division of Modern Automatic Alarms. Known as Portalarm



it comprises a 6 x 3 in. alarm/control unit which is connected to the goods to be guarded by a single thin wire. Alternatively the Portalarm system can incorporate pressure pads on which the goods are stood. Once set it is impossible to tamper with or block the alarm. Lifting of the goods sets off an alarm bell in the control unit. Any number of pads may be connected. The control unit costs £8, the pressure pads £1 each.

The company can also offer a comprehensive alarm installation for shops designed to protect any vulnerable points.

APAE EXHIBITION E44

THE 1968 exhibition of the Association of Public Address Engineers will be held from March 12th to 14th at the usual venue the King's Head Hotel, Harrow-on-the-Hill. The theme this year will be Outdoor P.A. There will be special displays of electronic timing equipment, scaffolding, outdoor speakers and micro-

phones for outdoor use. The Annual Dinner of the Association will be held on March 12th, and the Annual General Meeting on the 13th.

DISPLAY MARKET WEEK E45

INTERNATIONAL DISPLAY MARKET WEEK, the annual exhibition of display equipment, will be held at the Royal Garden Hotel, Kensington from February 19th to 22nd. An innovation this year will be an additional section for Store Equipment. This will be shown at the Royal Lancaster Hotel, Hyde Park, London.

MONOGRAM DISTRIBUTORS E46

FIVE NEW distributors have been appointed for Monogram's Consumer Electronics division. They are: Drury Radio of Liverpool; East Riding Electrical Factoring of Hull; A. F. Jarman of Leicester; Michael Black of Glasgow; Electrical Components, which has 12 branches. Robshaw Brothers are no longer distributing the company's products.

POWER FOR DISPLAY E47

A RANGE of compact low voltage transformers designed for use with display items is available from Process Units (Halifax). Outputs are 2A, 3A, 4A or 6A at 12V. Prices from 49s. Also new is a 230V. a.c. compact self-contained fluorescent lighting control unit suitable for low wattage display lamps. Price: from 60s.

USE THE PRE-PAID FORM ON PAGE 40 TO OBTAIN FURTHER DETAILS OF ANY OF THE ABOVE ITEMS, QUOTING THE REFERENCE NO.

literature RECEIVED

E48 LANCASHIRE DYNAMO ELECTRONIC PRODUCTS has published a leaflet covering its range of Starpac solid state a.c. power regulator modules. Starpac is designed for temperature control applications. It can also be used for the dimming of tungsten filament lamps.

E49 WE HAVE RECENTLY received the first issue of *Fidelity News*, a new dealer newsheet to be published four times a year. Its aim is to provide dealers with general information about Fidelity Radio and its products in the interest of forging a closer relationship between the company and its dealers. Of particular interest is an article *Profitable Displays can be Easy* by sales director Arthur Banford.

E50 A NEW LEAFLET NO. 77 from Linolite describes the new CA20 Safety Striplight with the longer light source.

E51 THE FIRST THREE SECTIONS of the second part of the British Standard for electronic tubes and valves, just published, give the first article sheets to replace the temporary sections of the standard. BS2251:Part2: 1967—*Sockets for electronic tubes and valves. Part 2: Article sheets for sockets and associated tools and gauges.*—contains requirements for the tests given in part 1 of the standard. The first three sections covered are Sections B7G, B9A and B8-0.

(Continued on page 36)



Police had to be called to control the crowds which gathered outside this new Colour Television Centre opened recently by Radio Rentals in the 'heart of the City' at 62 Cheapside, London, EC.2

YOU—and the DODGERS

AFTER January 28th television dealers will be required to tell the Post Office when, where and to whom they supply a TV set. The Post Office will know from its records whether the household concerned is licensed. If it is not, the householder may be prosecuted.

January 29th is the date on which the Wireless Telegraphy Act, 1967, comes fully into operation.

Maximum penalties to which evaders are liable on conviction, which were one provision of the Act, came into force last July. The penalties went up from £10

to £50 for a first offence and from £50 to £100 for a subsequent offence.

The information to be provided by dealers to the Post Office will help complete the GPO's list of households with television. After this the licence dodger will be at even greater risk of being caught than he is at present. Thirty thousand people were prosecuted for licence evasion last year.

The type of information dealers will be called upon to provide includes: Customer's name and address, Date of transaction and whether the set is a black and white set or a colour set.

From January 1st people using colour television receivers will be required to hold a new combined colour television and sound licence costing £10.

LITERATURE RECEIVED

continued

Members not doing their own installations are expected to obtain from their installation contractors an undertaking that they will subscribe to the conditions of the Procedure.

E56 PAINTON have recently reprinted their component summary brochure to include all their latest products. Included are resistors and chokes, plugs sockets and connectors, potentiometers, faders and attenuators and switches.

E57 THE LABOUR UTILISATION COMMITTEE of N.E.D.C. has published a booklet on the better use of labour in a firm. It does not pretend to set out all the solutions to the problems considered, but is intended as a practical check list of some of the aspects to be considered. Topics covered include: Organisation and planning of work in a firm; Management organisation; Job structures; Pay systems; Overtime; Work rules and Labour turnover.

E58 PLASTIC FOLDERS are now available for binding the *Abstracts of Interpretations* of the 14th edition of the IEE Wiring Regulations, the first set of which was published in June, 1967.

E59 JUST PUBLISHED is Part 4 of BS3999—*Methods for measuring the performance of domestic electrical appliances*. These methods are for use in the Consumer Council's Teltag scheme. Part 4 deals with electric clothes drying cabinets and racks, and specifies,

amongst other things, the maximum area of material which can be dried and the time taken to dry. Annex A outlines the information necessary for the Teltag label, and Annex B gives use and care instructions to be provided with the cabinet.

E60 THE TWO British Standards for asbestos cement boards for electrical purposes have just been revised. They are: BS3497:1967—*Specification for unimpregnated asbestos cement boards (incombustible) for electrical purposes*, and BS3503:1967—*Specification for bitumen-impregnated asbestos cement boards (self-extinguishing) for electrical purposes*.

E61 LEE PRODUCTS are now distributing their new Elpico catalogue, Lavishly illustrated, partly in colour, all pages are loose-leaf and can be supplied separately on request.

E62 DEMAND for Belling-Lee Aerial's recently introduced Colour TV aerial consumer leaflet (see Ref. E573, November, 1967, *RER*) has been so great that the company is considering a further bulk printing.

E63 A NEW British Standard—BS 4195: *Insulated flexible cables and cords for coil leads*—recognises eight types of insulated conductors—according to the material used for the insulation—for use as coil leads. Each type is further sub-divided into a number of voltage categories.

E52 ALL the important electrical and mechanical characteristics of a new family of nine low-priced, plastic encapsulated rectifiers are presented in a 12-page illustrated booklet from Westinghouse Electric Corp. The rectifiers are rated from 1.5 to 40A.

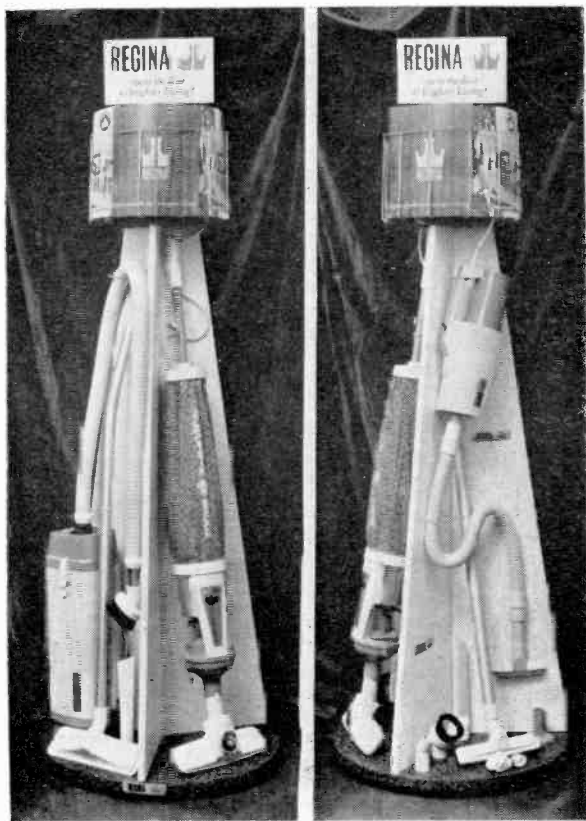
E53 THE 1967-68 edition of the booklet *Brimar Industrial Cathode Ray Tubes* gives abridged details of the tubes arranged in order of screen sizes. Notes are provided on screen phosphors and equivalents and there is a useful Comparables List.

E54 COMPREHENSIVE engineering data is now available for 56 plastic cased transistors manufactured by Sprague and available from WEL Components.

E55 FOLLOWING the announcement at the 1967 RTRA Annual Conference, the Association, in conjunction with RECMF, has produced an Agreed Procedure on Aerial Installation. All members of RTRA will be expected to conform to these standards and any serious departure from them may result in disciplinary action by the Association.

TO HELP YOUR SALES

manufacturers' advertising & sales promotion plans



Regina Electric Products have introduced an attractive new display unit for their dealers. It is available to retailers who have in stock any six Regina cleaners. Three appliances, together with promotional literature, can be displayed at the same time, so that it is only necessary to have three further Regina appliances in stock to qualify for the unit.



Now available from B. Adler & Sons, distributors of Eagle products, is a new display stand to carry the complete range of Eagle Educational Electronic Kit-sets. The stand is supplied free to any retailer purchasing a minimum quantity of 100 kitsets. It is 28 in. high by 22½ in. wide by 8½ in. deep and will accommodate several each of the ten different kitsets in the range.



SCHICK TRADE-IN

A THIRTY-FIVE shilling trade-in is offered against the purchase of a new Schick Electric Custom, Super-3-Speed or Cordless shaver. Retailers pass the old shavers back to Schick through their wholesalers for compensation. The offer is supported by retailer co-operative advertising. Four different sizes of blocks can be obtained direct from the company who will contribute on a 50-50 basis. New display units and window bills feature the offer.

The new Pifco Comb 'n Go hair styling comb, which is featured in the recently issued Pifco general catalogue, is now being distributed on a territorial basis. A big production programme is planned with considerable advertising and promotional support. Shown in our illustration is the attractive full colour display pack.

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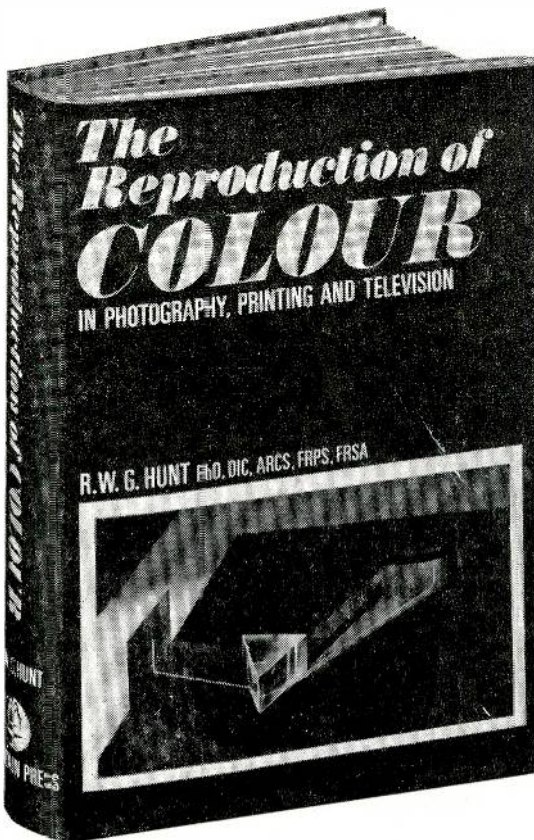
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By **R. W. G. HUNT**,
PhD, DIC, ARCS, FRPS, FRSA

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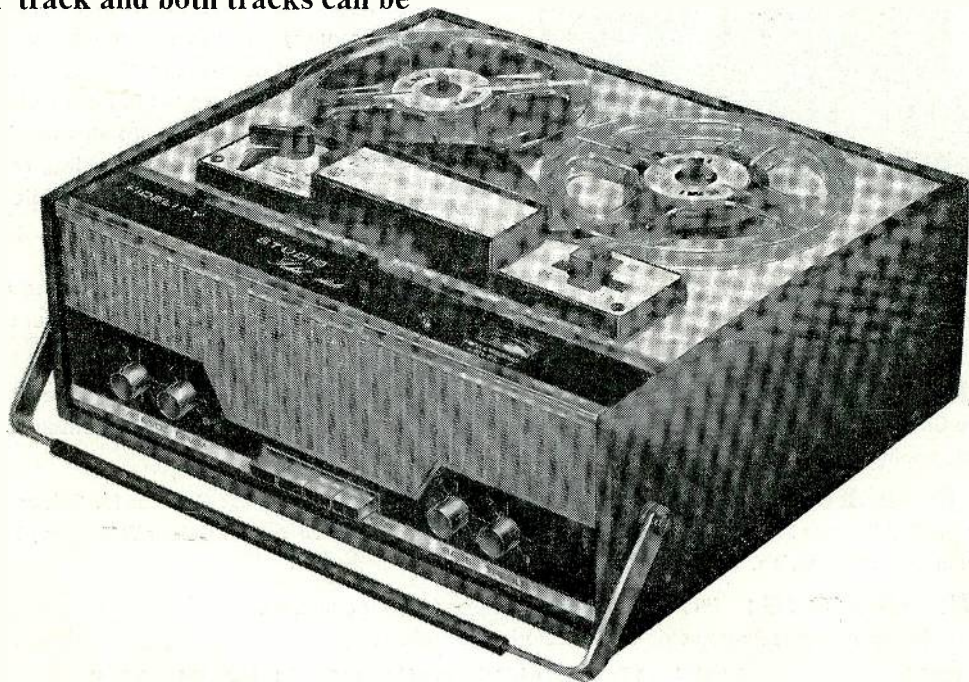
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