

# Operation and Construction of the Multiple Implement Connector

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The multiple implement connector is a device that is used to pull more than one implement at one time. The device is equipped with extension hydraulic hoses and has lighting for the rear implement. The system is designed to save the farmer time, gas, and decrease soil packing.

Material that was chosen for the construction was square tubing because of its light weight and durability.

The amount of material needed to complete fabrication are:

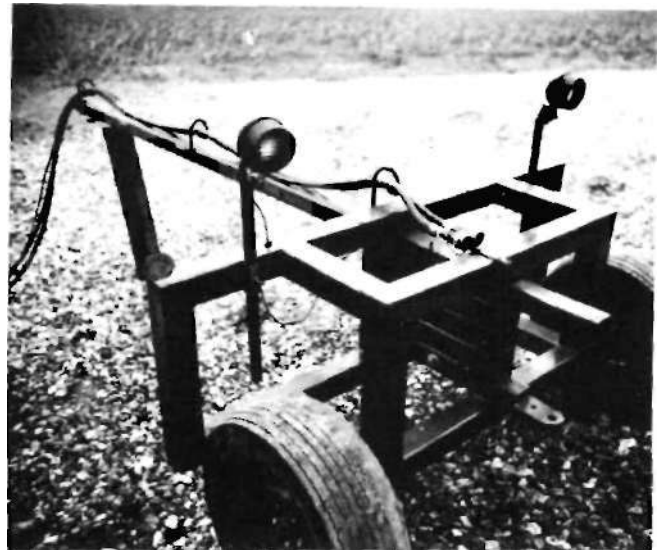
1.  $\frac{3}{16}$ " x 4" x 4" x 16'
2.  $\frac{3}{16}$ " x  $3\frac{1}{2}$ " x  $Vh$ " x 10'6"
3.  $\frac{1}{2}$ " x 1" x 1" x 28"
4.  $\frac{3}{16}$ " x  $Vh$ " x  $Vh$ " x 8"
5. W plate 3" x  $[Vh$ "
6. Spindels, wheels and tires
7. Lights and wiring
8. Hydraulic hoses

The main frame work houses the tongue supports, with the wheels to the lower rear of the main frame. The tongue was fabricated to telescope through the tongue supports, to be fully adjustable both horizontally and vertically to accommodate any size implement desired, to be pulled before or after the multiple implement connector.

Lights were installed to provide adequate lighting for the rear implement. The lights are adjustable to correspond with the height of the rear implement.

In order to operate the hydraulic system on the rear implement, hydraulic hoses had to be installed, with connectors on either end of the multiple implement connector.

The construction was fabricated first by cutting the square tubing to the desired lengths using a power horizontal band saw. For the 90° angles needed for the



main frame work the square tubing was cut at a 45° angle at either end of the frame pieces. Cutting 45° angles was chosen over butting the pieces together because the frame would then have higher durability and better appearance.

After all pieces were cut to proper length and angles, the front and rear rectangular main frame work was set on a work bench so that clamps could be used. The pieces were then squared and each joint to be welded was spaced  $Vu$ " apart to obtain total weld penetration. Then the frame was clamped down to the table and each corner tack welded to minimize warpage during welding. Then putting the frame work on the floor, all other pieces were added using the same procedure.

Holes were drilled in both the tongue and tongue supports, so the tongue could be moved to accommodate different implements.

BILL OF MATERIAL			
PC REQD	MAT'L	REF	DESCRIPTION
1	STEEL	FAB	LOWER REAR FRAME 4 X 4 X 5 1/2
2	STEEL	FAB	UPPER REAR FRAME 4 X 4 X 4 1/2
3			MIDDLE FRAME 4 X 4 X 1 1/2
4			LIGHT EXTENSION 1 X 1 X 1 1/2
5			FRONT FRAME SIDES 4 X 4 X 2 1/2
6			HITCH 3 X 3 1/2
7			LIGHT MOUNTING PLATE 2 X 1
8			EXTENSION HOLDER 4 X 4 X 1 1/2
9			SIDE FRAME 4 X 4 X 1 1/2
10			TONGUE SUPPORT 3/16 X 4 X 4 X 2 1/2
11			REAR SIDE FRAME 4 X 4 X 2 1/2
12			TONGUE 3/16 X 3 1/2 X 9 6
13			TONGUE 3/16 X 3 1/2 X 3 1/2 X 2 9
14	STEEL	PURCH	WHEEL SPINDLES

