

# ASC-140

Antenna Slave Controller for MRC Central Receive Antennas



## Applications

- Slave Controller for MRC Central Receive Antennas

## Features

- Directly control MRC antennas
- Choice of models to support:
  - ProScan™ Central Receive Antenna
  - MicroScan™ Central Receive Antenna
  - UltraScan™ Central Receive Antenna
  - Ellipse-CR Central Receive Antenna
- Remote slave to MAC-1000 Master Antenna Controllers
- Supports Millennium CR Central Receiver plus MRC and ProStar MRC receivers
- Standard configuration supports one antenna and receiver
- Dual support available through optional expansion kits

## Overview

The ASC-140 Antenna Slave Controller is an economical, easy to install remote site interface designed to directly control MRC's MicroScan, ProScan and UltraScan antenna systems. The ASC-140 works as a standalone unit or as a slave to the MAC-1000 Master Antenna Controllers.

The ASC-140 provides the interface between the MAC-1000, the MRC Central Receiver and antennas. All site functions may be controlled locally from the front panel of the ASC-140 except remote control of receiver functions. The receiver functions are accessed from the receiver front panel. The ASC-140 can even be expanded to a dual antenna version capable of controlling any combination of the UltraScan, ProScan, and MicroScan antennas, two receivers, and supplementary systems.

## Local/Remote Control

Local control lets an operator respond to intelligent display prompts by depressing one of five programmable mode switches. The easily read 80 character display guides the operator through the most complex test, calibration and operational routines. The pleasant tactile response of the front panel switches and audio verifications make this a "friendly" controller.

When used with the companion MAC-1000 Master Controller, the ASC-140 also supports sixteen configurable, all-parameter presets. Shots can be set up in advance, named and saved for recall at any time. All functionality of the slave, including diagnostics and emergency reset capability, can actually be accessed from the master. Someone left the mountaintop site and left the slave in LOCAL mode? No problem: a special command from the master will put the ASC-140 back in REMOTE.

**Standard Hardware**

State of the art modular design is used for high reliability and ease of service. This is a STD Bus based product and it uses industry standard hardware. Its primary central processor is a commercially available 8-bit microcontroller. Design attention to shielding and filtering assures that the ASC-140 will operate reliably in even the worst RF environments.

**Advanced Communications Capabilities**

The ASC-140 includes a choice of internal modems for communicating with the master controller location. Modems are available for dial-up, two-wire, or four-wire communication links. Advanced high-speed modulation schemes and commu-

nications protocols are used to minimize link overhead and maximize system response. This is especially important for real-time depiction of analog changes such as signal levels and other continuously changing values.

**Software and Interface Solutions**

The economical design of this controller is realized by the use of standard components flexible, thoroughly field-tested and proven software. Flexibility means the system can be configured easily for the exact system mixture of antenna, receiver and peripherals. The ASC-140 is fully specified and comes with the proper software and hardware bundle for UltraScan, MicroScan, ProScan, or Ellipse-CR single or dual installations.

**SPECIFICATIONS**

**STANDARD FEATURES**

- Control Modes: ..... Remote and local control
  - Local Control: ..... Surface membrane front panel  
80 character vacuum fluorescent display
  - Remote Control: ..... Slave to MAC-1000 Master Controller
  - Processor: ..... 8-bit microcontroller
  - Modem: ..... One Universal Message Card/Modem
  - Serial Port: ..... One high speed RS-232/485 serial port
  - Analog Inputs: ..... 8 analog input channels (10 bit) for azimuth, RCL, alarms, etc.
  - Alarm Inputs: ..... 4 opto-isolated alarm inputs
  - Antenna Control: ..... 8 antenna control closures
  - Receiver Control: ..... 10 opto-isolated receiver control closures
  - Spare Closures: ..... 8 spare Form C closures
  - Outputs: ..... 28 vdc or 48 vdc output @ 3 A
- Note: I/O is effectively doubled for dual-antenna versions.*

**MECHANICAL**

- Case: ..... Rugged, RF/EMI shielded with forced air cooling
- Size: ..... 3 RU (5.25" h), 19" rack mount, 14.5" deep (max)
- Shipping weight: ..... 22 lbs (10 kg)

**ELECTRICAL**

- Power: ..... Universal power supply, Selectable 115 or 230 VAC, 50/60 Hz, 2 A max  
Input surge protection

**ORDERING INFORMATION**

**ANTENNA SLAVE CONTROLLERS**

- ASC-140P: ..... ProScan Antenna Slave Controller
- ASC-140M: ..... MicroScan & Ellipse-CR Antenna Slave Controller
- ASC-140U: ..... UltraScan Antenna Slave Controller
- ASC-140S: ..... SectorScan Antenna Slave Controller

**ANTENNA SLAVE CONTROLLER OPTIONS**

- MEK-140: ..... MicroScan Expansion Kit
- PEK-140: ..... ProScan Expansion Kit
- UEK-140: ..... UltraScan Expansion Kit

**MASTER CONTROL SYSTEM**

- MAC-1000R: ..... MAC-1000 Rack Mounted Antenna Controller



ASC-140 Slave Antenna Control Front Panel

