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LOOKING WESTWARD

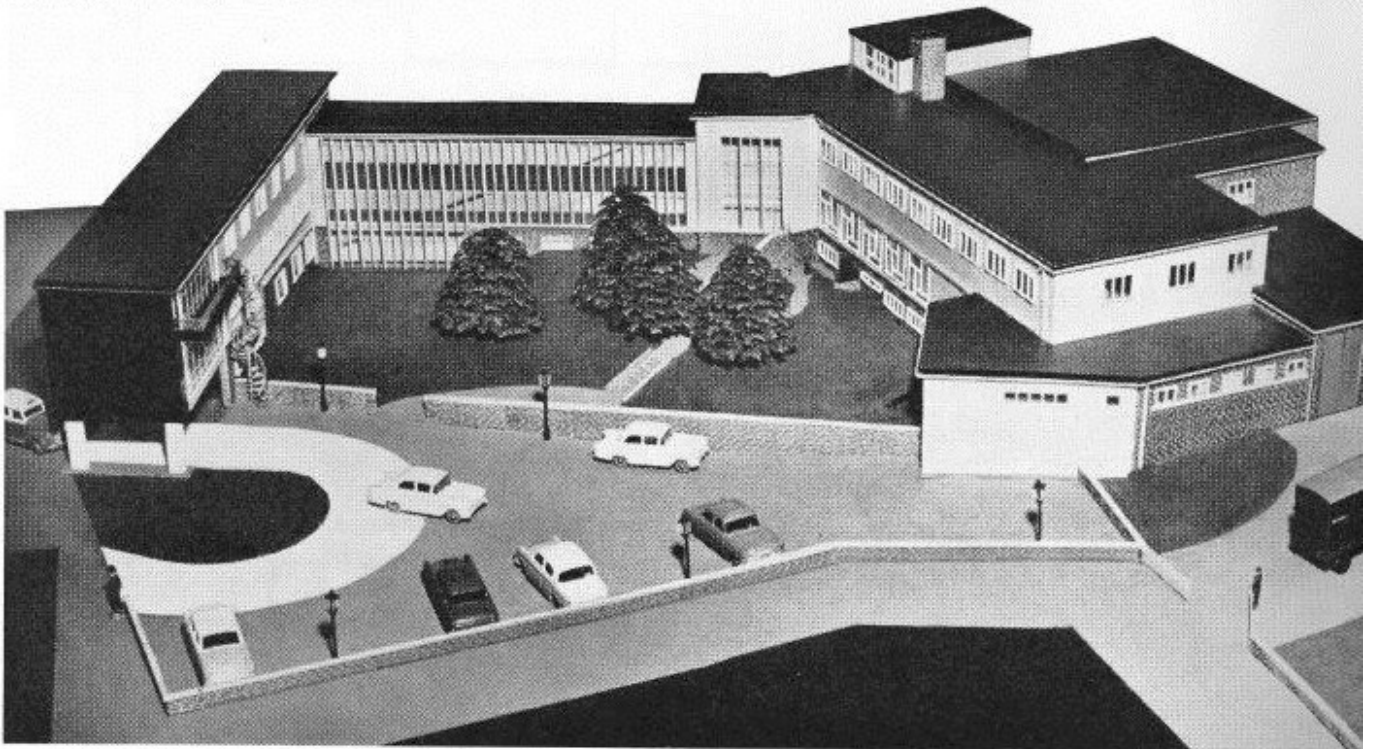
INTRODUCTION

LOOK WESTWARD—to the South West of England from whence for centuries British seafarers have set forth on the voyages of discovery, trade and, let us admit, piracy. It was from this toe of England that Francis Drake set out to circumnavigate the world and it was from here that he went to defeat the vaunted Spanish Armada, sent by King Philip of Spain to subjugate the English. British sea power has sprung from the hardy fishermen sailing from the hundreds of villages set in the craggy inlets that indent the beautiful, and sometimes forbidding, coastline. Today the area relies mainly on tourism, agriculture and fishing for its livelihood.

Westward Television provides commercial television programmes, seven days a week, for this romantic corner of England, the coverage area including the counties of Devon and Cornwall and parts of the adjacent counties of Somerset and Dorset.

The area has a 1,500,000 population in 500,000 homes. The service started in the Spring of this year and by the time this issue appears it is estimated that 240,000 homes and 720,000 people will be regularly Looking Westward. The headquarters of the Company, and the studio centre, are in Plymouth which, with a population of 250,000, is the largest city in the coverage area.

Fig. 1. Model showing the eventual shape of the Westward Television Studios at Plymouth. The block on the right corresponds to the plan. Future extension is shown at the left.



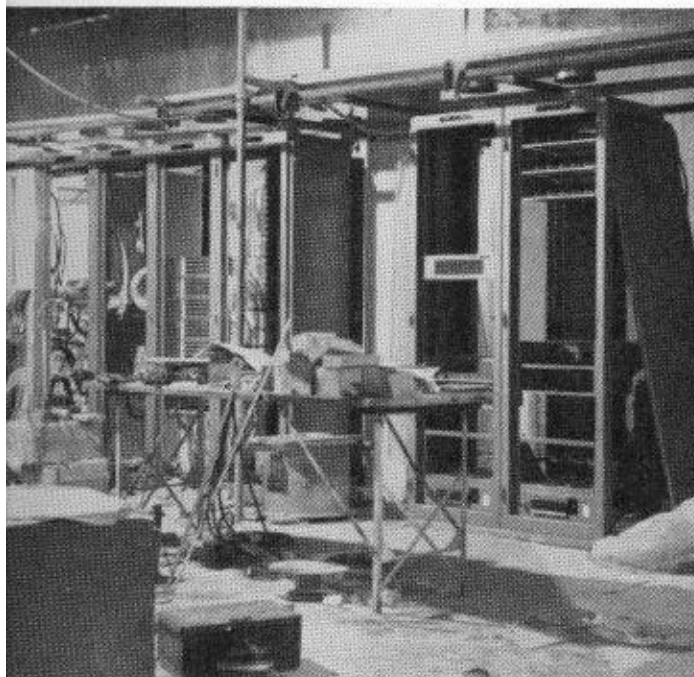


Fig. 2. Racking being installed while construction was still going on. The polythene covers were used for protection.

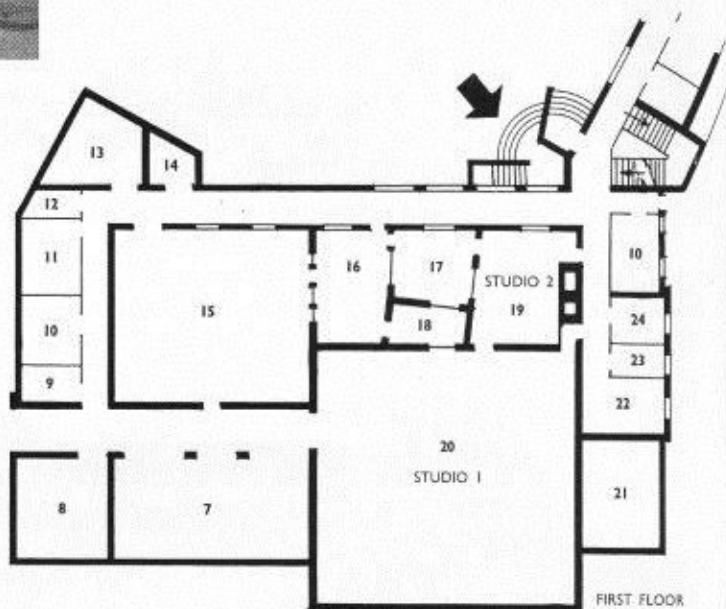
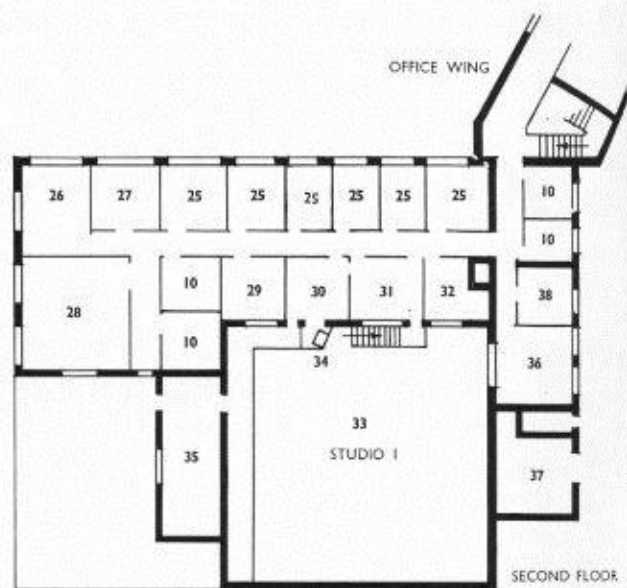
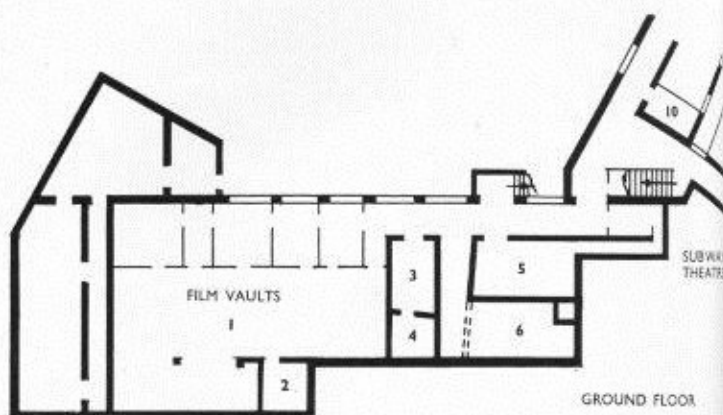


Fig. 3. PLAN OF THE LAYOUT OF WESTWARD TELEVISION STUDIOS.

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|---------------------------------------|----------------------------------|
| 1 Film Vaults, Editing and Processing | 21 Oil Storage Tanks |
| 2 Post Office Room | 22 Green Room |
| 3 Switch Room | 23 Announcer's Room |
| 4 Meter Room | 24 Make-up Room |
| 5 Fan Chamber | 25 Production Offices |
| 6 Boiler Room | 26 Chief of Programmes |
| 7 Scenery and Property Store | 27 Secretary |
| 8 Carpenter's Shop | 28 Rehearsal Room |
| 9 Storekeeper | 29 Production Floor Manager |
| 10 Toilets | 30 Vision Control Studio 1 |
| 11 Art, Caption | 31 Production Control Studio 1 |
| 12 Battery | 32 Sound Control Studio 1 |
| 13 Maintenance | 33 Studio 1 |
| 14 Store/Maintenance | 34 Alcove for Lighting Control |
| 15 Telecine, Master Control | 35 Dimmer Room |
| 16 Presentation | 36 Viewing Room/Public Relations |
| 17 Studio 2 Control Room | 37 Electricity Board Switchboard |
| 18 Announcer's Studio | 38 Teleprinter Room |
| 19 Studio 2 | 39 Accounting/Wages Office |
| 20 Studio 1 | 40 Fan Chambers |



Like all commercial programme companies, but unlike the B.B.C whose programmes also cover the area, Westward Television derives its income from the sale of advertising time. Two transmitting stations are provided by the Independent Television Authority, one at Caradon Hill and the other at Stockland Hill. Inward networking facilities are provided by the Post Office. Westward will take a high proportion of its programme material from the national commercial television network, as well as originating a lot of its own local programmes, and will eventually contribute programmes to the common network.

Three years ago, Westward's Chairman, Mr. Peter Cadbury, began his task of collecting together a board of local personalities to form his Company and to apply to the Independent Television Authority for the licence to operate commercial programmes in the area. The application was successful and in May 1960 the Marconi Company was approached by the Board of Directors to advise on the detailed technical planning of the new station and also to supply, install and completely integrate the technical facilities. The contractual date of opening, fixed with the I.T.A, was 29th April 1961—one year later.

THE STUDIO CENTRE

The rapid expansion of commercial television in the U.K, over the last few years, has forced programme companies to accept the fact that it is often necessary to adapt existing buildings for television use. In London itself, for example, many of the television studio centres are adapted theatres, film studios or other suitable premises. Similarly, in other parts of the country there are only four or five centres which are designed specifically as television studios.

At Westward it was early decided that time, although short, did allow for the erection of completely new studio buildings and as a result the centre, overlooking Derry's Cross in the very heart of Plymouth and representing an overall capital investment of £500,000, is certainly on a par with anything comparable in the British Isles.

The Technical block consists of three floors on a sloping site. The ground floor contains the film vaults, film editing and process rooms and the sub-station. This floor is lower than ground level and is therefore ideally suited to this purpose. The main technical area is on the floor above (see Fig. 3) which, to all intents and purposes, is at ground level at the south side of the site. An interesting feature of this area is that all the cable-runs for equipment on the

first floor are carried in trays approximately 12 inches below the ceiling of the ground floor. The cables pass through the holes in the pre-stressed concrete planks to the cabinet racks or consoles above. In this way additional cables can be installed in the future with the minimum of inconvenience and delay. Studio 1 Control Rooms, Production Offices and Rehearsal Rooms take up the bulk of the second floor of the Technical Block.

In a regional studio centre of this type, the facilities to be provided can be divided into four groups: local studio programmes including announcements, news, etc; films and commercials; television tape recordings, and lastly the re-transmission of programmes from the national network.

Live studio programmes originate from four main sources: the two studios, the nearby Athenaeum Theatre and the Announcer's Studio. Three Marconi Mark IV 4½-in. Image Orthicon Camera Channels are installed in Studio 1, two similar channels in Studio 2 and a Vidicon Camera is installed in the Announcer's Studio. Permanent wiring between the studio centre and the adjoining Athenaeum Theatre enables the Studio 1 facilities to embrace the theatre when audience participation shows are scheduled.

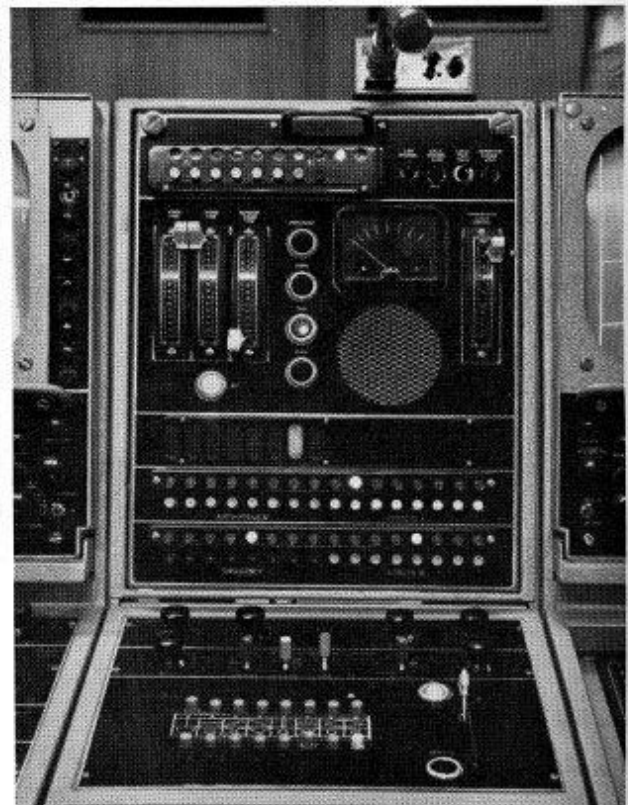


Fig. 4. Part of the custom-built presentation desk in the Presentation Control Room.



Fig. 5. The Presentation Control with the Announcer's Studio in the background.

The Westward Television project serves to illustrate how the English weather can prove unpredictable and make even the best planned project the most difficult to execute. The original date, by which it was hoped that the building would be sufficiently advanced for equipment installation to begin, was November 1960. Continuous rain caused the date to be postponed until December. Equipment began to arrive on site in December but the weather had caused further building delay, which was now five weeks behind schedule. In the closest co-operation with the builders, the engineers were able to draw up an installation plan which allowed them to install the equipment at the same time as the building was going up.

Some idea of the close interlocking of programmes necessary to achieve this can be seen from these examples. During January 1961 while ventilation ducting and floor screeds were being laid in the master control area, virtually all video wiring had already been completed in telecine area by the end of the first week. By this time the builders were completing the walls and roof of Studio 1 control rooms, and plastering was in progress in both studio control areas.

Two weeks later all the cables in telecine and master control areas had been completed and some hardware installed in the racks—it being still unsafe to mount equipment. A week later, however, racks, consoles and cables had all been fitted in Studio 2 control room, although dust prevented equipment

being installed. Presentation and Vision Control were also cabled and racks and consoles fitted.

During February it was possible, by the constant use of a vacuum cleaner, to begin to install electronic equipment, and as the builders vacated each area the engineers took over and completed their work. By the

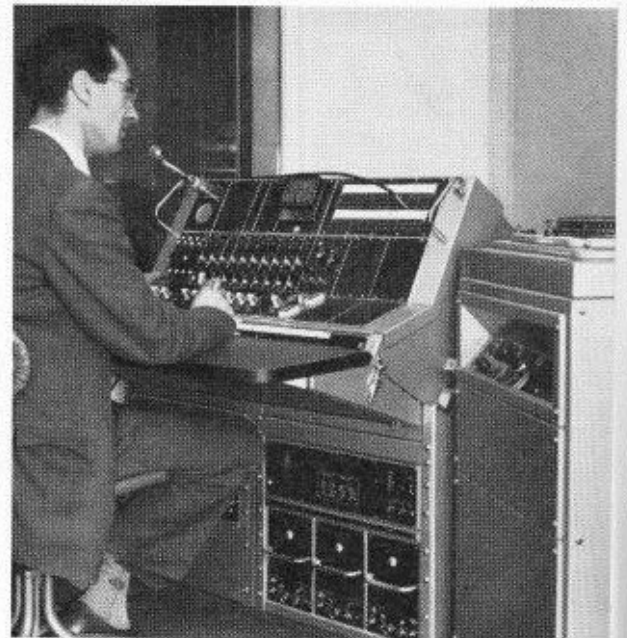


Fig. 6. Studio 1 Sound Control room with 'Minor' Sound Control Desk.

30th March Studio 2 was handed over to Westward's operating staff and circuits between this studio and telecine and presentation were tested.

By the following week Studio 2 was being regularly used by the Production Staff, and priority was switched to Studio 1 and its Control Rooms which were the last to be vacated by the builders. The camera channels and all the other equipment were installed and working by 17th April, thereby completing all Studio 1 wiring and technical installation in under a fortnight, and were immediately handed over to Westward T.V's Production Staff for rehearsals.

EQUIPMENT

The Sound equipment makes wide use of the compact modular audio amplifier with plug-in connections so

that programme interruptions are reduced to an absolute minimum. These amplifiers are also incorporated in the Studio Sound Control Desk, which caters for 11 microphone inputs and contains a total of 23 amplifiers, all fitted into a compact desk assembly.

Studio 2 has a mobile sound control equipment which has high level mixing of five low level and two high level inputs. Two disc reproducers are used in presentation control and one in Studio 1. Both equipments are fitted in mobile cabinets and can therefore be moved readily to various locations. British sound engineers continue to use discs because of the easy location of cues and the existence of so much recorded material already.

While the two main studios have the Marconi Mark IV 4½-in. Image Orthicon cameras the

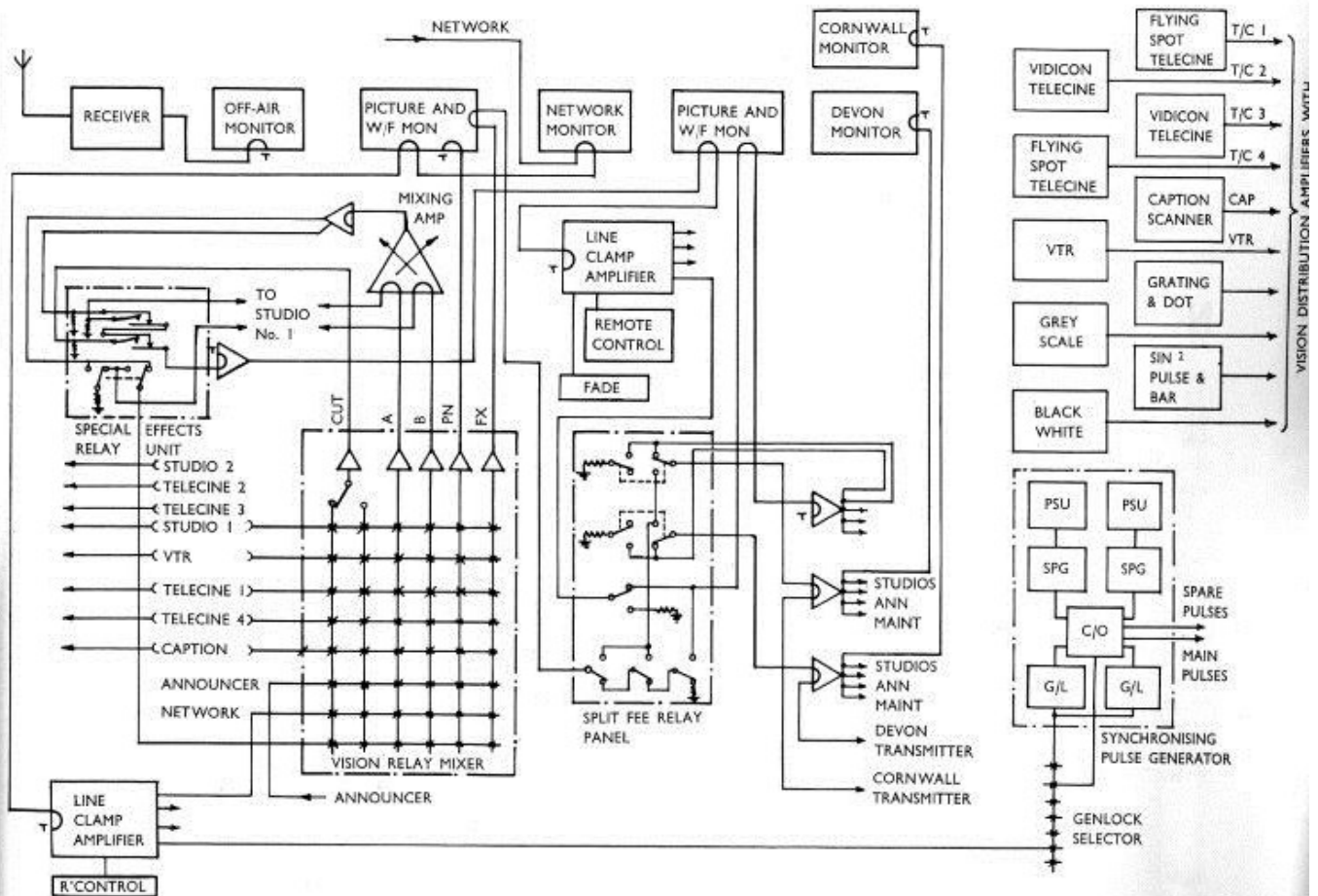


Fig. 7. SIMPLIFIED DIAGRAM OF THE VISION CIRCUITS AND PRESENTATION CONTROL.

announcer's studio has a small vidicon channel, controlled directly from the presentation desk. Ten picture and waveform monitors are used in the vision control rooms.

Vision switching in Studio 1 is by a relay-type mixer which has the facility for cutting between seven inputs, mixing between any two and the pre-setting of a superimposition of two inputs. The control panel is fitted to a locally built wooden desk installed in Production Control. The electronic pattern generator, remotely controlled from the vision mixer, enables wipes based on straight lines or wedges, and parabolic or circular patterns, to be used.

It is intended that the equipment installed in Studio 2 Control be used on occasions in a mobile form, and therefore the general layout of this control room is similar to the layout in an outside broadcast unit, particularly the sound and vision mixing equipments. The mobile vision mixer, similar in casework to the sound control unit, is utilized in this area.

The presentation control desk was specially designed to provide facilities specifically required by Westward Television. The programme line from the national network is restricted to a single incoming link and presentation control then redistributes this signal (or Westward originated programmes) to two Transmitters—one serving Devon and the second

serving Cornwall. Thus the programme engineer must have immediate emergency facilities available if sound and vision fail at either transmitter. These switching facilities are fitted to the production desk and enable the programme engineer, for example, to provide special vision apology captions to the Devon transmitter if sound failed while the Cornwall transmitter could continue to radiate normal sound and vision.

Additional facilities such as special effects control are also provided on this desk in addition to the normal programme switching and monitoring equipment. Console end-cheeks complete the desk and house remote control panels for the caption scanner, the announcer's vidicon camera, Telejector, and the switches for the announcer's studio lighting.

A centralized caption scanning unit is provided and facilities exist for video tape recording.

The layout of the Plymouth studios enables expansion both in building and technical facilities to be carried out without hindrance to existing facilities. For example, it is envisaged that an additional studio will be built on the west side of the existing technical block, which will further enhance the first-class service already provided for the West Countryman and the thousands of holiday visitors to this Riviera of England.