

PERCOM DATA CO.

TM-CIS-30-09

TECHNICAL MEMO

CASSETTE DATA SYSTEMS

DECEMBER 15, 1977

SUBJECT: USING THE PERCOM CIS-30 WITH THE MITS 680B COMPUTER

ALTHOUGH THE PERCOM CIS-30 WAS DESIGNED FOR THE SWTP 6800 COMPUTER, IT HAS PROVEN TO BE VERY ADAPTABLE TO NEARLY ALL COMPUTERS. THE MITS 680B IS VERY EASILY MODIFIED TO ACCOMMODATE CONNECTION TO THE PERCOM CIS-30. IT IS NECESSARY TO MAKE SEVERAL CONNECTIONS TO THE BOTTOM SIDE OF THE 680B MAIN BOARD AND TO THE 25 PIN I/O CONNECTOR ON THE BACK PANEL OF THE COMPUTER. THE WIRING WILL HAVE A BETTER APPEARANCE IF YOU COMPLETELY REMOVE THE 5-PIN MINIATURE MALE CONNECTOR (J3) FROM THE 680B MAIN BOARD AND WIRE DIRECTLY FROM THE MAIN BOARD TO THE 25-PIN I/O CONNECTOR. THE FOLLOWING DIRECTIONS ASSUME THIS MEANS OF CONNECTION TO THE MAIN BOARD. YOU MAY WISH TO MAKE ALL CONNECTIONS TO THE MAIN BOARD FIRST THEN DRESS AND TIE THE WIRES INTO A CABLE BEFORE CONNECTING TO THE 25-PIN I/O CONNECTOR.

PERFORM THE FOLLOWING MODIFICATIONS TO THE 680B MAIN BOARD:  
MAKE ALL CONNECTIONS ON THE BOTTOM SIDE OF THE MAIN BOARD.

1. CUT THE CIRCUIT TRACE BETWEEN IC-Z PIN 10 AND IC-JJ PIN 4. BE CAREFUL NOT TO CUT THE ADJACENT TRACE. THIS TRACE IS ON THE TOP OF THE MAIN BOARD BETWEEN IC-Z (BAUD RATE GENERATOR) AND IC-JJ (ACIA).
2. CONNECT IC-Z PIN 10 TO IC-Y PINS 12 & 13
3. CONNECT IC-JJ PIN 4 TO IC-Y PIN 8
4. INSTALL A 470 OHM RESISTOR IN R204. REFER TO THE DRAWING ON PAGE 29 OF THE 680B ASSEMBLY INSTRUCTIONS FOR THE LOCATION OF R204.
5. REMOVE Q100, R101, D100, AND D101
6. INSTALL A 1K RESISTOR IN R100.
7. JUMPER TOGETHER WHAT WERE FORMERLY THE BASE AND COLLECTOR PADS OF Q100. (THE EMITTER PAD OF Q100 IS MARKED WITH AN E)
8. STRAP THE BAUD RATE SELECTION FOR 1200 BAUD. REFER TO THE 680B ASSEMBLY INSTRUCTIONS ON PAGES 31 & 32.

WIRE BETWEEN THE MAIN BOARD AND THE 25 PIN I/O CONNECTOR AS FOLLOWS

FROM TO I/O CONN PIN:

J3-1	3	
J3-2	2	
J3-3	10	
J3-4	7	USE #20 GA WIRE
J3-5	6	

FROM TO I/O CONN PIN:

+5VDC	9	+5VDC IS ON THE RIGHT END OF R101. USE #20 GA WIRE.
IC-Y PIN 9,10	17	CLOCK INPUT TO ACIA
IC-Y PIN 11	15	CLOCK OUT FROM BAUD RATE GEN

CONNECTION BETWEEN THE CIS-30 AND THE 680B:

CIS-30	680B I/O CONN.	FUNCTION
10	6	READER CONTROL
11	9	+5 VDC
12	7	GROUND
13	10	-16 VDC
14	2	TERM. OUTPUT DATA
15	3	TERM. INPUT DATA
16	15	CLOCK OUTPUT
17	17	CLOCK INPUT

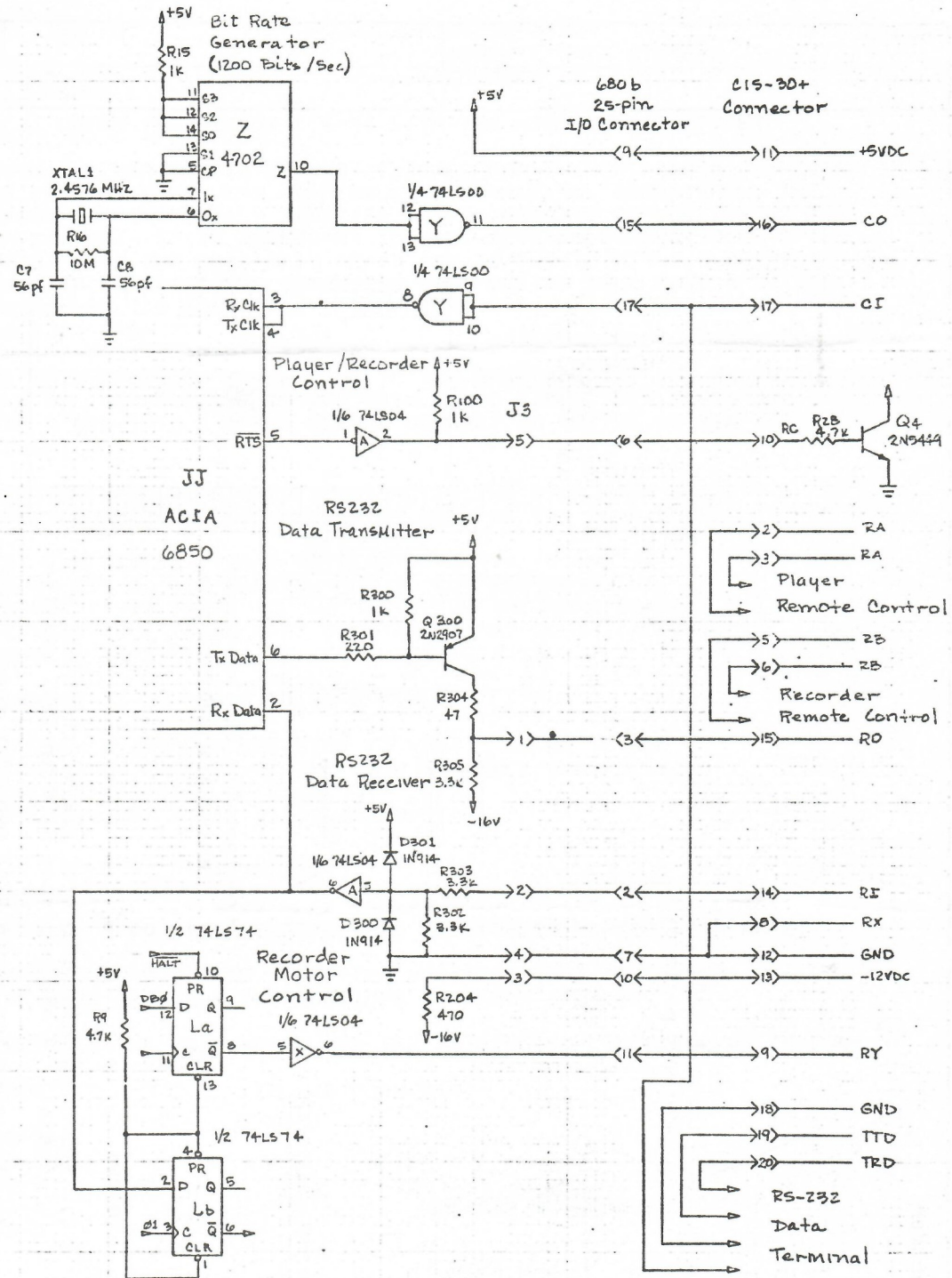
CONNECT YOUR RS-232 DATA TERMINAL TO THE CIS-30 AS SHOWN ON PAGE 9 OF THE CIS-30 INSTRUCTION MANUAL. SINCE THE 680B MONITOR/OPERATING SYSTEM SOFTWARE DOES NOT TURN ON THE READER CONTROL AUTOMATICALLY, IT IS NECESSARY TO FLIP THE "TAPE" SWITCH TO "ON" TO LOAD A PROGRAM. IN ALL OTHER RESPECTS THE OPERATION SHOULD BE AS DESCRIBED IN THE 680B INSTRUCTION MANUAL. THE BAUD (DATA) RATE OF THE SYSTEM WILL BE CONTROLLED BY THE RATE SWITCH ON THE CIS-30.

POSTSCRIPT 1/5/77

REMOVE RESISTOR R27 (4.7K) FROM THE CIS-30+ CIRCUIT CARD IF YOU INSTALL THE REMOTE CONTROL RELAYS. THIS PROVIDES MORE DRIVE CURRENT TO THE TRANSISTOR WHICH SWITCHES THE READER RELAY.

THE ATTACHED DRAWINGS ARE COURTESY OF JIM CRANE. MR. CRANE HAS IMPLEMENTED THE ABOVE MODIFICATIONS WITH A FEW IDEAS OF HIS OWN ADDED (SUCH AS USING THE BAUDOT INTERFACE CIRCUIT TO CONTROL THE RECORDER RELAY).

# 680b INTERFACE WITH CIS-30+

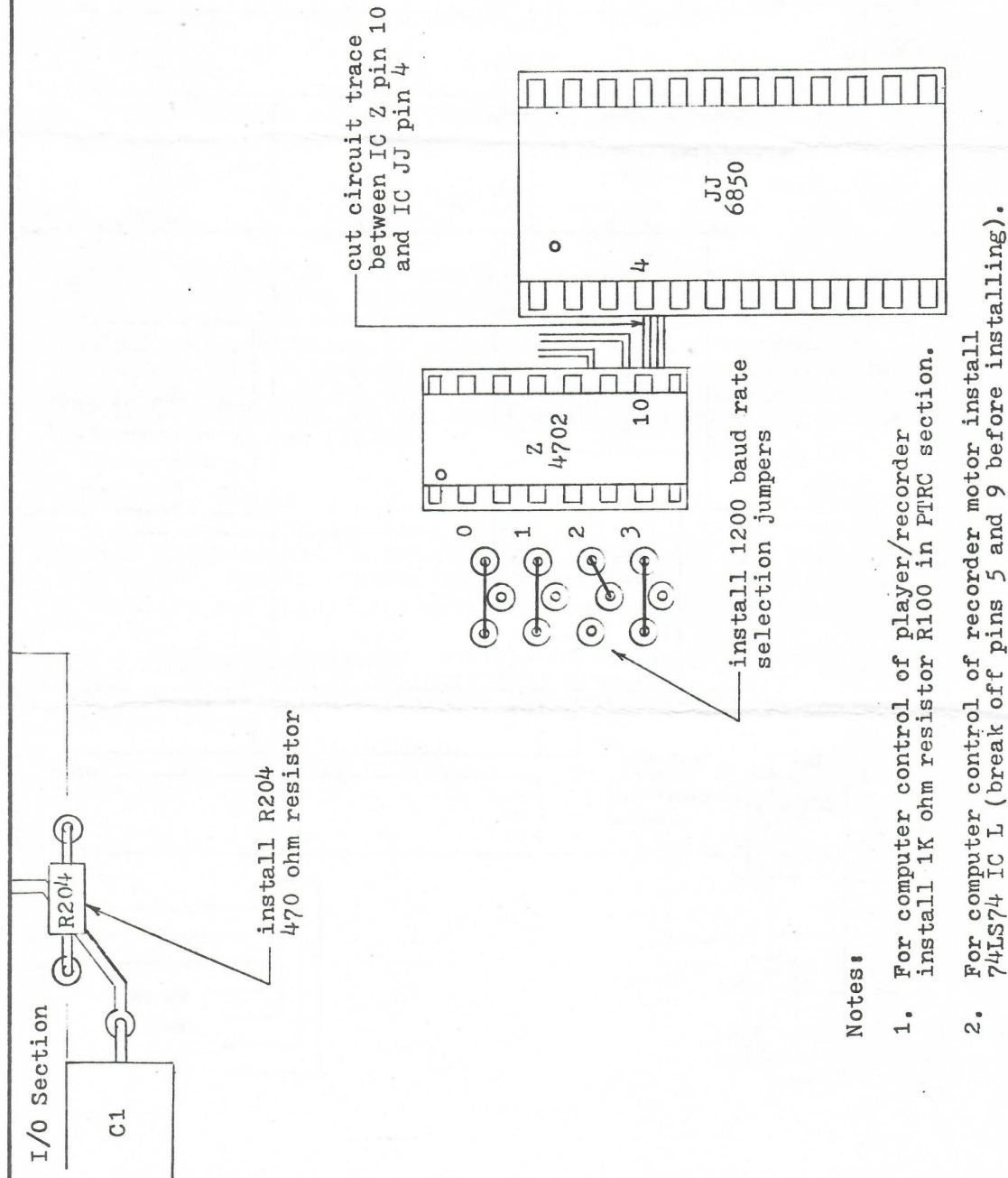




# TECHNICAL DESIGN NOTE

Project # \_\_\_\_\_ Project Name \_\_\_\_\_ Page \_\_\_\_\_

Program:	Programmer:	Date:
Subject:	Approved:	Revision: <input checked="" type="checkbox"/> No. _____



## Notes:

1. For computer control of player/recorder install 1K ohm resistor R100 in PTRC section.
2. For computer control of recorder motor install 74LS74 IC L (break off pins 5 and 9 before installing).