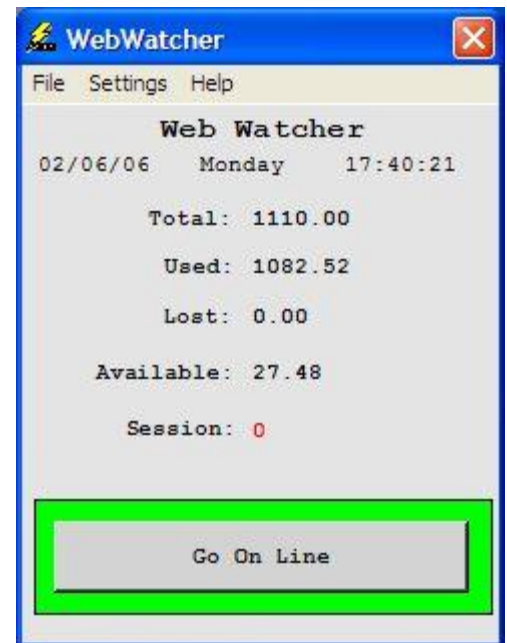


## Web Watcher V1.1



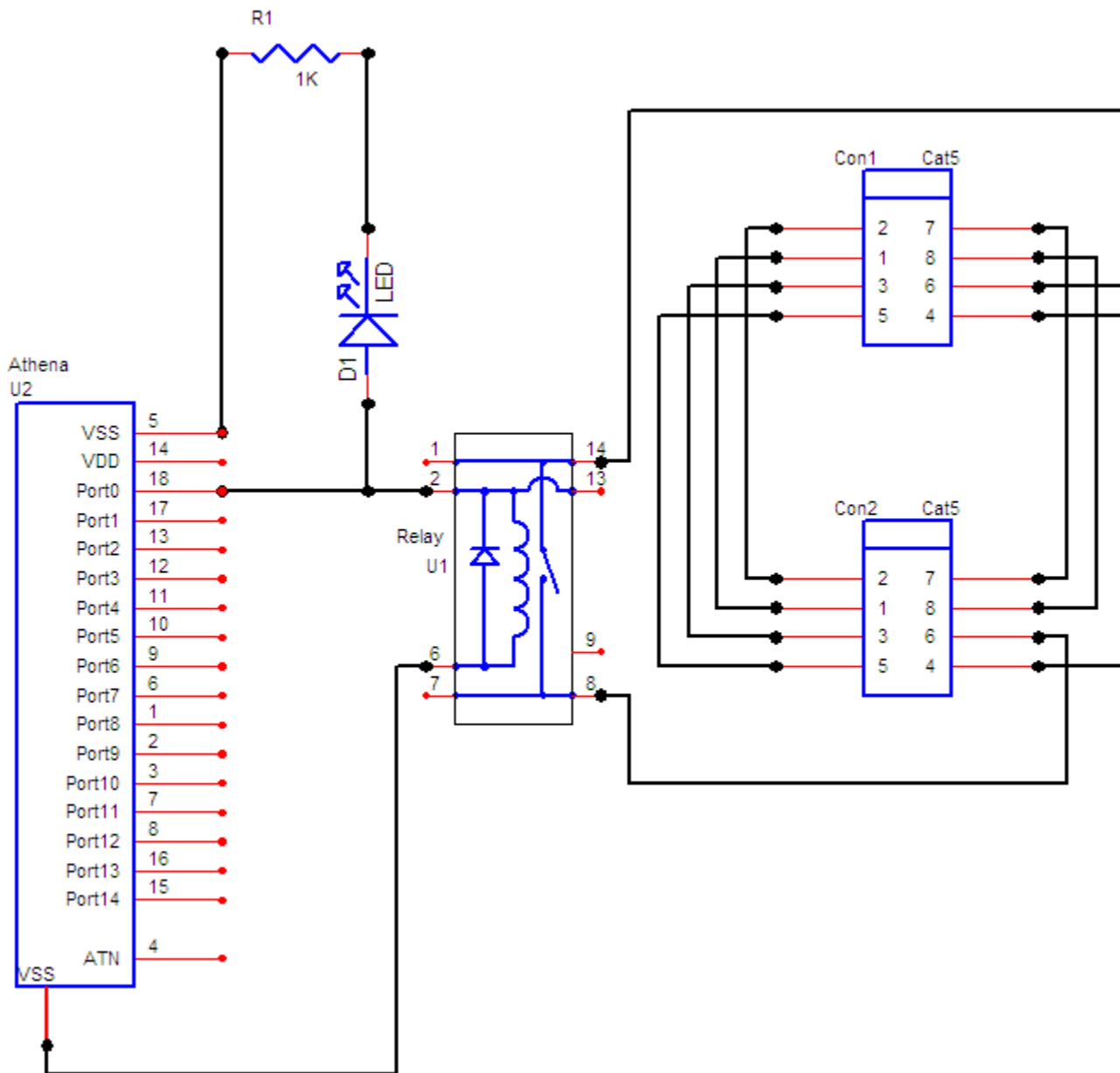
Our main connection to the internet from our house is ISDN. The problem with ISDN is that you only get so many minutes and then you pay major fees.

I have two children that love to play online computer games. They would play the games 24/7 if they could but as a parent I felt it was time to take control. Both of them have their own computer and they use it for everything from school work to various hobbies.

Each computer is connected to the in-house network. What was needed was some mechanism to disconnect the Cat 5 cable as needed.

Here is what I came up with.

Lets start with the Schematic.

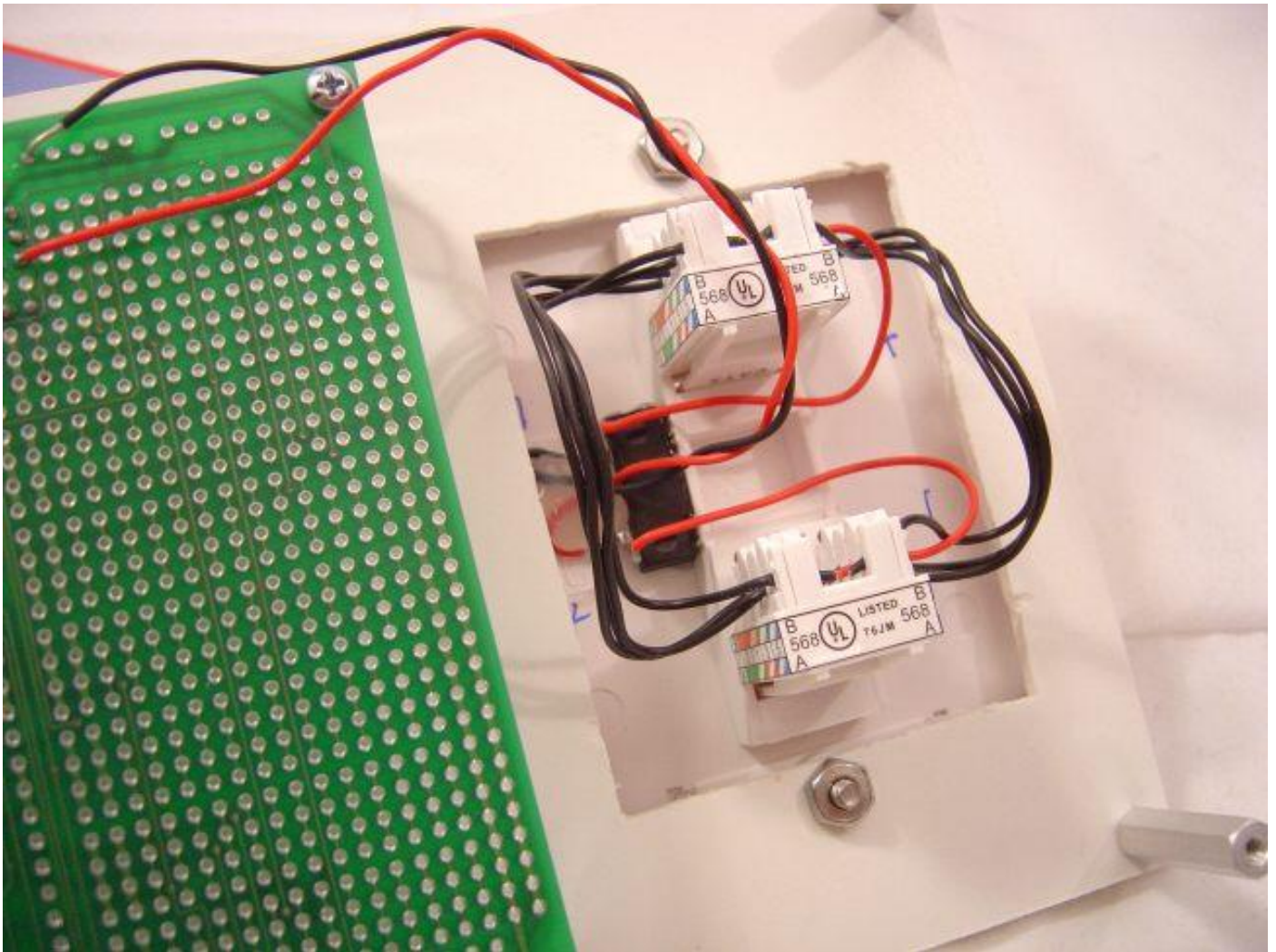


Idecided to use an Athena to control a small relay. This relay connects and disconnects one of the leads on the Cat 5 cable. The circuit does not show the power supply or the RS232 driver connections as it is assumed the Dios Workboard basic is used for this project as it has a built-in power supply and RS232 driver.

Zeus is used on the PC to control the Athena. Zeus sends a signal to the Athena to energize the relay. Zeus must constantly send a refresh or the Athena will turn off the relay thus dropping the connection.

More on the program later.

## Construction



### Connector

You will need the following from your local radio shack:  
2, Snap-In Category 5 Jacks (Radio Shack #278-2024)  
1, 2-Port Flush Mount Wall Plate (Radio Shack #278-2003)  
Some 22 gauge solid core hookup wire.

The key here is connect each pin on the corresponding pin on the other connector. All but pin 6. This one will be connected to the contacts on the relay.

The Radio Shack connectors come with a small plastic push tool to insert the wires. I mounted the relay directly to the wall plate with hot glue. This keeps the wires as short as possible. Then simply run the relay coil wires to the microcontroller as shown.

You dont actually need to connect all the wires. I just did it because at the time I did not know which leads were on used.



Here is a table showing the actual pins used.

Pin	Color	Function
1	Orange on White	Transmit +ve
2	White on Orange	Transmit -ve
3	Green on White	Receive +ve
4	White on Blue	N/A
5	Blue on White	N/A
6	White on Green	Receive -ve
7	Brown on White	N/A
8	White on Brown	N/A

## Enclosure

I like to mount my projects between two pieces of plastic, wood or plexi glass. This makes for a very nice enclosure with the Work board power and RS232 connector exposed.



The Workboard and Cat 5 Wall mount to the top piece of material and the bottom piece is attached with a couple of standoffs. You can then add rubber feet to the bottom board.

## Program

There are two programs needed to make this project work. The first is the firmware that is programmed into the Athena.

```
dim stat as integer
output 0
low 0
dim secs,mins,hours
HTIMEOUTU=1
HTIMEOUTH=1

timerASinternalclock
timersetclock 00,00,00

loop:
  timergetclock hours,mins,secs
  if mins > 0 then
    if inp0 = 1 then
      low 0
    endif
  endif

  debugin loop,stat
  if stat = 65 then
    timersetclock 00,00,00
    high 0
  endif

  if stat = 66 then
    timersetclock 00,00,00
    low 0
  endif

  goto loop
```

Athena Program

The Zeus program is a bit more complicated. It demonstrates many Zeus subsystems. It uses the KRDB database system to store the used seconds.

This program is also a great demonstration on how to use the new FormMenu commands as well as the new GetTime and GetDate commands.

### Zeus Source

Zeus Program can be found here:

<http://www.kronosrobotics.com/Projects/Webwatcher.zip>

### How does the program work?

When you click the main button to go online the Zeus will open a the com port and send a code to the Athena firmware to turn on the relay. You will need to set the com port using the settings menu.

The global variable State is set to 1 when the connection is supposed to be up. This variable is used in a couple places. For one it is used to make sure we send a refresh to the Athena. It is also used to update the variables used to keep track of the time on line.

The program is set up to add 30 minutes each day with a maximum accumulation of 3 hours if the time is not used. You can change these values in the procdta function. Please note that all the data is stored in seconds but displayed in minutes.

### Connection

Connect the serial cable from your PC to the Athena work board. You will use this connection to program the Athena as well as normal operation of this project. Once programmed removed the small Atn Enable jumper. (See manual)

Pull the Cat 5 cable out of your computer and plug it into one of the jacks. Then take another cable and connect it to the PC then to the remaining jack.

You will also need to connect an AC adapter to the workboard. (See the manual)

## Parts

Athena Microcontroller(Kronos Robotics #16276)

<http://www.kronosrobotics.com/xcart/customer/product.php?productid=16276>

Athena WorkboardBasic(Kronos Robotics #16473)

<http://www.kronosrobotics.com/xcart/customer/product.php?productid=16473>

Relay (Kronos Robotics #16461)

<http://www.kronosrobotics.com/xcart/customer/product.php?productid=16461>

Red LED (Kronos Robotics #16234)

<http://www.kronosrobotics.com/xcart/customer/product.php?productid=16234>

1K Resistor (Kronos Robotics #16191)

<http://www.kronosrobotics.com/xcart/customer/product.php?productid=16191>

9 Pin 6 Foot Male to Female cable (Kronos Robotics #16259)

<http://www.kronosrobotics.com/xcart/customer/product.php?productid=16259>

Zeus Pro

<http://www.krmicros.com/Development/ZeusPro/ZeusPro.htm>

Athena Compiler (Free)

<http://www.kronosrobotics.com/downloads/AthenaSetup.exe>

2Snap-In Category 5 Jacks (Radio Shack #278-2024)

12-Port Flush Mount Wall Plate (Radio Shack #278-2003)

Some 22 gauge solid core hookup wire.

You may also need one or more Category 5 cables.