

# ENGINEERING

The quarterly for BBC engineering, technical and operational staff

**WINTER 1991/2**

**No. 47**

## NEW POST PRODUCTION BLOCK

Over the past few weeks, Post Production Resources has been completing its move into the new Stage V block at Television Centre.

The new accommodation comprises seven office levels at the front and internally provides basement, ground and five technical floors. An extensive signal-routeing network has been installed to provide the necessary recording, dubbing, replay and monitoring circuits within Stage V, and to and from other areas inside and external to Television Centre.

Neil Pittaway - Head of Post Production - is delighted with the

*new facilities: "The move from paper to reality over the past two years has been remarkable - thanks to the enormous efforts of the PID Tel team, led by Peter Smith, and the Post Production team, led by Don Kershaw. It must now give them as much pleasure as it gives me to see our new customers and staff enjoying the undoubted success of the new area with its D3 videotape machines."*

*"With Producer Choice critical to us, it is gratifying to see that producers now have the facilities they have been requesting for so long - thanks to good foresight and careful planning" added Neil.*

Starting on page 4, John Frisby describes the technical facilities which have been provided within the new block.

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The Stage V extension block at Television Centre showing the mural designed by 15 year old Vicky Askew and, bottom right, the 6m dish antenna referred to on page 20.

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As *Eng Infs* an internal BBC magazine, it would be appreciated if no reference was made to it in articles, magazines, etc., published outside the BBC.

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Stories for the Summer edition should be forwarded to the editor by Friday 15th May, 1992 (please note the new room number at White City).

## Transmitter News

The following services opened or changed between 16th November and 21st January:

### New TV relays

Barnstaple	Devon
Bethesda	North Gwynedd
Canongate	Edinburgh
Lincoln	Central Lincoln
Little Eaton	Derbyshire

### New FM stations

Beecroft Hill	Leeds
Darwen	Lancashire
Rhymney	Mid Glamorgan

### Radios 1 and 4 on FM

Llandrindod Wells	Powys
Millburn Muir	Strathclyde

### Local Radio

An opt-out service of Radio Oxford opened on 21st January. Known as *BBC Radio Berkshire*, it broadcasts 40 hours of local programmes each week, taking Radio Oxford's output at other times. Four FM transmitters have been provided: Hannington (104.1 MHz), Henley (94.6 MHz), Reading (104.4 MHz) and Windsor (95.4 MHz).

During the period under review, four other local radio fillers have also opened or changed:

Beecroft Hill	Radio Leeds
Cirencester	Radio Gloucester
Nuneaton	CWR
Salisbury	Wiltshire Sound

## Television Training Manuals

Several new titles have been added to Television Training's catalogue of publications, including:

*Teletalk: a Dictionary of Broadcasting Terms* (£10.50) which is an invaluable reference work for anyone who has ever needed or wanted to understand the acronyms, neologisms, abbreviations and sundry jargon slipped into conversation by television folk.

*The Television Graphics Handbook* (£2.95) which is a basic guide to the equipment used to produce sophisticated graphics and special effects, especially in relation to urgent needs, for example, in the newsroom. The handbook explains how the graphic designer works and how the facility is organised.

*Television - Out on Location wallchart* (£5.99) which is a natural successor to the *In the Studio wallchart*. It depicts a typical drama crew filming a period piece using a real street, and aims to show most of the activities that would be found on a location for a major shoot.

Further details of these - and other training manuals, together with price lists, applications forms, etc - are available from Television Training, Room 322, Elstree. Telephone: (066) 2592. BBC staff are eligible for a discount of 25% on the quoted prices.

## Safety

In the Middle Ages, knights who went to the wars would take good care to lock up anything desirable which they might leave behind. We have just heard of a modern locking device which has a faint echo of this ancient device. In order to prevent violation of Safety Regulations, it allows one to lock up a 13 Amp mains plug, so that electrical equipment can be isolated securely (Regulation 12 of the *Electricity at Work Regulations, 1989*).

Using this device, anyone who maintains equipment on one side of a bay - which has its power plug on the other side - will appreciate the reassurance that no-one else can plug them in by mistake! The device - a B & R Safety Lock, Type H27 - is now stocked by D&ED (Cemast Number: 0646839). The unit price is £4.13.

Martin Nutt  
Sec to EMSC

## Corrections

On page 3 of our previous issue, an error crept in to the D&ED section of the family tree. Peter Gregory (Business & Information Manager) and Ray Marie (Head of Production) actually work to David Walker and not David Brown as shown. Our apologies go to all concerned.

And on page 5, the fluid returning from the hot aquifer at Southampton was stated to be at 760°C. In fact this should have read 76°C. Our apologies go to the grossly overheated staff of Southampton RBC.

# FAMILY TREES

## Engineering & Operations, Radio

General Manager, Operations & Engineering, Radio  
*Simon Shute*

RDS Development Manager  
*Mark Saunders*

Sp Assistant to GM Ops & Eng. Radio  
*Edmund Hartley*

Head of Radiophonic Workshop  
*Brian Hodgson*

Head of Outside Broadcast Resources, Radio  
*Leo Feord*

Head of Building Engineering Services, Radio  
*Ron Jeeves*

Manager, Engineering Services  
*David Swaysand*

Head of Operations  
*Gerard Gancy*

Manager Operations  
*John White*

Manager Planning  
*Tony Holland*

A. H. B. Eng. S. R.  
*Alan Marchbank*

Sen. B.E.S.M.  
*Steve Winter*

Sen. Man. Bldg. Maint.  
*Don Murray*

Sen. B.E.S.M.  
*George Mason*

Sen. Man. Dev. Proj.  
*Alan Inger*

Head of Studio & Network Resources, Radio  
*George Legg*

Personnel Manager  
*Jill Daniels*

Finance Manager  
*David Amman*

Training Manager  
*Peter Wisbey*

Head of Engineering Operations, Radio  
*Ian McCraw*

Broadcast Duty Managers  
*Ray de Clifford*  
*Brian Roberts*  
*Mike Todd*  
*Dick Oldman*  
*Dusty Miller*

Head of Studio Operations, Radio  
*(Vacancy)*

Manager, Comms Radio  
*Mike Shore*

Studio Engineering Manager  
*Steve Hatherly*

Network Manager  
*Tony Giles*

Computer Support Manager  
*Paul Evans*

Manager Operations  
*Diana Barkham (Groups 2/3)*  
*Andrew Warrington (Groups 4/5)*

Head of Resource Development & Engineering, Radio  
*George Crowe*

Personnel Manager  
*Sally Hulks*

Man. Tech. Dev. & Investigations  
*Richard Eliot*

Man. Tech. Support Services  
*Bob Waiters*

Finance Manager  
*Jacky Cato*

Head of Proj. Man. (West One Project Group)  
*Jeff Bottom*

Head of Proj. Man. (Outer London, NCA OB Facilities)  
*Mike Taylor*

Head of Proj. Man. (Information Technology)  
*Roger Ackroyd*

Head of Proj. Man. (Regions)  
*Ray Newrick*

Engineering & Operations, Radio - 11th February 1992

# NETWORK TELEVISION

## New Post Production block

As reported on page 1, Post Production Resources (PPR) has now moved into the Stage V block at Television Centre. John Frisby describes the technical facilities which have been provided in this new area.

The new Post Production block has been built as a continuation of the 'Spur' to the main building at TC. The block has seven office levels at the front and internally provides basement, ground, and five technical floors. The general structure of the block and its air conditioning were agreed some eight years ago but many major changes to the technical requirements have been successfully accommodated over the past few years.

A wide range of operational facilities has been installed in the new building. These have been built to specifications written by a team of engineers from PID Tel and executed by seven different contract companies.

The new facility will take over a high percentage of PPR's current workload. However, the existing transmission suites in the basement have been retained; this operation will be integrated into a new Network Transmission Area, due to enter service in 1993.

### Signal Routing

An extensive signal routing network has been installed to provide the necessary recording, dubbing, replay and monitoring circuits within Stage V, and to and from other areas such as TC's studios and network areas as well as locations external to the building.

Many alternatives were considered including manual plugging, multi-stage routing, and different configurations of the single-stage matrix philosophy. The resulting choice - a particular configuration of six single-stage matrices - was selected on the basis of efficient utilisation of staff effort and price - not only of the matrices but of the resulting implications of post-selection at the signal destinations.

Video signals are routed in conventional Pal format. Other alternatives were seriously considered but rejected on the grounds of cost, availability, space requirements, and heat dissipation.

The central matrices, as now installed, occupy twenty bays and provide nearly

*One of the general-purpose VT cubicles (2nd floor).*

40,000 crosspoint sets or almost 160,000 crosspoint switches. They comprise a record matrix (160 x 96); a monitor matrix (176 x 96); a replay matrix (80 x 48), as well as small reference, remote control, and comms matrices.

Record, monitor, pulse reference and remote control matrices are controlled at the individual destinations. The comms matrix and the major part of the replay matrix, however, are controlled from the main control room.

Each TC studio is allocated a dedicated destination on the Stage V replay router; the remaining replay router destinations are presented as sources to the TC Central Apparatus Room router.

The routing system provides a high level of security, each matrix circuit level being dual-powered and backed up with status displays, extensive diagnostics and fault reporting.

The control panels are purpose-designed; all vt and tk cubicles are provided with a panel which combines control of reference pulse signal selection, record line source selection, and monitor matrix source selection.

### Choice of VTRs

The television service has been using C-format as its mainstream machine for many years. More recently it has invested heavily in analogue component VTRs (in practice, overwhelmingly Betacam SP) which are highly suitable for portable acquisition. It is also convenient to do certain post-production operations in this format.

However, the choice of signal to be routed in Stage V clearly affects the type of VTR to be used as a mainstream machine. Since Pal signals are to be routed, there is nothing to be gained by using a component recorder, either analogue or digital.

A machine was needed that had all the operational features of the C-format machine but in a cassette-based form, with at least four high quality audio tracks for stereo working.

At decision time, two contending digital composite cassette-based VTRs were available, both offering excellent multi-generation performance as well as interfacing effectively with the Pal infrastructure of Stage V. However, they were not interchangeable as they used different tape widths.