



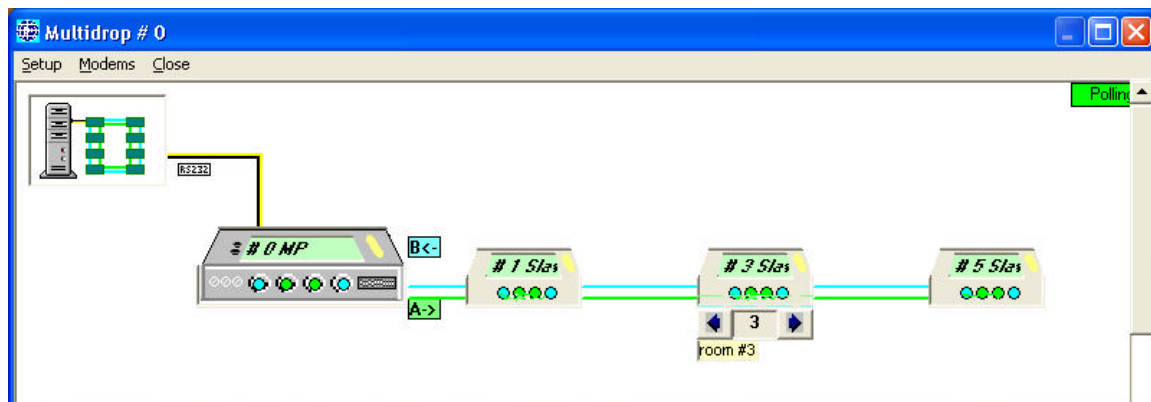
PX-2300 Troubleshooting Guide



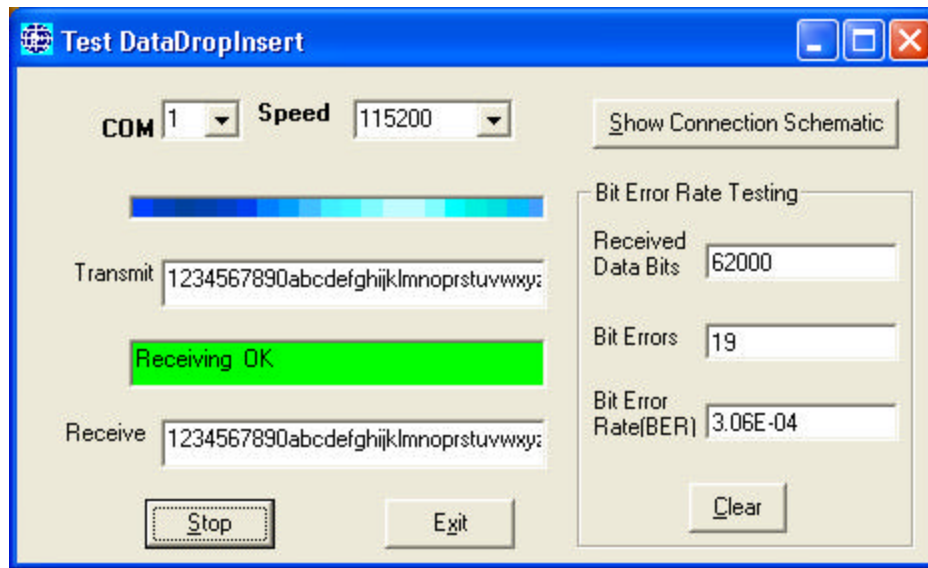
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1. Installation procedure for the ring with PC signal generator :

- set master modem DIP switch: 1, 2, 4 and 10 positions up / master primary, string mode, driver RS-232, local loop /
- connect PC serial port RS-232 /DB9/ to master modem / DB25/ by cable # 1 and adapter / RJ 45 – DB25 /
- set DIP switches of all slave modems :
 - position 4 / RS-232/ up ,
 - others down
- fiber optic links for modems :
 - master optical port TXA connect to slave # 1 port RXA
 - master optical port RXB connect to slave # 1 port TXB
 - slave #1 optical port TXA connect to slave # 2 port RXA
 - slave #1 optical port RXB connect to slave # 2 port TXB , etc
 - modems will work in string mode on the right side of the master



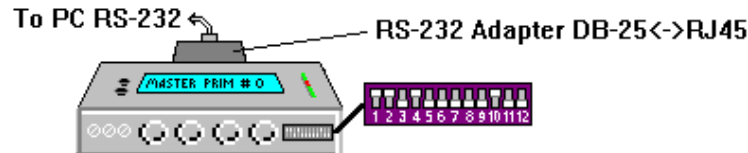
- power on all modems
- start PC testing program (D:/Test/TestDropInsert.exe). This program generate digital sequence and send it to PC serial port RS-232
- data stream flow through the master modem socket / DB25/
- as master modem set on the local loop mode , data go back to PC
- PC compare sent and received data and show "Receiving OK " or " Receiving Error "



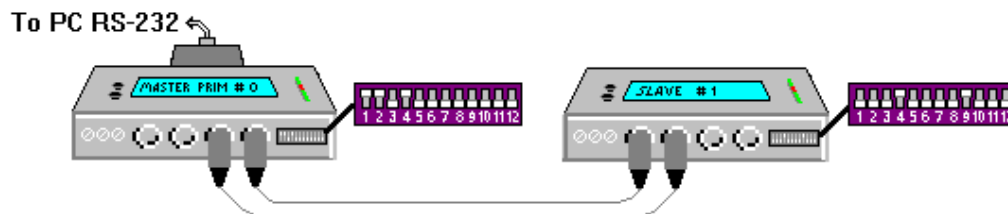
- if you have “Receiving OK “ then set master modem DIP switch : position 10 /local loop/ down and on slave # 1 set position 9 /remote loop/ up and push button “ Stop / Run “ on testing program
- if you have again “ Receiving OK “ , set slave # 1 DIP switch : position 9 /remote loop/ down and on slave # 2 set position 9 up , etc
- if you have message “ Receiving Error “ need to check / change modem or fiber optic cable
- two lights of the modem are important for troubleshooting:
 - link A is lit if optic receiver of the modem get carrier from transmitter by fiber optic line A , from master or slave.
 - if this light is not lit - then transmitter, receiver or fiber optic cable are broken
 - need to change optic cable or modem
 - link B has the same diagnostic .
- if you pass all slaves , connect last slave modem # X to master modem by fiber optic cable :
 - master optical port TXB connect to slave # X port RXB
 - master optical port RXA connect to slave # X port TXA
 - **modems will be working in ring mode, using driver RS-232,** if you set DIP switch :
 - on master modem position 1,2,3,4 up
 - on slave modems position 3,4 up

- **Warning** : you can change modem address when the power is on , but DIP switch position 1 , 2 , 3 retrieve only one time when power turns on or restart microcontroller /if you change DIP switch - turn off power and then turn on or restart modem by buttons /

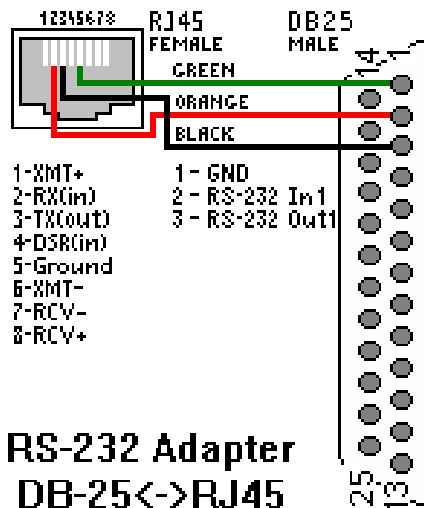
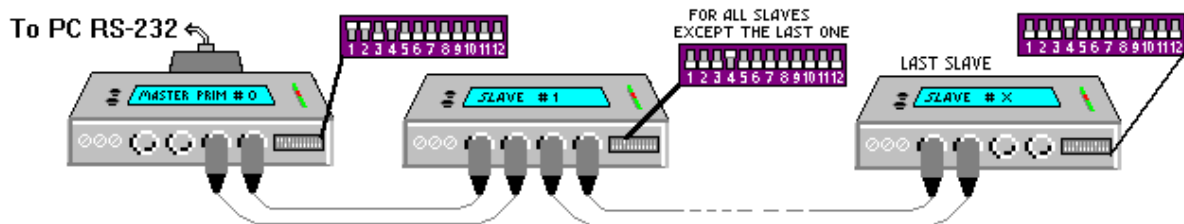
Check Modem in Local Loop Mode

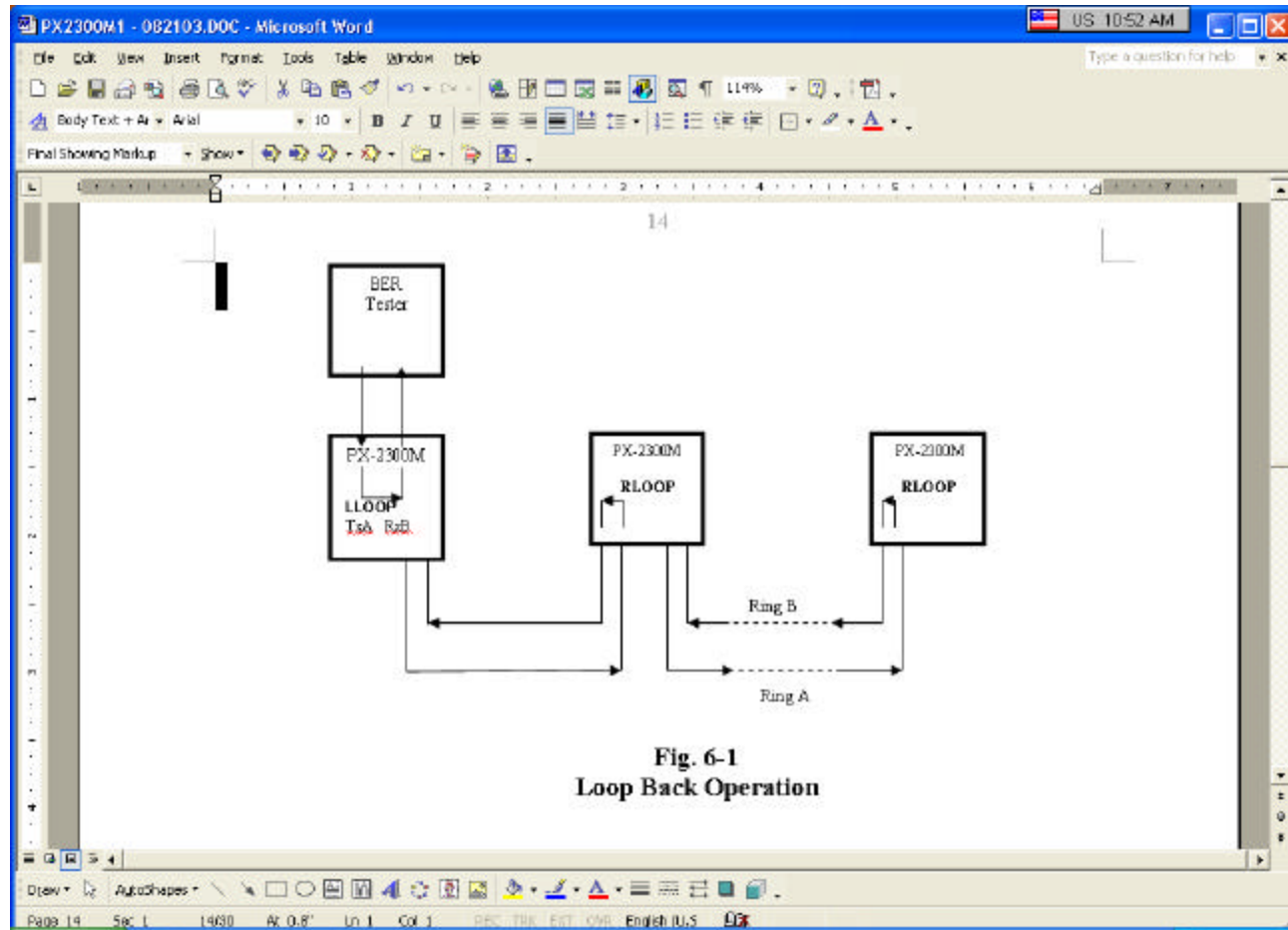


Check Modems with one Slave in Remote Loop Mode



Check Modems with several Slaves in Remote Loop Mode

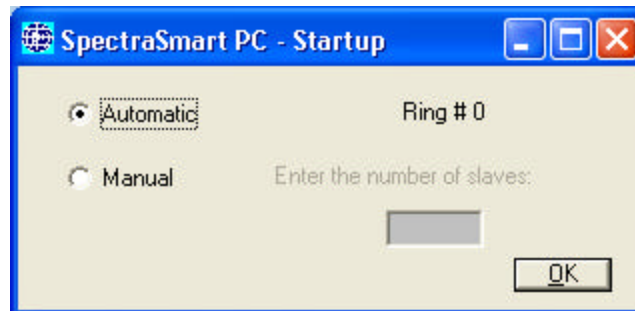




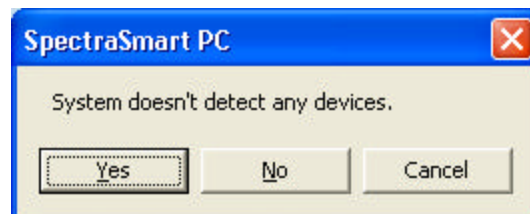
2. SpectraSmart PC can not recognize master modem :

- check front panel DIP switch : first three / 1,2,3 / positions should be up , others down
- open up the cover and set the 3-pin switch to the master mode
- rotary switch of master modem set the address 000
- connect PC comport RS-232 /DB9/ to master modem / RJ 45 / by cable # 1
- temporary make fiber optic links for master modem to itself :
 - optical ports TXB connect to RXB
 - optical ports TXA connect to RXA
 - master modem will be working as ring without slaves
- power master modem on

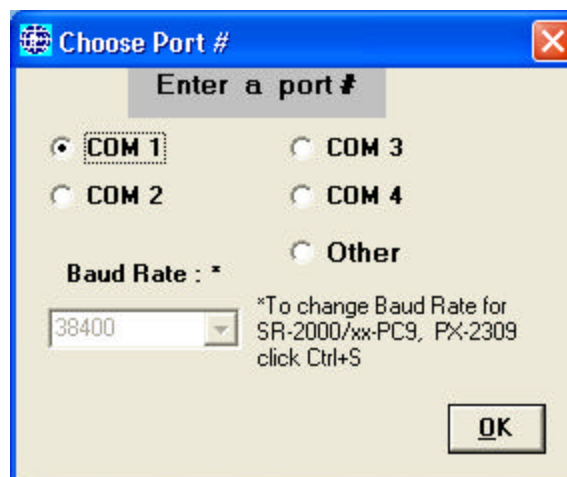
- push button # 1 and check on the modem display “selfhealing ring – master prim # 0”
- start SpectraSmart PC program . After Logon must appear the frame:



- if system does not recognize master modem and this will be :

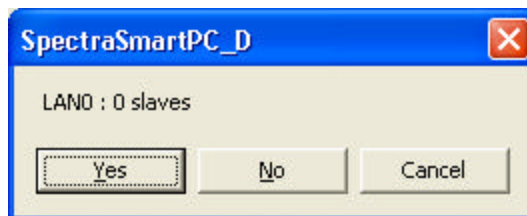


- in this case need to do :
 - change master modem
 - check PC serial RS-232 port , click Ctrl + P on copyright screen or frame “SpectraSmart PC Net” top menu – Configuration – Change Port:

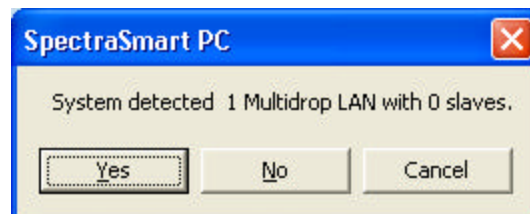


Baud Rate must be 38400.

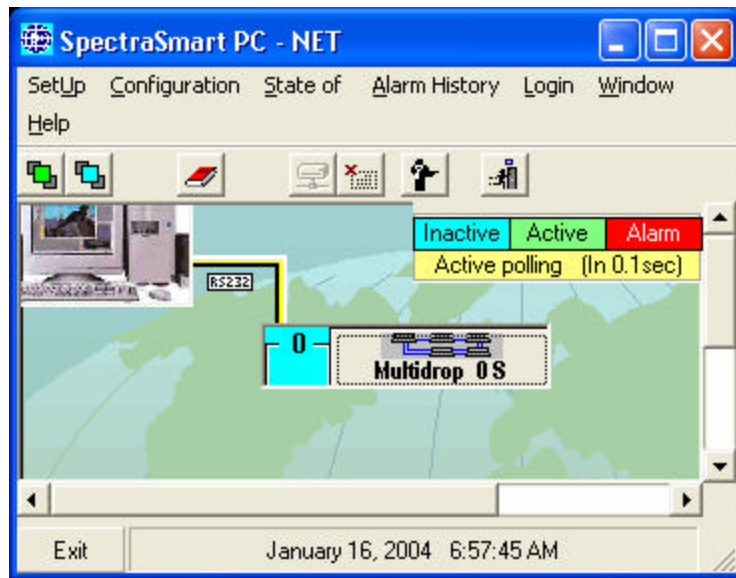
- if you use foreign language /not English/ Windows platforms try to do :
 - In Windows 2000, go to Control Panel -> Regional Options -> in “General” tab make sure that in “Language settings for the system” ‘Western Europe and United States’ is checked -> press “Set default ...” button -> choose “English (United States)” from the pop-up “Select System Locale” menu -> press “Apply” button and when you will be prompted to reboot the machine say “Yes”
- call to Meridian Technologies Inc. for tech. support
- if system recognized master modem , click OK.



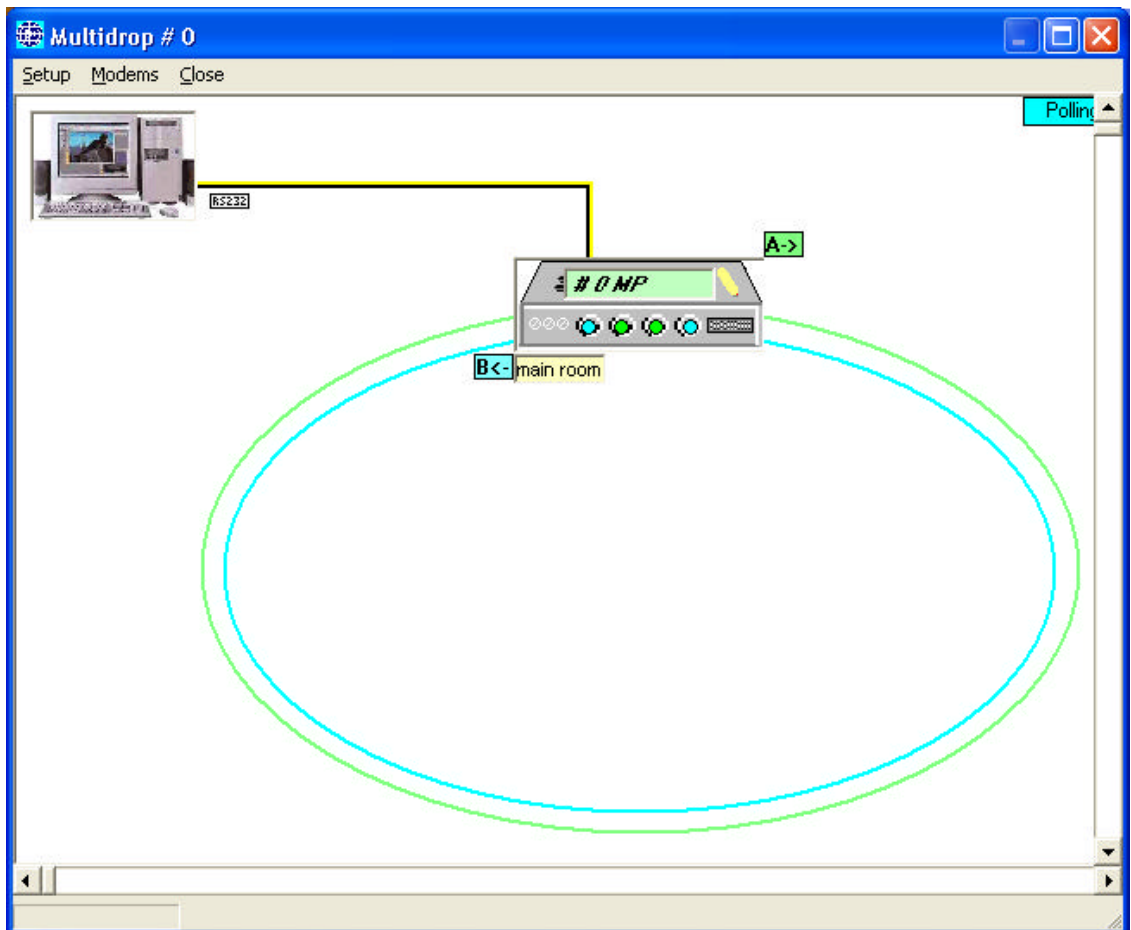
- system asks you to confirm : ring # 0 with slave quantity 0 .
- click “Yes“, and after “AutoDiscovery in progress” frame will be appeared :



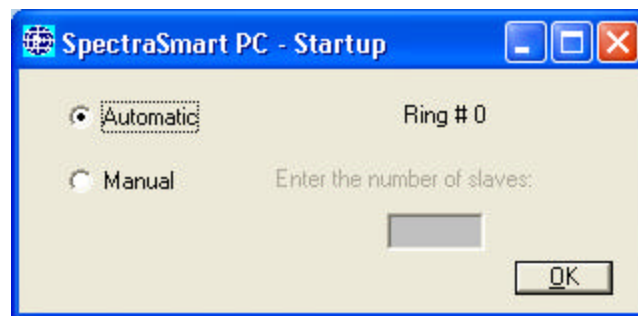
- click “Yes “ and frame is appeared :



- click right button of the mouse on small blue box and activate it. Then click left button of the mouse on the main box of Multidrop and frame is appeared:



- you can disconnect one of the fibers , this circle change color to red and flashing
- if master modem is working OK with PC , connect master to slaves by optic fibers :
 - check DIP switch position on all slaves , only position 3 has to be up
 - address / rotary switches / for first slave must be 1 , next 2 , etc
 - master modem optical port TXA connect to slave # 1 RXA and master RXB to slave # 1 TXB and etc
 - check on the all slave displays “selfhealing ring – slave # 1”, next # 2 and etc
- connect master modem to PC by cable # 1 and start SpectraSmart PC
- on the frame “ Startup” click option “ Manual” and enter the number of slaves real quantity XX of slaves on the ring



- click OK , go ahead and system show on the screen ring with master and slaves quantity XX . Then system is testing real ring and show places where the problems are.

3. Check Ring by Self diagnostic:

- disconnect master modem from PC /remove cable # 1 from modem RJ45 socket / - without PC handshake master modem is working on self diagnostic mode
- restart master modem or power turn off /on and master controller account slaves quantity
- check on master modem display “ slave inform. – count slaves XX “
- if XX is real slaves quantity - OK , you can work with ring
- if not - slaves or fiber optic cables have problems
- if there is only one problem : wrong connection or broken modem , master display will show damage place / for example : slave # 18 without power , display show “ net diagnostic - A&B BRK M – 17“
- line A and B is broken after slave # 17
- if slaves or optic links have more than one problem need to use SpectraSmart PC



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