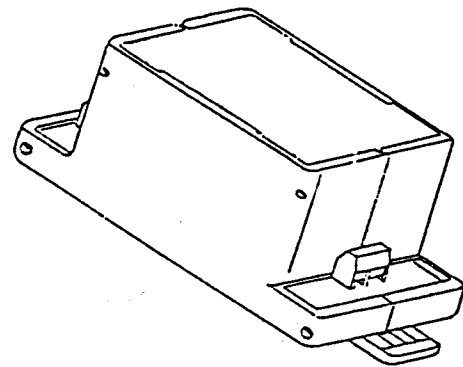




ClipperNet™ LAN Amplifier/Isolator

THE M945 LAN COMMUNICATION BUS ISOLATOR PROVIDES ISOLATION OF THE RS232 COMMUNICATION BUS WITHIN A LAN SYSTEM. IN ADDITION TO THE ISOLATION, THE M945 ALLOWS THE LAN DISTANCE TO BE EXTENDED AN ADDITIONAL 2000 FEET. MULTIPLE M945 MODULES CAN BE USED FOR ISOLATION AND/OR EXTENDED DISTANCE AS REQUIRED.

- Eliminates problems related to ground potential differences between two or more buildings
- Improves protection against lightning and electrical interference
- Isolates communication networks powered from different services
- Provides an amplified communication signal over long cable runs
- RS232 compatible voltage signal levels
- Optically coupled and isolated up to 5000 VAC
- LED's indicate communication status and proper connection to the LAN



#M945

GENERAL

The Solidyne M945 LAN Amplifier/Isolator provides isolation of the RS232 communications bus within a LAN system. In addition to the isolation, the M945 allows the LAN distance limit to be extended an additional 2000 feet. Multiple M945 modules can be used for isolation and/or extended distances as required.

The M945 requires a 24 VAC supply which may be tied or shared with the nearest Clipper.

SPECIFICATIONS

ELECTRICAL

SUPPLY: 24 VAC 50/60 Hz

OUTPUT: 10 VDC Unregulated

AMBIENT TEMP.: 0° TO 140°

CAUTION

BEFORE INSTALLING OR REMOVING ANY MODULES OR ACCESSORIES, DISCONNECT POWER TO PREVENT EQUIPMENT DAMAGE OR PERSONAL INJURY.

1. Read the instructions very carefully. If these instructions are not followed damage or injury may result.
2. Discharge any static you may have accumulated by touching building ground before touching any terminals or components.
3. Check the ratings in the specifications and verify that this product will meet the requirements of your application.
4. This product should only be installed by a trained and qualified service technician.
5. After the installation is complete, be sure to check the system out for proper installation.

MOUNTING / LOCATION

The M945 is designed to be mounted near a Clipper controller. Make sure that the M945 is not exposed to direct outside environment such as rain, direct sunlight, etc.

WIRING

All wiring must comply with local codes and ordinances. Terminal blocks are provided to connect the M945 to the ClipperNet Controller.

Single M945 LAN

1. Run two wires that will power the M945 with 24 VAC. These two wires may be tied to the same power supply as the nearest Clipper.
2. Run three signal wires from the first Clipper to the M945. Connect the MDM RCV off the Clipper baseplate to T2 of the M945. Connect MDM XMT off the baseplate to R2 and MDM COM to C2 of the M945.
3. Run three signal wires from the second Clipper to the M945. Connect the MDM RCV off the Clipper baseplate to T1 of the M945. Connect MDM XMT off the baseplate to R1 and MDM COM to C1 of the M945.

See *Figure 1: Single M945 LAN* for details.

MULTIPLE M945 LAN

1. Determine which two Clippers the M945 will be located between. For instruction purposes call the Clipper closer to the LAN, Clipper A and the remote Clipper (the Clipper amplified to), Clipper B.
2. Run two wires that will power the M945 with 24 VAC. These two wires may be tied to the same power supply as the nearest Clipper.
3. Run three signal wires from Clipper A to the M945. Connect the MDM RCV off the Clipper baseplate to T2 of the M945. Connect MDM XMT off the baseplate to R2 and MDM COM to C2 of the M945.
4. Run three signal wires from Clipper B to the M945. Connect the MDM RCV off the Clipper

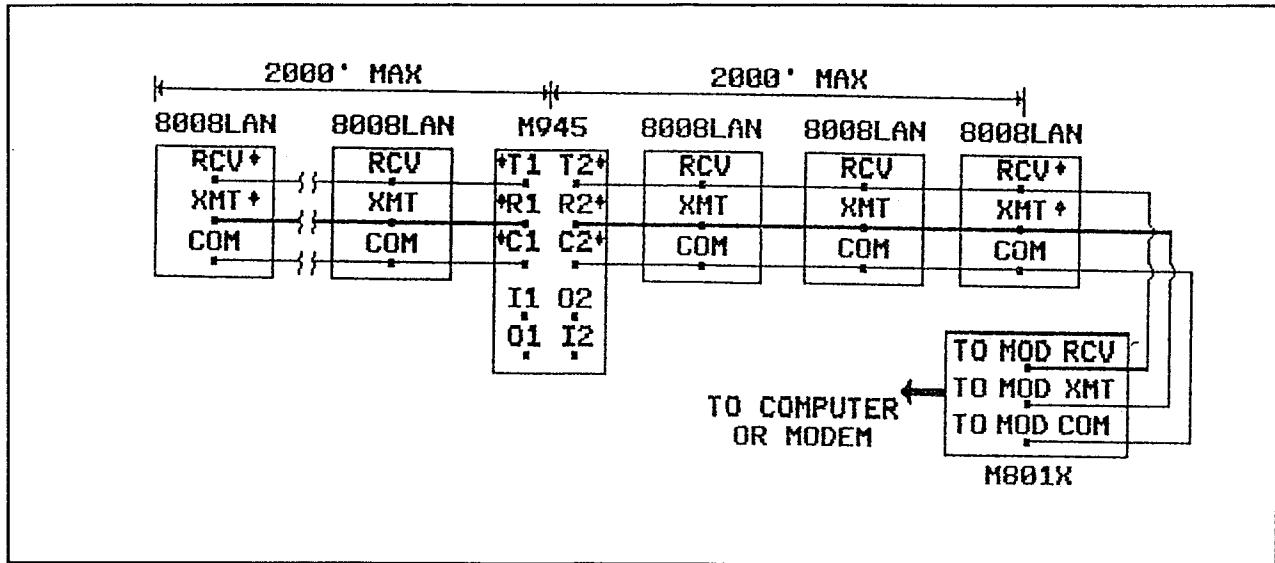


Figure 1: Single M945 LAN

baseplate to T1 of the M945. Connect MDM XMT off the baseplate to R1 and MDM COM to C1 of the M945.

See Figure 2: Multiple M945 LAN.

5. Repeat steps 1,2,3 and 4 for the second M945.

NOTE: For both, Single and Multiple M945 LAN connections, typically add resistors at the end of each cable run between MDM XMT & MDM COM and MDM RCV & MDM COM (see Fig. 3: Resistors Connections). As a rule of thumb, 10 K 1/4 W resistors are sufficient. The addition of these resistors will shunt any capacitance which may have built up over lengthy wire runs.

6. Run two signal wires from the first M945 to the second M945. Connect I1 from the first M945 to O2 of the second M945. Connect I2 from the first M945 to O1 of the second M945.

7. Repeat steps 1 through 6 for additional M945 modules on the LAN network.

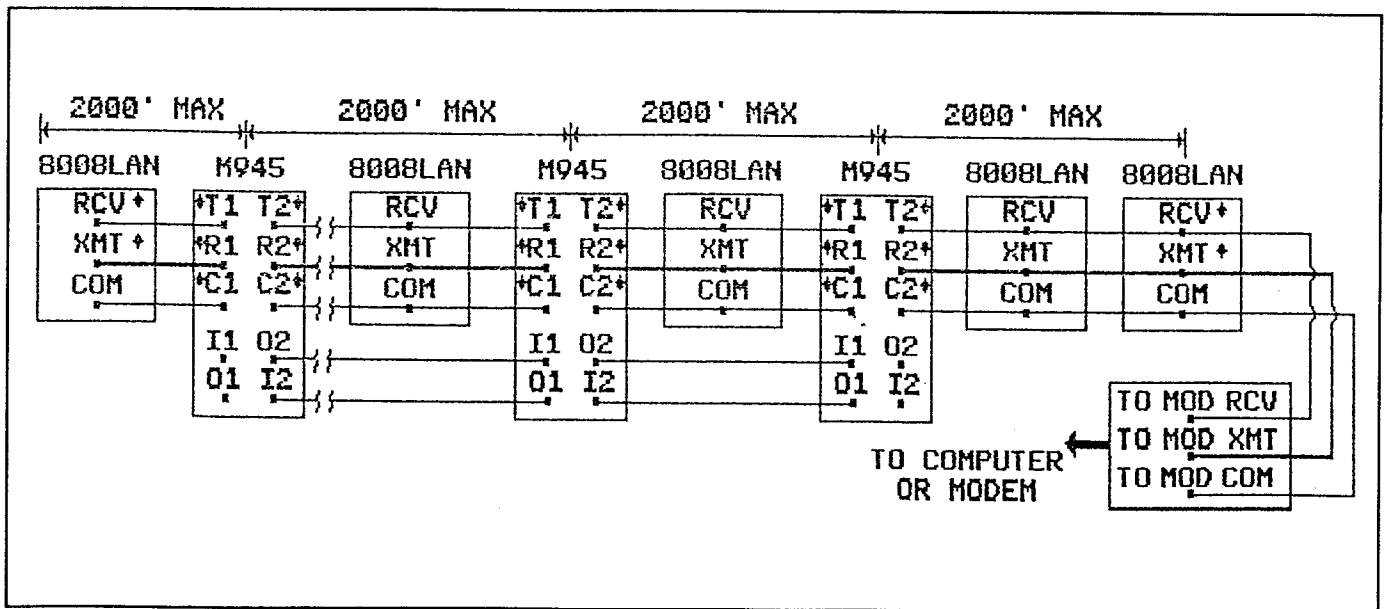


Figure 2: Multiple M945 LAN

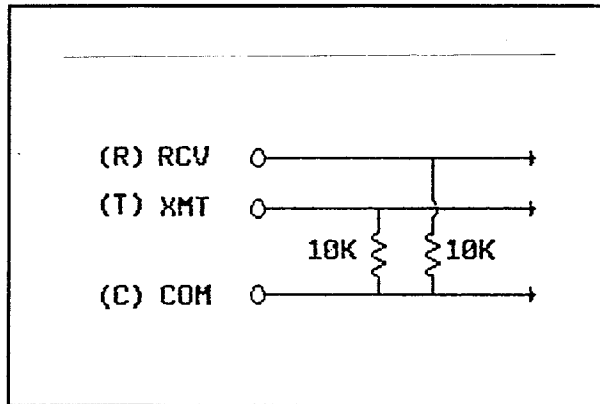


Figure 3: Resistors Connections

CHECKOUT PROCEDURE

- 1) Apply power to the M945 (Apply power to the Clipper should the M945 be tied to the same power supply).
- 2) Verify the 24 VAC supply to the M945.
- 3) To check the wiring, verify that the two LED's on the M945 flash occasionally and at the SAME time . Refer to the section WIRING should the LED's not flash at the same time.
- 4) Verify that the two Clippers are communicating by accessing the sensor information from one Clipper tied to an M945 from the other Clipper tied to the M945, an assistant would be helpful for this procedure.
- 5) Finally mount the M945 securely if you have not already done so.

ORDERING KEY

Refer to your authorized Solidyne Wholesaler or Blue Sheet price list for ordering information.

If you have additional questions or need further information related to this product or any other Solidyne products, call (800)648-3980 for ordering information.

1. Order part# M945.
2. For use with 8008LAN and XL9600 systems only.