THE YEAR THAT MADE THE DAY

THE CROWNING

THE YEAR THAT MADE THE DAY

how the BBC planned and prepared the Coronation day broadcasts

THE BRITISH BROADCASTING CORPORATION
BROADCASTING HOUSE
LONDON, W.1

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FOREWORD

BY SIR IAN JACOB, K.B.E., C.B., DIRECTOR-GENERAL OF THE BBC

THE second of June 1953, the day on which Her Majesty Queen Elizabeth II was crowned, is one that none of us will ever forget. Millions of people all over the world were able to participate in the ceremonies and rejoicings of that day in London because of the services of the British Broadcasting Corporation. I think it will interest them to read this short account of the planning and preparation that enabled these services to achieve an outstanding success in an operation unique for scale and complexity in the whole history of broadcasting.

GARTER PRINCIPAL KING AT ARMS PROCLAIMING THE CORONATION DAY.
ON HIS LEFT STANDS THE EARL MARSHAL

CHAPTER I

THE PLANNING

On 7 June 1952 Garter Principal King at Arms proclaimed from a balcony at St. James's Palace that Her Majesty Queen Elizabeth II would be crowned in Westminster Abbey on Tuesday 2 June 1953. This gave almost exactly a year in which to plan and prepare the biggest outside broadcast in the history of the BBC.

SOUND RADIO

The task of sound radio was clear enough. It was to aim at giving a full account of the Coronation Service in Westminster Abbey, and of the processions, culminating in the main procession from the Abbey after the Service. In the planning stage, however, it was the provision of technical facilities for the many different language broadcasts that formed the major preoccupation of sound radio. In planning the operation, the world-wide interest in the Coronation had to be taken into account, together with the numerous requests for the BBC to provide facilities to enable the programmes to be heard abroad. The interests of the Commonwealth, not only in the ceremony but in its broadcast coverage, were given first consideration in the many discussions which took place before the day.

Shortly after the second Commonwealth Broadcasting Conference, held in the summer of 1952, had been concluded, the Australian Broadcasting Commission and the Canadian Broadcasting Corporation accepted invitations to send commentators to join the sound team which the BBC was assembling. The West Indies, too, had their representative in the team, and the descriptions of London's pageantry given by Willy Richardson, Captain W. E. S. Briggs of CBC, and Talbot Duckmanton of ABC, played a memorable part in the long day's broadcast.

The broadcasts were given in forty-one languages besides English. They were Afrikaans, Albanian, Arabic, Bengali, Bulgarian, Burmese, Cantonese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hebrew, Hindi, Hungarian, Indonesian, Italian, Japanese, Kuoyu, Malay, Maltese, Marathi, Norwegian, Persian, Polish, Portuguese, Rumanian, Russian, Serbo-Croat, Sinhalese, Slovak, Slovene, Spanish, Swedish, Tamil, Thai, Turkish, Urdu, and Vietnamese.

It was decided early in the planning that the best method of avoiding

confusion would be to segregate the various sound programmes into five main categories :—

1. THE MAIN PROGRAMME IN ENGLISH
2. THE BBC EUROPEAN SERVICES
3. THE BBC OVERSEAS SERVICES
4. VISITING COMMENTATORS FROM EUROPEAN COUNTRIES
5. VISITING COMMENTATORS FROM COUNTRIES OUTSIDE EUROPE

Every commentator, and the equipment directly associated with him, was allocated to one or other of these networks so that there would be no difficulty in routing their outputs to the proper destinations.

The planning of adequate arrangements for broadcasting the Coronation Service from Westminster Abbey was a major problem in itself, since a large number of microphones was necessary, most of which would have to be inconspicuous if not concealed altogether. Accommodation was extremely limited, but permission was obtained for two British commentators and one French commentator to be present in the Triforium to set the scene and to help listeners to follow the proceedings. As soon as the routes of the processions were known, commentary positions were chosen. The approximate number of commentators who would be at each point was decided and the engineering requirements at the various points were then worked out. The map on page 16 shows the location of the various commentary points.

Apart from the Abbey itself, there were nine for the main programme in English : at the inner court of Buckingham Palace, the Victoria Memorial outside the Palace, King Charles's Statue (Whitehall), the Bazalgette Memorial on the Victoria Embankment, the Middlesex Guildhall, St. James's Palace, Stanhope Gate Hyde Park, the Marble Arch, and the BBC studio in the Criterion Theatre, Piccadilly Circus. Of these points, all were to be used by one or other of the Overseas networks except those at St. James's Palace and Marble Arch and Bazalgette Memorial : there would also be Overseas programme commentators at a Stand No. 34 erected for public use outside the Palace, at Trafalgar Square : at the Middlesex Guildhall; and at the Colonial Office site. The total number of commentary points planned was ninety-five.

Complex arrangements had to be worked out for routing the various programmes to their correct destinations. These necessitated close co-operation with the engineers of the General Post Office who provided many circuits to European and Overseas countries. The G.P.O. also provided the circuits linking together the various commentary and control positions and a large

number of microphone circuits. In all, they provided some 1,300 circuits additional to those normally used by the BBC.

Detailed arrangements were drawn up for recording the complete day's programmes for the archives. It was planned to make separate recordings so as to enable the Coronation Service to be re-broadcast at times suitable for local listening in different parts of the world and also to provide commentaries in many languages for subsequent re-broadcasting.

TELEVISION

While these plans were being laid, Television, too, had its own problems in preparing for the biggest 'outside broadcast' in the history of the service.

The main anxiety was to secure permission for live television cameras to be placed inside the Abbey during the Service. This at first might be regarded as one further intrusion into this most privileged area, which had already over the years been invaded by Press reporters, still photographers, film cameras, and sound broadcasters. Nevertheless, the virtue of having these Abbey cameras was that they could give to millions the chance to participate in the Service by eye as well as by ear while it was actually taking place. It was this very virtue of simultaneous participation which caused such earnest consideration.

Already it was realized that the long Service, lasting over two-and-a-half hours, was likely to be a very considerable strain on those taking part. Would this strain be increased by the knowledge that television cameras and microphones were transmitting each word and movement beyond recall? If some incident of the Service failed to go according to plan, might not the spell be broken for the millions watching intently in their homes? Might there, even, be something

THE CAMERA POSITION ABOVE THE WEST DOOR OF WESTMINSTER ABBEY

THE CAMERA POSITION ON THE CHOIR SCREEN

unseemly in the chance that a viewer could watch this solemn and significant Service with a cup of tea at his elbow? These were very real doubts and it took some time to dispel them. Once they were dispelled, those in authority—the Earl Marshal, the Archbishop of Canterbury, the Minister of Works—took untold trouble to ensure the success of the television broadcast.

It was essential to make the Abbey cameras unobtrusive and to see that they occupied the smallest possible space. One most important camera was eventually placed amongst the orchestra on the choir screen. The floor boards had to be removed to make room for the feet of the cameraman, whose back was menaced by a ring of steel sharp 'cello pegs. The provision of this space was a generous concession from Dr. (now Sir William) McKie, Director of Music, and his orchestra. It contributed enormously towards the success of the broadcast.

The problem of covering the outside processions was much simpler, though it called for a great deal of patient and painstaking work by the Ministry of Works and the General Post Office. Never before had so complicated a network of vision and sound circuits been needed. The camera positions had to be chosen so as to give the most effective coverage to the escorting processions, which were made up of marching units drawn from the four corners of the Commonwealth, as well as to closed-carriage processions carrying members of the Royal Family and distinguished Commonwealth personalities.

The route of the great Return Procession was over five miles long. The aim might have been to space single cameras along this route—so as to see the Queen and the Duke of Edinburgh as often as possible. The alternative was to concentrate cameras at a spot half way along the route, so that viewers could watch the procession in its entirety as it approached Marble Arch, and then again as it neared Buckingham Palace. It seemed likely that this procession with its 11,000 Servicemen and women, drawn from all over the Commonwealth, would provide so splendid and significant an escort for the newly crowned Queen that in the end it was decided to ensure a full length and consecutive

view. The final plan therefore was to group cameras outside Buckingham Palace, outside Westminster Abbey, on the Embankment (for the Queen's procession to the Abbey) and in Hyde Park (for a first and complete view of the two-mile-long return procession).

Great interest was shown by European countries operating television services, and the BBC was asked to make its television programmes available to these countries on Coronation Day. It had already been proved in July 1952 that it was possible for the BBC Television Service to take pictures from the French Television Service in Paris ; at that time the technical problems of conveying a television signal from one country to the other and of overcoming the difference in the television standards of the two countries were successfully solved by the BBC. It was decided to carry out tests to see whether this process could be reversed.

Canada and the U.S.A., also, expressed great interest, and plans were made to send to these countries in the shortest possible time television recordings on film of the Coronation Day programmes for broadcasting from their television stations. BBC telerecordings of the complete day's programmes were planned for historical purposes, and arrangements were made to produce an edited version for presentation to viewers in the evening for the benefit of those who had not seen the programme during the day.

COMMONWEALTH DETACHMENTS PASS ONE OF THE CAMERAS IN HYDE PARK

CHAPTER II

THE ORGANIZATION . . . IN SOUND

ONCE the general plans were laid, three or four months were left for detailed preparations. The task had two aspects. First it was necessary to find out in exact detail what was going to happen; that is to say, what would be the precise timings, the sequence of events, which personalities would be taking part, and many similar details. Then it was necessary to devise the best method of following events during the whole day, and reporting them through the skill of commentators.

The selection of commentators for the domestic sound broadcast had to be made, and, in addition to the three Commonwealth representatives already mentioned, it was obviously desirable to have a fair representation of the U.K. itself in the team. As a standby arrangement, every commentator in the Home sound team also had as his 'number two' an experienced broadcaster.

Complete recordings of the 1937 Coronation broadcast and its technical set-up were available for study, but otherwise the collecting of information about the arrangements made then was largely a matter of reading all that had been written about it and of questioning a number of very busy people.

AN EARLY MEETING OF THE SOUND BROADCASTING TEAM IN BROADCASTING HOUSE

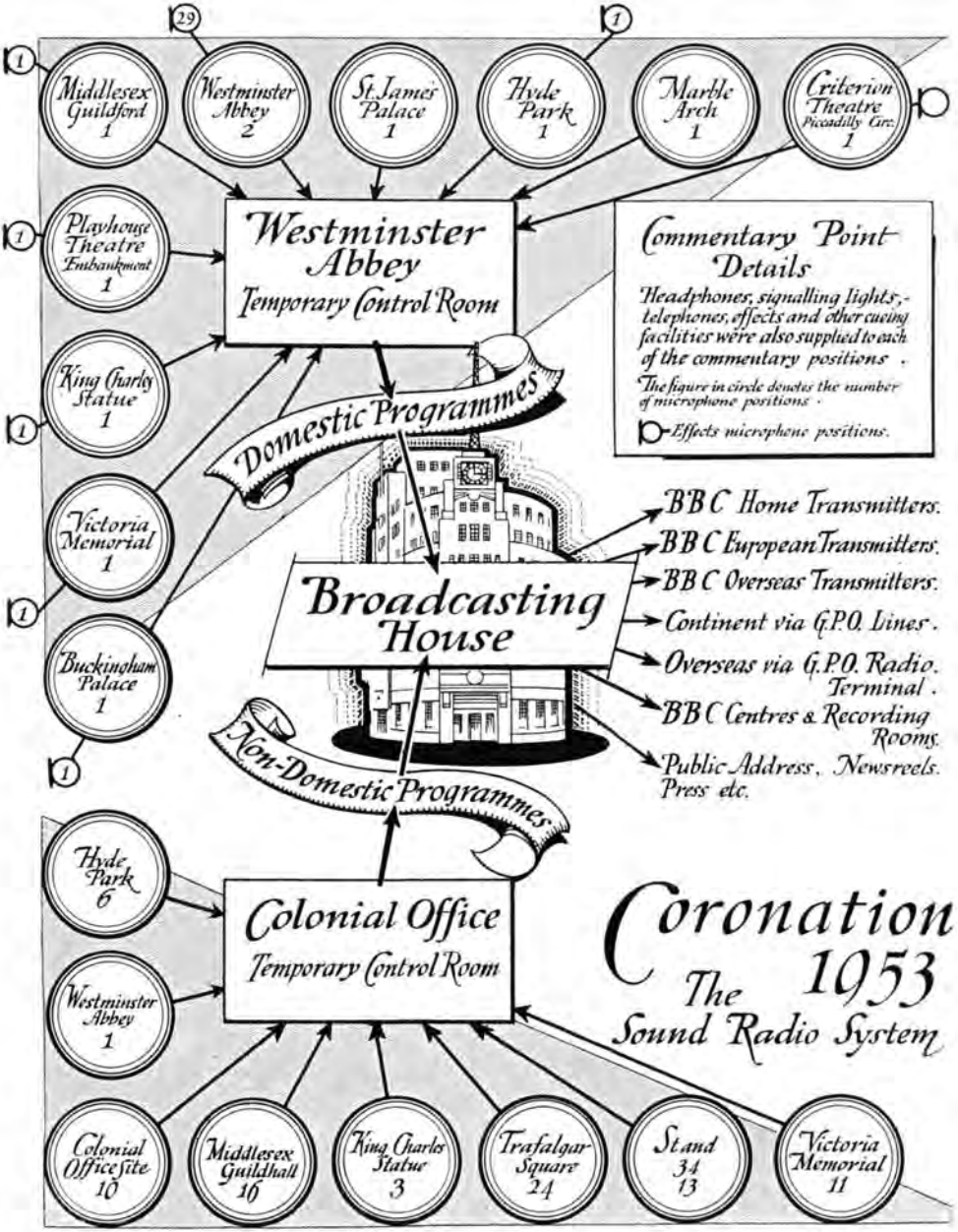
FOREIGN COMMENTATORS IN THEIR POSITIONS AT MIDDLESEX GUILDHALL

There was gradually built up a store of miscellaneous information which ranged from the length of a Guardsman's stride to the right pronunciation of 'Pursuivant'. For all commentators, including visitors from abroad, a folder was then prepared giving every possible piece of information that could be gathered. The necessity for some such guidance had been made apparent at a previous royal occasion when one visiting commentator reported that the Yeomen of the Guard were 'marching into sight carrying pikes and halibuts!'

As the day drew nearer, world-wide Press interest in the broadcasts increased and it became part of the BBC's job also to give publicity to its plans. Newspapers in places as far away as Fiji and as near as Paris were kept up to date with the latest news of the Broadcasting plans for the Coronation.

Parallel with this ran the administrative problems, common to every organization taking part in the Coronation. Additional staff, office facilities, furniture, typewriters, telephones, fire appliances, decorations—all had to be found, and later, for the day itself, there remained the less formal but equally necessary problems of catering.

The Engineering Division of the BBC was responsible for the organization of the complex technical networks needed. This was a formidable task even with past experience of the 1937 Coronation arrangements and of many other


Middlesex Guildford 1
Westminster Abbey 2
St James' Palace 1
Hyde Park 1
Marble Arch 1
Criterion Theatre Piccadilly Circ. 1
Playhouse Theatre Embankment 1
King Charles Statue 1
Victoria Memorial 1
Buckingham Palace 1
Westminster Abbey Temporary Control Room
Commentary Point Details
Headphones, signalling lights, telephones, effects and other cueing facilities were also supplied to each of the commentary positions.
The figure in circle denotes the number of microphone positions.
Effects microphone positions.
Domestic Programmes
Broadcasting House
BBC Home Transmitters.
BBC European Transmitters.
BBC Overseas Transmitters.
Continent via G.P.O. Lines.
Overseas via G.P.O. Radio Terminal.
BBC Centres & Recording Rooms.
Public Address, Newsreels, Press etc.
Non-Domestic Programmes
Hyde Park 6
Westminster Abbey 1
Colonial Office Temporary Control Room
Colonial Office site 10
Middlesex Guildhall 16
King Charles Statue 3
Trafalgar Square 24
Strand 34 13
Victoria Memorial 11
Coronation 1953
The Sound Radio System

large-scale outside broadcasts. In addition to the arrangements for broadcasting the Coronation Ceremony from Westminster Abbey, facilities had to be provided along the processional route for about one hundred commentators at eleven different sites.

At Buckingham Palace, which was the starting point for most of the processions to the Abbey, there were three sites, one in the inner courtyard of the Palace itself, another on the Victoria Memorial, and a third on the Ministry of Works stand No. 34 near the Victoria Memorial. Between them these three sites had a total of twenty-six commentators' positions. The next point along the route was Trafalgar Square where there were twenty-eight positions. Most of these were on the south side of Nelson's Column and the rest on an island at the top of Whitehall. There was one other site along the route to the Abbey, on the Victoria Embankment, where there was one commentary position.

The scene as the processions arrived at and left the Abbey was described from twenty-seven commentators' positions divided between the Middlesex Guildhall and the neighbouring site of the new Colonial Office. These positions commanded an excellent view of the approach to the Abbey, and of the Annexe through which the Queen entered and left the Abbey. Inside the Abbey there

THE MICROPHONE POSITION ON TOP OF MARBLE ARCH

AN ENGINEER AT WORK INSIDE THE CANADA GATE CONTROL ROOM

were two commentators' positions, in the Triforium, high up beyond the altar, and a single position in the annexe.

The progress of the State Procession from the Abbey back to Buckingham Palace was covered from the Middlesex Guildhall and Trafalgar Square sites already mentioned; there was a single commentary position at St. James's Palace. Near Stanhope Gate in Hyde Park there were seven positions on a stand facing the East Carriage Drive. The next site was on the top of Marble Arch with one position, and the next in Piccadilly Circus also with one position. On the final stage of the journey, the procession was covered again from the Trafalgar Square, Victoria Memorial, and Buckingham Palace sites.

Each of the eleven sites had a control room associated with it where the local commentaries and the sounds picked up by the 'effects' microphones were blended. There was one in the inner court of Buckingham Palace, one at Canada Gate on the north side of the Victoria Memorial serving the commentators on the Memorial, and one behind Stand 34 on the south side of the Memorial. The control room at Trafalgar Square was on the north side of Nelson's Column, and that for the Bazalgette Memorial site was just across the road at the Playhouse Theatre. Further control rooms were established at St. James's Palace, Stanhope Gate, Marble Arch, and the BBC's Criterion Studio in Piccadilly Circus. For the Abbey and its precincts there were two control rooms, one in the Abbey itself and the other on the new Colonial Office site.

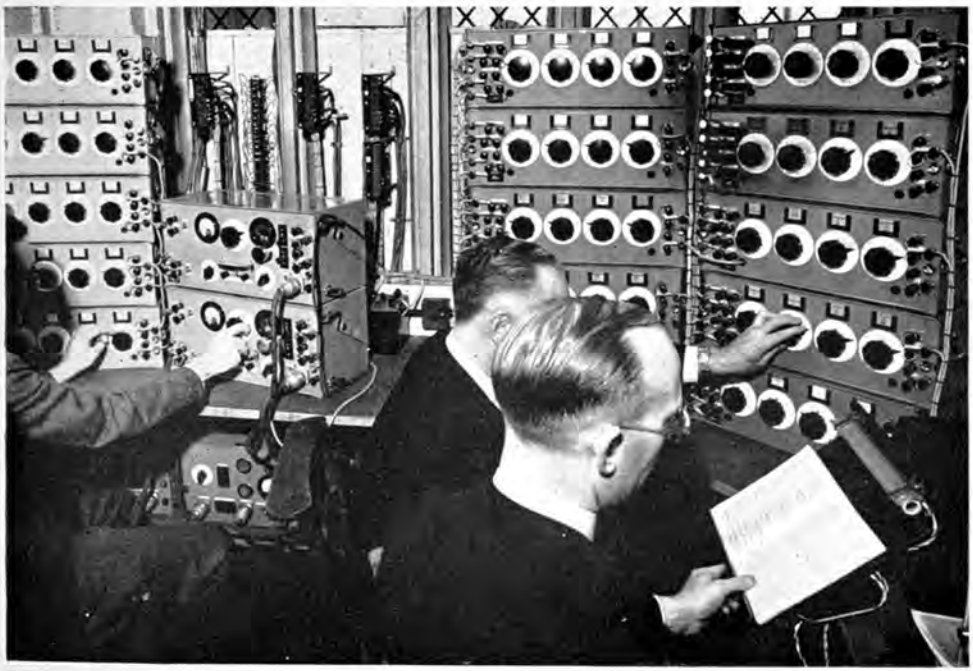
For the five major control rooms, other than the one in the Abbey, temporary wooden buildings were put up to house the BBC equipment and operating staff. These were at Trafalgar Square, the Colonial Office, Canada Gate, Stand 34, and Stanhope Gate.

In Westminster Abbey the Head Verger's office was put at the disposal of the

BBC, and in it was established a control room serving two distinct purposes. One section formed the local control position for all the microphones in the Abbey itself, while the other was a master control point to which were brought contributions from all the commentators working for the domestic sound programme from their various vantage points along the route. From the Abbey, the domestic programme was conveyed to Broadcasting House for distribution to the transmitters over the permanent line network. In the same way, part of the Colonial Office site was used as a master control point for all programmes other than the domestic service. The many outputs from this control room in different languages were fed either to Broadcasting House or to other BBC permanent control rooms in London for distribution to their respective destinations.

Equipment in the Westminster Abbey control room included a bank of ten four-channel mixer units* to which were connected the outputs of the twenty-

* Each of these units permits the outputs of four microphones to be selected individually or blended to make a composite sound picture.



THE BANK OF MIXER UNITS IN THE WESTMINSTER ABBEY CONTROL ROOM

nine microphones installed in different parts of the Abbey to give a complete sound picture of the Coronation Service. These were known as 'ceremony microphones'. This sound picture of the Ceremony, free from any commentary, was made available to commentators of visiting broadcasting organizations; to the BBC Television Service; to BBC Recording rooms; to the Ministry of Works for their Public Address system in official stands along the route, and to the Press and Newsreel companies.

The master control point was equipped with five four-channel mixer units and this dealt with the blended output from the Ceremony microphones, the output from the commentators' microphones in the Triforium and the Annexe, and the domestic service commentaries from the nine control rooms on the processional route. The output from this master position was known as the "domestic programme" and was heard by listeners throughout the United Kingdom and by listeners to the BBC's Overseas Services in English.

THE LARGEST OF THE TEMPORARY CONTROL ROOMS ON THE COLONIAL OFFICE SITE NEARING COMPLETION

ENGINEERS AT CONTROL POSITIONS TEMPORARILY INSTALLED AT THE PLAYHOUSE THEATRE

The Control room built on the Colonial Office site for the different languages was the largest of the temporary control rooms built specially for Coronation Day. It contained a total of twenty-eight control positions handling the output from the twenty-seven commentators' microphones on the Colonial Office site and the adjacent Middlesex Guildhall, together with outputs from the forty-four commentators' microphones at four sites round the processional route at which foreign language commentators were situated, plus the French commentator in the Abbey. The control rooms on the route followed the same general pattern as that on the Colonial Office site. At Trafalgar Square there were twenty-nine control positions, but at each of the other points the control positions were fewer. Thus at the Playhouse Theatre there were two positions, at St. James's Palace only one, at Stanhope Gate seven, at Marble Arch only one, in the inner court of Buckingham Palace one, at Canada Gate thirteen, at Stand 34 fourteen, and at the Criterion Studio two.

Each commentator was provided with a lip microphone of the type designed by engineers of the BBC's Research Department specially for use at Outside

Broadcasts. This is a ribbon microphone which is small in size and intended to be used close to the mouth so that in noisy situations, such as exist at most Outside Broadcasts, extraneous noises are largely excluded. By using this type of microphone, the need for sound-proof commentary boxes was avoided and commentators working for different networks and in different languages were able to sit approximately five feet apart without causing interference to each other.

A circuit from each microphone was run to the corresponding control position in the local control room. Each control position was manned by an engineer dealing only with a particular network programme, and it was his task to control volume and to ensure that local 'effects' sounds were added to the commentary at a suitable level so that the commentator's voice was not drowned.

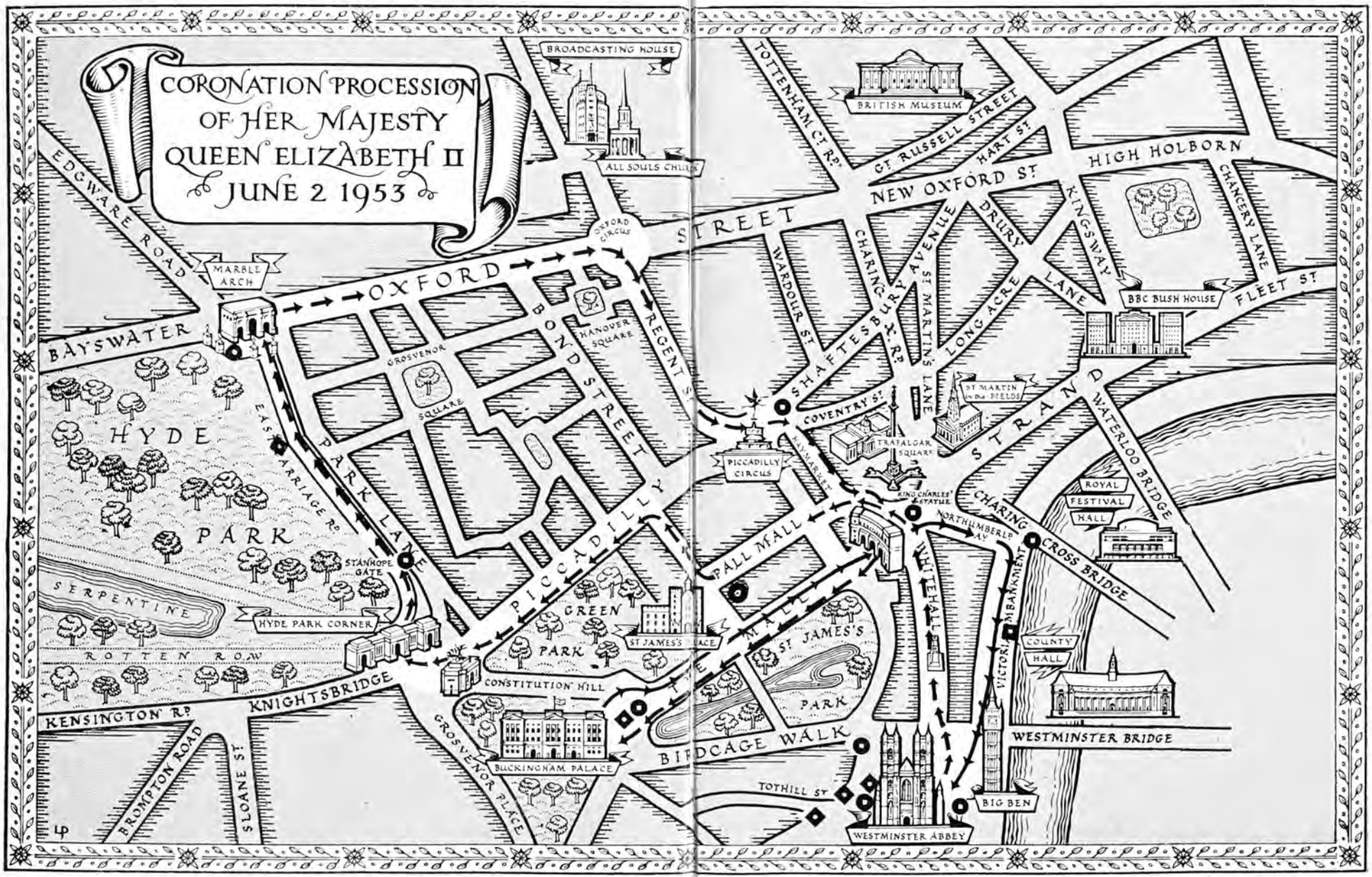
Separate control positions were provided for 'effects', and apart from the Abbey, similar arrangements were made at all sites. These consisted of two amplifiers, one or two mixer units, and a number of moving coil microphones.

LINE TESTING AT TRAFALGAR SQUARE

An output from these amplifiers was fed round the local control room and appeared as an input at the mixer at each control position. Between each control position and its associated commentator's position, red and green signal light circuits and a telephone for communication purposes were installed. The control positions were also in touch by telephone with the master positions at the Abbey and at the Colonial Office site.

A BBC LIP MICROPHONE IN USE

FOREIGN COMMENTATORS ON THE COLONIAL OFFICE SITE



The Route, showing proposed positions of BBC Commentators and Television cameras: BBC Commentator · BBC Television camera · Route from Buckingham Palace · Return Route from Westminster Abbey

STANDBY AND EMERGENCY ARRANGEMENTS

Electronic equipment is, by its nature, liable to develop faults in spite of good design and careful maintenance. Often there is audible or visual warning, but sometimes the failure is sudden. Cable circuits must also be guarded against hazards of tempest and fire to which they are particularly vunerable.

Much thought was given to the provision of adequate emergency arrangements in the form of stand-by equipment and circuits. On such occasions there is a temptation, which has to be firmly resisted, to guard against every conceivable contingency by over-elaborating the stand-by facilities. There is then the danger that the emergency arrangements may become so complicated that they defeat their own ends.

The arrangements adopted included duplicate amplifiers each with its own power unit at each control position so connected that the spare could be brought instantly into use by the touch of a switch. Batteries were provided to operate the amplifiers should the mains power fail. For the domestic pro-

A DISK-RECORDING CHANNEL

gramme, each commentator was provided with a spare microphone already connected to a spare circuit leading to the control position. For the remaining programmes, a spare microphone was provided in the proportion of about one spare for every five in use. For the domestic programme, in addition to the normal arrangements by which the output from each control room was conveyed to the master control position in Westminster Abbey, a separate circuit was run from each control room to a 'shadow' master position in Broadcasting House. At this position, the commentaries were listened to from point to point so that control could be taken over instantly should there be any failure in the normal circuits or at the Abbey. Extra precautions were taken over the circuits connecting the Abbey and Broadcasting House because it was expected that for considerable periods the Ceremony microphones would be the sole means of conveying to the outside world what was taking place inside the Abbey. In addition to the normal line circuit, a spare circuit following a different route was provided and, as a final precaution, a radio transmitter link was established between the roof of the Abbey and Broadcasting House.

SOUND RECORDING ARRANGEMENTS

As the planning of the recording requirements progressed, it quickly became clear that the permanent equipment installed in various BBC centres in London would be totally inadequate to meet the demand. It was decided to augment the normal facilities by bringing to London all available mains-driven transportable recording equipment from the Regions, but not to use battery-operated equipment because of the difficulty and expense of providing spare batteries and charging facilities. The equipment that was still needed, twelve disk-recording channels and twelve magnetic-recording machines, was hired from a commercial firm. The main equipment available on Coronation Day consisted of fifty disk-recording channels and sixteen magnetic-tape recording channels (a channel has two machines so that it is possible to record continuously for any length of time). In addition, fourteen portable magnetic-recording machines were provided for dubbing* and editing recordings made by Foreign commentators on their own portable equipment.

The provision of temporary accommodation for all the additional equipment was another large-scale problem. It was solved by making use of studios, studio-control cubicles and offices. Since these areas were in use for their normal

* To dub means to transfer recorded sound material from one recording to another. It is a process considerably used in making an edited version from several longer recordings.

purposes except on Coronation Day itself, the installation and subsequent removal of the equipment had to be carefully organized to avoid interruption of the broadcasting services. Finding the staff to operate all this equipment was yet another problem, which was solved by bringing in recording engineers from the Regions and members of Specialist Departments with the necessary experience.

DISTRIBUTION OF THE PROGRAMMES

The programmes were routed to their various destinations through the BBC permanent control rooms in London, principally those at Broadcasting House and at Bush House, Aldwych. Programmes radiated by the BBC's own transmitters, that is the domestic programme, the European Services and the Overseas Services, were sent by their normal permanent routes to the appropriate stations. Several broadcasting organizations abroad, both in Europe and elsewhere, expressed their intention of rebroadcasting the BBC's Overseas or European programme wholly or in part. Commentaries in European

AN ENGINEER AND EQUIPMENT ASSOCIATED WITH ONE OF THE MICROPHONE POSITIONS

languages given by commentators from the countries concerned were sent to the G.P.O. Continental Trunks Exchange for onward transmission by line, so that they could be broadcast from transmitters in those countries; those for countries outside Europe went to the G.P.O. Radio Terminal for transmission over radio-telephone circuits.

DESCRIBING THE CEREMONY FROM A TELEVISION SCREEN

On previous occasions some difficulty in following and identifying different languages has been met with when a programme has to pass through several countries on the way to its destination. To overcome this, special recordings were made carrying a short identification announcement, such as 'London Calling Italy', in the language of every country through which the programme would have to pass. These recordings were played continuously on eighteen turntables distributed between three centres in London; they were carried on the circuits prior to transmission, to help engineers at home and abroad in setting up and maintaining correct routings of the circuits. Special recordings were also made for the television sound circuits to the Continent.

Some forty television sets were installed for use by the sound broadcasting services. The most important group of these—eighteen in number—were placed at selected commentary positions at the Colonial Office and Middlesex Guildhall sites. These enabled the commentators to describe in their own languages what went on inside the Abbey as well as to describe the procession as it passed along parts of the route which they could not see. Sound effects from these various points were, of course, made available both for the Commentator to hear and for inclusion in his programme. Other sets were placed at useful positions, for example, in the various sound control rooms and in the places set up by the Catering Dept. for meals at different points on the route so that commentators when not at the microphone could keep a watch on the general progress of events. Talk-back circuits were provided to enable information and instructions to be given from the Abbey control room to all the domestic commentators simultaneously, or to any one of them individually. Similar, though less comprehensive, facilities were provided for the other networks.

CHAPTER III

THE ORGANIZATION . . . IN TELEVISION

To the dossier of Coronation information that the sound broadcasters compiled for their commentators, Television added a picture gallery, where—as the event so fully justified—the Queen of Tonga held pride of place amongst Commonwealth Prime Ministers, the Crown Jewels, and the high dignitaries of Church and State.

With five separate groupings of cameras and commentators, it was necessary to devise some sort of scheme for dividing up the mighty canvas that was to be worked upon almost continuously for six and a half hours. Without this division of responsibilities (and the same problem faced the sound broadcasters), there was the danger of serious omission or of tiresome repetition. This meant frequent meetings to discuss the emphasis at any particular time and place. Thus producers and commentators learnt that the first view of the great Return Procession was to be panoramic and the second view—from outside Buckingham Palace—was to be more detailed, more concerned with individual contingents and personalities than with the general pattern of the procession.

THE TELEVISION TEAM AT A MEETING IN BROADCASTING HOUSE

There was moreover need to decide finally on the course of action during the pause between the end of the Coronation Service and the start of the return procession. Another pause was expected after the Queen had returned to Buckingham Palace and before the Royal Air Force salute. A good deal of anxious thought was given to this problem. Would it be desirable to keep the broadcast going during these two periods or to let the viewer realize that nothing significant was happening and that he could therefore safely pause for reflection or refreshment. In the end it became increasingly clear that these two definite pauses should be made in the viewer's own interest, and commentators and producers were instructed accordingly.

Meanwhile those involved in the broadcast were getting the benefit of the rehearsals held both within the Abbey and along the route. The rehearsals of the outdoor processions were held at dawn and though they largely involved 'token' units the experience proved useful. The Abbey rehearsals on the other hand were both extensive and detailed. The final full rehearsal a few days before the Coronation made an immeasurable difference to the success of the broadcast. Here again the Earl Marshal and the Archbishop of Canterbury made television's task easier by their ready concern for any new television problem and their anxiety to find a solution to it.

DISCUSSING THE TELEVISION BROADCAST AT WESTMINSTER ABBEY

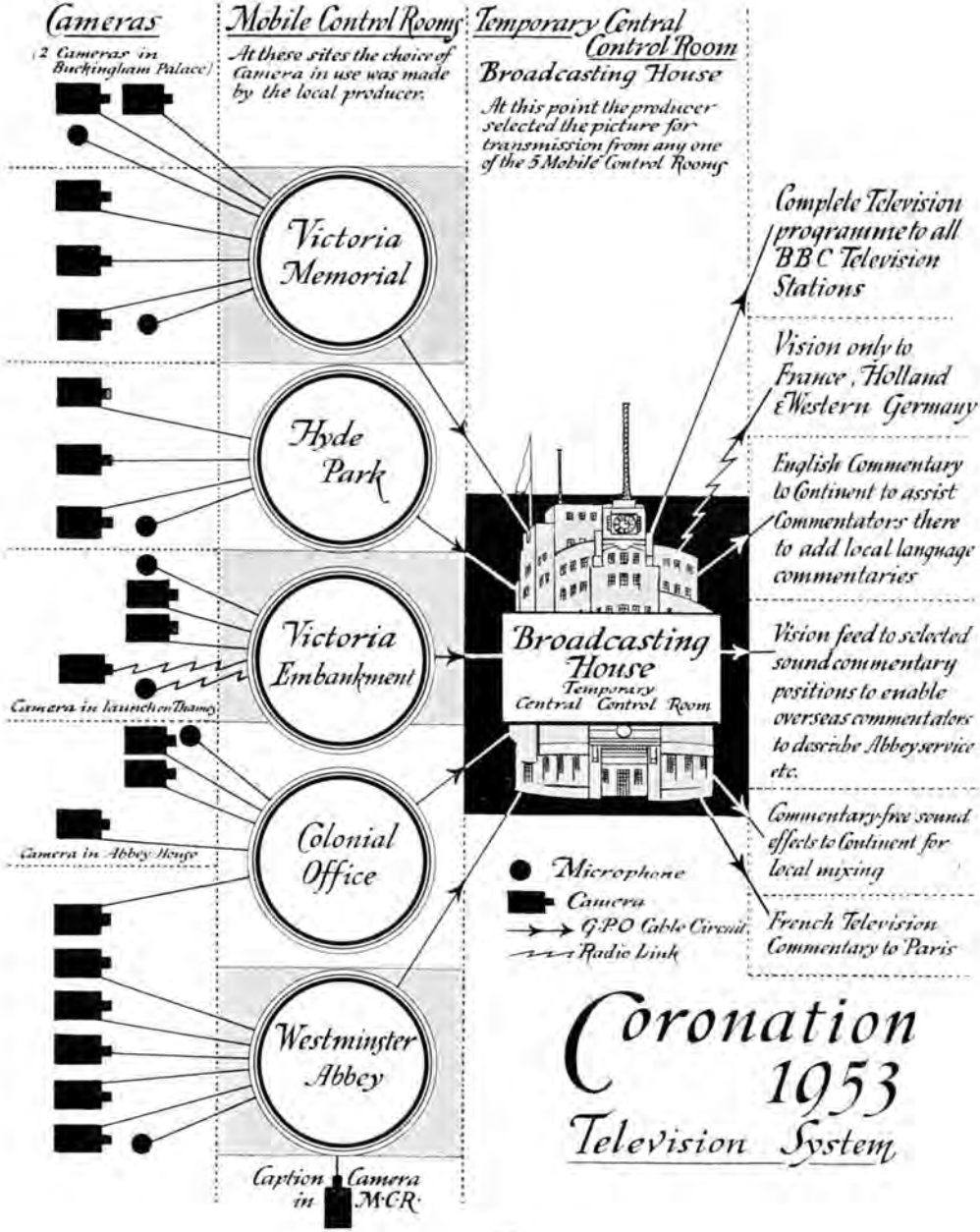
All this preparatory work was going on against a background of growing public interest in the television broadcast. Not only were television sets selling as they had never sold before, but there was news of widespread plans for large-screen showings of the broadcast. One such was in London's Festival Hall, where the three thousand tickets were put on sale one April morning and were all sold within fifty-four minutes.

Technically, the general problem was similar to that of sound broadcasting; it was, of course, to provide the best possible picture of the Coronation Ceremony in Westmin-

A CAMERA ON THE VICTORIA EMBANKMENT

ster Abbey and views of the processions at carefully selected points along the routes. The siting of camera positions was an exceptional problem in itself because the requirements of the Ministry of Works and Abbey officials had to be met, as well as competitive claims for space by sound broadcasting, the Newsreels, Press, and other interests. In the Abbey, the necessity for keeping equipment out of sight made arrangements extremely difficult.

According to plan, the twenty-one cameras used were deployed at the five sites shown on the map on page 33. The processions to the Abbey were covered from three sites at each of which a television mobile control room was set up. One of these was on the Victoria Memorial from which five cameras were operated, three on the Memorial itself, one in the forecourt of Buckingham Palace, and one on the roof of Buckingham Palace. A second mobile control room was on the Victoria Embankment, operating three cameras. One of these was on a launch on the river and was connected with its control room by radio link. Another control room was established in a stand on the Colonial Office site. This was used to control the cameras in the stands built on this site, one camera over the annexe entrance, and another high up on Abbey House at the junction of Victoria Street and Tothill Street.


Cameras
(2 Cameras in Buckingham Palace)
Mobile Control Rooms
At these sites the choice of Camera in use was made by the local producer.
Temporary Central Control Room
Broadcasting House
At this point the producer selected the picture for transmission from any one of the 5 Mobile Control Rooms
Victoria Memorial
Hyde Park
Victoria Embankment
Camera in launch on Thames
Colonial Office
Camera in Abbey House
Westminster Abbey
Caption Camera in M.C.R.
Broadcasting House
Temporary Central Control Room
Complete Television programme to all B.B.C. Television Stations
Vision only to France, Holland & Western Germany
English Commentary to Continent to assist Commentators there to add local language commentaries
Vision feed to selected sound commentary positions to enable overseas commentators to describe Abbey service etc.
Commentary-free sound effects to Continent for local mixing
French Television Commentary to Paris
Microphone
Camera
G.P.O. Cable Circuit
Radio Link
Coronation 1953
Television System

SETTING UP THE MOBILE TELEVISION UNIT IN HYDE PARK

A control room for the all-important Abbey cameras was built just outside the Abbey at the east end. This control room handled five cameras in the Abbey—two in the Triforium, one over the West Door, one on the organ screen facing east and one in the South Transept—and there was one in the control room itself for transmitting a still picture during part of the Communion Service. Finally, a mobile unit was set up in Hyde Park near Grosvenor Gate, from which point three cameras were operated.

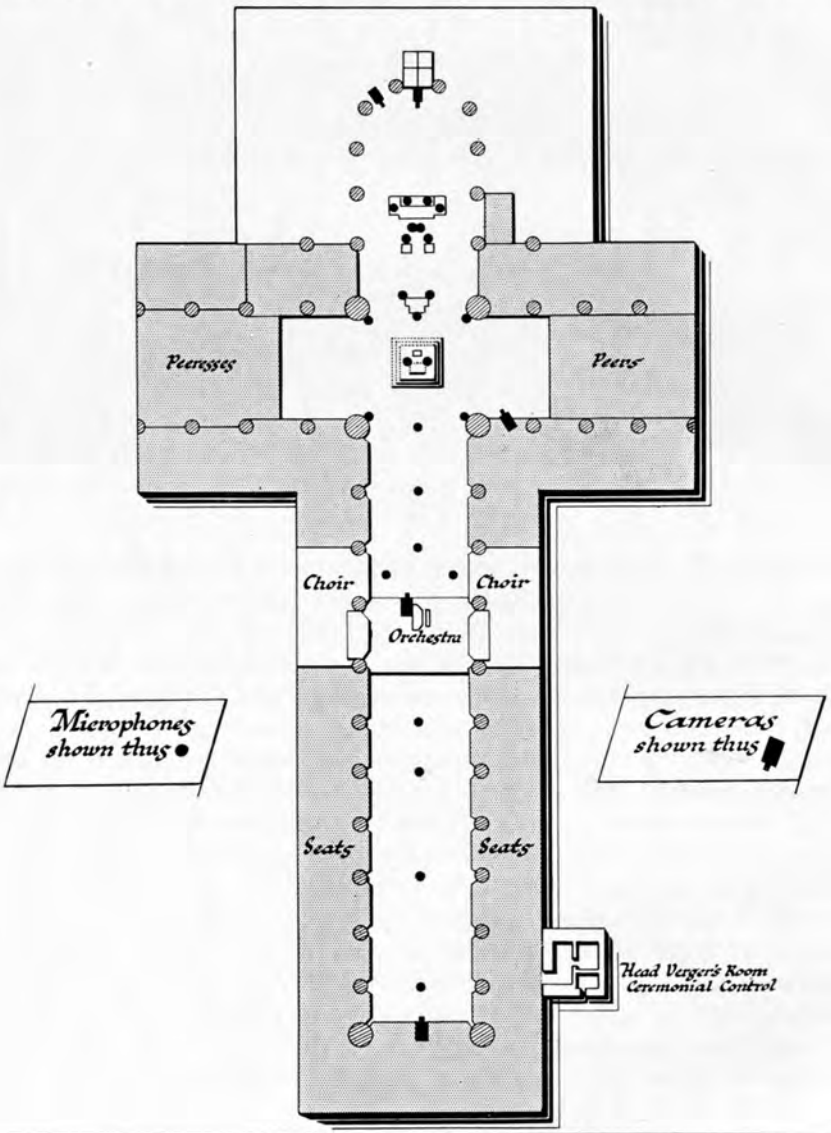
The acquisition of several new 'zoom' lenses shortly before the Coronation enabled one of these to be used at each site. The zoom lens enables an interesting feature in the picture to be magnified and apparently brought closer, this change of magnification being accomplished smoothly and gradually, in contrast to the sudden effect of lens-changing. The BBC has encouraged the development of British zoom lenses over a number of years and camera technique is now reaping the benefit of research and design in this important field. At the Victoria Memorial site another special lens, relatively new to television, and giving very high magnification, was used on a camera facing Buckingham Palace. This was a forty-inch telephoto lens which enabled a close-up view to be obtained of members of the Royal Family during their

THE CROWD, THE COMMENTATORS, AND CAMERAS IN HYDE PARK AWAIT THE PROCESSION

appearances on the balcony about 300 feet away. The use of this lens demands extreme care because any slight vibration, even that caused by a puff of wind, results in a highly exaggerated movement of the image on the screen.

Normally, outside broadcasts which originate in the London area are routed into the distribution network linking television stations throughout the country by way of the central control room at Alexandra Palace; on this occasion, with five main sources to be handled simultaneously, it was necessary to instal a temporary central control room in Broadcasting House. This was chosen as being the most convenient point into which to bring the Post Office lines carrying vision and sound signals from the mobile control rooms. The general plan was that at any one particular site the cameras could be used in turn and the picture from one of them, which ever might be appropriate at the time, transmitted to Broadcasting House. In the central control room at Broadcasting House, there were therefore five pictures available, one from each of the mobile units, and from these was selected the one to be transmitted to the public at any given time. The connecting circuits between the sites were G.P.O. cables of various types. These ran to a total of some twenty-nine miles, which placed a heavy strain on the G.P.O.'s resources.

Microphone & Camera Positions inside Westminster Abbey



The Government ban on the construction of medium-power television transmitters was partially relaxed in October 1952 when the BBC was given permission to instal two temporary low-power transmitters in time for the Coronation. These were designed to cover populous areas not served by the main transmitters and were established at Pontop Pike near Newcastle-on-Tyne and Glencairn near Belfast. A third, sanctioned in December, was installed at Truleigh Hill to improve reception in the Brighton area. At Pontop Pike there was no great difficulty in conveying the programmes to the transmitter because this site houses one of the Post Office's intermediate stations on the television radio link running from Manchester to the Scottish station at Kirk o'Shotts. At Truleigh Hill, which is about 700 feet above sea level, just north of Brighton, the strength of the transmissions from Alexandra Palace is such that they can be received with good quality and re-transmitted by the local low-power transmitter. Glencairn presented a more serious problem, because there is no link between this country and Northern Ireland suitable for carrying television signals. Tests were therefore carried out by the Post Office with direct reception from the high-power transmitter at Kirk o'Shotts, some 130 miles away, using a receiving point outside Belfast. The results were reasonably satisfactory and this method was used to feed the programme to Glencairn.

SPECIAL ARRANGEMENTS

A noticeable improvement in the definition of pictures came from the use of new 'derivative equalizers' developed by the Engineering Research Department of the BBC. These equalizers were produced in sufficient quantity to equip nearly all the cameras in use on 2 June and they provided a simple means of compensating for optical and electrical distortion.

Steps were also taken to prevent 'frame slips' or blank screens which usually occur when switching from one set of cameras to another set at a different site. In the course of a long broadcast such as that of the Coronation, a large number of such interruptions would have been distracting to the viewer, and a new system was evolved by the BBC Engineering Designs Department to overcome this difficulty. The method adopted was to distribute by line from the central control point at Broadcasting House a master frequency to lock the local pulse generators at the various sites. A phasing control in series with the signal fed to each line enabled the pictures from different sources to be kept in phase to an accuracy of a small fraction of one line; it was thus practicable to "cut" from one source to another without any loss of synchronism, that is, without any slipping of the picture.

THE TELEVISION SWITCHING CENTRE AT BROADCASTING HOUSE

TRANSMISSIONS TO THE CONTINENT

The relaying of the Coronation Broadcast in France, Holland, and Western Germany was looked upon by the BBC as a project of great importance, and the most careful preparations and tests were made during the preceding six months. To make this technically possible was no easy matter because between the countries concerned there was no existing connection suitable for conveying television signals. Furthermore, all three countries have television standards which differ from those of Great Britain. However, the experience gained in July 1952 when a temporary television link was established between Paris and London suggested that similar methods might be adopted on a more extensive scale. At that time the problem of converting the French 819-line signals to the British 405-line standard was successfully solved by using the converter equipment developed by the BBC Engineering Research Department. It was thought that the same general principles might be successfully applied in converting the BBC 405-line signal to the 819-line standard used in France, and to the 625-line standard used in Holland and Germany.

Tests extending over a week were carried out in April, and showed that acceptable pictures could be transmitted at least as far as Hamburg by temporary radio links and standards conversion equipment. The plan adopted for 2 June was to convey the vision signals by three radio links in tandem from London to Dover. A further radio link carried them to a point on the French coast near Cap Blanc Nez and, since there was some likelihood of serious fading occurring owing to the transmission path being over water, special precautions were taken to minimize this. The method adopted was a form of 'diversity' reception using, on the French site, two receivers connected to aerials mounted some fifteen feet apart in a vertical plane. It had been found during tests on an experimental link previously set up that when the signal received by one aerial was subject to fading, that of the other was steady ; thus one fading-free signal was always available. From Cap Blanc Nez the signals were conveyed by a further radio link to Mont Cassel in Northern France, and from there to Paris over a radio link provided by the French Post Office. These signals, still at the British 405-line standard, were fed via a 405-line/819-line converter to the

THE TEMPORARY CENTRAL CONTROL ROOM IN BROADCASTING HOUSE

819-line transmitters at Paris and Lille. The French authorities also provided a direct link from Mont Cassel to Lille for the 405-line signals. The Belgian and Dutch Broadcasting Authorities made arrangements to relay the signals across Belgium to Breda, in Holland, where the conversion from 405-line to the 625-line standard was carried out. The output from the converter at Breda was used to supply the Dutch television stations at Lopik and Eindhoven, and was also fed to Germany by a series of radio links as far as Wuppertal where it joined up with the German television network. By this means it was broadcast by all the television stations in the British Zone of Germany namely, Cologne, Langenberg, Hanover, Hamburg, Berlin, Frankfurt, and Weinbeit.

For the sound accompaniment, the whole of the Abbey service and 'effects' from sites along the processional routes were made available by line to the three countries. Also available in Paris was a commentary in French from the Abbey given by a commentator of Radiodiffusion-Télévision Française in the Triforium, who served both the French sound and television services. French commentators were also stationed alongside the British commentators at the Victoria Memorial, Hyde Park, and Colonial Office sites, and they spoke through independent microphones and circuits to a control point established at Broadcasting House and thence by line to Paris. It was not possible to make such elaborate arrangements for Dutch and German broadcasters; in Holland and in Germany, commentators gave their commentaries while watching the pictures on television screens in their own countries. Each commentary was superimposed locally on the sounds of the Abbey service and on the 'effects' from the microphones along the processional route. These Dutch and German commentators had visited London shortly before Coronation Day, and had been thoroughly briefed and made familiar with the route of the Procession.

TELERECORDING

Arrangements were made to record the whole of the television programme for historical purposes. These recordings, lasting some seven hours, were made by a process developed by the BBC in which the picture on a television screen is photographed on to standard 35 mm. cinematograph film. At the same time, excerpts from the programme were recorded, also on 35 mm. film, by the 'suppressed-frame' process recently developed by the Engineering Research Department. This edited recording, lasting nearly one hour, was shown to viewers in the evening television programme.

CHAPTER IV

THE OPERATION

ALL the BBC Home Services and Light Programme transmitters, thirty-seven in all, were joined together for the main Coronation programme, which opened at 5.30 a.m. with a 'Music while you wait' item specially arranged for the crowds lining the route.

Television opened with an hour's test transmission, primarily to enable last-minute adjustments to be made to newly-installed receivers, and the actual programme itself began at 10.15 a.m. The Home Service transmitters closed at one o'clock the next morning, the Light Programme stations at midnight, and the television stations shortly before midnight. That was the schedule within which the day's broadcasting at home was to continue unbroken. The transmitters of the BBC's External Services provided world coverage for the English language programme continuously from 9.30 a.m. to 5.45 p.m. and again from 7.30 p.m. to 10.45 p.m., in parallel with the sequence of foreign language programmes which commenced at 10.15 a.m. and continued until 3.30 a.m. on the morning of 3 June.

'FAMILY FAVOURITES' FROM THE ROUTE

Soon after 5.0 a.m. a body of rather chilled outside broadcasting engineers assembled in the Head Verger's room at the Abbey. Once the final engineering check-up was over the Programme Executive was able to have direct contact with his commentators all along the route. It soon became evident that, apart from the ordeals of commentary, the elements were going to be against the broadcasters, especially at some of the more open positions, where the wind and rain provided an almost overpowering sound effect. By 9.0 a.m. the programme tests had been completed successfully, and at 10.15 a.m. the microphones became 'live' to the world. A key phrase, 'The coach moves!' was included in Jean Metcalfe's commentary from Buckingham Palace a few minutes later—pre-arranged as a signal for the procession marshals in the event of their own communications breaking down. One by one, the commentators

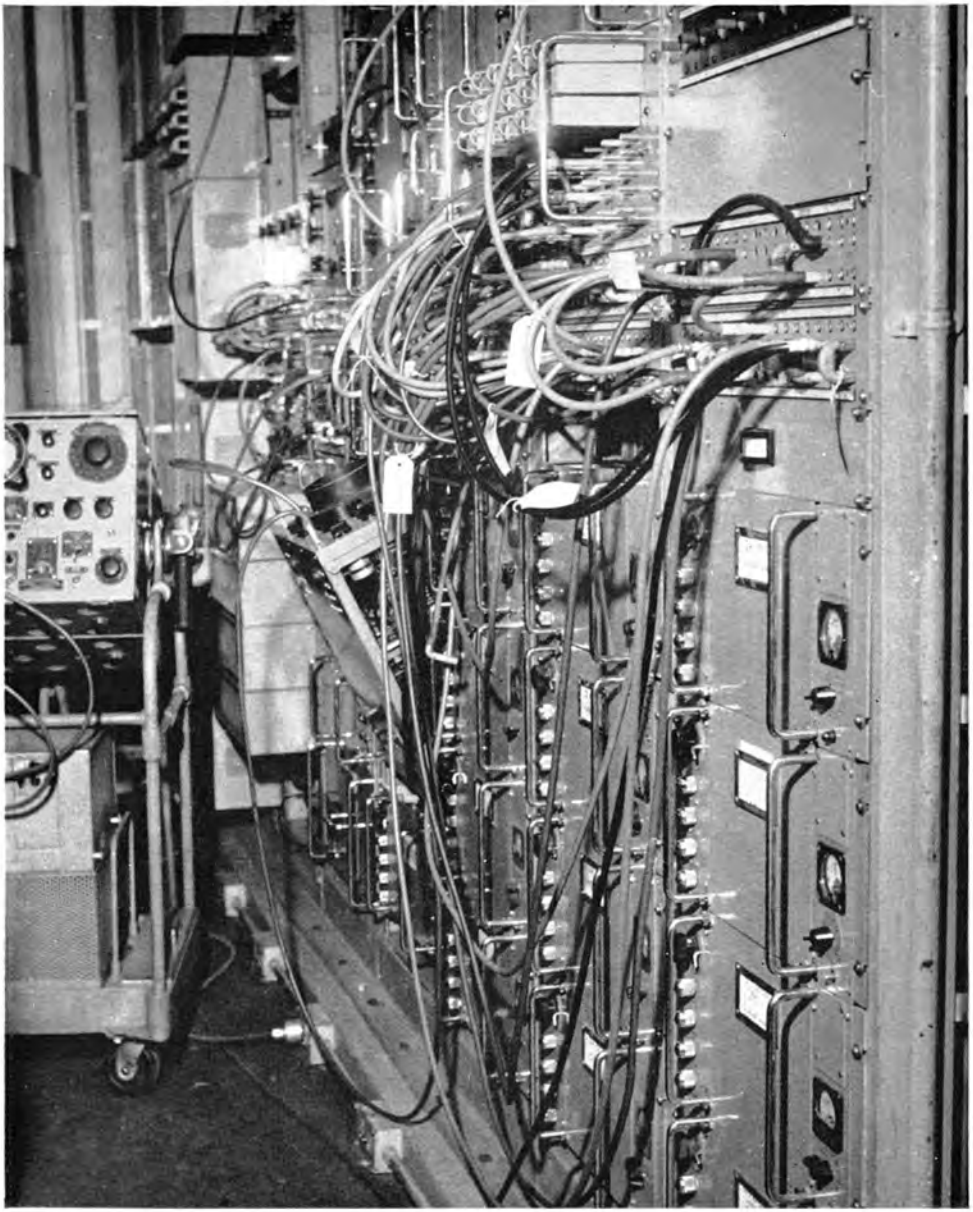
S. J. DE LOTBINIERE, HEAD OF OUTSIDE BROADCASTS (TELEVISION)

took up the story, describing the scene as the coach passed by each point and leaving the more detailed description of the procession itself to Wynford Vaughan Thomas and his colleagues on the Victoria Memorial later in the day. Wynford Vaughan Thomas's cue over to Charles Gardner who was in one of the jet aircraft of the fly past presented one of the most crucial timing problems of the day's sound broadcasts. Gardner's voice was to be brought in precisely two and a half minutes after his aircraft had passed over Biggin Hill. This problem was overcome by listening to Gardner's voice speaking from the aeroplane before he was due to go on the air and then bringing him in at exactly the right moment —'fading-up' is the technical expression. The only 'hitch' occurred some hours later, when Vaughan Thomas was unable to reach the Victoria Memorial for an evening description of the scene outside the Palace after the Queen's broadcast. Unable to get through the crowds to his position, he did the broadcast standing on a box near the control point.

The television team, some 120 strong, arrived at their posts by seven in the morning to prepare, like their sound colleagues, for the broadcast starting at 10.15 a.m. At about five minutes to ten there was a sudden and complete sound failure at Television's switching point in Broadcasting House. The power supply to sound desk had failed. It was a tense moment—particularly for the Programme staff, but a faulty power lead was quickly located and replaced and all was once more well. At ten fifteen precisely Sylvia Peters appeared on the screen to announce the Coronation broadcast 'on this the greatest day in television's history'.

Thereafter those sitting at this central switching point, where pictures were coming in from the five groups of cameras, had the exciting experience of watching from second to second the fulfilment of the

C. F. G. MAX MULLER, HEAD OF OUTSIDE BROADCASTS (SOUND)



THE MAZE OF CABLES THAT FESTOON THE APPARATUS IN THE TELEVISION SWITCHING CENTRE

H.M. QUEEN SALOTE OF TONGA AND H.H. THE SULTAN OF KELANTAN IN HYDE PARK

THE GOLDEN COACH IN CLOSE-UP

plans and preparations of the past twelve months. On 3 March the Earl Marshal had announced to the world that the Queen would be crowned at 'about 12.34'. Some seconds before the realization of this moment of climax a glance at the clock in the switching centre showed 12.33—so that the act of crowning must have been within perhaps thirty seconds of the predicted time. This punctuality of princes was all the more astonishing in that there was no real need for such exactitude. On the other hand it indicates one very good reason why it was possible to make a success of the Coronation broadcast.

Even though events moved according to plan, there were some unexpected pictures which must always linger in the memory—pictures which were complementary to the ordered loveliness of the Abbey service. Early on there were the 'close-ups' of children's faces as they watched the Queen pass on her way to the Abbey. Later there was the Queen of Tonga gaily mounting her open carriage during a tropical rainstorm, and there she was forty minutes later still in an open carriage, and by now using her handkerchief to mop as well as to wave. No wonder her kingdom's other name is the Friendly Isles. There was the glimpse, too, of Sir Winston Churchill as he left the Abbey clearly exulting in the splendours and lavish tradition of the Coronation ceremony. Then there were the pictures of the Queen's children at one of the windows of Buckingham Palace as they watched the home-coming of their mother and father. And so it went on—impression after impression of a day that seemed to draw the Commonwealth together in love and loyalty to its young Queen and in a new sense of purpose for a common future. And as Big Ben struck 9.0 p.m. all the BBC's transmitters joined together once more to bring to listeners, throughout the world, the voice of the Queen herself, broadcasting from Buckingham Palace to set the seal on this great Coronation Day.

FIREWORKS ACROSS THE THAMES

CHAPTER V

THE RECEPTION

An audience survey carried out in Great Britain shows that some eleven-and-three-quarter million adults listened to the sound broadcast of the Coronation and nearly twenty-and-a-half million saw it on television. It is estimated that a further one-and-a-half millions in Europe saw the Coronation relayed by their local television stations.

In order to secure world coverage by the Overseas Services, not only were all available transmitting resources of the BBC used but other broadcasting organizations gave active co-operation. Forecasts had indicated the possible recurrence of a geomagnetic storm on 2 June. The use of these additional transmitting facilities was therefore planned to improve reception in certain countries where direct reception from this country might have been poor. The co-operation of other broadcasting organizations included the release by the 'Voice of America' of a number of transmitters sited in the United Kingdom, which normally relay their programmes, and also of four other short-wave transmitters at Tangier. The Canadian Broadcasting Corporation placed at the BBC's disposal two 100-kW short-wave transmitters until the end of the Abbey Ceremony to relay the BBC's transmissions throughout the American Continent. Reports from North, Central, and South America showed the Canadian relay to have been invaluable because of disturbed reception conditions on the direct circuit from this country. The high-power transmitters of Radio Ceylon were also used to reinforce BBC coverage of South and South-East Asia.

The transmitters of the BBC's external services radiated between them 391 hours of broadcasting during the period concerned. The BBC transmitters in Malaya put out another 33½ hours.

Unfortunately many of the BBC short-wave transmissions to countries east of the Iron Curtain are deliberately jammed with the intention of preventing reception there. Special efforts were made to avoid this interference affecting the wavelengths used for the special Coronation Day programmes. BBC engineers took out of service two days in advance certain frequencies known to be regularly jammed. The idea was to indicate that these frequencies were to be used for the Coronation broadcasts in non-Cominform languages instead of for their usual purpose. This was intended to give the organizations concerned time to react suitably, and on the whole this procedure succeeded.

In spite of the recurrence of the geomagnetic storm which had been forecast, the large number of technical reports received show that with very few excep-

tions the day's programmes were well received throughout the world by one means or another. Reports from far and wide show that the direct transmissions from London had a very large audience, the size of which it is impossible to estimate. The audience was vastly increased by rebroadcasts from National networks and stations in the Commonwealth, the Colonies and many foreign countries. Excluding Europe, the total number of relaying stations was approximately 2,750; there were also rebroadcasts by the British Forces Network stations in Europe, the Middle East Land Forces' transmitters and the Commonwealth Forces' station in Japan. In Europe the total number of relaying stations was over 200, excluding the Forces transmitters.

The BBC had arranged, with the co-operation of the R.A.F., to fly telerecordings—that is to say, recordings on film of the television broadcast—to Canada in three stages during the day. This arrangement—'Operation Pony Express'—functioned perfectly. The film recordings were flown across the Atlantic in three Canberra jet bombers which left London Airport at 1.30, 3.15

LOADING TELERECORDINGS INTO A HELICOPTER AT ALEXANDRA PALACE

THE HELICOPTER LEAVES ALEXANDRA PALACE FOR LONDON AIRPORT

and 6.26 p.m. Each Canberra took a little over five hours to reach its destination and at 4.15 p.m. local time, a full telerecording of the BBC Television Programme was broadcast by television stations in Ottawa, Toronto, and Montreal. Two of the major United States television networks, the N.B.C. and the A.B.C., also took this programme via a television link from Montreal to Buffalo. Another major American network C.B.S. broadcast its own telerecording of the BBC programme, which had been flown across the Atlantic by the Canberras and then flown on to Boston. Later in the day, N.B.C. switched over to their own telerecording which had also been flown over.

It has been estimated that over two million people in Canada and some eighty-five million all over the U.S.A. watched the Coronation on television. Approximately 80,000 feet of cinematograph film were used for BBC telerecordings. Recordings of the sound broadcast required 3,400 12-in. disks and some 250 disks of other sizes, as well as 200 reels (approximately eighty-five miles) of magnetic tape.

The special Coronation number of *Radio Times* sold over nine million copies —not only a record for *Radio Times* but also the largest sale of a weekly

magazine that there has been made.

So much for the facts and figures of the Coronation broadcasts.

Only the reactions of those at the receiving end remain to be told and to close this chapter a selection of some of the many telegrams and messages received by the BBC is reproduced :

R.T.F., Paris, 11.25; 2.6.53

VERY URGENT QUALITY IMAGE PASSABLE DEPARTURE FROM BUCKINGHAM PALACE EXCELLENT FROM 10.30 STOP SOUND PERFECT STOP PUBLIC CROWDING ROUND PUBLIC RECEIVING SETS AND CINEMA HALLS FULL STOP REACTIONS ENTHUSIASTIC STOP BRAVO.

Netherlands Television Foundation, HILVERSUM, 12.46; 2.6.53

ON BEHALF OF THE DUTCH TELEVISION VIEWERS WHO WERE ABLE TO SEE THE HISTORICAL EVENTS IN LONDON ON THE SCREEN OF THEIR TELEVISION SETS THE NETHERLANDS TELEVISION FOUNDATION THANKS YOU FOR THIS POSSIBILITY WE ARE DEEPLY IMPRESSED BY THE CORONATION OF YOUR YOUNG AND BELOVED QUEEN ELIZABETH THE SECOND STOP MAY HER REIGN BE MOST BLESSED FOR THE BRITISH COMMONWEALTH AND MAY HER REIGN CONTRIBUTE TO THE PROTECTION OF THE FREEDOM OF THE WORLD STOP GOD SAVE THE QUEEN.

KAMPALA, Uganda

H.M. Queen's speech and Coronation Day programme four plus solid. Congratulations superb technical arrangements. I went down myself to Government House to put the Queen on for the Governor and his guests, and it was outstandingly good. The following day's repeat of the Queen's speech was picked up on 21470 kc/s and again results were outstanding.

SUVA, Fiji Islands

Abbey ceremony unheard direct or via Singapore. Programme received fairly well via New Zealand and Australia.

N.W.D.R., HAMBURG, 20.16; 2.6.53

AT END OF TELEVISION RELAY OF CORONATION EXPRESS MY DELIGHT AT SUCCESS OF COVERAGE AND PROFOUND THANKS OF ALL VIEWERS WHO HAVE RECEIVED THESE TRANSMISSIONS FROM OUR SENDERS AT HAMBURG, HANOVER, COLOGNE, LANGENBURG, FRANKFURT, BADENBADEN AND BERLIN STOP ENTHUSIASM IS UNIVERSAL STOP RECEPTION WAS UNEXCEPTIONABLE.

From a Petty Officer on board the British submarine *Andrew* which picked up the Coronation broadcasts during her 2,500 mile underwater Atlantic crossing.

'My biggest thrill was being awakened one morning by a fanfare of trumpets. I couldn't make out what it was at first. Then I realized we were hearing the Coronation broadcast from the Abbey.'

SYDNEY, New South Wales

Coronation ceremony reception fair improving to good approximately 1300 G.M.T. and thereafter. Service completely intelligible but music marred continuous surge. Long Live Queen and Coronation across World reception good. H.M. Queen, Churchill Good.

B.F.E.B.S., MALAYA

Abbey Service absolutely perfect reception, every cough and footstep, every emotional break in commentators voice faultless relayed RadMalaya wise English medium-wave stations Penang, Kuala Lumpur, Malacca and short wave from all three covering rural areas similarly carried our Malaya and Chinese.

COLOMBO, Ceylon

Reception of Abbey Ceremony on 17715 kc/s good.

Pictures from the Television Screen . . . . .

IN FRANCE

IN GERMANY

IN HOLLAND

The quality of reception on the Continent is shown by these photographs taken off television receivers during Coronation Day.

UPOTO LISALA, Belgian Congo

This is to report the whole of the broadcast in connection with the Coronation of H.M. Queen Elizabeth II on Tuesday, 2 June was clearly heard by us. While signals were received well on all wavebands the best results were obtained in the morning on 31 metres, in the afternoon on 25 metres and in the evening on 19 metres. The usual mid-day (local time) fading was not so noticeable as usual and did not prevent good reception.

PUERTO RICO, West Indies

We heard your wonderful broadcast of the Coronation and also Long live the Queen on the 2nd and the broadcast on the 3rd of Coronation celebrations in various parts of the Empire. They came over very clearly over short wave here in Mayaguez and we were thrilled by it all, especially to hear the Queen's speech as clearly as if she had been right in the room speaking to us.

R.A.I. Televisione Italiana, MILAN, 13.10

HAPPY TO INFORM YOU CORONATION KINESCOPE PRESENTLY ON TRANSMISSION MEET GREATEST INTEREST VIEWERS MILAN TURIN AND NEIGHBOURHOOD STOP EVENTS VARIOUS PHASES DEEPLY IMPRESSED AND RAISED GREATEST ADMIRATION FOR CEREMONY ITSELF AND EFFICIENCY OF TELEVISION IN REPRODUCING WORLD WIDE INTERESTING EVENT STOP HEARTILY THANKING YOU AGAIN FOR PROMPTLY DESPATCHING THE FILM AND FOR ASSISTANCE GIVEN WE CONVEY OUR WARMEST AND SINCEREST CONGRATULATION FOR SPLENDID RESULTS ACHIEVED.

SAO PAULO, Brazil

'I would like to mention that reception here was marvellously clear on the special wavelengths.' (This listener enclosed a copy of a Sao Paulo newspaper, published at 2.30 p.m. (local time) on 2 June, on the front page of which were four radio photos of the Coronation taken off the TV screen.)

Radio N.H.K., TOKYO, Japan

SPLENDID RECEPTION MANY THANKS GOD SAVE THE QUEEN.

FAYID, Egypt

Whole Coronation programme rebroadcast very successfully. Frequencies used 09.15 to 10.15 G.M.T. 17790 kc/s, 10.15 to 10.45 G.M.T. 11945 kc/s, 10.45-14.00 G.M.T. 21470 kc/s, 14.00 to 20.15 G.M.T. 15140 kc/s.

KINGSTON, Jamaica

We did actually use the transmission from Canada during part of the time of the Coronation broadcast and found the reception from there very good.

Koskiluoma Yleisradio, HELSINKI, 4.6.53

TRANSMISSION WAS SUCCESS MUSIC LINE HOWEVER (ONLY) IN FAIRLY GOOD CONDITION TELEPHONE CONNECTION BROKE DURING RECORDING BUT BOTH PROGRAMMES CAME THROUGH WITHOUT DISTURBANCES (BY RADIO) STOP MANY THANKS FOR YOUR EXCELLENT ASSISTANCE.

British Commonwealth Forces Station, SEOUL, Korea

'Crown Radio' relayed using B.F.E.B.S. 15435 kc/s 09.15-12.15 and 11880 kc/s from 16.30. On 3 June relayed Queen via B.F.E.B.S. 15435 kc/s reception. excellent.

NEW YORK, U.S.A.

Here BBC special Coronation Abbey Ceremony 10.15-10.45 G.M.T. good signal on 15310 kc/s fed to all networks.

HAMILTON, Bermuda

Reception Abbey Ceremony excellent—then fair. Almost all relayed.

The Commentators

in the

Sound Broadcasting

Team . . .

JOHN SNAGGE

WYNFORD VAUGHAN THOMAS

HOWARD MARSHALL

TALBOT DUCKMANTON

CAPTAIN W. E. S. BRIGGS, R.C.N.

WILLY RICHARDSON

AUDREY RUSSELL

FRANK GILLARD

HENRY RIDDELL

TOM FLEMING

CHARLES GARDNER

JEAN METCALFE

JOHN ARLOTT

RAYMOND BAXTER

ALUN WILLIAMS

DAVID LLOYD JAMES

REX ALSTON

. . . and opposite

the Commentators

in the

Television Broadcasting Team

RICHARD DIMBLEBY

MARY HILL

CHESTER WILMOT

MICHAEL HENDERSON

BERKELEY SMITH

BERNARD BRADEN

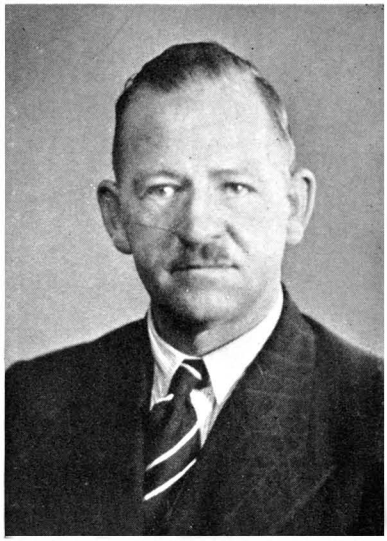
MAX ROBERTSON

BRIAN JOHNSTON

Some of the

Senior Engineers

who planned



E. L. LYCETT, ASSISTANT,
OUTSIDE BROADCASTS (SOUND)

and carried

out the technical

operation

T. H. BRIDGEWATER, SUPERINTENDENT
ENG., TELEVISION OUTSIDE BROADCASTS

APPENDIX

In the foregoing chapters the story of the sound and television broadcast of the Coronation has been told. As an appendix to this book there follows a selection of photographs taken from the television screen on 2 June. They capture, as did the Outside Broadcast cameras, many of the highlights of the historic occasion.