

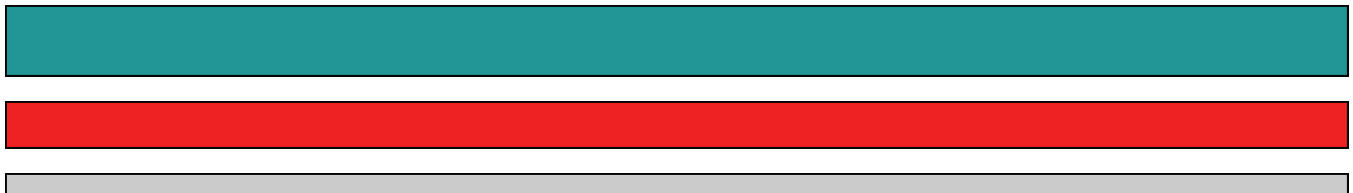


# ***MR32 ULTRA DRIVE***

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# ***START-UP GUIDE***

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# Specifications

The MR32 Ultra Drive is a design that utilizes a small 12 volt motor to belt drive the transmission instead of using a water turbine. A small dry cell motorcycle battery is charged by the supplied battery charger and gives the 12 volt motor 2.5 to 10 hours of run time. This model has been designed to operate when flows and pressures are not adequate for operating a standard water driven machine or when ultra fast retraction rates are needed.

## Specifications:

- **12 Volt Dry-Cell Battery Operated (Charger Supplied)**
- **Control Panel With Variable Speed Dial & Start/Stop Buttons**
- **3 Step Pulley Settings for Slow, Fast, & Ultra Fast Speeds**
- **End of Run Water & Drive Shut Down**
- **2.5 to 10 Hour Run Time Per Charge**
- **Flow Range 3 to 30 GPM**

## Charging the Battery



Figure 1) Plug charger cord to 110v outlet

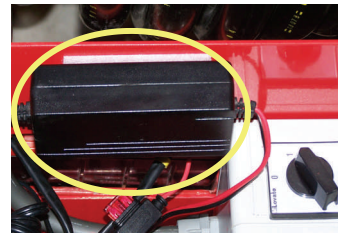


Figure 2) Charger w/ LED display on front

- 1) Connect the battery charger cord shown in figure 1 to a standard 110V outlet. (It is recommended not to run extension cords to the charger).
- 2) The GREEN LED light on the front side of the charger (figure 2) will turn ORANGE.
- 3) When the LED is ORANGE your battery is charging.
- 4) When the LED turns GREEN your battery is fully charged, the charger will stop charging when the battery is full even while plugged in.
- 5) Disconnect battery charger and Micro Rain Ultra Drive is ready to move to irrigation setting.

### Safety Instructions:

- 1) To reduce risk of injury, do not get charger wet.
- 2) Extension cords should not be used.
- 3) Do not operate charger with a damaged cord.
- 4) Do not disassemble charger or components.
- 5) Always unplug charger before cleaning or performing any maintenance.

# Start Up Instructions

The MR32 Ultra Drive 12 Volt Arena Watering System has been designed for simple and durable operation. The following guide will insure that you perform the basic steps to successfully operate your new traveling sprinkler.

**IN ADDITION TO THIS GUIDE, PLEASE FOLLOW THE DETAILED INSTRUCTION LABEL ON THE MACHINE AND FOLLOW ALL WARNING DECALS.**



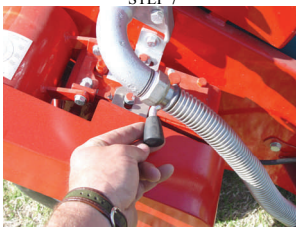
STEP 2



STEPS 5&9



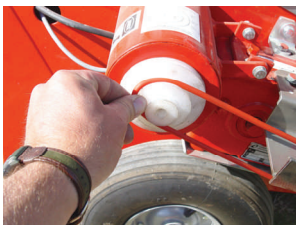
STEP 7



STEP 12



STEP 13



STEP 15

Step #1: Inspect machine for any possible shipping damages

Step #2 Open back hatch cover and connect battery wires And charger wire. The battery wires are color coded: red to red and black to black for proper polarity. The charger wire lead can only be connected in the proper polarity (split prong).

Step #3: Switch main panel dial to the on position (-)

Step #4: Place MR32 Ultra Drive in the direction that will be Irrigated. Sink stabilizer feet into the soil and level machine.

Step #5: Dis-engage anti-reverse lever

Step #6: Shift gearbox to the neutral position.

Step #7: Pull sprinkler cart out

Step #8: Adjust sprinkler stops to desired swath setting.

Step #9: Engage anti-reverse lever and roll drum by hand to Tighten remaining tube wraps left on the drum (Important!)

Step #10: Open shut-off valve by pulling on the handle and latching open. This action also re-sets the limit switch.

Step #11: Connect water hose to inlet and start water flow through machine.

Step #12: Shift gearbox to run position.

Step #13: Turn speed control dial to zero (0), and then press the green start button.

Step #14: Slowly turn the speed control dial clockwise until the desired retraction rate is met.

If the desired retraction rate is not achieved with the speed dial, then turn main switch to the off position and remove the belt cover. **IMPORTANT:** the machine must be in the off setting prior to adjusting the belt position.

Step #15: Follow the pulley position guide label on the motor cover to set the correct range. Two operation ranges are available: Turf (slow for plant irrigation) and Arena (fast speed for dust suppression). A rapid rewind setting is also available.

The sprinkler cart will retract back towards the machine chassis and trigger the shut-off sequence when it strikes the shut-off bar. The water and drive mechanism will shut-down automatically.



STEP 3



STEP 6



STEP 10



STEP 13



STEP 14



CART NEAR SHUT-OFF

# MR32 ULTRA DRIVE PERFORMANCE CHART

## 3 mm Nozzle

		80%		RUN TIME(HRS)			
		MAX	ADJ	MAX			
INLET PSI	GPM	WIDTH	WIDTH	LENGTH	0.10 INCH	0.25 INCH	0.50 INCH
25	2.8	70	56	277	5.01	12.53	
35	3.3	78	62.4	281	4.74	11.84	
45	3.7	80	64	282	4.33	10.83	
55	4.1	82	65.6	283	4.01	10.02	
65	4.2	84	67.2	284	4.01	10.02	
75	4.3	86	68.8	285	4.01	10.02	

## 4 mm Nozzle

		80%		RUN TIME(HRS)			
		MAX	ADJ	MAX			
INLET PSI	GPM	WIDTH	WIDTH	LENGTH	0.10 INCH	0.25 INCH	0.50 INCH
35	4	82	66	283	4.13	10.33	
45	4.5	85	68	284.5	3.79	9.46	
55	5	92	73.6	288	3.69	9.22	
65	5.3	97	77.6	290.5	3.67	9.17	
75	5.6	100	80	292	3.58	8.95	

## 5 mm Nozzle

		80%		RUN TIME(HRS)			
		MAX	ADJ	MAX			
INLET PSI	GPM	WIDTH	WIDTH	LENGTH	0.10 INCH	0.25 INCH	0.50 INCH
45	7	98	78.4	291	2.81	7.01	
55	7.8	103	82.4	293.5	2.65	6.62	
65	8.45	106	84.8	295	2.51	6.29	
75	8.9	109	87.2	296.5	2.45	6.14	12.27
85	9.4	111	88.8	297.5	2.37	5.92	11.83

## 6 mm Nozzle

		80%		RUN TIME(HRS)			
		MAX	ADJ	MAX			
INLET PSI	GPM	WIDTH	WIDTH	LENGTH	0.10 INCH	0.25 INCH	0.50 INCH
45	9.5	101	80.8	292.5	2.13	5.33	10.65
55	10.4	108	86.4	296	2.08	5.20	10.41
65	11.6	113	90.4	298.5	1.95	4.88	9.76
75	12.4	115	92	299.5	1.86	4.65	9.29
85	13.1	117	93.6	300.5	1.79	4.47	8.95

## 7 mm Nozzle

		80%		RUN TIME(HRS)			
		MAX	ADJ	MAX			
INLET PSI	GPM	WIDTH	WIDTH	LENGTH	0.10 INCH	0.25 INCH	0.50 INCH
55	13.3	110	88	297	1.66	4.14	8.29
65	14.5	115	92	299.5	1.59	3.97	7.95
75	15.9	121	96.8	302.5	1.53	3.81	7.63
85	17.2	126	100.8	305	1.47	3.67	7.34
95	17.8	129	103.2	306.5	1.45	3.63	7.26

## 8 mm Nozzle

		80%		RUN TIME(HRS)				
		MAX	ADJ	MAX				
INLET PSI	GPM	WIDTH	WIDTH	LENGTH	0.10 INCH	0.25 INCH	0.50 INCH	1 INCH
55	16.4	117	93.6	300.5	1.43	3.57	7.15	
65	17.7	124	99.2	304	1.40	3.51	7.02	
75	19.3	129	103.2	306.5	1.34	3.35	6.70	
85	21.1	134	107.2	309	1.27	3.18	6.36	12.73
95	21.9	137	109.6	310.5	1.25	3.13	6.27	12.54

## 9 mm Nozzle

		80%		RUN TIME(HRS)				
		MAX	ADJ	MAX				
INLET PSI	GPM	WIDTH	WIDTH	LENGTH	0.10 INCH	0.25 INCH	0.50 INCH	1 INCH
55	18.8	117	93.6	300.5	1.41	3.52	7.04	12.47
65	21	123	98.4	303.5	1.17	2.93	5.87	11.74
75	23	128	102.4	306	1.12	2.79	5.58	11.15
85	24.4	132	105.6	308	1.08	2.71	5.42	10.84
95	25.8	135	108	309.5	1.05	2.62	5.24	10.49
105	26.8	139	111.2	311.5	1.04	2.60	5.20	10.39

## 10 mm Nozzle

		80%		RUN TIME(HRS)				
		MAX	ADJ	MAX				
INLET PSI	GPM	WIDTH	WIDTH	LENGTH	0.10 INCH	0.25 INCH	0.50 INCH	1 INCH
55	21	116	92.8	300	1.11	2.77	5.54	11.07
65	23.2	122	97.6	303	1.05	2.63	5.27	10.54
75	24.7	127	101.6	305.5	1.03	2.58	5.15	10.30
85	26.4	131	104.8	307.5	0.99	2.49	4.97	9.94
95	28.2	134	107.2	309	0.95	2.38	4.76	9.52
105	30	135	108	309.5	0.90	2.25	4.51	9.02