

OPERATING INSTRUCTIONS
RS-1 (RAPID SENSE WITH BASE)
Part number 10900520 (with D-sub plug)
Part number 10900521 (with amp plug)

INSTALLATION:

The RS-1 unit, when received should be checked for shipping damage. If damage has occurred, contact the carrier that handled the shipment first and then Rapid-Air to report the damage.

The RS-1 unit is shipped pretested and adjusted to a working height of 52" and is set for payout operation. It should be set in place on a level surface, although each stand is provided with (4) base holes to level the stand. Base holes can be used as thru holes for 7/16 bolts if the unit is to be bolted to the floor or for leveling the stand. If the optional guide bar package was purchased, the bars should be mounted at this time.

Each RS-1 unit assembled is prewired to an Amp 14 pin circular plug or 25 pin D sub connector that matches a connector output on every Rapid-Air device capable of running from a non-contact loop controller. Optional cord adapters are available for interfacing each style. Contact Rapid-Air for details. The RS-1 gets its control power from the device that it is controlling. Once the plug is attached, the RS-1 is ready to run.

The RS-1 unit (10900520 and 10900521) consists of (4) major components.

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| 1. Sonic Head | 69100343 |
| 2. Stand | 21400130 |
| 3a. Cable Assembly | 28900226 for 10900424 14 pin Amp connector |
| 3b. Cable Assembly | 28900227 for 10900427 25 pin D connector |
| 4. Rod Assembly | 10900326 |

SONIC HEAD:

The Sonic Head is the key component for the RS-1. It is preprogrammed at the factory for a working height of 52" from the floor. If the working height must be changed, refer to the "Adjustments" section of the manual.

STAND:

The stand was designed to be durable but not cumbersome. All of the components are designed for easy replacement if a component becomes non-repairable or fails. Access to the payout/rewind and prog 1/prog 2 switches are from the front of the RS-1. Access the minimum/maximum pots and program/set switches are provided behind a removable side panel.

CABLE ASSEMBLY:

The cable assembly was designed to make the installation of the RS-1 to a Rapid-Air Reel, Straightener, or Rapid Roll very easy. The power and control connection is accomplished through one of two types of connectors. Optional adapter cables are available for each type of conversion if required. Contact Rapid-Air for details or assistance. If connecting to other Rapid-Air equipment, consult Rapid-Air.

OPERATION: PAYOUT MODE

With the RS-1 in place and electrically attached to the Reel, Straightener or Rapid Roll that is in the "ON" position the unit is ready for operation.

To start thread up, press the jog button of the Reel, Straightener, or Rapid Roll to feed material out so the operator has material to work with. Once there is enough material, the operator can release the jog button and put the Reel, Straightener or Rapid Roll in automatic and let the sensor take over.

With the material aligned between the two guide bars, the operator can now walk the material to its destination and the sensor will take care of the loop needed for the operation.

The RS-1 maximum voltage is factory set for 6 VDC. The RS-1 can provide a variable voltage of 0-10 VDC to a Reel or Straightener manufactured by others if required. This voltage is dependent on the height of the loop. The Rapid-Air device that received the variable voltage, although preset at the factory for optimum performance, might have to be readjusted in accell and decell to provide smooth operation of the material being handled. Consult with Rapid-Air prior to changing the maximum output voltage.

OPERATION: REWIND MODE

With the RS-1 in place and electrically attached to a Reel, the unit is ready for operation.

Attach the material being run to the reel. Turn on the reel and press the jog button to start the material rewinding and take up the slack. The RS-1 will then take over the control.

The RS-1 can now provide a variable voltage to the Reel. This voltage is dependent on the height of the loop. The Rapid-Air device that received the variable voltage, although preset at the factory for optimum performance, might have to be readjusted in accell and decell to provide smooth operation of the material being handled. The RS-1 max voltage is factory set for 6 VDC. Consult with Rapid-Air prior to changing the max output voltage.

ADJUSTMENTS

PAYOUT/REWIND SWITCH:

In the payout mode, the device that is receiving the signal from the RS-1 will increase in speed as the depth of the loop becomes smaller.

In rewind mode, the device that is receiving the signal from the RS-1 will increase in speed as the depth of the loop becomes larger.

ISOLATION RELAY:

This relay has a contact controlled by switch 2 of the sensor. The isolation relay insures that the device connected to the RS-1 will not receive a signal unless the beam of the RS-1 is broken within the 13" to 47.8" range. Use program mode 13 & 14 to change this setting.

TAUT STOCK:

This relay has a contact which is controlled by software adjustment of mode 10 of the sensor. The taut stock relay is a customer interface contact rated at 0.5 amp. The taut stock height is adjustable if needed or used. The contact will close when the material is in the taut stock location. The taut stock adjustment is made in the sonic head using program mode 10.

IF THE UNIT DOES NOT FUNCTION

1. Check for lights on the sensor unit.
2. Put your hand under the sensor and listen for a ticking sound. This means that the sensor is working.

Connect a meter selected for DC volts to terminals #10 and #12 of the terminal strip. Voltage should change, increase or decrease, depending on material distance from sensor head. If there is change then connect the meter to the motor drive board in the reel to check that the voltage change is getting to the drive board.

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