

## FSK MODEM for Allen-Bradley PLCs



- One slot in A-B Model 1771 I/O chassis
- Data communication for remote PLCs
- Bell and CCITT compatible modes
- Use on leased telephone lines, microwave, twisted pair or radio networks
- Point-to-multipoint communication
- Switch-selectable transmit levels
- Switch-selectable operating mode
- LED status indicators
- Two-wire or four-wire operation
- Low power
- Field-proven reliability & convenience

The MARC™ Model 137-001 module is an asynchronous, frequency-shift keyed (FSK), voice-band modem that plugs into a single slot of an Allen-Bradley PLC (Programmable Logic Controller). The modem provides data communication with other compatible Bell and CCITT modems at speeds up to 1200 baud. The modem is used to provide reliable long-distance data communication on dedicated telephone channels, radio channels or local twisted-pair cables. Compatibility is assured with other modems using any of four standard operating modes at speeds of up to 1200 baud.

The modem operating mode, transmit level and frequency equalization method are easily switch selectable. Switches are located inside the module case.

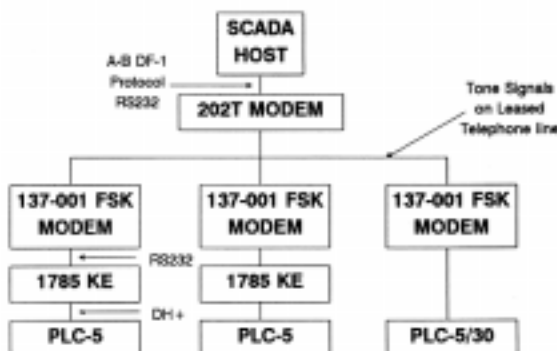
# FSK MODEM FOR ALLEN-BRADLEY PLCs

## Model 137-001

The Model 137-001 module is intended both for new PLC installations and for replacement of existing modems. It is designed specifically to provide reliable remote communication to Allen-Bradley PLCs over leased telephone lines, microwave and radio networks.

This modem module provides a tightly integrated communication package for the Allen-Bradley PLC. There is no longer a need to separately mount and power a stand-alone modem. Simply plug the 137-001 into any available slot, connect to the communications port and the phone line and turn on the power.

The 137-001 Modem is directly compatible with other MARC™ Allen-Bradley compatible modules such as the Comm-Troller™ (protocol converter) and Comm-Master™ (polling master). It can also be connected to any Allen-Bradley module that has an RS232 serial communications port. Cable assemblies are available for connection to most modules.



Typical Application

## Specifications

### Physical:

Standard Allen-Bradley module size (1.1"W x 10"H x 5.75"D) with A-B style metal shroud  
1 pound, 14 ounces

### Operating Environment:

0° to 60° Celsius  
10% to 90% relative humidity (non-condensing)

### Power Requirements:

750 ma from +5 VDC

### LED Indicators (6):

Provides status of the following signals: DTR, RTS, CTS, TXD, DCD and RXD

### Operating Modes and Speeds:

Bell 103/113/108 Originate, 0-300 baud Full-duplex  
Bell 103/113/108 answer, 0-300 baud Full-duplex  
Bell 202, 0-1200 baud Full or Half-Duplex w/Soft Carrier turn-off and selectable equalizer  
CCITT V.21, originate, 0-300 baud Full-duplex  
CCITT V.21 answer, 0-300 baud Full-duplex

CCITT V.23, 0-1200 baud, Full or Half-duplex w/selectable Soft Carrier turn-off, and equalizer

### Transmit Level:

Switch selectable from -12 to +2 dB in 2 dB increments

### Connections:

**RS232 port:** 15-pin "D" connector (DE15S) for serial asynchronous data link to unit served, such as communications interface module for Allen-Bradley PLC or MARC Comm-Troller™ or Comm-Master™.

1 DCD	2 TXD	3 RXD	4 DSR	5 GND
6 nc	7 RTS	8 CTS	9 RI	10 nc
11 nc	12 nc	13 nc	14 nc	15 nc

### Analog Connection:

RJ-11 modular telephone jack for analog cable; two 600-ohm line coupling transformers for line connection. Transmit pair is pins 3 and 4 (red and green wires) and Receive pair is pins 2 and 5 (yellow and black wires)

Millie Applied Research Company, Inc.

PO Box 87634, Houston, Texas 77287

(800) 729-0818 • (713) 472-6272