How to Use Etek Function in WebControl™ Firmware

For reference only, no warranty or support

Warning: Use RF equipment maybe subject to government regulation and rules. We do not responsible for any possibility of violation of regulation and law due to 433Mhz RF signal transmission.

ETEKCITY® is a trademark by **ETEKCITY CORPORATION** in **Ankeny, IA, 50021**

 Copyright © 2017 CAI Networks, Inc. All Rights Reserved.

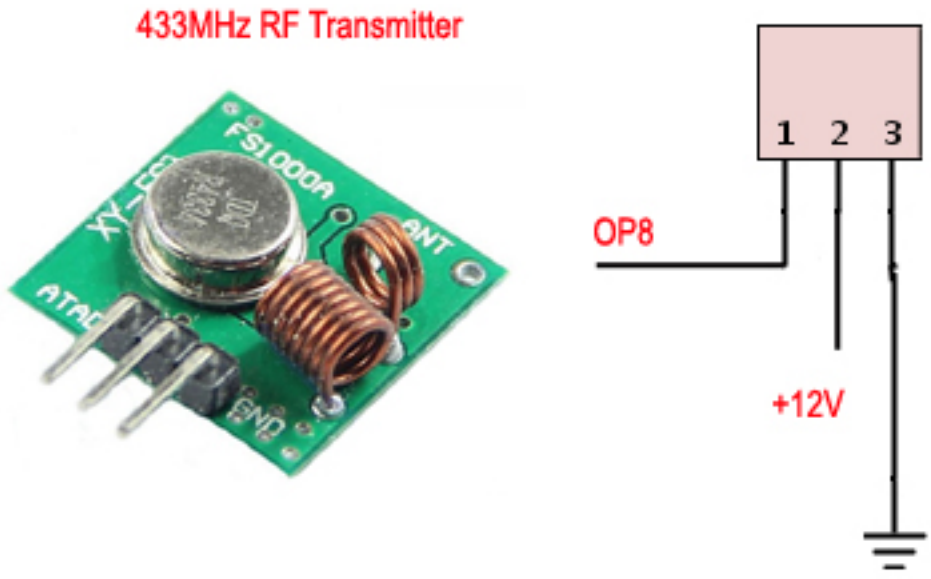
1. WebControl Etek Functions and Etekcity RF Sockets

The WebControl HW WC8 and HW WC32 board's latest firmware supports Etek RF function, they replaced X10 RF functions. User can remotely use web browsers or DOS or Linux utilities to control Etekcity® sockets. WebControl sends Etekcity® commands in the 433MHz RF format. User must have proper 433MHz RF transmitter to use WebControl Etek functions. To use Etek function, it needs WebControl with latest firmware version, it needs a RF transmitter that described later, it also needs Etekcity® sockets. We tested with ZAP 5LX-S models.

1.1 Wiring 433MHz RF Transmitter to the WebControl

When Etek function is enabled, TTL output 8 will be used for sending commands to 433MHz RF transmitters. TTL OP8 should be wired to the 433MHz RF transmitter data pin. The ground should be connected, To reach to max range, 433MHz power line Vcc should be connected to 12VDC power source.

WebControl can work with many popular 433Mhz RF transmitters for Etek control. The picture showing below is one of those many kinds:



Please note, if your RF socket can not be controlled, you may consider soldering a 10 inch wire into board ANT hole. That will make its RF signal to reach far distance.

 Copyright © 2017 CAI Networks, Inc. All Rights Reserved.

1.2 Etekcity Remote Address

in current shipping Etekcity® sockets, they support more than one RF remote addresses being programmed into each sockets. If you have such a socket, you can pick a new remote address number and program that into RF sockets, then you can remotely control it with both WebContro and your original Etekcity® remote. Please follow Etekcity® user manual to program those sockets.

If your RF sockets are not those newer ones, you may need to read out your current handhold remote address code, so that you can use both the remote and through WebControl programming. To read its address code, you can use your WebControl PLC function. First wiring the 433MHz RF transmitter on your WebControl board. The place this short PLC code into your PLC window in browser interface

```
START
        SET VAR1 1
LOOP:
        INC VAR1
        ETEK VAR1 1 1
        DELAY 2000
        GOTO LOOP
END
```

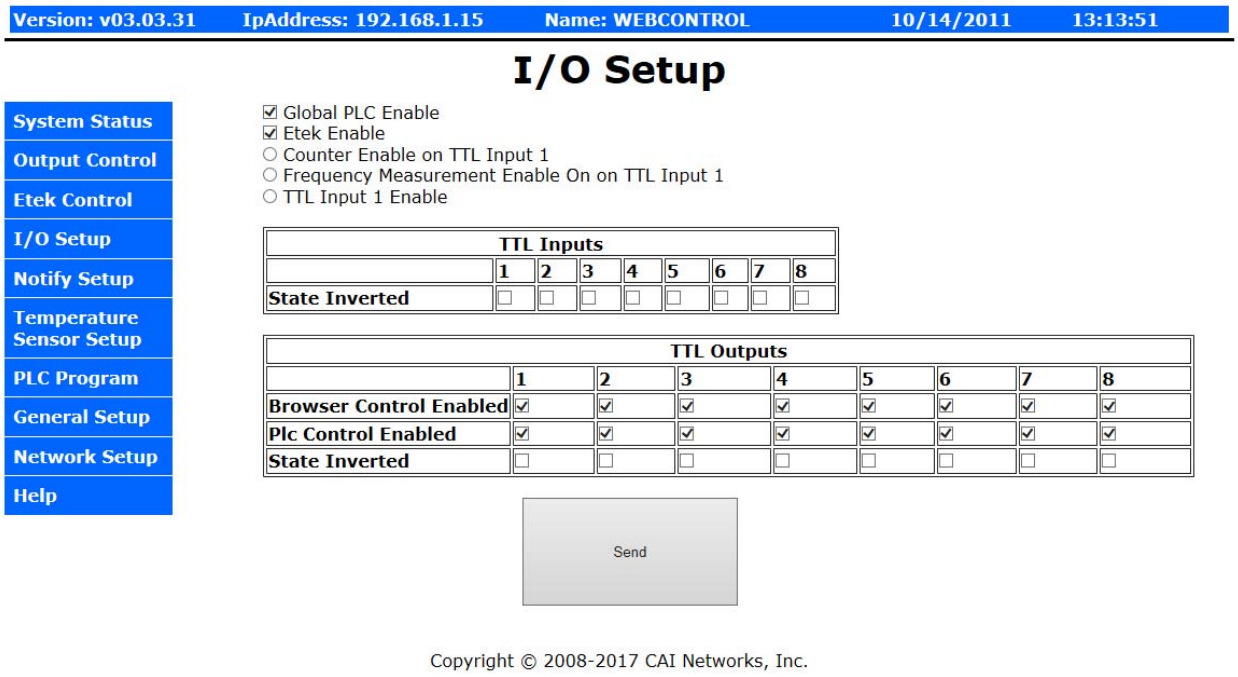
This little PLC code will increment VAR1 by 1 each two seconds, then send ON command to your Etekcity® RF socket 1. If the light connected to that socket is ON, the VAR display on your browser screen is the RF remote address.

 Copyright © 2017 CAI Networks, Inc. All Rights Reserved.

2. Etek Related Programming and Control

The WebControl V3.3.31 firmware allows user to user Web GUI to control the Etekcity® RF sockets or use command line wget to control those devices. In the Etekcity® RF sockets on the consumer market, it uses 10 bits remote code and button Code 1-5 to address different sockets. WebControl allows any combination of 10 bits remote code, and button code 1-5. In WebControl, command turn-on is 1 and turn-off is 0.

To use Etek function, user must first go to I/O Setup screen to Enable Etek functions:



 Copyright © 2017 CAI Networks, Inc. All Rights Reserved.

2.1. Web GUI Control of the Etekcity® Devices

The WebControl V3.3.31 firmware and above support Etek function. User can remotely use web browsers to send On/Off commands to the lamp or appliances.

.

2.2. PLC control of Etekcity® Devices

The WebControl V3.3.31 firmware and above support Etek function in the PLC programming. A new keyword Etek replaced X10 in this version of firmware in the format:

ETEK R B C

Where R is Remote code, less than 10 bits, B is Button Code, 1-5, C is one of the two commands:

0 - off

1 - on

 Copyright © 2017 CAI Networks, Inc. All Rights Reserved.

2.3. Etekcity® Device Control over Command Line

The WebControl Allowing user to remotely turn on and off Etekcity® controlled lamp or appliances by use wget command line from Linux or DOS. You can issue those commands through Linux script or DOS scripting language.

For format of the command is:

wget "http://192.168.1.15/api/sendetek.cgi?rc=59&bc=5&cmd=1"

Where “rc” is Remote code, like 59, “bc” is Button Code, 1-5, “cmd” is one of the two commands:

0 - off

1 - on

The double quotes seem very important for both Linux and DOS when using wget.

 Copyright © 2017 CAI Networks, Inc. All Rights Reserved.