

**SY/MAX POINT TO POINT COMMUNICATIONS PROTOCOL
DOCUMENT ADDENDUM**

The primary purpose of this document is to record corrections to the SY/MAX Point-to-Point Communications Protocol for Data Transfer Manual, Instruction Bulletin 30598-713-01. Note that some comments are merely improvements for clarification.

PAGE	COMMENTS
4-2	In Figure 4.2, the table heading of COMMAND OPCODES should be changed to DATA FRAME OPCODES.
4-3	In section 4.3.1.1 Alphabetical Key to the Fields, under BIT_MASK, the over-bar indicating a NOT or negate condition is missing. The second BIT_MASK, which is ANDed with old destination_register_value, should be negated.
4-11	In section 4.3.2.3 Multiple Register Read, the last box of the reply message should be REGISTER_DATA, not REGISTER_ADDRESS.
4-13	Section 4.3.3.3. In the reply message format for Print ASCII, the RETURN_PRINT_DATA range should be 0-256.
4-18	Section 4.6. In the fourth paragraph, the reference should be to Figure 4.3.2, not 4.2.2.
5-2	The last paragraph of the first column should start with “If the route is not valid, but is reversible as determined above...”
6-9	Section 6.8.3 (b) the first sentence should read: “Illegal DLE Sequence. A <negative_ack> should be sent when an illegal character is received after a <dle> once the <start_frame> condition has been detected.”
6-10	Section 6.8.4, subsection a) of “Reception of Busy response” the following sentences should be added to conclude the paragraph: “Unsolicited <busy> should also be ignored. Any response is considered unsolicited if there is no outstanding message to invoke the response.”
6-11	Section 6.8.6. In the first paragraph, the sentence should be “Link verification should be performed every 2 seconds...”
6-12	In Figure 6.8 the following should be added: a) Right after the START bubble, another box should be added to RESET RETRY AND INQUIRY COUNT. b) On NO exit from the RETRY COUNT EXCEEDED 8 – INCREMENT RETRY COUNT. c) Upon RESPONSE COLLECTED exit from COLLECT RESPONSE, a decision box with TYPE OF RESPONSE? must be present before going off in one of three different directions.
8-1	In subsection “Negative Acknowledgment Reception”, sentence before last, the “and waits for” should be “or waits for”.
8-1	In the heading of the subsection “SY/NET Broadcast Messages” the slask character ‘/’ should be used instead of the ‘I’. i.e. ‘/’ vs. ‘I’
8-3	In Section 8.3, subsection “RECEIVE BUFFER OVERFLOW (DATA LINK LAYER)”, the following correction to the last sentence should be made: “When the software detects that the incoming <data_frame> exceeds the maximum allowed length, it should respond with a <nak>.” i.e. replace “<busy>” with “<nak>”

- 8-3 In Section 8.5, subsection “RESPONSE TRANSMISSION”, to clarify the concept present in the paragraph, the following second paragraph should be added:
- “For example, if the incoming <data_frame> the <dle><soh> sequence is immediately followed by <dle><etx>, it should be responded to with <negative_ack> as soon as possible. However, the COMMUNICATIONS SOFTWARE SHOULD NOT BE WRITTEN IN AN UNSTRUCTURED OR A NON-LAYERED FASHION SIMPLY FOR LAST RESPONSE.”
- 8-5,7 Figure 8.3, text under reads:
 $10 + 01 + 11 + 30 \dots = 152H$
- The text should read:
 $11 + 30 \dots = 152H$
 i.e. delete the leading “10 + 01+”
- Figure 8.6, text under reads:
 $10 + 01 + 12 + 37 + 42 \dots = 2E0H$
- The text should read:
 $12 + 37 + 42 \dots = 2CFH$
 Least significant byte = CFH
 Two’s Complement of CFH = 31H
- The value of 31H should be in the last box in Figure 8.6.
- 8-9 In Figure 8.8, the transition from “WAITING FOR UPPER LAYER REQUEST” upon “MAX EXCEEDED” condition should be changed as follows:
- a) direction should be reversed (up instead of down)
 - b) “max exceeded” should be “max number of negative acks exceeded”
- 8-9 In Figure 8.8, the transition from “WAITING TO RESTART’ upon “TIME TO RESTART” condition should be changed as follows:
- Transition action (lower part of the label) must include “E:Collect response”.
- 8-9 In Figure 8.8, the transition from transitory stated above “TRANSMITTING” into “TRANSMITTING” state should be changed as follows:
- a) Transition action must include “E: Collect response”
 - b) Transition condition (upper part of the label) must read “max number of negative acks not exceeded”
- 8-10 In Figure 8.9, the transition from “WAITING FOR ID” state back to “WAITING FOR DLE, SOH” upon “OTHER” condition should be changed as follows:
- a) Transition action “D:Collect soh” must be deleted.
 - b) Transition condition (upper part of the label) must read “other collected”
- C-1 In the appendix section C.1 the last portion of the table should look as follows:
- | | | |
|----|--------|--|
| 12 | <even> | Used as data_frame’s id as well as a part of the positive_ack response |
| 15 | <nak> | Used as a part of Negative_ack respnse |
| 16 | <syn> | Used as a part of busy sequence |
| FE | <pad> | Used at the trailing end of the data_frame for synchronization purposes. |