

From : G8MNY

Serial Interface Connections

(Updated Mar 05)

25 Way D-Type Serial:

1 - NC	7	- Signal Ground		
2 - Transmit Data	8	- Carrier Detect	1	13
3 - Receive Data	9-19	- NC	x x x x x x x x x x x x x	
4 - Request To Send	20	- Data Terminal Ready	x x x x x x x x x x x x	
5 - Clear To Send	21	- NC	14	25
6 - Data Set Ready	22	- Ring Indicate		
	23-25	- NC		

9 Pin D-Type Serial:

1 - Carrier Detect	6 - Data Set Ready	1	5
2 - Receive Data	7 - Request To Send	x x x x x	
3 - Transmit Data	8 - Clear To Send	x x x x	
4 - Data Terminal Ready	9 - Ring Indicate	6	9
5 - Signal Ground			

RS-232C INTERFACE STANDARD (25Way)

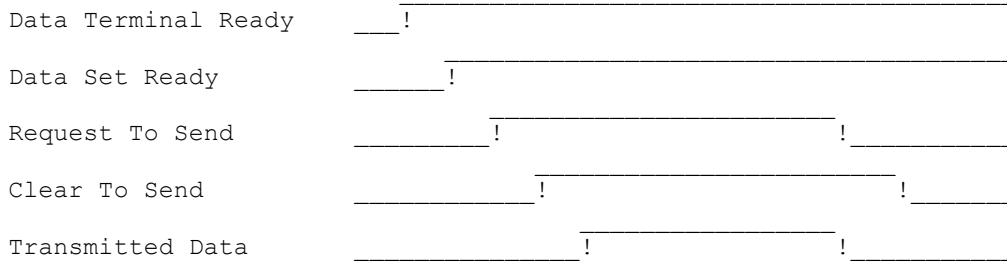
DTE (e.g. computer)	! DCE (e.g. Modem)
Data Terminal Equipment	! Data Communications Equipment

Signal	EIA / CCITT	Pin	Telephone Co.	Signal
Direct	Line Name	No.	Lead No	Direction
-	Protective Ground	1	AA/101	-
-	Signal Ground	7	AB/102	-
-	Transmitted Data	2	BA/103	>
<	Received Data	3	BB/104	-
-	Request to Send	4	CA/105	>
<	Clear to Send	5	CB/106	-
<	Data Set Ready	6	CC/107	-
-	Data Terminal Ready	20	CD/108.2	>
-	Connect Data Set to line	20	* /108.1	>
<	Received Line Signal Detector	8	CF/109	-
-	Speed Select	23	CH/111	>
<	Transmit Signal Element Timing	15	DB/114	-
<	Receive Signal Element Timing	17	DD/115	-
-	Select Standby	11	* /116	>
<	Ring Indicator	22	DE/125	-
-	Test	18	* /*	>

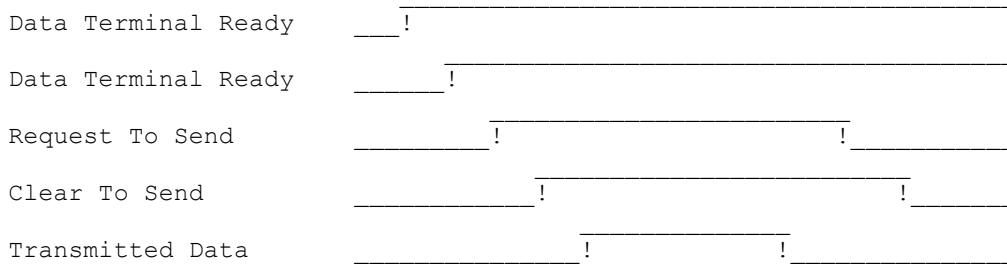
* means non-defined/standardized by EIA / CCITT

Line Loads are not < 3k0, & not > 7k0.
 Voltages not >±3v & not <±15v on load, <±24 for no load.

Switched Timing Sequence (dial-up modem line communication)



Non switched Timing Sequence (direct line connection)



 IBM PC-AT Serial cable DB25 to DB9
 serial adapter on computer (cable connector is female)

25 pin DB25		9 pin DB9	Signal Direction Cable-Computer DCE-ADAPTER
8	Carrier Detect	1	>
3	Received Data	2	>
2	Transmitted Data	3	<
20	Data Terminal Ready	4	<
7	Signal Ground	5	-
6	Data Set Ready	6	>
4	Request to send	7	<
5	Clear To Send	8	>
22	Ring Indicator	9	>

All other pins on the 25 pin connector are unused.

 RS232 x connections. Comprehensive RS-232 computer to Tnc cross reference
 Jumpers if needed, on a three wire RS232. AT the COMPUTER end only.

DB-25:			DE-9:		
RTS	CTS		RTS	CTS	
4	----	5	7	----	8
6	----	8	1	----	4
	----	20		----	6
DSR	DCD	DTR	DCD	DTR	DSR

RS-232 Serial port "3 Wire" Cable wiring for DB-25 to DE-9 or DE-25.

```

Computer DB-25  TNC DE-9      TNC(type 2)DB-25s.
      TO                OR
1 and 7 ----- 5 ----- 1
2 ----- 3 ----- 2
3 ----- 2 ----- 3
    
```

 RS-232 Serial port "3 Wire" Cable wiring for DE-9 to DE-9 or DE-25.

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Computer DE-9      TNC DE-9      TNC(type 2)DB-25s.
      TO                OR
5 and Shell ----- 5 ----- 1
2 ----- 2 ----- 3
3 ----- 3 ----- 2
    
```

 "Eight-Wire" RS-232 Cable (conventional)

Computer	to	TNC
DB-25 or DE-9	to	DE-9p or DB-25S
1	shell	5 1
2	3	3 2
3	2	2 3
4	7	7 n/c
5	8	8 5
6	6	6 6
7	5	5 7
8	1	"connected sig" 1 8
20	4	n/c 20

 Serial Port Cross Reference.

	Conventional	IBM AT	TNC-320	TNC_2
pin Function	DB-25 p/s	De-9P	DE-9p	DB-25s
FGround	1	shell	5	1
Txd	2	3	3	2
RxD	3	2	2	3
RTS	4	7	7	n/c
CTS	5	8	8	5
DSR	6	6	6	6
Sig Earth	7	5	5	7
DCD	8	1	1 (a)	8 (a)
test	9	V+	-	+12 V
test	10	V-	-	-12 V
DTR	20	4	n/c	20
RI	22	9	9 (b)	(23)

(a) This line goes high when a connection exists.

(b) RFDCD (Also used for multi_node NET/ROM and ROSE)

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73 De John, G8MNY @ GB7CIP