



NABU Network Internet Adaptor Software

A NABU computer project founded by Geek With Social Skills

Revision date: May 15, 2023

NABU Network Internet Adapter

This software allows for the NABU Personal Computer to communicate with the outside world via the adapter cable. Once the adapter cable is connected to the NABU PC and a computer (desktop, laptop or Raspberry Pi) your NABU PC can now communicate with the NABU world.

Current NABU Network Internet Adapter version: **v2.0 (May 1, 2023)**. As newer versions are released, they will be made available at NABU Network (<https://www.nabunetwork.com>)

Note: This software including homebrew games have been extensively tested with the stock NABU computer 4K ROM as well as all known NABU ROMs including the patched ROM 14.



**** This application is presented as "as is" and I\we do not take any responsibility for any damages or issues caused by the program. I\we try our best to test and make this application OS friendly.**

Included Features with the NABU Network Internet Adapter

- Application runs on Microsoft Windows operating system
- Allows the NABU computer to connect to the NabuNetwork.com and selecting newest versions
- Ability to execute demos, pictures, CP/M and NABU BASIC directly. No need to load NABU menu first
- Ability to execute arcade games directly. No need to load NABU menu first
- Allows the NABU computer to connect to a local server. Just set the folder location and start the server. No difficult configuration needed
- Great for local development
- No need to stop and start the server when changing sources. Just reboot/restart the NABU computer. Initially, you only start the server once.
- Baud rate changes can be made, if needed. Auto default value is set for maximum performance
- Application default is to save your settings on exit which will allow you continue where you left off therefore no need to search and select past setting(s)
- Easy to view button status shows when the server is started or stopped
- Segment transfers status shown in real time with serial RS422 mode
- Live/real time data shown during application loads. Requesting segments and packet status is displayed
- Easy to download from <https://www.nabunetwork.com>
- Free documentation provided
- Community supported and field tested

Thanks to everyone in the community for their support, testing, and providing feedback.

To report issues or if you would like to help grow this application, please see contact information on the <https://www.nabunetwork.com> website.

Installation of NABU Network Internet Adapter Software

1. Download the application from The NABU Network site (<https://www.nabunetwork.com>) into a folder of your computer.
2. Extract the file and execute the .exe file. Windows, Mac OS and Linux might present you with a warning about the application however, you can bypass this and continue. We are waiting on the software certification which will eliminate this warning.
3. Create a shortcut on your desktop for ease of use.
4. Launch the executable.

Installation of Files for Using Local Source

To use the local NABU server, you will need to download and uncompress the “cycle” file(s) into a folder of your choice. Start the application, select the source called “Local Path” and select the directory where the cycle files have been uncompressed. Now you are ready to start the server.

Application Available Sources

- NabuNetwork.com
- Homebrew
- Game Room
- Local Path
- Control from NABU (Headless)

Application Available Modes

1. Serial RS422
2. TCP/IP

NabuNetwork.com

With the pull-down button, you will be presented with the four selections (at time of this release).

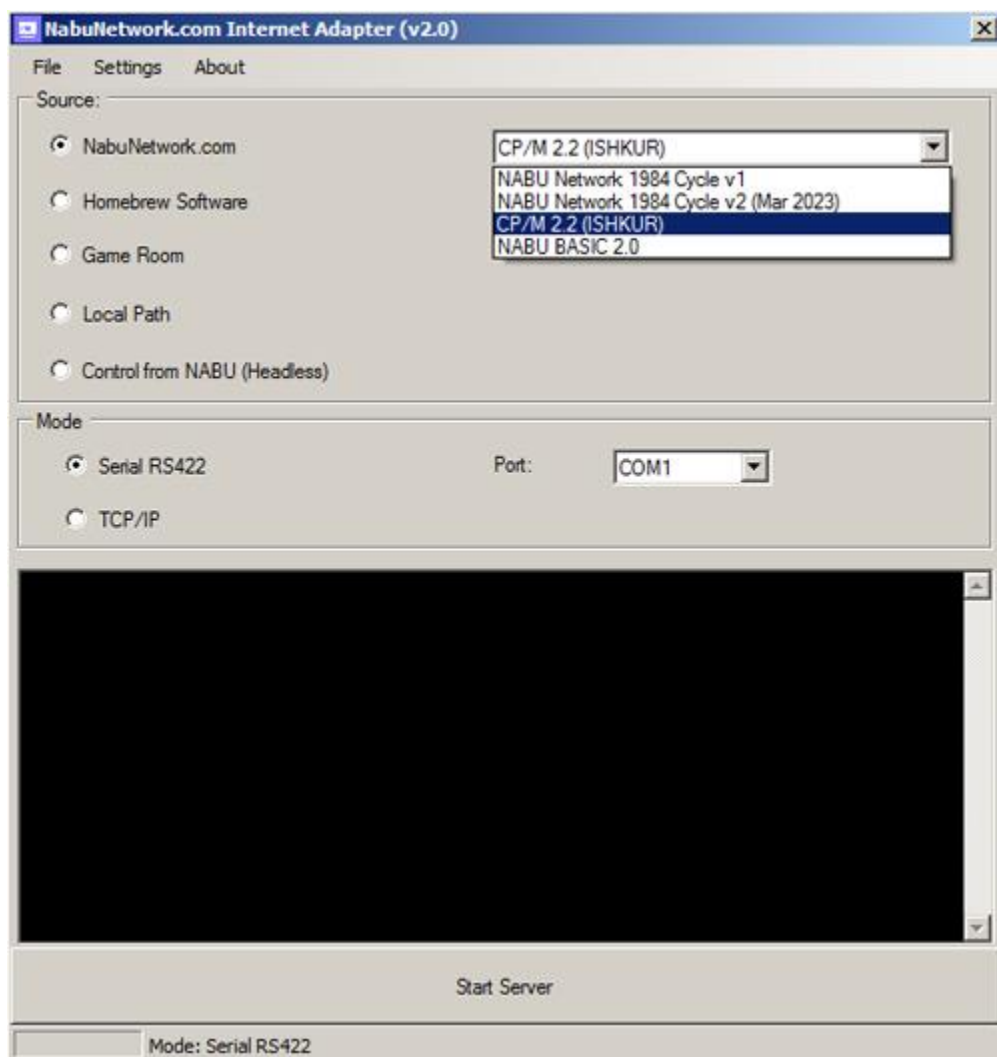
1. NABU Network 1984 Cycle v1
2. NABU Network 1984 Cycle v2 (March 2023)
3. CP/M 2.2 (ISHKUR)
4. NABU BASIC 2.0

Cycles v1 and v2 will present you with a working NABU menu. From the menu you can select and run applications and games as presented to home users back in the 1980's.

Additional cycles will be provided once they become available.

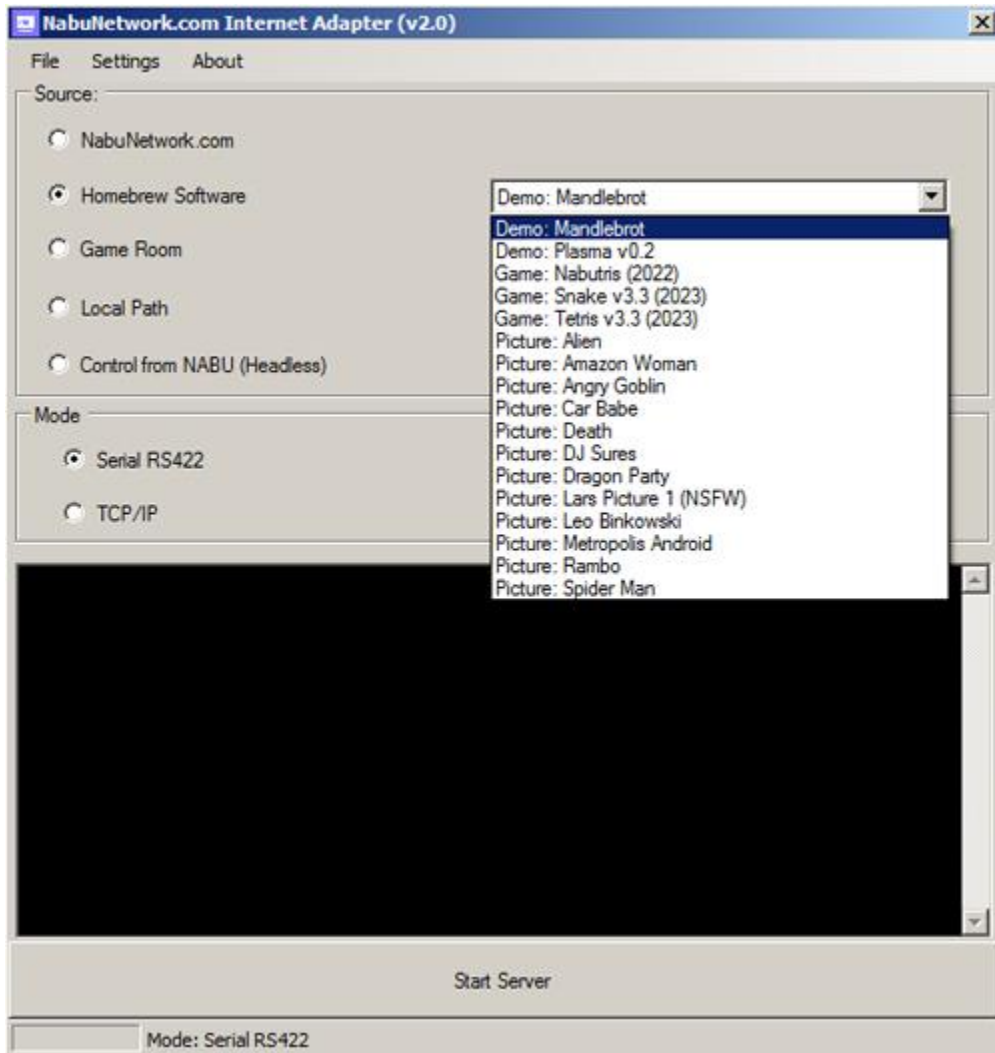
CP/M 2.2 (ISHKUR) will present you with a working CP/M software option. See pages 12-21 for more information.

NABU BASIC 2.0 will present you with a working BASIC software option. See page 21 for more information.



Homebrew

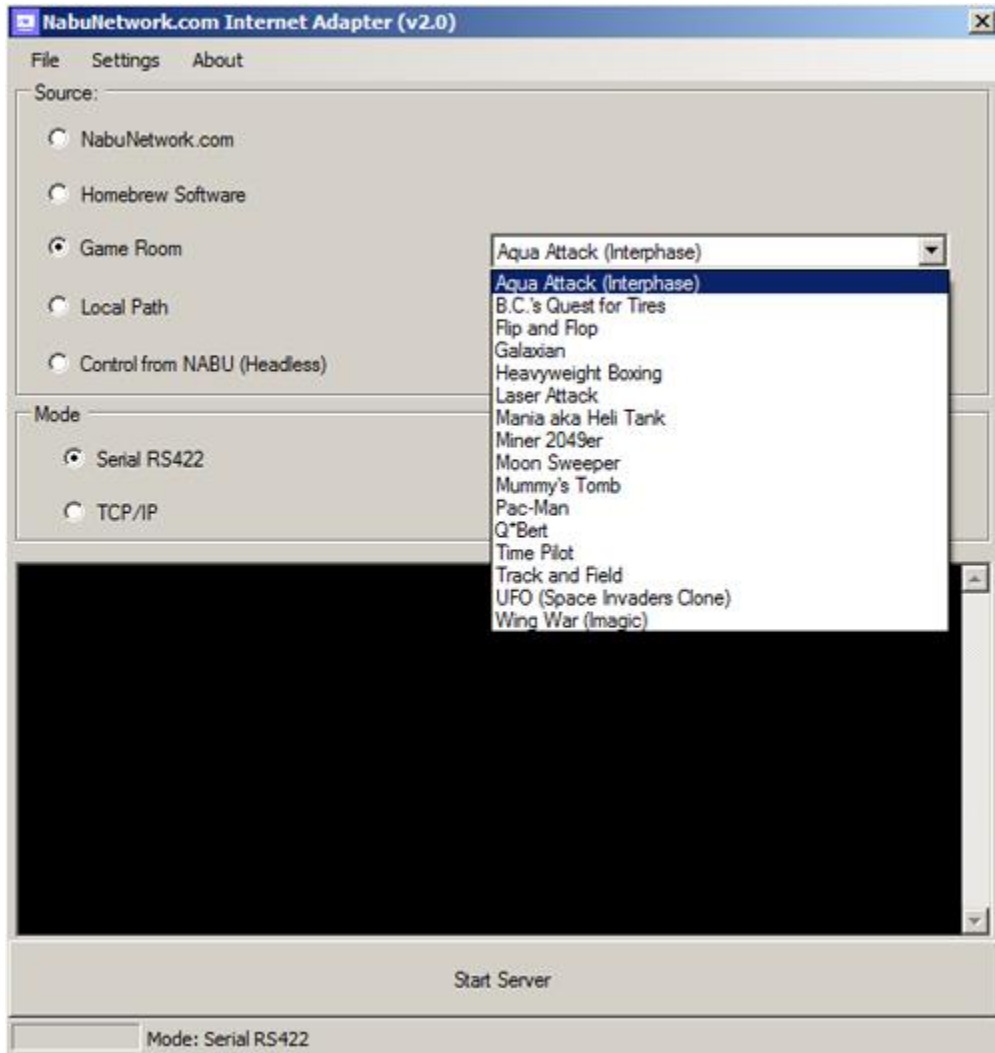
This source allows you to select homebrew software being created by the community on your NABU computer. You can view demos, play games and view pictures, and even load NABU BASIC without having to load them via the NABU menu(s).



Game Room

Here you can select and play several arcade games. Select your favorite and restart/reset your NABU computer. No menu will be displayed as the arcade game will start up automatically. No need to stop and start the server.

This menu will update as new games become available, so check the pull-down list often for more fun arcade style video games.



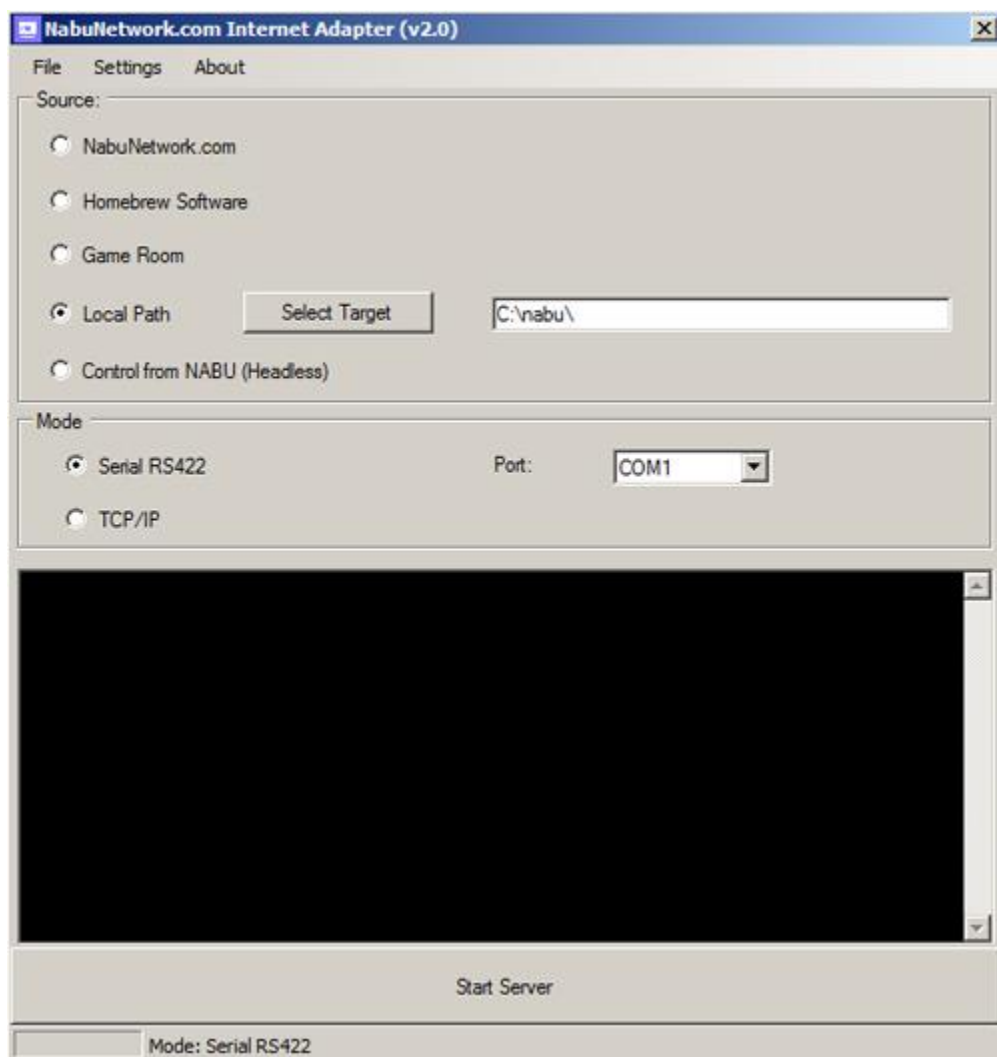
Local Path

This source allows you to run your desktop/laptop as a NABU server. No need to connect to the internet or any other NABU server.

Be sure to click on “Select Target” and select the directory where you uncompressed the “cycle” files. You can also load .nabu and .pak files using the local path option.

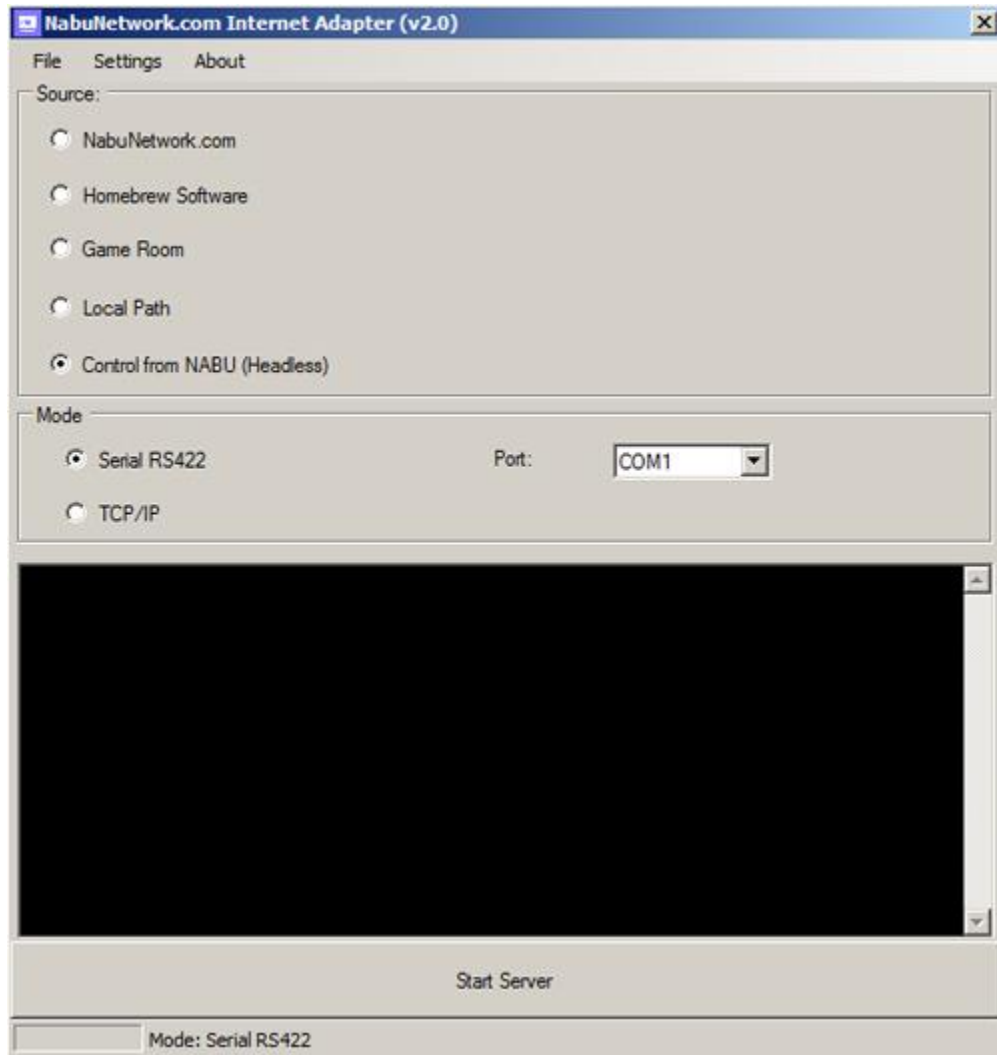
Once completed, reboot/reset your NABU computer and you will be presented with the NABU menu which is running completely local.

You can create and/or customize your NABU experience; however this is not covered in this documentation.



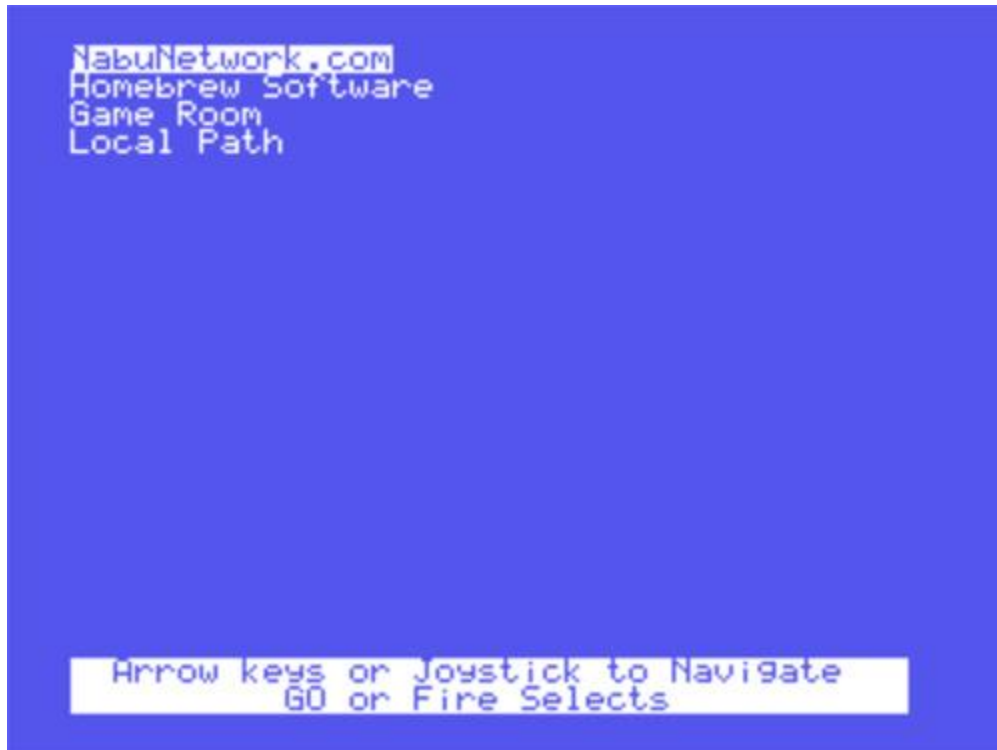
Control from NABU (Headless)

This source allows you to control the NABU Network Internet Adapter software directly on your NABU computer in “Headless” mode.



Controlling your NABU computer (Headless)

This is the NabuNetwork.com Internet Adapter software main view as seen on your NABU computer:



Joystick and/or keyboard Headless controls

You can use your joystick or NABU computer keyboard to control the headless menu options:

- Up and Down arrow keys or joystick moves you up and down
- Left arrow key or moving joystick left brings you back to a previous menu
- GO (Enter) button or joystick fire button selects Headless menu choice

You can use both the arrow keys and your joystick at the same time or a combination of either.

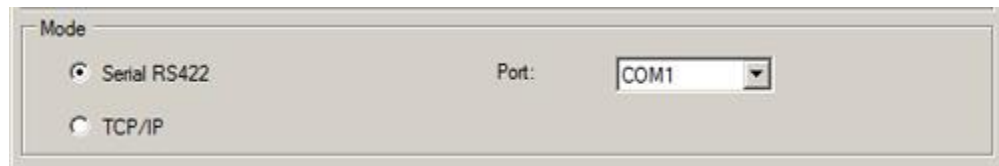
If you are using a NABU cycle, CP/M or MSX games, you will need to press RESET on your NABU computer to get back to the Headless menu.

Modes

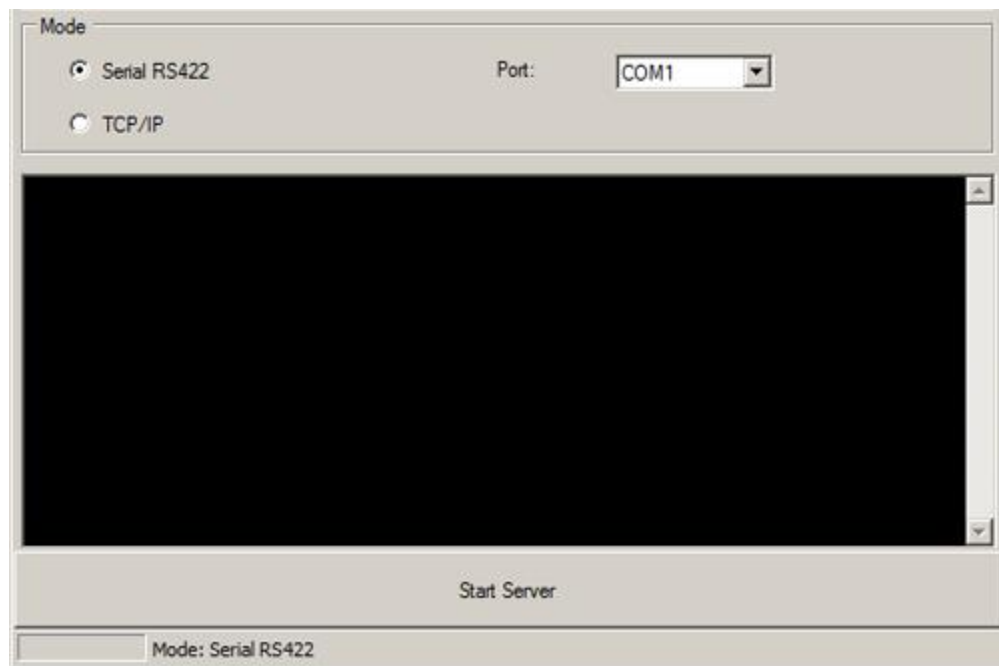
Modes are different ways to connect. There are two modes:

- Serial connection via the RS422 and cable connected to your NABU computer
- TCP/IP connection via your network

For real NABU hardware, you will be using the Serial RS422 connection



Once mode is selected press the Start Server button at the bottom of the screen



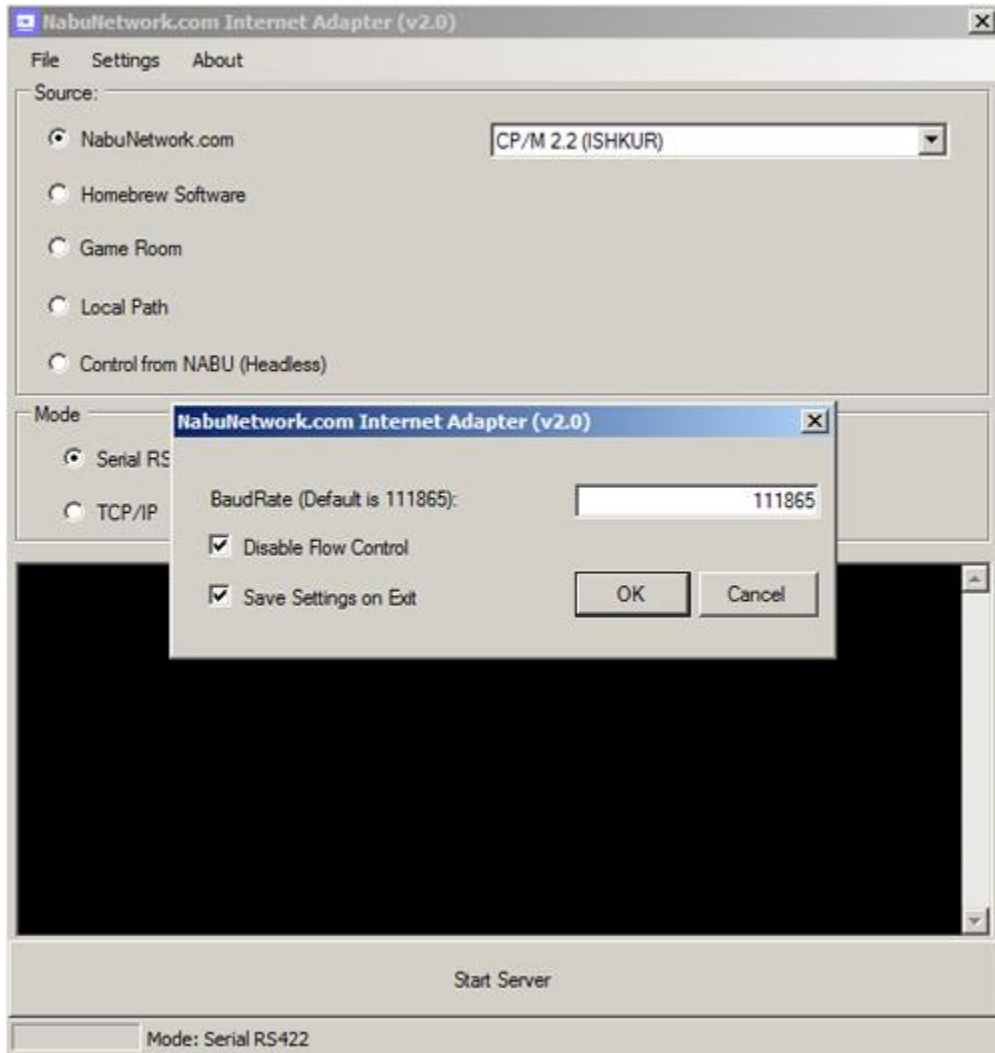
At this point you will see data being sent to the NABU computer. Requesting segments and packets sent will be shown. Similar data will be shown with each source you select.

If no data is being presented, make sure your NABU computer is turned on. If on, press the RESET button located on the front panel. Ensure that that the server button is now showing "Stop Server" in red background.

Settings

Under the “Settings” button you will be presented with the Baud rate. Baud rate is the velocity of data being sent to the NABU computer from your desktop/laptop. By default, the better performing baud rate is presented. There is no need to change this value at this time.

You can disable flow control in the settings by checking the disable flow control box. If you want to enable flow control, uncheck the box.

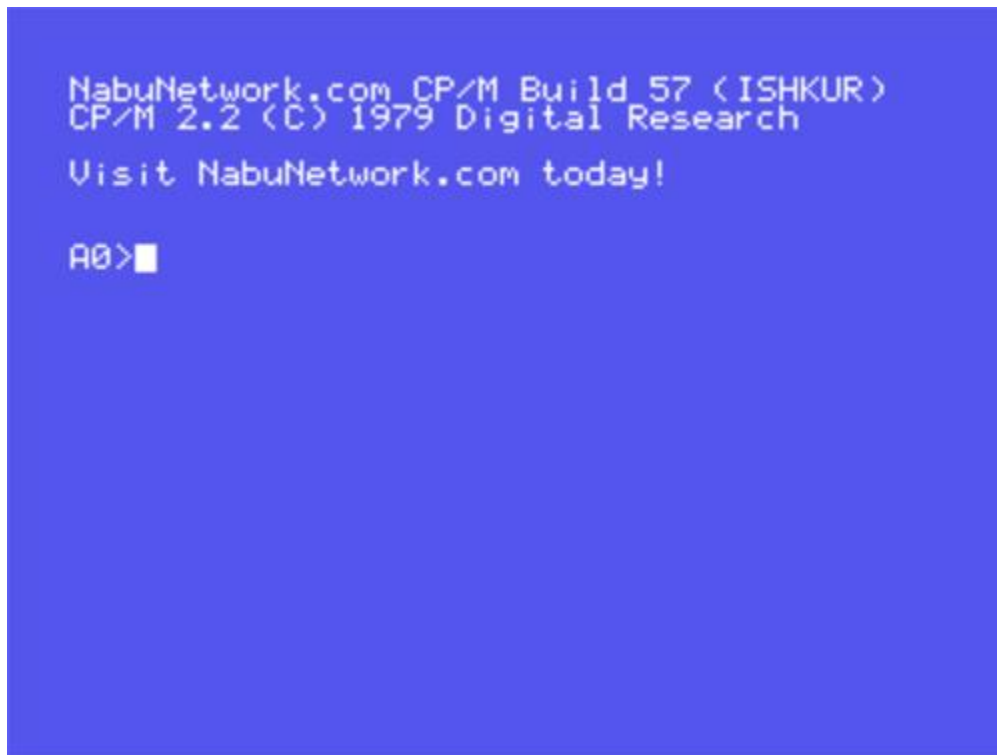


CP/M 2.2 (ISHKUR)

The CP/M 2.2 (ISHKUR) source provides an Open Source CP/M software option for your NABU computer. The NabuNetwork.com provided virtual floppy disks supply you with the following software:

- Disk A User 0 - CP/M 2.2 (ISHKUR)
- Disk A User 1 - MSX games ported to the NABU computer
- Disk A User 2 - Infocom Interactive Fiction Text Adventure games in 40 column mode
- Disk A User 3 - PTXPLAY chiptunes music player with a selection of 8-bit tunes
- Disk B User 0 - Blank disk for you to add whatever you'd like

When you first boot into CP/M you are using Disk A, User 0 which is the CP/M files and will be greeted with the following screen:



```
NabuNetwork.com CP/M Build 57 (ISHKUR)
CP/M 2.2 (C) 1979 Digital Research
Visit NabuNetwork.com today!

A0>█
```

If you type DIR (for disk directory) you will see the contents of Disk A user 0 as seen here:

```
NabuNetwork.com CP/M Build 57 (ISHKUR)
CP/M 2.2 (C) 1979 Digital Research
Visit NabuNetwork.com today!

A0>dir
A: ASM          COM : DDT          COM : ED
A: LOAD         COM : MBASIC       COM : PIP
A: STAT         COM : SUBMIT        COM : TE
A: XSUB         COM : ZEXALL          COM : INIT
A0>█
```

If you would like to change the color scheme of the NabuNetwork.com CP/M, type INIT and press GO key as seen here:

```
NabuNetwork.com CP/M Build 57 (ISHKUR)
CP/M 2.2 (C) 1979 Digital Research
Visit NabuNetwork.com today!

A0>dir
A: ASM          COM : DDT          COM : ED
A: LOAD         COM : MBASIC       COM : PIP
A: STAT         COM : SUBMIT        COM : TE
A: XSUB         COM : ZEXALL          COM : INIT
A0>init

ISHKUR CP/M Configuration
    1: Change TMS9918 Text Color
    2: Toggle F18A 80 Column Mode
    9: Exit
Option: █
```

Choose option 1 to change the text and background colors:

```
1: Change TMS9918 Text Color
2: Toggle F18A 80 Column Mode
9: Exit

Option: 1
TMS9918 Text Color Configuration
A: Transparent
B: Black
C: Medium Green
D: Light Green
E: Dark Blue
F: Light Blue
G: Dark Red
H: Cyan
I: Medium Red
J: Light Red
K: Dark Yellow
L: Light Yellow
M: Dark Green
N: Magenta
O: Grey
P: White

Text Color: ■
```

First you select your Text Color, then you select your Background Color:

```
2: Toggle F18A 80 Column Mode
9: Exit

Option: 1
TMS9918 Text Color Configuration
A: Transparent
B: Black
C: Medium Green
D: Light Green
E: Dark Blue
F: Light Blue
G: Dark Red
H: Cyan
I: Medium Red
J: Light Red
K: Dark Yellow
L: Light Yellow
M: Dark Green
N: Magenta
O: Grey
P: White

Text Color: m
Background Color:
```

Here you can see that the text is now dark green (choice M) with a background set to black (choice B).

```
C: Medium Green
D: Light Green
E: Dark Blue
F: Light Blue
G: Dark Red
H: Cyan
I: Medium Red
J: Light Red
K: Dark Yellow
L: Light Yellow
M: Dark Green
N: Magenta
O: Grey
P: White

Text Color: m
Background Color: b
ISHKUR CP/M Configuration

  1: Change TMS9918 Text Color
  2: Toggle F18A 80 Column Mode
  9: Exit

Option: █
```

Selecting Option 9 will save and exit. If you reboot your NABU computer, you will boot back into CP/M with your color changes.

```
NabuNetwork.com CP/M Build 57 (ISHKUR)
CP/M 2.2 (C) 1979 Digital Research

Visit NabuNetwork.com today!

A0>█
```

How to change to another user

How to switch to user 1 for the MSX games ported to the NABU computer (Disk A user 0):
At the prompt, type: **user 1** and then press the GO key.

```
NabuNetwork.com CP/M Build 57 (ISHKUR)  
CP/M 2.2 (C) 1979 Digital Research  
Visit NabuNetwork.com today!  
  
A0>user 1  
A1>■
```

Here you will see that the user is now set to 1 as represented by A1>

Disk A user 1, then switching to user 1 for the MSX games ported to the NABU computer. If you type DIR (for disk directory) you will see the contents of Disk A user 1 as seen here, then how to load a MSX game. In this example we load Goonies by typing: **msxrom goonies.rom** and pressing GO key:

```
NabuNetwork.com CP/M Build 57 (ISHKUR)
CP/M 2.2 (C) 1979 Digital Research

Visit NabuNetwork.com today!

A0>user 1
A1>dir
A: CASTLE ROM : CASTLEEX ROM : ELEVATO
A: GOONIES ROM : GUARDIC ROM : KINGSVB
A: KNIGHTMA ROM : KUNGFU1 ROM : KUNGFU2
A: MAGICALT ROM : MOBILESU ROM : MSXROM
A: RALLYX ROM : ROADFIGH ROM : ROLLERB
A: THEXDER ROM : TWINBEE ROM : ZANAC
A1>msxrom goonies.rom
```

The MSX Goonies game loading then running:

```
NabuNetwork.com CP/M Build 57 (ISHKUR)
CP/M 2.2 (C) 1979 Digital Research

Visit NabuNetwork.com today!

A0>user 1
A1>dir
A: CASTLE ROM : CASTLEEX ROM : ELEVATO
A: GOONIES ROM : GUARDIC ROM : KINGSWA
A: KNIGHTMA ROM : KUNGFU1 ROM : KUNGFU2
A: MAGICALT ROM : MOBILESU ROM : MSXROM
A: RALLYX ROM : ROADFIGH ROM : ROLLERB
A: THEXDER ROM : TWINBEE ROM : ZANAC
A1>msxrom goonies.rom

MSXROM for NABU PC v0.10
2023 RenderEng
Usage: MSXROM GAME.ROM 2

2 is option for IM2 mode
```



Disk A user 0, then switching to user 2 for the Infocom Interactive Fiction Text Adventure games ported to the NABU computer in 40 column mode. If you type DIR (for disk directory) you will see the contents of Disk A user 2 as seen here, then how to load a Infocom game. In this example we load Zork 1 by typing **zork1** and pressing GO key:

```
NabuNetwork.com CP/M Build 57 (ISHKUR)
CP/M 2.2 (C) 1979 Digital Research

Visit NabuNetwork.com today!

A0>user 2
A2>dir
A: BALLYHOO COM : BALLYHOO DAT : CUTTHRT
A: DEADLINE COM : DEADLINE DAT : ENCHANT
A: H2G2 COM : H2G2 DAT : INFIDEL
A: LGODDESS COM : LGODDESS DAT : LHORROR
A: MOONMIST COM : MOONMIST DAT : PHEARTS
A: PLANFALL COM : PLANFALL DAT : SEASTAL
A: SORCERER COM : SORCERER DAT : SPLBREA
A: STARCROS COM : STARCROS DAT : STATFAL
A: SUSPECT COM : SUSPECT DAT : SUSPNDE
A: WISHBRNG COM : WISHBRNG DAT : WITNESS
A: ZORK1 COM : ZORK1 DAT : ZORK2
A: ZORK3 COM : ZORK3 DAT :
A2>█
```

```
A: LGODDESS COM : LGODDESS DAT : LHORROR
A: MOONMIST COM : MOONMIST DAT : PHEARTS
A: PLANFALL COM : PLANFALL DAT : SEASTAL
A: SORCERER COM : SORCERER DAT : SPLBREA
A: STARCROS COM : STARCROS DAT : STATFAL
A: SUSPECT COM : SUSPECT DAT : SUSPNDE
A: WISHBRNG COM : WISHBRNG DAT : WITNESS
A: ZORK1 COM : ZORK1 DAT : ZORK2
A: ZORK3 COM : ZORK3 DAT :
A2>zork1
ZORK I: The Great Underground Empire
Copyright (c) 1981, 1982, 1983
Infocom, Inc. All rights reserved.
ZORK is a registered trademark of
Infocom, Inc.
Revision 88 / Serial number 840726

West of House
You are standing in an open field west
of a white house, with a boarded front
door.
There is a small mailbox here.

>
```

Disk A user 0, then switching to user 3 for the PTXPLAY chiptunes player ported to the NABU computer. If you type DIR (for disk directory) you will see the contents of Disk A user 3 as seen here:

```
NabuNetwork.com CP/M Build 57 (ISHKUR)
CP/M 2.2 (C) 1979 Digital Research

Visit NabuNetwork.com today!

A0>user 3
A3>dir
A: 3BADMICE PT3 : AGARTHA PT3 : ASSURED
A: B2REAL PT2 : BATTLEC PT3 : CASTLE
A: E PT3 : ESTROGEN PT3 : FIGHT4L
A: ITERAT PT3 : LIKEMYA PT2 : LOST
A: MANOFART PT3 : MRSID PT3 : ODULA
A: PPK PT3 : PTXPLAY COM : RAWR
A: ROBOCOP PT3 : RUNEWORT SC2 : SANXION
A: SMUTEK PT3 : SOFASTIC PT3 : SYNCHRO
A: WTOPM PT3 : YAMAHAY PT3
A3>■
```

To load a song type ptxplay then the song name. Example: **ptxplay Robocop.pt3** and pressing GO key:

```
NabuNetwork.com CP/M Build 57 (ISHKUR)
CP/M 2.2 (C) 1979 Digital Research

Visit NabuNetwork.com today!

A0>user 3
A3>dir
A: 3BADMICE PT3 : AGARTHA PT3 : ASSURED
A: B2REAL PT2 : BATTLEC PT3 : CASTLE
A: E PT3 : ESTROGEN PT3 : FIGHT4L
A: ITERAT PT3 : LIKEMYA PT2 : LOST
A: MANOFART PT3 : MRSID PT3 : ODULA
A: PPK PT3 : PTXPLAY COM : RAWR
A: ROBOCOP PT3 : RUNEWORT SC2 : SANXION
A: SMUTEK PT3 : SOFASTIC PT3 : SYNCHRO
A: WTOPM PT3 : YAMAHAY PT3
A3>ptxplay robocop.pt3
PTxPlay r.1, Written by S.U.Bulba
NABU support by tergavi7 (Gavin) Rev 3c
Now playing: ROBOCOP.PT3
```

To exit song and load something else, press the spacebar which will bring you back to the A3> prompt.

NABU BASIC 2.0

The NABU BASIC 2.0 source provides a BASIC software option for your NABU computer.

*** At this time, you cannot save NABU BASIC programs to your desktop/laptop computer. External floppy drives, SD card drives and GOTEK support will become available by the community.*