

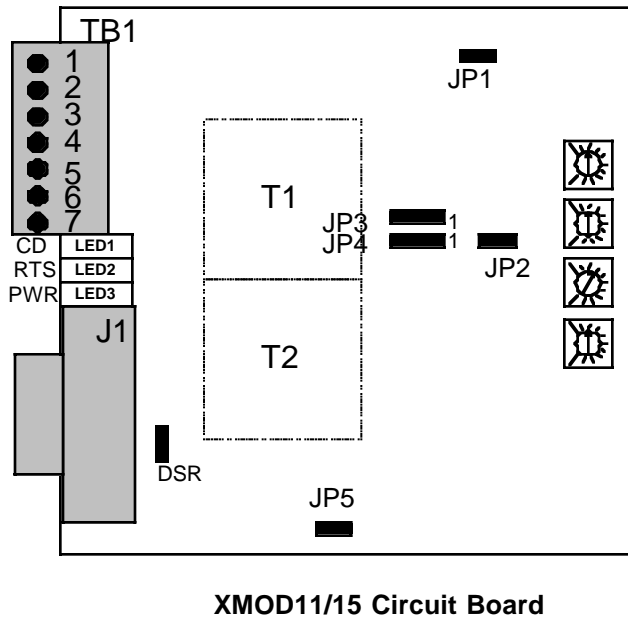
Bell 202 HDX

Model: XMOD15 Telemetry Modem

- 4 Wire Transformer Coupled Leased / Wire Line Capable
 - *2 Wire Leased/Wire Line, 4 Wire Radio
 - *(factory default setting)

User Information

Bell 202 1200 Baud Radio/Leased Line Modem XMOD11 / XMOD15



Jumper Settings

PTT JP1 (Radio use)

IN Pull PTT to ground
 OUT Pull PTT through 1K resistor

Mode Select

2 Wire (JP2 IN) (JP3 2-3) (JP4 1-2)
 4 Wire (JP2 OUT) (JP3 2-3) (JP4 2-3)
 Radio (JP2 OUT) (JP3 1-2) (JP4 1-2)

RTS Control JP5

IN Key RTS Constant (Testing only)
 OUT RTS follows Serial RTS (default)

RD

TD

CTS

DR

TB1 Connections

(1,2,3 - same for all modes)

1 12-24VDC Power
 2 Common
 3 PTT (Radio use)

Leased Line (2 Wire Mode) Default

4/5 TX/RX Data

Radio (3 Wire Mode)

6 Receive Data
 5 Transmit Data
 (2 ...Common to Radio Common)

(TB1 Connections (Continued))

4 Wire Hookup (XMOD15)

TB1-4,5 Tx Data
 TB1-6,7 Rx Data

J1 DB9 Serial Connections

1 Carrier Detect (CD)
 2 Receive Data (RD)
 3 Transmit Data (TD)
 5 Signal Ground
 7 Request to Send (RTS)
 8 Clear to Send (CTS)
 4-6 DTR - DSR

Indicator Lights

LED 1 Carrier Detect
 LED 2 RTS
 LED 3 Power

Specifications:

Modulation:		Bell 202 Half Duplex
Baud Rate		Nominal 1200 (<1800)
Sensitivity:		to -40 dB
Serial I/F:		RS232
Coupling:	2/4 Wire:	Transformer
	Radio:	Capacitor
TX Level:		Adjustable: -8db to -25db
RX Level:		Adjustable attenuation
CTS Delay:		Adjustable: 15ms to 1 sec
CTS Drop Delay:		Adjustable: 3ms to 50 ms

Adjustments

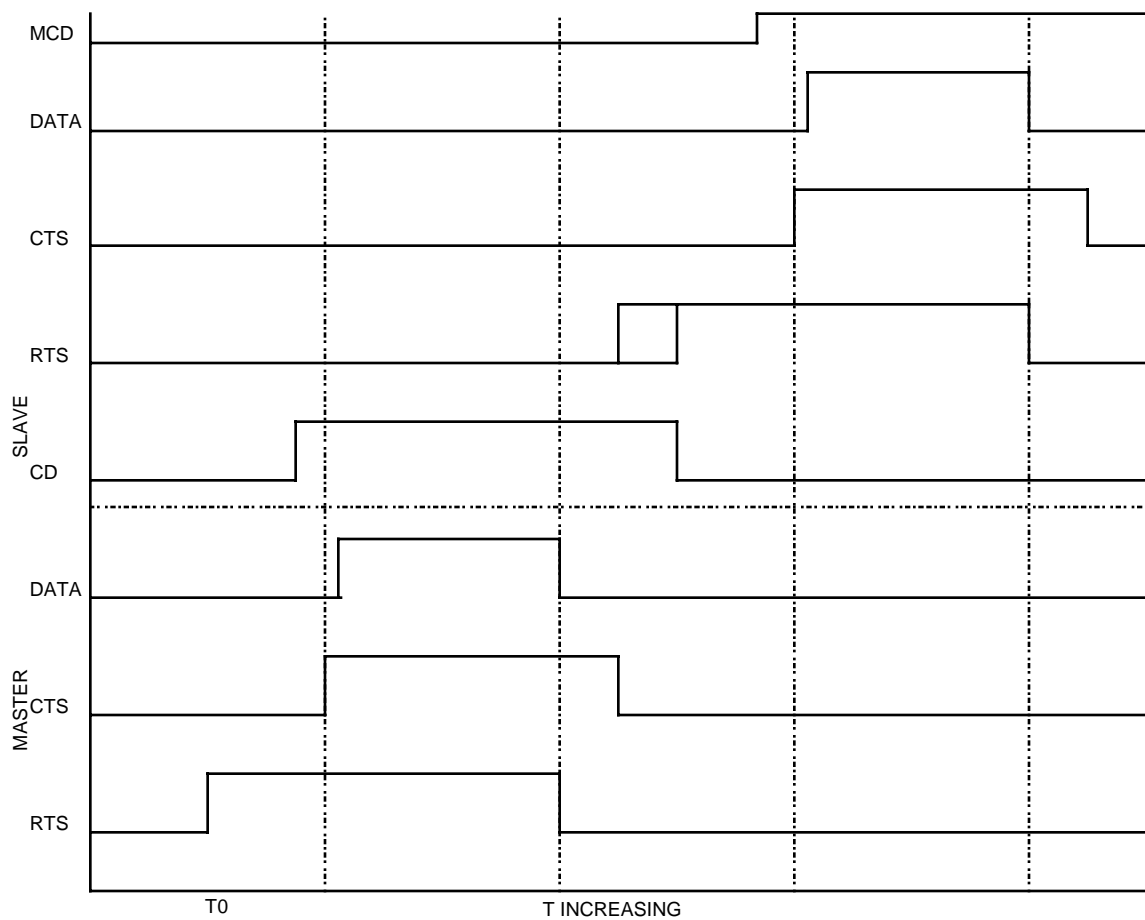
<u>Pot Label</u>	<u>Function</u>	<u>Direction</u>
RD	Rx Data Attenuation	CCW to attenuate
TD	Tx Data Level	CW to increase level
CTS	Clear To Send delay	CW to increase delay
DR	CTS Drop delay	CW to increase delay

(CW= Clockwise)
(CCW= Counter Clockwise)

Typical Half Duplex Master Slave Signal Operations

The following diagram illustrates a generic time sequence for a half-duplex communication sequence. It starts with the Master raising its RTS line. (see bottom line in diagram) Some time later the modem raises CTS to the Master.

The Slave end sees carrier from the master and begins its receive. At some time after the slave's receive is finished, it begins his transmit sequence with the response message. As the slave begins its response the master's carrier detect line goes high (ON). (see top line in diagram)



Mounting Dimensions

