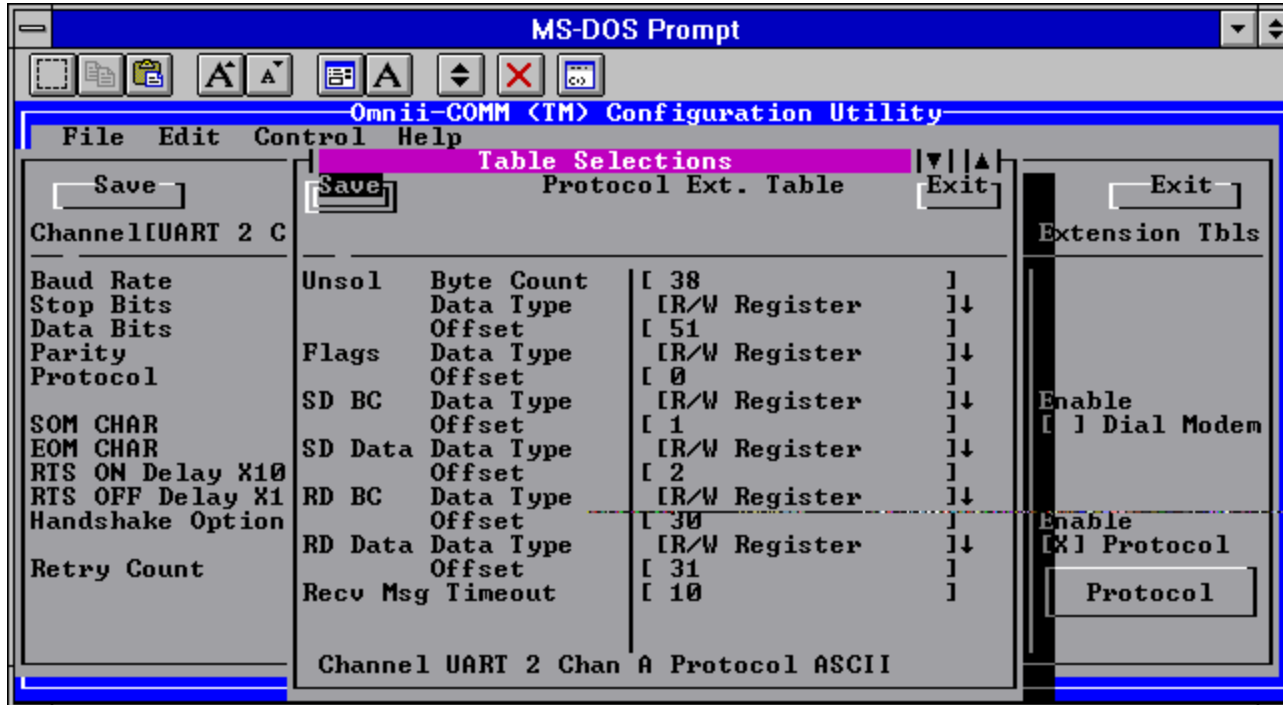
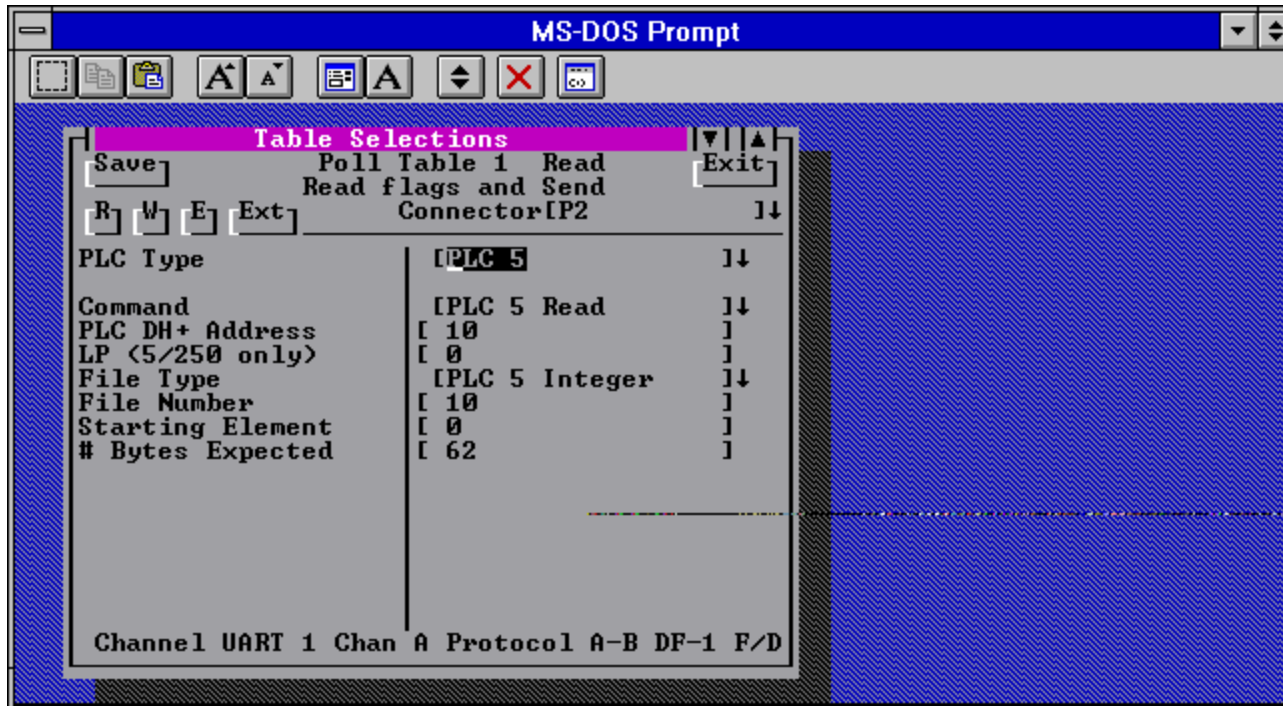


Omni-Comm ASCII Communication Example

The Protocol Extension Table for the ASCII port is set up as shown below. We have specified that unsolicited messages will be 38 characters long and that they will be written to datatype R/W registers starting at R/W register 51. Solicited messages will use the byte count stored in R/W register #30 and will be stored starting at R/W register 31. The number of characters to send is located in R/W register #1 and the data to send starts in R/W register #2. The command flags that trigger the sending of a message are found in R/W register #0. A pause of 10 seconds or more between characters in any incoming message will cause the message to be discarded.



Poll table #1 reads 62 bytes (31 words) of data from the PLC starting at N10:0 and puts it into the first 31 R/W registers. We do this read once every 100 X 10msec or once a second.



ASCII Example

Based on configuration file ASCII.DBA

PLC Register	Database register	Name	Function
N10:0	R/W 0	Command Flags	Setting bit 0 of this register sends ASCII message out
N10:1	R/W 1	Send Data Byte Count	This is the number of characters in the outgoing message
N10:2 thru N10:29	R/W2 thru 29	Send Data (ASCII message out)	This is the outgoing message string
N10:30	R/W 30	Solicited message byte count	The size of the incoming message if it starts with a capitol letter
N10:31 thru N10:49	R/W 31 thru 49	Solicited message (ASCII message in)	The incoming message ASCII
N10:50	R/W 50	Unsolicited message byte count	The size of the incoming message if it does not start with a capitol letter
N10:51 thru N10:69	R/W 51	Unsolicited message (ASCII message in)	The incoming message ASCII

Poll table #1 reads N10:0 thru N10:31 once a second and places the data into Omnii-Comm database R/W Registers 0 thru 30.

Poll table #2 relates N10:32 thru N10:69 to Omnii-Comm database R/W Registers 31 thru 69.

Note that the timer value for Poll Table #2 is set to zero. This means that the poll is only used to establish a link between PLC memory and the Omnii-Comm data base. Data written to the database is sent back to the source registers in the PLC.

The protocol extension table for connector P3 (the ASCII port) defines the data types and offsets for each message type.

To send an ASCII message the PLC Ladder logic transfers String Text files to the Send Data area based on contact closures and also sets bit 0 of the command flag word.

Incoming messages that start with a capitol letter are stored in the RD data area and transferred by PLC program to ST20:10

Incoming messages that do not start with a capitol letter are stored in the Unsol data area and transferred by PLC program to ST20:11

Address	0	1	2	3	4	5	6	7	8	9
N10:0	0	17	21608	26995	8297	29472	29556	29289	28263	8227
N10:10	13056	0	0	0	0	0	0	0	0	0
N10:20	0	0	0	0	0	0	0	0	0	0
N10:30	38	21608	26995	8297	29472	24864	29551	27753	25449	29797
N10:40	21632	28005	29555	24935	25888	8224	8224	8224	8224	8224
N10:50	38	29800	26995	8297	29472	24942	8309	28275	28524	26979
N10:60	26996	25956	8301	25871	29537	26469	8224	8224	8224	8224
N10:70	0	0	0	0	0	0	0	0	0	0

Command Flag Register

Send byte count and data

Solicited message byte count and data

Unsolicited message byte count and data

Address	LEN	STRING TEXT
ST20:0	17	This is string #0
ST20:1	17	This is string #1
ST20:2	17	This is string #2
ST20:3	17	This is string #3
ST20:4	0	
ST20:5	0	
ST20:6	0	
ST20:7	0	
ST20:8	0	
ST20:9	0	
ST20:10	38	This is a solicited message
ST20:11	38	this is an unsolicited message

Incoming messages that start with a capitol letter

Incoming messages that do not start with a capitol letter