SRL-20 *Servoreeler*
INSTALLATION and OPERATION

L

H   front

4.25"H x 8"W x 1/4-20 thdd holes
on the rear frame surface.

D   bot.

cable exit point
rear surface

6.875"   2.125"   6.875"

.937 (15/16)"

Cable exit point

2mm dia. Kevlar, Shielded Cable
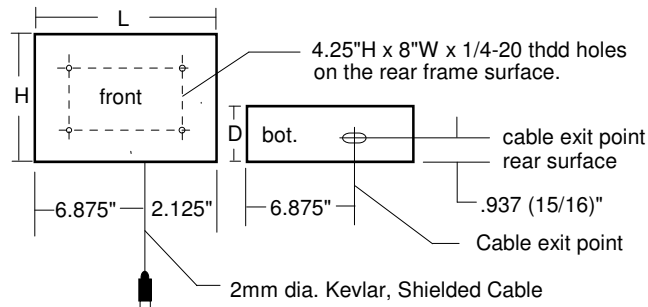
Dimensions: H = 7.25" L = 9.125" D = 2.05" 184mm x 231.8mm x 52mm

RJ-45 Pin Out

1- Down Sense
2- Down Control
3- Common
4- + 24 VDC
5- + 24 VDC
6- Common
7- Up Control
8- Up Sense

TEST RUNNING: We urge you to test run these Servoreelers prior to installation. The reeler is designed for operation in a vertical position; when test running, hold the SRL-20 in a vertical orientation with the cable exit point facing down. A minimum payload weight of approximately one (1) ounce is required for proper down feeding of the cable. A standard XLR cable connector provides this minimum ballast. An internal spill sensor is employed to stop the reeler if it is operated with too light a payload or with its cable impeded from down feeding freely; This interlock is designed to prevent internal cable spill resulting in jamming the mechanism. This safety interlock may not offer adequate protection if the unit is operated horizontally.   **Please note that this interlock is a back-up system, it is prudent to avoid conditions that would overly rely on its intervention.**

 MOUNTING: *The SRL-20 is provided with a 4.25" x 8" mounting hole patern on its rear surface. These holes are threaded to accept ¼-20 machine screws. The frame of the reeler is machined aluminum plate, some care is advised to avoid stripping these holes. Prior to installing try the machine screws by hand to assure a proper fit. Screw length should be selected so that no more than a nominal one half inch (.5 extends into the rear plate. Two or more of these mounting holes must be utilized for mounting.*
C A U T I O N *Professional care and judgement must be exercised when mounting equipment overhead*. *Mounting screws must engage a permanent, solid structural member or a metal bracket that is in turn securely attached to such a structure. Should mounting against a wood beam or surface be required, sheet rock or wood screws may be employed from the inside, through the threaded holes into the structure. (to remove the cover, loosen the four cover screws about two turns and slip the cover up from the body of the reeler.) In this case all four holes must be used. Install washers so that the center of the reeler frame is elevated clear of any irregular or high spots.*
Please note, the installer and the purchaser must assure that these devices do not pose a hazard to others, both during and after installation. Architectural or engineering guidance is highly recommended to help assure a safe installation, consistent with the particular physical requirements of your project.

OPERATION: Servoreelers are operated by a remotely located controller. SRC controllers provide linear regulated 24vdc system power. Operation is initiated by either pusbutton control or through interface with an external computer control system like AMX or Crestron. IR sensors are employed to provide empty and full limits. An adjustable operating stop is also provided. This adjustable stop operates from the deploy mode. After this preset stop is reached, re-start with a sustained down command to reach a lower "service level". Automatic or incremental operation is selectable. The automatic mode provides locked-in operation that is initiated by a single "Deploy" or "Retract" momentary signal. The incremental mode facilitates fine positioning by allowing the Servoreeler to respond to individual, incremental, commands. Test running as described below, should always be performed in the incremental mode.

SETTING OPERATING STOP POINT: The IR sensor that controls the length of cable deployment is mounted on an adjustable module and track. To access this adjustment; loosen the four cover screws about two turns and slip the cover up from the body of the Reeler. To the middle right of the cable storage reel, you will see an aluminum track with a guide slot in the middle. An adjustable module is set into this slot with a thumbscrew. The Reeler is shipped from our factory set to maximum deployment. To reset, loosen the locking thumb screw just enough to enable the module to slide; utilizing the left edge as a pointer, push on the bracket utilizing firm finger pressure to re-locate the sensor to a new position. Retract above this point then re-activate the down mode to test the new stop point; repeat until desired length is achieved. Final positioning may require very slight movement of this module. Gently tighten the thumbscrew to retain the setting. Excessive force is not required and should not be used when tightening. This pre-set stop position will take place from the down mode. Unless configured as a final stop, this position may be bypassed to reach a lower service position by applying another sustained down command signal. **CAUTION:** Maximum deployment of this Servoreeler is about 25 feet; verify that this reach does not exceed the physical height limits of your facility and permit the microphone to collide with a surface.

OPERATIONAL CAUTION: When handling the cable after installation, DO NOT pull on the cable exerting a force greater than the normal payload weight. Never exceed 10Lbs (4.5kg) of pull on the end of the cable. Non-linear or excessive pull force of the cable will distort the concentricity of the cable pack on the storage reel. This will adversely affect the operation of the IR sensors. Should this occur, cable pack concentricity, can be restored by fully deploying and then retracting the microphone cable with its normal payload.

Thank you for selecting the SRL-20 Servoreeler. Should you require any assistance in the US, please call our toll free line for support at: (800) 431-8900 For assistance from outside of the US, please use: 718 464-9400   fax: 718 464-9435

SRL-20 Mechanical Details

L = 9.125"

1.40">   3.125">   4.35">

< Rear

D = 2.05"

Top View

< Front

XLR-Male   RJ-45   Bezel
                             Switch
                             Input
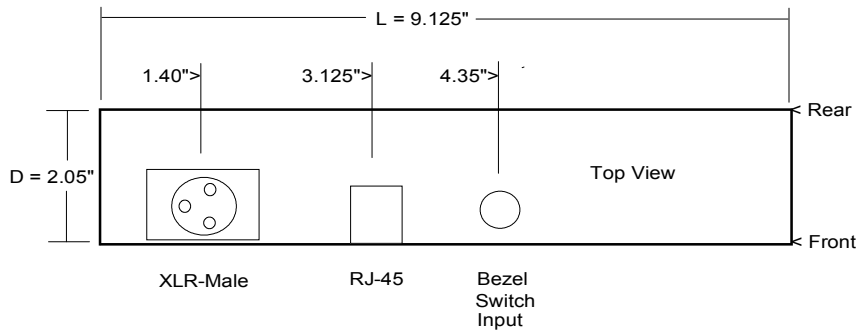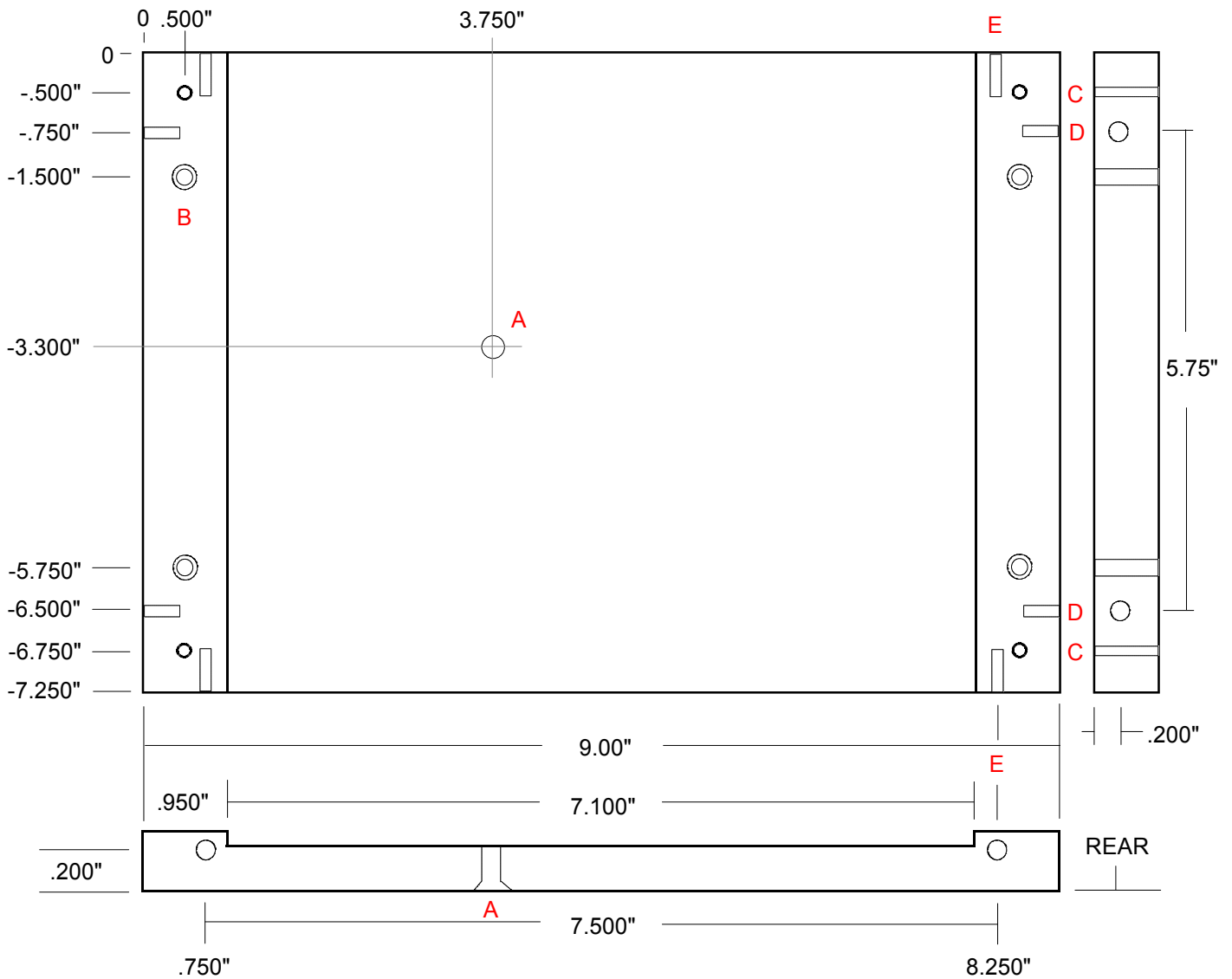
1/4-20 Threaded mounting hole patern on 4.25" x 8.0" centers
located on the rear surface of the Servoreeler.
The mounting holes are shown through the frontal view.

8.0"

H = 7.25"

4.25"

Cable Exit Location
6.875" From Left Side

2.125"

,937" From Rear Surface

SRL-20 BIN PLATE

0 .500"   3.750"   E

0

-.500"

-.750"

-1.500"

B

-3.300"   A

5.75"

-5.750"

-6.500"

-6.750"

-7.250"

C
D

D
C

.200"

9.00"

E

.950"   7.100"

.200"   REAR

A   7.500"

.750"   8.250"
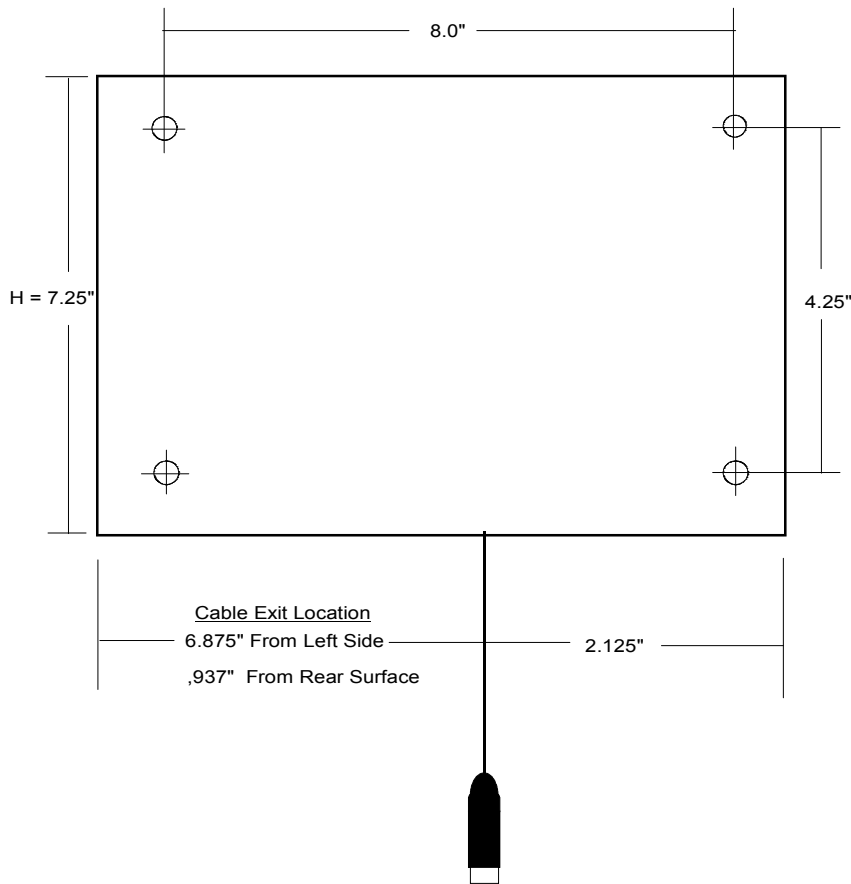
NOTES and HOLE DETAIL: Xedit Corporation   2-2005

A: 8-32" clearance hole (166" dia.) countersunk at rear for flat head screw.
B: ¼-20 tapped hole; 4 places on 5.75" x 7.50" centers. Chamfer both sides
C: .093" diameter thru-holes 4 places on 6.250" x 8.00" centers.

D & E: 8-32" tapped hole x .425" deep with .020" chamfer.

D: Two holes on each end on 5.75" centers x .200" from the rear surface.
E: Two holes on each side on 7.50" centers x .200" from the rear surface.

TROUGH CUT: 7.100" Wide centered on plate.
             Run cutter at 1000 RPM to obtain smooth surface finish.

SRL-SERVOREELERS
INSTALLATION ADDENDUM – A
SRL-20; SRL-40; SRL-90

Please note the following general Cautions:

1- Never apply any external voltage to Sense Outputs (pin numbers 1 and 8);
this will damage the control circuit and compromise the warranty.

2- If user supplied, always employ a <u>linear</u> 24Vdc regulated power supply, allowing 700ma per Servoreeler.

3- Never apply a force that exceeds the normal payload weight on the Servoreeler cable. Absolutely never exceed a maximum of ten pounds of pull on the cable. Excessive loading of the cable will compress and distort the cable pack on the storage reel. Should this occur, fully deploy, then retract the cable with the normal payload to restore normal cable pack concentricity. An oval or eccentric cable pack will adversely affect the accuracy or operation of IR limit sensors.

Payload capacity: Servoreelers are conservatively rated at 2.2Lbs (1Kg) with a maximum of 4.4Lbs (2Kg) There is also a minimum combined payload weight of 1 – 2 ounces (28 – 56gms) that is required to assure reliable cable deployment. The XLR female connector that is usually employed is sufficient in itself to provide the required minimum ballast.
An internal accumulation of cable can occur if the Reeler is operated in the Down mode <u>while on its back</u> or if the cable is not free to down-feed or is too lightly loaded. A cable "Spill" sensor interlock system is employed to stop the down operation if an internal accumulation of cable is detected. This system will normally prevent a jam from developing. This safety mode is effective, but may not always be caused to trip; it is intended to be a <u>back-up</u> system. This interlock is provided to protect the Servoreeler primarily during testing and installation. Conditions causing its intervention generally do not occur after the Servoreeler is installed. Care is advised to avoid conditions that would rely on the activation of this interlock.

Clearing an Internal Cable Jam:

1- Cable jams are not common. However, if a jam is suspected then the four cover screws about two turns each and slip the cover up from the Servoreeler chassis. You will see the cable storage reel with the cable retained by a clear Plexiglas flange. **<u>IMPORTANT CAUTION !</u> DO NOT LOOSEN THE FLANGE SCREWS OR ATTEMPT TO REMOVE THE CLEAR FLANGE. Removing this flange is rarely necessary. If removed, the resulting disruption of the microphone cable and its synchronization with an internal cable system will be <u>very difficult</u> for you to remedy.** Cable jams that occur due to an internal spill and a consequential accumulation of microphone cable can be cleared by following the procedures listed below.

NOTE: Take care not to alter the normal cable layer sequence when clearing a jam.

2- The cable is wound in one plane on the storage reel; layer upon preceding layer. There should be no discontinuities in these layers. Look for any irregularities at the last several outside layers of cable. If there are any trapped loops of cable or cable caught between some of the round spill bumpers, or the input roller guide, these need to be cleared. Usually such jams can be cleared by carefully working the loose winds until the cable is returned to a uniform even condition. When necessary, to clear a more serious tangle, press down on one of the white, round spill-bumpers to release spilled cable. It may also be helpful to activate the Servoreeler in the Up or Down-modes to help realign the cable. Any turns of stored cable that are removed from the storage reel must be counted and then must be replaced after the jam is cleared.

3- Do not over tighten the retaining- screw when re-installing the input guide roller or any other part that has been removed.

4- Carefully smooth-out any kinks in the cable. Serious kinks must be unwound and then straightened. Do not attempt to force kinks out by just pulling them straight, this will leave a permanent kink in the cable structure. Smoothing small bumps and bends can be done by gently pulling the cable by making a half turn across a screwdriver or other similar .25" (6mm) or larger round shaft.

5- After clearing a jam, it is wise to fully deploy the cable with its normal payload and then fully retract it. This will permit the cable to wind itself evenly on the storage reel. If the Servoreeler will not deploy or retract <u>all</u> of the cable, this is an indication that cable synchronization has been altered. Remedy by either adding or removing a turn of cable on the storage reel. If the storage reel stalls before taking-in all of the cable then add cable. If stall occurs before full payout of cable, remove cable from the storage reel. Do this by manually passing the cable past each white spill-bumper until a complete layer has been added or removed. After all of the loops and slack have been removed and proper operation has been observed then re-install the cover.

PLEASE DO NOT ATTEMPT ANY OTHER DISASSEMBLY OF THE SERVOREELER MECHANISM.

Should you require any further assistance, or have any questions regarding these instructions, please call us for support at: 800 431-8900   From outside of the US: 718 464-9400 fax: 464-9435 or srsystems@servoreelers.com