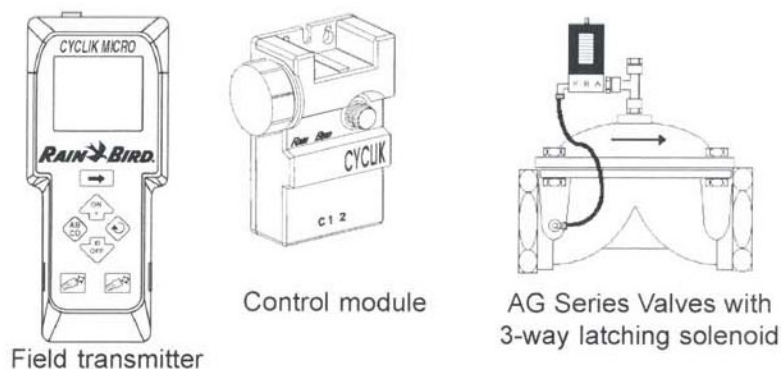


CYCLIK MICRO 2000 INSTRUCTION MANUAL

1 - INTRODUCTION

The Cyclik Micro 2000 system consists of one or more control modules and a Cyclik Micro 2000 Field Transmitter used to program and operate the Cyclik Micro 2000 modules via an infrared connection. An optical connector at the end of the Field Transmitter cord allows easy plug-in to the control module. This system is designed to automate micro-irrigation. Its wide application range, apart from micro-irrigation, includes filter cleaning, fertilizer injection, etc.



MODE A: up to 8 starts per program (4) per day. A run time can be programmed for each start. 1, 2 and 4 station control modules can be programmed.

MODE B: an irrigation cycle with the same Run and Soak time is repeated during 2 Time Windows. You can only program 1-station modules in this mode.

IMPORTANT : CYCLIK MICRO 2000 and CYCLIK MICRO 2000 - RADIO Field Transmitters can only be used with CYCLIK 2000 Control Modules (1, 2 or 4 stations).

2 - SPECIFICATIONS

MODE A

- 4 completely independent programs : **A, B, C, D**
- 7-day programmable calendar for each program
- 8 starts per program per day with a run time for each of the 8 start times.
- Run time: 1 minute to 12 hours in 1 minute increments.

MODE B




- 1-day calendar
- 1-2 Time Windows
- Run time: 1 minute to 99 minutes in 1 minute increments.
- Soak Time: 1 minute to 99 minutes in 1 minute increments.

General

- The Field Transmitter can program an unlimited number of Control Modules (Mode "A" or Mode "B")
- Manual **Start/Stop. On/Shutdown** Mode.
- Automatic synchronization of the Control Module with the Field transmitter when the program is transmitted.
- LCD automatically turns off after 1 minute if transmitter is not being used.
- "**Beep**" tone confirms key has been pressed
- Infrared transmission of program data
- Field Transmitter battery life : one year with 1 9V alkaline battery type 6AM6 (Varta,...) (international standard) or type 6LR61 (European standard).
- Control Module battery life:
 - . 1 year using **A MODE**
 - . 1 year using **B MODE** with not over 20 daily starts
 - . 6 months using **B MODE** with not over 40 daily starts
- Operating temperature range: 0° C to 55° C.

CYCLIK MICRO 2000 PROGRAMMING OVERVIEW

Cyclik Micro 2000 programming features include:

- A circular menu. You can run through the menu and return to the first screen by repeatedly pressing the  key. Repeatedly pressing  will help you become familiar with the screens.
- Program data entered is automatically stored by pressing the  key and moving to the next screen.

The various functions are represented by icons. The icons indicate in which function you are working.

Example :  = Start time function

TIP (only in MODE A)

If you want more than 8 irrigation start times per day on a site equipped with only 1 valve, you can wire the valve to several stations on a 2 or 4-station control module and program multiple start times for each station by assigning each station to a different program (A, B, C or D).

Example: if you wire the same valve to both stations on a 2-station module, you can obtain up to 16 starts (2x8). If you connect the same valve to 3 stations on a 4-station control module, you can obtain up to 24 starts (3x8). But keep in mind that the stations assigned to this valve cannot be assigned to other valves.

IMPORTANT

If you use this method, make sure that there is no program overlap. The program run time must be shorter than the time interval separating 2 start times.

MAINTENANCE

- Replace the 9V battery once a season or when the low battery icon blinks.
- Place the transmitter in the sheath after use.
- Do not expose the LCD to sunlight over long periods of time.

The systematic use of the protective sheath is the best way to guarantee a long service life

DECLARATION OF CONFORMITY TO EUROPEAN DIRECTIVES

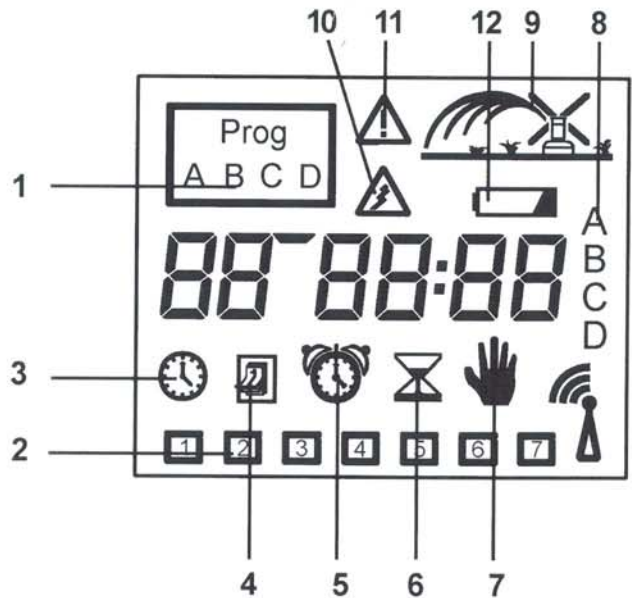
I declare that the Cyclik Micro 2000 device, field transmitter to program control modules, conforms to the European directives 89/ 336/CE and 93/31/CE concerning electromagnetic compatibility

Aix en Provence, 01/02/2001
General Manager
Rain Bird Europe

Signature

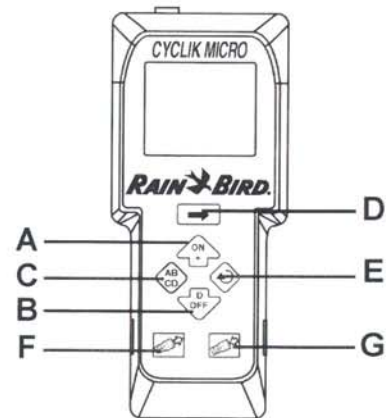
LCD SCREEN ICONS

- 1- Select program (A, B, C or D)
- 2- Day of the week and / or water day
- 3- Current time function
- 4- Irrigation cycle function
- 5- Start time function
- 6- Run time function for each station
- 7- Manual start of a station or program
- 8- Assign station to a program (A, B, C or D)
- 9- System On / Off
- 10- Transmission taking place
- 11- Transmission problem
- 12- Replace battery
 - in the field transmitter (when field transmitter is activated)
 - in the Cyclik Control Module (when programs are transmitted or received)



CYCLIK 2000 KEYPAD

- A - Increase adjustment key
- B - Decrease adjustment key
- C - Program selection key
- D - Move to next function key
- E - Key to work within a function
- F - Transmission key transmits program to control module
- G - Key to display module program
- D + B: Press these 2 keys simultaneously to move from Mode A to Mode B.

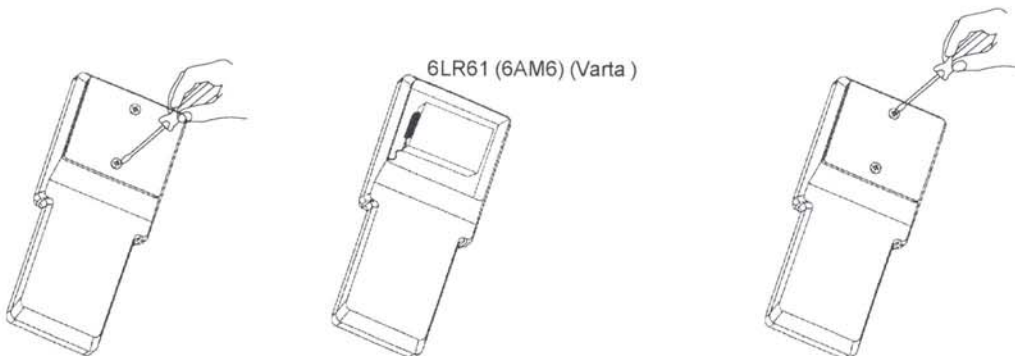


3 - TRANSMITTER START-UP

a - Install the battery

Locate the battery compartment cover on the back of the transmitter case.

Loosen the screws 6 turns only to avoid losing them. Install a new, high quality, 9V alkaline battery (Varta) type 6LR61. Replace the cover. Make sure not to snag the wires. Tighten the 2 screws.



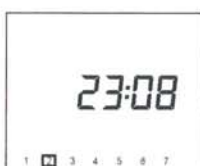
b - Start-up

As soon as the battery is connected, the standby screen appears (N.1).

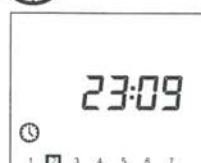
The field transmitter can now be programmed.

If the screen is blank, press the key once to activate the field transmitter. Press the key again.

The clock symbol will appear (N.2).



N.1





N.2

PROGRAMMING

IMPORTANT : Press  to activate the screen

1. SET CLOCK



Use the  or  keys.

1.1 Set current time of day :

Holding down a key for more than 2 seconds will cause the numbers to increase or decrease more rapidly. In this example, we change 23: 08 to 23: 09 (N.2).

1.2 Set current day :

Use the  key to place the square on the current day of the week.

Monday = 1...Sunday = 7

Example: if " today " is Wednesday, place the square on number 3, (N.3).

1 2 **3** 4 5 6 7



N.3

Note: when a program is transmitted to a control module, the current day and time are also transmitted. This means that all modules are synchronized with each other.

2. PROGRAMMING MODE A

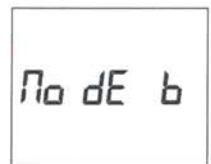
Press  and  simultaneously to select **MODE A**.

Repeat the procedure to move from MODE A (N.4a) to MODE B (N.4b) and vice versa.

The selected Mode will appear for 3 seconds. Afterwards, no icon indicating the selected Mode will appear while the transmitter is being used.




N.4a





N.4b



2.1 - Set days of the week to water

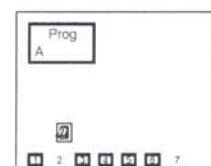
Press the  key to display the calendar icon (N.5).

Use the  key to select the program.

Use the  key to move through the days (1 to 7, 1 = Monday). The number / day you are on will blink. Use the  and  keys to cancel or maintain watering on

that day. A day with a square around it is a water day.



Note that the square will disappear if you press the  key. No watering will occur on that day. If you change your mind, press the  key and the square returns = water day.





N.5

Example :

You want to water with program A on every day except Tuesday and Sunday.

Use the  key to move the square to number 2. Press the  key and the square around number 2 (Tuesday) will disappear. No watering will occur on Tuesday.

Repeat the procedure with the  key by moving the square to number 7. Then press 

1 2 **3** **4** **5** **6** 7

2 - Set irrigation start times (1-8) and run times



Press the to display the start time icon.



Select the program with the key. The number on the left indicates the start time (1-8).

1 = 1st start time (N.6).

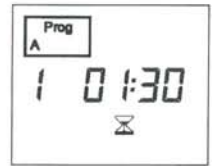
Use and to set the first start time.

Then press . The run time icon will appear.



The number on the left is the start time number (N.6).

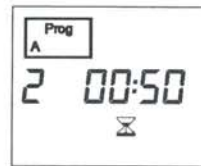
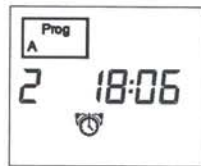
Set the desired run time with and .



N.6

Then press to program the 2nd start time. Set the 2nd start time with and .

Press to program the run time for the 2nd start time. Repeat the above procedure (N.7).



N.7

Note: you do not have to use all 8 start times.

To cancel a start time, use the key to slowly display all the start times. When the start time you wish to cancel appears, hold down the key for at least 2 seconds. A start time can also be cancelled by using the and keys to move to the --:-- position between 11:59 and 12:00 or 23:59 and 00:00.

3 - Assign stations to programs

After entering the program (A, B, C and D) start times and run times, you must decide which stations are assigned to the programs.

Repeatedly press until you see the screen STA 1. Then press the key to assign station 1 to the program you wish (N.8a)

Use and to assign the other stations in the control module to a program (N.8b, 8c, 8d)

Example : Program C :

1st start time: 08:00 with a run time of 10 minutes

2nd start time: 10:00 with a run time of 30 minutes

If station NR.1 is assigned to program C, irrigation will occur from 08:00 to 08:10 and then from 10:00 to 10:30.

Note 1: several stations assigned to the same program.

- If several stations are assigned to the same program, they will **not** operate simultaneously, but one after the other in sequential order.

Example: stations 1, 3 and 4 are assigned to program C.

At the first start time:

Station 1 will operate from 08:00 to 08:10

Station 3 will operate from 08:10 to 08:20

Station 4 will operate from 08:20 to 08:30

At the 2nd start time:

Station 1 will operate from 10:00 to 10:30

Station 3 will operate from 10:30 to 11:00

Station 4 will operate from 11:00 to 11:30



N.8a



N.8b




N.8c



N.8d

Note 2: each station is assigned to a different program. In that case, each station is completely independent. It is possible to operate stations simultaneously.

3. PROGRAMMING MODE B

Press  if the LCD is blank.

Simultaneously press  and  to select **MODE B (N.9)**. Repeat the procedure to move from **MODE B** to **MODE A** or vice versa.




N.9



The selected mode is displayed during 3 seconds.

Note: afterwards, no icon appears on the screen to indicate which mode has been selected.

3.1 Programming the time window(s)



Repeatedly press  to display this icon 

If the current time is displayed, press  again. If not, refer to "Programming 1. Set Clock".

- Press the  key to display this icon: (N.10) 



N.10

This screen (N.10) indicates that you must now set the opening (ON) of the 1st time window. Use  the  and keys. In this example, the 1st time window



opens at midnight.


- Press the  key to display this icon: (N.11) 

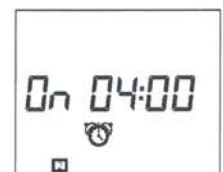


N.11



This screen (N.11) allows you to enter the time window closing time (OF).

Use the  and  keys. In this example, the 1st time window closes at 2:00 in the morning.

- Press the same key  again to access this screen (N.12) if you wish to enter a 2nd time window. Note the " 2 " at the bottom of the screen.



N.12

Set the 2nd time window opening and closing times (N.13) as above. If you do not want a 2nd time window, use the  and  keys to display --:--

situated between 11: 59 and 12: 00 or between 23: 59 and 00: 00.





N.13

Note: note that 2 dots appear between the hour and the minutes.

3.2 Set run time and soak time

The irrigation run time you enter will occur and be repeated within the time window (s) you have set. You can enter a soak time (no irrigation) which will also be repeated within the time window between each water application.


- Press the  key to display this screen  (N.14) after you finish programming the time window(s).



N.14



The "ON" indicates that you should now enter the irrigation run time in minutes and seconds in 1-second increments.

Minimum: 10 seconds – **Maximum:** 99 minutes.

Use the  and  keys. Then press  to enter the soak time



N.15

The "OF" indicates that you should now enter the soak time with the  and  keys (0 to 99 minutes in 1-minute increments) (N.15).

Example :

In this example, there are 2 time windows.

1st time window: 00: 00 to 02: 00 (N.10 and 11)

2nd time window: 04: 00 to 06: 00 (N.12 and 13)

Irrigation run time: 2 minutes 30 seconds (N.14)

Soak time: 5 minutes (N.15)

Irrigation will start at **00: 00** and operate for **2 minutes 30 seconds**. Then it will stop for **5 minutes** (soak time). After 5 minutes, irrigation will take place again for **2 minutes 30 seconds**, and stop again for 5 minutes. This sequence will repeated until **02: 00** when irrigation will stop. The same sequence will start again at **04: 00** and operate until **06: 00**.

Note: there is only a single dot between the minutes and seconds in the time screens used for run time and soak time.

ERASE PROGRAM DATA IN THE TRANSMITTER

This function erases all program data (**MODE A** and **MODE B**) in the transmitter except current time and day.




Press the **+ / ON** and **- / OFF** keys simultaneously and hold them down for at least 3 seconds.


4 - TRANSMISSION

MODE A or MODE B transmission to Cyclik 2000 control module(s)

Connect the field transmitter to the Control Module.

Press  to activate the LCD screen if it is blank.

Press 

The transmission icon  will appear during 2 seconds.

Note: if there is a transmission problem (poor connection, dirty connector, lack of battery or dead battery, etc.) you will hear 3 " beeps " and this screen will appear. 

Important: if the blinking battery icon is displayed on the LCD during program transmission, replace the 9V battery in the Cyclik control module.

Note: MODE B operates only with 1-station Cyclik 2000 control modules. If you transmit MODE B to a multi-station module, only the 1st station will operate.

5 - MANUAL FUNCTIONS :

5.1 - Mode A : Manual station or program start


You can manually start a station by either entering an irrigation run time or by starting a program for a certain length of time.

A. Repeatedly press  to display this screen (N.16)



N.16


B. Enter a run time with the  and  keys (N.16)

C. To start a station, repeatedly press  until the desired station number appears. (N.17), then go to step 5.E.



N.17





D. To start a program, repeatedly press  until the desired program appears (N.18), then go to step 5. E.





N.18



E. After having selected the station or the program, connect the field transmitter to the control module. Press  to start irrigation. Irrigation will occur during the programmed run time (N.16). You can stop irrigation at any time by selecting the station or program as above. Then connect the transmitter to the control module and press .

5.2. Mode B

This mode allows you to close or open a valve with the field transmitter without programming a run time. Make sure that the transmitter is in Mode B. See " 3. PROGRAMMING MODE B ".


Repeatedly press the  key to access this screen (N.19). Connect the field transmitter to the control module. Press  to open the valve.

To close the valve, repeatedly press  to display screen N.19, connect the field transmitter to the module, then press .



N.19



5.3. Important :

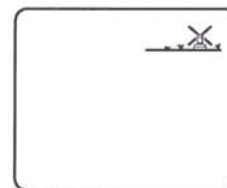
When you connect the field transmitter to the control module to perform a manual start, and the screen displays **MODE A**, this means that your transmitter is in **MODE B**, but the control module was programmed in **MODE A**. In that case, the field transmitter will automatically change to **MODE A**. Use  to access the necessary screens and follow the procedure in step 5.1.

Otherwise, **MODE B** will be displayed on the transmitter screen and you can apply the 5.2 procedure.


6 - Mode ON/OFF

This mode is used to permit watering or prevent any valve from opening. It overrides both manual (Step 5) or programmed valve opening.

Repeatedly press  until this screen (N.20) appears. Note the blinking cross on the sprinkler. Connect the transmitter to the module(s) and press the  key to place the module in the "ON" mode. The cross will disappear. Any programmed or manual irrigation will take place.




N.20




Note : the default mode is "ON". If you press the key , the module will be placed in the "OFF" mode. All irrigation, either programmed or manual will be prevented. A non-blinking cross appears on the sprinkler. This mode is useful during rainy weather (rainy weather shutdown). The irrigation program remains stored in the module.


IMPORTANT : Make sure that the control module is in the "ON" mode before trying to manually open a valve with the console.

7 - PROGRAM REVIEW AND CHANGE

Connect the field transmitter to the control module.

7.1. If the LCD is blank, press 


7.2. Press  to receive the program data stored in the control module. You can now review the program that is in the module by using the  and  keys : **MODE A** or **MODE B**, irrigation run time, start times, water days, program assignment (A, B, C, D), "ON/OFF". However, you cannot consult the current time of day stored in the module.

7.3. To modify the program data, simply enter the desired modifications. Then press  even if you decide not to make any changes. This will synchronize the transmitter and module clocks.



IMPORTANT : If during reception of the program, the low battery icon blinks (see N.22), you must replace the 9V battery in the control module. The low battery icon function only operates in Cyclik modules with a date code after 02 October 2000.

8 - LOW BATTERY ICON

a - Low battery in the field transmitter

If the battery is low in the field transmitter, this screen (N.21) with the blinking low battery icon will appear after you press . Replace the battery in the field transmitter.

b. Low battery in the control module

After you transmit a program  to a module or monitor a program 

in a module, this screen (N.22) will appear if the battery in the module must be replaced.



N.21

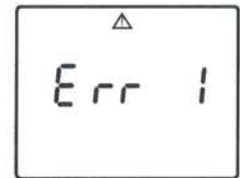


N.22

9 - Err 1 Message - Screen N.23

If the transmitter is incompatible with the control module, the **Err 1** message will be displayed on the LCD. Possible reasons:

- New Micro 2000 field transmitter connected to a control module with a date code prior to October 2, 2000.
- In the manual mode, the number of the station entered to open or close a valve is higher than the number of stations in the module.
- If the module has been programmed with an old version Cyclik Micro or Cyclik CI field transmitter, the message is displayed when the Cyclik Micro 2000 transmitter monitors the program data stored in the module.




N.23

10 - TROUBLESHOOTING

SYMPTOM : Scheduled irrigation does not occur.

CHECKLIST :

1. Make sure that the valve has not been manually closed.
2. Make sure that the system is not in the "OFF" mode.
3. Clean the optical connectors on the field transmitter and control module.
4. Make sure that the optical connectors between the module and the transmitter are securely connected.
5. Make sure that the program has been properly transmitted to the control module by pressing .
6. Replace the batteries in the field transmitter and control module(s).
7. Check the wiring between the module(s) and the solenoids.
8. Make sure the battery snap is tightly connected to the battery.
9. Make sure that the wires between the modules and the solenoids have not been inverted. See the Cyclik Module Instruction Manual.