

itec-V 4,6,8,10 station Outdoor Controller - Municipal Controller

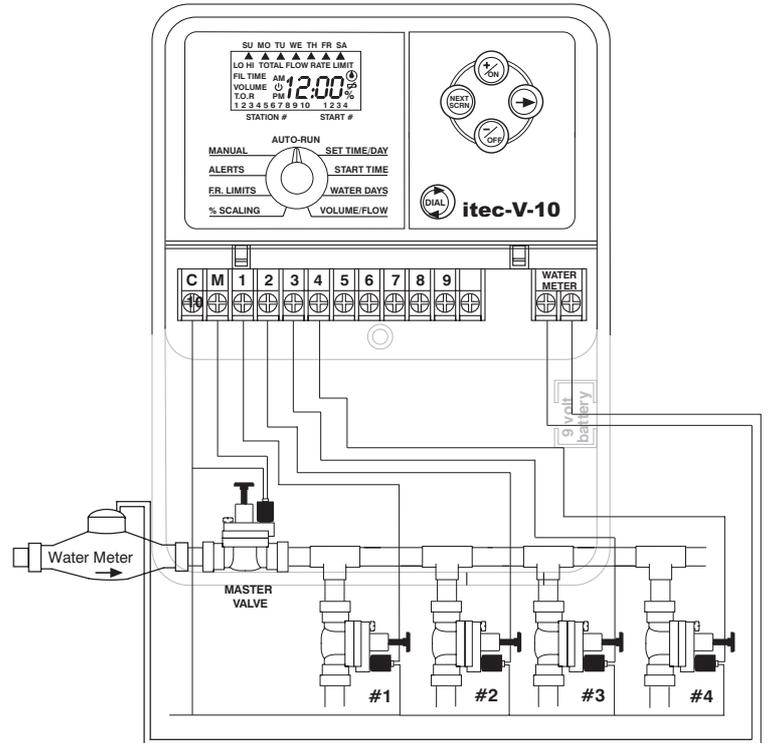
INSTALLATION INSTRUCTIONS

Remove the lower cover. Place the unit on the wall using one slot and two fixed hall under the terminal. Connect the solenoid wires to the terminal block.

All Black wires must be connected to COMMON. Red wires to their appropriate Number. Connect the Water Meter wires to the controller. (Polarity is not important) Note the Water Meter UNIT OF VOLUME. You may wish to operate the controller using a different UNIT OF VOLUME which can be set by the WATER METER MULTIPLIER.

If you wish to connect your controller(s) to "CELL COMMUNICATION" unit, please refer to the attached instructions for this purpose.

Only after all your wiring is done and checked, connect the 9 volt Alkaline battery. The display will now be on.



SPECIFICATIONS

Product Name	itec-V
Cabinet	Will use outdoor lockable cabinet (plastic)
Power Source	Battery Operated - 1 battery for the Indoor enclosure 9 volt - 2 batteries for the Outdoor enclosure 12 volt - Rechargeable for communication solar panel
Output to Solenoid	13.5 volt pick using 4,700 ufd capacitor
Station Count	4,6,8,10
Sensor input	Water Meter Input
Programs	4 starts (like 4 programs) Stacking ! Only 1 station + master.
Schedules	Calendar (7 days) / Interval 1 - 19 days
Watering Volume/Time	Up to 999 units of volume. Up to 999 minutes in Time Mode
Flow Rate measurements	Flow Rate up to 255 units of volume/hr
Water Budget	% Scaling from 10% - 200%, with 0% = OFF for the Start Time.
Flow Rate Limits	Flow Rate Limits in % of deviation from the nominal value set for each station. Can be set to OFF = No FR. protection.
Fill Time	Fill up time from 1 - 30 min. Default 6 min.
T.O.R	T.O.R. - Timer OverRide - from 1 - 255 min. Can be set to OFF.
Alerts	5 Alerts = Hi & Lo FR. Limits, T.O.R., Uncontrolled Water Meter operation, Low Battery.
Communication	Full 2 ways Cellular communication to/from Cell phone or CMS
Manual	2 Manual Modes: Per Station & Per Start # (Semi-Auto)
Program Erase	Erase data related to 4 parameters of each Start Time.
Auto-Run	Will display Time & Day and Alerts. If a station is operating will display flow rate and remaining volume.
Water Meter Multiplier	From 1 - 1000 X water meter unit of volume.

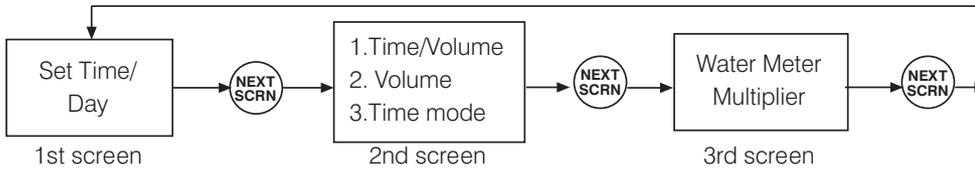
PROGRAMMING STEPS

The itec-V controller operates using the "windows" or "screen" system, ie, for each Dial Position there are number of screens to allow programming selection.

Press  to advance from one screen to the next.

Dial position: Set Time/Day

In this Dial Position the Following parameters can be set:



1st screen: Set current Time & Day

Press  or  to set the time.

Press  to set current day.

Press  to next screen or Press  to next dial position.

NOTE! if you press  or  continuously, digits will advance quickly.

2nd screen: Selection of Volume mode or Time mode or Time/Volume mode.

(Default selection of the controller is Volume mode.)

Press  to set Time mode or Time/Volume. If Time mode is selected, 3rd screen will be skipped! ro set to OFF

Press  to next screen.

3rd screen: Water Meter Multiplier

This controller was set to display volume in cubic meters and flow rate in cubic meters/hour.
The water meter unit of volume could be 1 liter, 10 liters 100 liters or 1,000 liters (1 cubic meter).
The water meter multiplier must be set according to the following table:

WATER METER UNIT OF VOLUME	SET WATER METER MULTIPLIER @
1 liter	1000
10 liter	100
100 liter	10
1000 liter	1

Setting Volume for each station as a function of WMM-

As can be seen from the following table, the setting and reading of volume is a function of the water meter unit of volume.
When you set the water meter multiplier, the controller identifies the water meter unit of volume and allow setting and reading accordingly.

With Water Meter unit of volume = 1,000 liters multiplier = 1	With Water Meter unit of volume = 100 liters multiplier = 10	With Water Meter unit of volume = 10 & 1 liters multiplier = 100 & 1,000
Start with: OFF OFF	Start with: OFF OFF	Start with: OFF OFF
Press:  	Press:  	Press:  
Display: 001 999	Display: 1.00 0.90	Display: 1.00 0.99
002 998	1.10 0.80	1.10 0.98
	1.20 ↓	1.20 0.97
	↓ 0.10	↓ ↓
999 001	19.90 999	19.90 0.05
001 999	20 ↓	20 999
	↓ 999	↓ ↓
	0.10	999 1.00
		0.05 0.99

In accordance with the water meter unit of volume, the flow rate setting and reading will start from **0.05** cubic meters/hour for 1 liter and 10 liters units of volume, **0.10** for 100 liters unit of volume and **1.00** for 1,000 liters unit of volume.
Maximum flow rate setting and reading is **255** cubic meters / hour.

Press  or  to set the start time. Pressing BOTH will reset back to OFF.

Press  if you wish to select next Start Time or  to next Dial position.

2nd screen: Program Erase PE

You can erase all data entered for each Start Time:

Press  to select the Start # you wish to erase.

Press  to Program Erase screen.

Press  and  to erase ALL parameters entered for this Start Time.

Press  to return to Start Time setting.

Press  to next Dial position.

Dial position: Water Days

Note the Start # appears on your screen. For Watering Days you can select:

1st screen: Days of the Week *CAL* or 2nd screen: Days Cycle *DC*

1st screen: Days of the Week selection (default - All Days will be ON)

Press  to set the day as Irrigation Day.

Press  to skip the day.

Press  if you wish to set your irrigation days by selecting Days Interval or

Press  to next Dial position.

2nd screen: Days Cycle

You can select from 1, every day, to 19, once every 19 days.

Press  or  to select your Days Interval

Press  to next screen to select the 1st day of the week to start counting.

Press  to select the day.

Press  to return to "Days of the Week" or Press  to next Dial position.

Dial position: Volume/Flow

Note the Start # appears on your screen. In this Dial position you set the Volume and Flow Rate for each of the stations selected for this Start. Station(s) not operating in this Start should remain OFF.

Press  or  to set the Volume. Pressing BOTH will reset back to OFF.

Press  to select next station.

When you complete setting all the station's Volume, Press  to next screen.

2nd screen: Flow Rate for each station (Read Note #2 below)

Press  or  to set the Flow Rate. Pressing BOTH will reset back to OFF.

Press  to select next station. (same stations you entered Volume)

Press  to return to Volume setting or Press  to next Dial position.

Important notes!

1. The controller was design to allow the user to skip from each station, either in Volume setting or Flow Rate setting, to next Dial position by pressing  . It is therefore easy and quick to update a station's Volume or Flow Rate and move on to next Dial position.
2. In cases where Flow Rate is not known, the controller will do it for you after the first time the station will open. The registered flow rate will be taken after the selected Fill Time. This Flow Rate will not be updated on next opening and will be considered as the Reference Flow Rate. (Current FR. in Auto-Run)

Dial position: % scaling

It is assumed that in the initial programming setting, the 100% will remain as is.

To program your next Start Time, Press  . The Dial position will change to Start Time.

To scale your Volume , for all stations in a Start, Press  to this position.

Press  or  to scale by percentage. NOTE: 0% = Start is OFF.

Press  to scale next Start #. Press  or  to scale.

Press  to next Dial position.

Dial position: F. R. LIMITS

In order to have full control of your irrigation system, 4 parameters must be entered, each have it's own screen. (illustrated on page 4)

1st screen: High (Hi) Flow Rate Limit

Both Hi and Lo Flow Rate Limits are set as "percentage of deviation" from the Reference Flow Rate entered for each station in "Volume/Flow" Dial position.

For example: A Flow Rate was set @ 60 cubic meters per hour.

Set Hi Flow Rate Limit = 20%. When Flow Rate reaches over 72, controller will detect it as Hi Flow Rate, turn OFF that station, skip to next station and display Alert **FL** .

Press  or  to set the percentage of deviation.

Press  to next screen or Press  to next Dial position.

2nd screen: Low (Lo) Flow Rate Limit

Like the Hi Flow Rate Limit.

Press  or  to set the percentage of deviation.

Press  to next screen or Press  to next Dial position.

3rd screen: Fill Time

Sets the time, in minutes, during which you fill up the pipe.

During this time Hi Flow Rate limit will not be activated.

Press  or  to set the time.

Press  to next screen or Press  to next Dial position.

4th screen: T.O.R (Timer OverRide)

Sets an emergency time required in case of water meter malfunction and no input from water meter is received.

Press  or  to set the time, in minutes and hours.

The T.O.R should be calculated based on the **LOWEST** Flow Rate of the system.
(the station with the LOWEST Flow Rate)

For example: If the LOWEST Flow Rate is 60 - we expect a pulse from the Water Meter every 1 minute. In this case you can set your T.O.R for 2 minutes.

When a station is ON and for 2 minutes NO PULSE is received from the Water Meter, the controller operation is suspended and an Alert will be displayed.

Only after the Alert is cleared, the controller will resume its operation.

Press  if you wish to go back to 1st screen.

Press  to next Dial position.

Important Note !

Any or All FR. LIMITS can be left in OFF position. Any Flow Rate Limit left in OFF position will NOT PROVIDE PROTECTION or ALERT.

Dial position: ALERT

In this Dial position you can review, for each station, the Alerts the controller registered. Following is a table of the various Alerts and action taken by the controller.

<i>AL1</i>	Hi Flow Rate was detected	Will not open new start
<i>AL2</i>	Lo Flow Rate was detected	Will open new start
<i>AL3</i>	T.O.R was activated	Will suspend all irrigation
<i>AL4</i>	Uncontrolled Water Meter Pulse	For information only
<i>AL5</i>	Low Battery	For information only

Press  to scroll from one alert to next, for each station.

Press  to advance from station to station.

Press  and  together to clear alerts, for each station.

Press  to next Dial position.

Dial position: MANUAL

Two MANUAL operations are available: Single Station Manual and Semi-Auto operation of the sequence of stations in the selected Start #. 1st screen is for Single Station and 2nd screen for Semi-Auto.

1st screen: Single station Manual

Press  to select your station.

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