RAIN BIRD®

TECH SPECS

Wireless Automatic Control System

The Rain Bird® CYCLIK™ wireless control system is battery operated for economical automation of an irrigation system, without AC power and without control wires.

The CONTROL MODULE has a 9-volt battery located in a weatherproof enclosure and operates latching solenoids to interrupt water flow to the valve chamber and provide on/off control of up to four valves.

The FIELD TRANSMITTER uses simple programming steps to create a coordinated irrigation schedule for up to 85 control modules. Programs are loaded into the optical port of the control modules through an infra-red link.

The simple programming menu in the field transmitter is used to set up the irrigation schedule for each valve. Then, the transmitter is taken to the field to load the program into each control module via the optical port. After the programs are loaded, each valve will operate until a new program is entered. The programming can be created to repeat a sequence, or operate one time, then remain off.

There are two models of field transmitters for different irrigation applications:

- Cyclik CI controls a series of valves to open and close in a sequence such as “pulse” irrigation of a solid set sprinkler or drip system.
- Cyclik Micro controls valves to open and close at specific times per day.
  - Micro Mode A allows four programs, and up to eight start times per day on a weekly schedule.
  - Micro Mode B allows multiple start and stop times within a specific time window, for use in a system with frequent daily irrigation and rest intervals.

CYCLIK control module shown operating two Rain Bird cast iron hydraulic valves.

Features	Benefits
• Accurate, synchronized control without control wires or AC power	• Low cost installation
• Weatherproof optical port	• Trouble-free operation, even under water
• Simple menu-driven programming	• Saves time and reduces errors
• Programming changes are made only through the field transmitter	• Unauthorized individuals cannot change irrigation programs
• One year control module operation with one 9-volt alkaline battery	• Battery is reliable for one irrigation season
• On/Off rainy weather control via the field transmitter	• Saves water by allowing shut-off during rain without losing the stored program
• Synchronized control of up to 85 irrigation blocks	• Economical system, even for large farms

CYCLIK control module and field transmitter connected via optical port.

How to Specify/Order:

Part Number	Description
JA1100	Cyclik CI Field Transmitter
JA1300	Cyclik Micro Field Transmitter
JA3000	3-Way Latching Solenoid
JA3001	Control Module - 1 Station
JA3002	Control Module - 2 Stations
JA3004	Control Module - 4 Stations
71P51018	Bracket (attaches control module to valve)
TBOSPSOL	2-Way Latching Solenoid

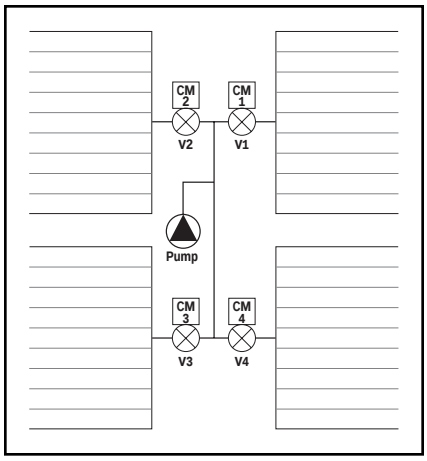
Cyclik CI

Many growers who use drip irrigation have found that frequently turning the drip laterals off and on will spread out the water in the ground to create a broader wetting pattern. This also avoids saturation and promotes better oxygenation of the plant roots. By spreading the wetting pattern, excess deep percolation can also be avoided.

The Cyclik CI, combined with Rain Bird automatic valves provides an ideal system for pulse irrigation. As many as 85 valves can be programmed to open and close in a coordinated sequence. The Cyclik CI also features a time overlap between valve operations so that the next valve will be sure to be open before the previous valve closes. Cyclik does not allow a pump to operate against a closed system, so this avoids the situation where a pump could "dead head".

The simple four valve system illustrated above shows the location of the Cyclik control modules and Rain Bird valves, with connecting piping to the water source. For example, suppose the grower wants to irrigate each block for one hour, then rest each block for three hours. The Cyclik CI field transmitter would be programmed to operate block 1 for one hour, then open the valve for block 2 slightly before closing the valve for block 1. One hour later, the valve for block 3 would open, slightly before closing block 2, and so on until all four blocks receive one hour of water.

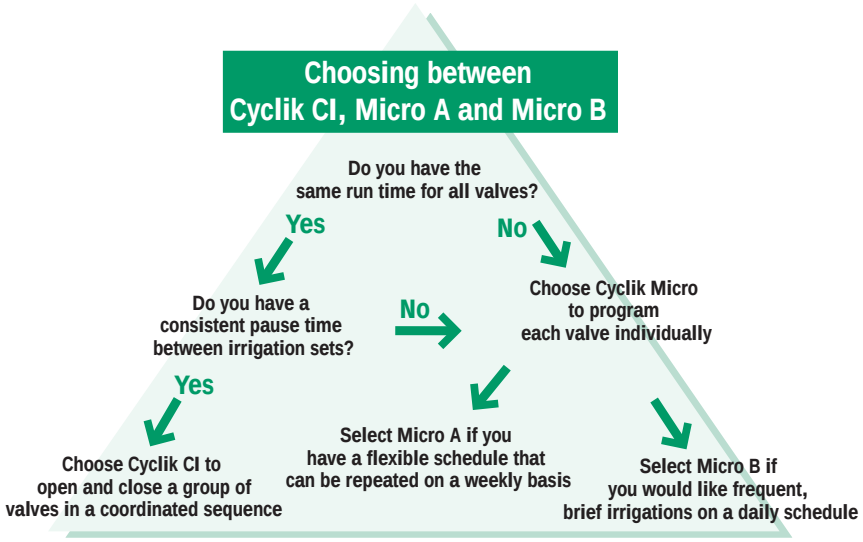
The Cyclik control modules can be programmed to repeat the pulsing schedule as many times as necessary to apply the required irrigation to all blocks. After the irrigation is completed, the grower can turn off the pump. A popular option is to program the Cyclik control modules to keep opening and closing the valves, even while the pump is off. This approach means that one of the valves will be open at all times, so a grower can start an irrigation at any time by simply starting the pump. Once the water is on, the Cyclik control modules operate the valves to provide "pulse" irrigation to the field.



Typical field layout with Cyclik control of each valve in a sequence.

Key Features

- Works with single station control modules
- Maximum irrigation time is 23 hours, 55 minutes
- Maximum overlap between valves is 120 seconds
- Maximum 14 days between irrigation cycles
- Up to 85 control modules



	CI	Micro A	Micro B
Number of stations (valves) operated by one control module	1	1, 2, or 4	1
Maximum irrigation time per set	23 hours, 55 minutes	12 hours	99 minutes
Interval of runtime	5 minutes	1 minute	Seconds (minimum 10)
Maximum overlap time between valves	120 seconds	No maximum – Valves may be individually programmed	No maximum – Valves may be individually programmed
Maximum number of days between irrigation cycles	14 days	Select from a 7-day calendar	Runs daily
Manual option	Yes	Yes, for each station individually	Yes
Other features	Up to 85 valves in a sequence	Up to 8 start and run times per day at each station	Two irrigation windows per day
Rainy weather shutdown	Yes	Yes	Yes

Cyclik Micro Mode A

Growers who need to irrigate on a weekly schedule may use Cyclik Micro Mode A. The first step is to choose the days of the week to receive irrigation, and skip the days that will not get water. Next, set the start time and run time, up to 8 start times per station per day, and the Cyclik control modules will repeat the program until a new program is entered.

Key Features

- Works with 1, 2, or 4 station control modules
- Each station controls up to 8 start times and run times per day
- Can assign an independent program to each station

Example: A remote pasture requires irrigation Monday through Friday only. On irrigation days, the pasture needs two irrigations per day, three hours starting at 5 AM, and for one hour starting at 3 PM.

Controlling a Rain Bird Rain Gun on a remote pasture without electric power or wiring.

Cyclik Micro Mode B

This sequence is designed for growers that want to operate on the same schedule every day, and need to irrigate in short bursts, followed by a "soak-in" time. After the time of day is set, the next step is to enter the start time and end time of the irrigation window (up to 2 irrigation windows per day). Once the irrigation windows are set, the final step is to enter the run time (from 10 seconds up to 99 minutes), and soak time (up to 99 minutes) within the irrigation windows.

Key Features

- Works with single station control modules
- Up to 2 irrigation operating windows per day
- 10 seconds to 99 minutes irrigation "run time"
- 1 minute to 99 minutes "soak time"

Example: A Greenhouse requires 30 seconds on and 3 minutes off all day from 6 AM to 7 PM.

Greenhouse application with many short on-cycles during an irrigation "window".

Additional Features

Manual control

All Cyclik products have the option of manual control with the field transmitter to close or open a valve immediately.

ON/OFF control

An ON/OFF mode is also available. In the OFF mode, the program is kept from operating (and valves are not allowed to open) until the control modules receive an ON command. This feature is often used during rainy periods when the grower does not wish to irrigate, but wants to store the program in the control modules for activation in the future.

Program review

The system also allows the grower to take the field transmitter to the field and review the program in each control module by connecting the optical port and choosing the key.

Automated irrigation of a corn field with the Cyclik control system.

This control module and valve were buried for 2 weeks due to flooding. Infra-red communication with the field transmitter still worked.

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