

EN INF

SUMMER 1990 No. 41

LIVE FROM ROME HDTV

The BBC recently hosted, on behalf of Eureka 95, three live HDTV demonstrations of World Cup football from the Olympic Stadium in Rome, including the final match on the 8th July. Several hundred guests attended the demonstrations in Studio 4 at Television Centre, including MPs, journalists, manufacturers of Broadcasting equipment, and senior members of BBC staff.

The live pictures from Rome were provided by the Italian state broadcaster, RAI, using six BTS Eureka HDTV cameras and two Eureka HDTV outside broadcast units. The sound consisted of stereo ground effects, for background atmosphere, along with four separate commentaries in Italian, French, German and English. The vision and sound signals were encoded in the HD-MAC transmission standard and relayed via the Olympus and French TDF satellites to special receiving installations in Italy, France, Germany and the UK. These were the first HD-MAC transmissions of a live HDTV broadcast.

In the UK, the transmissions were received via a BT mobile 2Am dish, parked adjacent to Studio 4 at Television Centre. The HD-MAC signals were fed to a Thomson decoder and Philips and Thomson receivers. The output from these provided both a 625-line compatible picture and the full 1250-line

HDTV picture for viewing in the studio: for the HDTV demonstrations, front and rear projection displays were used as well as a conventional crt monitor.

HDTV also went on display live at Wimbledon this year. Using two BTS cameras, continuous HDTV coverage of the Centre Court action - including HDTV graphics - was relayed via a specially-designed fibre-optic link to the Club House. From there, the signals were separately fed to the Royal Box Guest Area, the Press Restaurant and the Players Lounge, where the HDTV pictures were displayed on crt monitors. A separate feed to the Octagon gave every ticket holder the opportunity to view the HDTV action on a 50-inch rear projection display.

For the first time, a quarter-picture inlay facility was demonstrated. This enabled a 625-line picture from any of the regular cameras at Wimbledon to be inserted into the corner of the HDTV picture. Thus, play from other courts could be viewed simultaneously on the high definition monitors covering the Centre Court action.

Earlier this year, HDTV was demonstrated to the public at the Ideal Home exhibition in London. The demands placed on the HDTV playback equipment are described on page 18.

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John Barrett, R.D.

Off-screen HDTV photograph: Italy taking a penalty against the USA.

ENG INF

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The closing date for stories to be included in the autumn issue is 24th August.

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Friends and colleagues were shocked to hear that Derek Robinson of EID had passed away. Among other things, Derek was responsible for organising the annual EsIC Conference and the visits by outsiders to BBC technical premises in the London area. He also led a very active life outside the BBC.

Derek is greatly missed by all those who worked with him and our heartfelt sympathies go to Sybil and the rest of the family.

Mike Meyer

NETWORK RADIO:

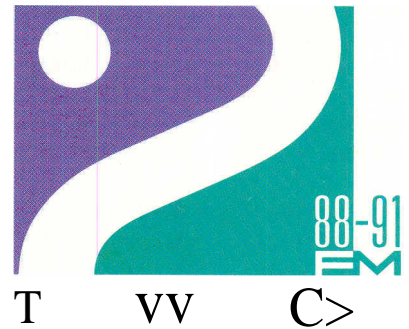
In the light of the forthcoming Broadcasting Bill, the BBC will have to surrender some of its medium-wave frequencies for use by national commercial broadcasters. Consequently, the top priority in Network Radio is to reorganise our services to accommodate the end of simulcasting - the simultaneous broadcasting of a radio service on more than one waveband.

The move to single-waveband broadcasting will, of course, put an end to the practice of *network-splitting* - the broadcasting of different programmes on a network's FM and its medium-wave (or long-wave) outlets.

The end of simulcasting and network-splitting will substantially alter the pattern of national radio broadcasting by the BBC, as explained here.

Over the years, network-splitting has enabled us to offer our listeners a wider choice of programmes. Depending on programme schedules, the four national services have been able to broadcast up to seven different programmes simultaneously - Radio 1, Radio 2 (FM), Radio 2 Sport (MW), Radio 3 (FM), Radio 3 Cricket (MW), Radio 4 (LW) and Radio 4 Education (FM). However, network-splitting is not popular with many of our listeners; it causes considerable confusion (and annoyance) when listeners are asked to change wavebands in order to hear the programme they want.

DDB RADIO



Before this major switch to FM takes place it has been necessary to discontinue Radio 1's periodic use of the Radio 2 FM network (10pm to midnight on weekdays, and on Saturday afternoons and Sunday evenings). This practice stopped in April 1990 when about three quarters of the UK population had access to Radio 1's new FM network.

TRANSMITTER NEWS

The following services opened between 17th March and 22nd June:

Television

Long Compton	West Midlands
Penrhiwceiber	Mid Glamorgan
Redbrook	Gloucestershire
Roose	Cumbria
Uplawmoor	Strathclyde

FM Radio

Eitshal	Western Isles
Walsden South	W. Yorkshire

Radio 1 FM

Londonderry	Co. Londonderry
Pontop Pike	Co. Durham
Rowridge	Isle of Wight

On 2nd May, the Oxford Radio 1 FM transmitter changed frequency to 99.1 MHz, substantially increasing its power at the same time.

Radio 4 FM

The Radio 4 FM transmitter at Ballycastle (Co. Antrim) was converted to stereo on 10th April.

Local Radio

The BBC's thirty-seventh local station - *BBC Radio Suffolk* - opened on 12th April, with FM transmitters at Manningtree and Great Barton.

DDB RADIO



Radio 5 - which starts on 27 August - will overcome much of the need to split networks. It will use Radio 2's medium-wave frequencies to provide a varied schedule of sports, educational and youth programmes. During weekdays, Radio 5 will also carry certain World Service programmes in the early morning and late at night.

With the introduction of Radio 5, Radio 2 will become an FM-only service.

Much effort is already going into encouraging Radio 2 listeners to switch to FM, including over-air trails and meet-the-public events such as *Radio Goes To Town* and EID's mobile *Tuning Clinic*. Furthermore, a special telephone linkline into EID has been provided and the number is trailed frequently by Radio 2. This enables listeners, at the cost of a local call, to obtain tuning and reception advice on Radio 2 FM from trained staff.

DDB RADIO



The Radio 1 FM network (97.6 to 99.8 MHz) is now developing as fast as resources will allow: transmitters are being installed at all existing FM sites (on a population-priority basis) and, by the end of this year, coverage will be greater than 90% of the population.

Radio 1 will lose its medium-wave transmitter network to a commercial operator in the next few years. Thus, it too will become an FM-only service.

A New Pattern of Broadcasting

!!!IG RADIO



Ball-by-ball cricket commentaries on Radio 3 medium-wave will transfer to Radio 5, when it starts in August. Open University programmes will also be moved to Radio 5 but, during the night, Radio 3 FM will carry repeats of educational programmes - for the benefit of the few schools, OU students, etc, that cannot receive Radio 5 satisfactorily.

Radio 3 will lose its medium-wave outlet to a commercial operator in the next two to three years. Thus, it will also become an FM-only service.

Controller Radio 5, Pat Ewing, explains the role of the new network at a Presentation for Staff in BH, London.

outlet for Radio 4 and the only outlet for Radio 1, Radio 2 and Radio 3. A sizeable number of new transmitting stations will be built, to extend Network Radio to areas where FM reception is inadequate at present.

On the medium-wave band, Radio 5 will be the only UK-wide service provided by the BBC. The Radio 4 long-wave service will be retained but, on occasions, may cover national events while the regular programmes continue on FM.

The end of network-splitting will enable each network to present a clearer identity to the listener.

A three-waveband radio will still be necessary to receive the full range of BBC Radio programmes. However, because the majority of BBC Radio will *only* be available on FM, good reception performance on this waveband will become an essential feature to consider when buying a new radio.

BBC ENGINEERING

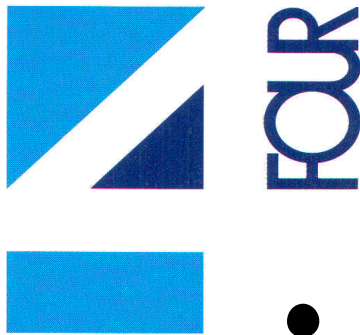
VERTICAL BLANKING INTERVAL

Since Friday 8th June, the Vertical Blanking Interval (VBI) on both BBC1 and BBC2 has been used as follows:

6 + 319	Local Noise
7 + 320	Network Noise
8 + 321	Datacast
9 + 322	Datacast
10 + 323	Ceefax
11+324	Ceefax
12 + 325	Ceefax
13 + 326	Ceefax
14 + 327	Ceefax
15 + 328	Ceefax
16 + 329	Ceefax
17 + 330	Ceefax
18 + 331	Ceefax Subtitles
19 + 332	ITS
20 + 333	ITS
21 + 334	ICE
22 + 335	One-Line ITS (test)

The additional Ceefax lines have been provided to improve its flexibility; for example, pages which are in great demand (such as the recent World Cup football) can now be accessed more quickly.

!!!IG RADIO



Radio 4 FM, until recently only available in England, is now being extended to Scotland, Northern Ireland and Wales as quickly as resources will allow. Educational programmes (Schools, Options and the Open University) will be transferred from Radio 4 FM to Radio 5, when it opens in August. All Radio 4 programmes will then become available on FM and listeners will no longer have to retune to long-wave in order to hear the programme they want.

Radio 4 will be retained on the long-wave band but, on occasions, this outlet may carry 'national events' (such as running news stories, Elections, etc) while scheduled Radio 4 programmes continue on FM.

Thus, as the new pattern develops over the next few years, FM will become the main