

# BTM Out of Frms (RED) Error

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## Introduction

This error applies to the IGX broadband trunk module (BTM) with E1, E2, E3, and T3 backcards.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

This document is not restricted to specific software and hardware versions.

### Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

## Error Definition

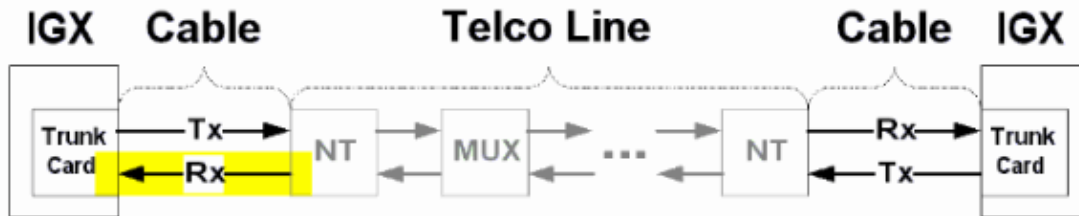
The Out of Frames (OOF) or Loss of Frame (LOF) condition occurs when the BTM backcard receiver detects an LOF synchronization. This error represents consecutive errors in terminal framing bits.

The BTM expects this framing information from E1, E2, E3, and T3 backcards:

- **E1 and E2:** G.704 framing
- **E3:** G.832 framing
- **T3:** C-bit framing

## Error Example

The likely location of equipment errors is shown in yellow:



Out of Frames

NT = Network Termination

MUX = Multiplexer in Telco Line Path

Tx = Transmit

Rx = Receive

14.gif

## Troubleshooting

The troubleshooting steps in this section are intrusive. Perform them in a maintenance window only if user traffic is affected or if the **dsprks** command output indicates an error condition still persists, such as when the trunk is not in the Clear-OK state.

1. Both ends of the trunk must be active during troubleshooting. Use the **dsprks** command to verify that the trunk is active. If the trunk number is not displayed in the **dsprks** command output, the trunk is not active. Use the **uptrk** command to activate a trunk.
2. Use the **dsprkcnf** command to verify that the line coding and line framing settings match the settings configured at the Telco side of the trunk. For E1, verify the cyclic redundancy check (CRC) setting. The CRC-4 settings must match the Telco settings.
  - a. Use the **vt** command to access the remote IGX.
  - b. Use the **dsprkcnf** command at the remote IGX to verify the line coding, line framing, and CRC setting of the BTM E1 trunk.
  - c. Delete the trunk to correct the settings.

**Note:** If you delete the trunk, you could remove all connections routed across the trunk. Before you delete a trunk, verify whether an alternate route for the connections exists, or record all connections and parameters as needed to re-add the connections.

- d. Use the **cnftrk** command to match the line framing, line coding, or CRC configuration on the BTM.
3. Monitor the **dsprkerrs** command output for other evidence of a bad line.

Bursts of Line Code Errs can indicate a timing problem. Check to see if the trunk configuration reflects whether the Telco provides the clock or expects the clock.

4. Place a loopback plug (E1) or loopback cable (T3/E3) onto the connector at the backcard of the trunk module to check the local hardware.

If the trunk status in the **dsprks** command output changes to Clear-OK, and if the **dsprkerrs** command output no longer shows incremental errors, the trunk module and backcard are working properly.

- a. Replace the cables.
  - b. Wait at least ten seconds longer than the Red Alm Out timer setting configured in the **cnftrkparm** command before you continue.
5. Ensure signal strength is sufficient and that the maximum cable length is not exceeded.

For T3 trunks, the line build-out (LBO) is configured from the `Line cable length` field of the `cnftrk` command. Delete the trunk to correct the `Line cable length` setting.

**Note:** If you delete the trunk, you may remove all connections routed across the trunk. Before you delete a trunk, verify whether an alternate route for the connections exist, or record all connections and parameters as needed to re-add the connections.

6. Ask the Telco to test the line. Line equipment malfunctions can cause framing problems.

If the problem persists after you perform the troubleshooting steps, contact the Cisco Systems Technical Support at (800) 553-24HR, (408) 526-7209, the Cisco Technical Support Website, or send e-mail to [tac@cisco.com](mailto:tac@cisco.com).

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## Related Information

- [IGX 8400 BTM Trunk Error Troubleshooting and Definitions](#)
- [WAN Switching Network Synchronization Fundamentals](#)
- [International Telecommunication Union \(ITU\), Recommendation G.704](#)
- [Cisco WAN Switching Solutions – Cisco Documentation](#)
- [Guide to New Names and Colors for WAN Switching Products](#)
- [Downloads – WAN Switching Software](#)
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