

THE TELEVISION ANNUAL

Edited by

KENNETH BAILY

Presenting Interesting Facts and Pictures

The entire interest of the said

THE
TELEVISION
ANNUAL FOR 1950/51

Edited by
KENNETH BAILY of "The People"

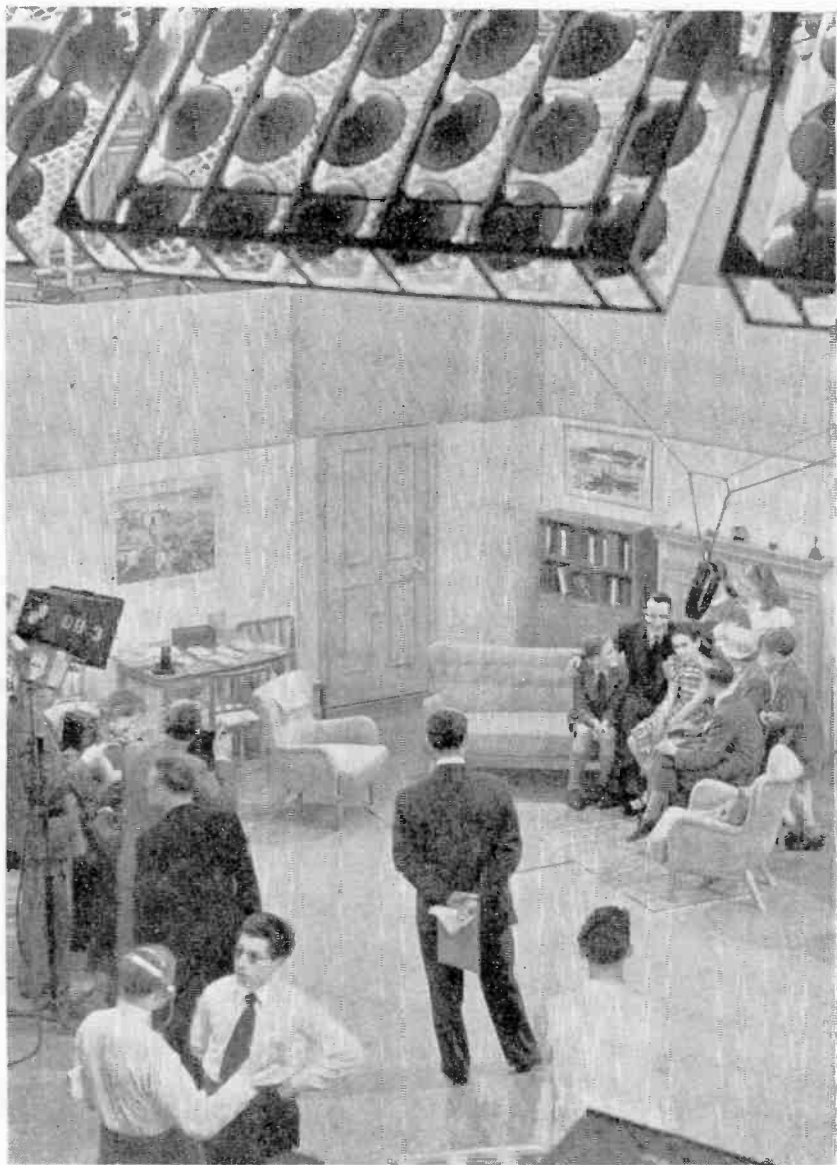
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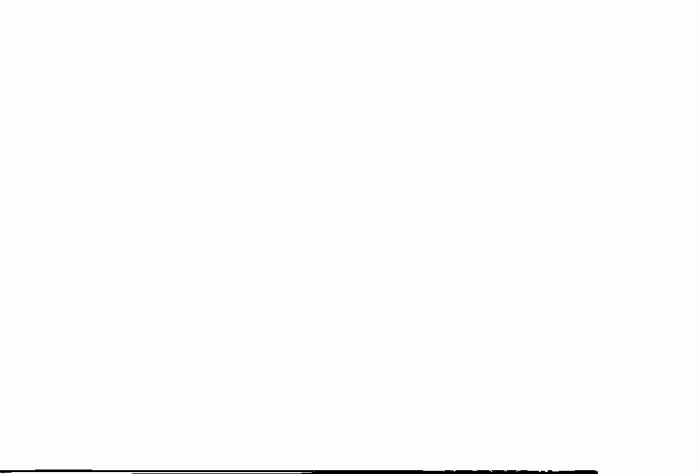
In May, 1950, Television stepped out into new and larger studios. Wilfred Pickles with the children in the first programme to be produced in the new Shepherd's Bush studio centre.

EDITOR'S NOTE

(See pages 11 and 12)

Since this book went to press, the BBC has in fact issued a more detailed note on its accounts, giving the 1949/50 revenue expenditure on Television as £1,172,714 (BBC Report and Accounts, September, 1950).

Even so the programmes speak plainer than figures. The best artists and writers are not being sufficiently attracted to Television, and production staff is too limited.—K.B.



THE TELEVISION ANNUAL

FOR 1950/51



Television shot of the year. Princess Elizabeth and the Duchess of Kent made one of many intriguing and brilliant shots caught by hidden TV cameras in the foyer of the Royal Opera House, Covent Garden, on the occasion of the French President's visit to the Gala Ballet Performance on March 9th, 1950.

TELEVISION IN BRITAIN

A Review

WHATEVER reasons some people may give for keeping television out of their homes, it is plain enough that increasing numbers find the fireside picture irresistible. Once a BBC transmitter brings the television programme service to their area, they have to take advantage of it—or at least as soon as savings or pocket covers the cost of the television set.

The small anti-TV camp puts up several reasons for its cold-shouldering of the home-screen. "I'm waiting until television is developed," say some. This presupposes that TV reception is a crude, peepshow affair; whereas that stage was really passed as long ago as 1939. Moreover, if sensational developments are awaited, the wait is going to be a long one. The definition standard of British television will not be increased for some years: this the Government of the country has pledged. Colour TV will not become a domestic service for years.

Or—"Viewing takes up too much time," say other opponents. This idea certainly appears to be borne out by the fanatical every-night viewing of the new viewer; but in reality I fancy the objection is a defensive reaction to TV's biggest challenge—its demand that we are discriminating and selective in our viewing.

New inventions are apt to give rise to sweeping generalizations about the changes they may cause in everyday life. Plenty of prophesies have already been made about the influence television may have on home life, and whether we agree with them or not the viewer who has just installed his first receiver will soon realize that he has introduced an alluring new magic into his family circle. It cannot help causing some changes.

The wilder generalizations predict that television will turn us into a race of stay-at-homes. It will replace theatre-going, cinema-going, sports-going. It will make book reading a drab bore. It will kill what remains of family music-making, and the hobbies of young and old. It will keep young people



Mrs. Attlee, wife of the Prime Minister, performed the televised opening ceremony of the new studio block at Shepherd's Bush — at the same time meeting Muffin the Mule, TV's unique star puppet. He plays a leading part in children's programmes which come from Shepherd's Bush.

at home in the evenings; and children will sit glued to the screen when they should be abed or doing school homework.

These predictions ignore our long-established gregarious instincts, which will always make us want to join with other people in amusements and recreation. They also ignore the fact that, like all inventions, television will not always be new, and will certainly slip into a proportionate place among all the other amenities of life.

During the first months of viewing, however, the exaggerated predictions may seem credible. For there must be very few households indeed who do not at first become enslaved to the new wonder in the fireside corner. To the new viewer, the lure of the screen is irresistible. Everything the BBC transmits must be seen, and consequently all other family occupations and chores are abandoned so long as the programmes are on.

This period of incessant viewing has been aptly termed by Norman Collins, BBC Controller of Television, "the honeymoon." And it can last for several months, or even a year or

more. We are only human, and we do not want to feel we are missing any part of the new experiences television can bring; and certainly, sometimes, they can be very wonderful and inspiring experiences.

This human weakness has, however, the unfortunate effect of blunting our discrimination in programme selection, and our judgment of what we see. The BBC's television programmes are not intended to be watched by everybody all the time. There are programmes for tastes very much in the minority; and even at the other end of the scale few productions can be so universal in appeal as to be everybody's meat. Though the honeymoon period is unavoidable, it does limit the amount of intelligent criticism reaching the BBC, for when everything televised is considered liable to be too wonderful to miss, judgment cannot be exactly acute. Verdicts on programmes are either over-enthusiastic or unreasonably damning!

The deepest enjoyment of viewing comes after the "honeymoon," when programmes are carefully selected with discrimination, and the screen is adamantly left blank at other times. When this stage is reached, viewers can also express criticism helpful to the BBC in making proper progress with what is, after all, a completely new medium of entertainment and enlightenment. They can then detect what things television can do supremely well, and what things it ought never to attempt. The more this important difference is discerned, the quicker will the BBC be led to guide television toward its fullest and most beneficial development.

When we are more discriminating in our viewing, we soon realize how exaggerated are some of the claims about the power of television for changing family life. We almost certainly find, for instance, that television of sports events makes us want to go out and see sport "in the flesh," more so than before. Similarly, television drama will certainly make us avid for any opportunity which comes our way of seeing plays on the live theatre stage. Television programmes may also awaken new and active interest in all kinds of home occupations, from painting pictures to cookery.

In fact, television will be assuming its right and sensible place in home life—as an additional home amenity, yet at the same time a spur to deeper and wider interests in all manner of outside activities.

This is not to say that TV has no quality of its own which can affect home life. It can restore a sense of family enjoyment and family enlightenment which may have been on the way out, if not entirely lost. The intimacy of viewing, the fact that it is done in the familiar surroundings of home, make it an experience you do not walk out of when it is over, as from a theatre play—but one which you may want to discuss and share there and then, and also in retrospect.

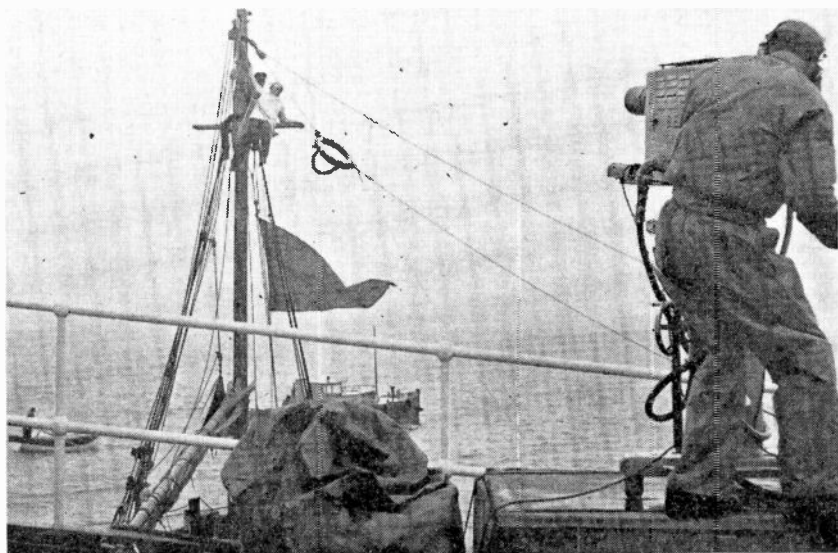
These things have stopped happening in listening to sound broadcasting. It has slipped into the background. There has been too much of it. It is often half-heard, sometimes ignored, and almost always quickly forgotten. But what the eyes see on a TV screen, the mind dwells on longer. Already, as TV strides on towards the north of England, towards Scotland, towards the West Country—it has the power to give families a view, in more than a literal sense. For this reason alone it behoves us to attempt some assessment of its policy, its control, its successes and its failures.

For too long the wonder of television as a scientific invention has been allowed to obscure the fact that the programmes provided by the BBC are too often amateurish. Originality, and polished and finished productions, are too rare in a service which had three years before the 1939 war, and has had four since, in which to develop.

The best talent is not being drawn into television; nor are the most imaginative and experienced writers and producers.

Two problems have to be solved. The first—how many hours of television can be produced without so diluting quality as to make the greater part of the output second-rate? The second—can the BBC, as at present administered, pay the top prices which always must be paid for the best talent and material?

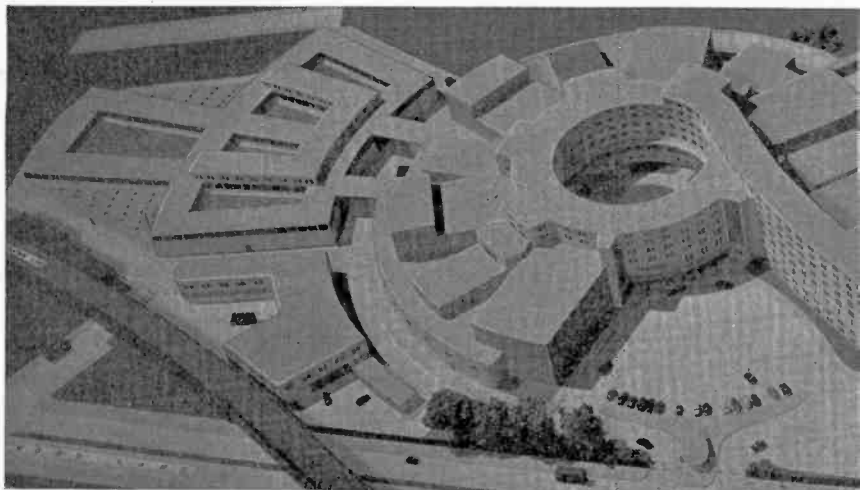
Neither the BBC's Board of Management nor its Director-General has yet given any assurance that the quantity of television broadcasting has been considered in relation to the cost. Every BBC statement about television has been superficial, concerned either with immediate and piecemeal developments, or, at the other extreme, with paper plans for grandiose developments years ahead. What qualitative and quantitative limits is the BBC working to in building its Television Service? It is time this was clearly thought out.



Viewers see the sea for the first time. Richard Dimbleby demonstrated sea rescue, off Southend—a broadcast which paved the way for picking up programmes from across the Channel.

If the BBC puts quality first in television broadcasting, it should not be straining as it is to extend the transmission hours. Because there is certainly not the money available, *under the present BBC system of administering it*, to provide more television than we are getting. Television is a medium which amalgamates with radio many of the complicated techniques and the expensive resources of films and theatre. It therefore requires vastly more money than radio.

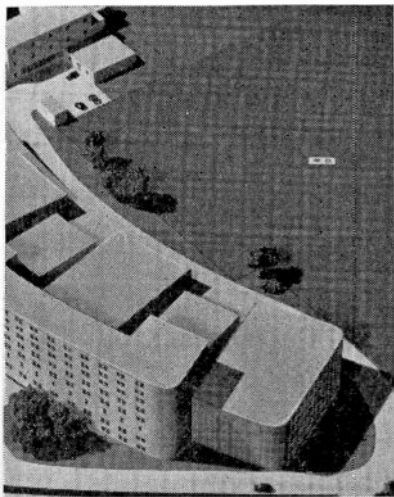
The BBC should also have recognized the fact that, financially, television is revolutionary, and requires not a mere extension of the financial allocations which are made for sound broadcasting, but an entirely new system of finance altogether. Licence revenue, as at present collected by the BBC, for both sound and vision broadcasting, will still fall short of providing adequate funds for a high-quality television service, even when the extra pound paid for television is being subscribed by the majority of the population.



Clinging to what it did with sound broadcasting, the BBC envisages a continuing expansion of transmission hours for television. It sees these filled by programmes planned and financed by the administrative machine which has run sound broadcasting.

That machine is notable for two things—its capacity to fill the air with cut-price entertainment, and its incapacity to make audacious experiments. Yet, if the television medium is not to be frittered away ineptly, it needs the constant spur of costly experiment.

The reasons for the BBC's unstatesmanlike management of its Television Service are mixed ones. To some extent sound broadcasting has become a vested interest at Broadcasting House, and television gets kicked around as the latest, and partly unwanted child. Then, the war caused a break in television development, and a temporary dearth of materials for studios and transmitters; and for too long both circumstances were made the excuse for muddled and piecemeal planning. Also helpful to a BBC which is cool towards television has been the fanatical enthusiasm of viewers for their first television sets. This has made "selling" the programmes far too easy; as soon as television reaches a district, sets sell themselves, and licence revenue soars, whether programmes are good or bad.



Television City of tomorrow. Model of the BBC's long-term plan for a new broadcasting centre, embracing TV and sound radio studios and offices, at White City, London. The circular ring and buildings to its left will be built first, and will be devoted to television.

All this is not to say that within the television studios there is no zeal and inspiration of the right kind. At the production level, there are pioneers whose efforts to improve television programmes have the fervour of a mission—performed at low rates of pay, and always under the repres-

sive influence of a totally inartistic administration. But the BBC tradition is for the administrators to decide the policy, and the men and women with practical knowledge of what television needs for its advancement are not consulted.

This pioneer zeal will not last much longer, unless it is given its head in a more artistically free and financially remunerative organization. Already, that occupational disease of the BBC, complacency, is showing itself. Too often, material and artistes are scraped together at the last minute, and shoddy and ineffective programmes inevitably result. This will remain the danger so long as the Television Service lacks the money with which to engage the best artistes and writers, at prices competitive with those offered by films and theatre.

Comment of this kind begs a number of questions unless it can propose the fundamental solution. Obviously the answer is to be found in a plentiful supply of money for television production—such a supply as would be unprecedented, pro rata per transmission hour, in the history of broadcasting. But the BBC's secrecy about its finances prevents anybody proposing a scheme realistically based on hard figures. Nobody outside the BBC's top-management knows how much money the Corporation is putting into television production. The BBC's published accounts give no inkling of this important spending of public money. I am not prepared to accept rumours

that the budget for television programmes is in the region of two million pounds a year, and then argue from that, because if I did the BBC would certainly rebut my assumptions without disclosing the figures on which it based the rebuttal!

The financing, and therefore the organization, of British television broadcasting is so revolutionary a problem that it can only be properly settled at Government level. The BBC has shown itself incapable of taking a sufficiently far-sighted view. It is to be hoped that the Government Committee, set up under Lord Beveridge, to examine the financing and constitution of British broadcasting services, has recognized this. If its recommendations about television are as audacious as they ought to be, it is to be hoped that the Government will implement them in action—however disruptive that may be to the BBC.

Where television is concerned, the public's long-term interest exists in its being protected from a programme service conducted like a sausage-machine, on the indifferent, mass-production system which has made sound broadcasting mostly second-rate.

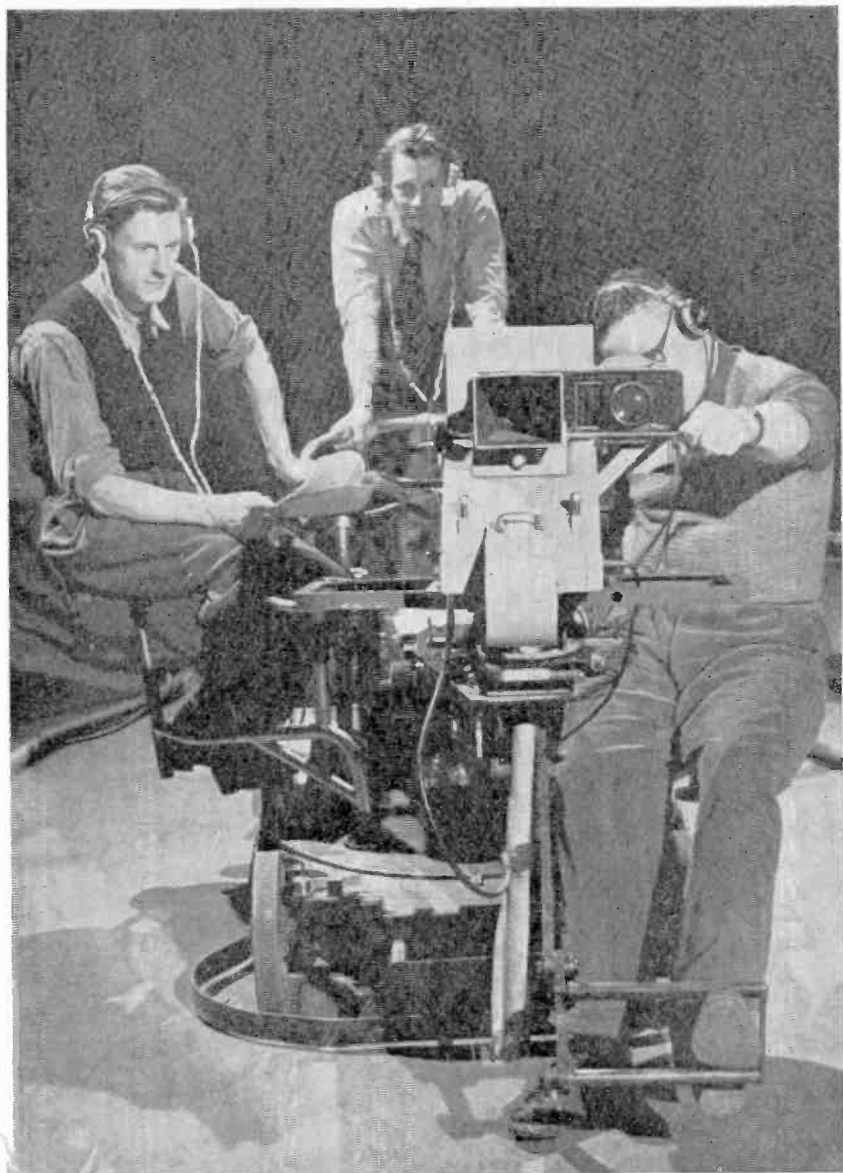
Also of prime interest to the public is the question of establishing a national television network. Outside the Television Service regions, people are impatient to have television—which, as sound-licence payers, they are in fact subsidizing.

The official plan, devised by BBC engineers, promises stations for 80 per cent of the population by the end of 1954. Sometime in 1951 a station should open in Yorkshire; western Scotland may get one the same year. Other areas look like having to remain without.

It seems strange that Britain's national radio authority, with the money clearly made available, cannot do better than this. Here is little evidence of that drive and energy which British television so sorely needs.

One other major problem is the bogey of interference to television reception from motor cars and electrical apparatus. It may be a scientific fact that this can only be countered at its sources, and not in the television set. But science is continually out-dating its own facts. The public needs an assurance that the radio industry is devoting all the energy it can to research to that end.

KENNETH BAILY



Mobile studio TV camera, with cameraman and his assisting crew. Through earphones they listen to directions from the producer. Three or four cameras are used on most productions.

1. MAN FINDS

THE TELEVISION EYE

String and Sealing Wax Helped !

MAN'S inventiveness with the products of scientific knowledge had taken him far, along many beneficial paths, before anybody had the idea of transmitting vision over distances. This notion seemed the dream of fantasy, until the eighteen-seventies. Bell's telephone invention then started some men thinking about sending pictures "by wire." This kind of still picture transmission was actually demonstrated to the Physical Society by Shelford Bidwell in 1881.

At that time, too, a Frenchman, Maurice Leblanc, was experimenting with methods for breaking up pictures into small pieces, so that they might be transmitted and reassembled at a distant reception point. Simultaneously, a German-Pole, Nipkow, was operating a rotating metal disk, perforated so that a picture projected on to it was in effect sliced into pieces.

It was along these mechanical lines that men moved towards practical television—strangely enough, for the television we got as a result uses none of their mechanical contrivances, though it applies the basic theory these pioneers applied. It did not occur to them to try to emulate the action of the human eye, by producing an artificial retina sensitive to light rays; for it is this principle which gives us today's television.

Virtually, the secret of television is within a single characteristic of our eyesight. Without this, television would be impossible. It is the characteristic known as *persistence of vision*. This it is which creates, within our visual sense, the illusion of a continuous moving picture, when what is really being shown us is an extremely rapid series of still pictures. The speed of their assembly deceives the eye.

The all-powerful assembler, which does the work in the television picture, is a flying spot of light. Its flight is so rapid

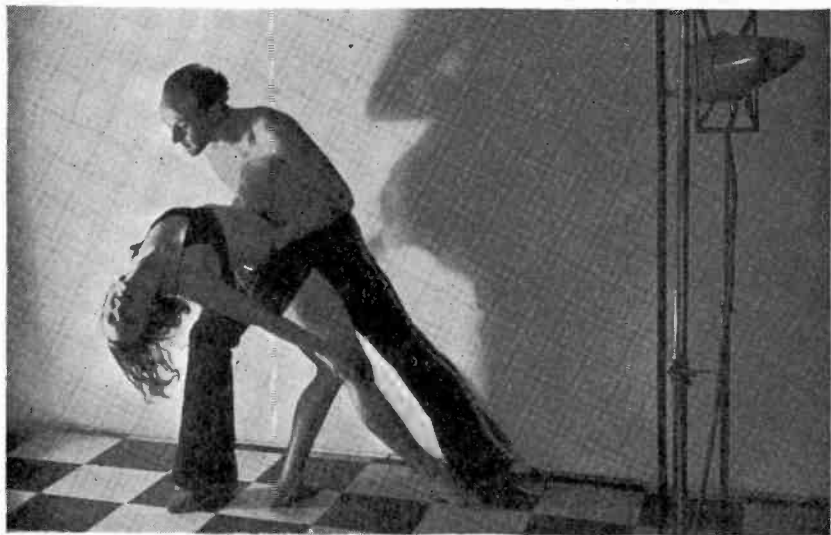


The first commercial television set, made by Baird in 1928. This historic curio is examined by railwaymen at an exhibition held by the French Railways Television Club in 1950.

that the eye notices only its continuous effect—a line of light. These lines are traced from left to right, down the television screen from the top left-hand corner to the bottom right-hand corner. In the BBC system of television, the spot makes $202\frac{1}{2}$ lines, and then flies back to trace as many more in the spaces between. This gives the picture its 405-line standard of definition.

The spot making the lines varies in intensity through a gradation from black to white; the gradation is the result of varying electrical impulses sent by the television camera, which has collected the gradation from the subject being televised. But the spot of light, flying twice up and down the screen, has still only made us one *still* picture. So television uses an extremely rapid succession of pictures to reproduce movement. Each picture in this succession has, of course, caught an infinitesimal degree of the movement going on in the studio; so when the eye sees all the pictures in rapid succession it sees all the movement.

The spot of light, as it moves down the screen, is moving at 8,750 miles an hour! But when it flies back, to start tracing again, it is going at the rate of 75,000 miles an hour! The rapid



As long ago as 1932 Britain had television programmes—experimental ones, of 32-line definition. Here is a variety act being televised in the experimental studio which was then in use.

rate of pictures transmitted is twenty-five each second; but owing to the double scanning—or “interlacing”—from top to bottom of the screen, the effect is one of fifty a second.

It was the application of the cathode-ray tube to television development which made this system possible. In the cathode-ray tube, in the camera, the rays given off by the studio subject are dissected by a sensitive plate known as the *mosaic*, and there variable electric impulses are shot to the transmitter.

In the receiving set the same qualities of the cathode-ray tube convert the impulses into the spot of light, which is shot on to the broad end of the tube—now the screen. Other synchronizing electrical impulses are transmitted, and collected by the receiver, for the purpose of moving the spot of light sideways, and up and down, at the speeds required.

It was in 1908 that A. A. Campbell Swinton suggested the use of cathode-ray tubes, at the transmitting and receiving ends, for television. Little was done about it until much later—when John Logie Baird was in fact well advanced with his

mechanical system, which showed the first television pictures ever.

Baird was the son of a Scots minister. He went to Glasgow Technical College, and the University there, at both institutions showing strong inclinations toward advanced mechanical and scientific invention. After training, he first patented a medicated foot sock! He worked in a jam factory. He patented and tried to sell a new kind of soap. His health broke, and he had to live by the sea, at Hastings. It was there, with scant possessions, and next to no money, that he started experimenting in what was to become television.

He worked on a washstand, with tin boxes, bicycle-lamp lenses, pieces of string, wire, wood and cardboard, glue and sealing wax. And on the contraption he so made he actually transmitted the picture of a Maltese cross.

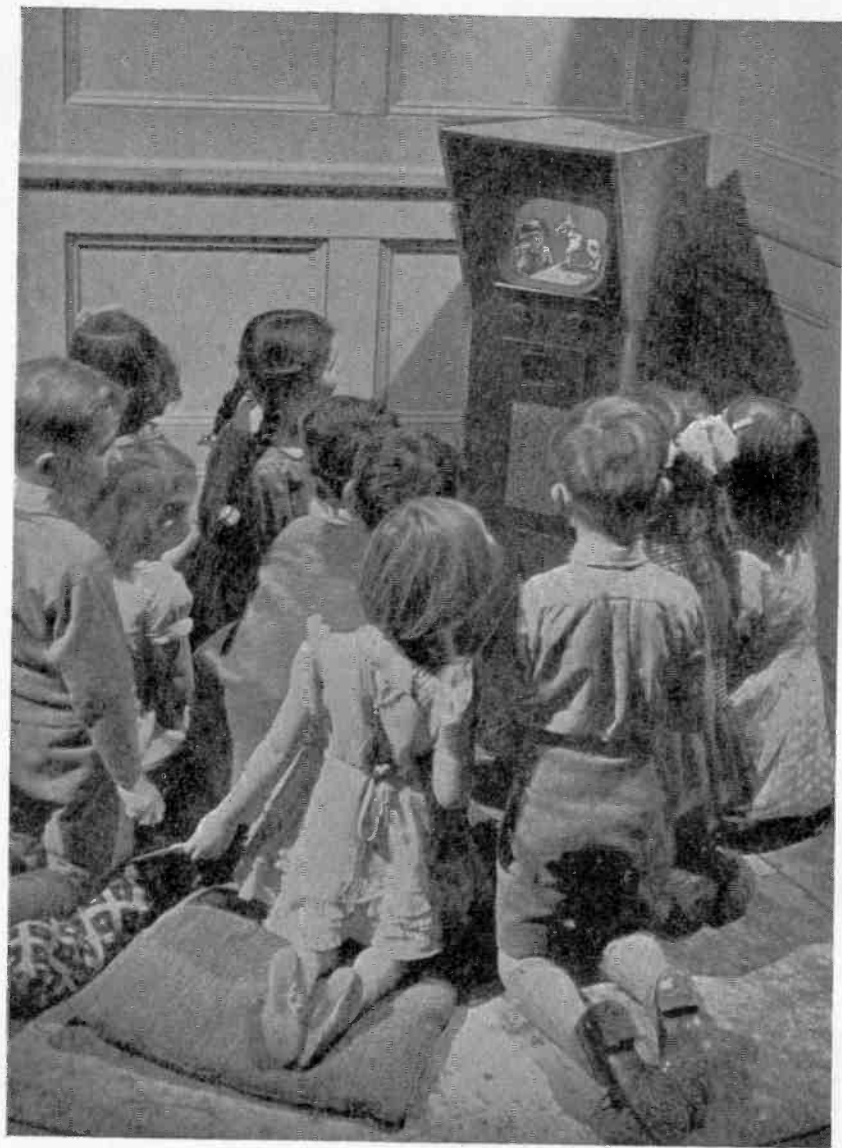
He moved to an attic in Soho; and there transmitted the grinning head of a grotesque doll. Next he called in an office-boy, and received his picture in the next room. The boy, William Taynton, now adult, has appeared in dramatized reconstructions of that historic scene, produced in modern BBC television programmes.

On January 27, 1926, Baird gave the first public demonstration of television, to forty members of the Royal Institution. By 1928 he had advanced as far as crude *colour* television, and had sent a picture across the Atlantic.

In 1929 the BBC started cautious experiments with a mechanical system of television, of only 30-line definition. In 1936 it opened its regular high-definition Television Service.

But by that time the cathode-ray system had taken long strides forward; and in view of this, the Government commanded that the BBC service use both types of system, alongside each other, for a trial period. The first BBC television programmes were therefore transmitted alternately on the Baird mechanical system, giving a definition of 240 lines; and on the cathode—or *electronic*—system, giving a definition of 405 lines. This system had been perfected by Marconi—E.M.I. In 1937 the Baird system was dropped in favour of the higher-definition service.

Though there have been many improvements in technical details, and in the knowledge of how to handle this system, it is the one still in use today in Great Britain.



Television's appeal to children makes it a family investment. The BBC has recruited a special staff which will eventually give the youngsters a daily hour all to themselves.

2. TELEVISION COMES INTO THE HOME

Will it Date? What Size Screen?

FOR every home the television adventure begins with the selection of a set, at the radio dealer's. But first an assurance is needed that some sensational development in television is not going to render obsolete a receiver of current design. That assurance has in fact been given. It is part and parcel of the Government policy within which the BBC is developing television into a national service.

The Government has said that no change will be made in the British system of television which would be radical enough to out-date the kind of set now in the shops. This is a proviso against any sudden increase in the definition standard of British television, as well as against any hurried adoption of colour television.

To increase the definition standard above the present 405 lines would jeopardize the BBC's plan for building transmitters up and down the country. Higher definition would need more stations than the present national plan will allow. Since 1954 has been given as the earliest date for completion of this national spread of television, it is unlikely that the 405-line standard will be dropped before a good proportion of the population has made use of the sets designed to receive pictures of that standard. This security from sudden change is an essential also, of course, for the progressive development of the set-manufacturing business.

As to colour television, its transmission would require even more transmitters, of a more costly type. Colour may well be introduced as an alternative and experimental programme, confined to a small area; but even this cannot be expected for some years.

Fear of future changes can therefore be discounted in approaching the shop for your first television set. Considerable

care is required, however, about immediate and practical details as to installation. Most television sets require a home electric supply of alternating current of not less than 200 volts. There are no battery television receivers. With those elementary details out of the way, there is the matter of the distance of your house from the television transmitter. This can be tricky; the strength of television reception is made infinitely variable, even within the same town, by the nature of the surrounding country, the height of the situation, and by local sources of interference.

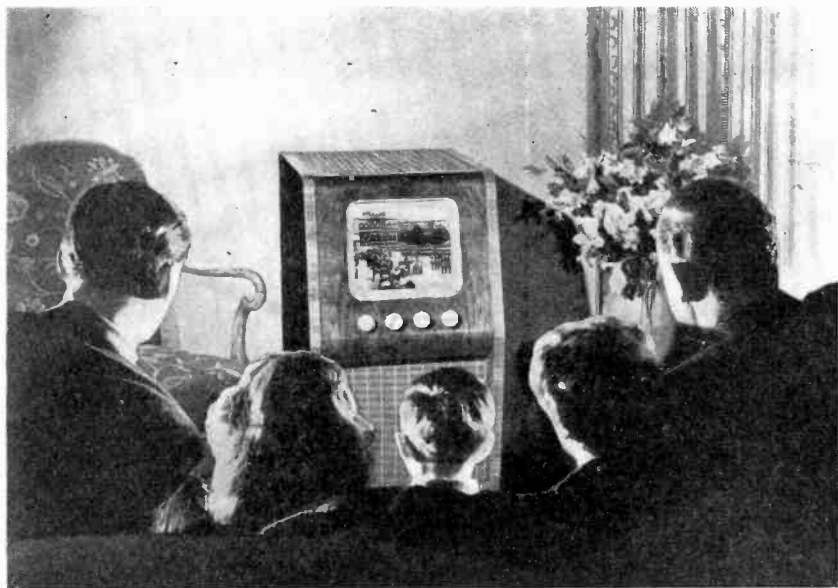
It is necessary to recognize that the 30-mile service area of the Alexandra Palace transmitter, and the 40-mile area of Sutton Coldfield, are both cautious estimates made by the BBC. Both stations are being regularly received at places well beyond those limits, especially in the case of Sutton Coldfield.

It is usually known in any locality whether television reception, in general, is good, mediocre or bad. But even then the situation of the house itself may prove an exception, especially if it stands high or low among surrounding heights. From this point of view, and from that of local interference, by far the best method is to have a set demonstrated in your own home before making your choice.

Where "moving pictures" are concerned we have been brought up to think of them on the cinema screen. Because of this, our first reaction to the new invention of pictures in the home is an urge to look for the largest possible screen. This is a fallacy. The cinema screen, with its mammoth images, has to satisfy an auditorium. The television screen need satisfy nobody beyond a fireside circle. Moreover, a few nights of viewing will soon show that what looked a "small" screen in a shop is of quite satisfactory proportions for the job it has to do within the confines of the ordinary familiar drawing room.

The medium-sized television screen will suit most homes. The largest-sized screens have advantages in large rooms. The medium range of receivers now in supply gives pictures measuring roughly nine by seven or eight inches. The largest screen in general use gives a 12 by 10-inch picture.

The medium-sized screens are usually available either in table cabinets or in console cabinets. A table-model television set is usually somewhat bulkier than a sound-radio set, and in most cases requires a low-legged stand if the screen is to be at



The modern television screen is bright enough to give good entertainment under subdued lighting conditions, and even to allow afternoon viewing in a shady corner of a room.

the best viewing level. The console models stand at the correct height in themselves.

Once the set is delivered at the house, a considerable domestic argument usually arises about where to place it. Alcoves, to one or other side of the fireplace, are often favoured. A site near a window, for the aerial lead-in, is also advantageous as also is a position reasonably near to an electric supply socket. The main need is to put the set where viewing will be the most comfortable, avoiding the possibility of half the family being shielded from the fire while the other half is roasted on top of it!

Once the receiver is working, perfectionists in the family will decree all lights out for night-time viewing. Their fanatical enthusiasm for this will probably wear off. The modern television screen is bright enough to give good entertainment under subdued lighting; it is in fact bright enough to allow summer

afternoon viewing in a shady corner of a room. An effective and restful position for the subdued light is behind the receiver. Viewing in a certain amount of light is also considered less of a strain on the eyes, for people who need to consider this.

The placing of the control knobs varies in different makes of television set; but the system of control is standard through practically the whole range of sets on the market. The *main controls*, often easily accessible at the front or side of the receiver, are usually termed:

FOCUS

CONTRAST

BRILLIANCE (*sometimes also includes the on-off switch*)

In addition there are pre-set controls, intended to be set on installation, and then rarely requiring manipulation. These are often situated at the back of the set, and are usually concerned with fixing the following adjustments, all necessary in obtaining a steady picture:

HORIZONTAL HOLD. *If this control is out of adjustment the picture will break up, or stagger irregularly across the screen.*

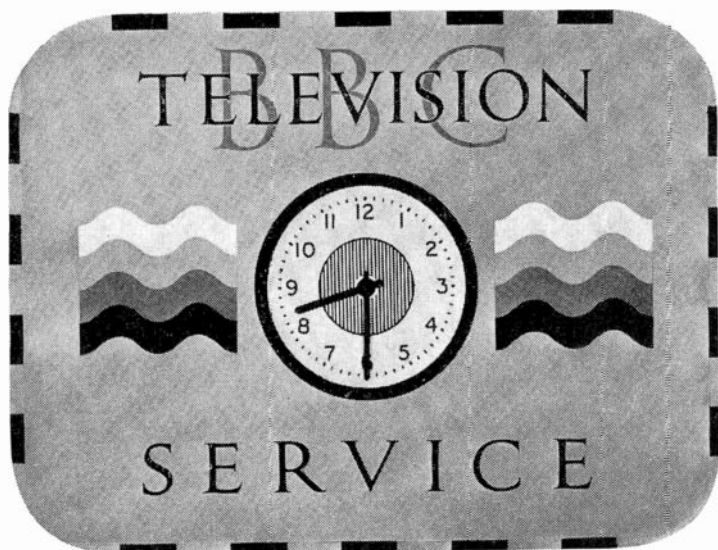
WIDTH. *This regulates the width of picture, and should be matched to the test card which is televised at the beginning of each BBC transmission.*

VERTICAL HOLD. *If this control is out of adjustment the picture will roll up or down.*

HEIGHT. *This regulates the height of the picture and should be matched to the BBC test card.*

It should be remembered that picture quality may occasionally vary in the actual BBC transmissions. Studio programmes are normally reliable, but the pictures received from outside broadcasts may sometimes give the impression that the set needs readjustment. The qualities of brilliance and contrast may be affected. The BBC always tries to give warning of this.

Pictures may also be thrown out of true by local interference, but this should happen only where the set is used a

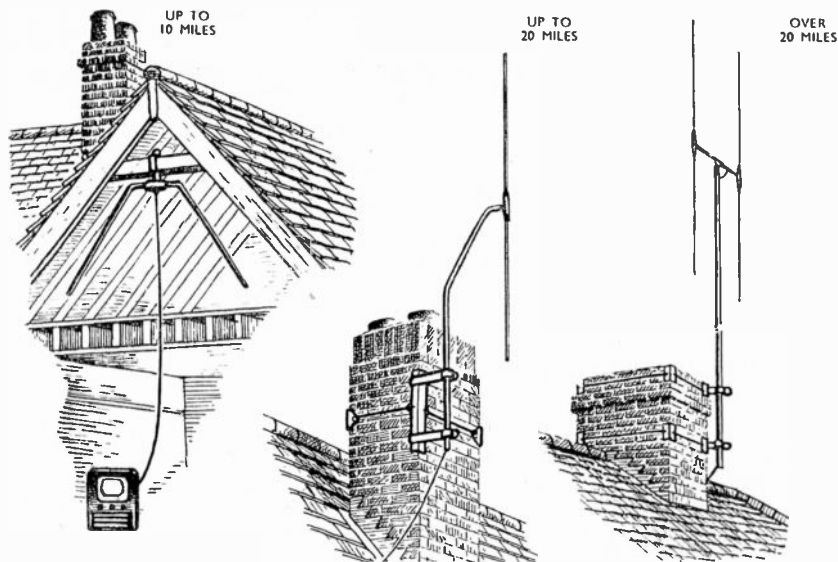


Every day the BBC shows this card to help you set your receiver controls. From it the correct height, width, contrast values and focus of the picture can be obtained.

long way from the transmitter and is therefore receiving a weakened signal. Interference from busy main-road motor traffic may sometimes upset the pre-set controls, so that some slight readjustment is needed.

At all times the golden rule should be Never Go Beyond the Named Controls—in other words, *do not* poke about inside the television receiver. There can be 6,000 volts or more floating around inside. If the normal controls fail to produce bright, properly focused and steady pictures, call in a service engineer to survey the trickier internals of the set.

The aerial is far more important to a television set than it is to the sound-radio receiver. In almost all cases it is vital if the best kind of reception is to be enjoyed. The exception is the receiver used within one or two miles from a television transmitter. Then a short length of wire will provide all the



No universal rule can be laid down, but in many cases distance from the transmitter decides which type of aerial the viewer needs—indoor, single dipole, or H-type.

signal input needed; indeed, reception may be so strong that the set will need a dealer's special attention to avoid overloading of the receiver.

The usual type of aerial is the H-shaped dipole, now the popular mark of television. Each of its vertical arms is approximately half the wavelength of the transmitting station. A special kind of cable or feeder has to be used to connect the aerial to the set.

The erection of the H-aerial is not every man's job, and to most householders it is worth the cost to have it done professionally. This is especially so as it is of extreme importance that the aerial be accurately aligned in relation to the transmitter, and to possible nearby sources of interference.

Because of the vagaries of television waves, which are affected by high buildings, hills and valleys, flat country, sheets of water, and even mineral outcrops, there are no hard and fast rules as to the distances at which a simpler aerial can be used. Each case must be investigated according to its

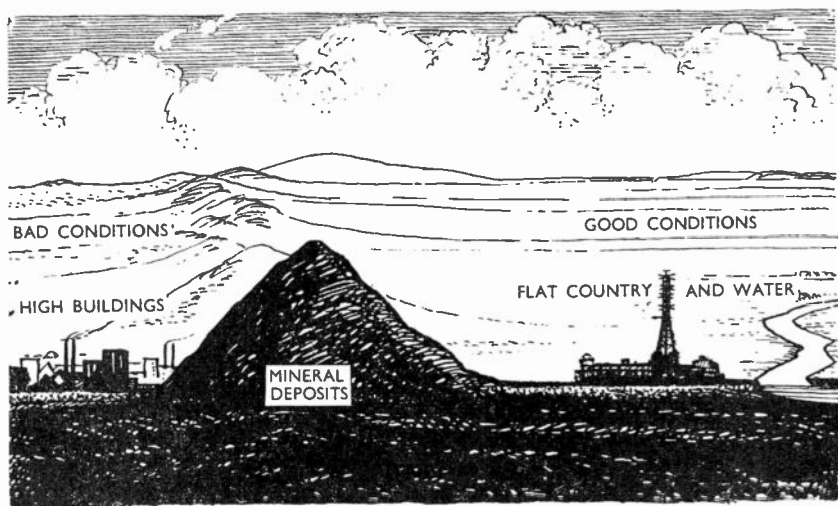
situation. Speaking in a very general way, the H-aerial is required anywhere over twenty miles from a transmitter.

Nearer the television station a single dipole aerial or an indoor aerial may give perfect reception. In theory this can be further classified as the outdoor dipole for eight to twenty miles; an indoor aerial for under eight miles. Indoor aerials are available in many forms. They can be fixed in a roof loft—and usually the higher position is the better, even for an indoor aerial—or they can be fitted inside window or door frames.

Special aerial fixtures will often be required for reception at long distances, on or beyond the fringe of the television transmitter's normal service area. Here again, because of good material conditions in the country between the station and the house, a simple H-aerial may suffice, even up to 80 miles. This will be even more likely if the aerial is placed really high.

But in other places, between 60 and 100 miles from the transmitter, an "array" type of aerial will have to be used. The array aerial uses more than the two elements familiar in the H-aerial. An additional element, called a director, is placed in front of the forward element of the H. This system

To a considerable extent, the formation of the country between the television transmitter and your home will effect the strength and reliability of reception.





There is no fake in this studio picture. Announcer Sylvia Peters looks up into the television camera, as it puts her picture on the studio monitor screen, beside which she stands.

can be extended by adding more directors. This is not so simple as it may appear, however, since the more directors that are added, the more may other factors in reception be affected and cause loss of picture quality. The long-distance television aerial is therefore definitely a job for the skilled technician, preferably one who knows the television receiving capacity of the district.

When the television set is installed, tuned, and viewing has begun, you will be able to note what kinds of interference, if any, your receiver is liable to pick up. Normally, well inside the transmitter's service area, signal strength will be good enough to "kill" most kinds of interference—unless indeed the interfering electrical system is very close to the house.

The chief cause of trouble is the ignition system of motor vehicles. Though it may soon be law to apply suppression of electrical interference, it will take time for it to take complete effect throughout the country. In actual fact, motor vehicle

interference can be suppressed by the fixing of a gadget, costing no more than eighteen pence, in the ignition system.

Interference from motor traffic can be recognized as white spots, or "snowstorm," on the screen, accompanied by crackling on the sound reproduction. An H-aerial, correctly installed in the matter of its relative position to the transmitter and the source of traffic interference, can do much to cut down this kind of trouble. Some television sets also are fitted with vision interference limiters; and so long as these are correctly adjusted they will reduce the white spots to a minimum.

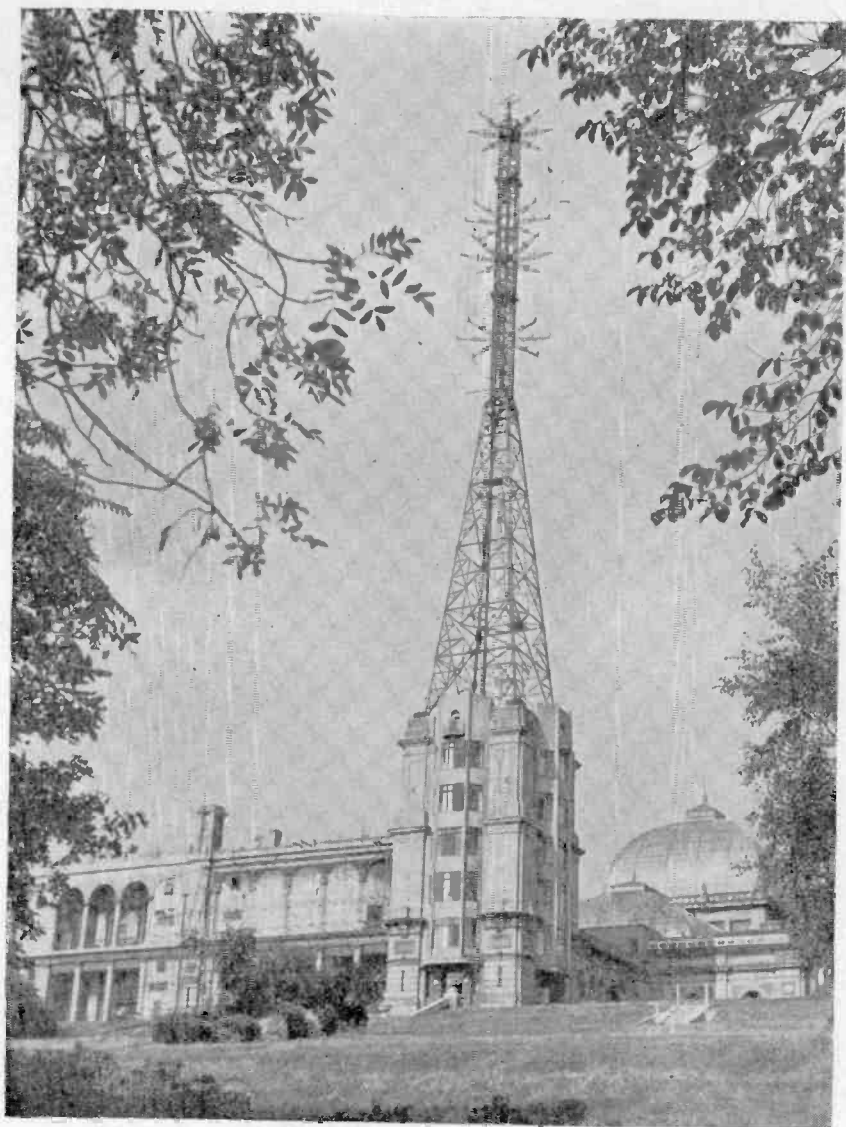
Electrical motors and machinery of all kinds—anything from hair-driers to heavy factory equipment—can cause interference on the television picture. This usually takes the form of white spots, but in this case they are normally grouped in horizontal bands or streaks, either stationary or moving up and down the screen. The only remedy is suppression at the source, and by reporting such cases to the local post office this may in time be achieved.

Viewers living near hospitals and other medical establishments may sometimes find a wavy or herring-bone pattern superimposed on their television picture. This can be caused by systems of electrical treatment, such as diathermy. Suppression at source is usually the only remedy.

"Ghost" pictures on the screen, through the duplication of the images, usually to the right of the normal picture, can be produced by metallic objects in the neighbourhood causing a kind of extra reflection of the television waves. Gasometers and pylons may give this effect, and the dealer should be called to see if aerial adjustment can get over it.

In areas where there is a good deal of aircraft traffic, particularly low-flying near aerodromes, passing aeroplanes may cause the television picture to wobble or fade in and out. This again is due to reflected waves, off the aeroplane wings, interfering with the direct wave from the transmitter. There is no simple way of overcoming this, but fortunately it is perhaps the least annoying type of interference, and not very common.

A fairly rare kind of television picture disturbance is that which can be caused by interference from the sound channel of the set. Horizontal bars may flicker across the picture, usually accompanied by noise from the speaker. Correction of this fault is a job for the service engineer.



Alexandra Palace, London, headquarters of the BBC Television Service. Since 1936 two studios, cramped into this single wing of the building, have had to suffice. Now more studios are being prepared at Shepherd's Bush.

3. INSIDE TELEVISION'S HEADQUARTERS

Achievement Under Difficulties

THE past year has seen the beginning of a long-awaited expansion of the home of British television. Since the start of daily programmes in 1936, television programmes have been produced at Alexandra Palace; but, because of circumstances of leasehold, the BBC cannot remain in occupation there after 1956, so much-needed additional studio space has had to be sought elsewhere.

Consequently television's headquarters has for some time been growing at Shepherd's Bush, and not on the heights of Alexandra Park above London's northern suburbs. At Shepherd's Bush the BBC has taken over the old Lime Grove film studios, an area of 30,000 square feet—as compared to the paltry 5,000 square feet in which all studio television programmes have had to be produced hitherto.

The conversion of the Shepherd's Bush building into a modern television centre will, however, take time, and only two of the five studios it will eventually provide has come into use as yet. The Alexandra Palace studios—only two in number—remain the chief centre, and will be kept busy for a considerable time yet. For this reason, and because it is at Alexandra Palace that television production has been developed, it is worth while taking a close-up look at the place.

The situation was chosen in 1936 because the Palace stands on top of a hill 300 feet above sea-level, and the higher the transmitter aerial the greater would be the reception area of the station. The aerial mast rises a further 300 feet, so an aerial elevation of 600 feet is in fact provided. (The later aerial mast, for the Midland area, at the Sutton Coldfield station, rises 750 feet, on a 550-foot hill.)

The Alexandra Palace is a very large and sprawling building which saw its best days as an amusement and ex-

hibition centre in the Edwardian era. The BBC television premises occupy less than a quarter of the whole. The main BBC section has two floors; the ground floor is mainly devoted to the transmitters, and the upper floor to the studios. At the outer end of the wing has been raised a tower of five floors of offices, topped by the aerial mast. Behind the wing a queer conglomeration of premises has been added piecemeal.

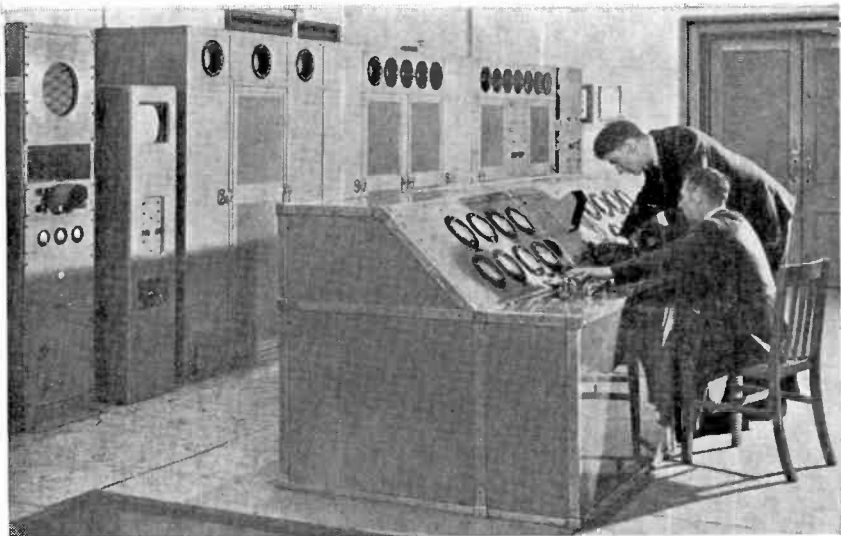
There are producers' and scenic designers' offices—some of them converted out of the dressing-rooms of an old theatre. There are engineers' and scenic carpenters' workshops; and in the old theatre itself a store for the hundreds of pieces of scenery used in programmes. The whole place is unwieldy, too small in its separate parts, and thoroughly inconvenient. But for the war it would probably have been abandoned some time ago. To give but two instances of the inconvenience: television studios should be at ground level, to allow easy access for the considerable amount of scenery which is always having to be trundled in and out. And the scenic design and manufacturing quarters should, of course, be hard by the studios, and not, as is the case here, several hundred yards distant, necessitating movement of scenery round the outside of the building!

Yet here, largely due to a great amount of pioneer enthusiasm, the BBC has been producing nightly television for seven years! Let us look more closely inside this bizarre home of what will surely be recorded as a memorable, if not miraculous achievement.

Through burnished copper doors we enter a severely functional foyer, at the foot of the aerial tower. To one side is a crowded and packed Film Cutting Room, now in ever-increasing demand, as more and more news films reach the programmes, and as film is increasingly used in plays and documentaries specially devised for television.

Ahead of us is a lift, busily in service all day long, serving the five floors of the aerial tower. On these floors are the offices of the Controller of Television, the Head of Programmes, the Heads of the production departments—Drama, Light Entertainment, Talks, Films—and senior administrative and engineering officials.

The ground-floor corridor leads from the lift and skirts the large transmitter hall. As we move along it we hear the



Alexandra Palace transmitter: the control desk and modulator section of the vision transmitter. Loudspeakers and cathode-ray screens allow the engineers to monitor the programmes.

steady, high-pitched buzz of transmitter machinery in action. Inside this lofty room the vision and sound transmitters, and long banks of associated electronic equipment, are housed in austere battleship-grey cabinets, through the glass fronts of which strange, over-sized bulbs show a vicious blue light.

In the centre is the long, squat transmission control desk, severely orderly yet bewildering in its array of switches, control knobs and dials, and with two "master" television screens, on which the controlling engineers steadily watch the quality of the picture being sent down from the studios above.

The remainder of the long ground-floor corridor serves on one side the mecca of television's film technicians; and, on the other side, the ever-necessary kitchen and restaurant. The film department's holy-of-holies is a small projection theatre and an adjoining dubbing suite. The latter has been brought into increasing use during the past year.

The dubbing suite embraces the small studio where, for one thing, the commentator's voice is added to *Television*

Newsreel. The suite is packed tight with all the paraphernalia of sound-film recording, dominated by a control desk and a small cinema screen. Here music, voices and sound effects can all be taken from their different sources and wedded together in the right proportions on the sound track of films made specially for television.

On the other side of the corridor is the restaurant. Here meals are served from breakfast to supper. At the height of the lunch hour all the tables are occupied by as varied a crowd as you may find anywhere in London. There are technicians, camera-men, scenic artists, musicians, administrators, stenographers, producers, make-up and wardrobe experts, carpenters, plasterers and painters, actors, actresses and chorus girls in costume and make-up—and probably the white-and-blue garbed nursing sister, who is always on duty in case of accidents.

Now a long flight of stone stairs leads to the second floor, a magic area, peopled morning, afternoon and night by personalities being watched on screens in homes scattered from South Yorkshire to the South Coast. But the work-a-day, backstage end of the studios is encountered first. At the top of the stairs the “scene dock” yawns, a mighty loft, with a trap door opening on to its as huge under-part, on the ground floor below.

This is the ever-open maw through which has to be fed every piece of scenery, and every bit of furniture and setting, needed in each day’s television productions. The scenery is brought on an electric trolley from the scenic shops away over at the back of the studio wing, and is hoisted up this dock, to be trolleyed once more into position in the studios.

Opposite is another hive of backstage activity, a block of rooms housing the wardrobe and make-up department. Hampers of costume line the corridor outside, and from behind the door comes the incessant chatter of sewing machines. Costume experts and seamstresses are always busy here. In the make-up room, twelve chairs face twelve brightly-lit mirrors. Around this quarter there is always the exciting mixed scent of make-up powder, of glue-size, and of fresh paint from the scenery.

Dressing-rooms flank the corridor facing the studios; they are of all sizes, and some are fitted with baths. The

corridor itself is of great height, with at its distant end a red light, to signal to all passers when the studios are on the air and quietness is necessary. Between the two studios opposite is the central control room, with its long desk and television screens, where the output from each studio is "cued" in and out to form the transmitted programme. Alongside are service rooms, packed with racks of sensitive equipment beside which technicians check and keep to a constant quality the pictures coming from the studio floor.

The studio nearest the scene dock is Studio B, and is slightly smaller than Studio A, which is at the other end of the wing.

The main difference between the two studios is in the position of the producer's gallery. This is where the producers sit, with their assistants, to direct the action on the studio floor. Studio A's gallery is high up, behind a glass panel, at one end of the studio. The gallery in Studio B, on the other hand, juts out into the centre of the studio, somewhat like a ship's bridge.

The scene in these studios changes according to the kind of programmes which go to make up each day's television transmission. Let us suppose that the day is a Wednesday, and before them viewers have this programme:

3.0 Cookery Demonstration, by Mrs. Joan Robins.

3.20 *For Your Wardrobe*, with Mary Malcolm.

3.40 *Night Mail*—interest film.

8.30 Variety Show.

9.15 *Picture Page*.

10.0 *Television Newsreel*.

10.15 Weather Forecast.

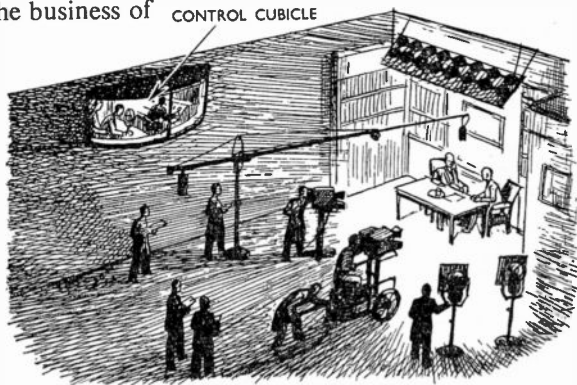
To get even this modest bill of fare on to the home screens will entail full and continuous use of both the Alexandra Palace studios.

Before the opening programme at three in the afternoon, final studio rehearsals will have occupied both studios since mid-day. The first rehearsal to start will have been that of the evening's variety show; and in readiness for this Studio A will have been set with the various scenic sets and properties required for the show. This rehearsal is monopolizing Studio

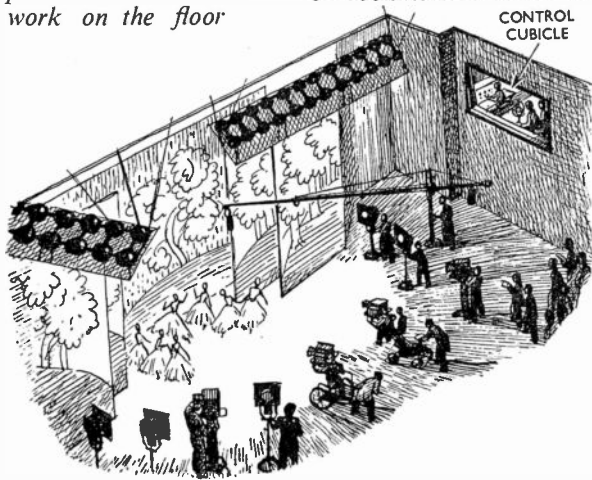
A all day, and is in full swing when Mrs. Joan Robins runs over the preliminaries of her Cookery Demonstration, in a corner of Studio B, shortly before three o'clock.

Elsewhere in the same studio, Mary Malcolm and others have rehearsed the *For Your Wardrobe* programme, a feature of dress and fashion hints. All the scenic sets, or backgrounds, required for both these afternoon features, will be in this one studio; and, more than that, another part of it will be earmarked for the announcer's opening and closing of the programme.

At three o'clock the red lights flash, inside and outside Studio B, and until 3.40 it is occupied with the business of



Inside the studios. Simplified drawings to show the difference in control positions in the two Alexandra Palace studios. Above: Studio B, where the producer directs work on the floor



from a cubicle high in the side of the studio. Below: Studio A, where the producer and his assistants control from high above one end of the studio.

the "live" part of the afternoon programme. Viewers are then given the *Night Mail* film. This comes from the telecine apparatus, thus freeing the studio. But settings for the evening's *Picture Page* feature have to be brought into Studio B immediately, while all the paraphernalia used for the afternoon's programme has to be moved out. All must be spick and span for rehearsal of *Picture Page* to start at 4.30.

Actually, just before four o'clock there will have to be a five-minute interval in all this "moving" business, in Studio B, so that there may be silence for the announcer to close down the afternoon transmission, from one corner of the studio.

Then, probably right up to seven o'clock, both Studio B and Studio A are occupied by the continuing rehearsals of *Picture Page* and the variety show which is to precede it. All those involved in both studios will then have a meal break, and technicians will make final adjustments, and tests, of the equipment which is shortly to put both the studios on the air for the evening transmission.

At 8.30 from in front of one camera in a corner of Studio B, the announcer introduces the evening programme. In Studio A the variety show begins, and, as it gets under way, all the people involved in *Picture Page* collect in Studio B. At nine o'clock they are on the air—and scene-shifters are already taking settings used for the variety show out of Studio A, so that it may be ready, first thing next morning, for re-setting for the following night's programme.

When *Picture Page* ends at ten o'clock, the telecine apparatus gives viewers *Television Newsreel*, and Studio B empties of all but two or three technicians and the announcer. At 10.15, they have the transmission of the weather forecast, which is managed by showing meteorological charts. These are set up before one camera in Studio B, and the announcer stands ready before another. Not until this has been coped with, and the announcer has closed down the station, can Studio B be cleared of its settings, and left in readiness for the morrow.

At any time between 10.30 and eleven o'clock at night, according to when staff and performers can get clear of the studios, a crowded motor coach leaves the darkened Alexandra Palace, packed with all those who need to go into central London in order to get home for the night. For a few brief

hours, the studios where daily television programmes have been pioneered and developed, are left empty, dark and quiet.

By ten o'clock next morning a staff of 600 will have swarmed busily round them once again, ready to put another quota of television programmes on the air.

BBC OFFICIAL TECHNICAL DESCRIPTION

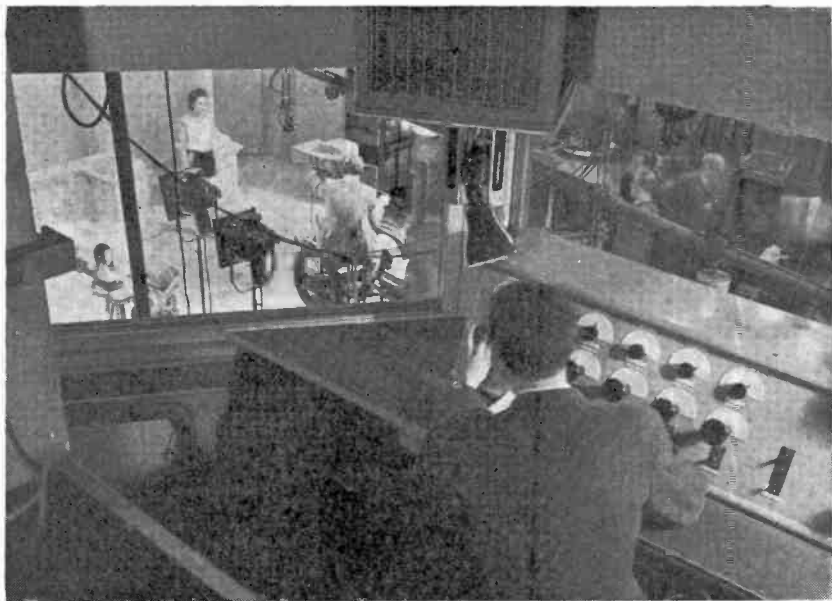
Alexandra Palace

THERE are two studios. One is equipped with three cameras and the other with four. In each studio one camera is mounted on a crane that can lift it and the operator high in the air in order to take downward-looking shots. A second camera is mounted on a mobile truck or dolly allowing silent approach or withdrawal, and a third is mounted on a simple semi-mobile pedestal that can be set at any convenient height. Between the camera itself and the top of the support there is a "panning head," which permits vertical tilt and horizontal "panning" of the camera.

The cameras each contain an Emitron tube, manufactured by the Emitron Television Co., Ltd., working with a $6\frac{1}{2}$ -inch lens of maximum aperture f.3 which gives a horizontal subtended angle between 28 and 25 degrees. The camera has its own head amplifier and is connected to the control room by a multi-core cable containing some 20 wires. These carry not only the vision currents to the control room, but also numerous supplies and scanning signals for the camera and its head amplifier. The camera operator is connected by headphones to the communication system, called the "talk-back" circuit, and can thus hear the producer's instructions throughout the rehearsal or transmission.

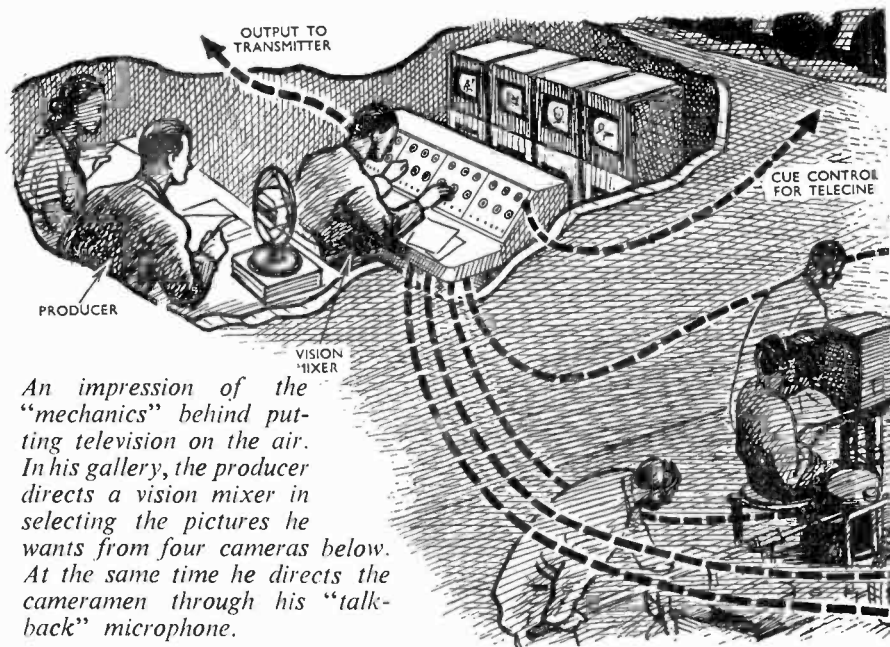
Sound is picked up by moving-coil microphones, mounted either on floor stands or on telescopic booms, whose operators are also connected with the talk-back system.

Next to each studio is the control room containing the vision apparatus, which employs in all more than 500 valves. Above the control room, and separated from the studio by a large window, is the control gallery, on which the operational control of the whole vision and sound system is centred. The producer sits at a desk in the centre, and in front of him is a



Part of the producer's control gallery, above one of the studios at Alexandra Palace. On the right is the sound-mixing engineer who controls the microphones in use on the floor below.

microphone connected to the talk-back system. Beside him sit his assistant and the senior studio engineer, who also has a microphone connected to the talk-back system. Facing these positions are a pair of picture monitors, or viewing tubes, one showing the picture that is being transmitted, and the other showing a "pre-view" of the picture from any other camera that may, in a few moments, be required for transmission. At a desk facing the two picture monitors is the vision-mixer operator, whose position is provided with controls enabling her to introduce a camera into transmission either by a slow fade or by an instantaneous cut. There is another position for the sound-mixer, who has an array of potentiometers enabling him to fade the various microphones up and down in their due order, and to pre-set the volume that they will generate when faded up. A four-turntable gramophone unit is provided for introducing recorded sound effects into the

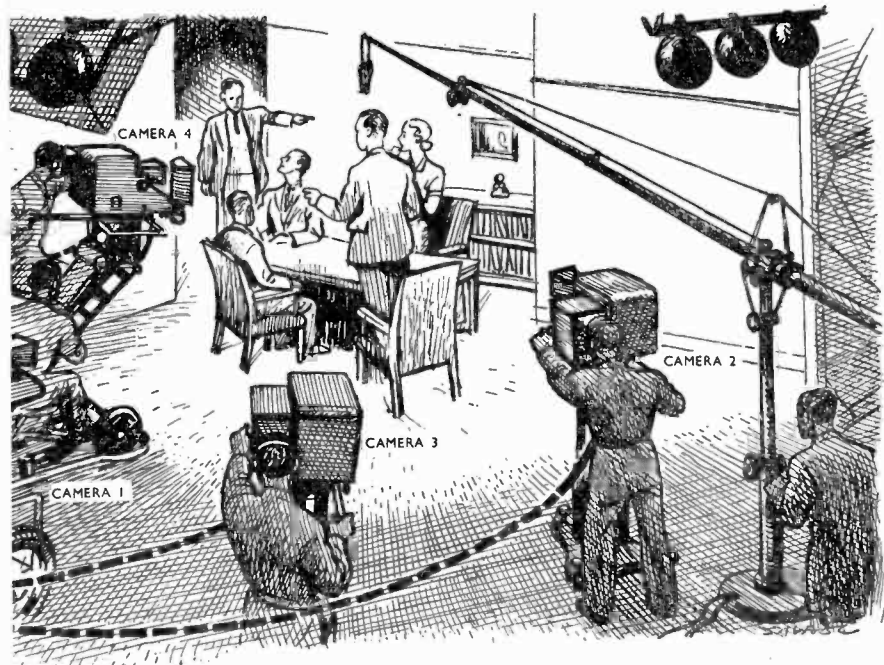


An impression of the "mechanics" behind putting television on the air. In his gallery, the producer directs a vision mixer in selecting the pictures he wants from four cameras below. At the same time he directs the cameramen through his "talk-back" microphone.

programme, and a high-quality loud-speaker for monitoring.

Two film-scanning machines, forming a unit that can be used in conjunction with either studio, are provided for the addition of film sequences to studio productions. Each film scanner consists of a film projector and an Emitron camera. A standard film projector cannot be used for this purpose, since each film frame would not remain long enough in position for the scanning to be completed. Recourse is therefore had to a continuous-motion projector developed in Germany for use in cinemas. In this projector the film moves continuously through an optical system consisting of a set of rotating and rocking mirrors, whose motion keeps the optical image steady by cancelling the effect of the movement of the film. Hence this image can be scanned by an ordinary television camera. The great advantage of these projectors is that a picture is available for transmission in less than a second after the machine has been started.

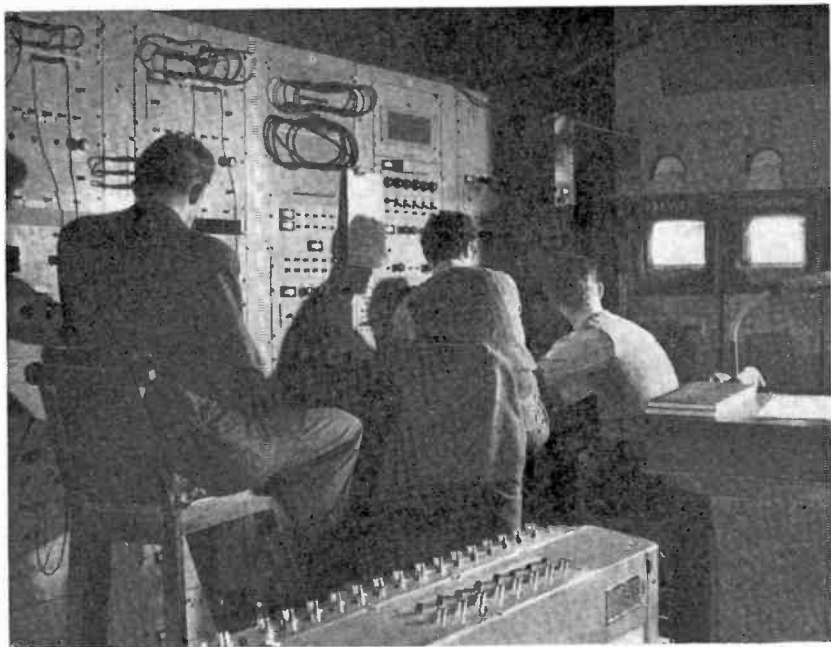
Full-length films are not televised on these machines, but on other machines in the central film-scanning room.



The heart of the control-room equipment is a set of pulse generators that receive timing pulses at 20,250 c/s, 10,125 c/s (line frequency), and 50 c/s (frame frequency) from the master timing generators in the central apparatus room. From these master timing pulses the pulse generators produce thirteen different waveforms. Of these, the line and frame-scanning waveforms, known as the "keystone" waveforms, are supplied to the camera cables through a keystone amplifier, in which the height, width and centring are adjusted, and actuate the scanning beam in the Emitron tube. During the fly-back periods this beam is extinguished by the application of "black-out" pulses supplied down the camera cable. The camera-gun voltage of 1,500 volts is generated by a rectifier and supplied to each camera through individual control panels, on which the beam intensity and focus are adjusted. The vision signals, representing the scene being televised, go from the camera along concentric cables to the "tilt mixer" in the control room, where they are amplified, corrected in amplitude and phase to compensate for the frequency response of the camera,

and then mixed with shading signals whose purpose is to smooth out the errors in light distribution introduced by the camera tube. Proceeding through the phase reverser, which enables negative film to be transmitted as a normal picture if desired, the vision signals go through a unit called the fading and monitoring mixer, by means of which the signal from any camera can be switched or faded in and out of circuit. After further stages of amplification the signals enter the suppression mixer, where the D.C. component is restored and the periods between lines and frames are cleared of all voltages in readiness for the insertion of the synchronizing signals by the picture and synchronizing-signal mixer. The final unit is a distribution amplifier, having a number of low-impedance outputs provided by cathode followers.

Racks of sensitive equipment at which studio technicians check and keep to a constant quality the pictures coming from the studio floor. The picture then passes to the transmitter, where it is finally checked before going on the air.



Much of the above-mentioned apparatus is provided for each camera, and the remainder is provided in triplicate, one set being for transmission, the second for pre-view, and the third held in reserve. All the apparatus is fed from low-impedance, stabilized, high-tension rectifiers.

The sound apparatus consists of rack-mounted units, each source of sound, be it microphone, film sound head, or disk reproducer, having its own amplifier. The outputs of the amplifiers are brought to the sound-mixing desk, where they are faded up as necessary.

The two studios are not the only sources of vision and sound material to be found at Alexandra Palace. Before the war the film scanners that have already been described had the dual function of providing film insets for studio productions, and of televising other films having no relation to studio productions, such as newsreels and feature films. After the war it was decided to install separate film scanners for televising newsreels and feature films, in order that the original apparatus might be devoted wholly to studio requirements. In the basement of Alexandra Palace a central film-scanning room has been built, and four machines installed there. Two of the machines were supplied by Cinema-Television, Ltd., and two by E.M.I., Ltd.

The method of televising the film is broadly the same in both makes of film-scanner. The principal components are a projection cathode-ray tube, an optical system, a film projector, and a photo-multiplier tube. A scanning pattern, with an aspect ratio of 8:3, is traced on the fluorescent screen of the projection cathode-ray tube by the electron beam, and two images of this pattern, one above the other, are projected by the optical system on the gate of the projector. The film runs continuously through the projector at a speed equivalent to twenty-five frames per second, and each film frame is exposed for a fiftieth of a second first to one scanning image, and then to the other, by the action of a rotating shutter. The light that passes through the film is focused on a photo-multiplier tube which generates the picture signal, and the signals corresponding to the exposure of each film frame to the two scanning images combine to give an interlaced signal. Though the aspect ratio of the scanning pattern on the face of the cathode-ray tube is 8:3, this is increased to an effective

ratio of 4:3 by the motion of the film. Synchronism between the film and the scanning waveform is ensured by driving the projector with a synchronized motor.

The new machines give better television pictures from film than have previously been possible: in particular, the definition and tonal gradation are much improved. Since a camera is not used to generate the television signals, the difficulties arising from spurious signals and shading are eliminated, and, moreover, the quality of the pictures is much less affected by the density of the film stock.

The central control room and its associated central apparatus enable the various vision and sound sources that may contribute successively to a broadcast to be selected and distributed to the transmitters. In addition to the two studios and the film scanners at Alexandra Palace, there are three mobile units for outside broadcasts, and provision must be made for changing over from any one of these sources to another without, on the artistic side, loss of smooth presentation, or, on the technical side, loss of synchronism by the viewers' receivers. The second condition precludes one source of vision programme from being simply faded out and replaced by another. Similarly, straightforward disconnexion is not satisfactory either. In replacing one vision signal by another, continuity of the synchronizing components of the waveform must be maintained. The corresponding problem for the sound signal is, of course, simpler and no different from that encountered in sound broadcasting, and a straightforward fade-over may be made.

The central apparatus room contains the equipment that enables the changes from one vision source to another to be made without loss of synchronism. It also contains the corresponding sound equipment and the master timing generators, already mentioned in the description of the control rooms. The frequency of the mains supply at Alexandra Palace controls the pulse-repetition frequencies provided by these generators, and they in turn control the scanning frequencies generated in the receivers. When, however, an outside broadcast is taken from a place where the power supply is obtained from a source other than synchronized mains, all the synchronizing signals in the transmission are controlled by the frequencies generated at the outside-broadcast point.

Next door to the apparatus room is the central control room, which is really the remote-control position for the central apparatus room. Here work the central vision and sound mixer operators, who make the changes, for example, from an outside broadcast that is just finishing to a studio programme that is about to begin. The operators are provided with transmission and pre-view monitors like those in the studio control rooms and galleries, and are in telephone communication with all the links in the television system.

The vision transmitter, made by Marconi-E.M.I., Ltd., is in two parts. The radio-frequency part consists of a crystal-controlled oscillator and a number of multiplier stages for generating the carrier-wave frequency, followed by a cascade of six power amplifiers. The final power amplifier is grid-modulated and is capable of a continuous output of 17 kilowatts, which is the power radiated during the white parts of the picture. The modulator part has four vision-frequency power amplifying stages, the output of which is a vision signal having an amplitude of 2,000 volts and a power of 2 kilowatts. The design of a modulator to deliver an output of this voltage and power, with a bandwidth extending from zero to 3 Mc/s is a matter of some difficulty, and the modulator is a remarkable achievement. In brief, the amplifying stages are coupled by cathode followers associated with filter networks and direct couplings. The filter networks and subsidiary supply components are themselves corrected for frequency and phase by additional networks. Between the second and third power amplifier is a circuit, called the "black level clamp," which stabilizes the value of voltage corresponding to the black tones in the picture.

The transmitter employs positive modulation; that is to say, maximum power is radiated during the white parts of the picture, and zero power during the synchronizing signals. The D.C. component of the vision signals is transmitted, and so there is no fixed value of carrier-wave power, the power varying with the picture brightness. The picture-synchronizing ratio in terms of amplitude is 70:30. The power at black level is thus nine per cent of the total, or just over 1.5 kilowatts.

The auxiliary services of the transmitter follow well-established practice. The filament supplies are obtained from generators or transformers, and the high-tension supplies



Film dubbing suite, added to Alexandra Palace in 1950. TV Films Chief Philip Dorté (centre) is watching a new film being screened and directing how voice and music shall be added to it.

from transformers and rectifiers. All the rectifiers are of low impedance, owing to the imperative necessity for good regulation in the high-tension supplies. This factor is very important, because the brightness of the received picture depends directly upon the transmitter power, which in turn depends on the regulation of the power supplies. A poor performance in this respect would accordingly lead to lack of faithfulness in reproduction of the relative intensities of the various black, grey and white shades in the picture. There is one unusual feature in the power supplies, in that the high-tension and certain other supplies to the modulator cannot conveniently be energized from the 50-c/s A.C. mains supply. This is because the special nature of the television waveform requires that these modulator supplies should be of constant impedance over the vision-frequency band. The apparatus required to achieve this with an input of 50 c/s A.C. would have been so bulky and expensive that it was found preferable to raise the supply frequency to 500 c/s by means of a low impedance 50-kilowatt inductor alternator.

The performance of the various units of the transmitter is under continuous observation by means of a high-grade waveform monitor, which can be switched to examine the waveform at several strategic points.

The Alexandra Palace sound transmitter is a straight-forward anode modulated transmitter, with a carrier power output of 3 kilowatts, made by Marconi's Wireless Telegraph Co., Ltd. Like the vision transmitter, the initial radio-frequency generator is a crystal-controlled oscillator, which is followed by conventional voltage and power amplifiers. The final power amplifier is anode-modulated by a three-stage modulator. The power supplies, monitoring and control equipment follow the standard practice.

The Sutton Coldfield Transmitter

OPENED in December, 1949, this television transmitting station is the most powerful yet built anywhere in the world.

The station is on a 24-acre site, some ten miles to the north of Birmingham and 550 feet above sea level. Near the centre of the site is an L-shaped station building in which are installed the sound and vision transmitters. A 750-foot mast supports the combined television and sound aerial—the tallest mast so far erected for the BBC. There are no studios, for Sutton Coldfield is solely a transmitting station, and takes its programmes from the London Television Station, at Alexandra Palace.

The vision-programme signals are sent from London to Birmingham over the ultra-high-frequency radio link, provided specially by the GPO for the purpose, and over a special coaxial cable for the first stage of the journey from Alexandra Palace to Museum Telephone Exchange, London, and the last stage from Birmingham to Sutton Coldfield. A coaxial cable link is also being provided by the GPO between London and Birmingham, so that ultimately it will be possible to send the vision-programme signals either by coaxial cable or by radio link.

The vision transmitter operates on a carrier frequency of 61·75 Mc/s, which corresponds to a wavelength of 4·86 metres. Its normal peak output is 35 kilowatts, which is double that of its counterpart at Alexandra Palace. Asymmetric sideband

transmission, in which one sideband is partially suppressed, is being used, in order to increase the number of transmission channels available within the limited band of frequencies allocated to television, thereby making room for further transmitters which will serve other parts of the country.

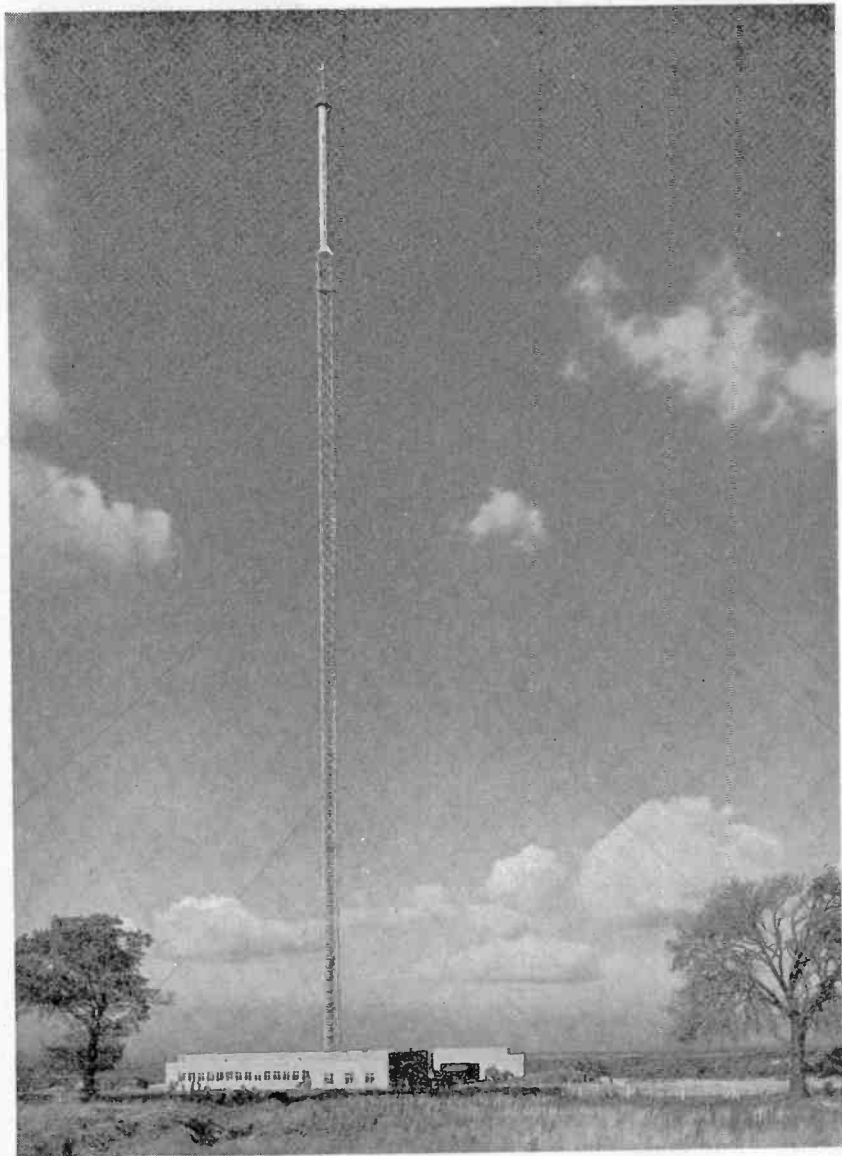
The sound transmitter operates on a carrier frequency of 58.25 Mc/s, the corresponding wavelength being 5.15 metres. It is amplitude-modulated and has a power output of 12 kilowatts, which is four times the power of the Alexandra Palace sound transmitter.

Both transmitters are under the control of the engineer at the control desk which overlooks the transmitter hall. The vision transmitter is push-button operated, the various power supplies being applied automatically and in the correct sequence. Meters indicate the voltages and currents to the various stages of the transmitters, and the progress of the vision signal through the transmitter can be inspected on a cathode-ray oscilloscope. Tubular feeders carry the radio frequency signals from the transmitters up the mast to the aerial at the top.

The mast is 750 feet high and has an all-up weight of 140 tons. The base is located by a steel ball in a socket, which forms a pivot to allow angular movement of the mast in high winds. Up to the 610-foot level the cross-section is triangular, each face being nine feet across. Between the 610 feet and 710 feet the cross-section is circular. The eight tiers of four slots in the surface of this part will form an aerial for VHF sound broadcasting, should this system be adopted at Sutton Coldfield in the future. Above the circular section is a square-section topmast, which supports the television aerial.

In the aerial a single array radiates the sound and vision signals. It consists of eight vertical folded dipoles arranged in two identical groups placed one above the other and separated by a distance of approximately one wavelength. Each of the four dipoles in the two groups is mounted on one face of the topmast, the dipoles on opposite faces being approximately two-fifths of a wavelength apart. The average gain of the aerial in a horizontal direction is 4 decibels.

A lift inside the mast runs between the ground and the 610-foot level. In order to prevent icing, each dipole incorporates an electric heater, controlled from the ground.



A 750-ft. mast marks the most powerful television station in the world—the Sutton Coldfield transmitter, first in a BBC network of high-power stations soon to cover Britain.



*Famous plays are revived for television. Here it is George Bernard Shaw's **Widowers' Houses**, with (left to right) **Frances Rowe**, **George Hayes**, **Dennis Arundell** and **David Markham**.*

4. PLAYS FOR THE HOME

SCREEN

How They are Produced

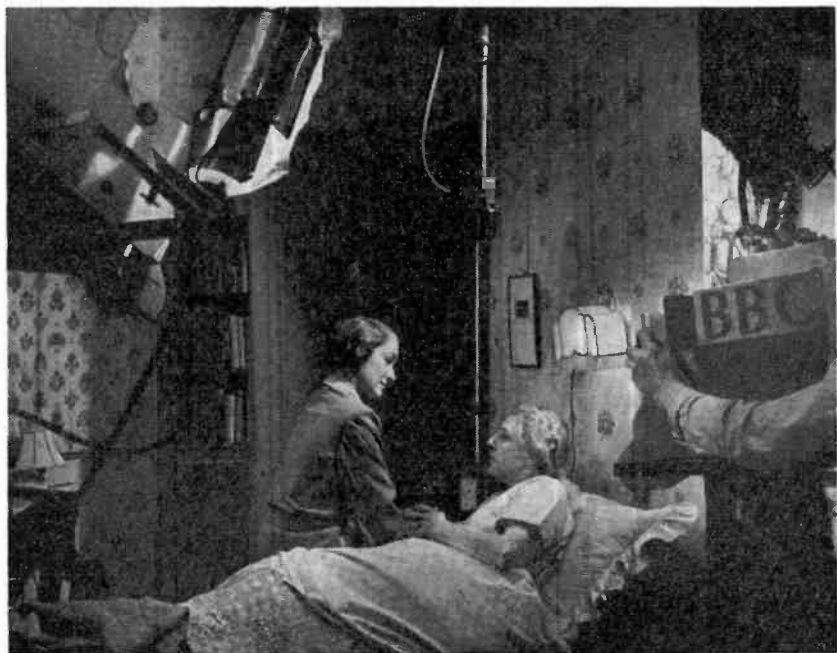
THERE can be no end to what has to be done to put a television programme on to the screen. If time, labour and money were unlimited, probably a whole year could be well spent—by about a hundred people, at a cost of several thousand pounds—preparing and rehearsing an original television play.

The writing of the story, made specially to fit and to exploit the new medium of television, would take six months. Unless the writer had worked inside television studios, he would spend a great deal of that time alongside the producer, and other experts, learning how certain dramatic effects can best be obtained in television—as well as finding out what things it is never wise to attempt in television.

His script completed, some weeks more need not be any too long for the designing of scenic sets, which, since this is a drama purely for the television screen, will have to make their own intrinsic and perhaps vital contribution to the atmosphere and movement of the play. If the play is really to make full use of the medium, even properties and furnishings will need to be specially designed.

The author will have resorted to the use of some film, to enable him to give full effect to his story, as well as to allow the most dramatic arrangement of sequences. He will not only want weeks spent on filming exteriors, but interior filming will be needed—perhaps to cover a sudden change of time in the story, over which characters must put on age.

Though, at present, television plays get about fourteen days of rehearsal, everybody involved in them would welcome longer preparation; and in the ideal dream we have been indulging in, no doubt the new play for television would get a month's rehearsal, the second fortnight of it actually in



Gladys Young (right), famous sound-radio actress, made her television debut in the gripping play Corinth House. With her is Jane Barrett, one of television's most versatile actresses.

the studio. Parts of this studio rehearsal would be screened on closed circuit, so that the producer and others could sit back and judge progress. Or it might be recorded, off the monitor screen on to film, and then played back, to help the cast see for themselves how they were shaping.

The result, on the night of transmission at long last, might be outstanding, good, mediocre, or shockingly bad. There are few "naturals" in television yet; few actors playing in it, and few writers writing for it, on whom you can bet on scoring a certain success. Presenting every new television play is an equal risk. But even if fate had been kind to our dream production, and had blessed it with a brilliantly successful reception—it would still only have a "run" of two nights, with a possible film recording stored away for its revival at

some future date. To have worked for so long, for that limited result, would surely have been fantastic, let alone most uneconomic.

Besides, in a daily service, all kinds of productions must reach the screen every night for 365 nights of every year; so in actual fact, time, labour and money have to be spread over many shows at any one moment. Better and better television productions will not come to us by the spending of colossal sums on many months of work, as is done in film production; the improvements undoubtedly ahead of us, in the near future, will be made by refinements in cameras and lighting systems, and by the ever-increasing knowledge of how to handle everything that goes into a television production, among all those working on the studio floor. Since 1946 all manner of methods of giving better dramatic effect, and generally better pictures, have been worked out. This will continue for some years yet, particularly in matters of depth of focus, lighting, and the best use of scenery.

The past year has seen the first systematic attempts by the BBC to find out what programmes viewers favour most, and throughout the audience research which has been undertaken, plays have held their place at the top of the "poll," among all other studio productions; and plays have kept an equal place with outside broadcasts in "polls" of all types of programme, indoor and outdoor, taken together. (*How Audience Research is Organized*—see p. 131.)

Whether in fact there is among television viewers an insatiable demand for full-length plays, to such an extent that the BBC has to put on at least two a week, is a question which might well be explored. Certain it is that the work of providing over a hundred television plays a year is asking far too much of producers and writers, if original plays specially devised for the new medium are to be found. Inevitably the bulk of televised productions have to be slight adaptations of stage plays, both classic and recent.

It takes a writer time to write a play, especially for television. It takes—as we have seen—some time for it to be produced. Ideally, at the beginning of any one year, television's Drama Head ought to have half a dozen new plays in the "kitty," ready for his producers to get to work on; another dozen in the process of being specially written; and anything

up to a couple of dozen being discussed as possibilities with authors. At the beginning of 1950 there were few new plays ready for production, next to none being written, and precious few being discussed. So, in its first year under the headship of Val Gielgud, the television Drama Department has had to lay reliable foundations for a regular supply of new material to the screen—material likely to blossom only in the second year, 1951, when, for instance, Terence Rattigan, James Bridie and J. B. Priestley are providing television plays during the period of the Festival of Britain.

More than a score of writers were specially approached to write for television. Meanwhile, the programme output of plays had to be kept up; and there would seem to be little doubt that the year got off to a disappointing start. Very soon there was considerable viewer and press criticism of the morbidity of the plays selected at Alexandra Palace. The sombreness of such pieces as *Craven House* (with Jean Cadell and Helena Pickard), *Corinth House* (marking the television debut of Gladys Young), Zola's *Thérèse Raquin* (with Sonia Dresdel and Nancy Price), and T. S. Eliot's *Family Re-union*, came across the screen so much in one continuous piece that even Luise Rainer and Jeanne de Casalis in *The Seagull* could do nothing to break the seeming gloom, while the normally delightful *Lady Precious Stream* only seemed to add to the abnormality of the dramatic output.

Following the criticism of this phase there was something of a patent change of front. Gordon Harker was hurried in—with *The Poltergeist*—and Wilfred Pickles made a very happy television acting debut, in *Hobson's Choice*. Mary Ellis and D. A. Clarke-Smith kept up the fun with *The First Mrs. Fraser*, and the summer saw a fairly balanced mixture of family-story, thriller and comedy plays.

The lamentable absence of new plays continued, though Michael Barry's *Promise of Tomorrow* was a considerable advance in the art of pure television drama, marked by outstanding performances by Jill Balcon, Marius Goring and Jack Allen.

On the acting side, Irene Worth, our pre-eminent television actress, was much missed during the year, owing to her work in America. Sonia Dresdel, Mary Ellis, Alec Clunes, Pamela Brown, Joan Hopkins, André Morel, Alan Wheatley



*Luise Rainer (right) visited the television studios to play in *The Seagull*, with (left and centre) Tatiana Lieven and Jeanne de Casalis. Two of the four cameras used are seen.*

and Stephen Murray were acceptable visitors to the screen. Valerie Hobson paid a single call on viewers, in Shaw's *The Man of Destiny*.

Memorable appearances were made by Betty Ann Davies, in *The Compelled People*; Barbara Mullen, in *Mother of Men*; Raymond Huntley, in *The Title*; Jane Barrett, in *The Admirable Crichton*; Richard Attenborough and Kathleen Michael, in *Justice*; Arthur Goulbet, in *Dark Tribute*; Alastair Sim, in *Mr. Gillie*; Andrew Osborn and Gladys Cooper, in *Adventure Story*; and by Emrys Jones, in *The History of Mr. Polly*.

Whether television will create two or three exclusive dramatic stars, exclusively famous only by reason of their acting in television, remains a question. So far it has not done so; and though hundreds of aspiring actors and actresses were auditioned for television during the year, no great discovery was made. This however may be no bad thing; the "discoveries" of the film studios are too often artificial and conveniently short-lived. Television requires a more stable diet of talent.

The Television Service has turned out in the course of a year an average of two plays a week. The work falls to a staff of twelve producers, each getting six to ten weeks in which to prepare every play.

The producer's preparation begins by a thorough study of the script. If it is a play which has been produced on the stage,

Wilfred Pickles made a happy television acting debut as Will Mossop in the Lancashire comedy Hobson's Choice. Belle Chrystall (left) starred opposite him, as Maggie Hobson, who stole him from Ada Figgins, played by Sibell Gill (centre).



he will want to decide how much adaptation—or maybe improvement—is necessary for its performance to an audience of three or four, by a fireside. If it is a new play, specially written for television, this will have been taken care of in the writing; and the producer may well have been in close touch with the writer throughout the preparation of the script.

It is of prior importance to know whether the play can be produced wholly from sets within the studio, or whether film sequences will be required—perhaps because some scenes are placed outdoors, or because of changes in time, or because of other subtle dramatic effects in the story. For if filming is necessary, the producer has to give good notice to Alexandra Palace's film unit, so that days may be set aside in its busy programme.

If everything can be managed inside the studio, the producer needs to assess how many scenic sets will be required, and exactly how the movement of the cast between them, as well as the movement of the cameras, will affect their placing on the studio floor, and also their size. If the production is ambitious, he may need both of the Alexandra Palace studios, a factor which the programme planners will want to know as early as possible, since tying up both studios, even for one day, may well affect arrangements for a whole week's programmes.

The producer will discuss the design of his scenic sets with one of the half-dozen set designers on the television staff. This will be more than merely a discussion about scenery. More and more, producers and designers are working closely together on the whole appearance and movement of a play. The designers have practical knowledge, and hard-won experience, of such technical television traps as focus, angle of shots, heights and distances in scenic sets, and many other details which can be controlled in order to provide what the producer wants his audience to see in the finished picture on the screen.

For all this preparatory work with the designer, charts are employed, showing a plan of the studio to be used. On these are marked the positions of sets, cameras and microphones. From the plan, the whole movement of cameras, throughout the play, can be worked out on paper.

Throughout this preliminary study, the producer will have been reading and re-reading the play, to gain more and more recognition of what it needs for a visual performance within the limits of the television screen. He will have been deciding when he will be shooting close-in, and when he will be moving back to mid-shots or long-shots. Now, looking at his chart, he will be able to make the first indications on his script as to which cameras he will be using, and what kind of shots, for practically every line of the dialogue.

Some producers can get all this detail down on their scripts before starting rehearsals. Some carry the detail in their minds. All find changes necessary when actually working it all out with the cast. Rooms for the preliminary rehearsals will have been booked in readiness, but before the rehearsals start there is still plenty to be done from the producer's office.

Working from a list he will have given her, the producer's secretary will be requisitioning props, furnishings and scene dressings from the appropriate department at Alexandra Palace. She will be requisitioning whatever costumes are to be required, from the Wardrobe Department. As the producer decides whom he wants in the cast, she will send out inquiries to actors and actresses, or their agents, to find out if they are free to fit in with the rehearsals and performance of the play.

The artistes a producer wants for a cast are never all available, and he will spend some time searching for others to fill the gaps which remain in his cast-list after the first—and in his view, the ideal—selection has been tried. In the case of the leading parts, film and stage commitments often get in the way of stars working for television. Unlike sound radio, television cannot be fitted in by doing a morning's work in the recording studio. Stars, however accomplished or famous they may be, must be available for a considerable part of a fortnight's rehearsals, and free to do the live evening performance for viewers. This keeps some of our busiest stars out of television plays. Film and stage producers, who fear the competition of television, are also keeping leading actors and actresses out, by inserting in their contracts clauses which ban television performances.

Eventually, and probably not without disappointments, the producer has his television play cast. His secretary has told the players involved where to collect for the first rehearsal.



Above: Camera technique in television. Two cameras shooting facial reactions during tense dialogue in *Death of a Rat*.
Below: Scene-setting and costuming in television. Effects of perspective and luxury within the space of a television picture, gained for *Comédie Française* players presenting *Othello*.



We are still a fortnight away from the night of performance. In the scenic workshops the sets are being made, and will soon be painted by the staff of scenic artists, all the time watched by the eagle eye of the designer. The Wardrobe Department has either ear-marked the costumes required, from out of its own stock, or has set in motion machinery to hire costumes for the occasion.

If film has been taken to fit into the play, there will be "rushes" to see, and changes to make. But in the end the day of the first rehearsal arrives, and producer and cast meet for the first time.

Their first "work-out" however does not take place at Alexandra Palace. There has never been room there for all the rehearsals all the television programmes require. Plays are therefore rehearsed for ten or fourteen days in rehearsal rooms in Marylebone. Practically bare of furniture, these rooms contain no cameras, and no television equipment at all. Working from his studio chart, the producer has to mark, with chalk lines on the floor, where the scenic sets and the cameras will be when, eventually, the cast gets inside the television studio proper.

By this system of make-believe, with producers and cast creating an imaginary studio around them as they work, is life put into the play, day by day. Not until the day of the television performance can space normally be found at Alexandra Palace for a full-dress rehearsal, in the actual studio, with cameras, microphones, scenic sets, and all the rest of the paraphernalia required.

When that day comes, the producer leaves his cast and climbs into the producer's gallery, high above the studio floor. In his place, among the cast on the floor, stands the studio manager, whose job it is to convey to the cast, the cameramen, and all the technicians on the floor, a great deal of what the producer requires of them. The studio manager receives these instructions from the producer on a pair of headphones, which he wears all the time, wherever he moves. Cameramen and their assistants, and sound technicians also, wear headphones, and are also instructed individually by the producer. But it is the studio manager who sees that artistes and cameras, props and furnishings are in the right places at the right time, as the rehearsal continues. This is vital in



Valerie Hobson, paying a brief visit to television, took the part of the Strange Lady in George Bernard Shaw's play The Man of Destiny, with Hugh Burden in the part of Napoleon.

television, because once a performance has started, it obviously cannot stop.

Up in his gallery, the producer has in front of him a series of television screens. These screens show him the picture being obtained by each of the cameras he has in use on the studio floor below. A final screen is of the picture he chooses to send out on transmission. Virtually the production which the viewers watch is made up by the producer's almost continuous selection of pictures from the pre-view pictures he can see in the gallery.

He may start his action through Camera One, and intend, after so many lines of dialogue, to stress a dominant character by putting him into close-up. It is necessary, therefore, while Camera One's picture is going out on transmission, to instruct the cameraman on Camera Two to get "lined-up" for the pending close-up shot. If, as is likely, there is to be a quick



Before leaving England to make further conquests in America, television's star actress Irene Worth gave a memorable performance in the 17th century tragedy, The Duchess of Malfi.

cut from that close-up to yet another angle of shot, taken from Camera Three, then the producer will also be talking to the third cameraman, in order to line-up the picture he wants from him—and all this while the first action of the play is in progress, and before that first change to a close-up shot has been reached!

In fact, during what are but the first few minutes of the play, the producer's commands may have sounded something like this:—

“Grams out!”

This instruction to a girl operating gramophone turntables. The introductory music to the play, played against the display of opening titles on the screen, is thus faded out, for the action to begin.

“Right, Terry, cue them now.”

This to Terry, the studio manager on the floor below, to signal to the players to begin their action.

“On you, One.”

A reassuring word to the cameraman on Camera One, who is shooting the opening few moves.

“Can I see Two on pre-view, please?”

This to the vision mixer, a girl sitting with the producer, who, through a set of controls in front of her, can bring the different cameras on to the pre-view and transmission screens.

“Two, pan slightly left; remember I am taking you very close in; steady—right as you are.”

He has now got Camera Two into position for the close-up.

“Three—I want you in towards the end of the table, please. Can I see Three on pre-view now?”

Cameraman on Three moves in; the vision mixer “puts up” on the screen the picture he is getting.

“Good, that’s the shot I shall want. Coming to you, Two—right, cut to Two!”

The vision mixer places the close-up from Camera Two on to “transmission.”

“Cut to Three! On you, Three.”

The close-up shot is quickly lost as the vision mixer brings Camera Three’s shot, across the end of the table, into transmission.

At this point the producer may get—and deserve—a small respite from actual camera changes, while a scene is played from one position. What has been indicated omits altogether the other worries of the producer in action—his constant watch on the quality of the picture, as affected by lighting, and by the moves of cast and cameras; his constant watch on the quality of sound similarly affected; and his continuous pre-occupation with the performance of the cast he has so patiently rehearsed, and to none of whom he can now say “Stop—let’s try it this way!”

Through the studio manager, as well, he will be directing the movement of cameras from one scenic set to another, as the play goes on, so that all is ready for every change of

scene. Unlike the stage producer, who on the first night can sit and watch the results of his work from the audience's point of view; and unlike the film director, who can stop and shoot scenes again and again, the television producer, on "the night," is contributing as actively to the performance as any of his actors. More so — for on his every word depend the chances of their making the best of their opportunity, and of the cameras doing them justice.

No wonder producers leave the gallery, at the end of the play, feeling that they themselves have been giving an exacting performance; and no wonder that the more honest of them freely admit to having no accurate idea of how the thing actually looked to the viewer!

As soon as more space can be provided for television play production, at Shepherd's Bush, all this will be changed. The producers' galleries in the new studios coming there will not be the crowded "cupboard" affairs now in use at Alexandra Palace, where producer and his assistants work elbow to elbow, under cramped conditions.

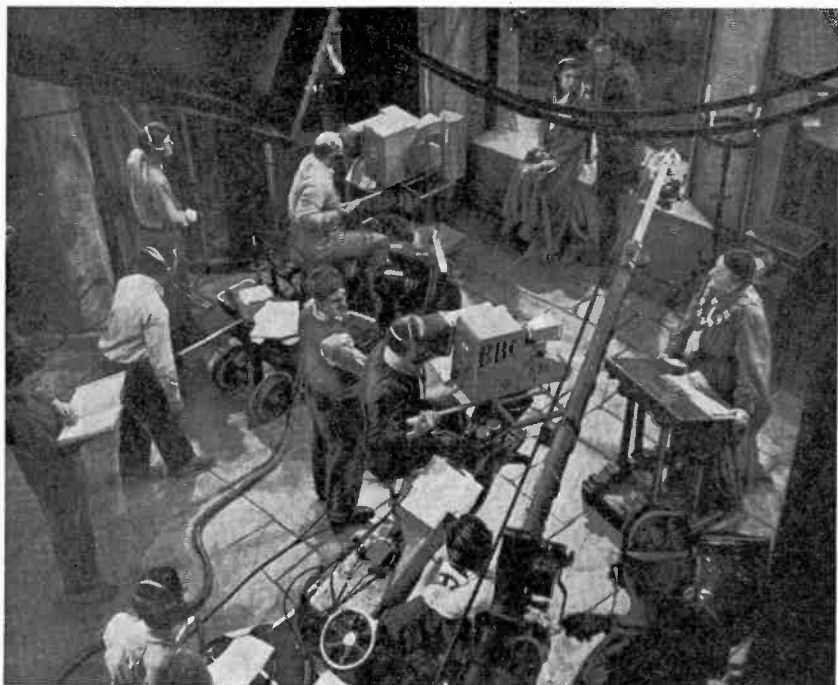
It is hoped that the new producers' galleries will allow producers to sit back, free of the job of giving instructions to cameramen and studio manager, and able to study the transmission picture minute by minute, making quite sure that it is in fact as he wants it. The instructions will be given by an assistant technician, sitting alongside vision mixer and sound engineer, below and in front of the producer. Eventually, producers may sit in a different room altogether, watching the final rehearsals of their plays on a screen, in circumstances as near as can be to those prevailing in the living room at home.

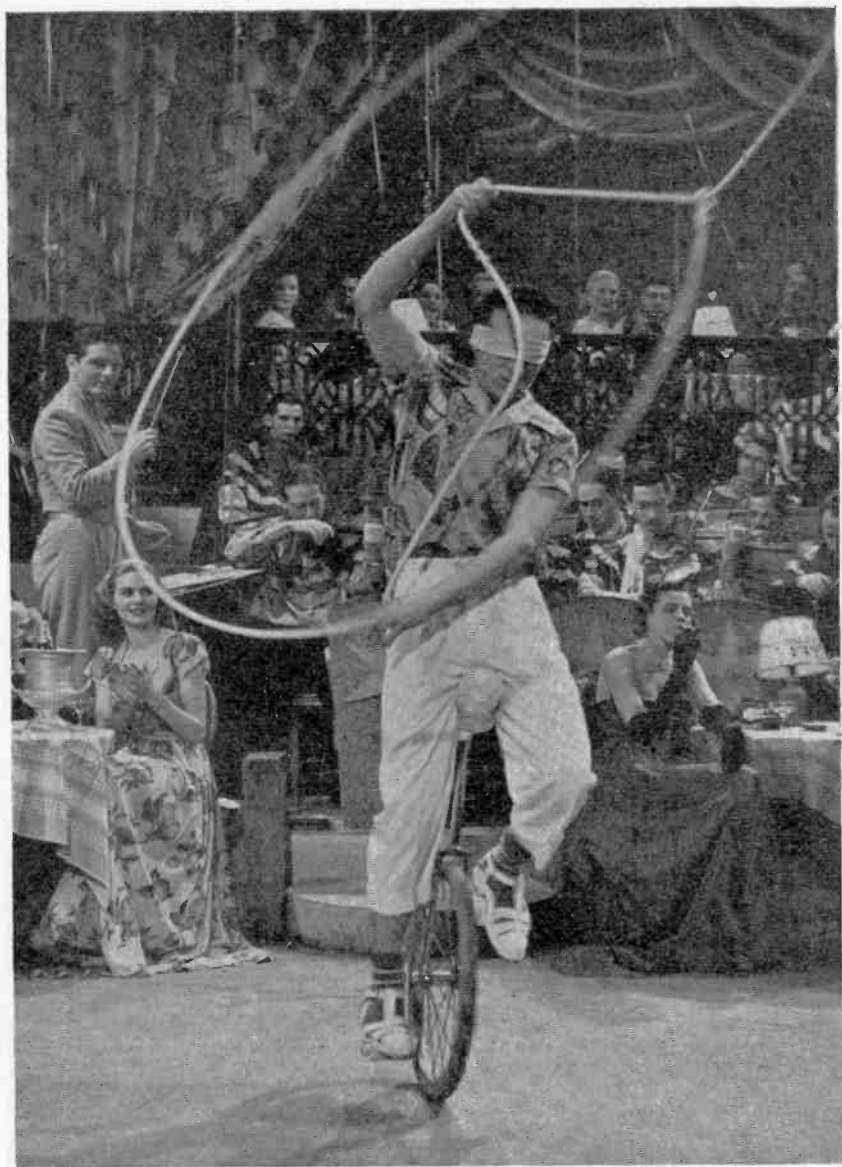
But let us not lose track of our play, now getting under way on the studio floor, below that crowded and tense producer's gallery in Alexandra Palace. A great deal is going on that is incidental to the action of the players in the studio itself. Make-up girls are standing by, with trays of grease paint, creams and powder, ready to render "running repairs" to actresses whose make-up may wilt under the hot lights. Lighting technicians are constantly moving about, soft footed, keeping an eye on the lighting arrangements, and changing the lighting as and when the producer needs for his effects. Sound technicians are watching as closely the

manoeuvres of the microphone booms, ever engaged in keeping an unseen place in the thick of the action. Off the studio, crouched over monitor screens in half darkness, the "racks" technicians are watching the quality of the pictures, ready to adjust them should need arise.

When the play is ended, the number of people who can relax again, and think about making tracks for home, is considerably more than the number viewers have been watching on the screen. Supposing the cast numbered ten, we can put the total now released from an exacting job at 43! They would be made up as follows: producer, his secretary, vision mixer, sound mixer, senior maintenance engineer, gramophone operator, make-up girl, call boy, and twenty-five engineers engaged in the studio and at the transmitter.

Cameramen and sound technicians at work on the studio floor in the production of Christopher Fry's The Lady's Not For Burning, starring Pamela Brown and Alec Clunes.





Started in 1946, Café Continental still brings top-line variety and cabaret talent to the home screen. Here Jim Cluny challenges credibility with a complicated blindfold balancing turn.

5. VARIETY: SEARCH FOR TALENT

It's a Risky Business in Television

WITH lack of sight ever a limitation to radio variety, it would be natural enough to expect television rapidly to turn its visual advantage to spectacular success in light entertainment. Comedians, so many of whom are funny to watch, as well as hear, could now be seen by radio. Glamour and movement, those essentials of stage variety and revue, could easily transfer to the television screen. Dancers, acrobats, jugglers, conjurers—what a wide field of variety fare should lie open before the television viewer!

It is not proving so simple; in fact, finding good television light entertainment has proved to be a very chancy business. It was soon found that taking a comic out of a music hall and putting him up in front of a camera was rarely going to succeed in making viewers laugh. For one thing, the television camera does not see as the human eye sees; and, for another, the viewing audience is not a music hall audience having a night out as a crowd.

Similarly, dancers, acrobats and all others who may be acceptable on a stage some distance from your seat, are rarely as convincing seen through the close scrutiny of the television camera, on a screen beside your armchair. Spectacle, too, on the stage so dependent on lavish settings and hordes of dancing girls, becomes only an irritating mirage of its former self when it has to be compressed within the limits of the television screen. Those limits are not of size only, but of definition as well; you cannot discern the features of a chorus line in a television scene.

Light entertainment in television has only succeeded, therefore, when it has discovered talent so polished as to appear beautifully natural within the close scrutiny of the camera; and when it has found writers sufficiently talented

to create a form of comedy or spectacle which is effective to a few people seeing a small screen by their own fireside.

An added difficulty is that the celebrated talent in the country, polished enough to make a good impression always in television, is mostly barred from appearing in programmes. Either long-term contracts in leading music halls, or in film work, prevent these top-of-the-bill performers from getting time for television; or their music hall engagements are subject to a contract clause forbidding them to appear in television.

In these circumstances the provision of television light entertainment has had to depend very largely on the auditioning of unknown talent, and the bringing of talent from the Continent. Where spectacular story-shows, like musical comedy and revue, have been tried, it has usually been done by reviving past stage successes, and few of them, however much adapted, can be said to have made successful television entertainment.

The most promising avenue of approach to the secret of success in the elusive sphere of television light entertainment has been that of the original show, specially prepared for television. Such special origination of light entertainment material for television takes a long time, and the one salient development in this sphere at Alexandra Palace over the past year has been a definite policy whereby long preparation of shows has been a common practice, and no longer a rare one. This policy has paid dividends through such programmes as *Family Affairs*, *Vic Oliver Introduces* and *How do You View?*

Vic Oliver Introduces made a new advance in mixing several entertainment ingredients which had before been served up separately. There was a symphony orchestra, conducted by the comedian. There was operatic singing and ballet. There was classical piano playing, by Vic Oliver. And there was plenty of fun from the comic in his own comic style. On top of this unusual "something-for-everybody" appeal, the programmes held the attention by reason of some brilliant presentation and camera-work by Bill Ward.

The year also carried on a new venture, started at the end of 1949, a Saturday night serial story on light comedy lines. *Family Affairs*, the adventures of the Connover family, invented and written by Betty Farmer and Eric Maschwitz, caused considerable argument among viewers. So far as



Isobel Bigley (with fan), American musical-comedy actress who was a television discovery in 1950. Here she is playing opposite Jack Buchanan in Gay Rosalinda, a comedy operetta.

could be gauged, probably for every fifty liking this feature and wanting more of it, there were fifty wanting it stopped.

Family Affairs, in which Heather Thatcher and Michael Shepley starred, explored further the blending of exterior film shots in television light entertainment, and a great deal of experience was gained in thus breaking through the limitations of the enclosed studios.

If length of run is anything to go by, some early television features on the lighter side can show honourable records. *Café Continental*, which started in 1946, has been the great purveyor of Continental talent to the viewers' screens. This cabaret feature, produced by Henry Caldwell, has introduced many artistes to England for the first time.



The Rooftop Lovelies encircle Al Burnett, compere of television's regular cabaret feature, Rooftop Rendezvous.

Caldwell has combed the cabarets, night clubs, circuses and music halls of Paris, Brussels, Copenhagen, and many lesser towns in Europe, in order to find acts for his television show. Usually it has been worth the trouble; in fact, it is doubtful whether so extraordinary a variety of polished artistes could have been found by confining the search to this country.

When it had been running some time, the BBC considered *Café Continental* might have a rival, a cabaret programme built from talent within this country. So *Rooftop Rendezvous* was created. In a setting which was for a long time only a small variant of the *Café Continental* one, this programme has had some hard going trying to find sufficiently polished acts from home resources.

Kaleidoscope is a television programme-name of fond association to many viewers. It popped up first in programmes soon after the Television Service re-opened after the war. A miscellaneous, light magazine feature was introduced,

starring to a certain extent the announcer McDonald Hobley (and his Scotty dog, Kilty!) as compere. It became very popular, especially as efforts were made to make it the viewers' own feature by inviting contributions to it.

Ronald Waldman's *Puzzle Corner*, long renowned in sound radio, was introduced into *Kaleidoscope*; but the programme was judged to have got as far as it could on its original formula, and was dropped for more than a year. During that time the number of viewers more than doubled, and when *Kaleidoscope* returned to the screens in 1950 the majority of viewers were seeing it for the first time. By then, also, Ronald Waldman had joined the television staff, and produced the whole programme, which he has considerably changed from its original conception.

A quick-moving programme of light entertainment and surprise, it has been one of the best-produced of all the regular programmes. For his *Puzzle Corner* section, Waldman sent a mobile sound-radio transmitter into people's homes, so that viewers could answer his questions from their own

Musical-comedy star Bobby Howes ventured into television programmes as "the little man struggling with his conscience," in the comedy series Such is Life. Here he meets Eve Ashley at the dentist's.





Two regular attractions in one of television's most popular shows, Kaleidoscope, a mixture of fun, mystery and surprise. Above: the Kaleidoscope Girls. Below: Richard Hearne, as Mr. Pastry, in one of his uproarious slapstick sketches.



firesides. His series of sketches starring Richard Hearne as Mr. Pastry, and his discovery of television's most attractive line of dancing girls, the Kaleidoscope Girls, also won legions of admirers for his programme.

Next to *Kaleidoscope*, the most outstanding of the light entertainments specially devised for television was the Terry-Thomas series, *How Do You View?* In these programmes, produced by Bill Ward and scripted by Sid Colin, Terry-Thomas made a place for himself as television's own comic. The series was followed by another which projected Alfred Marks as resident comic, but Terry-Thomas appears to have remained the viewers' first favourite.

That long-established star of the musical-comedy stage, Bobby Howes, bravely ventured into new fields as star of a television comedy series, *Such is Life*. Though produced by one of Alexandra Palace's ablest producers, Michael Mills, on a script from Ted Kavanagh, this show could not be said to have advanced the search for originality in television variety. Michael Mills made a better success of a new cabaret formula, *Regency Room*, during the summer.

"Monsewer" Eddie Gray, a comedian of very visual quality, also attempted to crack the jackpot in his series *Innocents Abroad*; while in the *Lucky Dip* series, which was given a rousing send-off by the appearance of Gracie Fields, Duggie Wakefield had a short run.

Hildegard, Frances Day, Lucille Boyer, Vera Lynn, and Cicely Courtneidge have all contributed to television light entertainment, but the BBC has still not found the way to lure sufficient of the top-rank variety stars into radio's newest medium.

In opposition to the theory that variety must be specially produced for television is the idea of sending the cameras into an audience-music-hall show, in the hope that they will pick up and relay to people's homes some sense of the atmosphere of people having a night out.

This is what is done with television's *Music Hall*. Viewers are certainly shown shots of the audience enjoying itself, but it is still the quality of each act which makes the show. Looking to the future, the occasions when television visits theatres and outside halls will probably be limited to rare excerpts from important "first nights."

6. PERSONALITIES IN CAMERA

JOAN GILBERT

FOR four years, once a week, with very few breaks, Joan Gilbert has introduced television's *Picture Page* feature to the home screen. A visual elaboration of the idea which started *In Town To-night* on the radio many years ago, *Picture Page* selects personalities out of the week's news, and has them interviewed before the cameras.

The full significance of credit captions is not always understood, so it is as well straight away to explain that when the *Picture Page* captions say "Edited by Joan Gilbert" they are referring to the major portion of her television work. The three-quarters of an hour during which she is seen each week provide but the "performance" which follows six, if not seven whole days of hard, preparatory work.

Joan Gilbert came into this intriguing sphere of television by way of radio's *In Town To-night*. She joined the BBC administrative staff as a result of a golf match between her father and a BBC administrative official! She was drafted to the sound radio variety department as a typist-secretary. Her boss there was W. H. Hanson, the original producer of *In Town To-night*. In the weekly scamper to put that programme on the air, Joan Gilbert soon found herself carrying more of the work than is normally signified by the title "typist-secretary." She was in fact Hanson's assistant.

W. H. Hanson died suddenly in tragic circumstances, and Joan Gilbert left *In Town To-night*. The year was 1937—twelve months after the start of daily television programmes in Britain. Up at Alexandra Palace, Cecil Madden was editing a new kind of television programme, called *Picture Page*. Joan decided to join him as a reporter—she would seek the newsy personalities for the programme week by week. Soon she became assistant editor to this pre-war *Picture Page*.



At a studio birthday party for her programme, Picture Page, Joan Gilbert cuts the cake. Announcer Lionel Gamlin and some Army apprentices from the Royal Tournament are ready to assist. Picture Page has run for six years.

But 1939 brought war, and the sudden closing down of the Television Service for the duration. During those war years Joan Gilbert held a variety of jobs, all of them in the front line of wartime radio broadcasting. Eventually she was conducting some of the most popular radio programmes for the Forces.

At long last the Television Service was opened up again, and in 1946 it was decided that *Picture Page* should be one of the first post-war vision programmes. Joan Gilbert was offered the editorship of the feature. There was no intention at all of her appearing in the programme on the screen. But by the time she had got her first *Picture Page* together, nobody really suitable had been found to introduce the personalities on the screen; so she went in and did it herself. With the exception of two intervals, when she was ill, and the job fell to Announcer Mary Malcolm, Joan Gilbert has done it ever since.

Picture Page is rehearsed from about 4.30 p.m. onwards on the same day as its transmission. Joan Gilbert and interviewer Leslie Mitchell then meet the personalities who are to appear in it, and, in conjunction with the producer, they arrange the order and general presentation of the programme. Each personality is rehearsed to ensure some feeling of familiarity with the strange paraphernalia of a television studio; but nobody is so rigorously rehearsed as to turn the thing into a memorized "act."

The *Picture Page* staff, and the personalities, have a break for a meal in the Alexandra Palace restaurant, and about thirty minutes before the programme, tradition has it that Joan offers drinks all round, in her dressing room. This tradition actually serves the useful purpose of making people forget any zero-hour nerves they may have.

Next morning Joan Gilbert is back in her office, a clean page of her *Picture Page* entry book open before her, and with eight to ten personalities to find by the next Wednesday. The job is a tricky one, since it is no use feverishly rushing to get it all done well in advance. If she has filled her programme by Monday, worthwhile personalities may crop up in the news on Tuesday, and even on Wednesday itself.

By the end of the week, therefore, Joan Gilbert has probably definitely accepted only two or three items for the coming programme, with several others in mind. Even by Tuesday night she may not have heard definitely whether her final selections for the programme are going to be available. Frequently a last-minute item is fixed on Wednesday when Joan is already at the Alexandra Palace being made-up.

In this work of tracking down the newsy personalities, Joan uses a team of "scouts"—who chase all over London, and further afield, after the "possibles," interview them, report back, and wait on Joan's decision whether to go ahead and bring in their finds for Wednesday's programme. When they are told to do this, they prepare a short script of notes merely to guide the personality in the order which the interview is to take. A copy of the script goes to Leslie Mitchell, so that he may have a rough idea how to conduct the interview.

Since she started the job Joan Gilbert has found no fewer than 1,500 personalities for the *Picture Page* screen, and has, in addition, appeared in several other programmes.



Personalities out of the news in each week's Picture Page are interviewed by Leslie Mitchell, who has a longer experience of facing the television cameras than anybody else in the world.

LESLIE MITCHELL

THE major part of the task of interviewing the personalities in the *Picture Page* programme falls to Leslie Mitchell. The secret of his success is an unflinching ease of manner with whomsoever may pop up in this parade of personalities. He can converse with suitable dignity and earnestness with a potentate or statesman one minute, have us feeling quite at home with a sophisticated film actress the next, and never be at a loss to put us on good terms with cockney barrow boy or rustic countryman.

Though there is undoubtedly more to it than this, the over-riding fact is that Mitchell has a longer experience of working before the television cameras than anybody else in

the world. Before daily television programmes began in 1936, he was sitting in front of the cameras to allow engineers to carry out the test transmissions by which Alexandra Palace was got ready for service. And when the daily service began, Leslie Mitchell was television's first staff announcer.

He had been selected from a great number of applicants for the job, which in those days was considered something sensationally new and full of great promise. Actually Mitchell had been on the BBC staff some months. He was a junior announcer at Broadcasting House, and had been specializing in the announcing of variety programmes. He had also done some radio variety producing. For his very first radio broadcast one needs to turn to the early BBC days at Savoy Hill. Leslie Mitchell appeared before the microphone there—as a singer. At that time he was a member—along with many young aspiring actors—of the travelling Arts League of Service.

It had been at the suggestion of Sir Nigel Playfair, of the Lyric Theatre, Hammersmith, that Leslie Mitchell went in for a stage career. After playing at the Lyric, he was cast with Leslie Banks for a leading part in an Edgar Wallace play, and started work in this on its tour prior to coming to the West End. But before the piece reached the West End he had been involved in a motor crash, and was off the stage for a year.

When the famous play of the first world war, *Journey's End*, was in preparation, he was asked to play the lead, but had to refuse because he was already committed in *The Lady With the Lamp*. Colin Clive got Stanhope's part in *Journey's End*, and many will remember how it shot him to fame. Leslie Mitchell did play it, however, when Clive was away, and on tour in South Africa.

For health reasons he then had to try a change of occupation, and travelled for a publishing firm. Later he saw the BBC advertisement for a radio announcer.

In those first years of British television, before the war, Leslie Mitchell frequently left his announcing duties to give a hand to the enthusiastic pioneers who were making the very first steps in television programme production. He was responsible for some of the very first television outside broadcasts.

As a result of the popularity which came to him as television's first announcer, the British Movietone Newsreel

asked him to become its commentator. After a while it became necessary for him to choose between the film job and the television one. He chose to leave the BBC and concentrate on the film work, with freelance broadcasting thrown in.

He soon became much in demand for several types of radio programme, and for many spectacular shows, such as Charles B. Cochran's pageant of show business, staged in the Royal Albert Hall, in which Mitchell acted as a spot-lit compere, before a massed audience of thousands.

After the war, Leslie Mitchell joined Alexander Korda, in the London Films organization, and spent some months organizing the publicity side, and visiting America for the business. He was always anxious to get back to television, though not as a staff announcer; and when the spell of film business activity was over, he returned to Alexandra Palace to take his place in *Picture Page* every Wednesday night. There, without a doubt, he is a personality asset to the BBC, as well as to the radio trade, selling receivers to people who have watched with enthusiasm a number of *Picture Page* shows on other people's television sets!

JEANNE HEAL

TELEVISION programmes for women have received some priority attention in the BBC's initial occupation of the large new studios at Shepherd's Bush. The extra space the new studios provide has been used to increase the number of women's features in afternoon television programmes. This has meant more work for Jeanne Heal, the woman viewer's original television "hostess."

Jeanne Heal came into television with the entry of Alexandra Palace's first women's programme, *Designed for Women*. Always transmitted in the afternoon, this feature has been the main programme of feminine interest, and all along Jeanne Heal has acted as its compere. In 1950 she also conducted a new programme for women, *Women of To-day*.

Designed for Women ranges through most of the interests of women, and the various experts who take part in the programme are Miss Heal's concern. Not only has she to interview them, before the camera usually, but she always spends time on seeking them out and meeting them before-

hand, so that every contribution to the programme can be fully discussed and planned. These meetings pay an additional dividend in providing a degree of prior acquaintanceship that gives a striking appeal to the programme.

At one time it seemed that Jeanne Heal was destined for a career in architecture. Having an architect father, this was the idea. Her own inclinations, however, lay toward journalism, and she started in that sphere in the provinces.

London beckoned, but it was not newspaper work which brought Jeanne Heal to the capital. She had the chance of a job in a London advertising agency, and came to town that way. She was there, involved in the mysteries of writing advertisement "copy," when the second world war broke out. She joined the Land Army.

Jeanne was stationed in Gloucestershire, and she occupied her week-end leaves by hitch-hiking to London, usually through Saturday night. At first this effort was full of interest; but after several weeks it was becoming a boring routine. Still, she thought, if she had found it intriguing to start with, perhaps other people would like to hear about it. So she wrote to the BBC suggesting a radio talk about her weekly hitch-hikes.

She had to make the condition that if the BBC really wanted to try this idea, they would have to put themselves out sufficiently to have somebody meet her on a Sunday morning, as she arrived in London. To her surprise an enterprising BBC official was willing to take this trouble. To her further surprise, she was given a date for the talk. And to her continued surprise, some Ministry of Labour official who had heard it put up the official suggestion that this girl might do a lot of good by talking on the radio about life in all the women's wartime services.

So Jeanne thereupon served through all the different women's services, spending several months in each, and broadcasting her impressions of how she found them. At the end of the war, she became a broadcaster in sound-radio's *Woman's Hour*, and in the BBC's overseas services. She was also writing a column for a national newspaper, as a specialist in women's interests and fashion.

Through her connexion with the fashion world, she was approached by the BBC to see if she would consider com-

mentating on a millinery show at Alexandra Palace. Arriving at the television studios for what she took to be a preliminary discussion, she found they wanted her to go in and do the job on the air straight away! That she acquitted herself well at this short notice can be taken for granted, since afterwards Mrs. Mary Adams, chief of women's programmes, asked her if she had any ideas for a regular women's television feature. Jeanne thereupon made up the contents of the first *Designed for Women* feature, and has been doing so ever since.

All the time she has kept up her sound broadcasting and journalistic work. Jeanne Heal prefers television work, however. She notices a great difference between the mail she receives from radio talks and that brought in by her screen appearances. Constructive criticism from viewers is received and welcomed, but in television—so far, at any rate—she

Jeanne Heal, at a rehearsal for her programme Designed for Women, discusses silverware in the studio with a collector.



finds none of the mere bad-mannered and cranky criticism which finds its way into most sound broadcasters' mail bags.

Jeanne Heal is married to an architect. Their son, Christopher, is six, and their daughter, Louise, is four. The family live in a house tucked away in a half-forgotten and quiet corner of North London, near Regents Park.

MCDONALD HOBLEY

TELEVISION'S senior announcer at Alexandra Palace is McDonald Hobley, a married man, with a toddler daughter. Inevitably he has become known as "Mac." He was born in the Falkland Islands, where his father was Naval Chaplain. For eight years the boy Mac lived in Chile, where his father ran a school. Back in England, Hobley senior became Vicar

McDonald Hobley, BBC television announcer, competed with over a hundred applicants for the job. In addition to announcing he is the popular compere of the Kaleidoscope series.



of Old Hove Church, and junior was sent to school at Brighton College.

The youngster now became a fervent follower of the theatrical repertory company then performing at Brighton's Theatre Royal. As soon as he left school he applied for an audition with this company, and they took him on. Playing all the parts that all repertory players always play, he gained sufficient experience to get himself into the regular company at the Cambridge Festival Theatre. There then followed a tour with a Priestley play—the end of which deposited him in the Artillery, since it was now 1939 and war had broken out.

A varied war service led him to a position on Lord Louis Mountbatten's staff, with SEAC. There, he became involved in the planning of Radio SEAC, and its programmes for the scattered forces of that Command. As the war drew on, there was much talk among these officers about what they would do with themselves after the war. The future of radio as a career loomed large in the discussions. One night Mac suggested that television announcing should not be a bad job after the war. It was just a passing idea, and he thought no more about it.

His remark had been noted, though, by a fellow officer, who had a television job to go back to. This was James Hartley, already Music Organizer at Alexandra Palace. And when Hartley got back into television, and heard they were looking round for an announcer, he wired Mac the tip.

Mac's application for the job had to take its turn alongside over a hundred others. However, after preliminary interviews, he found that he had been sifted on to a short list of four. All four were then called up for camera tests at Alexandra Palace, and given mock announcements to deliver. Two of the four fell at this hurdle. For Mac and his rival a final test was devised—and the result has been visible on the television screens ever since. He shares the announcing duties on a shift system with Mary Malcolm and Sylvia Peters.

The television announcer has to be the official voice of the BBC Television Service, and yet, at the same time, needs to exploit the intimacy of television viewing by appearing as a friendly person on the hearthside screen. It is not a matter of always being chirpy and gay—that would be out of place on many announcing occasions, and would be likely to

get on viewers' nerves anyway. It is a mixture of the formal with the informal, and McDonald Hobley is very adept at achieving an attractive balance between the two.

All announcements for the television announcers are written by a special department, the Presentation Department. As far as possible, Mac is handed the announcements some hours before transmissions begin. In television, unlike sound radio, announcers must memorize their words. Between rehearsals of the evening programmes, Mac can be seen striding up and down the long studio corridor, learning his announcing script.

However varied the bill of fare which the announcers have to introduce to viewers, night by night, the sheer job of announcing is inevitably something of a routine, limited in its opportunities for expressing personality. The announcers, therefore, always welcome chances to appear in programmes where there is more scope for them to be themselves. For McDonald Hobley the main opportunity in this direction came with *Kaleidoscope*, the regular magazine programme produced by Ronald Waldman, in which Mac has scored a notable and well-deserved success as a compere.

MARY MALCOLM

ANNOUNCER Mary Malcolm made her first appearance in television as a mannequin—not a professional one, but a mannequin for a night. It was soon after television programmes started again after the war, and a history of women's fashions was being presented. To wear some of the glamorous dresses used in this feature, a number of highly presentable young women, other than professional models, were invited to take part. Receiving one of the invitations, Mary Malcolm accepted. After the programme she was given a lift back to the West End in a car with Cecil McGivern, Head of Television Programmes. He suggested she ought to do more television work. Mary Malcolm thought no more about the suggestion—but McGivern did.

Late in 1947 Mary received a letter from Norman Collins, Controller of Television, suggesting that she might care to take an announcer's test at Alexandra Palace. They wanted to appoint an announcer, and were on the look-out. McGivern



When Christmas comes round, television announcer Mary Malcolm goes to a London toy store with the television cameras. She first faced the television cameras in a dress show.

must have given Collins the tip. Early in 1948 they took her on the staff.

Mary Malcolm had been working as a sound-radio announcer throughout the war. She was one of the original "Forces" announcers, and immediately before moving into television she had assumed an executive post of some importance on the announcing staff at Broadcasting House. She soon found announcing for television a sharp contrast to announcing for sound radio. In TV she was not so hard-driven for time; things were more elastic there; what was important instead was how she looked, how she stood, how she sat, and that whatever she did she always looked happy about what she had to say!

As is often the case, she thinks that the thing which really put her at ease before the TV cameras was making a mistake.

One night, soon after she had started working in television, she was closing down the programme when she said: "That's the end of television for today, and in a few moments you'll hear the nine service home o'clock news . . ." She realized the slip; laughed openly, and tried again.

Another great help to her in forming a bond with viewers, and removing the artificiality of talking to a camera, was the experience she had deputizing for Joan Gilbert, as hostess of *Picture Page*. Joan Gilbert was ill, and away from duty for some weeks, and while Mary took her place she collected a large fan-mail, and was the toast of the radio columnists.

The two feminine members of television's announcing staff, caught informally between duties. Mary Malcolm (left) and Sylvia Peters share the announcing with McDonald Hobley.



Mary is married to Sir Basil Bartlett, writer, traveller and actor, and they have three daughters. They have a country house near Chichester, converted out of the stables of an old mansion. During the week they live in the West End. It was in the West End, and among fashionable society, that Mary grew up. She is, in fact, a granddaughter of Lily Langtry, the beautiful actress who was the toast of the town when Queen Victoria was on the throne. Her family intended her to take up acting, and sent her to the Royal Academy of Dramatic Art. Mary had ideas about becoming an architect. But the second world war broke into both plans. Soon after the war started, her first daughter, Jemima, was born. Air raids on London decided the Bartletts to send the baby girl to the United States. Not long after their London home was bombed.

With Sir Basil Bartlett in the Forces, the young couple found themselves billeted on the edge of a gunsite in Derbyshire. Their second daughter, Lucy, was born there. Moved back to London, Mary joined the wartime staff of women announcers which the BBC was forming at Broadcasting House. Their youngest daughter, Annabel, has Kay Hammond, of stage and broadcasting fame, as her godmother.

SYLVIA PETERS

IN Jack Hulbert's pantomime, which was one of the first television shows of 1950, viewers received a pleasant surprise when the Fairy Queen turned out to be Sylvia Peters, one of the three official announcers at Alexandra Palace. Besides playing the part, Sylvia rendered a song in an attractive voice, a fully professional style. And well she might, for those in the know were already well aware that Sylvia Peters came to TV announcing from the musical comedy stage of the London Coliseum.

She had played soubrette parts in the famous wartime musicals at the Coliseum, *The Night and the Laughter*, and *The Night and the Music*. In fact, in the second show she understudied most of the female side of the cast. Between her duties in the studios today she still takes singing lessons to keep her voice in trim.

It was Sylvia's mother who started her daughter on the way to Alexandra Palace. She saw the BBC advertisement for

a television announcer and persuaded Sylvia to apply. Of the hundreds of girls who had done likewise, a score were chosen for interview at Alexandra Palace. Six of these remained in the "contest" for a camera test, and Sylvia was one of them. After making some official BBC test announcements, they asked Sylvia to tell the nursery story of "The Three Bears" in her own words. It is believed that the winsome way in which she did this had a lot to do with getting her the job.

At any rate, she was asked to do a week's announcing, as a trial. Three or four other candidates were still in the running, and were also being given trial runs. Sylvia's week was followed by a contract for a month's announcing duties, still as a trial. Only after all these preliminaries did the BBC make up its mind and appoint Sylvia Peters to its television staff. This was in June 1947.

Television had come quite unexpectedly into Sylvia's life. Previously the direction of her career had always been along the way of the theatre stage. At the Coliseum her musical show experience had seemed but a natural development of a stage career as singer and dancer. She had shown leanings towards this early in life, and her parents had had her trained in singing, dancing and ballet. When she was seventeen she was in the ballet of a musical show at the Stoll Theatre. Meanwhile she took her teacher's examination in dancing, always aware that if stage work failed she could earn an income from her teaching qualifications.

Emile Littler, the theatrical impresario, however, cast her as one of the eight daughters of a dean, in a comedy on tour prior to its West End performance. Then, when the *The Quaker Girl* was revived in the West End, she played in the ballet of that. A straight play, *Daughter of Janie*, at the Apollo Theatre, followed. In this Sylvia became understudy to the leading lady's understudy. Before moving on to the Coliseum musicals, she played fairy godmother in a Cinderella pantomime.

The attractive picture Sylvia Peters makes on the screen frequently makes women viewers curious about the dresses she wears. These are all "official wear," bought out of BBC funds. They are chosen on occasional shopping expeditions made for the purpose by Sylvia and Miss "Johnny" Bradnock,

who is mistress of the wardrobe at Alexandra Palace. The reason why Sylvia Peters—and Mary Malcolm for that matter—is so rarely seen in a full-length picture is the very practical one that there is rarely room in the crowded Alexandra Palace studios for the cameras to draw back sufficiently.

ANNETTE MILLS

FOR her children's programmes, Annette Mills was in 1950 presented with the medal, awarded yearly by the British Television Society, for the most outstanding contribution to TV entertainment in the preceding year. There was no doubt about the popularity of the choice for this honour: and Miss Mills's personal story, once known, only increases one's appreciation of her achievement.

Before the wooden puppet mule, Muffin, inspired her towards TV stardom, she had triumphed over such ill-fortunes as would have made many folk give up any idea of performing for the public, especially in a new and fickle medium. This is the story.

Though she made a promising start to her career by training to be a pianist, she dropped that notion completely in favour of acrobatic dancing. With a partner, she joined a musical comedy company, playing in South Africa. Doing an acrobatic jump in this show, Annette fell and broke her leg. She had to retire from dancing.

Back at her piano, she concentrated on writing songs, and after the usual adversities of all song-writers who try to enter this precarious and hard market, she began to have her numbers used by such stage artistes as Douglas Byng, Stanley Holloway, Beatrice Lillie and Frances Day. Then, one day, she wrote a song called "Boomps-a-Daisy." It became a top-line best seller—so much so that it was worth Annette's while to appear in public, on the music halls.

She appeared to have gained all the ground she had lost, and more. The future was bright. The war came. Annette was much in demand for entertaining the Forces with her songs at the piano, and was doing so at an R.A.F. camp in Essex one night when a bad air raid blew up.

To make another engagement, Annette had to travel through the raid, and in the course of her car journey through

the black-out she crashed into a stranded lorry. Her injuries were grievous. She was kept in hospital for three years. She left hospital on crutches, and few could have thought she would work again. But she started her challenge of fate, and got herself into some sound-radio discussion programmes.

When television re-opened after the war, the producer of the sound-radio discussions suggested Annette might try out some kind of entertainment for children. One Sunday afternoon she gave songs at the piano in the TV programme for children. She thought it might be a nice visual idea to have puppets playing on top of the piano while she sang.

She investigated the considerable puppet store kept by Ann Hogarth and Jan Bussell, and there, forgotten on a shelf,

Annette Mills listens to Louise the Lamb, one of Ann Hogarth's delightful puppets, which are so popular a feature of children's television programmes. The famous Muffin series was born the day that Annette found the mule in the Hogarth puppet store.



spotted a wooden mule and a puppet clown. She chose these to be a double act in her children's programme, naming them Muffin and Crumpet respectively. Poor Crumpet did not look too well on the TV screen, and he was dropped. But Muffin stayed, and quickly rose to such heights of stardom as many human performers must envy.

The truth about Muffin is that he was bought by Ann Hogarth, from a travelling showman, for fifteen shillings, and then more or less stranded on her puppetry shelves. It is Ann Hogarth who pulls the strings which make Muffin and all his friends work in this phenomenally popular feature.

Annette Mills writes the Muffin stories and songs. She was making up songs and stories as quite a young girl, and in fact used to entertain her young brother John, in this way. Later he reached stardom as John Mills, film-star. In her young days Annette lived in Chelsea; her father was headmaster of a naval school, and her mother was a pioneer of stenography for women—having been one of the first women typists.

Today, Annette Mills lives in Highgate, where she has a large garden, at the bottom of which it is alleged Muffin has his quarters—in a potting shed. Her house is never very long without children—including her own very young grandson.

RICHARD DIMBLEBY

THE genial presence of Richard Dimpleby has enabled many television producers to score on the screen with programmes which would be extremely risky to produce without him. His knack of knowing what to say at the right time, coupled with his understanding of people, makes him pretty near the ideal commentator for features like *London Town* and the *Other People's Jobs* series.

Yet it was quite by chance that Dimpleby ever entered the broadcasting world.

Newspaper work was his background. His family ran a weekly newspaper in south-west London, and in preparation for this Richard was trained as a reporter on the *Southern Daily Echo* and the *Hampshire Advertiser*. He reached Fleet Street early, but in its magazine field, as news editor of the trade paper, *Advertiser's Weekly*. It was while there that he had an idea about broadcasting.

In those days the BBC was still broadcasting the names of all the agencies from which it selected news for the News Bulletins. This recital of "credits" every few hours seemed foolish to the young Dimbleby, so he suggested to the BBC that they get some radio reporters of their own, and keep them on their own staff. Much to his surprise the BBC agreed to try the idea, and offered him the chance of being its first trial news reporter. Dimbleby took the risk—and so started a nine years' spell on the BBC news staff.

Radio fame rarely comes overnight—though it may appear to do so in retrospect; and it was not for some years that Dimbleby became a name in broadcasting. It was his wartime BBC news reporting, often from the scene of battle,

Richard Dimbleby gets around London with a schoolboy friend, Barry MacGregor, in order to compere so knowledgeably television's popular London Town feature.



which really put him to the fore. His experiences as correspondent with the B.E.F., and in the Middle East, culminated with his graphic broadcasts during the march on Berlin.

On the strength of the fame these broadcasts had brought him, Dimpleby left the BBC and launched himself as a freelance commentator. When television programmes started again, in 1946, he was soon in demand as commentator for occasions of high ceremony, and for the kind of outside broadcast where people in their work are interviewed.

As well as his TV and sound broadcasting work, he continues his connexion with the old family business, and is in fact active director and editor-in-chief of weekly newspapers in south-west London. Somehow or other he has also found time to write books—*The Frontiers are Green*, *The Waiting Year*, and *Storm at the Hook*.

He is tireless in putting himself into all manner of odd places for the sake of the *London Town* series, and has been filmed in many strange situations all over London. On one occasion the programme dealt with the oldest wine shop in London, an antique place where is still kept a pair of scales, on which young Regency bucks used to weigh themselves, after roustering meals in old London. Several celebrated visitors to London have since been weighed there, and have added their weights to the old record book still kept. Richard Dimpleby did likewise—and found his weight equalled the Aga Khan's.

Richard Dimpleby lives in the country, near Hindhead, Surrey, with Dilys, his wife, who was a journalist, and three sons and a daughter—David, Jonathan, Nicholas and Sally.

ALGERNON BLACKWOOD

THOUGH television is young, youth has by no means claimed all its star positions. It is in fact extraordinary to how many people television has brought a new kind of fame in their middle life, and later. There is no doubt, however, that the palm for this goes to Algernon Blackwood, who is really one of the supreme television stars—at 81! Blackwood had told stories on sound radio, off and on, for years. He had, of course, been writing them for much longer. But to transfer his story-telling art to the visual radio medium,

and make a resounding success of it straight-away, was more than many would have dared prophesy, and he does not mind anybody knowing that it came as a surprise to himself.

He did three stories as a trial, quite convinced that each was worse than the one before, and when the BBC asked him for more he told them this, and said television story-telling was not his line. The Alexandra Palace programme chiefs had to coax and cajole him back to the studio, for the fact of the matter was they had received such an appreciative mail from viewers that they just dare not let him vanish.

The secret of it all is the complete spontaneity and naturalness which Blackwood brings to the incomparably difficult job of sitting in an armchair and telling an impromptu story to a television camera.

Blackwood would say that it "comes naturally" to him; certainly he is afraid, almost to an extreme degree, of getting involved in too much self-conscious preparation for his television story sessions. He has no rehearsal. His story is not even written down. In fact, frequently he walks up the long hill from Wood Green underground station to Alexandra Palace purely in order to get the thing clearly in mind!

Where do his stories, weird and macabre, come from? They almost certainly spring from the colourful and adventurous life he has led. A bachelor, something of a lone traveller up and down the countries of the earth, Blackwood has always been nose-y about the odd, the strange, the supernatural. As a young man he found himself roughing it in a trapper's hut in Canada. Then followed a spell on a New York newspaper, reporting the seamy side of life—police and coroner's courts, cases of murder, intrigue and vendetta. There was little money in it, and he had to share a sordid tenement room with two colleagues.

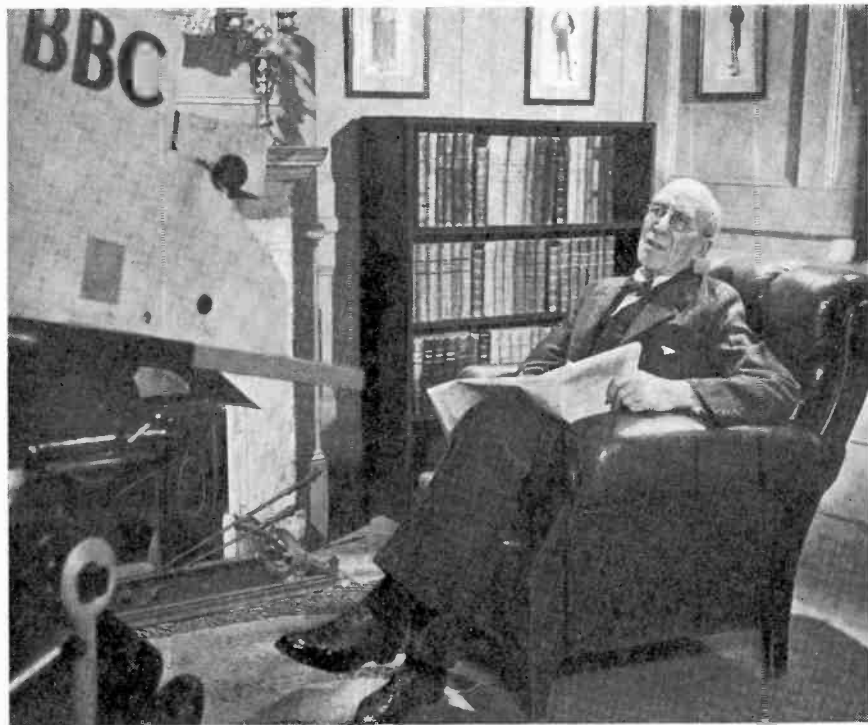
Next he had a shot at getting in on a growing business—the dried-milk trade. This brought him back to London, and he met an erstwhile colleague, a newspaper reporter, who remembered how Blackwood used to tell yarns in the shabby tenement room in New York. "Why not write 'em down?" suggested the colleague. So Blackwood put together his first book of short stories, and when he received about £25 as a result, he thought he would be done with working for bosses, and become his own for the rest of his life. He quite deliberately

decided so to order his life that he would be able to live on what his stories made. And this he has done.

As each new book of stories filled his kitty, so he would disappear—to the lonely places of the East, or middle Europe, or South America. Travelling alone, he would knock around among strange places and strange people—then back home, for more and ever more strange story-telling.

Algernon Blackwood was awarded the British Television Society's medal, as creator of the most outstanding contribution to television entertainment in 1948. He lives in Bayswater, spends most of his time in a West End club, and still—at 81—takes an annual holiday in Switzerland, ski-ing!

Algernon Blackwood, one of the three people in Britain holding the Television Society's medal, awarded to those who make the most outstanding contributions to television programmes.





Fred Streeter looks after the garden in the grounds at Alexandra Palace, from which he gives viewers his popular Saturday afternoon gardening demonstrations, during the summer. This garden was planned and started by the late C. H. Middleton, British radio's original gardening broadcaster.

FRED STREETER

THE serenity of age and the wisdom of long experience are qualities which have a great deal to do with the popularity of Fred Streeter as television's gardening counsellor. Many viewers, who are not necessarily keen gardeners, find watching his summer Saturday afternoon programme a joy and a refreshment after the turmoil of the week's work.

Fred Streeter, now 70, was called to the Television Garden when the programmes opened up again after the war, in 1946. The garden, which is in the park surrounding Alexandra Palace, had been started by the late C. H. Middleton in the early days of television. Streeter was asked to take a look at it and give an opinion on it; and while he was doing

so, television chiefs took a quiet look at him, through the cameras, and decided he "would do." So they then owned to springing a secret camera test on him, and made him the viewer's gardening expert.

For his television appearances, Streeter travels up to London from his pretty house, standing in the great Petworth Park, Sussex, where he has been head gardener for nearly thirty years. He was born not far away across the hills from Petworth, at Pulborough. He went to schools at Dorking and Reigate, and got his first job, at thirteen, in the grounds of a wealthy landowner in Reigate—wage 3s. 6d. a week. In that job he learned the Latin names of plants, names which he uses as second nature. The first he remembers committing to memory was *Phlox Drummondii*.

Fred worked in various country mansions, living in his early years in the gardener's shed, which was then the general practice on large estates. Eventually he was journeyman gardener to Lord George Curzon, at Reigate Priory, and he had the job of looking to the flowers in his lordship's London house as well. There followed some valuable experience on a large estate in Ireland—one of the flower gardens had 200 beds!—and then he returned to England into the service of Nicholson, the gin manufacturer, at his place, Basing Park, in Hampshire.

His first job as head gardener came at Bramley, Surrey. a post he followed by a move to Levington Park, Sussex, home of Buchanan the whisky magnate. The first world war interrupted his career, and he was badly wounded, having to spend two years in hospital. To restore his health, he went back to Ireland, and the open-air work he loved soon had him fit and spry again. Then, in 1922, he got the job at Lord Leconfield's famous Petworth Park.

It was C. H. Middleton, the one-time radio gardener, who got Fred Streeter interested in broadcasting, and introduced him to sound radio, as long ago as 1938. Now, both from radio and television, he gets thousands of letters every month asking for his advice. He is in demand for the opening of flower shows and fêtes up and down the country. But most of his time he prefers to spend close by the South Downs, and under the old elms at Petworth—with just a trip to London now and then to have a look at that television garden.

ERIC ROBINSON

THERE is no Musical Director on the BBC's television staff, but this does not mean that the musical arrangements for all television shows, large and small, are not carefully co-ordinated and organized by one brain. The brain is Eric Robinson's. He is on a contract with the BBC as conductor, organizer and supplier of orchestras and music for many of the programmes. The first conductor in the world to direct 200 television shows, his position is probably still unique.

He recruits the orchestras which play for television variety, musicals, revues, and ballet. His business organization sees to the making of special arrangements which may be needed, as well as the formation of special small musical combinations for the shorter programmes. He is possibly the only conductor in the world with a specialized knowledge of ballet in the television studio, and his musical direction of this, and television's special production of *Pagliacci*, has been noted as outstanding.

Unlike conducting in the theatre, where the man with the baton always has the stage in front of him, conducting for television often has to be done in a corner of the studio far removed from the action. Rarely can the conductor see the singers and dancers direct. Robinson therefore is a past master at using the monitor screen, on which he sees the action as it is being televised. In fact he has had designed for himself a combined conductor's rostrum and television monitor.

Eric Robinson reached London from the North. He was born in Leeds. His father was a church organist, and his mother a singer. His brother, Stanford, became the BBC's Theatre Orchestra conductor, and later its Director of Opera. At eighteen Eric went to the Royal College of Music, and earned a living outside his college hours by playing in cinema and theatre orchestras. He joined the BBC Theatre Orchestra, and later the original BBC Television Orchestra. This combination, specially formed when the BBC began television programmes in 1936, was dropped at the outbreak of war, and has not been revived.

In the war, Eric Robinson joined the Army, and was posted to the Royal Army Ordnance Corps, as part of an entertainment unit made up of professional musicians. An Army



Eric Robinson conducting television's memorable performance of Pagliacci, from behind the scenery. Performers are often out of the conductor's sight, and sometimes in a different studio. The rostrum with monitor screen (below) then allows Eric Robinson to follow the show for which he provides the music.



revue was produced in the Garrison Theatre, and there was nobody to conduct the orchestra. Eric took the rostrum, and has been a conductor ever since. His Army band became the famous Blue Rockets Dance Orchestra, and Eric was conductor of this combination when it became a feature of sound radio at the end of the war.

Towards the close of the war, Eric Robinson was moved to the War Office to work with George Melachrino, who was musical director to the Army radio unit. Today he and Melachrino run a business organization in the West End which is one of the success stories of the post-war years in show business. It provides music and orchestras for many branches of the stage, film and radio industry.

PATRICK BURNS

CATCHING up on a neat movement in a televised ice hockey match, commentator Patrick Burns said "Gee, I reckon that feller was going quicker than I talk—and that's saying sump'un!"

Ice hockey is the fastest of all sporting spectacles which television brings to the screen, and one would have expected its commentator to have no time but to rap out the briefest essentials as the play rattled through before him. Instead of that, Burns is one of the most voluble of all television commentators, and the one most likely to spin arresting, quick-fire word-pictures.

With one player holding another spread-eagled against the side, Burns said "Boy! he has him there like he was in an art gallery hanging up a picture!" As a man skidded and fell full-length and face-down along the ice, he rapped out "Well, there's a bit of ice that won't need sweeping." Two tough brothers playing for a team he called, "the gruesome two-some" all the way through his commentary.

Patrick Burns has himself twice had a nose broken—*playing* ice hockey. A regular example of breezy, tough Canadian manhood, he has packed a lot into his 28 years, including all sports, active war service, and service as a government official.

His present job off the television screen is in the Canadian Treasury Department in London. He administers a rehabili-

Not only the fastest-speaking commentator in British broadcasting, but also the wittiest, this is quick-fire Patrick Burns, television's own ice hockey and speedway reporter. At the ice rink he has the hard task of following the play as well as the pictures of it, selected by the producer, and showing on a monitor at the commentator's side.



tation scheme, arranging visits to this country by students from Canada, and organizing their visits to universities, business firms, cultural institutions and the rest.

He always had a hankering after broadcasting and had "had a go" on sound radio before he came to television. How he came to television is a story of wifely initiative. He had watched a televised ice-hockey match and remarked that he thought he could give a better commentary. His wife telephoned the BBC and told them. The BBC asked her to send him round for an audition. That's how Patrick Burns got to the television commentator's box by the London ice rinks.

As television spreads there is no telling where it will take Patrick Burns, so long as he wishes to go with it. Certainly he is now the fastest-talking commentator in British broadcasting, but what is more important, to his speed he adds a picturesque idiom, and a gift for relieving the most acute sporting tension with a humorous sally—and that is often very acceptable to the viewer by his fireside.



*Terry-Thomas scored a television comedy success in 1950 by his regular programme *How Do You View?* Adele Dixon intrigues him with a plan in the first programme of the series.*

TERRY-THOMAS

THE year 1950 saw the introduction into television programmes of the comedy series, for so long a staple ingredient of sound broadcasting. Terry-Thomas was the first comic to get the opportunity to establish himself in a regular series of shows, and he did so with marked success. His vehicle was *How Do You View?*, an unpretentious yet swiftly moving half hour, in which he did most of the work himself. The series coincided with the first scientific "viewer research" scheme, launched by the BBC, and in the appreciation index recorded by this system, Terry-Thomas knocked up the considerable score of 71—that is, 71 per cent of the viewers were applauding him.

Thirty-five-year-old Terry-Thomas became a name in radio only after the Hitler war. He crashed into eminence, in sound broadcasting, with his uproarious sketch about the BBC announcer who had lost a set of gramophone records arranged for half an hour's "disk-jockeying."

In the war he was in the Royal Corps of Signals before finding his way into that company of accomplished Forces artistes, "Stars in Battledress." His radio acts, and a part with the late Sid Field in *Piccadilly Hayride*, shot him to the fore, with such brilliance that he was chosen for the Royal Command Performance at the London Palladium in 1946.

All along he has played in cabarets and night-clubs, the standing and smartness of which have steadily moved up the scale as his reputation has grown. Oddly, it was as a film-extra appearing in night club scenes, in pre-war British films, that he hit on many of the ideas now incorporated in his acts.

His film work in those days was but the beginning of a show-business career to which he had turned from a bank clerk's desk in the City of London. While in the City he had done a great deal of amateur acting, including appearances in week-long runs at the Scala Theatre, where London's leading amateur dramatic societies put on their yearly productions.

Though in a Vic Oliver film he played the not inconspicuous part of a tipsy exhibition dancer, he was advised to get out of the film studios, and to try and make a place for himself on the music hall or cabaret stage. He began a spell of provincial music-hall touring at the Tivoli in Hull, eventually getting more and more London dates.

His television producer, Bill Ward, is the first to speak of the conscientious toil—there is no other word—which Terry-Thomas put into learning the television technique. Terry-Thomas himself believes that this technique should not be regarded as a development of any other form of comedy, but rather as a combination of them all, with many of their problems and quite a few others peculiar to television.

A considerable asset to this comic is his ability to memorize rapidly. Television rehearsals are notorious for breeding last-minute changes in scripts and routines, but Terry-Thomas has always shown an amazing facility for having a new piece of fun off by heart within the last few minutes of the final rehearsal.

Terry-Thomas writes his correspondence on note-paper embossed with a small red cow. It is a crest not without humour or reasonable purpose—for the motto appearing below it reads, "I shall not be cowed!" In television he could not have been more faithful to that motto!

7. BALLET AND MUSIC

There is much Argument about Each

TELEVISION'S programme planners at Alexandra Palace found themselves in something of a dilemma, when a new system of viewer research, launched early in 1950, began to show the position of ballet among viewers' likes and dislikes. Again and again statistical surveys produced a dead-heat—apparently as many viewers want ballet on the television screen as do not. In situations like these the BBC has a way of favouring the appreciative audience, and ballet has been allowed to hold its place.

It is too early to proffer any solution to the controversy which televising ballet has caused. Balletomanes, and others, decry the confining of the ballet within the limited studio space available at Alexandra Palace. Most of them are highly suspicious of BBC talk about "adapting" ballet to television technique—this because few of them understand the technical strengths and limitations of the television camera. Eventually, when the BBC has more of its new studio space at Shepherd's Bush ready, the critics will undoubtedly be able to see what a veritable ocean of studio space can do for the televising of ballet.

Ballet was nicely introduced to viewers by a series of programmes *Ballet for Beginners*, produced by Philip Bate on the lines of a mixture of illustrated lecture and practical demonstration, professionally executed. There is little doubt that this series won new recruits to ballet viewing.

The other main advance in television's handling of ballet has been in the conception of a new kind of "dance drama," devised specially for television. Evolved from ballet, this form of entertainment has been pioneered during 1950 by an Alexandra Palace producer, Christian Simpson, and Celia Franca, who is an experienced ballerina from the late Metropolitan Ballet Company.

Their first effort was to set the story of Salome to dance form; and they followed this with a dance drama based on



Les Sylphides, with Annette Chappel of the Ballet Rambert. Is classic ballet too much confined in television? Ought it to be specially devised, or is there a satisfactory compromise?

Keats's poem *The Eve of St. Agnes*. In both cases the choreography was arranged to fit the technical opportunities, and to combat the limitations arising from confined studio space and from the peculiarities of the television camera in matters of depth of focus and angle of shot. The leading dancers used their hands and facial expression to point the emotion of their ballet movements.

The BBC has been erratic in its presentation of our leading ballet stars. Margot Fonteyn, Moira Shearer, Massine and Robert Helpmann have all danced for television since the war, but the appearances of such artistes are apt to come together like a glut, when viewers would prefer them more evenly spaced.

Unlike the dramatic and variety profession, the ballet world seems indifferent whether viewers see its stars or not. There is no animosity in this attitude; it arises from a sense that television is not yet ready to present ballet. It will be interesting to see whether this view prevails, or that of the



Teaching the piano by television. A successful educational series was initiated in piano lessons given by Sidney Harrison to 12-year-old Yvonne Riddington, a London schoolgirl.

BBC's young men who believe in a new and specially devised type of television ballet.

Turning to concert-music programmes, there are devout music lovers who prefer to listen to a symphony or a concerto without sight of the artistes performing it. There are others who haunt the concert halls, and declare that they miss something when listening to music on sound radio. And there are viewers who say that television pictures of musicians scraping their bows and blowing their instruments fail to interest or entertain them, whatever the works being performed! Certainly the televising of music calls for a more subtle approach than standing a television camera in front of a symphony orchestra.

Sir Malcolm Sargent has successfully "got away" with a symphony orchestra in television—but that is because he was introducing *The Instruments of the Orchestra*—a couple

of programmes devoted to explaining the composition of a symphony orchestra. On each occasion works were played, but they were incidental to the purpose of the programme.

The BBC has also provided the viewer with full-dress performances of the most popular concertos. It has put on musical *mélange* programmes, of near-classical compositions, performed by instrumental soloists and singers. And it has presented a series of our leading pianists, in short Sunday evening recitals, *via* television. The most appreciated of these was Pouishnoff, who, just before 1950 opened, took viewers into his confidence by sitting sideways on his piano stool between his pieces, and telling them, in a few colloquial phrases, something about the works in his programme. In all these piano recitals, the producer and the recitalist arranged beforehand how the performance was going to be "shot." Special passages in the music may require a special angle of shot over the keyboard, and so on. Some very satisfying visual interpretations have been provided in this way.

The static posture of the great singer on the concert-hall platform is the last thing the television producer wants. When Tito Gobbi visited Alexandra Palace he could not have been more accommodating to the producer, who was determined to keep him moving and also had the idea of his chatting informally with a pretty television announcer, between his songs. But though the voice of the master was acclaimed as usual, the general effect of the presentation was artificial, and too arch to be fitting to the occasion.

The other musical development in television has been *Piano Lesson*, a series of programmes intended as an introduction to learning how to play the piano. A London school-girl, Yvonne Riddington, was shown receiving a series of initial lessons from Sidney Harrison. The series was followed by a tuition course, for a piano pupil who had reached the intermediate stage. In these programmes, Sidney Harrison instructed and advised young Peter Croser in the technique and interpretation of Beethoven's "Moonlight Sonata."

In presentation all these lessons were highly successful, and as the BBC wisely put them on the air half an hour before the usual time of starting the evening transmission, viewers who were not interested had no grudge that the series was taking time from the majority's viewing period.

8. FOR THE CHILDREN

They are First into New Studios

AMPLE studio space is the basic requirement for the proper development of television. The first major extension of studio space to be won, after years of waiting, was immediately put to use almost exclusively for the production of programmes for children. This is Studio D, one of five large film studios which the BBC is reconvertng for use as a temporary television centre, at Lime Grove, Shepherd's Bush. With much ado, the studio was opened by Mrs. Clement Attlee, the Prime Minister's wife; and its first programme was closed by the Bishop of Grantham calling upon all gathered on the studio floor to join in the Lord's Prayer. These ceremonies were televised on May 21st, 1950.

Almost immediately, the number of sessions for children in weekly television transmissions was stepped up. From one hour a week, every Sunday, it jumped to three hours a week, Sundays, Wednesdays and Fridays. There now appears to be little impediment in the way of the BBC achieving its aim of a television Children's Hour *every* day.

There are significant reasons for the priority the BBC has given to the development of children's programmes. Rightly or wrongly, the decision is the result of a mixture of commercial acumen and educational idealism. From the commercial point of view, it has been assumed that plenty of children's programmes make a television set a better "buy." Parents, who might hesitate to buy a set for themselves alone, are encouraged to spend the money on an instrument which will entertain their children into the bargain. Since the greater the number of television sets sold, the higher the BBC's licence revenue, this can be seen to be an argument worth considering when considerable money is going to be required to develop television in general over the coming years.

Idealistically, the BBC is known to see in television a force with which to balance, if not with which to counter positively, those influences in children's entertainment and

reading matter which are considered undesirable. "Wholesome family entertainment" is, virtually, the motto of the BBC Television Service throughout; but when it comes to the children, the emphasis is very much on the "wholesome." It seems at least arguable that better children's entertainment on the home screen should cause children to ask for a higher standard of material in their films, comics and books. At any rate, a few years of daily and *visual* Children Hours, in increasing numbers of homes, will prove the matter.

In order to carry its great extension of children's programmes in the past twelve months, the BBC appointed no fewer than seven producers, whose work is full-time and exclusively in the preparation of children's television programmes. Their work has been placed under the top-level co-ordination of Richmond Postgate, an educationalist who was head of the BBC's Schools Broadcasting Service before being moved to the television staff.

Wilfred Pickles, Jennifer Gay (standing centre) and Mrs. Attlee, at the opening of the first of the Lime Grove studios. Jennifer is announcer for many children's programmes.





Children's programmes are a boon to young hospital patients, as at the country branch of Great Ormond Street Hospital. The National Television Fund has been set up to provide hospital sets.

The producer with most experience of the work is Peter Thompson, a young talks producer at Alexandra Palace who became entirely responsible for building up the original Sunday Children's Hour.

Appointed chiefly to deal with children's plays, Joy Harington joined the new children's staff after experience as a "guest producer" of television plays for the adult audience. The other producers appointed are: Pamela Brown, author of the successful children's novel, *The Swish of the Curtain*, Dorothea Brooking, a studio manager from sound radio; Naomi Capon, who has worked in American radio; Michael Westmore, a character singer and revue artiste with acting experience in sound radio and television; and Rex Tucker, a schoolmaster who became a successful drama producer on the BBC's sound-radio staff.

A special Children's Newsreel has also been launched, for inclusion in the children's programmes, and a unit works

full-time compiling it, under the direction of Don Smith, who has had valuable experience as a member of the Television Newsreel unit. Mary Malcolm and Stephen Grenfell act as commentators for this film.

Muffin the Mule was, of course, the pioneer children's star in television programmes. He is still a hot favourite, though he has been joined by a number of other "characters" in the past year. Muffin is a wooden puppet, always manipulated behind the scenes by Ann Hogarth. Annette Mills made him a feature of a children's song act, which she was doing in television in 1947, and he became so popular that the BBC had to make him a regular feature.

Soon after the opening of the new children's studio, Annette Mills introduced a new character in Prudence Kitten, a glove puppet for which Miss Mills creates songs and patter. Peter the Pup is another star arrival in children's television, an animated drawing character based on a real bull terrier owned by Bill Hooper, who tells his stories.

A popular feature of children's programmes throughout have been the "Flower Fairies," a troupe of teen-age ballet students, who perform ballet routines, dressed cleverly in the guise of flowers. Educationally, nature-study items, and features on photography and modelling, have been added to the children's programme output. There have been special outside broadcasts for the children, from a farm, from the River Thames, from swimming baths, and even from H.M.S. *Worcester*, the naval training ship at Greenhithe.

Child viewers have their own television announcer in the person of 14-year-old Jennifer Gay, who is known simply as Jennifer, and has an attractive and winsome way of doing her job which has made her popular with adult viewers as well. The daughter of an orchestral conductor and an actress, Jennifer goes to school like any other girl, and in addition to television work is training as a ballet dancer.

Outside the regular television sessions "For the Children", there are other programmes which it is known have considerable appeal for children. *Picture Page* and *Kaleidoscope* are adult evening programmes which are known to have some juvenile audience. Whether children should sit up late to see these, or any other specially outstanding television programme, is a matter for the jurisprudence of parents.

9. REAL LIFE IN PICTURES

Documentaries and Talks

AT FIRST sight it might well appear that the television camera, with its ability to see life as it happens, would establish a new and exciting form of "documentary"—something of unprecedented realism. Documentary films are made to give a carefully calculated impression of real-life subjects which have been watched, under the film cameras, from many angles, in many locations, usually over considerable periods of time.

With the television camera, however, the kind of subjects normally covered so painstakingly by film writers, producers and cameramen could surely be radio-photographed in their actuality, on the spot. But this has not been the case. The outside television camera, sufficiently mobile to be sent hither and thither, has so far made only a small contribution to television documentary programmes. These programmes have more often than not emanated from inside the Alexandra Palace studio, and it has so far been the film camera, rather than the mobile television camera, which has enabled them to add "locations" to the studio action.

Rather than being a realistic portrayal, the television documentary programme looks as though it is going to be a carefully produced artistic interpretation, with actors and actresses taking the places of the people actually concerned. It was found out early on in television that it requires the art of the trained actor to give a realistic impression of ordinary people going about their everyday business. The ordinary people themselves become unnatural, self-conscious and extraordinary once any attempt is made to direct them under the all-seeing eye of the television camera.

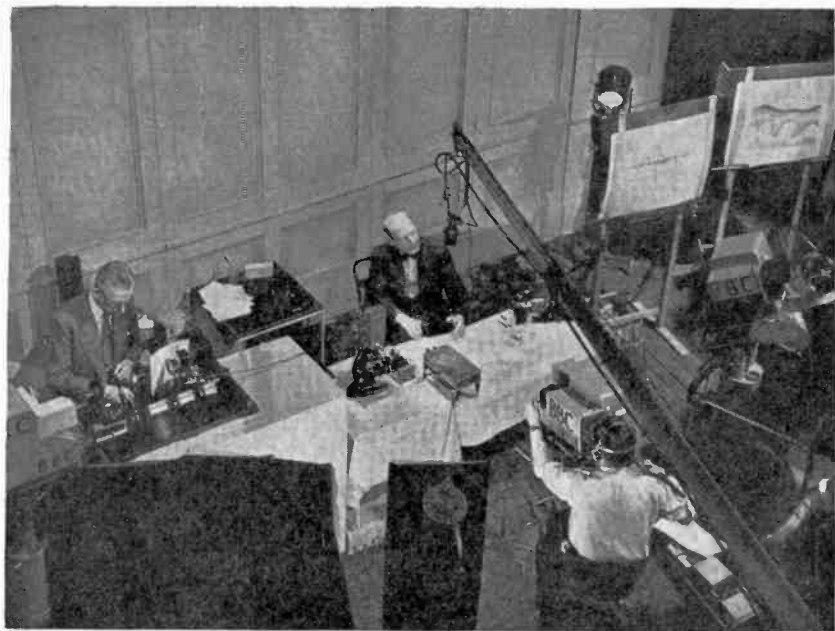
This is not to say that televising life in action, as it were, can never be done at all. The first television documentary effort of 1950 was in fact a novel blend of televised life-in-action, mixed with specially filmed excerpts, and with yet other excerpts presented "live" in the television studio. This



Watching the café waitress stack cigarettes gives the young criminal the idea of breaking in. A scene from a documentary television programme portraying crime among young people.

was the method used in a short series of features produced to illustrate and explain the history, practice, and aims of the Peckham Health Centre. It was indeed a cynical fate which forced this pioneer experiment in medicine and social service to close down, for lack of funds, almost immediately after its work had been introduced by television to nearly half a million viewers.

A great proportion of each of the Peckham series came from a mobile camera unit touring the rooms of the Centre. Commentators accompanied the cameras, explained what was going on, and interviewed people taking part in the Centre's life. Some pre-arrangement was necessary; certain activities had to be held at a time convenient to the broadcast; and some rehearsal was necessary, if only to enable the people to keep within the cameras' range.



Television viewers saw cells and living organisms under the microscope when a system of linking television camera to microscope was used during a series of scientific programmes.

It was a brave attempt; but the general conclusion seems to have been that a carefully written interpretation of the impact of the Centre on the district—say, seen through the members of one family—would have been just as informative, and possibly considerably more satisfying to watch. In that case, actors and actresses would have played the parts, and scenic sets would have been used in the studio to give an impression of the real backgrounds.

It will be seen that a television documentary programme produced in that manner becomes something akin to a play. What distinguishes it from a fictional story is the selection and use of real-life facts upon which it is built. The secret of successful features of this kind therefore rests in the diligence of the research by which the “slice of life” to be interpreted is first examined. This work calls for scriptwriters able to

spend weeks, if not months, absorbing the facts, the circumstances, the atmosphere and the characteristics of the subject chosen.

Careful research, the writing of a dramatic yet true-to-the-facts script, and, finally, performance by first-class actors and actresses—these requirements of television documentary did in fact contribute one of the BBC's biggest television successes of 1950. This was a series of programmes entitled *War on Crime*, produced by Robert Barr, and written by Guy Morgan and Percy Hoskins. Actual cases of real-life police detectives were taken from the files of Scotland Yard, and dramatized in play form on the screen.

The aim was more than to tell a "thriller" story; it was to illustrate the different methods of criminal detection used for trailing different types of criminal. The well-planned raid by the well-organized gang was shown by a reconstruction of the affray at a London airport when police ambushed a gang of gold thieves.

The case of a woman's body, washed up in a London canal, was followed, showing the processes of identification, and the means of finding out how she died, and at whose hands. The murder, for petty theft, of an Oxford widow, was reconstructed to show how the culprit was finally brought to justice entirely by circumstantial evidence. In this feature the details of the evidence were all reconstructed. Another programme in the series revealed the uses of pathology in crime detection, and was based on the real facts behind a number of sensational murder arrests, including that of Haigh, the acid-bath murderer.

In all these programmes viewers saw the criminals and their confederates; their victims; the police, the plain clothes men, and the star detectives from Scotland Yard—all characterized by actors and actresses. Not one real-life policeman or Scotland Yard official ever appeared on the screen, yet the effect was as though a moving-picture record had been taken of each case as the events going to its compilation had actually occurred.

It is perhaps unfortunate that the BBC has been preoccupied with crime in its exploration of documentary technique in television. Programme time is still so limited that one would have appreciated seeing what could be done with other

subjects. In fact, the other major documentary series of the year was about juvenile crime, as seen and dealt with by the juvenile courts. This was compiled by Duncan Ross, who pioneered the present technique of television documentary in a similar series in 1947, when he showed the workings of a magistrate's court.

Away from crime, the Television Service has made no major advance in documentary other than in the *London Town* series, which, since it is so good an example of the use of film in television, is dealt with under that heading.

Some effort was put into a long series of featurettes, *Made by Hand*, purporting to show the craftsmanship which still exists in the few trades which have not been mechanized. Smoothly produced, these programmes had the effect of a well-illustrated magazine article, and—perhaps because of their subject matter—lacked the significant drama which a television documentary programme at its best will always provide. Silversmithing, wig-making, tailoring, marbling paper, stained-glass making, violin making, and the making of shoes by hand were among the trades covered. A slick mixture of film sequences and studio action showed the various stages of the work in each case.

One of the first-ever television documentary programmes, *I Want to be a Doctor*, originally produced in 1946, was revived during the year. In this producer and writer Michael Barry showed not only what goes into a medical student's training, but also the sources of medical knowledge down the centuries. The programme, regarded as a milestone of television advance in 1946, did not compare favourably with current programmes—proof that the television documentary technique is advancing, and that the future may hold many surprises in store.

To the viewer, the dividing line between the television documentary programme and the television talks programme may at times seem difficult to discern. There might be better programmes of both kinds if the BBC would think a little more about the dividing line. Is a Talks Department, derived from the similarly named department in sound broadcasting, almost an anachronism in television?

Certainly it was soon obvious to viewers that nothing could be more deadly than having to sit opposite a television



The 1950 General Election was the first in which results were screened by television. From the rostrum (left) TV cameras scanned a results screen in Trafalgar Square.

screen wholly filled with the head and shoulders of a speaker, allowed so to occupy the screen, without change or movement, for a matter of minutes. The BBC is still reluctant to accept this primary fact about television viewing, and most of its television talks programmes which do fail do so simply because some uninteresting face has been allowed to monopolize the screen.

The division between documentary and talks has also inhibited the television Talks Department, so that it too often adopts a kind of next-slide-please technique merely in order to get picture and movement into its discourses—a method which is crude against the dramatic freedom allowed by the documentary method. Several of the Talks Department's offerings in the past year would have made effective documentary programmes, and the department would seem to be living merely to perpetuate an artificial designation which the

advance of television documentary has thoroughly out-dated. Apart from the straight interview, in the *Picture Page* kind of programme, and utility demonstrations such as those on cooking for women viewers, it is to be doubted whether "talking" is any longer a saleable television commodity.

Taking its cue from the sound-radio Talks Department—a habit which has harmed television—the television Talks Department attempted to cope with the General Election in February, 1950. Two programmes were put out, one on the night of Election Day, going on into the early hours of the next day; and the second on the following night, with the idea of summing up the situation the election had precipitated. The first programme could hardly fail as a visual recording of the results as these were made known. Comments, made by a strictly neutral commentator and by a statistician as the figures came in, added to the interest.

But television's real chance came on the following night, when the almost dead-heat election result could have provided a summing-up programme of lively controversy. Instead, fifteen minutes were spent telling viewers what had been obvious all day to anybody who had read his morning newspaper. Lacking a News Department, the television planners had in fact expected the Talks Department to provide a topical allusion to the election. It would have been better to have planned the summing-up period for a week after Election Day, so that in the event of a highly controversial result, a really lively programme could have been got together.

That controversy in debate can make a satisfying television programme was proved by Mrs. Grace Wyndham Goldie, one of the Talks Department's producers, in 1949. Neither she nor anyone else has succeeded in following up that advance. It may be that what was done in 1949 must for ever stand on its own, had its excellence in its specific material, and can never be repeated. Debate between speakers on television has certainly languished, and may well be on its way out. A debate, held in the television studio, between students of Cambridge and Birmingham Universities, on whether television is worth while, was little more than an intellectual frolic.

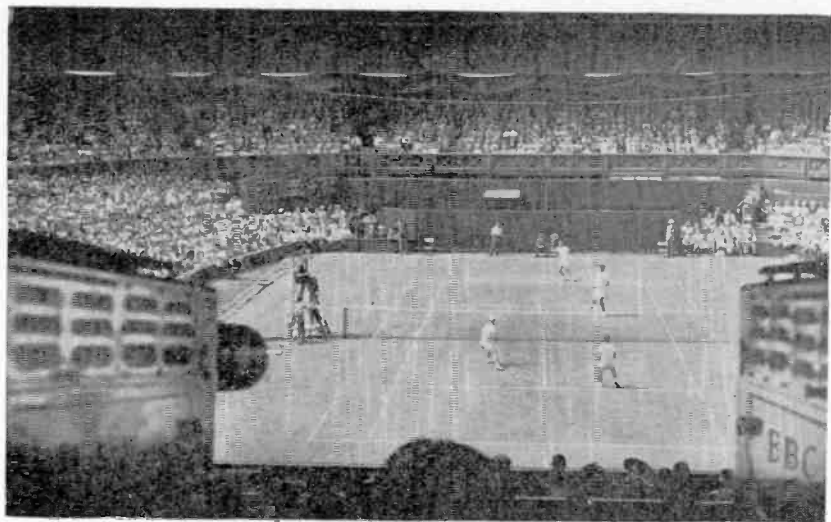
On the other hand, a valiant and not unsuccessful struggle was made by television's Talks Department with a series

intended to explain some of the principles of medical diagnosis and treatment. *Matters of Life and Death*, as the programmes were somewhat dramatically called, took tuberculosis, diabetes, and modern surgery among its subjects, and, presenting a leading authority on each, garnished his "lecture" with practical demonstrations.

The Talks Department's most impressive achievement was in fact in its presentation of a half-hour film. The BBC received an American TV film of the Security Council sessions during which the Soviet's M. Malik used his chairmanship to delay discussion of the Korean War. By skilful editing and the production of a brilliant commentary, given by Mr. Christopher Mayhew, the Talks Department made this film into a gripping and significant programme.

Matters of Life and Death was a series about medical science and diseases, dealing with tuberculosis, diabetes, appendicitis and ulcers. Here a bacteria-freezing apparatus is being shown in a programme about new chemicals for fighting disease.





Television's greatest attraction—the outside broadcast. Lawn Tennis at Wimbledon and cricket at the Oval (and at Lord's) have become regular home-screen events. Sensitive and variable-focus cameras give vivid close-ups of players' styles.



10. THE ROAMING CAMERA

It is Going Further Afield

THE manufacturers of television sets, and the retailers in radio shops, are pretty certain by now what it is that sells television to the man in the street. They all agree that it is the television outside broadcast. To most people television is at its most alluring when it offers sight of sporting events and national ceremonies as they happen. Some of the most exciting milestones in the development of British television have been reached through the lens of the outdoor, mobile camera. The future development of television broadcasting from outside the studios is certain to bring undreamed of achievements during the next few years. And ultimately, television broadcasting may well settle down to a service largely consisting of outside broadcasts, news films and educational programmes for schools and universities.

The BBC got away to an early start with the television outside broadcast. The first was a shot from a window in Alexandra Palace showing trains running along the railway, north of Finsbury Park! There quickly followed the first experimental outside broadcasts from within the grounds of Alexandra Palace. All this was before the 1939 war. In fact, the first television outside broadcast of historic importance and of national consequence, anywhere in the world, took place through BBC cameras before the Hitler war. It was the Coronation Procession of King George VI and Queen Elizabeth, in 1937.

Television programmes had not been back more than a few weeks after the war, when the mobile cameras were again dotted along a processional route in London—for the Victory Parade of 1946. Though for a year or so the aftermath of war kept the Television Service short of equipment badly needed to expand its activities, the outside broadcasts increased both in number and in their range. The Lord Mayor's Show in London became a regular television event. The wedding celebrations of Princess Elizabeth and the Duke of

Edinburgh were televised in 1947. The Cup Final, racing at Ascot and elsewhere, tennis at Wimbledon, cricket at Lord's and the Oval—all became regular highlights on the television screen. The Boat Race of 1949 made history as being the first televised in full from start to finish. The preceding year brought most aspects of the great Olympic Games to the television screen.

In the past year the BBC has had more outdoor equipment at its disposal than ever before, and most of the leading sports events have again reached the screens. There has also been a considerable development of television outside broadcasting for other types of amusement and information—the cameras have been into the country and to the seaside, on rivers and into factories, into churches and lecture halls.

Perhaps the most outstanding television outside broadcast came early in the year, however, when the French President, M. Auriol, and his wife, paid their visit, with the King and Queen and other members of the Royal Family, to the Gala Ballet at Covent Garden. Television cameras were installed in the Opera House foyer, to watch the scene of spectacle as the guests arrived. Sitting quietly at home, viewers got intimate glimpses of lords and ladies, members of the diplomatic corps, and officials of the King's household, all chatting together as they prepared to go to their seats. Then a pause, followed by the excitement of the King and Queen's entry.

While their Majesties stood chatting to officials, close-up shots of unprecedented clarity and naturalness reached the television screens. Royalty had never before been seen in such happy and close-quarters informality. There was no wonder that this outside broadcast brought to the BBC one of the biggest appreciative mails in the history of British television programmes.

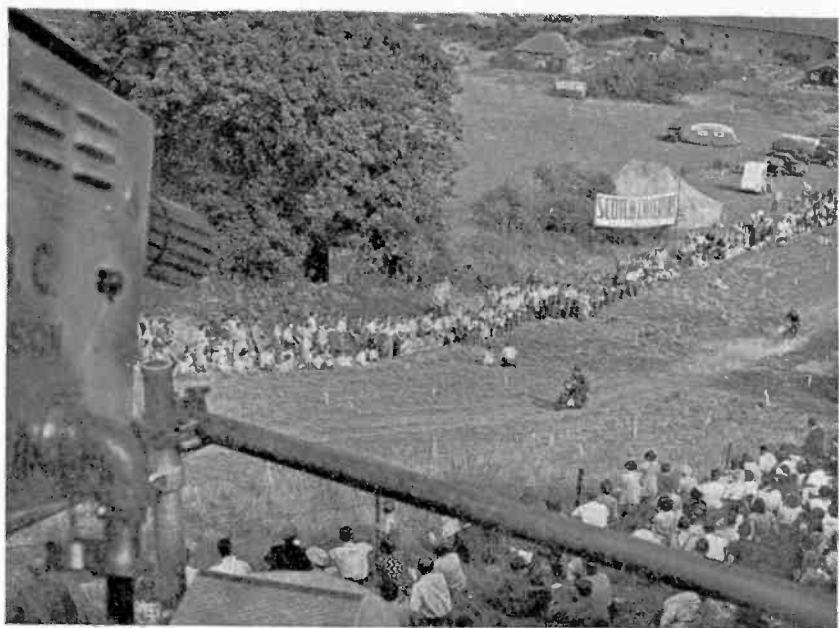
Behind all the ever more varied activity of television outside broadcasting during 1950 has run a controversy. From time to time it appeared to cause tension among those involved, and sometimes even threatened to put an end to the travel of the BBC's roaming cameras. That no major calamity did in fact occur makes it now more than ever unlikely that anything is going to stop the further expansion of television outside broadcasting.



In 1950 television cameras covered more of the Royal Ascot races than ever before. This camera is in position above the unsaddling enclosure—vantage point for behind-the-scenes shots.

The controversy arose over the televising of sports events. It was held by promoters of sports to which the public pay admission dues that showing the games in people's homes by means of television was going to be detrimental to gate receipts. Though some promoters maintain this in connexion with the game actually being televised, most see the danger as one affecting alternative sports events, held elsewhere at the same time. For instance, it was said that because probably two million people stayed indoors to see the 1950 Cup Final, receipts at football matches played elsewhere that afternoon suffered.

An organization of sports promoters has carried on some campaign to call a halt to the televising of sports events until new legislation could be brought in to safeguard the financial interests in organized sport. Little result came of threats to ban the BBC cameras from sports grounds and arenas, but



A motor-cycle hill climb, at Readercott Hill, Knatts Valley, Kent, gave television viewers one of many summer outside broadcasts of sporting and outdoor interest.

considerable advance was made in discussions on this problem, held between the promoters and the BBC, and also with the highest level of interested Government departments. At one point the Postmaster-General called a conference, in an effort to clear the air. A committee was set up, representative of sports promoters and the BBC, which is allocating sporting events for television over a trial period.

At the root of the sports promoters' fear is commercial exploitation of the televised game in public places. It is the possibility of large-screen television shown in cinemas, hotels, restaurants, and clubs which is the real bogey. Some legal method of controlling this development will no doubt soon be found. Large-screen television has been successfully demonstrated a number of times during the year—the 1950 Cup Final was watched enthusiastically and without hitch by

2,500 people in a London cinema. But so far, the cost of manufacturing and installing large-screen television equipment has prevented its adoption by the cinema industry.

The BBC has itself been concerned to clarify the copyright problem which has arisen through the television recording of events as they happen, and legal and Parliamentary experts have been at work trying to come to some satisfactory ruling about copyright of the live image on the television screen.

Once these political and administrative problems have been laid aside, however, there has been no let-up in the advancing technique and variety of television outside broadcasts. The first outside events to be televised from beyond the London and Home Counties area came when mobile cameras visited Birmingham and district, first for a boxing match, and later for cricket.

Televising from outside locations in the Midlands is made possible by the ability to reverse the relay link, which exists to send programmes from London to the Sutton Coldfield transmitter. But the number of occasions when this can be done has been limited, because no separate mobile camera unit was supplied for the Midland area, and every Midland outside broadcast has meant the sending of a unit from London, so reducing the number available at the central source of television programmes.

The Midland beginnings apart—for the area will soon have its own full-time outside broadcasts television section—the range of programme locations has steadily increased during the year. This has been the result of the BBC's bringing into use a micro-wave link system for carrying the television picture from the outside location to the main transmitter at Alexandra Palace. Before this, a single mobile transmitter and aerial, carried on the mobile camera unit to the site of the televised event, had to send the pictures back to Alexandra Palace, and could not be expected to do so adequately for more than a distance of twenty-five miles, or thereabouts.

The micro-wave link system allows the siting of what are virtually small television beacons, to pass on the pictures from one to the other, over almost any distance, until the transmitter is reached. This system enabled the first sally of the mobile cameras to the seaside—at Southend at Whitsun 1950.

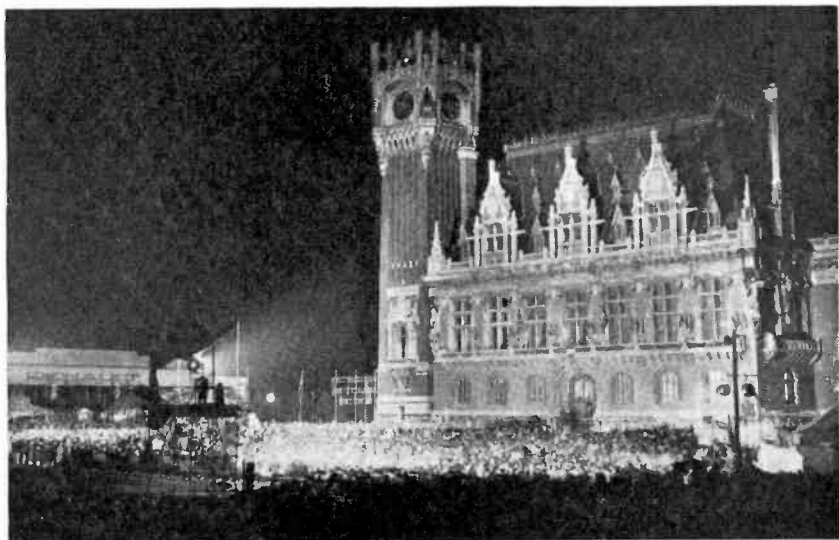
It was this link which finally facilitated the greatest-yet advance in the range of outside cameras. By linking across the Channel and into France, viewers in Britain saw television pictures direct from France. In honour of this most important first international television link the port of Calais went *en fete*, putting on, not only ceremonies and festivities, but also a street carnival for the BBC cameras to "see" and to send back to half-a-million viewing homes in England.

The instructional and educative use of the mobile cameras has increased considerably in documentary and interest programmes, for both adult viewers and children. During the summer and early autumn a wealth of information about country life was obtained from farms, fruit orchards, harvest fields, and hop-fields in the Home Counties. The lighter side of life in these spheres was not missed in passing, and horse riding, point-to-point races and all manner of outdoor country events have reached the screens as well.

A series of features, *Other People's Jobs*, was built on the mobility of the outside cameras, which were taken to a steel foundry to show blast furnaces at work; to a gramophone record factory; to the workrooms of Madame Tussaud's Exhibition, and to the training school of a large London catering firm to see waitresses trained for their jobs. Another illuminating series of programmes provided by mobile cameras came from a room at the British Museum, from which were shown several of the Museum's most precious treasures.

Some attempt has also been made to use the outside broadcast as part of a major documentary operation in television programmes, where it can make a contribution alongside studio sequences and filmed sequences. This technique was tried out in a series of documentary programmes about the famous Peckham Health Centre in London.

The BBC now has four units of mobile television cameras. Each can go at fairly short notice to any location within linking-range of Alexandra Palace, and when there can deploy several television cameras at different points. The cameras have variable lenses giving a choice of shots at different focal lengths. Four television cameras around a sports arena will in fact give twelve different shots, by selection from which the producer interprets the game to the viewer. The close-up shots of the mobile cameras are a distinct



1950 sees television span the Channel. Townspeople of Calais throng the square in front of the Hotel de Ville, where a floodlit fete was staged for BBC cameras.

and unique advantage since, in cricket for instance, viewers can watch the batsman in action right inside his crease, seeing his style in more detail than is possible from any grandstand.

When a television mobile unit has reached the location of a broadcast, the various cameras are rigged up, and cables are run out to link them to the mobile control van, which has travelled with them. More cables are used to link it to the mobile transmitter, which will send the pictures and commentary back to Alexandra Palace. The mobile transmitter runs up an extending aerial, something like a fire-escape, which is put in alignment with Alexandra Palace.

In the control van the producer sees pictures from all his cameras, on a series of screens before him. From these he selects, as the broadcast goes on, the pictures he wants the viewers to see, cutting from one camera to another as he wishes. At the same time he will be keeping in touch with a commentator, or perhaps two or three, giving them instructions through a radio talk-back, and so knitting together the whole course and effect of the programme.

A later acquisition to television's outside broadcast department has been a *central* mobile control van by means of which four different locations can be "mixed in" to one programme. This was first used for the 1950 Boat Race. On its screens the central producer "collects" pictures sent out by four other control vans, and so sends to Alexandra Palace a programme issuing from locations spread over a large area.

The compactness and general mobility of outside television gear is constantly being refined, and the next development is likely to be the one-man television camera, by which it will be possible to detach a "floating" camera from any one set of mobile cameras, and have it operated by a single man at considerable distances from the control site. It will send its picture to the control van by radio link, and will not be encumbered by cable attachment.

Another continuing development in the outside cameras is in their sensitivity. Television can now cover events in failing light, and by night. It can cover events in halls and stadiums without needing to rig up powerful lighting equipment. In fact, the modern television camera has already beaten every treachery of Britain's erratic weather, save thick fog!

The Bertram Mills Circus at London's Olympia is a regular Christmas event for the mobile television cameras.



11. FILM IN TELEVISION

A Speedily Expanding Field

AT THE outset, certain facts must be made clear. Television programmes are not—as some people think—made on film. The advantage of television is that it enables people to enjoy a “live” performance actually going on at the time of watching. This gives viewing an exciting realism, and it gives the television performer an attractive personal advantage over the film performer. But all of this does not mean that nothing is ever filmed as *part* of a television programme.

The other situation, about which there is natural misunderstanding, is that which prevails between the BBC Television Service and the commercial organizations which produce and distribute cinema films. These organizations will not allow their films to be televised, because they fear television’s competition with the cinema box office. The few story films the BBC has televised have all been ten or more years old, and hail from companies having no further interest in them as box-office properties. The BBC does not make story films for itself, and so far as can be seen it never will do so. The oft-mentioned suggestion that viewers could have longer television programmes if classic cinema films were shown, ignores the fundamental failing of the cinema film on the television screen—that it was made for the *large* cinema screen, and has important features which are entirely lost when it is reduced to television size and shown to a family audience.

The production of films—fictional or documentary—specially designed for television broadcasting, has been proposed increasingly; but so long as British television remains the sole possession of an official monopoly, nobody is going to risk money by making films for which only one market exists! Some films have been produced in this country for sale to television networks in America, notably a series based on the BBC’s *Café Continental* television feature.

In BBC television, film is an aid to the producer, used whenever technical circumstances, or those of time and space,



Filming high up on the Quadriga, above Hyde Park Corner, for the London Town series. Cameraman G. Bryan-Smyth, script-writer G. Moresby-White, and producer Stephen McCormack.

make it impossible to produce an effect from actual life, or with live actors, at the time of the broadcast. It is used for outdoor action in television plays; in the play specially written for television it can be used considerably to obtain the atmosphere and speed of action so intrinsic to "pure television" production. Film is used in television documentary programmes, which can blend a dramatic interpretation of real life with filmed records made on the spot. It is used for bringing out-of-studio locations on to the screen when only a fabulous array of outside broadcast mobile cameras could provide them otherwise.

It has been notably used, in this direction, during 1950, for the *London Town* series of features, which are one of the Television Service's assets. These programmes introduce the viewer to aspects of London's life, customs and traditions. Obviously the film camera is the best instrument for getting about London and selecting those facets of London life which the producer wishes to show.

On the other hand, doing the *whole* job by film would lose much of the intimacy which is a charm of television. People met with outside, like interesting London characters, can be talked to informally in the studio. Filming interviews with them on the spot, perhaps during their work, would often be inconvenient and probably be stilted in its result.

So Richard Dimbleby, the "guide" of *London Town*, is always in the studio and "performs" his commentary "live." He also visits the places in London where *London Town's* film unit finds its stories, and often appears in the film sequences so made on the spot. The producer of *London Town*, Stephen McCormack, often mixes these film sequences so neatly with studio action that viewers are hard put to it to see which is which.

When the men who clean London's statues were filmed out on the job, Dimbleby shouted to one of them to climb down from his perch on a statue, and when the man reached the bottom rung of the ladder Dimbleby interviewed him—in the studio at Alexandra Palace eight miles from the statue he had been cleaning! McCormack had switched from film to a live studio interview.

Film enabled Dimbleby to accompany some of London's special constables on their West End beats, though the major

part of this sequence was staged in a scenic set, put up in the studio, to represent the inside of a London police station.

Film's remaining benefit to television programme building, and to viewers' entertainment, is in the provision of news pictures. The BBC *Television Newsreel* was, early in 1950, voted the most popular of all television broadcasts. The newsreel is considerably longer than those shown in cinemas, and each item in it is given a longer showing and a more thorough coverage. It is usually a mixture of the film-magazine type of story and hard news stories. It is shown in two weekly editions, each edition having two screenings. Three editions will shortly be introduced each week, and eventually the aim is to have a new BBC Television Newsreel every night.

By a new system of sound recording, it has become possible during 1950 to shoot a newsreel story in the afternoon, and have it in that evening's screening, complete with commentary. A complete suite of film dubbing rooms and commentators' studios was opened at Alexandra Palace during the year to facilitate speedier work in putting together the newsreels.

The other way in which film helps to put news events on to the viewer's screen is by the BBC's own invention of the "telefilm." This, virtually, is a television recording. A television outside broadcast of a news event, occurring in the morning or afternoon, is filmed direct from the television screen. This film record of the broadcast can then be shown in the evening, for the benefit of the many viewers unable to view earlier in the day. The system also offers a method of "storing" important outside television broadcasts in the BBC's archives. Most important of all, it provides a way of recording plays and variety shows, so that repeats may be screened, and the total hours of television transmission time increased, without putting additional burden on limited studio space.

Unfortunately, this last advantage of the telefilm is denied the BBC, because actors', musicians' and variety artistes' unions will not permit their members to work for a television recording, at the fees so far offered by the BBC for repeat performances. This is one of the details, in the whole problem of trade unions vis-à-vis the BBC, which Lord Beveridge's inquiry will report on in 1951.

12. HOW AUDIENCE

RESEARCH WORKS

THE BBC's Audience Research Department uses various methods in its attempts to assess what the listener and viewer thinks of BBC programmes. The year 1950 saw an extension of the department's work into television. The research started in southern England, and was then expanded to cover the Midland viewing area.

A panel of 600 viewing families, in both areas, returns a "log" to the BBC expressing candid opinions on the programmes watched.

The returns are then analysed, and a report on each week's "viewing response" is sent to all television programme chiefs and producers. The following excerpt shows how the report is set out ("Sets in use" and "Total Viewers" are per 100 panel families answering):

	SETS IN USE	VIEWERS PER SET	TOTAL VIEWERS	PER CENT PLEASED
<i>Monday, 6th March</i>				
8.30 Newsreel	72	2.51	180	76
8.45 TV Dancing Club	74	2.49	185	63
9.15 War on Crime (documentary)	85	2.52	213	79
<i>Thursday, 9th March</i>				
3.00 Checkmate, film	17	1.93	33	62
8.30 Made By Hand	63	2.55	160	65
8.50 French President at Royal Opera House	86	2.77	239	93*
9.45 Telepathy Act	77	2.65	205	59

**One of the highest appreciation "markings" yet recorded.*

Producers of the main items also receive a more detailed statement, giving viewers' opinions of their production.

13. BEHIND THE SCREEN

WHO'S WHO

NORMAN COLLINS is the man responsible for the present development of the BBC Television Service. In the brief space of six years, Collins rose meteor-like from an assistant's job in the BBC's Overseas Section, to the position of Controller of Television. Collins is 43 years of age. At eight he wrote and illustrated a school magazine, which he loaned to friends at a halfpenny a time. His first job was with the Oxford University Press. From 1929 to 1934 he was assistant Literary Editor of the *News Chronicle*. He then joined Victor Gollancz, the publishers.

In 1941 he joined the BBC as an assistant in the Overseas Talks Department, became Talks Manager, and eventually Director of the General Overseas Programmes Service. In this job, during the war, he toured the world in connexion with broadcasting to the overseas forces. In 1946 he was appointed Controller of the Light Programme. He moved to the Controllorship at Alexandra Palace in 1947. On top of his "office-hours" career Norman Collins is a prolific writer of novels. His best-seller *London Belongs to Me* was made into a successful film. He is married, with two daughters, Anthea and Cordelia, and one son, Roderick. He lives at Northwood.

CECIL MCGIVERN is Number Two in charge at Alexandra Palace, being the BBC's Head of Television Programmes. Born in Newcastle, of Irish parents, he attended St. Cuthbert's Grammar School, and later Armstrong College, Durham University. Before joining the BBC he was a schoolmaster, travelling amateur theatre producer, and repertory theatre producer in the North East.

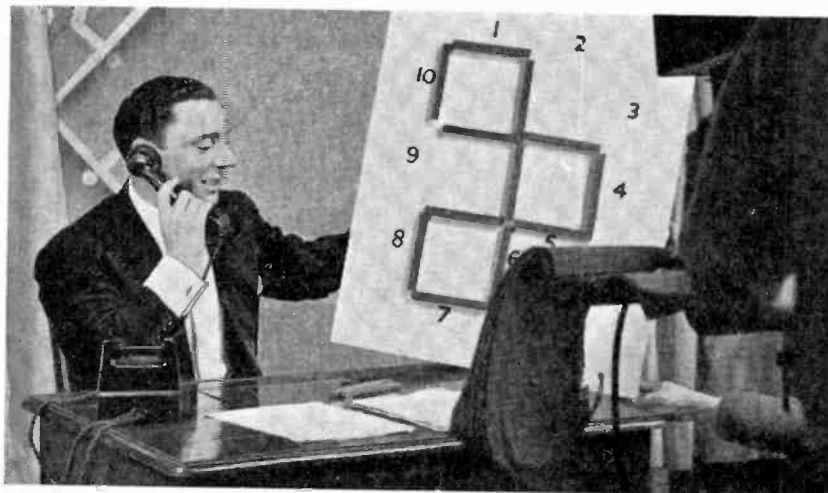
His first BBC jobs were in Newcastle and Manchester, where he was responsible for variety and drama, and eventually for all regional programmes in the North East. In 1941 he was transferred to London, as a documentary-feature writer and producer, and contributed some of the outstanding



Controller of BBC Television, Norman Collins (right), with announcer McDonald Hobley in an Alexandra Palace studio.

documentary sound-radio programmes of the war years. After the war he left the BBC and joined the Rank Organization, as a scriptwriter. In 1947 he rejoined to take over his present television appointment. Is married, with three children.

ERIC FAWCETT. An outstanding producer of considerable range, having scored some of TV's most striking programme advances in straight drama, variety and opera. Came to radio after a thorough stage upbringing. Son of Alfred Burbidge and Florence Henson, appeared on the London stage in musicals. In the twenties played in America in musicals and films. In pre-war TV played as an actor and then joined the staff as a producer. During the war returned to the stage in *Runaway Love*, at the Saville Theatre, and then became a sound-radio variety producer. Rejoined TV in 1946. As long ago as 1929 he appeared on an experimental TV programme organized by John Logie Baird in a London attic.



One of the senior variety producers, Ronald Waldman, conducts his Puzzle Corner feature in the regular TV programme, Kaleidoscope. A viewer is answering a puzzle over the telephone.

D. C. BIRKINSHAW is TV's chief technical man, known at Alexandra Palace as Superintendent Engineer. Aged 44, educated at Oundle and Corpus Christi, Cambridge, he joined the technical research department of the BBC after five years in a Sheffield steel works. When Britain's first TV station was opened, at Alexandra Palace, in 1936, he was appointed Engineer-in-Charge. On the outbreak of war the Television Service was closed down, and Birkinshaw became chief engineer of the BBC's mammoth radio station at Daventry, then carrying the broadcasts to overseas. Has hobbies right away from his work—plays piano and organ, and composes songs, and is a Fellow of the Royal Horticultural Society. Is also an amateur church-bell ringer. Married, he has two children, Pauline and Keith.

RONALD WALDMAN, after long and successful work in sound radio, joined TV as its Senior Variety Producer, in January 1950. Made an outstanding contribution to the year's programmes by re-introducing TV's popular *Kaleidoscope* series. Waldman is 37, took a M.A. at Pembroke College,

Oxford. Was a member of the Oxford University Dramatic Society, and became interested in the theatre. Joined Brighton Repertory Company in 1935; became leading man, and then producer. Toured in plays, from farce to Shakespeare and Shaw. Joined the BBC as sound-radio producer in 1938. A bachelor, he lives in the West End, and as a hobby plays the piano.

STEPHEN McCORMACK, producer of TV's popular *London Town* series of documentaries, joined the BBC as a TV studio manager in 1946. His training had been in stage management with the Prince Littler commercial entertainment concern. The war put him into the Irish Guards, and he produced the first pantomime ever presented in that regiment. Was later posted to India, and was two years with British Forces Radio in the Far East, originating broadcast messages from the troops to their homes. Demobilized as a major. Married actress Nancy Lind, and has young son and daughter.

GEORGE MORE O'FERRALL is a senior drama producer at Alexandra Palace who was in at the beginning of TV programmes in 1936. At one time he produced *Picture Page*. Was once on the stage with Sir Ben Greet, and was producer at Arts Theatre, and assistant director in film studios. After war service at home and abroad, rejoined the Television Service, producing the first play to re-open programmes after the wartime break. Produced Shaw's *St. Joan* for television, and in 1948 was awarded the first TV "Oscar" medal, presented by the British Television Society, for his production of *Hamlet*.

MICHAEL MILLS launched the *Regency Room* revue series during 1950, and before that produced the first TV comedy serial, based on the life of the "Conover Family." Started in the BBC as a sound-effects boy at Broadcasting House. Joined the Navy in 1939, and served until 1945, when recalled from sea to become second in command and stage director of a naval show touring the United Kingdom, France, Germany, Belgium, Holland, Canada, and the Pacific. Was for a time stage manager at St. Pancras People's Theatre, and joined the Television Service in 1947. Aged 31, a bachelor.

HAROLD CLAYTON, producer of several outstanding TV plays, was at one time stage director and actor with the Dennis Neilson-Terry company, and has produced and managed repertory companies at Newcastle and New Brighton. Played in *After October*, at the Aldwych Theatre, and toured in this play, with Jose Collins. Produced at the Embassy Theatre, Arts Theatre, Criterion, and Saville. In R.A.F. during the war, and afterwards taught at Central School of Speech Training. Joined the Television Service in 1946.

ROYSTON MORLEY. A senior TV producer in the drama department, with experience of TV from its beginning in 1936. Aged 39, son of a Baptist Minister, started his career as a journalist in Fleet Street. In 1936 joined the BBC as a feature writer for sound radio. After a few months transferred to TV, becoming responsible for all manner of productions, from variety acts to Shaw plays. At outbreak of war headed BBC's overseas features and drama department, until 1941, when he went to Middle East as a war correspondent. Later served in the ranks in the Army, and commissioned in Royal Artillery. Worked on Forces Radio, and awarded American Bronze Star. Writes novels in his spare time.

CHRISTIAN SIMPSON is a producer who has pioneered the art of TV ballet. Son of a Scottish Minister, he joined the Television Service in 1936 as a sound engineer. Later transferred to camera work. Joined R.A.F. in war, first in radar, then in air crew, specializing in coastal reconnaissance. Returned to TV in the lighting section, and became a studio manager. Later promoted to producer of ballet and musical programmes. Paints and composes music.

JAMES BOULD is a scenic designer, responsible for the settings of many plays. Studied art at Birmingham School of Art, and was designer for Birmingham Municipal Theatre. Worked in the famous Abbey Theatre, Dublin, and came to London to design for Cochran, Charlot and Stoll. Was for a time producer at Manchester Repertory Company. Has worked for the stage in France, America, Russia and China. Served in Royal Navy, later becoming a commando, and First Lieutenant to Admiral Fisher in the Pacific.



In action in the producer's gallery are seen (front) sound and gramophone operators, (centre) producer Eric Fawcett with his secretary and a senior engineer, and (back) the vision mixer.

HAROLD L. COX is manager of the popular TV Newsreel. Was once an actor and stage manager, and later production manager in several leading film companies. In 1938 was appointed assistant manager to TV outside broadcasts. During the war served as Lieutenant Commander, R.N.V.R. His hobbies are yachting and bee-keeping.

RICHARD GREENOUGH is a young member of the Scenic Design Section who entered the theatre after training as an electrical engineer. Has been a scene-shifter in a West End theatre and an actor at Stratford-on-Avon. While stationed at Glasgow during the war, studied at the School of Art, and followed this up by taking to scenic design.

KEITH ROGERS, an outside programme producer, was a technical journalist before joining the BBC, and now specializes in producing television camera visits to industry. Was once a radio operator in the Merchant Navy, and from 1940 to 1945 was a member of the R.A.F.V.R., responsible for installation and maintenance of radar equipment.



Barrie Edgar, producer and commentator on the outside broadcasts staff, is describing a motor - cycle hill climb into a lip-microphone. Television commentating poses new problems for broadcasters — chief one being how much to describe when the viewer can see for himself.

HENRY G. WHITING is the man in charge of Sutton Coldfield Transmitter, the station which gives TV to the Midland counties of England. He was trained as a chemist, and later joined Western Electric Company as an engineering student, in the physics laboratory. Took part in construction of some major radio stations, and joined BBC as an engineer at the big Daventry transmitter. Joined TV as a development engineer when the Television Service started in 1936, and became senior maintenance engineer at Alexandra Palace.

BARRIE EDGAR is a popular commentator, especially for the children's programmes. Also produces outside broadcasts. Was assistant stage manager, Alexandra Theatre, Birmingham, and stage manager at Birmingham Repertory Theatre. Has played light comedy roles on the stage. During the war was seaplane pilot in Royal Naval Air Arm. Joined Television Service as a studio manager, and appointed producer in 1949. Is son of Percy Edgar, late head of BBC Midland Region, and married Joan Edgar, wartime BBC announcer. They have one son, David.

MICHAEL HENDERSON is known as a television commentator on sports and outside ceremonies. He is also a producer of outside television programmes, and joined the BBC originally as a studio manager in sound radio. Became a newsreader and announcer, before transferring to television. Has played cricket, hockey and rugger for Wellington College, and got his rugger Blue at Oxford. Keen on sailing, playing the flute, and singing in madrigals and choral works.

ANDREW MILLER-JONES is a talks producer at Alexandra Palace, responsible during 1950 for the *Matters of Life and Death* series. Worked in the early talkie-picture studios, and later wrote many educational and instructional films. Pioneered cartoon and animated diagram films for instructional purposes. Joined BBC in 1937 as junior television producer. During the war was in charge of R.A.F. Training Film Production.

IAN ATKINS. A BBC television drama producer who was trained in the film industry, which he entered as a cameraman just as talkies were beginning. Was stage manager to his father, Robert Atkins, at Regent's Park Open Air Theatre, and later played small parts for such producers as John Gielgud and Komisarjevsky. Joined Television Service in 1939 as a studio manager. Did radar research during the war. On his return to television his first job was to handle the televising of his father's production of *As You Like It* by the Regents Park company.

DUNCAN ROSS was for a long time sole scriptwriter on the television staff, and has always specialized in the television documentary programme. Was behind the Peckham Health Centre series of programmes, and then wrote the outstanding documentary series on the workings of the juvenile courts and the assizes. Started as a cinema manager in Edinburgh, and was at one time youngest manager in the Gaumont British circuit. Managed the new Savoy Theatre, Glasgow. In the war joined the Scottish Office to organize film distribution in southern Highlands. Took over production of a film magazine from Paul Rotha. Is married, and has three sons. Says his hobbies are finding golf balls, pulling legs and corks.

STEPHEN HARRISON, a drama producer, responsible for some of the most famous plays brought to television from the stage, had a long film studio experience. Was in Paramount studios in America and in 1929 was assistant director to Paramount at Elstree. With London Films he was editor on such pictures as *The Private Life of Henry VIII*, *Catherine the Great*, and *The Private Life of Don Juan*. During the war was chief sub-editor of BBC Home News.

PHILIP BATE. The producer who put on the screen television piano lessons, and the series *Ballet for Beginners*. Originally took a science degree at Aberdeen and did research work for the university. Joined BBC as an assistant studio manager at Alexandra Palace, and became a producer within a year. During the war was first a programme engineer in sound radio, and then held administrative and production positions in overseas and home broadcasting. Is an expert musician and has a collection of valuable and ancient musical instruments.

BILL WARD, whose real name is Ivor William, is a light-entertainment producer who made a hit with the Terry-Thomas series, *How Do You View?* and put Gracie Fields on the screen in a Victorian bathing costume—in the *Lucky Dip* series. Was once the youngest engineer in the BBC—at Plymouth. After joining television went through all the technical jobs, cameraman, vision and sound mixing, and lighting. During the war instructed on radar at Military College of Science. Became a studio manager at Alexandra Palace, and promoted to producer in 1947. Married, with two children, he is a keen and expert apiarist, and takes a special pride in his garden.

MICHAEL BARRY is a television drama producer who has specialized also in writing for television. His play, *Promise of To-morrow* was a highlight of the drama year in television. Forty years old, he originally trained for an agricultural career, but became a student at the Royal Academy of Dramatic Art. Then held a number of production jobs in repertory theatres up and down the country. Has directed films.



Television scenic designer Barry Learoyd at work. Studio plan shows where scenic sets will stand in relation to camera movements, lighting, and action of the production.

BARRY LEAROYD is senior designer in the Scenic Department, being responsible for many of the outstanding scenic settings of the year's productions. Educated and trained as an architect, and was working in film production prior to joining TV in 1938. Had a varied war service: Ack-ack, Instructor O.C.T.U., War Office staff captain, Pilot-Officer, Flight Lieutenant.

JOHN GLYN-JONES is a television play producer, son of Sir William Glyn-Jones, who was M.P. for Stepney and was associated with Lloyd George in the first national health insurance legislation. John joined Oxford Repertory Theatre as assistant stage manager, toured, and played at the Westminster Theatre. Was first a sound-radio actor in plays, variety and schools broadcasts, and got his first job in the BBC in the Schools Programmes Department. Became a television producer in 1946.

FRED O'DONOVAN is the veteran of the television play producers, having made his first appearance on the stage at the famous Abbey Theatre, Dublin, in 1908. Later became producer and manager at the Abbey. Played on the London stage. After one year as television producer the war came, and he became an acting member of the BBC Drama Repertory Company. Later produced sound-radio features, and then returned to television, developing a single-camera technique.

CARYL DONCASTER at twenty-seven is one of the youngest television producers, being responsible for such documentary series as the *Made By Hand* features. After training at Bedford College and London University, she took a social science course at London School of Economics. Then worked with a concern developing film strips for educational purposes. Became a temporary producer in Television Service in 1948. A year later promoted to full-time producer.

CAMPBELL LOGAN is a television play producer who has specialized on the adaptation of stage plays for television. Toured at home and abroad as an actor, having played at the Globe and Wyndham's. Stage-managed for Leon M. Lion at the Royalty and the Garrick. In 1939, stage director at the Open Air Theatre. During the war served with the Army Kinematograph Service Film Production Unit. Has written plays; married, with two children.

STEPHEN BUNDY is one of the scenic designers at Alexandra Palace. Got his training with Aberdeen Repertory Company, where Stewart Granger, Michael Denison, Dulcie Gray and Elspeth March were also "in training" at the same time. In addition to scenic sets, he designs hair styles and costumes. Married, with one son, and lives at St. John's Wood.

DOUGLAS ALLEN is a television drama producer who spent several years on the stage, as an actor, stage director, and producer in repertory, on tour, and in the West End. During the war served with the R.A.O.C. After demobilization was stage director for *Spring 1600*, *The Time of Your Life*, and *Clutterbuck*. Joined the Television Service as a studio manager in 1947 and became a producer two years later.

JEANNE BRADNOCK is known to all at Alexandra Palace as "Johnny," and is in charge of the Wardrobe and Make-up Department. One of the pioneers, she joined the Television Service from films in 1937. Modern TV make-up is a much simpler proposition than in those days, being largely a simple effect not unlike outdoor sun-tan. Johnny spends a lot of time studying costumes for television's many requirements, and organizing her dozen wardrobe assistants and the other dozen Make-up Room staff.

ROBERT BARR. A television documentary producer and script-writer who contributed several outstanding programmes in the *War on Crime* series. Had a varied career in Scotland and Fleet Street as a reporter, and joined the BBC from the *Daily Mail*. First BBC job was sound-radio script-writer. Became a radio war correspondent. Three days before the final German capitulation he was injured, and flown back to England. Became a television producer in 1946.

Miss Jeanne ("Johnny") Bradnock (left), Manager of TV's Wardrobe and Make-up Department, and Mrs. David Manderson, assistant make-up manager, in the make-up room at Alexandra Palace. Television make-up has been refined from the early days when it was heavily applied. Today a more or less normal "outdoor tan" is generally sufficient.



14. TELEVISION AS A CAREER

TELEVISION has obviously opened up a new field of employment, and new opportunities for the use of creative and administrative talents, as well as technical skills. On the creative and administrative sides recruitment is bound to draw largely on personnel already in the employ of the BBC.

However, there are occasional opportunities of employment for persons with specialized experience in films, the theatre, journalism, music, or in the administrative spheres of these fields.

On the theory that it offers a lifetime's security, with good conditions and an excellent pension scheme, the BBC does not compete with either the commercial entertainment industry or the newspaper world, when it comes to salaries. The highest salary in the Television Service is considerably below that earned by a theatrical manager, or managing editor of a newspaper. Heads of departments, with administrative and creative responsibility for the entire output of their department (such as Drama Department or Variety Department) receive £1,610 a year. Senior television producers, so qualified by reason of long experience either within the BBC or in films or theatre, get £1,360. Television producers are on a scale ranging from £610 to £890.

One method of gaining appointment as a television producer is to work first as a studio manager—the producer's right-hand assistant on the production floor. Salaries for this work range from £470 to £680.

A rapidly growing section of the Television Service, its Film Section, is drawing largely on the film industry for its staff. It offers pay in no way competitive with films, but owing to the retrenchment in the film industry, some previously highly paid film cameramen, editors and assistant directors have joined the Television Service.

Television's scenic design department will grow as additional studio space becomes available. Set designers

Film technicians play an increasing part in television work — like this newsreel cameraman. The growth of the new medium will call for people of many skills — artistic, administrative, and in the field of electronic engineering. Remuneration is not high, but employment is secure.



receive from £600 to £800; and scene-painters and carpenters from £7 to £10 5s. a week. Scene-hands, in the studios, get £6 5s. a week.

In theory, women would be considered by the BBC for any of these television jobs. In practice, there is only one woman departmental head, and only six women producers in a total production staff of 200—not counting secretaries and clerks. There is a growing legion of producers' secretaries, with interesting and not unexciting jobs, but the abilities required could command more money elsewhere. The pay is £5 10s. 6d. to £6 5s. 6d. a week. The only chance of better pay for the BBC secretary is on work with a high administrative official, and such opportunities are few and far between.

To the schoolboy question, "How can I become a television cameraman?" the answer is, oddly enough: "Only by being a BBC engineer first." And to the schoolgirl, asking, "How can I become a television announcer?" the answer is: "On the rare occasions when the job is advertised, apply—and take your chance against hundreds of other applicants!"

15. TELEVISION FOR THE NORTH AND WEST

Towards a National Network

AS THE result of careful tests of the field strength of the Alexandra Palace television transmitter, the BBC officially defines the reliable service area of the London Television Station as within a circle bounded at the north by Hitchin, at the east by Southend, at the south by Reigate, and at the west by Reading. But it is of course common daily practice to receive television quite adequately over a considerably greater area than this. It is because serious fading may occur at odd spots within that greater area that the BBC places it outside the reliable reception area. In actual fact, Alexandra Palace is serving south Norfolk, east Northamptonshire, a good part of Oxfordshire, Berkshire, the Surrey-Hants border, Sussex, Kent, Essex, and the southern fringe of Suffolk—even parts of the Isle of Wight.

When BBC television got its second transmitter, at Sutton Coldfield, near Birmingham, the BBC again made a cautious estimate of its probable service area. It was suggested that the considerably greater power of the transmitter, coupled with the height of its aerial, would provide a 50-mile service area. Discounting odd and isolated spots of freak reception as far away as North Yorkshire and North Wales, extensive field tests have shown that Sutton Coldfield is giving reliable and high-quality reception 45 to 50 miles away, and is seen at less quality up to 80 miles away.

Britain's two television transmitters therefore give a viewing area somewhat like a wide, diagonal path running from the south-east coast to the north-west Midlands. The centre of the south coast, and the whole south-western area of England, all Wales, the North of England and Scotland, and northern East Anglia are still without a reliable television service, five years after the end of the war, and no less

than fourteen years after the start of daily television programmes in Britain.

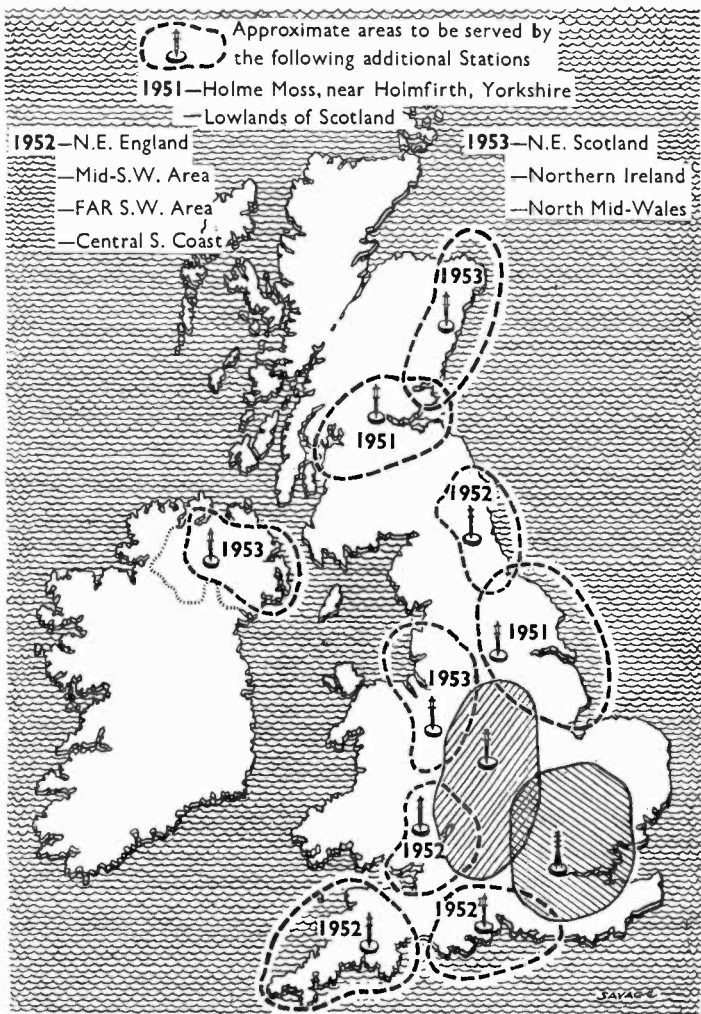
The slow spread of television stations since the war is due to the rigid allocations of money, manpower and materials made at Government level. Critics may or may not be right when they suggest that the Government could have been persuaded to act more speedily for television, had the BBC been keen enough about it to agitate for it.

The upshot of the situation is that not until 1954 will anything like a national coverage be given by BBC television stations, unless present officially agreed plans can be speeded. According to the present plans, by that time 80 per cent of the population will be within viewing distance of television.

By the end of 1951, television should have reached most of the North of England, a good deal of the south and west of Scotland, and possibly a major part of south-west England and South Wales. The third television station to be opened in Britain will be at Holme Moss, a high Pennine site near Holmfirth in Yorkshire. It should be in service by the middle of 1951. With its elevation of 1,000 feet, and an aerial mast of 750 feet on top of that, Holme Moss is likely to exceed even Sutton Coldfield's long range. Even so, the BBC plans, later on, to build a low-power transmitter in the Tyneside area, to "boost" television signals for the North-East.

The first television station for Scotland should be operating by the end of 1951. It will stand in the hills at Kirk of Shotts, Harthill, fifteen miles to the east of Glasgow. Its transmitter, with that intended for the south-western area of England, will be the most powerful ever built for television in the world. Later a local low-power transmitter will extend the Kirk of Shott's service area to the Aberdeen district.

In south-western England, the BBC took some time to decide between the rival merits of sites south or north of the British Channel. Investigations were made into the possible effectiveness of television transmission from the Mendip area of Somerset, before finally choosing a site in the vicinity of Cardiff. Choosing a site for a television station is done by attaching a television transmission aerial to a balloon, and sending it up from selected and alternative locations. A moving receiver van then travels the area with experts able to



The aim is to provide good reception in all the above areas before 1954, by adding nine transmitters to the existing two.

plot, in the form of contours, the signal strength of the experimental station. At the BBC's research centre, all the maps of the alternative service areas are compared, and a final choice of site is made.

In the years 1952, 1953 and 1954—according to the present plan—television stations will be built to serve the far south-west of England, central and northern Wales, eastern Scotland, the middle counties of southern England, and the eastern half of Northern Ireland.

Spreading television throughout the country is not merely a matter of building the transmitters. The programmes the provincial stations will transmit have all to travel from the television studios in London. This entails laying a "link" from London to every supplementary transmitter. Between London and Birmingham this link is forged by two methods. The television signals from the London studios are sent through five small repeater stations, placed on hills between London and Birmingham; alternatively, they can be sent along a coaxial cable.

Future links will be formed by whichever method is best suited to the terrain.

There are two alternatives to this intricate system of sending television programmes up and down the country. One is to film all the programmes produced in London and to have provincial television stations transmit the films. The other way is to give each provincial station its own television studios.

The filming method runs directly against the BBC tradition of giving the viewer a spontaneous, live performance whenever possible, and makes impossible provincial televising of news events, including sports events, as they happen. The provincial studio plan would be enormously costly, and even then would be of dubious value, since, despite valuable sources of local talent, no provincial area could supply a daily television service with enough good talent to keep it going with success.

No doubt, eventually, some of the main provincial transmitters will have local studios added to them—in their near-by cities. These will be small studios, however, and will be used for local information and educational services supplementing the national programmes emanating from London.

16. TECHNICAL ADVANCES

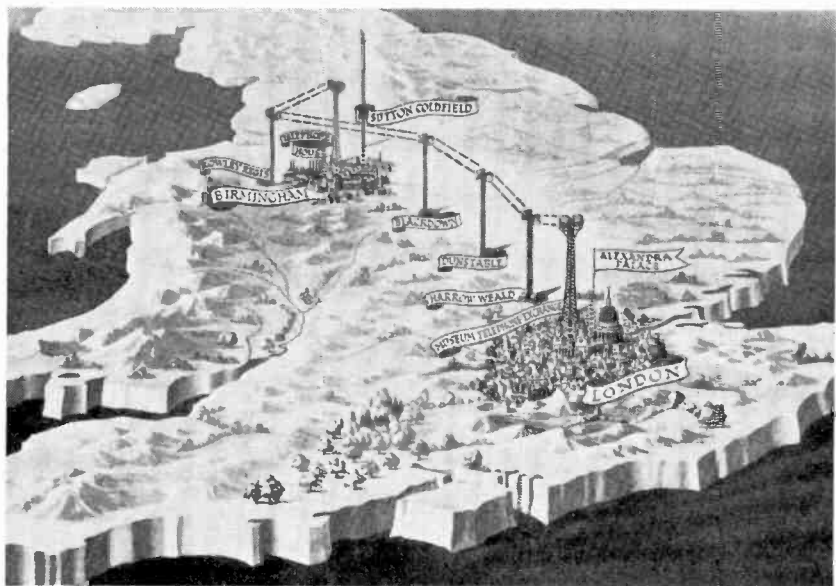
Television Transmission and Reception

THE MOST outstanding development in British Television since the Second World War has undoubtedly been the inauguration at Sutton Coldfield, near Birmingham, of the Midland Television Transmitter. During 1950 this station extended television over a 50- to 80-mile radius.

The transmitter receives its programmes from Alexandra Palace, in London, through a chain of relay transmitters and receivers, known as the "link." This normally supplies the Midland transmitter with the sound and vision signals originating at the London studios, or at an Outside Broadcast point in the London area. The link can, however, be reversed to permit sound and vision of a programme originating in or near Birmingham to be radiated simultaneously from both Midland and London transmitters. Reversal of the link is not likely to occur very often because there are, at present, no television studios in Birmingham, and the only material which can be televised by this means are sports events, or other activities suitable for O.B. transmission.

Outside broadcast activities in the London area have been increased by the steady acquisition of new O.B. units. There is an increasing number of mobile control rooms, each with three cameras and associated equipment. The cameras used with these units are more sensitive than the standard Emitrons used in the studios at Alexandra Palace. They are cameras capable of giving good pictures even when the scenes to be televised are very poorly illuminated.

Some of the O.B. units are equipped with pick-up tubes employing entirely new principles, namely the C.P.S. Emitron (Cathode Potential Stabilized Emitron) and Image Orthicon tubes. Viewers who saw the outside broadcast of the Royal Visit to Covent Garden Opera House, on the occasion of the visit of the French President M. Vincent Auriol, may remember the very impressive pictures of the scene in the foyer. These were given by the image orthicon pick-up tubes.



How television programmes produced in London reach Sutton Coldfield for transmission over the Midland area. An impression of the radio-link, the first of its kind in the world.

If an O.B. site is fairly near one of the television cables in the London area, the cable can be used to convey the vision signals to Alexandra Palace. At sites remote from these cables, the O.B. unit must include a mobile television transmitter, which can radiate the signals to a receiving station, from which the signals can be sent to the main transmitter by cable. The range of these mobile transmitters is normally limited, but has now been considerably extended by a system of micro-wave transmitters and receivers.

An example of the use of this link was the O.B. from Southend at Whitsun 1950. A micro-wave link was used between the pier site and the roof of a tall building in Leigh-on-Sea and a second link carried the vision signals to a site on Wrotham Hill, in Kent. A third link was used to London University, Senate House, and the signals then proceeded by cable to Alexandra Palace. This link system paved the way for sending television pictures across the Channel.

The new types of pick-up tube mentioned earlier have not been confined to O.B. use, and some of them have been used for short periods of a few weeks for studio broadcasts from Alexandra Palace, in tests alongside the standard Emitron tubes. These experiments are intended to give an opportunity of comparing the rival performances of different camera types, under favourable lighting conditions, in an endeavour to decide what pick-up tubes shall be used in the future. There has been a great deal of research on pick-up tube design during the last 14 years, particularly in America, and it is possible that some of the more recent types may be adopted for use in studios. For example, C.P.S. Emitron cameras were installed in the first of the new television studios opened at Lime Grove, Shepherd's Bush.

The Lime Grove premises contain five very large studios, each much larger than either of the two studios at Alexandra Palace. As a result of the present lack of studio space, very little time can be devoted to rehearsals of shows and plays; moreover, whenever a show is televised on two occasions a few days apart, the studio sets must be dismantled after the first performance, to make room for other programmes or rehearsals, and later reassembled for the second performance. The acquisition of the new studios should avoid this duplication of labour, give more time for rehearsals, and add enormously to the working comfort of all concerned.

Since the war a number of new telecine film-showing equipments have been installed, some at Alexandra Palace and one at Sutton Coldfield. The equipment at Birmingham is used only to provide emergency film programmes in the event of a lengthy breakdown of the link with London. These equipments are different in principle from the pre-war telecine equipment, and give very much better reproduction of the films.

One of the difficulties experienced in designing telecine equipment was the difference in shape of film and television pictures. For many years now the aspect ratio of film pictures has been standardized all over the world at 4:3—that is, the width of the picture is 33 per cent greater than the height—and most countries with a television service have also adopted this ratio. Until recently, in British television the aspect ratio was 5:4, but early in 1950 it was decided to alter the aspect

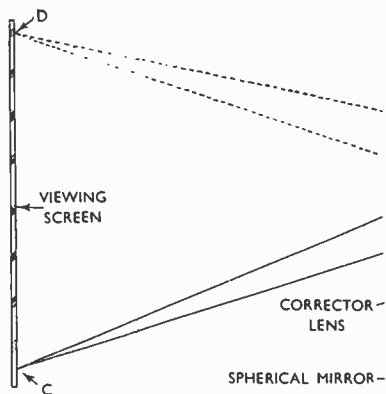
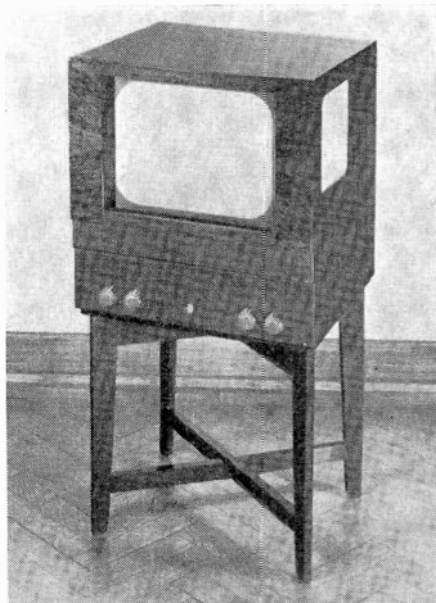
ratio to 4:3 and so bring it into line with cinema practice. This decision not only simplified the design of telecine equipment, but also made possible the exchange of television programmes, such as telefilm recordings, between different countries.

The change in aspect ratio required viewers to make a slight adjustment to the picture-height control of their receivers, in order to preserve normal proportions in the image. Because of this adjustment most receivers manufactured before the change in aspect ratio now operate with a slight gap between the image and the mask at the top and bottom of the picture.

Considerable research and design work has been carried out on the problem of recording television programmes; a method was required enabling programmes to be recorded on cinema film in the form in which they are actually broadcast. Certain items, for example a football match, can be recorded for subsequent retransmission by the use of a standard cine camera positioned alongside the television camera, but this method cannot be used to record such items as a television play, or a complicated production involving studio, outside broadcast and telecine contributions.

Two successful recording systems have therefore been developed, in which the screen of a television receiver is photographed by a special type of cine camera. One system produces standard 35-mm. cinema films, which can be reproduced anywhere on standard projectors; these recordings can thus be used by cinemas, or by television services, anywhere in the world. Telefilm recordings of this type are made of programmes of great interest, such as Royal occasions, the Boat Race and the Cup Final, and items which may take place at times when most viewers are at work. Some of the chief cricket and tennis events of the 1950 summer were so recorded for evening transmission. The quality of the recordings is steadily improving as research goes on, and operational skill increases, and it is expected that the majority of viewers will soon be unable to detect recordings from live programmes.

The second system of telefilm recording uses 16-mm. film, and is much cheaper to operate than the 35-mm. system, but the quality of sound and vision is not so high as in the

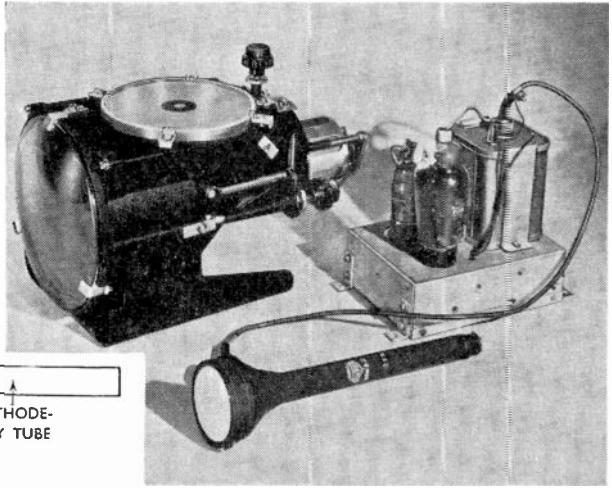
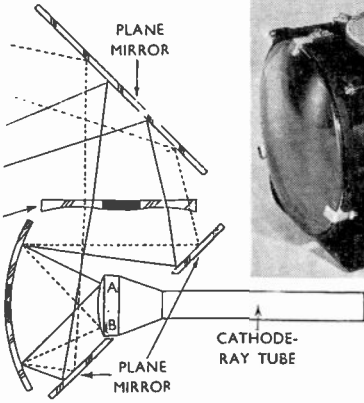


The new projection-type television receiver (left) employs a diminutive cathode-ray tube producing a picture of matchbox size. The latter is enlarged by means of projection components (right) so that an image of one

alternative system. The 16-mm. recordings being made are not intended for transmission, but are used mainly by television programme producers to enable them to judge the results of their own handiwork. Without this or some other recording system, television producers are never able to see their own programmes under conditions as favourable as those of the viewer at home.

Possibly the most interesting recent development in the design of television receivers has been the introduction of the universal receiver, which works equally well on A.C. and D.C. mains. Such receivers are, of course, the only type which can be used in those areas where only D.C. mains exist, but they also benefit viewers with an A.C. mains source because of their cheapness. The cost of universal receivers is low, because they do not need bulky and expensive mains transformers such as are required in receivers intended exclusively for use on A.C. mains.

A number of technical problems had to be solved in the development of the universal receiver; one of them was that of producing a voltage as high as 6,000 volts for operating the



of the standard sizes (or up to 4 by 3 feet in the case of wall projection) is seen. The diagram illustrates the method used and traces the paths followed by light from picture elements at A and B on the raster to points C and D respectively on the viewing screen.

cathode-ray tube. Several solutions to this problem have been devised; in one, the line-flyback voltage is used as a source of high voltage; and, in another, an R.F. oscillator is used to generate the required high voltage. An attractive feature of this latter system is that the voltage produced, though as high as 6,000, is not dangerous, as the oscillator ceases to work at full efficiency the moment a hand is brought into contact with it.

As a result of research into picture-tube design, modern television receivers give intensely bright images, and there is no need to dim or extinguish normal room lighting in order to enjoy television programmes. Moreover, modern tubes, such as the "aluminized" type, are not subject to ion burn. Ion burn is a serious trouble in older-type tubes, and causes a large circular discoloured patch in the centre of the tube screen, which gets darker as time goes on, and becomes very obvious in light-toned pictures.

Manufacturers appear to be standardizing on tubes of 9, 12 and 15 inches in diameter, and giving pictures approximately 8 by 6 inches, 10 by 8 inches and 12 by 9 inches respectively. There are, however, much smaller tubes, approx-

imately 2½ inches in diameter, capable of producing an intensely bright picture, which can be projected on a screen to cover an area of 3 feet by 4 feet; projection-type receivers embodying such tubes are now beginning to appear on the market.

Research on television aerials has mainly been directed towards reduction of dimensions whilst keeping efficiency high, and manufacturers have marketed a number of aerials, such as the inverted-V type, which are suitable and small enough to be placed in the loft space beneath the roof of an average house. For flat-dwellers, with no loft space, and who cannot have an outdoor aerial, a number of television aerials suitable for use indoors have been produced.

In the struggle to reduce the prices of television receivers, a number of manufacturers have introduced models of reduced sensitivity. These may have, for example, two stages of amplification less than the standard models, and the price is correspondingly lower, but nevertheless the sensitivity is more than adequate to give excellent pictures and sound reproduction up to, say, 10 miles from the transmitter. For reception at greater distances an additional unit containing the necessary valves is attached to the receiver. Standard models can usually give satisfactory results to the limit of the television service area, up to, say, 50 miles radius of the transmitter. Difficulty is often experienced in obtaining reliable reception at distances greater than this, but the addition of one of these R.F. units containing additional amplifying stages may give a worthwhile improvement in reception.

At least one television manufacturer has produced an extension viewing unit, which may be regarded as the television equivalent of the extension loudspeaker, commonly used with sound receivers. The viewing unit contains a cathode-ray tube and a loudspeaker, and is designed to be connected to a television receiver by means of a cable, to give pictures and sound reproduction in a room remote from the receiver. Unfortunately, the design of an extension unit is by no means as simple as that of an extension loudspeaker. In addition to the picture tube and loudspeaker, the unit must contain quite an amount of equipment, including several valves, and the cost of the unit is necessarily rather high, usually about half the cost of a complete television receiver.

17. TELEVISION IN OTHER LANDS

ONLY two nations in the world have daily television programmes on any scale—Great Britain and the United States of America. France is transmitting television daily, but has very little organized programme output, broadcasting mainly films, and short, unambitious studio entertainments. Outside broadcasts by television are only at a beginning in France. The viewing audience is still small, and television set production is only just beginning to be stepped up. There are two transmitters, one working on 455-line definition and the other on 819-line.

Of West European countries, Denmark and Holland are probably nearer to instituting a full-scale daily television service than the other countries. A great deal of advanced experimental transmission has gone on in these two countries, and when they get a national television service it is likely to rank with the best in the world. In Sweden, Italy and Germany television is being experimented on, and services are being planned.

Australia and Canada have taken keen interest in the British and American systems of television, and both countries are buying television transmission equipment from Britain, as well as from America. The first full-programme service stations in Australia and Canada are likely to be on the air during 1951.

In India and South Africa, television is still at the experimental and discussion stage; the great distances in these continents are a considerable problem of television communications.

If the wave of interest in television continues to rise in America, something like ten million television sets will have been sold before the end of 1951. Television stations, often small-powered to serve only very local areas, have been raised quickly, and there are now over a hundred stations sending out programmes—often films—either for a few hours

a day, or all day and most of the night! The American definition standard is 525-lines, and advanced experiments have been made both in higher definition to 1,000-lines and in colour television; but the latter is not a "consumer" service in the United States yet.

Excepting about half a dozen high-spot programmes, richly sponsored by advertisers, American television has neither the consistent programme output nor the variety of features to be found in the British programmes. Finding sponsors willing to put in the great sums of money which good television production needs has become a basic problem of development in the United States. More adventurous in outdoor television broadcasts, the United States nevertheless appears to whittle away the technical advances it has made in this sphere on stunts, rather than on a regular service of worthwhile and important outside broadcasts.

The great television dilemma on this side of the Atlantic remains the search for a standardized picture, so that exchange of television programmes may become possible between the Western European countries.

Technically it is now possible to pass an Alexandra Palace transmission across the Channel to France—and vice versa. Given equipment to form cross-country links, it would then be possible to exchange programmes with other countries on the Continent. Our 405-line definition television, however, cannot be relayed by the various continental television systems which are being planned on 455, 567, 625, and 819-line definition. Nor can our 405-system relay to us pictures from any system having a different definition.

During 1950 the International Consultative Committee on Radio Communications visited Britain, the United States, and European countries, to try and find some agreement on international standards for television pictures. The search for an agreement continues.

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