



Mobile Communications

EDACS ADVANTAGE™ Three and Five-Channel Basic EDACS® Repeater Sites

Installation Manual

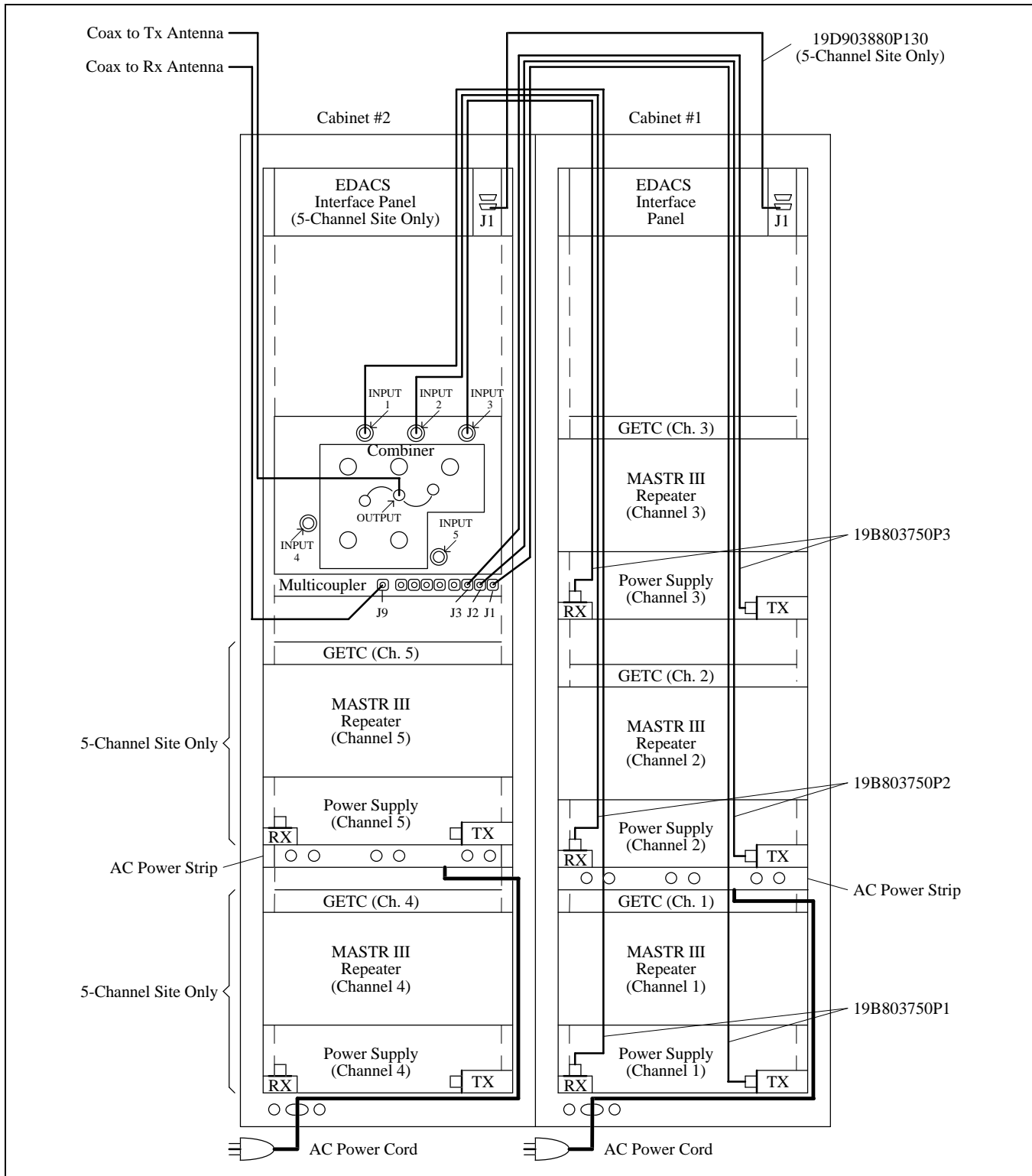


Figure 1 - Installation Connections Only - Rear View

INTRODUCTION

The three and five-channel EDACS (Enhanced Digital Access Communications System) ADVANTAGE repeater sites provide Failsoft trunking in a "plug and play" package, requiring the minimum amount of effort and experience to install.

This instruction only describes the cabinet connections required at the time of installation, for the three and five-channel sites, and the standard antenna system. If your system does not include channels 4 and 5 or the standard antenna system, skip references to those items.

Power cords must be plugged into three-contact electrical outlets that have the ground wire securely connected to the electrical ground and meet local codes and ordinances.

If your system is connected to an outside antenna, the cabinets should be connected to a grounding point which is provided as part of the building and/or tower structure, to further protect the equipment from lightning and to provide for personnel safety.

CABINET CONNECTIONS

Orient the cabinets as shown in Figure 1 (rear view). All cables, except AC power, are to exit through the top of the cabinets (remove covers over oval cable openings in top as required). AC power cords may exit the cabinets through the top, or the openings below the rear door. Cables to be connected between the cabinets are shipped (connected and coiled) in cabinet #2. Cable ties are supplied to secure these inter-cabinet cables in the cabinets during installation.

STEP 1 --- TX & RX CABLES

- ❑ Connect one 19B803750P1 coaxial cable:
FROM: cabinet #2, Combiner, Input 1 (top left, on the front), female Type N connector
TO: cabinet #1, channel 1, "CHANNEL TX" bracket (to the right, behind the power supply for channel 1), female Type N connector
- ❑ Connect one 19B803750P2 coaxial cable:
FROM: cabinet #2, Combiner, Input 2 (top middle, on the front), female Type N connector
TO: cabinet #1, channel 2, "CHANNEL TX" bracket (to the right, behind the power supply for channel 2), female Type N connector
- ❑ Connect one 19B803750P3 coaxial cable:
FROM: cabinet #2, Combiner, Input 3 (top right, on the front), female Type N connector
TO: cabinet #1, channel 3, "CHANNEL TX" bracket (to the right, behind the power supply for channel 3), female Type N connector
- ❑ Connect one 19B803750P1 coaxial cable:
FROM: cabinet #2, Multicoupler, J1 (far right, on the back), female Type N connector
TO: cabinet #1, channel 1, "CHANNEL RX" bracket (to the left, behind the power supply for channel 1), female Type N connector

- ❑ Connect one 19B803750P2 coaxial cable:
FROM: cabinet #2, Multicoupler, J2 (2nd from the right, on the back), female Type N connector
TO: cabinet #1, channel 2, "CHANNEL RX" bracket (to the left, behind the power supply for channel 2), female Type N connector
- ❑ Connect one 19B803750P3 coaxial cable:
FROM: cabinet #2, Multicoupler, J3 (3rd from the right, on the back), female Type N connector
TO: cabinet #1, channel 3, "CHANNEL RX" bracket (to the left, behind the power supply for channel 3), female Type N connector

STEP 2 --- FIVE-CHANNEL SITE ONLY

- ❑ Connect the 19D903880P130 15-conductor cable:
FROM: cabinet #2, EDACS Interface Panel (top back of cabinet), "SERIAL MODULE" (far right in panel), J1, female Type N connector
TO: cabinet #1, EDACS Interface Panel (top back of cabinet), "SERIAL MODULE" (far right in panel), J1, female Type N connector

STEP 3 --- POWER

- ❑ Plug the AC power cord from each cabinet into a separate 115 Vac, 60 Hz outlet. (Each outlet should be connected to a separate 20 amp circuit breaker.)

STEP 4 --- ANTENNA

- ❑ Connect the coax from the transmit antenna:
TO: cabinet #2, Combiner, Output (center, on the front), female Type N connector
- ❑ Connect the coax from the receive antenna:
TO: cabinet #2, Multicoupler, J9 (center, on the back), female Type N connector

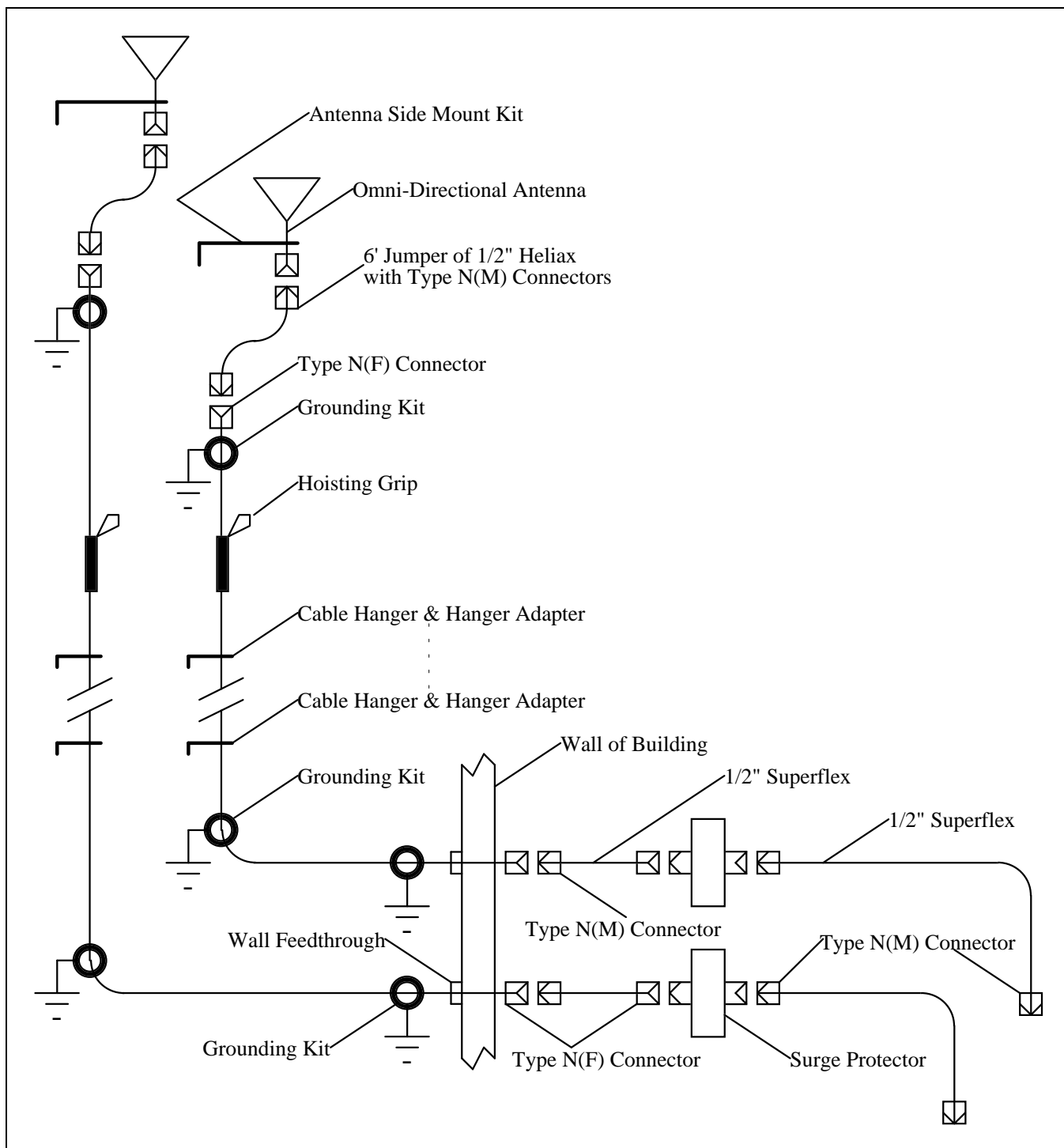


Figure 2 - Standard Antenna System

ANTENNA SYSTEM

The standard antenna system is shown in Figure 2. If the standard antenna system was not ordered, skip this section.

The installation description given here is intended to identify which parts go where for purposes of inventory and inspection. It is not sufficient to direct an inexperienced tower crew through an installation. The antenna system should only be installed by an experienced tower crew with the specialized equipment and skills required for working on towers and antenna systems.

- ❑ Two antennas are supplied for the transmit and receive signals, and two antenna side mount kits are supplied for their mounting. The antennas can be mounted on the side of the tower (one 10 feet or more above the other), or on the top of the tower (6 feet or more between antennas).
- ❑ Two 6-foot coaxial jumpers are supplied to connect each antenna to its respective transmission line.
- ❑ A single 400-foot length of 7/8-inch diameter coaxial cable is supplied for the transmit and receive transmission lines between the antennas and the equipment room (up to 200 feet for each transmission line). Each transmission line must be a continuous run with no connections or splices.
- ❑ Two hoisting grips are supplied (one for each transmission line) to allow hoisting without damaging the cable. The hoisting grips may be left attached to the transmission lines after the installation is complete. Do not exceed the minimum bending radius of 250 mm (10 inches) for the 7/8-inch diameter coaxial cable supplied for the transmission lines.
- ❑ Ten screw-on cable hanger kits (each containing 10 hangers) and ten screw-on angular-member hanger adapter kits (each containing 10 adapters) are supplied to secure the transmission lines to the tower at 3-foot intervals. If the structural members of the tower are round, additional materials will be needed.
- ❑ Four female Type N connectors are supplied for installation on each end of both transmission lines.
- ❑ Six coaxial cable grounding kits are supplied to ground the outer conductor of both transmission lines in three places for lightning protection: at the top end, just before it leaves the tower, and just before it enters the feedthru in the wall to the equipment room.
- ❑ Weatherproof tape is provided to wrap each of the four exposed outside connector joints (at each end of both 6-foot coaxial cable jumpers) to keep moisture out.

POWER UP

- ❑ Turn on the power supply for each channel (switch is on the front of each power supply).
- ❑ Observe that the red LED, L7, is lit on the front of all GETCs and that the red LED, L6, is lit on the front of one GETC.
- ❑ Check to see that the three toggle switches on the front of the SYSTEM MODULE of each MASTR III Repeater is in the down position.
- ❑ Turn on the power supply for the multicoupler (switch is on the front and is lit when the power is on).

If any difficulty is encountered, or more information is needed about a specific item, see the EDACS MASTR III Basic or Level 1 System Installation Manual, LBI-39074.

The interconnection diagram (installation and factory connections) for the 5-channel site is shown in Figure 3. If your system has three channels, cabinet 2 will not contain the EDACS Interface Panel, channel 4 repeater and GETC, channel 5 repeater and GETC, or any cables that would have connected to them. If your system has three channels, the multicoupler will have additional 50-ohm terminations on J4 and J5.

Customer assistance is available through the Ericsson GE Technical Assistance Center by calling 1-800-528-7711.



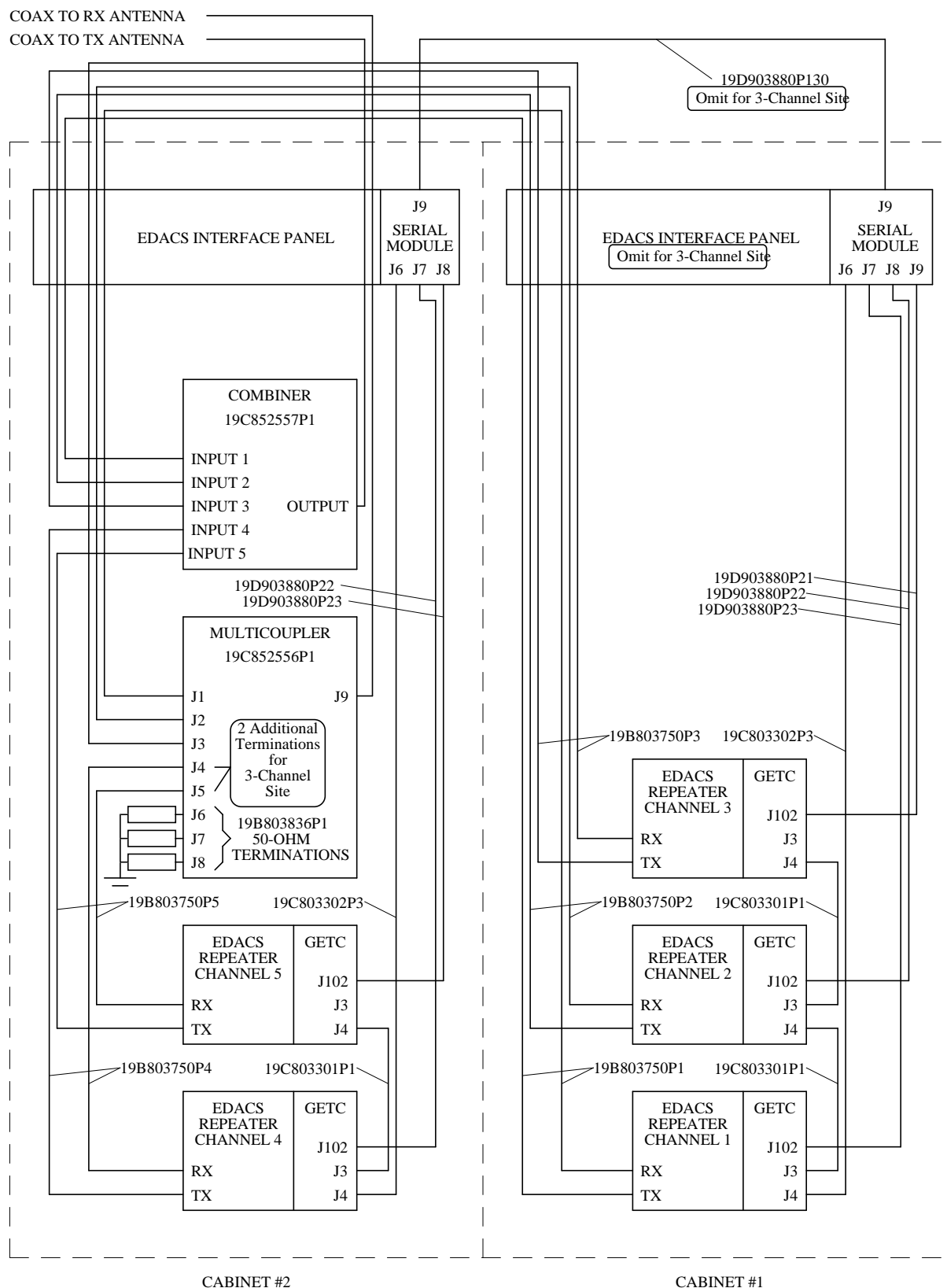


Figure 3 - 5-Channel Site Interconnection Diagram (Installation and Factory Connections)