

USB Power Delivery ENGINEERING CHANGE NOTICE

Title: Enter and Exit Mode Clarification

**Applied to: USB Power Delivery Specification Revision 3.0
Version 2.0**

Brief description of the functional changes proposed:
Clarifies language to avoid misinterpretation of the Enter_Mode and Exit_Mode commands. Avoids any language that hints the GoodCRC message may have additional meaning other than to indicate that the bits have arrived correctly.

Benefits as a result of the proposed changes:
Incorrect implementations should be less frequent.

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
No change.

An analysis of the hardware implications:
None.

An analysis of the software implications:
Correctly implemented software will not need any change

An analysis of the compliance testing implications:
No change.

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Actual Change Requested

(a). Section 6.4.4.3.4 Enter Mode Command

From Text:

If the Responder responds to the **Enter Mode** Command request with an ACK, the Responder **Shall** enter the Mode before sending the ACK. The Initiator **Shall** enter the Mode on reception of the ACK. Receipt of the **GoodCRC** Message corresponding to the ACK confirms to the Responder that the Initiator is in an Active Mode and is ready to operate.

To Text:

If the Responder responds to the **Enter Mode** Command request with an ACK, the Responder **Shall** enter the Mode before sending the ACK. The Initiator **Shall** enter the Mode on reception of the ACK. **Successful transmission of the message confirms to the Responder that the Initiator will enter an Active Mode.**

Note: Please see [Figure 8-60 DFP to UFP Enter Mode](#) for a more detailed view.

1. (b). Section 6.4.4.3.5 Exit Mode Command

From Text:

The Responder **Shall** exit its Active Mode before sending the response Message. The Initiator **Shall** exit its Active Mode before sending **GoodCRC** Message in response to the ACK. Receipt of the **GoodCRC** Message confirms to the Responder that the Initiator has exited the Mode. The Responder **Shall Not** return a BUSY acknowledgement and **Shall** only return a NAK acknowledgement to a request not containing an Active Mode (i.e. **Invalid** object position). An Initiator which fails to receive an ACK within **tVDMWaitModeExit** or receives a NAK or BUSY response **Shall** exit its Active Mode.

To Text:

The Responder **Shall** exit its Active Mode before sending the response Message. **The Initiator Shall exit its Active Mode when it receives the ACK.** The Responder **Shall Not** return a BUSY acknowledgement and **Shall** only return a NAK acknowledgement to a request not containing an Active Mode (i.e. **Invalid** object position). An Initiator which fails to receive an ACK within **tVDMWaitModeExit** or receives a NAK or BUSY response **Shall** exit its Active Mode.

Note: Please see [Figure 8-61 DFP to UFP Exit Mode](#) for a more detailed view.