



Model **600**

## **SLIDER MOTOR**

Serial No. 20001 onwards  
Fitted with 6.0 or 7.0 control cards

## **INSTALLATION**

**&**

## **SERVICE INSTRUCTIONS**

**SLIC MOTORS manufactured by**

**BEECO PTY. LTD.**

**297 Glen Road, Warwick. Queensland. 4370 Australia**

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## 1. POWER SUPPLY

The SLIC SLIDER MOTOR is designed to operate on a 12 - 18 volt smoothed D.C. supply. It will work best on 14 – 16 volts.

To calculate the required rating of the power supply, allow 1.5 amps each for the maximum number of motors drawn or cancelled at the one time. This is particularly important if a full registration is put off by a General Cancel piston.

Performance and quietness of the SLIC MOTORS will be affected by the quality of the power supply. Modern switch-mode power supplies give sound performance at moderate prices.

In large installations, it may be more economical to provide multiple power supplies instead of one large supply.

If the organ action operates on 24 volts, a separate 14-16 volt supply must be provided, and the negative busses connected. Where complex installations arise, a competent DC technician should be consulted.

## 2. INITIAL MOTOR SETTING

**Warning:** *The initial settings of the slider motor are best done in a bench situation. Under NO circumstances should any wire lead be connected to a power supply at this stage.*

The slider motor is factory set in the “OFF” position assuming the sliders to be pulled “ON” ie. with the drive linkage fully extended towards the end mounting flanges. To reverse the direction for a “PUSH ON” action, remove screw (a) (Fig 1 ) and ext. s.p. washer. Slide the drive linkage out of the runners, turn the Drive Arm through 180 degrees, re-fit the drive linkage assembly, screw and s.p. washer and tighten. Ensure that screw (b) is central in the registration adjustment slot (see Figure 2).

## 3. ADJUSTMENT LENGTH OF DRAW

Before mounting the motor, measure the distance the Drive Channel overhangs the back end of the Drive Arm. When these two ends are flush, the draw will be 32 mm. For every 1mm of overhang the travel will be reduced by 2mm. Eg. suppose the required slider travel is 20mm. Then, with the drive linkage fully extended, loosen screw (a) (fig. 3) and pull the linkage back on the Drive Arm until the channel overhangs by 6mm. ( $32 - 2 \times 6 = 20$ ) Tighten screw (a) making sure the channel does not move.

**IMPORTANT:** Blocks or limit pegs should never be fitted to the slider or windchest. Accurate control of travel will be determined by the motor setting.

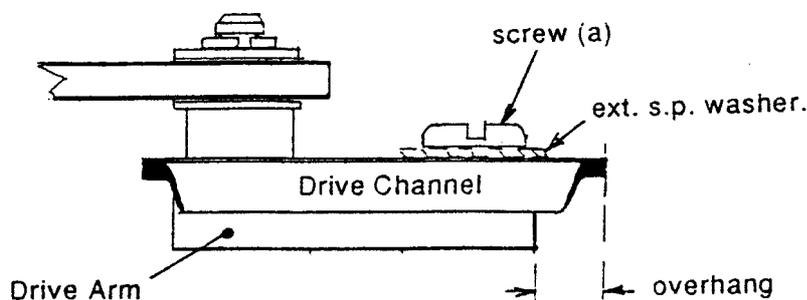


Figure 1

#### 4. MOUNTING

- (a) Mark the spacing of the motors on the end of the windchest, allowing not less than 68mm ( $2\frac{5}{8}$ "") from the centre to centre, keeping each unit as near the centre of its respective slider as possible. Transfer centre lines of motors to ends of sliders.
- (b) Mark a horizontal line on the end of the windchest 38mm ( $1\frac{1}{2}$ "") below the underside of the sliders.
- (c) Drill holes 5mm ( $\frac{3}{16}$ "") diam. X 18mm ( $\frac{3}{4}$ "") deep where the marks intersect.
- (d) Attach Mounting Plate with  $1\frac{1}{2}$ " x  $\frac{1}{4}$ " hex. head screw and double helix washer, keeping indented corners towards the windchest and two small holes uppermost. Tighten screw until washer is fully compressed, then slacken off half a turn. Check that mounting plate is vertical and drive the two pins provided through holes, leaving approximately 2mm clearance between pin head and back of mounting plate.
- (e) Mark three horizontal lines on the end of windchest at distances of 150, 170 and 190 mm ( $6$ ",  $6\frac{3}{4}$ " and  $7\frac{1}{2}$ "") below underside of sliders and mount positive, negative and stop terminal lugs. For convenience (+) and (-) lugs may be screwed through flat metal buss strips.

#### 5. DRILLING SLIDER

**Warning :** Do not attempt to adjust or turn the motor by hand whilst supply wires are connected. **SERIOUS INJURY MAY BE SUSTAINED.** It is not possible to remove the control card for installation, but there is ample space to apply a spanner for installation..

With motor in "ON" position (Push or Pull), measure distance (d) between drive pin and end Mounting Flanges of motor. With slider and windchest pipe holes aligned, mark the same distance (d) on the sliders from mounting surface of the motors on the windchest. Mark intersection of this distance with motor centre lines ( see 4a above) and drill a 6.35 ( $\frac{1}{4}$ "") hole through slider. ( This hole must be a neat sliding fit on the drive pin.) Cut off excess length of slider.

#### 6. FITTING THE MOTOR

Slacken the mounting plate screw a further half a turn. Then, using a screw driver to lift the bottom edge of the mounting plate, slide the motor upwards until the two pins ( see 4d above) engage the slots in the end flanges. If the foregoing procedures have been followed correctly, the drive pin should enter the hole in the slider and the mounting screw may now be firmly tightened with an 11mm ( $\frac{7}{16}$ "") A.F. spanner.

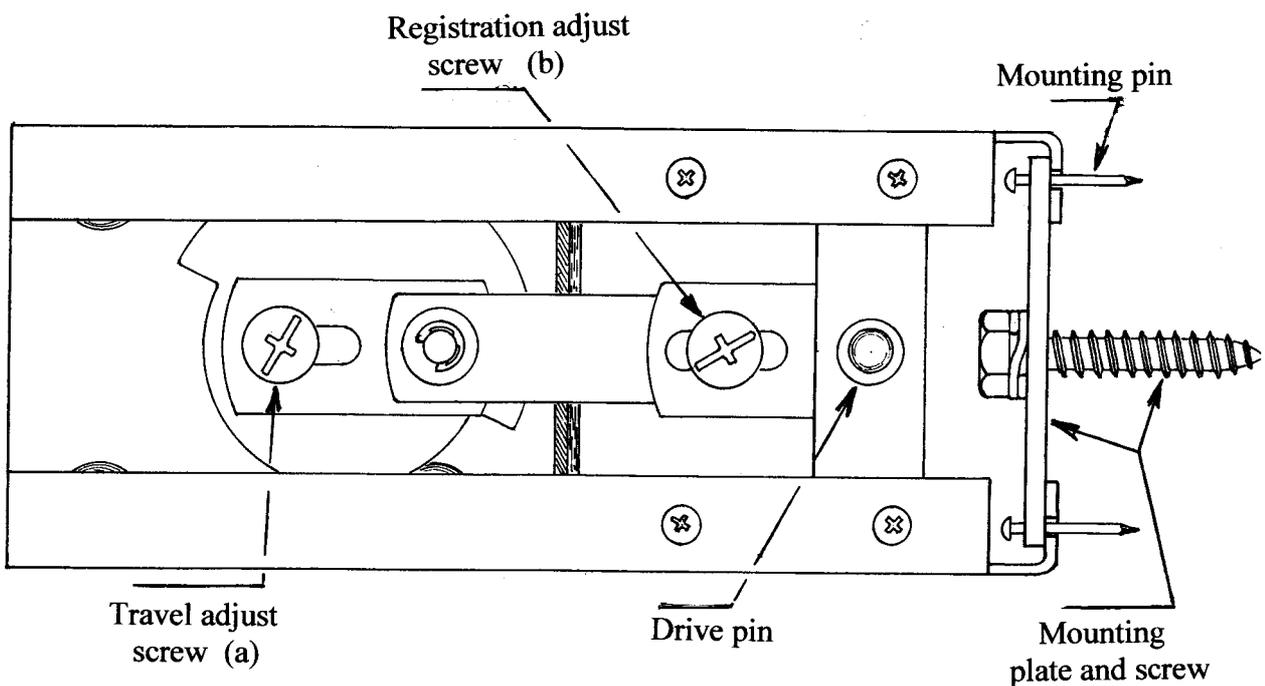


Figure 2

## 7. TESTING

Plug in red (+) and black (-) wires ( In 'push on' installations, motor will immediately move to 'OFF' position). Operation may now be checked by touching yellow wire (stop) to the red (+) terminal. With the stop in the 'ON' position, accurate registration of the slider may be adjusted by screw (b) (fig. 2). Check that all screws are firmly tightened. Plug in yellow wire and test from console.

### **Overload Protection**

SLIC Slider Motors are fitted with modern resettable fuse (polyswitch) protection. In the event of an overload (slider excessively tight or jammed), these devices heat up and break the circuit. Power supply should be turned off and the fault remedied before reconnecting. The resettable fuse restores the power automatically as it cools.

## 8. SERVICE

High quality materials and components have been used exclusively in this product. Provided that it is used within the specified ratings and is not subject to damage or environmental conditions involving excessive dirt or moisture etc., it will give many years of reliable service without attention. There are no user serviceable parts within the motor and gearbox.

Drive pin travel is controlled by a metal vane fixed under the drive arm, and a photo-interruptor mounted on the control card. Should the SLIC motor not work in an otherwise correct installation, it is most likely that the control card is faulty. In this case remove the drive linkage assembly by removing screw (a) Fig 2, and then remove the control card by loosening the M4 x12 screws until the card can be removed from the metal frame.

On reinstallation, ensure that the fibre spacer is between the control card and the metal frame, and that flat washers are between the nuts and the slotted flange of the frame. Ensure that the metal vane rotates in the centre of the photo-interruptor gap before final tightening of the M4x12 screws.

Reinstal the drive linkage taking care to keep the stroke of the unit at its original setting.

### **In case of fault, check as follows:**

#### **Failure to operate or Running - on**

- a) check that leads are correctly connected.
- b) check supply voltage and try operating by touching yellow wire on +ve terminal.
- c) check that organ slider is not jammed.
- d) try interchanging control card with one from working unit.

9. The 6.0 control cards first used with the Model 600 slider motors can only be triggered by a positive signal from the stop control. Future motor supplies will be fitted with a 7.0 control card which can be factory switched to use a positive or negative trigger. The two versions are physically interchangeable.

### **Warranty**

*SLIC SLIDER MOTORS have been thoroughly tested and inspected before leaving our factory and each is guaranteed for a period of 12 months from date of purchase against defective workmanship and / or materials - providing such defect is not due to misuse or negligence or interference by others and that the defect is first reported to the distributor from whom the actuator was purchased and provided it is returned adequately packed and freight paid.*

*No other warranty written or verbal is given or implied.*