

ZONE	ISSUE	DESCRIPTION	DATE	APPROVAL
-	A	PRODUCTION ISSUE	2004-11	

1. Ensure laser (TX) of the remote card (907-R) is connected by optical fiber to the receiver (RX) of the console card (907-C) and laser (TX) of the console card is connected to the receiver of the remote card.
2. A minimum of 5dB optical attenuation is required for optimum performance. A 10dB fixed attenuator or variable optical attenuator (VOAT) is recommended for testing. Fiber spools are optional, but recommended to provide dispersion.
3. All optical fibers and attenuators must be of the same type, e.g. singlemode (SMF), 50/125um multimode, or 62.5/125um multimode (MMF).
4. Apply +5Vdc power to J7 on both cards using the power harnesses provided. The power source must be capable of providing at least 1A per card. Voltage from the power source must be regulated +5Vdc +/- 0.25Vdc. The power LED on each card should be ON (green).
5. If the optical link is established, the LINK LED on each 907 card will be ON (green). If the optical link is not established, verify that the output power from each laser is good (>-4dBm) and the optical receiver power at each receiver is good (>-24dBm). A fiber optical power meter and test cable are required for these measurements. Ensure all connectors are cleaned prior to mating them.

Video Test:

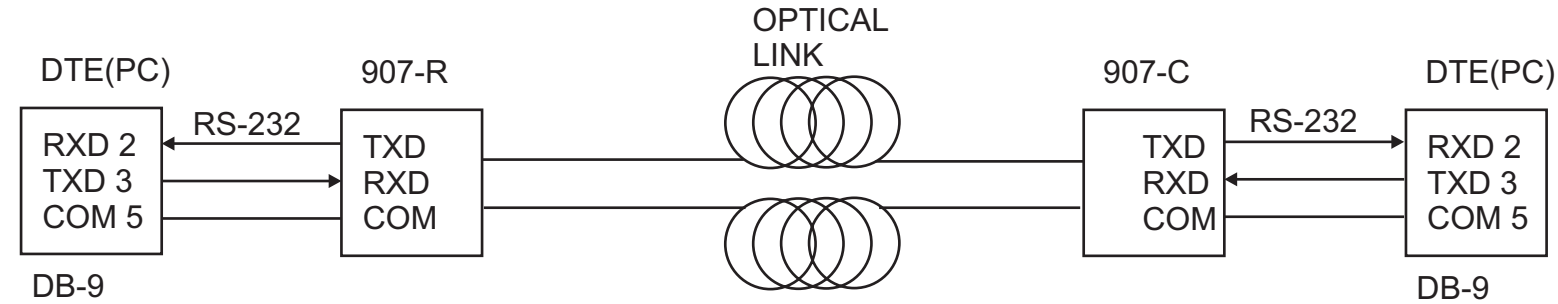
6. Attach a video camera (NTSC or PAL) or video signal generator to video channel #1 on the 907-R and a video monitor to channel #1 on the 907-C. Use video test cables supplied or equivalent 75 ohm coaxial cables with SMB connectors for the 907 cards and BNC connectors for the video equipment. The video #1 LED(VA1) should be ON (green) at each end of the system. A high quality video signal should be visible on the monitor. The other video channels may be tested by attaching test cables accordingly. Any black lines in the video typically indicate a marginal optical link.



TOLERANCES (EXCEPT AS NOTED) 1. DIMENSIONS IN INCHES 2. 3 DECIMAL PLACES +/- 0.005 3. 2 DECIMAL PLACES +/- 0.010 4. FRACTIONS +/- 1/32 5. ANGLES +/- 0.5 DEGREE	THIS DRAWING IS THE PROPERTY OF FOCAL TECHNOLOGIES CORPORATION AND MAY BE NEITHER COPIED, REPRODUCED, OR OTHERWISE DEALT WITH NOR ITS CONTENTS COMMUNICATED TO OTHERS EXCEPT IN ACCORDANCE WITH WRITTEN INSTRUCTIONS RECEIVED FROM FOCAL TECHNOLOGIES CORPORATION.				
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MATERIAL N/A FINISH N/A SCALE NTS	DATE 2004-11-17 FILENAME 907-2014-00A.CDR SHEET 1 OF 2	TITLE MODEL 907 TEST CONFIGURATION	SIZE B TYPE SK	DRAWING NO. 907-2014-00	ISSUE A

RS232 DATA TEST:

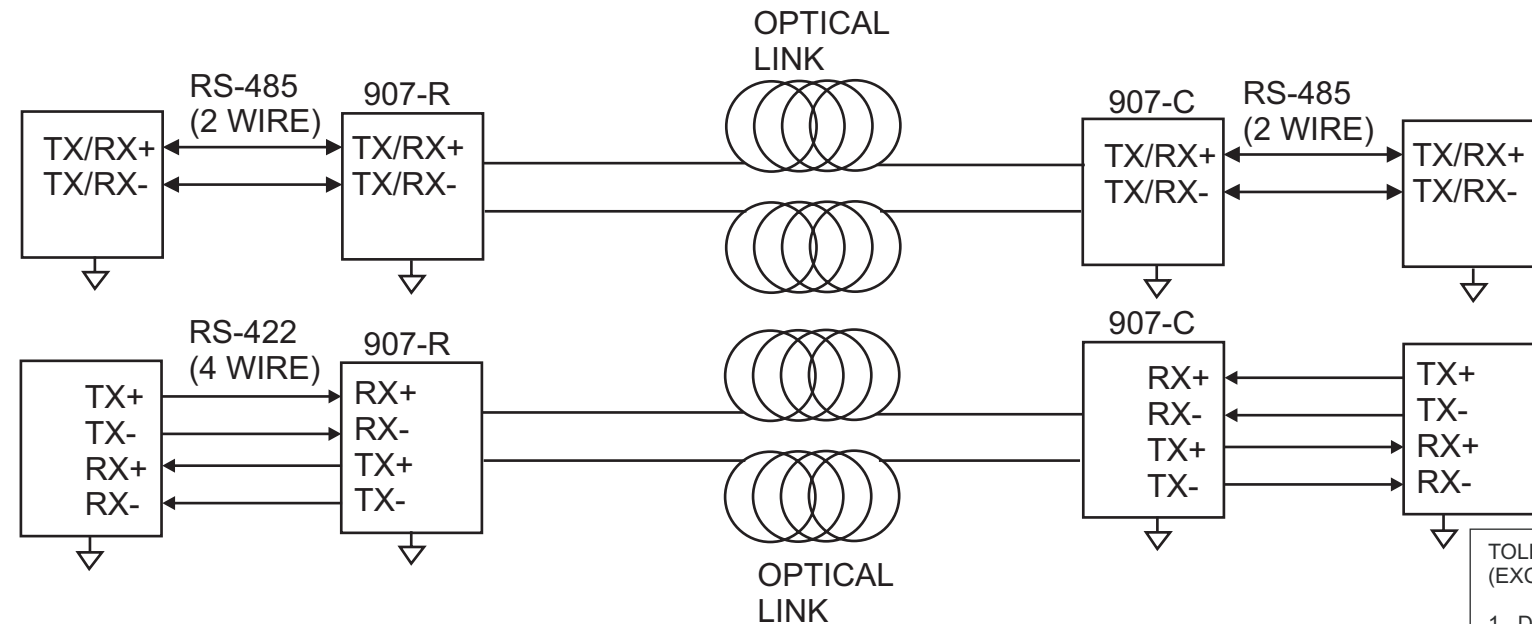
7. Connect one of the four RS-232 data channels at 907-R and 907-C per wiring diagram of the Molex connector in 907-2001-00. Transmit (TXD) and receive (RXD) pins on the 907 cards are referenced to the 907 (transmit pins are driven by the 907). Terminating devices are typically DTE types, such as the COM port on a personal computer (PC). Wiring a DB-9 COM port for PC to PC data transfers is shown below. Other types of port or connectors may require different wiring. A terminal program on the PC may be used to test basic functionality of the RS-232 link.



If an Ethernet card (907-EIB) is added to the system, typically channels 1 - 4 of the 907 are disabled. In this configuration 907 Tx and Rx LED's for data channels 1 - 4 are ON continuously.

RS485 DATA TEST

8. Connect one of the two RS-485/422 data channels at 907-R and 907-C Molex connectors per wiring in 907-2001-00. If RS-485 autosense is required, ensure DIP switches on the 907 cards are set according to 907-2001-00. Transmit (TX+/-) and receive (RX+/-) pins on the 907 cards are referenced to the 907 (TX pins are driven by the 907). See diagram below:



Terminating devices are typically sensors (e.g. sonars) at one end and master controllers (e.g. sonar processors) at the other end. Basic functionality may be tested with a PC to PC link, as in the RS-232 tests, with RS-232 to RS485/422 converter boxes.

High data rates on RS-485 or RS-422 may require use of UTP or STP cable with controlled impedance, typically 100 or 120 ohms. Optional line terminators may be enabled on the 907 per 907-2001-00. There must be a common ground reference between each 907 and data source, typically via power grounds.

9. Data LEDs (DN1, DN2...DN6; UP1, UP2...UP6) indicate presence and direction of traffic. Red data LEDs monitor data received into the 907; green LEDs monitor data transmitted from the 907. Uplink (UP) and downlink (DN) channels and LEDs are independent. Uplink LEDs at one end should be matched by uplink LEDs at the other end. For example, UP2 red LED ON at the 907-R (data received on channel 2) should be matched by UP2 green LED ON at the 907-C (data transmitted on channel 2).

TOLERANCES (EXCEPT AS NOTED)	
1. DIMENSIONS IN INCHES	
2. 3 DECIMAL PLACES +/- 0.005	
3. 2 DECIMAL PLACES +/- 0.010	
4. FRACTIONS +/- 1/32	
5. ANGLES +/- 0.5 DEGREE	
ESD SENSITIVE PARTS MAY BE USED. TAKE PRECAUTIONS.	
MATERIAL	N/A
FINISH	N/A
SCALE	NTS

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CHECKED I. MACKAY			
APPROVED J. SNOW		TITLE	
DATE 2004-11-17		MODEL 907 TEST CONFIGURATION	
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B	SK	907-2014-00	A