FDL
Tension Arm Retrofit

Name: _____

Loom Width: _____

_____ Tension Arm with 5/16 x 4 1/2 Hex Bolt, 3 Washers, and 1 1/2 Wood Spacer

_____ Tension Tie-Up

_____ Tension Weight

_____ Allen Wrenches: 1 - 5/32, 1 - 3/16

_____ Instructions

Packed by: _____

Date: _____

FDL TENSION ARM SYSTEM

To install your Tension Arm on your loom:

1.) You will need to drill a 21/64 diameter hole through the right folding leg. It needs to be located in the center (from side to side), 7" down from the top of the leg. Next, you will need to mount the Tension Arm. Put the hex bolt and one washer through the leg, then the wood spacer and one washer. Then the Tension Arm, one washer, and the hex nut. Now you will need to mount the warp beam before you go any further (instructions in your manual).

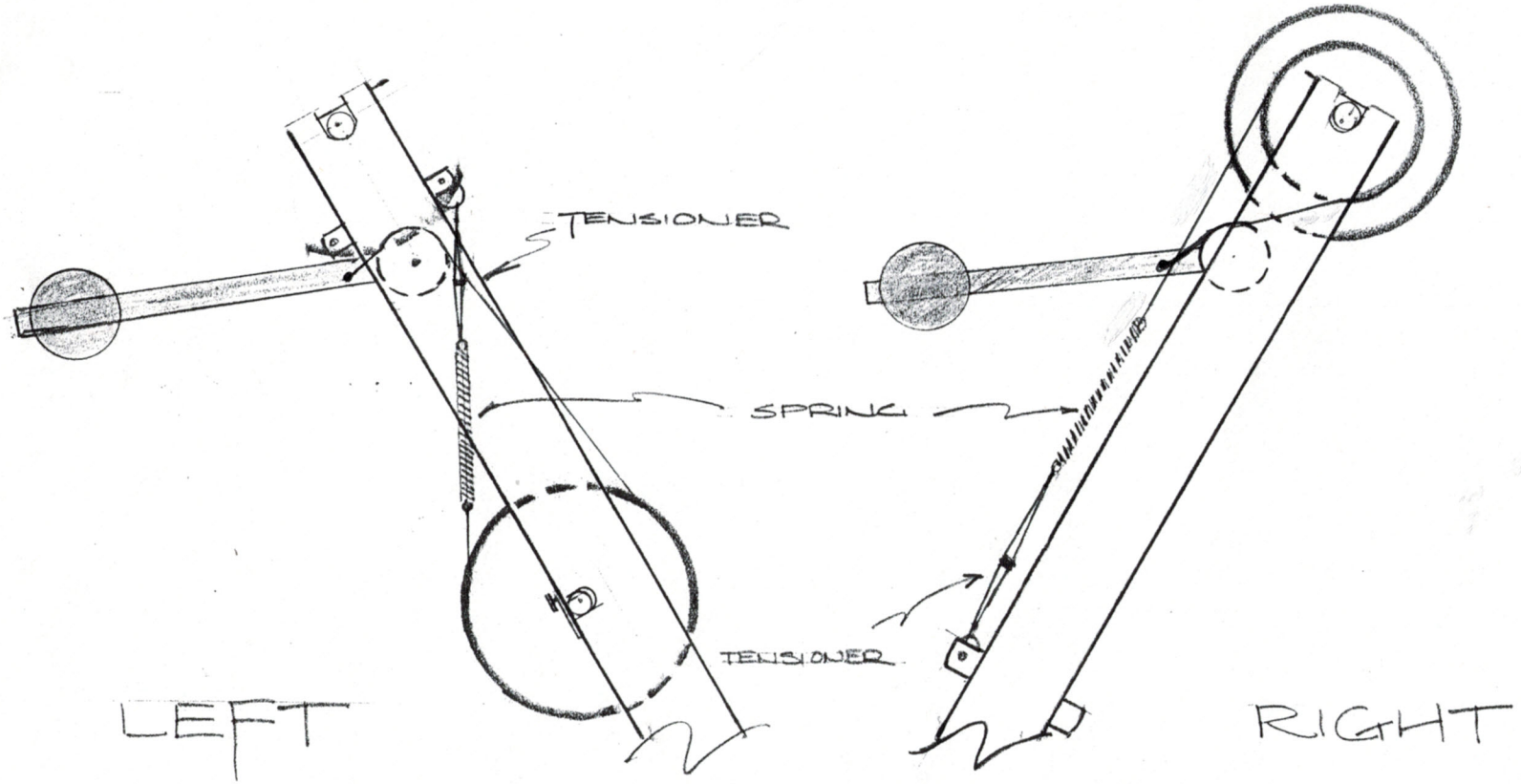
2.) Next, you'll want to attach the tension tie-up cord to its bracket. Let's begin with the right side. Note that the cord is already secured to the Tension Arm. Route the free end of the cord **over** the small pulley (1) to which the arm is attached and then **behind** the brake drum (2). Wrap the cord around the drum three times with the first wrap toward the outside of the drum working in. Carry the remaining cord, which includes a spring and an adjustment assembly (lighter cord with plastic lock) to the cross-mounted steel bracket (3). Slip the metal ring on the cord over the protruding hex bolt.

3.) Time to add the Tension Arm weight (the black disk with a side knob). Using the 3/16" allen wrench we've provided, remove the screw from the end of the Tension Arm. Loosen the knob on the weight and slide it onto the arm.

The instructions for adjusting tension for the big loom are included.

NOTE:

A tension box track system must be used to keep the loom from falling over.


TENSIONER
SPRING
TENSIONER
LEFT
RIGHT

SETTING THE TENSION DEVICE

Warp tension on an AVL Loom is controlled automatically by a special weighted tension arm which insures a constant and even tension at all times. The tension is easily adjusted, and the warp beam is released automatically as the cloth is advanced.

1. You should already have the cord wound round the tension drum and the cord end clipped to the spring. This should be done before winding the warp on to the plain beam to prevent the warp beam from turning backwards while winding on and threading. In the case of the sectional beam, the cord is entirely unhooked and unwound from the pulley and drum during the warp winding process; then is rewound and clipped on to the spring just prior to threading. Be sure to check with the diagrams to make sure you are doing this correctly. The cord should make three turns around the drum and must start from the correct position. Always check to make sure the cord has not crossed over itself.

2. To set the warp tension, move the weight to its rearmost position (next to the wooden pulley). Wind the warp forward slowly using the ratchet handle on the cloth beam. Continue winding until the weighted lever rises and stops when the rope slips on the brake drum.

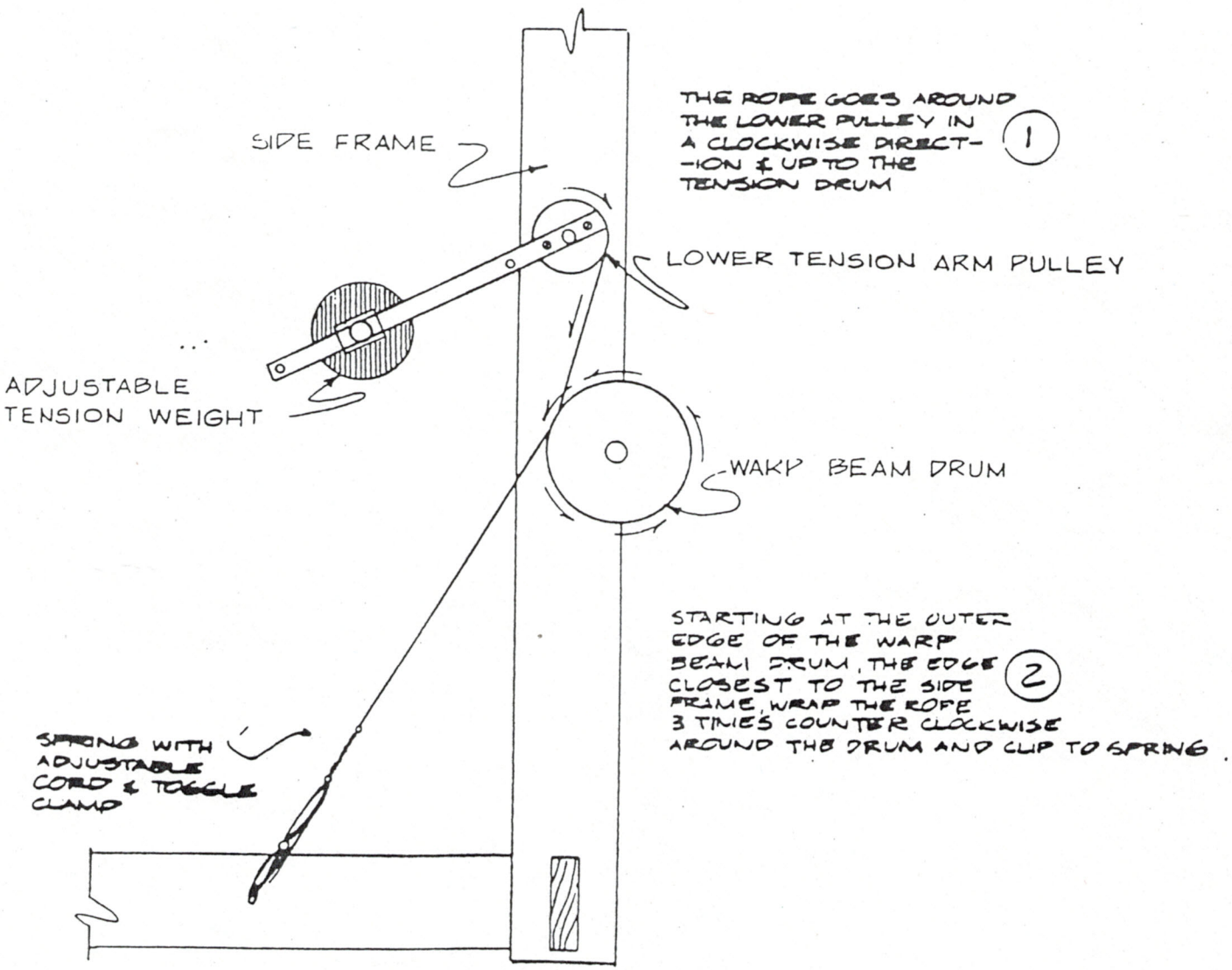
3. Ideally, the tension arm should rise (as you advance the warp) to about 45 degrees above horizontal, then slip and rest at an approximately horizontal position. If it stops above horizontal, let the adjusting cord out at the spring. If it stops below horizontal, shorten the cord. The length of the adjusting cord is changed by squeezing the ends of the small plastic toggle clamp together and then pulling the cord through it.

4. Now feel the warp for tension. If the warp is too loose, set the weight further out on the arm. Wind the warp forward a little and check again. Once you feel you have attained the proper warp tension, make certain that the tension arm is rising and slipping correctly. If it isn't, tighten or loosen the adjusting cord as needed. You will find that you can weave with less warp tension with a weight control than with the conventional ratchet system. Once the correct tension adjustment is made, it will be maintained automatically as the weaving is advanced. For light, fragile warps it may be necessary to use a lighter weight than the one that comes with the loom, and for dense heavy warps you may have to add some weight to the arm. You can order half-size weights from AVL Looms. This can be used by itself for very light

tension or can be used with the existing weight if more tension is needed.

For sectional beam tension device see figure 27 in assembly instructions page 71.

5. After making these adjustments, at times the warp will be wound too far forward. To wind it back on the warp beam, release the tension at the front of the loom and then go around to the back of the loom and lift the tension arm, then turn the crank so that the warp beam turns backwards. Always check to see that the tension cord has not become crossed over itself after this operation. Then wind the warp forward again with the front ratchet handle until the tension arm rises to horizontal.



TENSION DEVICE

Fig. 7