

**From:** Broadcast Duty-Manager  
**Sent:** 05 August 2007 21:00  
**To:** ~~Not relevant to request~~  
**Cc:**  
**Subject:** Major disruption to FM & AM services, Sun 5th August 2007

This is the RailLS log. **Below it, in red, are additional notes and that DAB, DSat and Online were unaffected by this failure.**

Summary: An air-conditioning failure in a Cable & Wireless apparatus room in S.24 resulted in intermittent loss of Path 1 and Path 2 NICAM radio distribution circuits affecting all FM & AM transmitters *except* Wrotham and Rowridge. The failure *should* have only affected Path 1 radio circuits, but clearly affected Path 1 and Path 2. THIS TO BE INVESTIGATED; investigation to be lead by the DTM.

Details: At 1222 a producer reported occasional dropouts on Radio 3 in the Oxford area. Over the next half hour all networks were reporting audible dropouts all over the country (although generally not from the London and South East area), Manchester CTA reported intermittent loss of both NICAM paths in to them, and NGW reported alarms on both NICAM paths into a significant number of transmitters (although not Wrotham or Rowridge). The scope of the failures did not point clearly to either an LBH source problem or a distribution problem, but as an LBH NICAM changeover is easy to do and causes minimal disruption, this was performed by LCR at 1256; it did not effect a cure, but did at least exhorated the NICAM coders.

The DTM reported that Cable and Wireless engineers had traced the problem to an overheating apparatus room in S.24 where they found that the air-conditioning had failed and so an engineer was dispatched there. However it was understood that this should only have affected Path 1 radio (and Path 2 TV) circuits although Manchester and the NGW transmitters were continuing to register failures on both radio paths, (but with Wrotham and Rowridge still OK). By 1415, the programme dropouts were so severe that a decision to go to RBS mode was taken - this would restore all networks to clean mono rather than heavily degraded stereo.

Within a few minutes of going to RBS NGW reported failure of Radio 1 from Sutton Coldfield and all points north, and so they sent an engineer to investigate. He found that the RBS changeover system had not operated correctly and he was able to plug around the system at 1450 appx - this restored Radio 1 to RBS (mono) mode.

Cable & Wireless engineers had fixed the S.24 air-conditioning soon after 1500 and the apparatus room temperature started to fall. It was not possible to verify that the equipment there would carry our programmes without actually restoring the NICAM distribution (and leaving RBS mode); this was done at 1615, initially on Path 1 only. This restored the whole country back to normal stereo and NGW and Manchester were able to verify that Path 1 had returned as anticipated. Path 2 was restored at 1625 which put the whole country back to normal.

(When the nature and scope of the problems had been ascertained, the national terrestrial networks put out announcements - mainly at news junctions from 1400 - to steer listeners to other platforms.

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**Additional info.**

- Our Path 1 route is via S.24 and Path 2 is via S.24, so it's interesting that S.24 S.24 - is actually Path 1 for radio NICAM distribution! Having said that, reports from both Manchester (BBC) and NGW verified that both Path 1 and Path 2 had been affected by this failure.

- s.24
- Although NGW were able to resolve the failure of the Sutton Coldfield R1 RBS problem (by plugging the RBS receiver directly to the TIE), this needs to be investigated. The RBS system is tested annually and the RBS system here has performed correctly until now.
- Before coming out of RBS mode (at 1615), the NGW plugging at Sutton Coldfield had to be restored to normal to avoid a Sutton Coldfield <-> Oxford howlround.
- The s.24 failure should have resulted in only a Path 1 failure. Since Paths 1 **and** 2 were affected, Andy Baker was keen to establish that Paths 1 and 2 were unambiguously routed. Therefore when we came out of RBS mode, we restored Path 1 only at first; this was achieved by restoring the NICAM Cut Key but with the Path 2 u-links in s.24 removed. NGW and Manchester positively identified Path 1 as back. Only then were the Path 2 u-links restored.

Regards,

Mark Ekiert

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