

REV: 2.01

Valve Power detector wireless controller PD-1B

User Manual

© 2017 ANC Technology

www.ancotech.com

www.ancotech.com.cn

CONTENT

1.Introduction.....	3
2. Features.....	3
3. Specifications.....	4
4. How to installation.....	5
5. Mesh Network.....	6
6. How to use.....	7
6.1 PD-1B illustration.....	7
6.2 Power on/off.....	8
6.3 Display of work status.....	8
6.4 Wireless control.....	8
6.5. Setup.....	9
6.6 System ID setup.....	11
7.Help.....	12
8.Packing list.....	13
ANC Technology Limited Warranty card.....	13

1. Introduction

This PD-1B wireless controller could detect power signal from existing wired timer controller, then send valve open/close demand wirelessly to the related wireless valve controller. Which make maintain work easy.

2. Features

1. Get 24V AC power directly from existing wired controller.
2. Control up to 40 wireless valves and 2 master valves.
3. Support up to 4 layers of relay. All ANC field valve controllers also function as relay.
4. Will automatically establish wireless mesh net-work according to wireless strength.
5. Within wireless coverage, supports up to 100 sets system with different ID with no interference.
6. Field controllers need to learn with PD-1B controller to establish wireless communication with PD-1B main controller. After that, the field controller will be only work for this special PD-1B except been deleted from this main controller.
7. Simple to use. The LCD will show real time valve status, wireless communication strength and battery power.

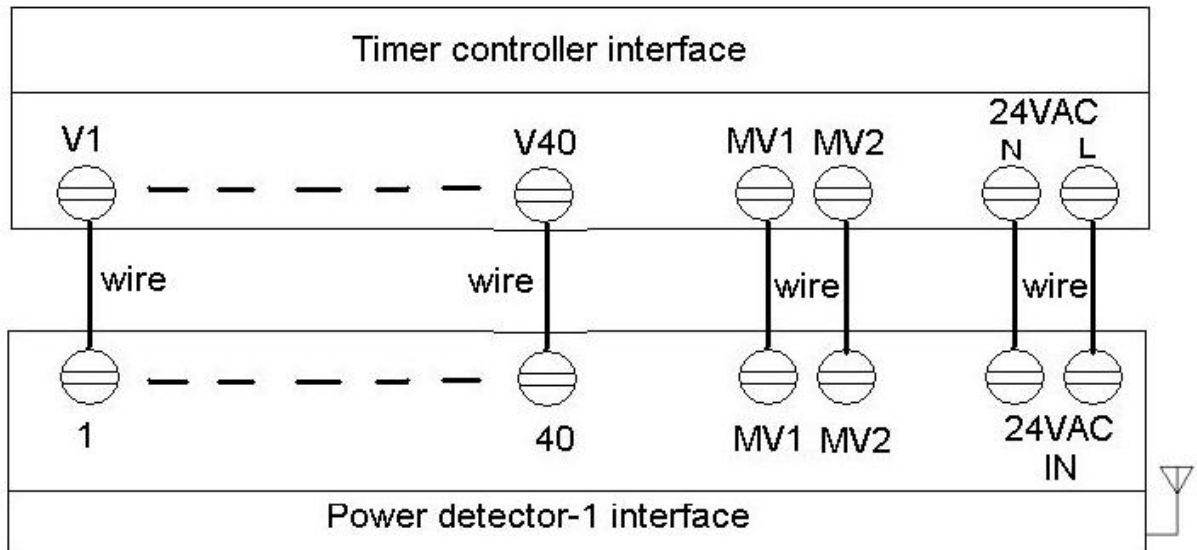
3. Specifications

1. Power supply: 24VAC \pm 20%, 50-60HZ
2. Idle current: 2mA
3. Input signal of valve: 24V AC \pm 20%
4. Frequency: 902-928 MHZ
5. Wireless transmitting frequency: Less than 24dbmW
6. Wireless distance for one layer: \cong 500m, after 4 layers relays: 2000m
7. Valve number: 1-40, Master valve: 2

4. How to installation

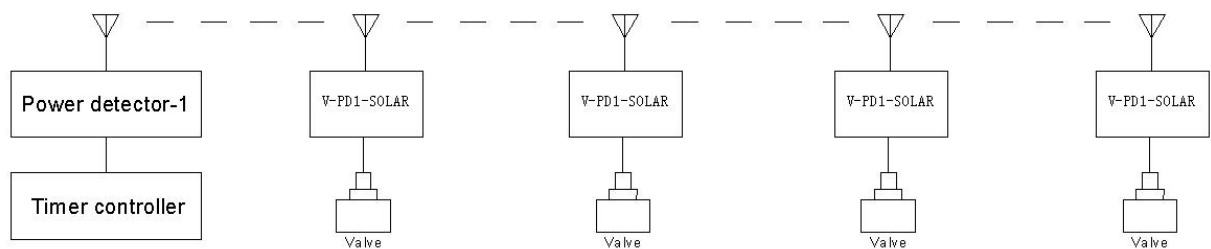


Attach the PD-1B to the shell of the existing timer controller, or arrange it properly by the user. Make sure there is no metal shield around the antenna, otherwise the wireless distance will be affected.



Connection illustration of PD-1B and the existing timer controller

5. Mesh Network



1. First setup PD-1B system ID. In the effective wireless distance range of 2000M radius, can't have same ID for more than one system.
2. Only after setup ID for the PD-1B system, then start to let field controllers learn with the PD-1B main controller one by one to establish wireless communication channel with PD-1B. All the registered field controllers will only work with this PD-1B main controller.

Note: If you changed ID in the PD-1B, you must let all the field controllers to learn and establish wireless communication with the PD-1B again, otherwise whole system will not working.

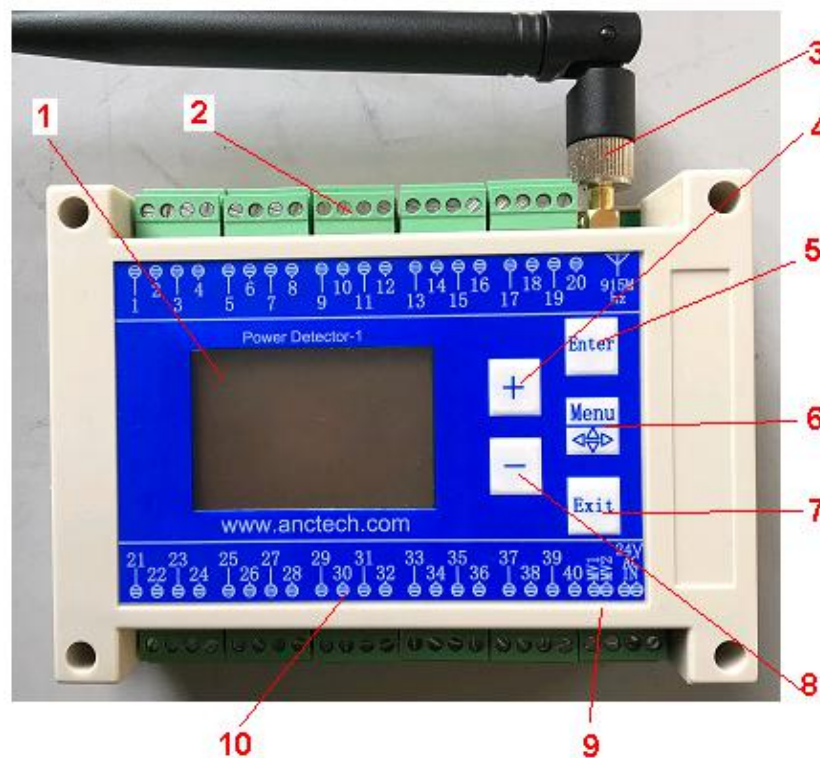
3. The mesh network’s wireless distance can reach radius of 2000m/6560 feet.

4. This system supports 4 layers of wireless signal relay. Install nearby field controllers first, eventually toward far side. All the installed field controllers will automatically establish wireless network according to wireless signal strength with no need of human intervention.

Attention: Make sure the PD-1B main controller is on all the time.

6. How to use

6.1 PD-1B illustration



1) LCD 2) Connector post for connecting to existing timer.

3) 915Mhz Antenna 4) Up key

5) Enter key: Confirm and save

6) Menu key. 7) Exit key

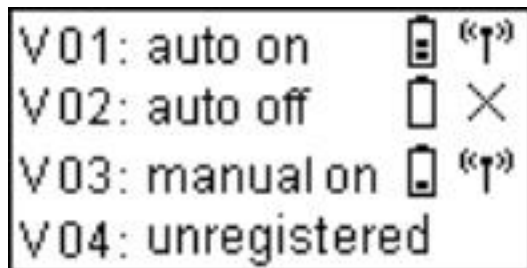
8) Down key 9) M1, M2 means master valve 1 and 2.

10) 1-40, related to #1 to #40 valves in the timer controller. Connect them one by one up to 40 valves.

6.2 Power on/off

Power will be on after PD-1B connect to the power of 24VAC from the existing timer. Otherwise will be off. When the power is off, PD-1B will keep all the setup.

6.3 Display of work status

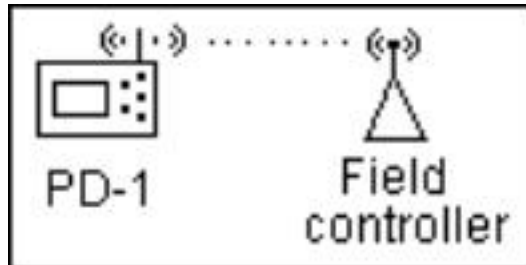


1. One screen shows all 4 valves status, push up/down key to switch, then keep this screen until push up/down key again.

2. V01 rep #1 valve, V02 rep #2 valve..... Valve status will be auto on, auto off, manual on, manual off, on failure, off failure. Battery full indication is total 3 bars. If wireless communication is failed, you will see “X”. “Unregistered” means this valve is not been used.

6.4 Wireless control

1. During wireless communication, the keypad will be locked up as flowing illustration until done, then display show work status again.



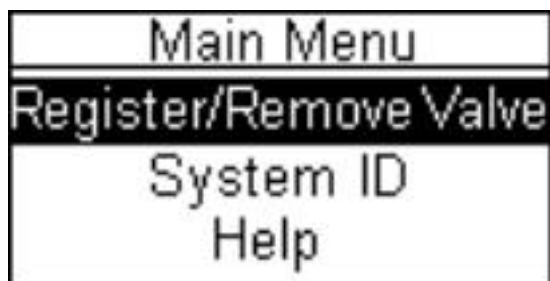
2. PD-1B checks all import end valve signals every 4 seconds, when there is change of import signal, PD-1B immediately start wireless scan and control. Otherwise check wireless connection every 30 seconds.

3. At PD-1B work status, push **【Enter】** key make one wireless scan immediately.

6.5. Setup

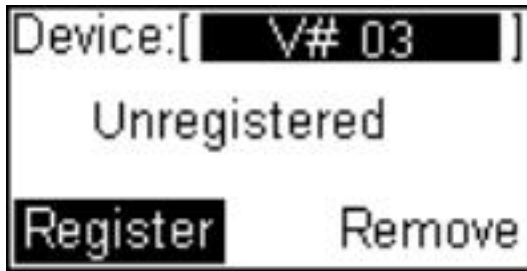
Push **【Menu】** key into main menu, **【up/down】** key to browse.

Highlighted menu means current menu:



6.5.1 Register/Remove valves

When **【Register/Remove】** menu is highlighted, push **【Enter】** key into this menu.



A. The screen will show as above. Valve with number, in the order of 1 to 40. Push up/down key to choose, push/hold up/down key will speed up browse. Valve is either unregistered, or registered. Push **【 Menu 】** to choose either “Register” or “Remove”, push **【 Enter 】** key to start either register or remove. The related field controller should be at same mode at same time.

For the field controller already registered, needs to “Remove” with the matched PD-1B main controller first before been use for another system.

B. During registration, distance between PD-1B and field controller should be less than 500m, since there is no relay during registration. After successful registration, LCD of PD-1B show as following:



C. For remove one registered field controller from the PD-1B, needs to operate remove for both the main controller and field controller at same time. The remove distance must be less than 500m.



After successful registration/remove, system will automatically back to previous menu.

D. Remove registered field controller information from the PD-1B

When field controller is broken, or missing, then you must replace with new one. Before register with new field controller, you must first remove the previous registered information. Step as following: **【Menu】** key to choose Remove, **【Enter】** key into removing, **【Enter】** key again into illustration 2. **【Enter】** again to remove. After done, back to previous menu as show on illustration 3.

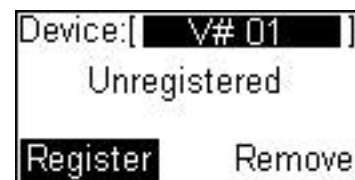
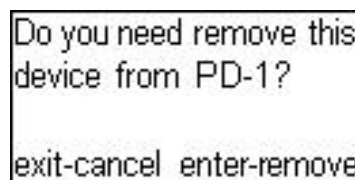


Illustration 1

Illustration 2

Illustration 3.

Note:

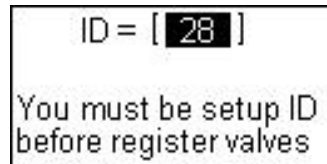
Each valve # on the PD-1B main controller only can register one field controller.

Field controller already registered with one PD-1B, must be removed from this PD-1B main controller first before register with another PD-1B

main controller.

6.6 System ID setup

On the menu browse into **【System ID】** , **【Enter】** into this setup.



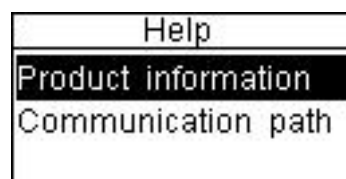
Push up/down key to change ID number.

Notes:

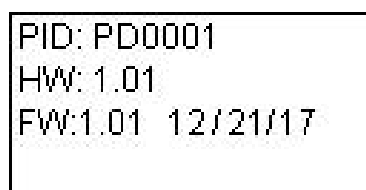
1. Setup ID before registration. Otherwise if you changed system ID after registration, must do all the registration again.
2. If you use several PD-1B together for same project, must setup different ID for them. Otherwise will not working right.

7.Help

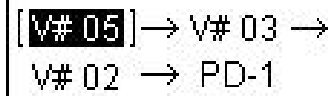
Browse into **【Help】** , **【Enter】** into this menu.



A. Information as following:



B. Check wireless route



```
[V# 05] -> V# 03 ->  
V# 02 -> PD-1
```

Push up/down key to change valve #, check the related route. As illustrated above, V#5 relay through V03, V02, then reach PD-1B.

8.Packing list

- 1) PD-1B main controller
- 2) Screw driver
- 3) One bundle of wires.
- 4) Manual and Guarantee card

ANC Technology Limited Warranty card

Dear Customer:

Thank you very much for choosing ANC products.

- 1. This product has FCC verification and BV certification.**
- 2. Warranty period is one year. Beginning on day of receipt.**
- 3. Please keep your receipt and this warranty card.**
- 4. Please verify contents are correct, see included items listed in the manual.**
- 5. For warranty repair, customer is responsible for shipping to ANC; ANC pays shipping to customer.**
- 6. Beyond the warranty period, or for damage caused by customer or for other than defects in material or workmanship, ANC offers repair service at customer's expense.**
- 7. Service phone: 021 5974-3993, in China; 1 805 530-3958, or toll free 1 877 822 3958 in North America.**

Product			Type	
Address			Serial #	
Tel			Purchasing date	
Fax			Zip code	
Repairing Record	Check date	Problem	What been done	Repairer

America sales and service:

ANC Technology

10195 Stockton Rd Moorpark, CA 93021

Phone: 877 822-3958, Fax: 805 503-3968

Website: www.anctech.com

E-Mail: sales@anctech.com