

How to use the RTC with external Battery Backup Voltage

The DIL/NetPC DNP/5280 offers a Real Time Clock (RTC) chip and an external battery voltage input pin. The battery voltage supplies the RTC if the DNP/5280 main voltage is off.

- **1. Step:** Setup the RTC. Run the `date` command and set time of day to the Linux system clock. Then run the `clock-dnp5280` utility from the DNP/5280 directory `/home` and write the current time to the RTC.

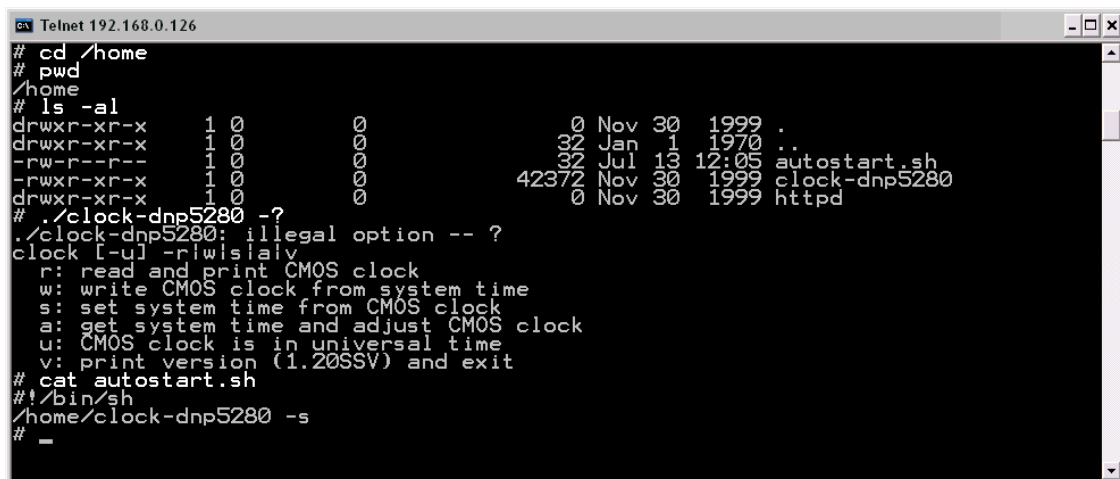
```
date -s MMDDhhmmYYYY
./clock-dnp5280 -w
```

`Date` is a build-in command of *Busybox* (the DNP/5280 shell). The `clock-dnp5280` utility is available from the DIL/NetPC DNP/5280 starter kit CD-ROM or via Internet download from www.dilnetpc.com/dnp0078.htm. Please copy the file `clock-dnp5280` to the DNP/5280 directory `/home`. Don't forget the executable rights.

- **2. Step:** Build a shell script file `/home/autostart.sh` and insert a command line for the `clock-dnp5280` utility with parameter `-s`. The next two lines show a sample for `/home/autostart.sh`.

```
#!/bin/sh
/home/clock-dnp5280 -s
```

This sample is executed after each DNP/5280 reset or boot process. With the `-s` parameter, `clock-dnp5280` reads the time from the RTC (CMOS clock) and writes this time to the Linux system clock.



```
Telnet 192.168.0.126
# cd /home
# pwd
/home
# ls -al
drwxr-xr-x  1 0      0      0      0 Nov 30  1999 .
drwxr-xr-x  1 0      0      0      0  32 Jan  1  1970 ..
-rw-r--r--  1 0      0      0      0  32 Jul 13 12:05 autostart.sh
-rwxr-xr-x  1 0      0      0 42372 Nov 30  1999 clock-dnp5280
drwxr-xr-x  1 0      0      0      0  0 Nov 30  1999 httpd
# ./clock-dnp5280 -?
./clock-dnp5280: illegal option -- ?
clock [-u] [-r] [-w] [-s] [-a] [-u] [-v]
r: read and print CMOS clock
w: write CMOS clock from system time
s: set system time from CMOS clock
a: get system time and adjust CMOS clock
u: CMOS clock is in universal time
v: print version (1.20SSV) and exit
# cat autostart.sh
#!/bin/sh
/home/clock-dnp5280 -s
#
```

That's all.