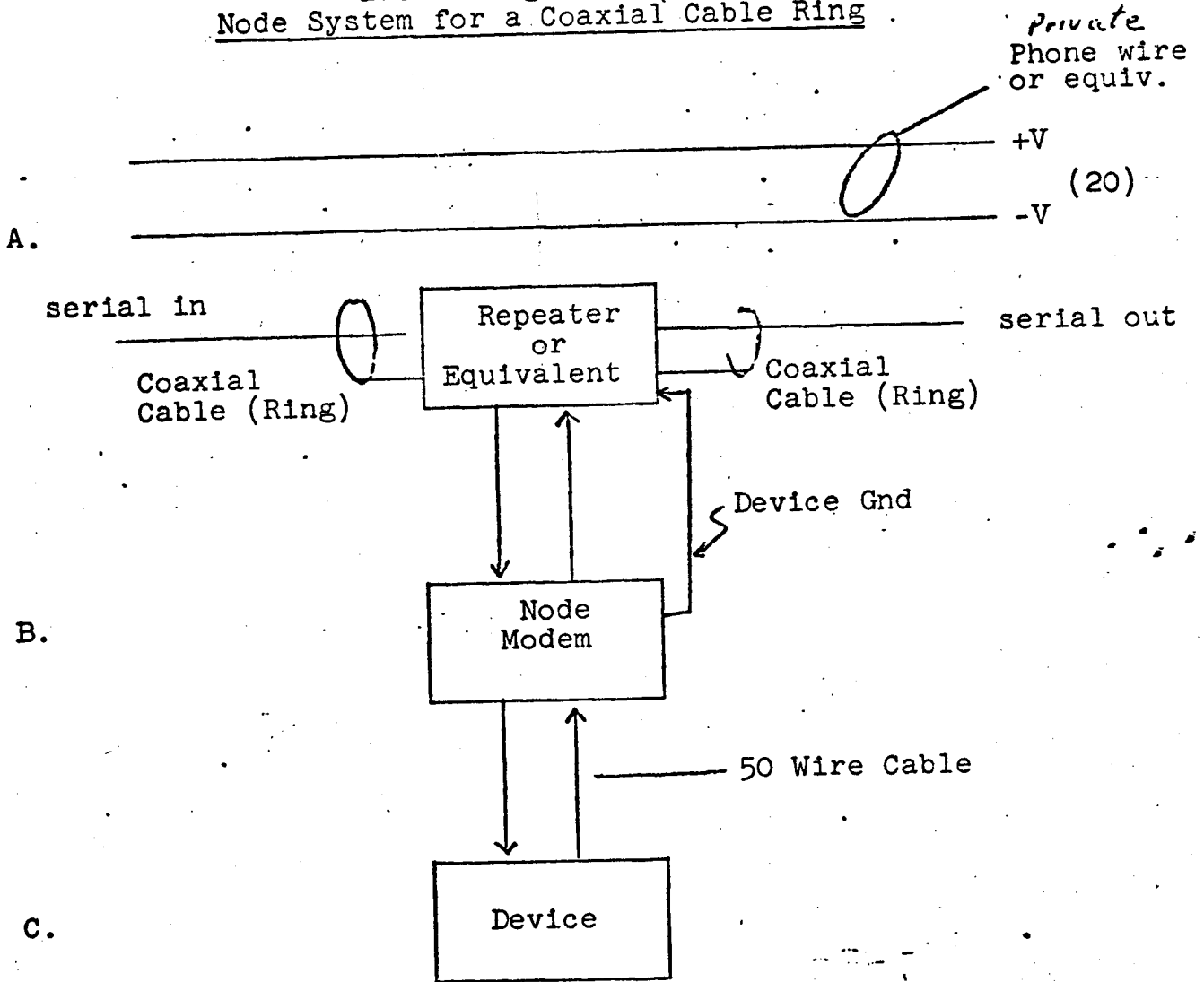


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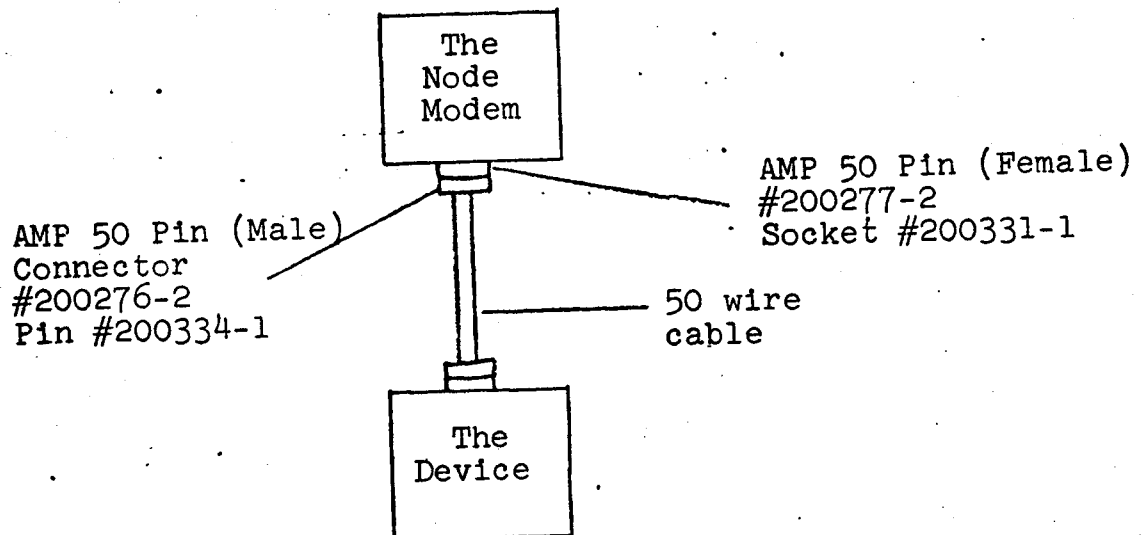
SPECIFICATIONS FOR THE
NODE MODEM INTERFACE

Block Diagram of the
Node System for a Coaxial Cable Ring



B. The "Node Modem"

The Node Modem has only one plug for all its connections with a device. Let us assume for the present the "Repeater" or "Directional Coupler" is part of the "Node Modem." The connections then would be as follows:



B.-C. Connections between the Node Modem and the Node Device.

It will also be helpful to refer to 516-11 notes, which are the "Computer Interface Ring Formats".

All connections are in reference to the Node Modem:

- a. "8" output lines.
- b. "8" data input lines.
- c. "8" status input lines.
- d. "8" Device Name input lines.
- e. 3 code lines out
 - (1) Write command
 - (2) Read data
 - (3) Write data
- f. "2" Strobe lines out.

Co 1	1st eight
Co 2	2nd eight

- g. "3" control lines in
 acknowledge permit
 device interrupt
 reset
- h. "4" lines for power
- i. "4" spares

The eight output lines are for data or commands when the Mode Interface is receiving write instructions from the computer interface.

The two strobes, Co 1 and Co 2, divide the text of the message into two eight-bit parts as follows:

For Write Data or Write Command -

- 1. Co 1 means that this is the first part (8 bits) of the text.
- 2. Co 2 (occurs 2 usec after Co 1) means that this is the second part (8 bits) of the text.

For Read Data -

- 1. Co 1 means the Node has read in the first part (8 bits) from the device.
- 2. Co 2 (2 usec later) the Node has read in second part (8 bits) from the device.

Device Control Lines to the Node Modem -

- 1. Permit acknowledge (PA) is used to let the interface receive and acknowledge in a normal manner. In case of a change in status of the device, such as a paper tape punch running out of paper tape, the device will bring down the PA line. This will force the Node Modem to ignore all messages except a request for status or an all-station call for service.
- 2. Device Interrupt (I). The Node Modem inserts ones between messages when this line is high.
- 3. Reset is created by the device zeroing all conditions for the Node Modem starting conditions (once power is applied).

NODE TO DEVICE CONNECTOR

AMP #200277-2

PIN #	NAME	PIN #	NAME
A.	Out 1	d.	Device Name IN 1
B.	Out 2	e.	" " IN 2
C.	Out 3	f.	" " IN 3
D.	Out 4	h.	" " IN 4
E.	Out 5	j.	" " IN 5
F.	Out 6	k.	" " IN 6
H.	Out 7	m.	" " IN 7
J.	Out 8	n.	" " IN 8
K.	Data IN 1	p.	Write Command
L.	Data IN 2	r.	Write Data
M.	Data IN 3	s.	Read Data
N.	Data IN 4	t.	CO 1
P.	Data IN 5	u.	CO 2
R.	Data IN 6	v.	Device Interrupt
S.	Data IN 7	w.	RESET
T.	Data IN 8	x.	Permit Acknowledge
U.	Status IN 1	y.	Spare
V.	Status IN 2	z.	Spare
W.	Status IN 3	AA.	Spare
X.	Status IN 4	BB.	Device Gnd.
Y.	Status IN 5	CC.	Device Gnd.
Z.	Status IN 6	DD.	+5 volts
a.	Status IN 7	EE.	+5 volts
b.	Status IN 8	FF.	gnd (+5)
c.	Gnd (+5)	HH.	gnd (+5)

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PIN CONNECTIONS FOR NODE MODEM

Side A	Side B	516 B
1 VCC	1 VCC	
2 SR1 Output Bit 1 LSB	2 DN8 $\overline{\text{CREADY}}/\overline{\text{IDWIF}}$	MSB 8
3 SR2 " " 2	3 DN7 $\overline{\text{CREADY}}/\overline{\text{IDRIF}}$	In 9
4 SR3 " " 3	4 DN6 Device Name Bit 6	10
5 SR4 " " 4	5 DN5 " " " 5	1st 11
6 SR5 " " 5	6 DN4 " " " 4	Time 12
7 SR6 " " 6	7 DN3 " " " 3	13
8 SR7 " " 7	8 DN2 " " " 2	Slot 14
9 SR8 Output Bit 8 MSB	9 DN1 Device Name Bit 1	LSB 15
10 ID8 Input Data Bit 8 MSB	10 DSO Status Bit 0	MSB 0
11 ID7 " " " 7	11 DS1 " " 1	1
12 ID6 " " " 6	12 DS2 " " 2	In 2
13 ID5 " " " 5	13 DS3 " " 3	2nd 3
14 ID4 " " " 4	14 DS4 " " 4	Time 4
15 ID3 " " " 3	15 DS5 Status Bit 5	Slot 5
16 ID2 " " " 2	16 $\text{DWF} \wedge \overline{\text{AWF}}$	6
17 ID1 Input Data Bit 1 LSB	17 $\text{DRF} \wedge \overline{\text{AWF}}$	LSB 7
18 $\overline{\text{WC}}$ Write Command to Device	18 CO1 1st 8 Bits	
19 $\overline{\text{WD}}$ Write Data to Device	19 GND	
20 $\overline{\text{RD}}$ Read Data from Device	20 CO2 2nd 8 Bits	
21 APD Acknowledge Permit Device	21 GND	
22 DI Device Interrupt	22	
23 RESET Node Modem Reset from Device	23 P2 Parity (W) Text	
24 CREADY Computer Ready	24 P3 Parity (W) Text	
25 RD VAK Reset Device or Acknowledge	25 DWI Device Write Interrupt	
26 GND	26 DRI Device Read Interrupt	
27 +24	27 AW Awake	
28 -24	28 GND	
29 CØX1 IN (Data)	29 CØX12 IN(GND)	
30 CØXØ1 OUT (Data)	30 CØXØ2 OUT(GND)	
31 GND	31 GND	