

**GOVERNMENT OF INDIA (BHARAT SARKAR)
MINISTRY OF RAILWAYS (RAIL MANTRALAYA)
(RAILWAY BOARD)**

No. 2003/Tele/TP/1

New Delhi,
Dated: 17.9.12

**Sr. Exec. Director(Signal),
R.D.S.O.,
Lucknow.**

**Exec. Director (Telecom),
R.D.S.O.,
Lucknow.**

Sub: Issues with BPAC working on OF cable

BPAC is generally working on 4/6 quad cable with OFC channel as a protection path. In many sections, BPAC is worked on OFC for extended period of time due to cable cut/cable fault on Quad cables. Recently in busy sections, dual- BPAC have been introduced, where one BPAC works on Quad cable and the other on OF cable. Frequent cases of BPAC failure (for one train) requiring "Reset" has been reported while working on OF cable.

Whenever BPAC works on OF cable, a time slot (VF channel) is assigned is on PD MUX out of the available 30 time slots working on one E1. Remaining time slots of PD MUX are used for meeting other communication requirements such as control circuits, station-to-station phones etc. This arrangement generally causes the following problems in the functioning of BPAC:-

- (i) Any momentary break in communication on VF channel used for BPAC, results in failure of hand-shake protocol of Axle counter, resulting in failure. Such failures are encountered quite often without any other apparent reason.
- (ii) Whenever common cards become faulty in the PD MUX, replacement requires switching OFF of power supply, resulting in break in communication on BPAC channel, causing failure of BPAC.
- (iii) Whenever PD MUX is Reset, communication on BPAC channel breaks & results in failure of BPAC.

These issues were deliberated in Board's office and both Signal & Telecom Dtes are of the view that to control the cases of failures of BPAC while working in OF media, BPAC should work on a dedicated 'E1' instead of the present arrangement of using one time slot of an 'E1'. Necessary interface equipment to connect BPAC directly on 'E1' for transmission on OF media may be developed and approved by RDSO so as achieve better reliability of BPAC.

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Ministry of Railways
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✓ CSTEs/All Indian Railways.

17/9/12
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