WELCOME TO THE FIELD SKILLS TRAINING

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Irrigation Components and Maintenance

- Common Irrigation components
- Types of controllers
- Maintaining an irrigation system

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Impact driven rotor sprinkler head

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Gear driven rotor

Mist head

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Fan spray mist head

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Poly drip line

Drip emitter

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Sprinkler head adjustments

Impact head adjustment can be made by turning the silver guides on the "stem" of the sprinkler to adjust the arc of the spray to the left or right.

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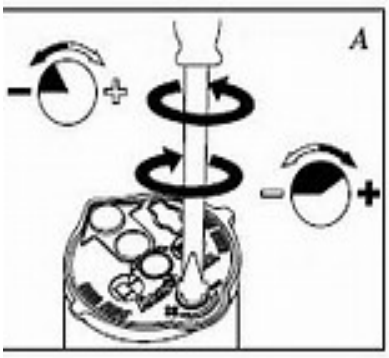
Gear driven sprinkler head

To adjust a gear driven sprinkler head insert a small flat bladed screw driver in the slot shown in the diagram and turn adjustment screw to adjust the "arc" of the spray.

Diagram



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Pop up mist head

Adjusting a mist heads angle of spray can be done simply by "twisting the shaft of the pop up sprinkler to the desired position as needed.

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Valve boxes

- Types of valve boxes

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Valve assemblies

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Valves and solenoids

Valves are used to open or close a zone of sprinklers this is done by an electrical current sent from a programmed controller.

Typical valve with a solenoid

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Quick coupler key and valve

- Quick coupler valve is installed on the "main" pressurized pipe and is used in conjunction with a key to be used with a garden hose for manual watering of plants etc

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Backflow preventers

Backflow preventers are used to prevent the infiltration of contaminants into the water supply from the irrigation system.

There are many different types of these and all prevent contamination of water supply and are required on all irrigation systems.

- Back flow preventer

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Controllers

Irrigation controllers are the "brains" of an irrigation system they control the number of days to water how long to water when to water and can set multiple programs to water different areas of turf or plantings at different times and duration.

- Irrigation controller

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Irrigation piping

Pvc pipe

- Poly irrigation pipe

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Irrigation pipe repair

- Pvc pipe;
- Locate area of leak.
- Open a trench in area of leak exposing the broken or leaking pipe.
- Cut pipe on either side of break in pipe.
- Clean both ends of cut pipe removing any burrs and soil.
- Apply primer and pvc glue to both the pipe and the repair coupling.
- Slide the repair coupling to connect to either end of cut pipe ensuring that you have a good connection to pipe.
- Let the repair set up (dry)
- Test repair by turning system on and check for leaks.

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Irrigation pipe repair

- Poly pipe repair.
- Open a trench in area of cut pipe or leak about 2' on either side of cut.
- Locate area of cut pipe.
- Cut out a section of pipe as needed.
- Slide a repair clamp on both ends of pipe.
- Install the proper sized barbed coupler into pipe and tap in place with a rubber mallet then position and clamp the hose clamp.
- Do the same for both ends and then install the section of new pipe using the clamps.
- Test for leaks.

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Sprinkler head maintenance

- Once adjusted for proper coverage there is little maintenance of a head unless damaged or clogged with debris or soil.
- Mist heads have a filter in stem just below nozzle that may require occasional cleaning.
- To clean the nozzle or filter
- Raise the stem and hold in place while removing the nozzle and filter clean out the filter and nozzle if needed and reinstall both.
- Test mist head to be sure it is working properly and adjust as needed.

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Checking for proper coverage

- Run system manually to check that system is running properly and watering adequately and that there are no dry spots.
- Using the controller you can adjust the days to water amount of time per zone how many times a day a particular zone goes off.
- Set the time of day to run.
- Time per zone.
- Days to water
- And programs to run.
- Example: program A is turf.
- Program B is perennials
- Program C is shrubs.

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Settings for irrigation

- Turf zones: 20-35 minutes depending on needs new vs established and shade or direct sun.
- Perennials groundcovers and most annuals: 8-10 min.
- Shrub zones: drip systems 15-20 min. mist heads 5-10 minutes depending on location and needs.
- Soil conditions
- Sun vs shade
- Evergreen vs deciduous
- Monitor moisture content in soil or rootball of plant.
- Healthy green lawn vs dry unhealthy lawn.

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Irrigation Systems require frequent adjustments to water properly!!

- Thank You for being a part of ILCA'S Field skills training!!
- And don't forget to become certified !!

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