

BPQ32 with Peanut

INSTALLATION MANUAL

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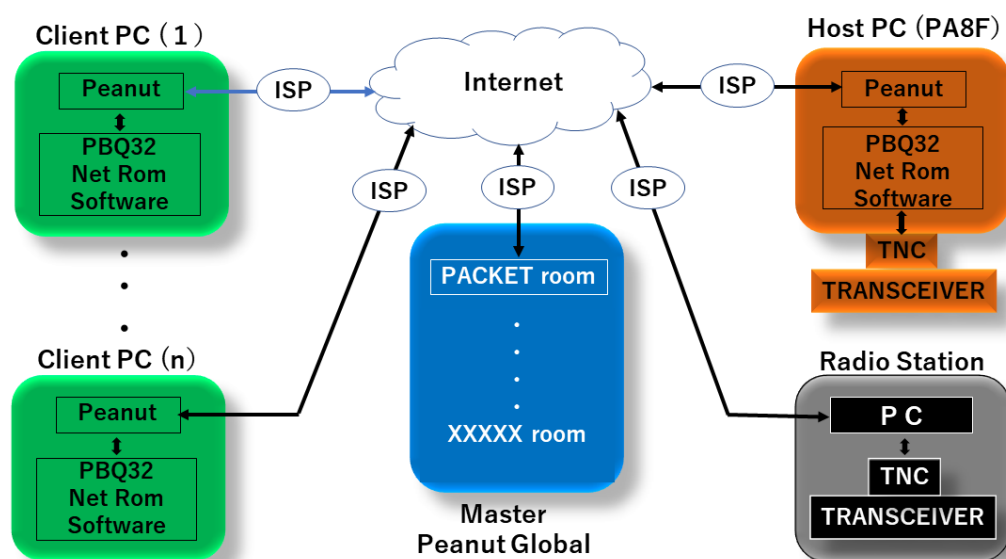
1 OPERATION SYSTEM ON THE PEANUT PACKET ROOM

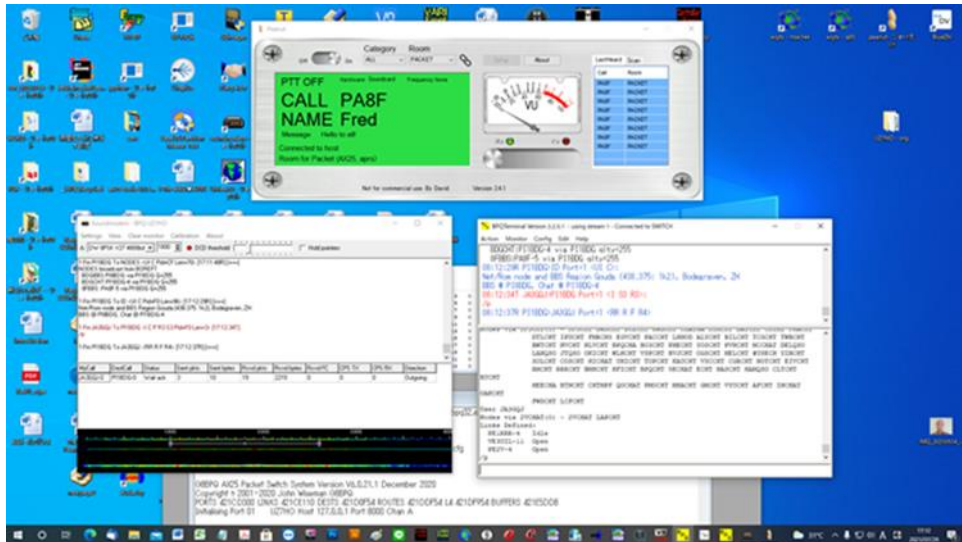
In Peanut's packet room, there is an automatic response node station (host station) PA8F which is using net / rom software, PBQ32.

I experienced chatting on Windows 10 with only software PBQ32 which is setting for client use, without any external TNC (hardware). The necessary softwares are as follows, and client use PBQ32 settings is same as for the radio transceiver settings. Peanut replaces the transceiver, but the node stations (PA8F) in Peanut's packet room seem to be connected to various packet radio stations. The figure below is an imagination diagram of packet QSO.

- PC with Windows 10 OS (32-bit or 64-bit)
- Peanut (Version2.4.1)
- Virtual com port driver
- Virtual audio cable
- BPQ32 packet software
- Soundmodem software
- Software to decompress compressed files (eg: Lhaplus)

IMAGINATION DIAGRAM OF PACKE QSO





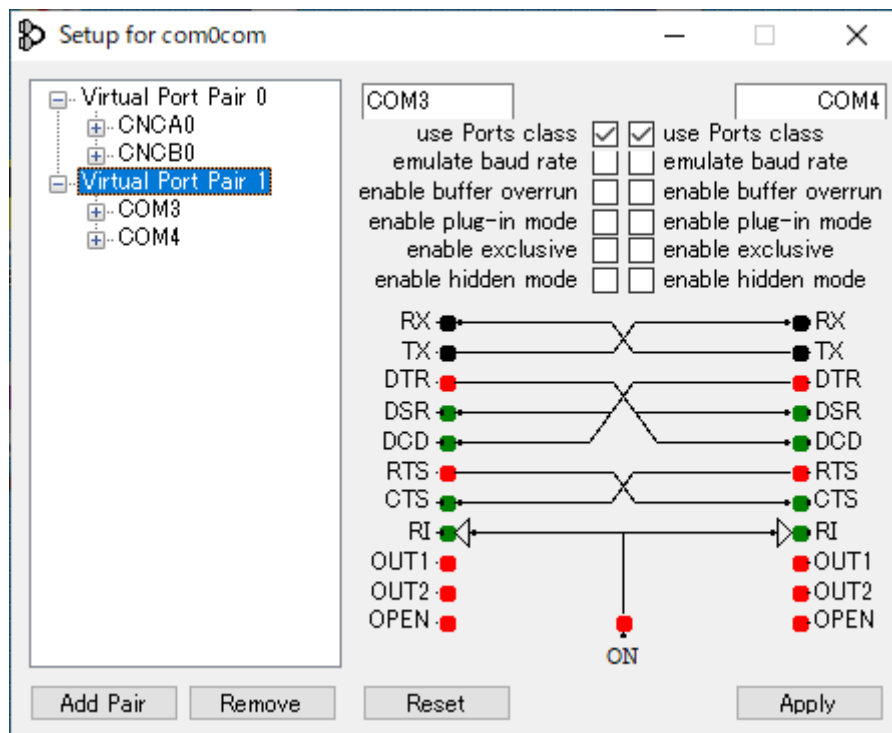
1.1 INSTALL AND CONFIGURE VIRTUAL COM PORT

Install the virtual serial port driver "comport nullmodem" from the following URL to control PTT etc. for sending and receiving peanuts. See APPENDEX 1 at the end of the book for details.

<https://sourceforge.net/projects/com0com/>

Once installed, you will have two virtual COM ports. The COM port number differs depending on the individual computer.

In my case, COM3 and COM4 were created. COM3 is used to control the sound modem. (Refer to Section 1.3 Installing Virtual Audio Cable) COM4 is used for Peanut PTT. (Refer to Section 1.2 Configure Peanut with PTT control)



I use the COM ports for the following:

- COM3 for soundmodem (See 1.4.1 Configure soundmodem)
- COM4 for Peanut for Windows (See 1.2 CONFIGURE PEANUT WITH PTT CONTROL)

1.2 CONFIGURE PEANUT WITH PTT CONTROL

It is assumed that you are already using Peanut, but if you are not already using Peanut, please refer to APPENDEX 0 to install it.



The main folder of Peanut after installation is c: \ Program Files \ Peanut \ Peanut, but there is another Peanut folder in the "Documents" folder opened by "File Explorer" (folder type icon) on the taskbar of the desktop.

There is "peanut.ini" that can be edited with Notepad here, so edit it as follows.

myCall in [GENERAL] and serial in [SERIALPTT] must be your own.

[GENERAL]

myCall=JA3GQJ

.

----- Omitted on the way -----

.

[SOUNDCARD]

recdevice=0

playdevice=0

[SERIALPTT]

CTS = Peanut PTT

RTS = Squelsh frm Peanut

enabled=1

serial=COM4

invertRTS=1

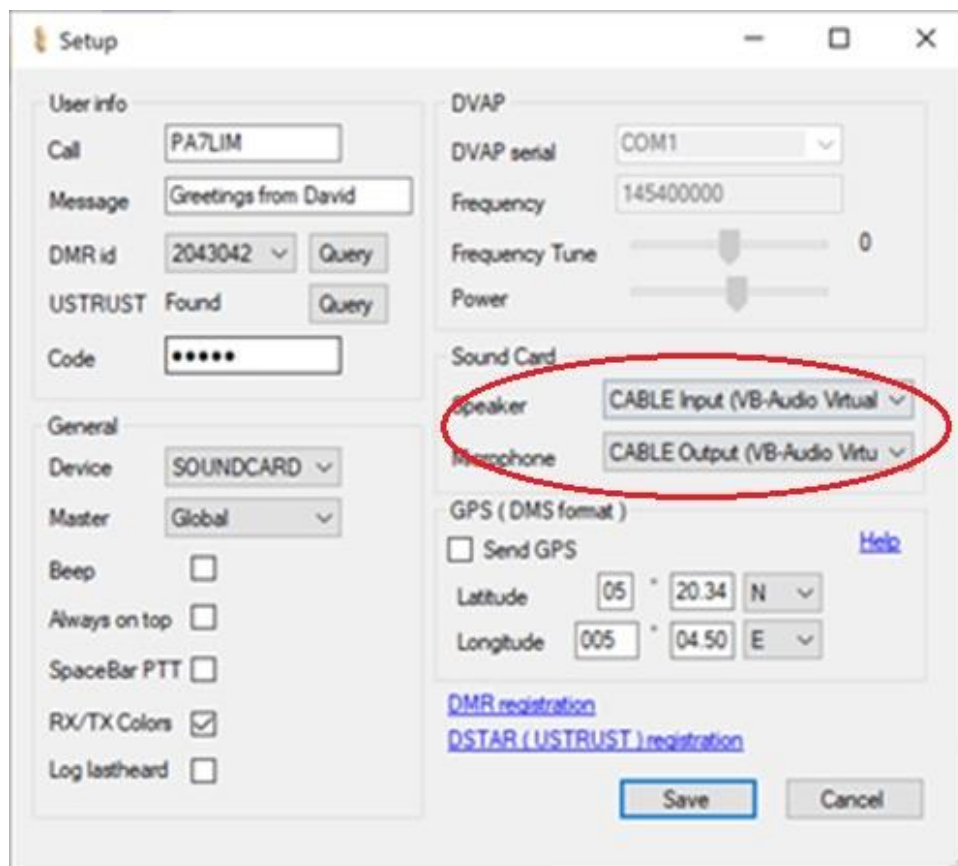
invertCTS=1

1.3 INSTALL VIRTUAL AUDIO CABLE

Download the VB-Cable software that exchanges packet signals with Peanut from the following URL.
See APPENDIX 2 at the end of the book for details.

<https://vb-audio.com/Cable/index.htm>

After installation, the virtual sound card loopback will be completed instead of the built-in sound card of the computer (the speaker circuit and microphone circuit are internally coupled, so an external microphone cannot be used). You need to select this virtual sound card in the Peanut settings "Sound Card". (CABLEInput and CABLEOutput)



1.4 INSTALL BPQ32

Download the software from the following URL. See APPENDEX 3 at the end of the book for details.(password is bpq32)

<https://www.cantab.net/users/john.wiseman/Downloads/LatestInstaller/>

1.4.1 Configure soundmodem (NOT soundmodemHS)

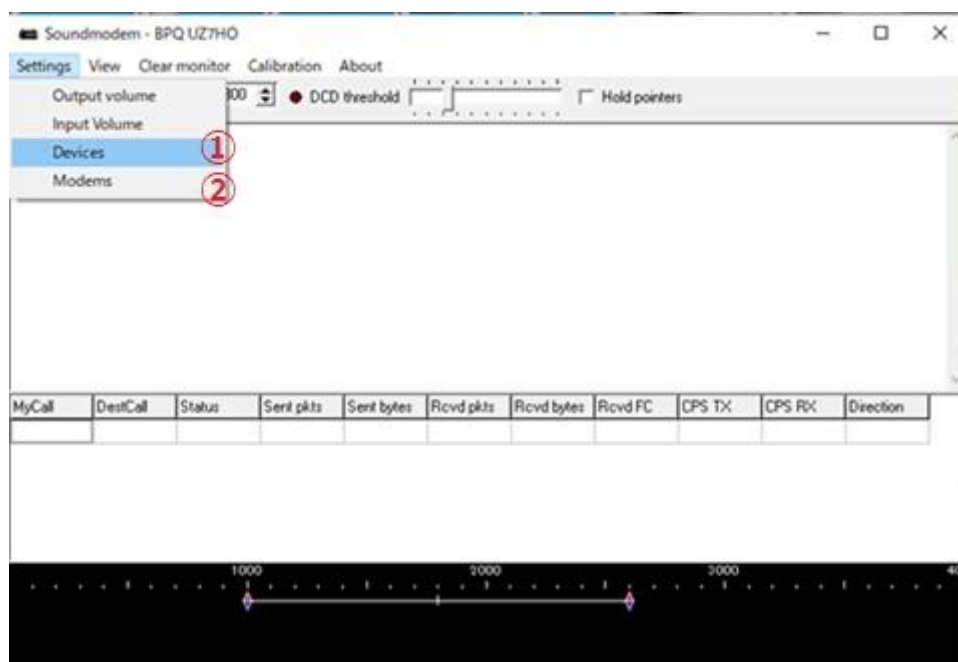
Download **soundmodem113.zip**. (See APPENDEX 4 at the end of the book for detail.)

Do NOT download hs_soundmodem27.zip. This version will not work!

<http://uz7.ho.ua/packetradio.htm>

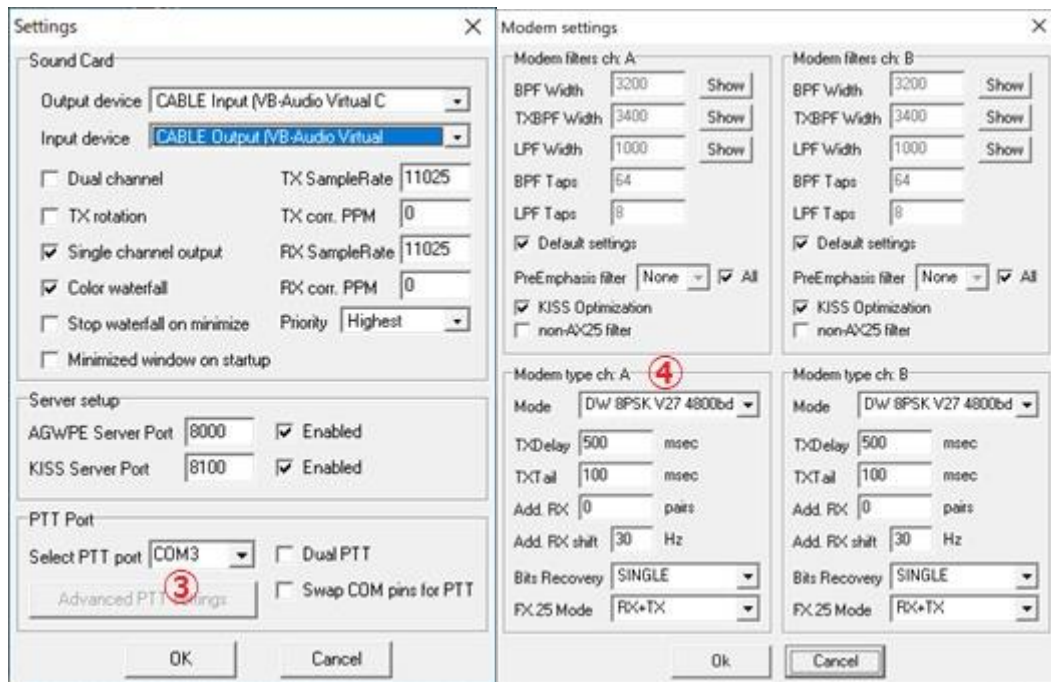
Extract the file in the **c:\soundmodem** directory.

Start the soundmodem to configure all settings. See the settings below.



① Device Setting

② Modems Setting



① Device Setting :

As described in Section 1.1, "INSTALL AND CONFIGURE VIRTUAL COM PORT", the two installed virtual COM port numbers are different for each computer. In my case, it was COM3 and COM4, so I selected COM3 with the smaller number for Select PTT port ③ and set it.

② Modems Setting :

For "Mode" of "Modem type ch: A", select "DW 8psk V27 4800bd" ④ used in Peanut's packet room and set it.

1.4.2 Configure BPQ32

BPQ32.cnf is the most important file that must be configured to use the PA8F node station as a client. See Appendix 3 at the end of the book to set it up correctly.

1.4.3 Cheat sheet for BPQ32

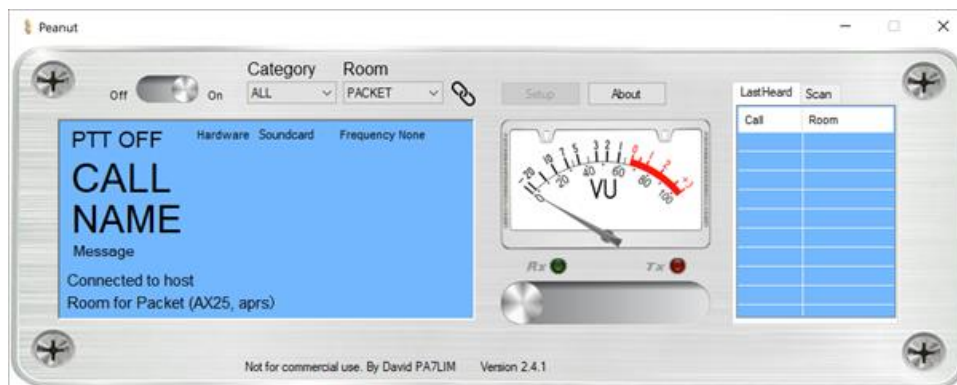
I found a nice document with all commands that you can use for BPQ32.

<https://cheatography.com/gcremerius/cheat-sheets/bpq-user-and-sysop-commands/>

2 WORK WITH BPQ32

2.1 START BPQ32

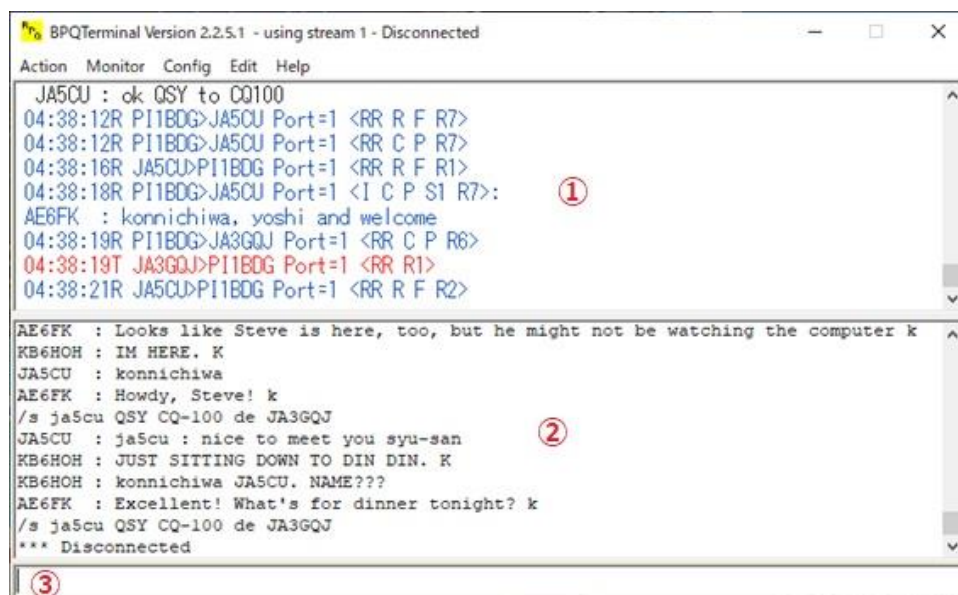
- Start peanut for windows.
- Select the PACKET room



When you start BPQTerminal, BPQ32consol and soundmodem will also start automatically. If soundmodem does not start automatically, you have not installed soundmodem in the correct folder. (For details, refer to APPENDEX at the end of the book.)

• BPQTerminal:

Window ① at the top of the BPQ Terminal screen is a monitor drop-down box where you can monitor traffic. The center window ② shows the connected output, and the bottom window ③ is used to enter commands.



• Soundmodem:

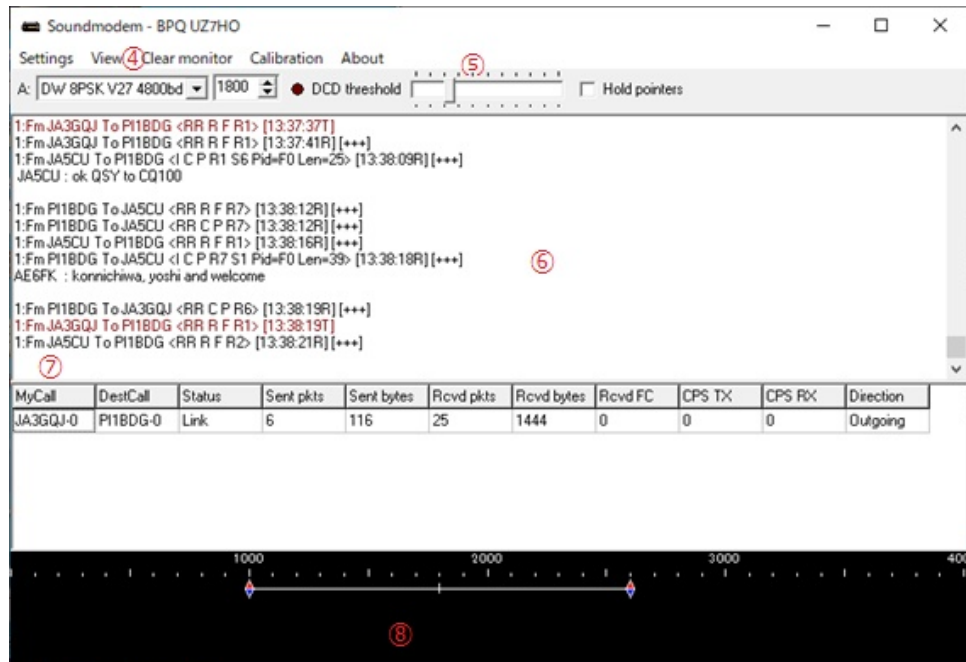
This Soundmodem-BPQ UZ7HO is the key to packet communication. You can change the mode here ④ if necessary.

It seems that the number of retries for accessing the node station is different depending on the adjustment of the DCD threshold level adjustment slide bar⑤.

The same contents as the BPQ32 Terminal window are displayed in the monitor window ⑥.

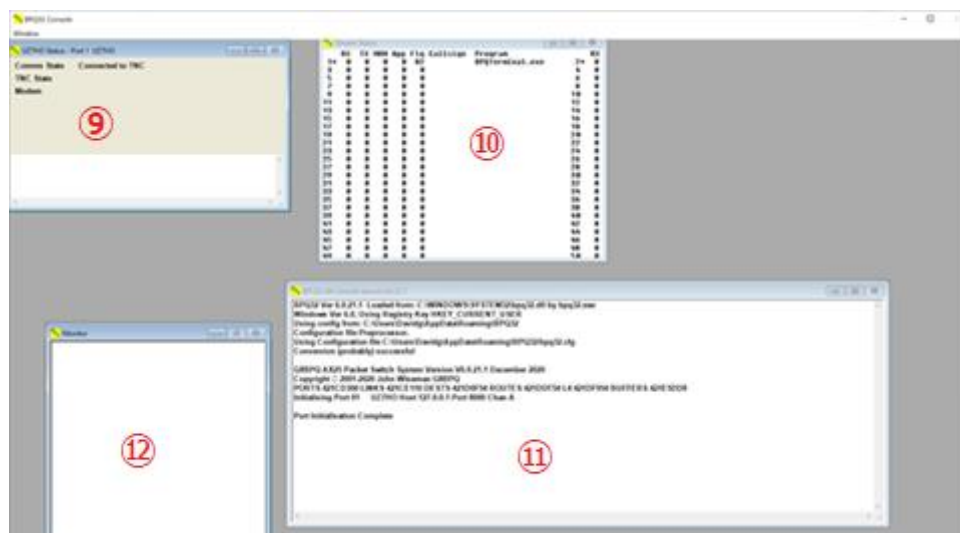
It seems that the data in QSO is displayed in ⑦, which has eleven(11) items.

⑧ is waterfall, but I don't feel the need for display so far.



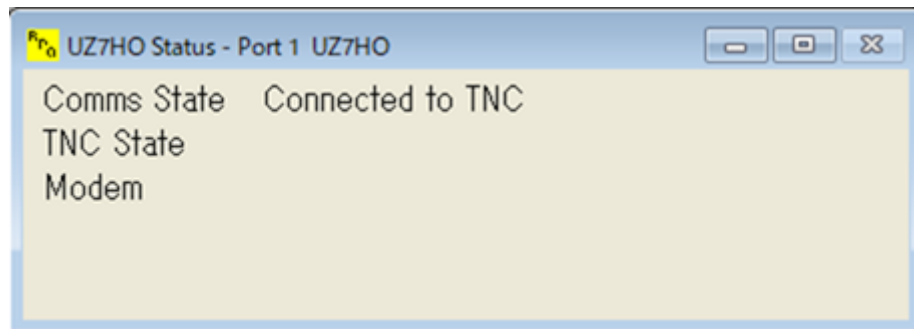
• BPQ32consol :

I don't think the next BOQ32 Console will be needed during operation once it has been confirmed that the software required for the packet has started correctly.



⑨UZ7HO Status (Port1) :

Indicates that the sound modem is recognized.



⑩ Stream Status :

It indicates that BPQ32 and BPQTerminal are running for the client use.

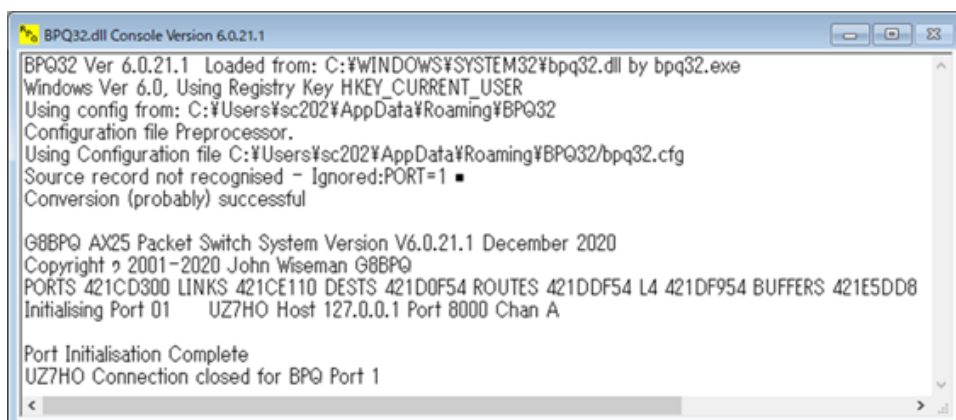
If you are running BPQ32chat.exe and BPQ32Mail.exe together on the host node station, they are also listed.

RX	TX	MON	App	Flg	Callsign	Program
1*	0	0	0	0	00	bpq32.exe
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	
5	0	0	0	0	0	
6	0	0	0	0	0	
7	0	0	0	0	0	
8	0	0	0	0	0	
9	0	0	0	0	0	
10	0	0	0	0	0	
11	0	0	0	0	0	
12	0	0	0	0	0	
13	0	0	0	0	0	
14	0	0	0	0	0	
15	0	0	0	0	0	
16	0	0	0	0	0	
17	0	0	0	0	0	
18	0	0	0	0	0	
19	0	0	0	0	0	
20	0	0	0	0	0	
21	0	0	0	0	0	
22	0	0	0	0	0	
23	0	0	0	0	0	
24	0	0	0	0	0	
25	0	0	0	0	0	
26	0	0	0	0	0	
27	0	0	0	0	0	
28	0	0	0	0	0	
29	0	0	0	0	0	
30	0	0	0	0	0	
31	0	0	0	0	0	
32	0	0	0	0	0	
33	0	0	0	0	0	
34	0	0	0	0	0	
35	0	0	0	0	0	
36	0	0	0	0	0	
37	0	0	0	0	0	
38	0	0	0	0	0	
39	0	0	0	0	0	
40	0	0	0	0	0	
41	0	0	0	0	0	
42	0	0	0	0	0	
43	0	0	0	0	0	
44	0	0	0	0	0	
45	0	0	0	0	0	
46	0	0	0	0	0	
47	0	0	0	0	0	
48	0	0	0	0	0	
49	0	0	0	0	0	
50	0	0	0	0	0	
51	0	0	0	0	0	
52	0	0	0	0	0	

⑪ BPQ32.dll Console :

Indicates that the system has booted properly.

If you are running BPQ32chat.exe and BPQ32Mail.exe together on the host node station, their status will also be displayed at the end of the line.



⑫ Monitor :

The same contents as the monitor window of soundmodem and BPQ Terminal are displayed here.

2.3 CHAT A STATION

Now that we have all the commands for NODE, let's try chat QSO.

Type CHAT or chat on the command input window③

Now you will have following his node and will get messages as below which is including list of already connected stations who may be able to chat with you.

chat

BOREFT: PI1BDG} Connected to CHAT

[BPQChatServer-6.0.21.51]

PI1BDG's Chat Server.

Type /h for command summary.

Bringing up links to other nodes.

This may take a minute or two.

The /p command shows what nodes are linked.

5 Station(s) connected:

OH5RM at RMCHT Jouko, Kouvola FI [General] Idle for 67285 seconds

JA3GQJ at BDGCHT Shu, Osaka JAPAN [General] Idle for 0 seconds

VK2NA at CHATNA Dave, iot [General] Idle for 3451 seconds

WA3WLH at WLHCHT Rich, East Greenville PA [General] Idle for 28251 seconds

PE1RRR at RRRCHT red, th rijen [General] Idle for 67285 seconds

Type /H or /h on the command input window③

/h

Commands can be in upper or lower case.

/U - Show Users.

/N - Enter your Name.

/Q - Enter your QTH.

/T - Show Topics.

/T Name - Join Topic or Create new Topic. Topic Names are not case sensitive

/P - Show Ports and Links.

/A - Toggle Alert on user join - Disabled.

/C - Toggle Colour Mode on or off (only works on Console or BPQTerminal - Disabled.

/Codepage CPnnnn - Set Codepage to use if UTF-8 is disabled.

/E - Toggle Echo - Disabled.

/Keepalive - Toggle sending Keepalive messages every 10 minutes - Disabled.

/ShowNames - Toggle displaying name as well as call on each message - Disabled

/Auto - Toggle Automatic character set selection - Disabled.
/UTF-8 - Character set Selection - 8 Bit.
/Time - Toggle displaying timestamp on each message - Disabled.
/S CALL Text - Send Text to that station only.
/F - Force all links to be made.
/K - Show Known nodes.
/B - Leave Chat and return to node.
/QUIT - Leave Chat and disconnect from node.

Now you can chat with a people that are connected to the node of PA8F. PA8F is also connected to the internet with his node so you can also hop around the world. I had some nice chats from all over the world. Very nice!!!

2.4 BBS A STATION

2.4.1 Change node mode from chat to BBS

Follow the steps below and switch from chat mode to BBS mode.

Type /B or /b on the command input window③ then Link will return to Node with following messages and you are able to change mode from CHAT to BBS.

```
/b
73 de PI1BDG
Returned to Node BOREFT: PI1BDG
```

Type /BBS or /bbs on the command input window③ then following messages will return and mode changes from CHAT to BBS.

```
bbs
BOREFT:PI1BDG} Connected to BBS
[BPQ-6.0.21.51-B2FWIHJM$]
Hello Shu. Latest Message is 18353, Last listed is 0
Please enter your Home BBS using the Home command.
You may also enter your QTH and ZIP/Postcode using qth and zip commands.
de PI8BDG>
```

Then type? on ③ and get user command list in ② as follows.

```
?
A - Abort Output
B - Logoff
CMSPASS Password - Set CMS Password
```

D - Flag NTS Message(s) as Delivered - D num
 HOMEBBS - Display or get HomeBBS
 INFO - Display information about this BBS
 I CALL - Lookup CALL in WP Allows *CALL CALL* *CALL* wildcards
 I@ PARAM - Lookup @BBS in WP
 IZ PARAM - Lookup Zip Codes in WP
 IH PARAM - Lookup HA elements in WP - eg USA EU etc
 K - Kill Message(s) - K num, KM (Kill my read messages)
 L - List Message(s) -
 L = List New, LR = List New (Oldest first)
 LM = List Mine, L> Call, L< Call, L@ = List to, from or at
 LL num = List msg num, L num-num = List Range
 LN LY LH LK LF L\$ LD = List Message with corresponding Status
 LB LP LT = List Mesaage with corresponding Type
 LC = List TO fields of all active bulletins
 You can combine most selections eg LMP, LMN LB< G8BPQ
 LISTFILES or FILES - List files available for download
 N Name - Set Name
 NODE - Return to Node
 OP n - Set Page Length (Output will pause every n lines)
 PASS Password - Set BBS Password
 POLLRMS - Manage Polling for messages from RMS
 Q QTH - Set QTH
 R - Read Message(s) - R num
 RM (Read new messages to me), RMR (RM oldest first)
 READ Name - Read File
 S - Send Message - S or SP Send Personal, SB Send Bull, ST Send NTS,
 SR Num - Send Reply, SC Num - Send Copy
 X - Toggle Expert Mode
 YAPP - Download file from BBS using YAPP protocol

2.4.2 Connect directly to the node in BBS mode

Type `c pi8bdg` on the command input window③

Now you will have following his BBS node

c pi8bdg

*** Connected to PI8BDG

[BPQ-6.0.21.51-B2FWIHJM\$]

Hello Shu. Latest Message is 18356, Last listed is 0

Please enter your Home BBS using the Home command.

You may also enter your QTH and ZIP/Postcode using qth and zip commands.

de PI8BDG>

2.5 DISCONNECTION FROM THE NODE

When you are chatting:

- Enter the chat user command `/ QUIT` or `/ quit` The chat ends and the connection with the node station ends.

When you are on a BBS:

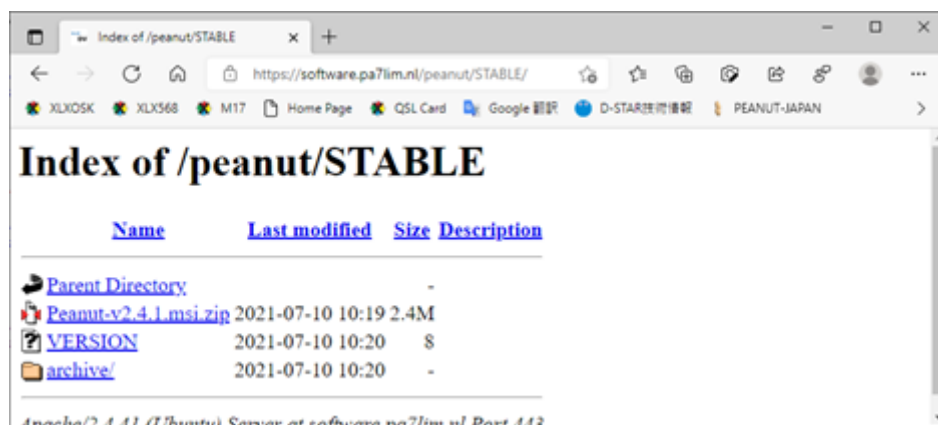
- Enter the bbs user command `"B"` or `"b"` The bbs ends and the connection with the node

Let's use BBS effectively by user commands, which got from his node,.

As of August 1, 2021

3 APPENDIX 0

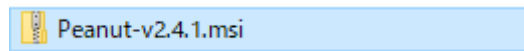
Click [here](#) to open download page for “Peanut-v2.4.1.msi.zip”



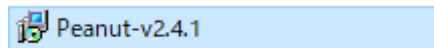
Then click on "Peanut-v2.4.1.msi.zip" to start download.

Subsequent steps are the same as the download steps you always follow.

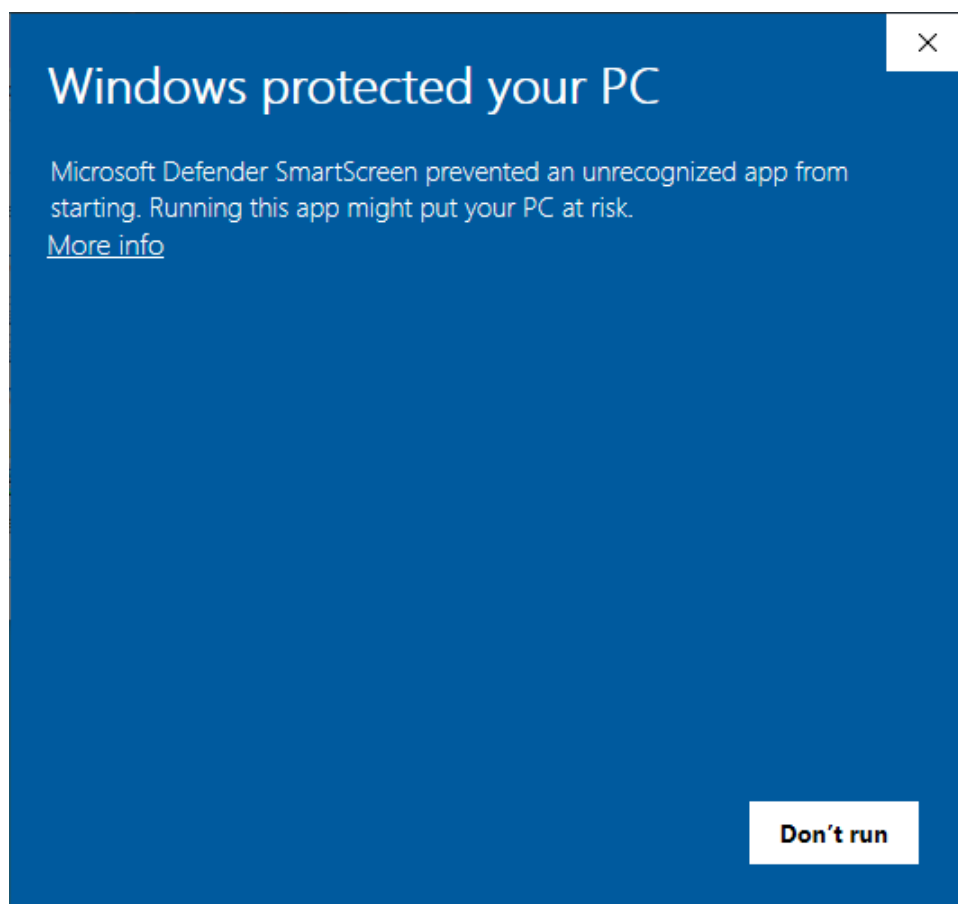
In my case, I was able to download the compressed file in the Windows default download folder as follows. Click this



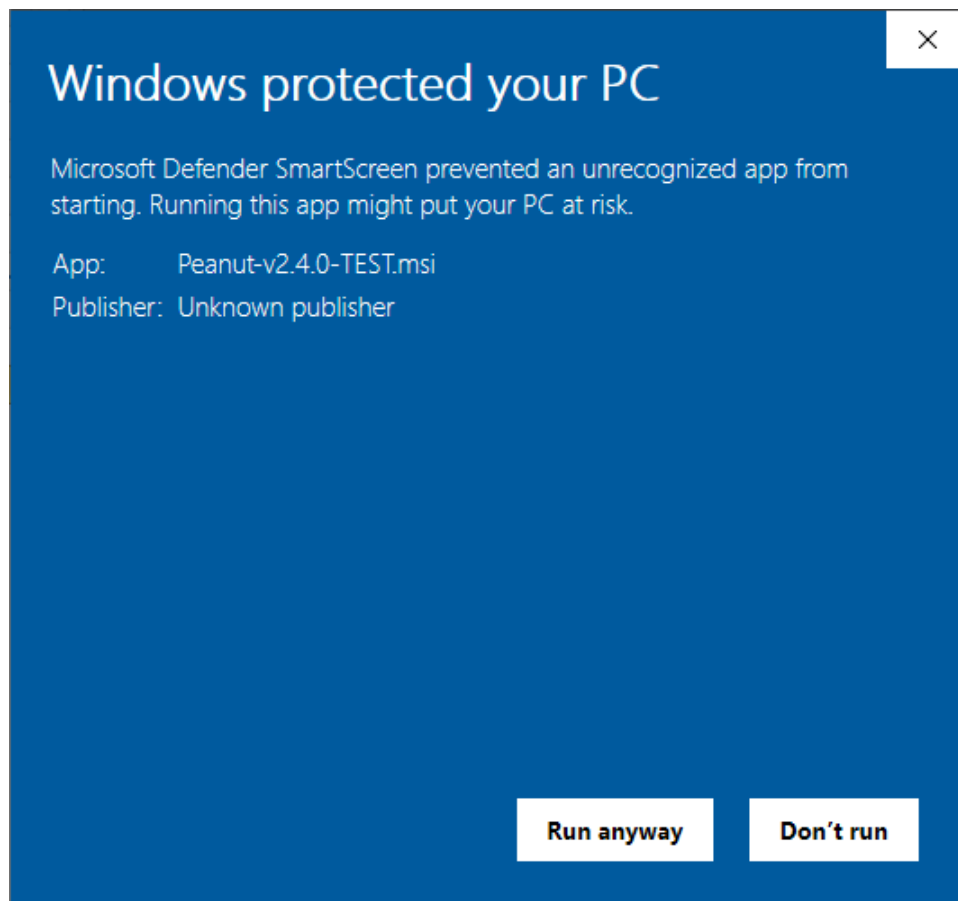
It depends on how to use the decompression software, but in my case, the executable file was generated in the download folder of Windows default as follows.



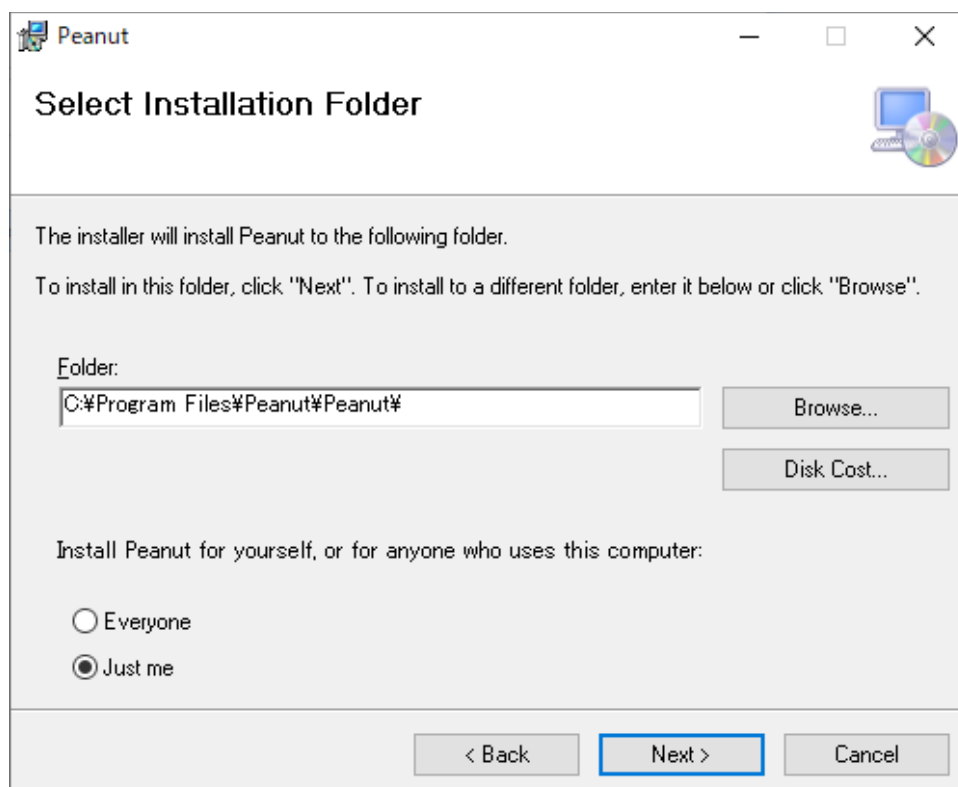
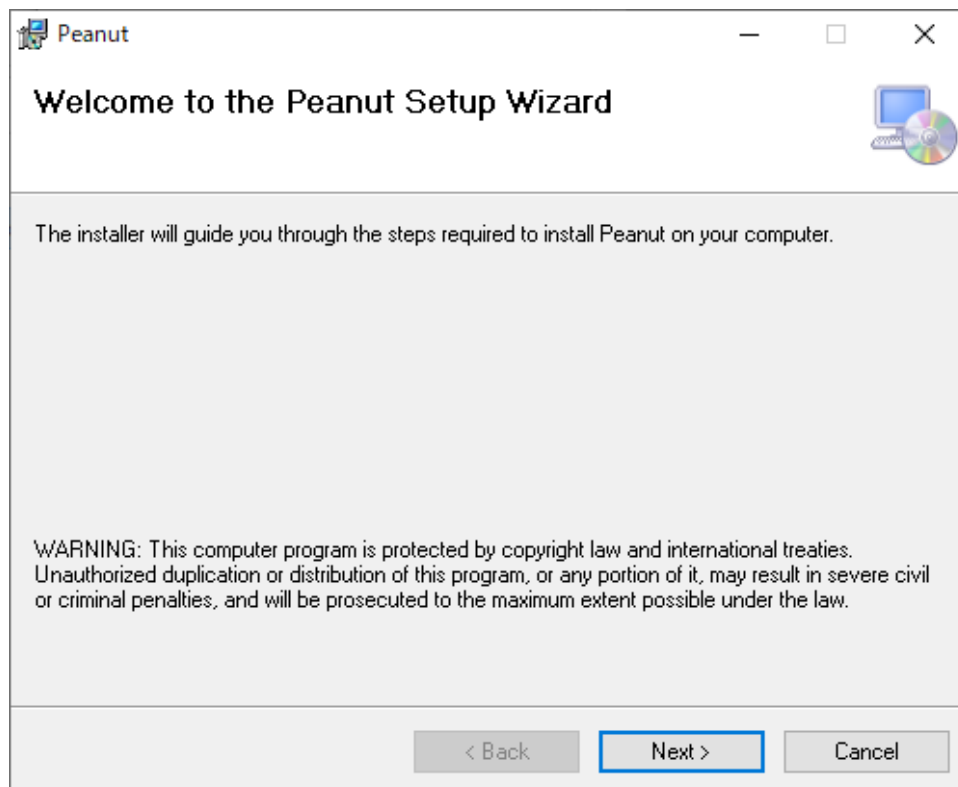
Clicking this will start the installation, but for my computer, a screen stating "Windows protected my computer" popped up as shown below. Then click "More info".

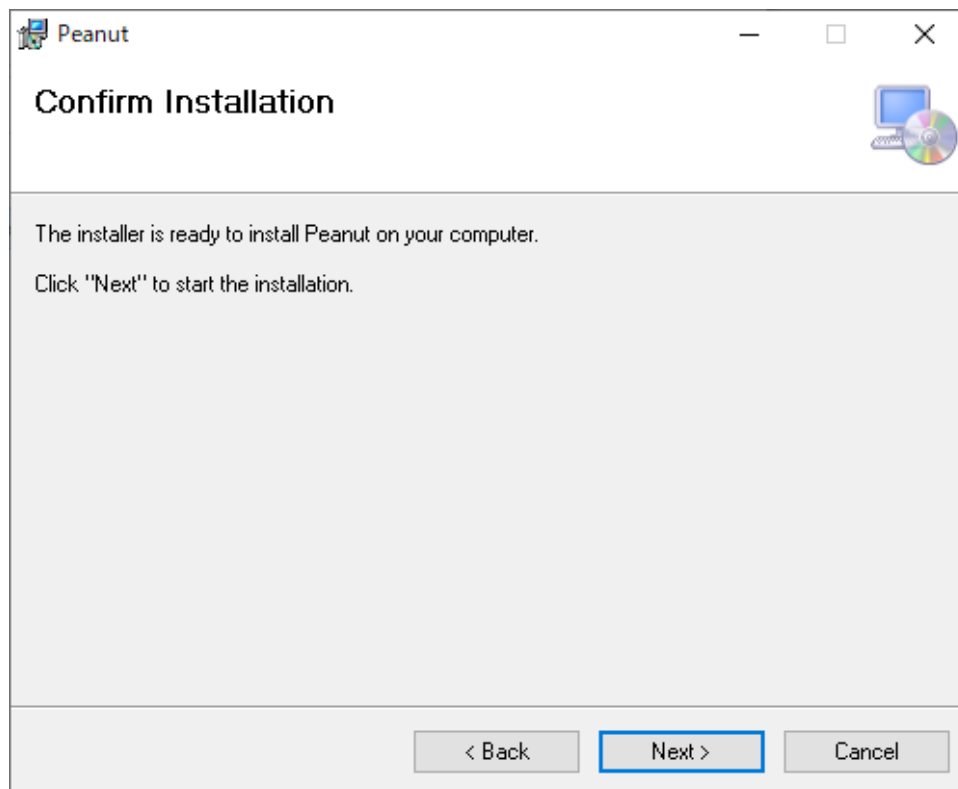


Then, the screen changed to the screen with the "Run" button as shown below, so click the "Run anyway" button.

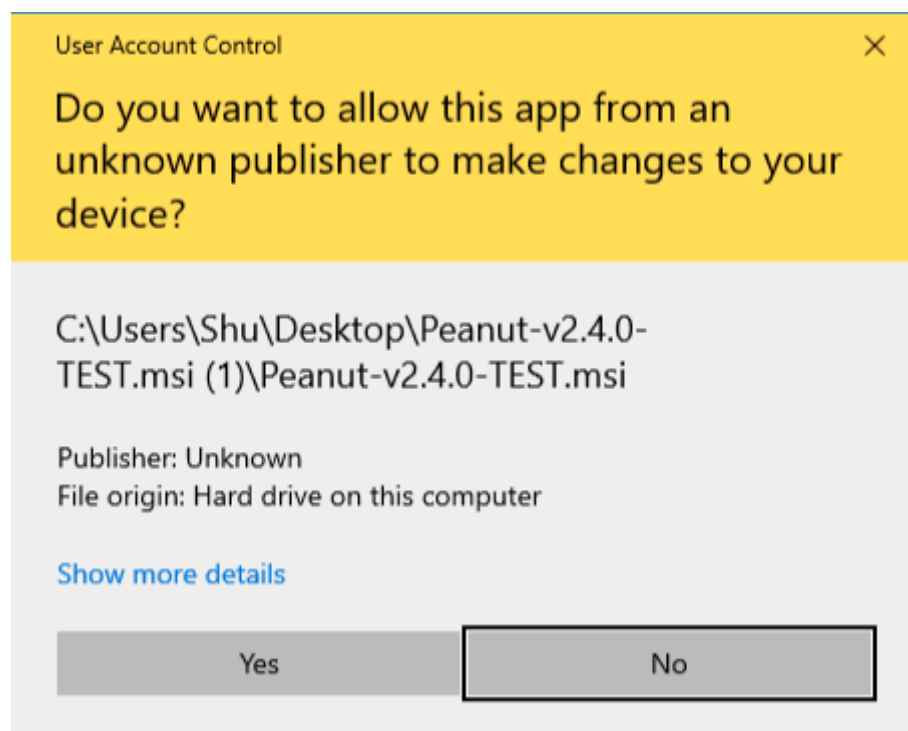


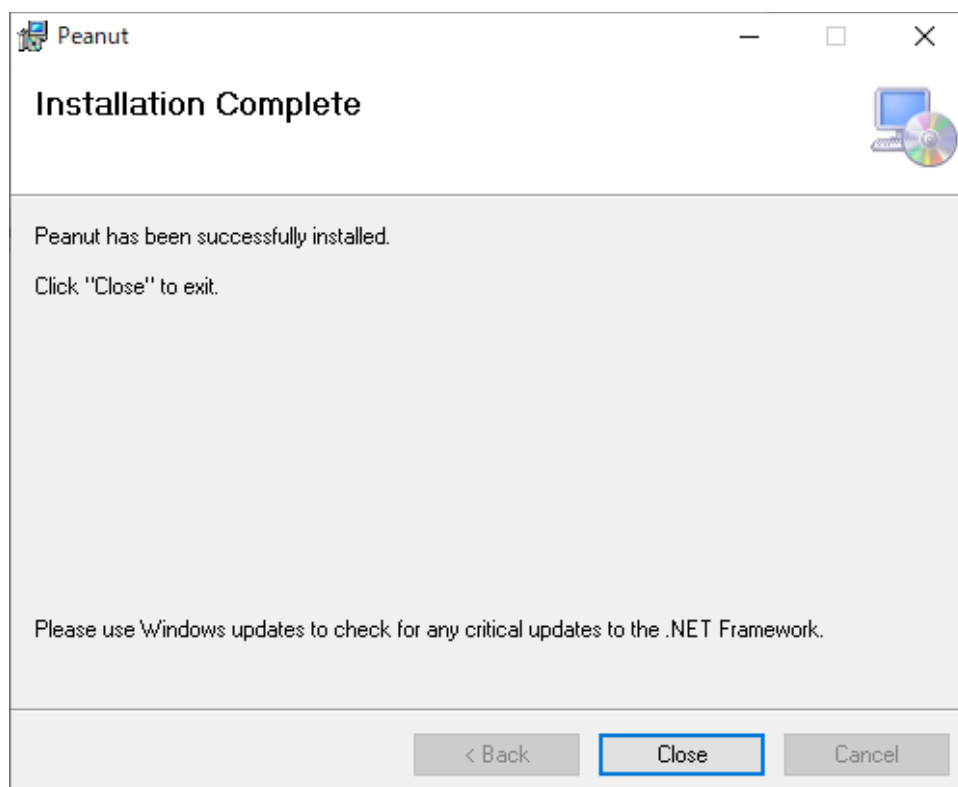
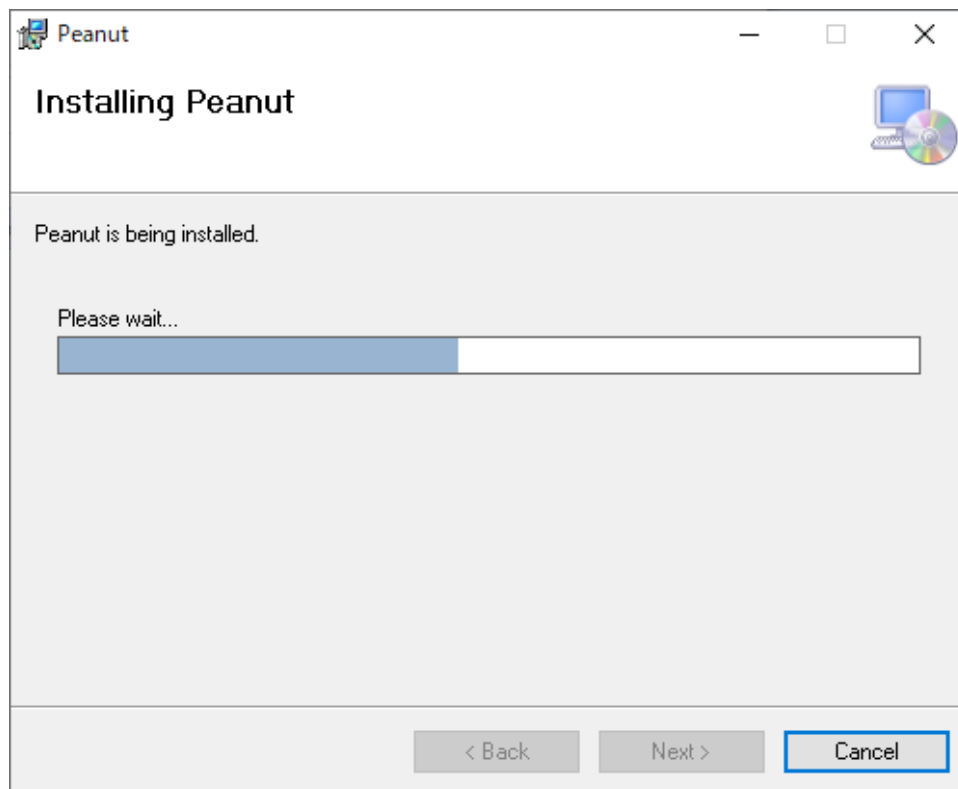
Then "Welcome to the Peanut Setup Wizard" will pop up, so click "Next>" for each screen to proceed with the installation.





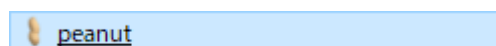
When I click the "Next>" button, the following screen pops up saying "Do you want to allow the app to make changes to the device from this unknown publisher?", So click "Yes".



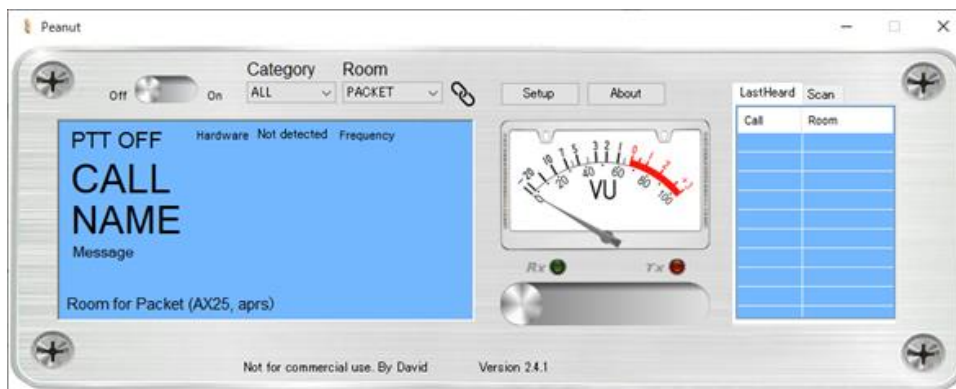


Click the "Close" button to finish the installation.

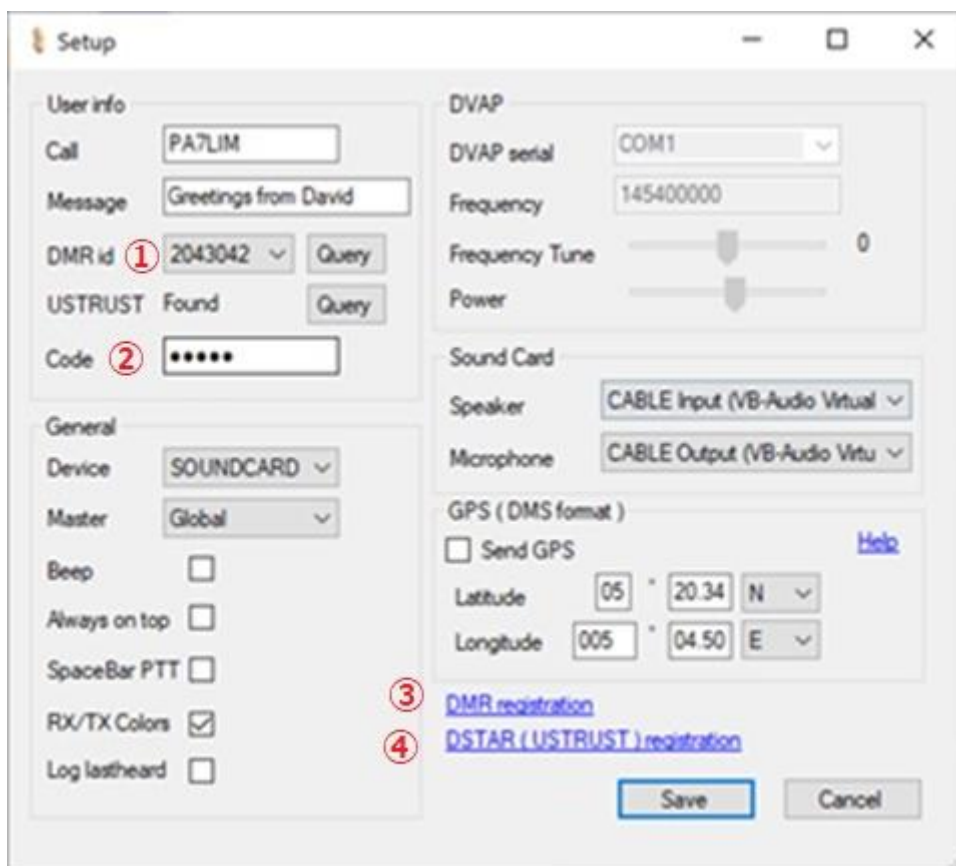
The installed program files are located in C: \ Program \ Peanut \ Peanut.



Click this to launch Peanut.



Then click the "Setup" tag to open the settings screen.



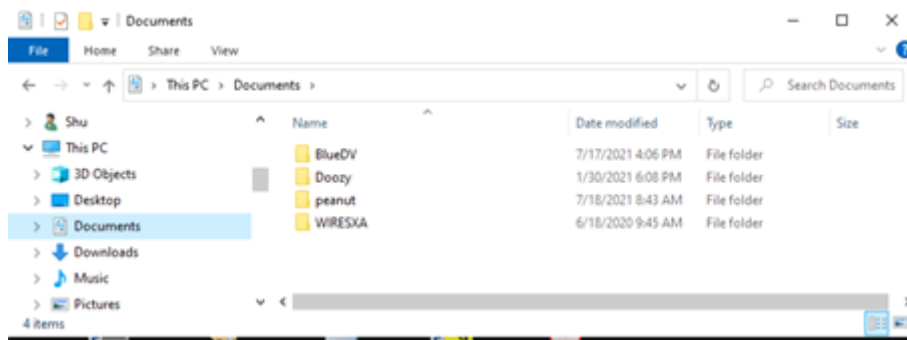
You can get your MDRid① by clicking DMR Registration (blue letters)③ at the bottom right of the screen and following the necessary procedures according to the instructions on the page that opens.

You can get your Code②, click [here](#) to make a code request.

If you are interested in Dstar, please click "DSTAR (USTRUST) registration"④ in the line below to register. Not limited to Peanut, you can enjoy various ways using "BlueDV for Windwos", "Dozy", etc.

The main folder of Peanut is c: \ Program Files \ Peanut \ Peanut, but there is another Peanut folder that can be called a subfolder in the "Documents" folder opened by "File

Explorer “(folder type icon) on the taskbar of the desktop. Here is the "peanut.ini" that you can edit with your notepad.



Contents of “peanut.ini”

[GENERAL]

myCall=JA3GQJ

.

.

.

----- Omitted on the way -----

.

.

.

.

[SOUNDCARD]

recdevice=0

playdevice=0

[SERIALPTT]

CTS = Peanut PTT

RTS = Squelsh frm Peanut

enabled=1

serial=COM4

invertRTS=1

invertCTS=1

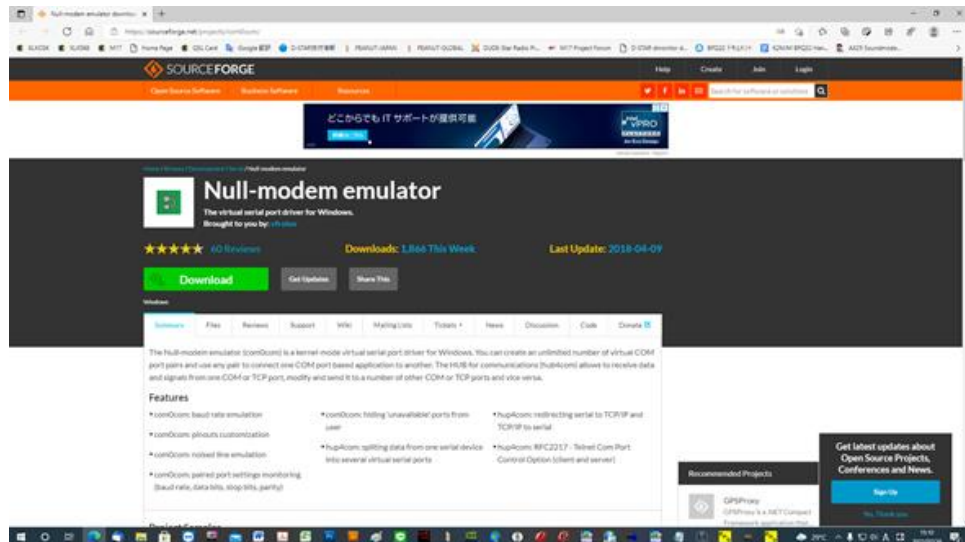
dataMode=1

4 APPENDIX 1

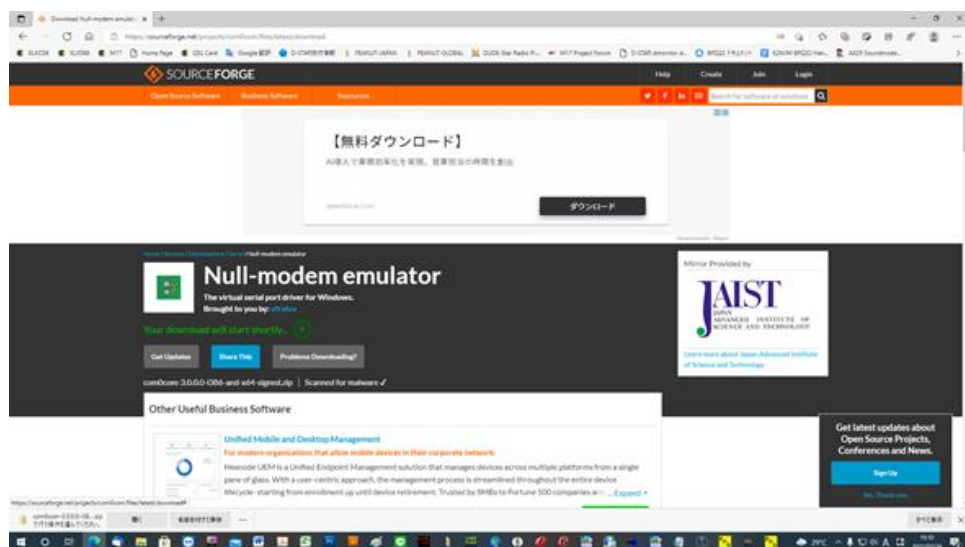
INSTALL AND CONFIGURE VIRTUAL COM PORT

Click <https://sourceforge.net/projects/com0com/> to open download page

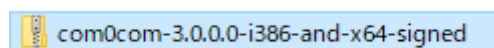
Then click green colored “Download” button to start download.



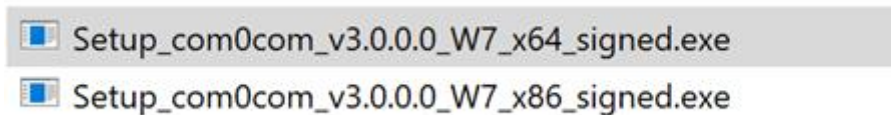
Subsequent steps are the same as the download steps you always follow.



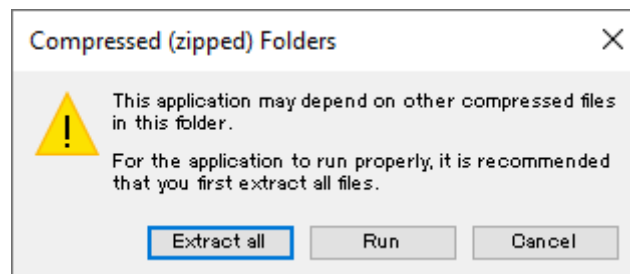
In my case, I was able to download the compressed file in the Windows default download folder as follows. Click this



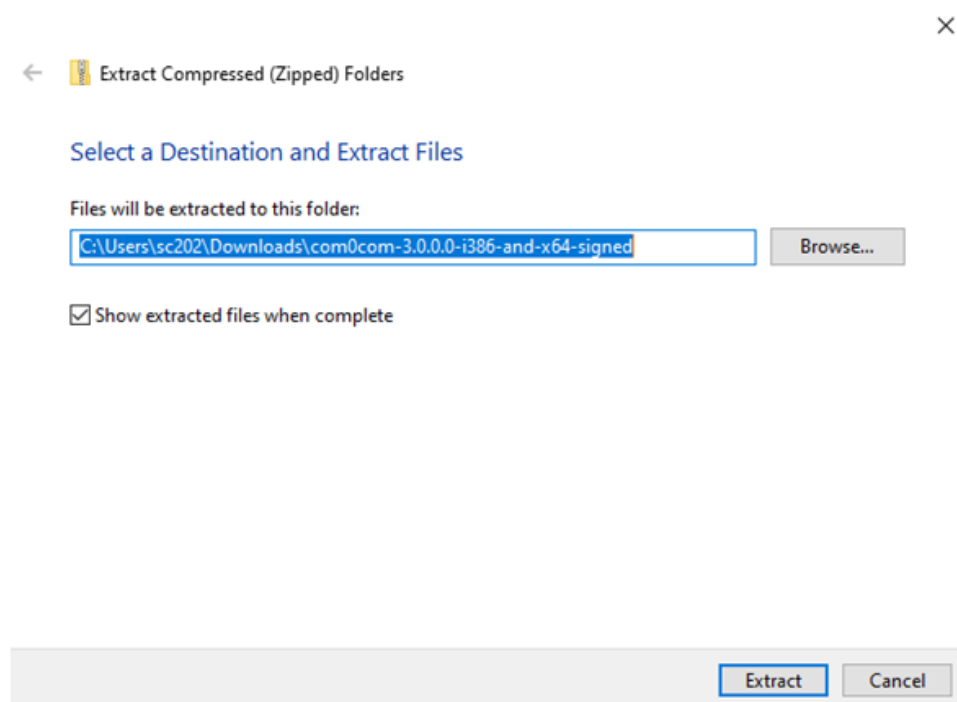
It was unzipped and we now have two files, one for 32-bit and one for 64-bit.



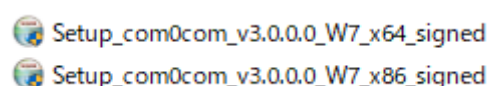
In my case, when I clicked for 32-bit, following comment screen popped up, then click "Extract all" button.



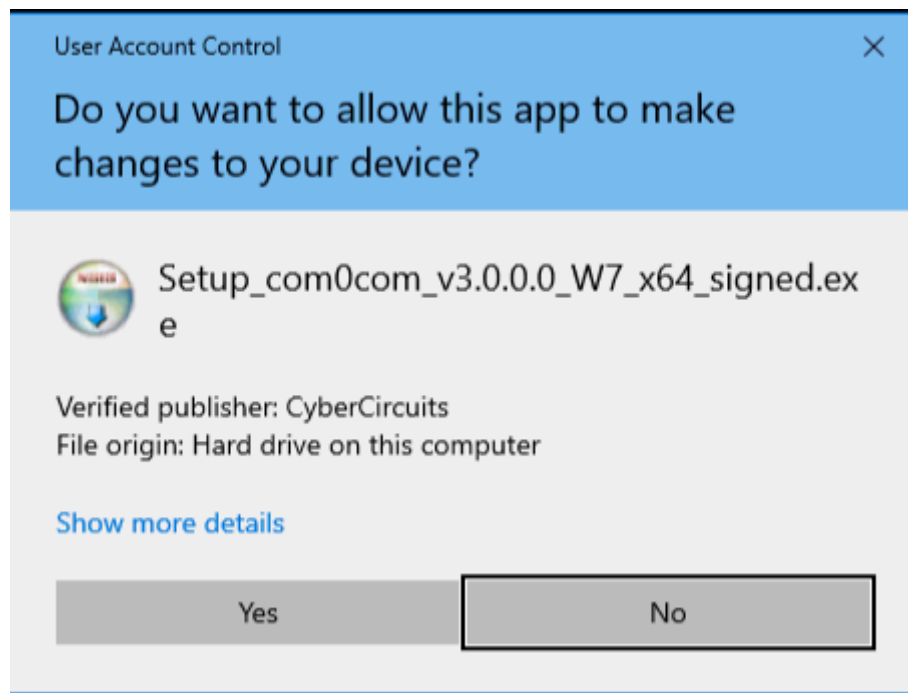
Then, a screen popped up specifying the folder name where the files were extracted. Then click the "Extract" button.



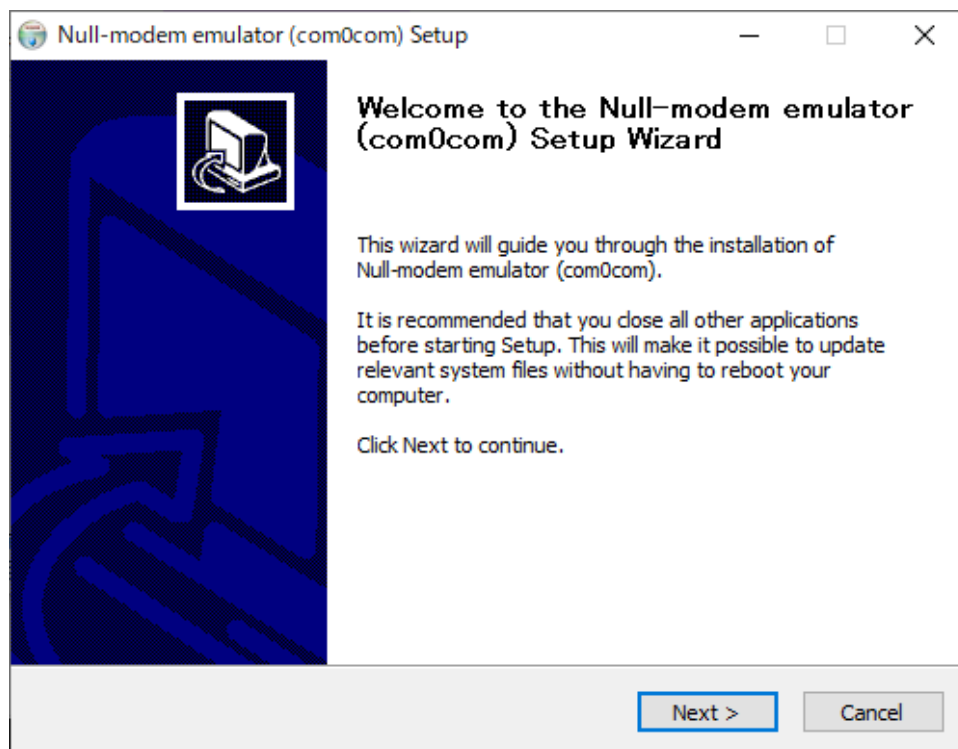
Then, the following two files were generated. Click on 32-bit icon .

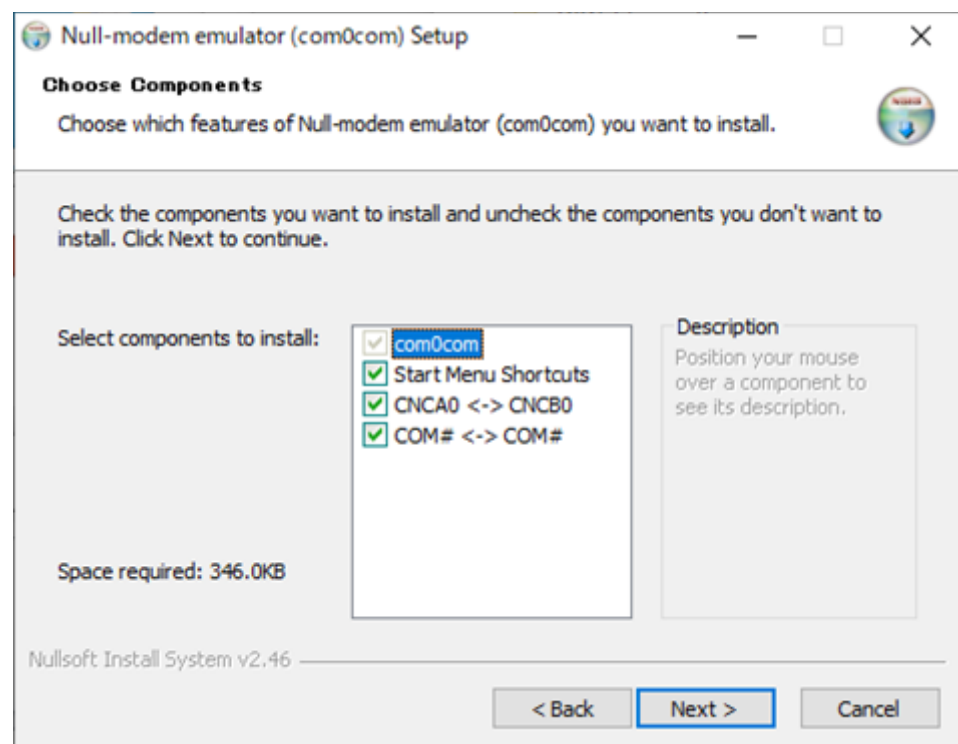
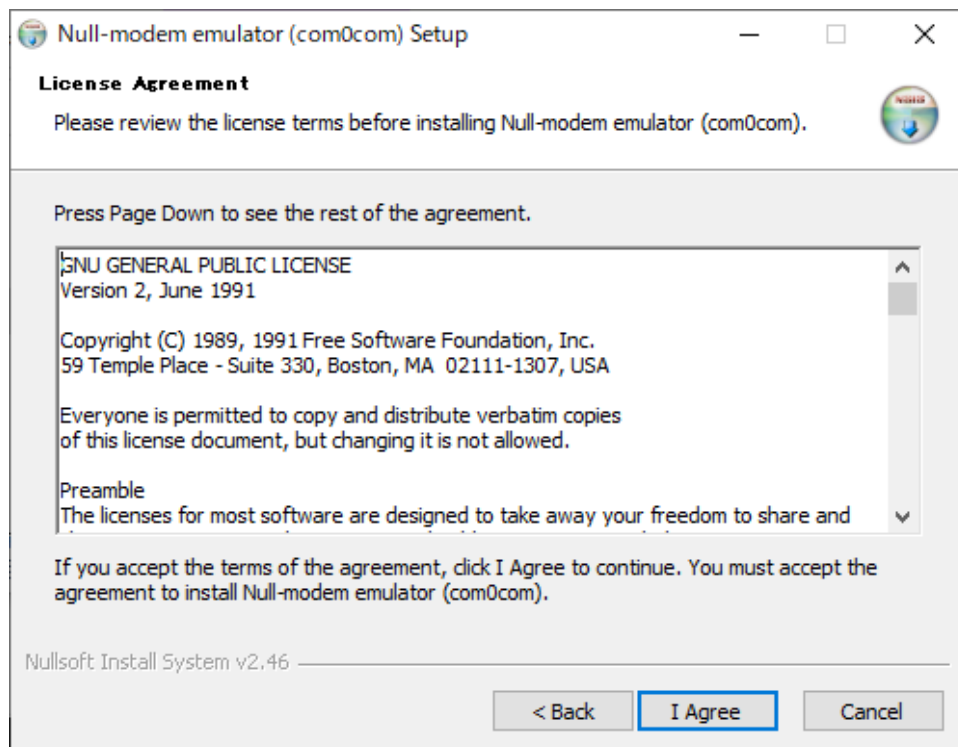


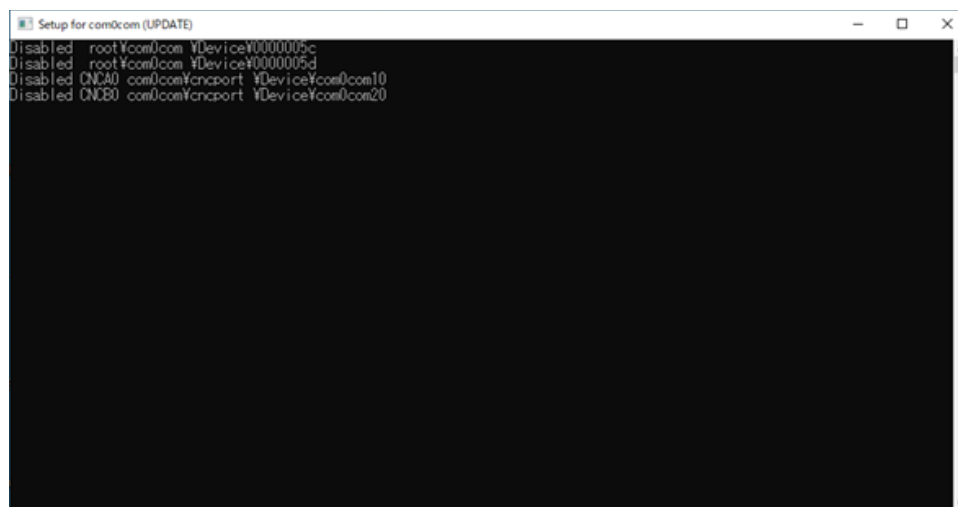
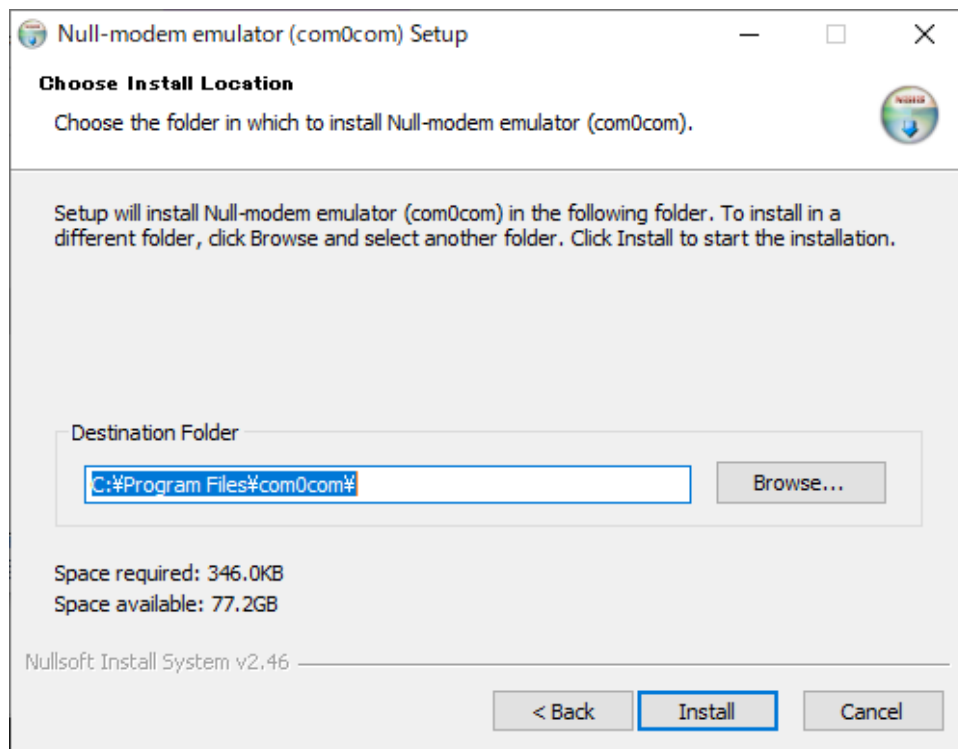
Click the "Yes" button on the pop-up screen to start the installation.

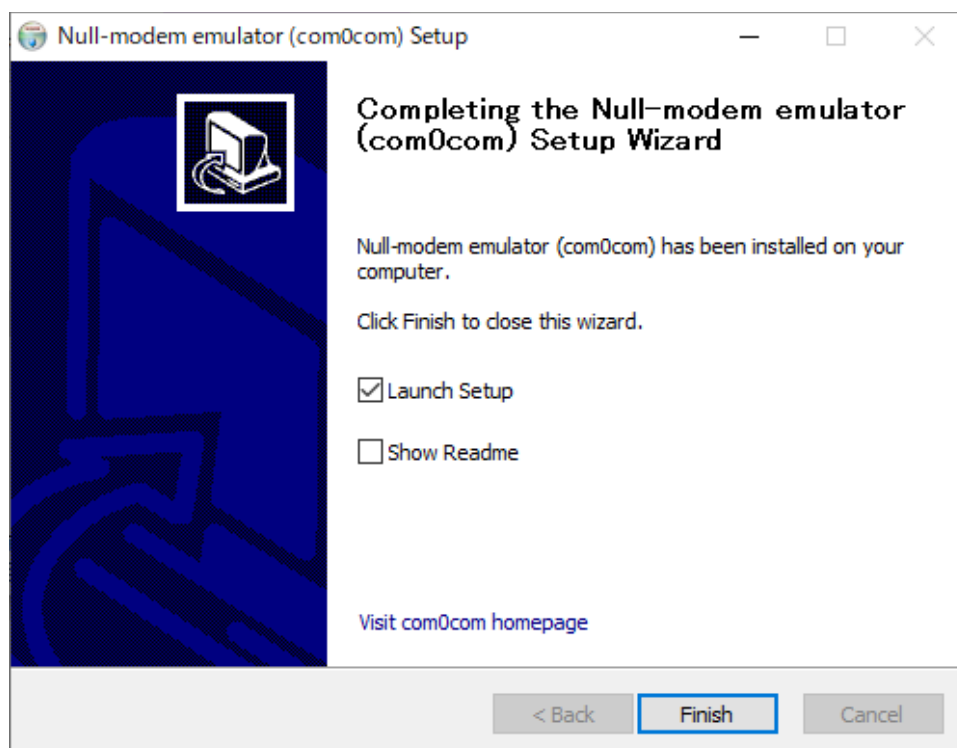
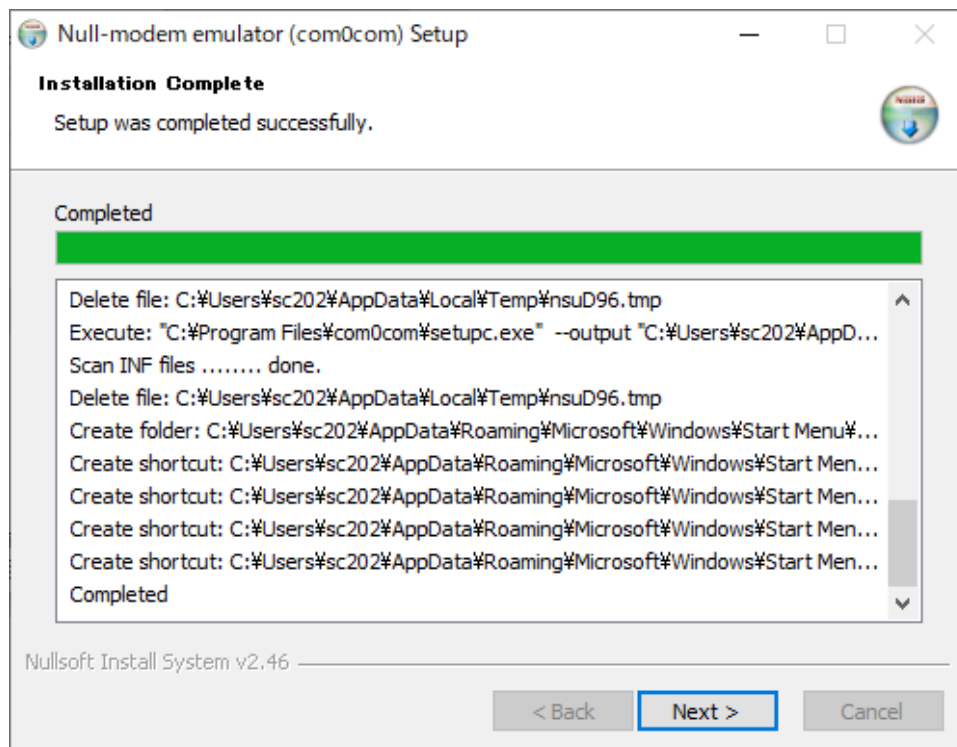


After this, click the buttons such as "Next", "I Agree", and "Install" on the pop-up screen to complete the installation. Please note that you should put check mark at "Launch Setup" before clicking the "Finish" button on the installation completion screen.

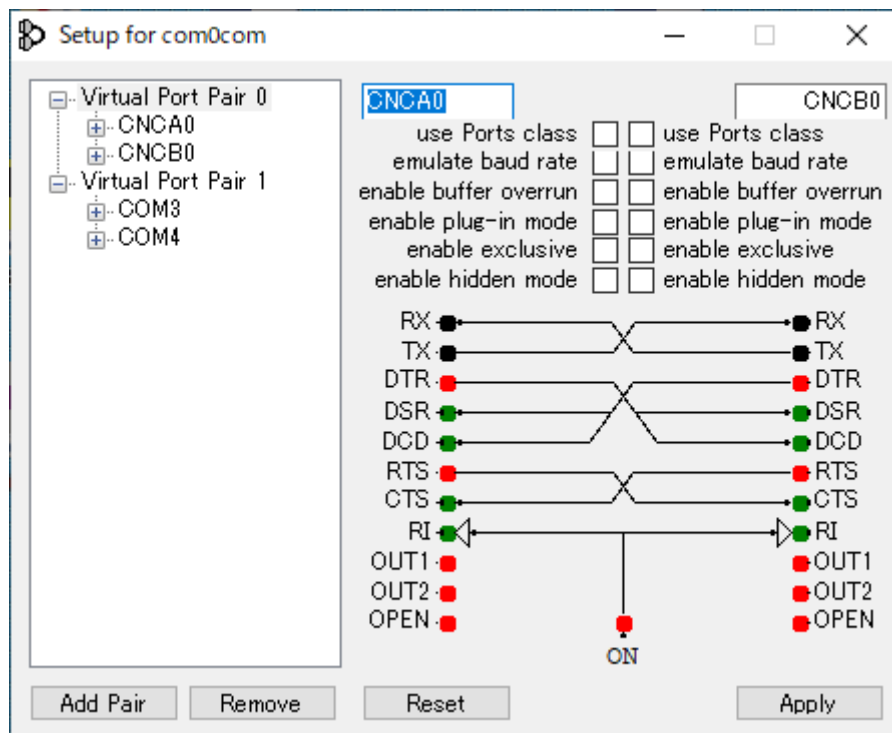




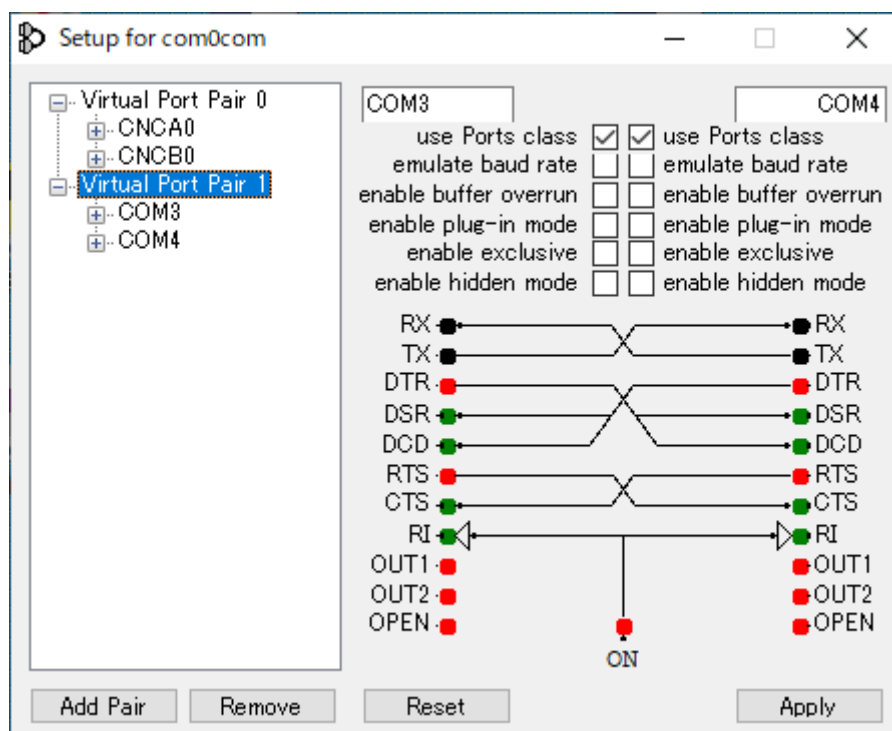




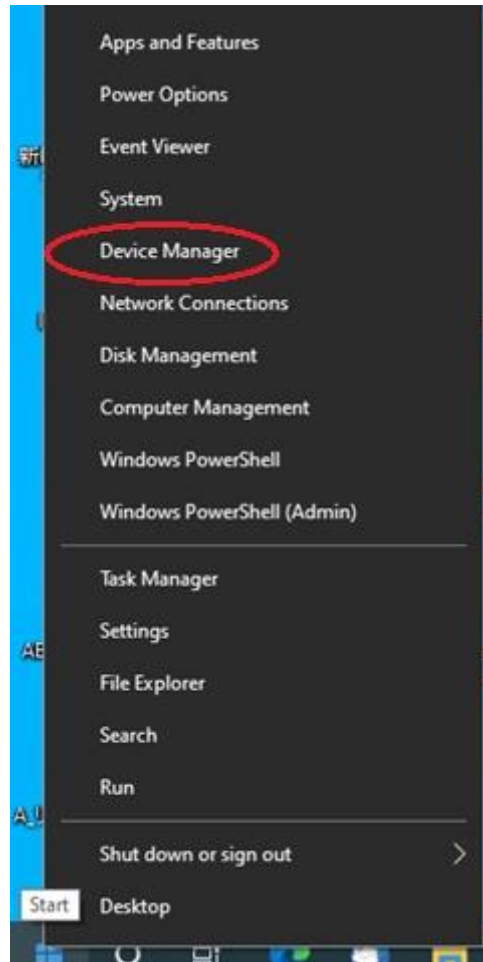
After you put check mark at "Launch Setup" and click the "Finish" button, the following "Setup for com 0com" will pop up.



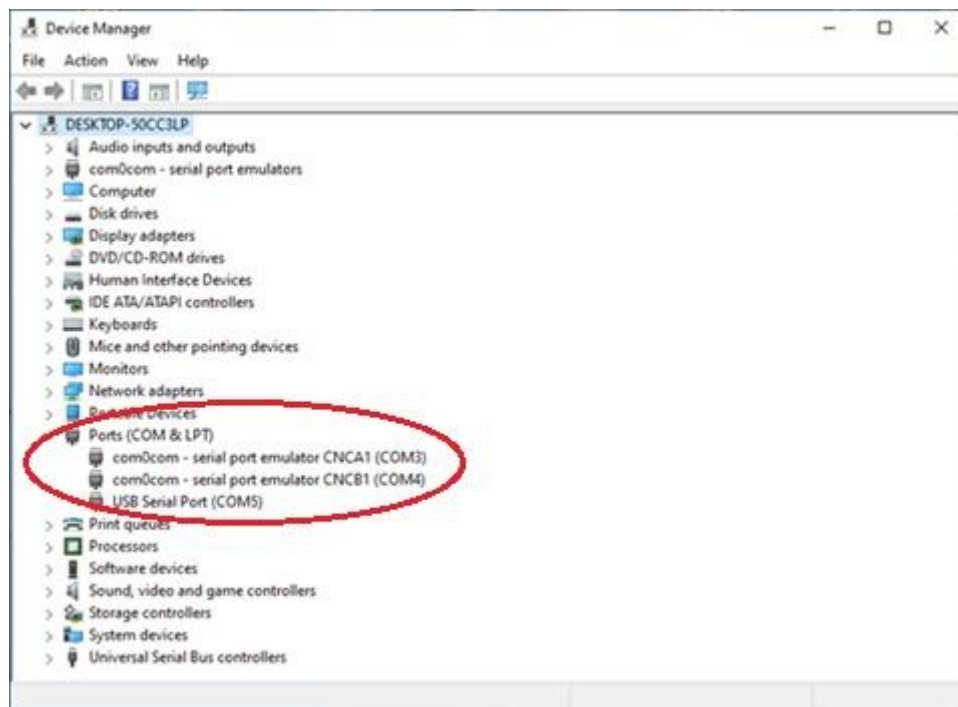
Now select "Virtual Port Pair 1" on the left side of the screen. Then, the following screen will be displayed and the virtual COM port will be set.



Right-click the "window" icon on the far left of the taskbar at the bottom of the desktop screen to make sure the virtual COM port is selected. Then click Device Manager in the pop-up list.



It is OK if there is "com0com-serial port emulate CNCA1 (COMx)" in "port com and LPT" in the device manager list. The number of x in COMx varies depending on the usage status of the port of the personal computer used. The smaller the number of ports used earlier, the smaller the value of x. Since my personal computer uses few ports this time, the value of x is small and the ports are COM3 and COM4.



5 APPENDIX 2

INSTALL VIRTUAL AUDIO CABLE

Click <https://vb-audio.com/Cable/index.htm> to open download page.

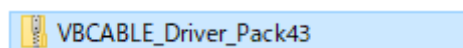
Then download Windows version. After that, the procedure is the same as the download procedure you always do.



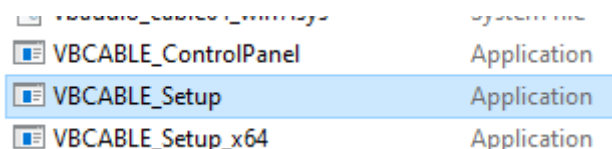
Please note the following comment when clicking the download icon.

"INSTALLATION: Extract all files and Run Setup Program in administrator mode. Reboot after installation."

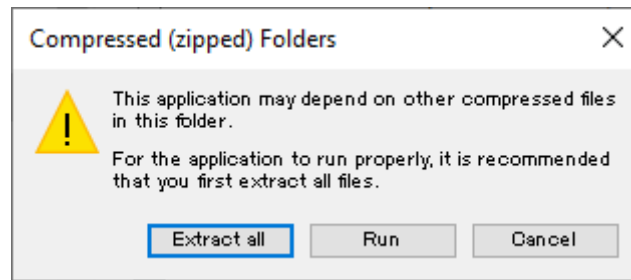
In my case, I was able to download the zip file as follows in the Windows default download folder. Click this;



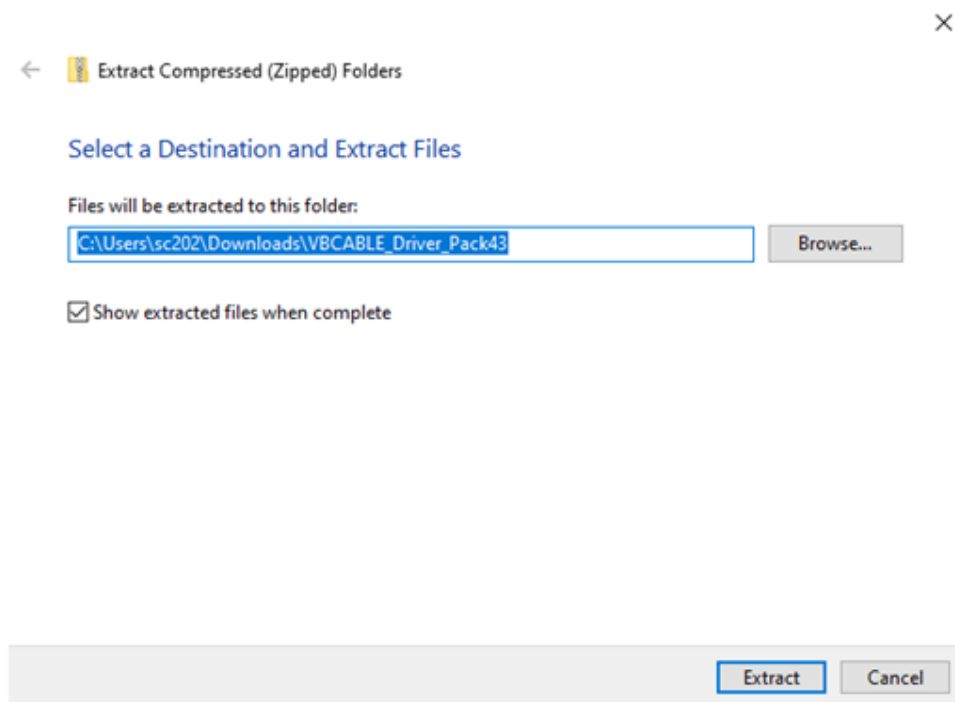
This will generate the following "VBCABLE_Setup" file in a different folder. Click this.



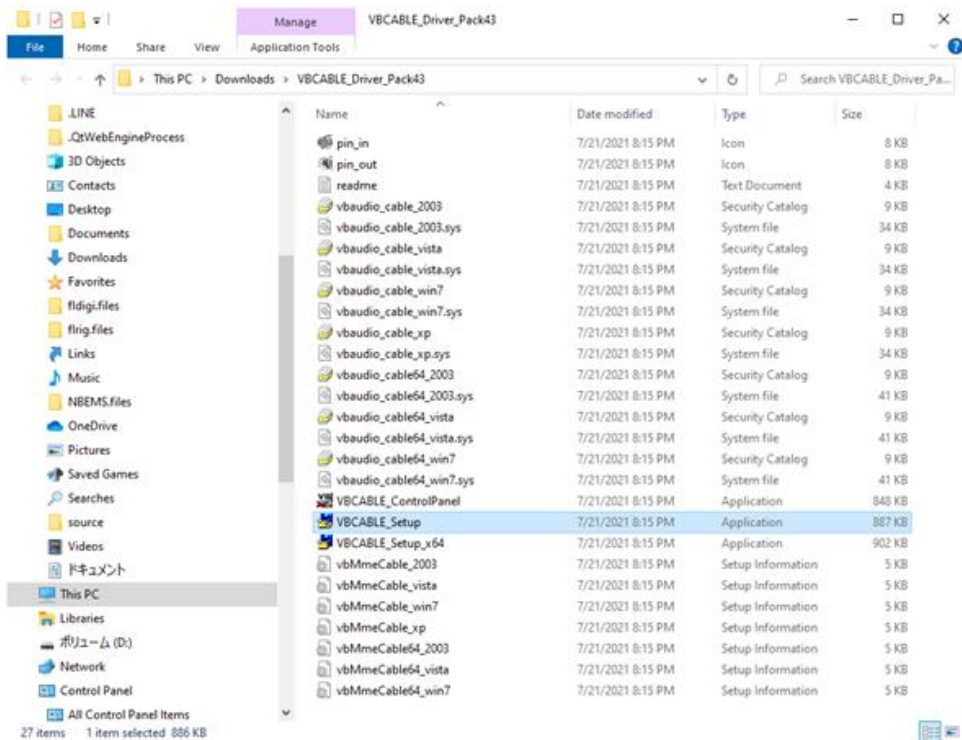
When I clicked it, a following screen popped up, then I click "Extract all" button.



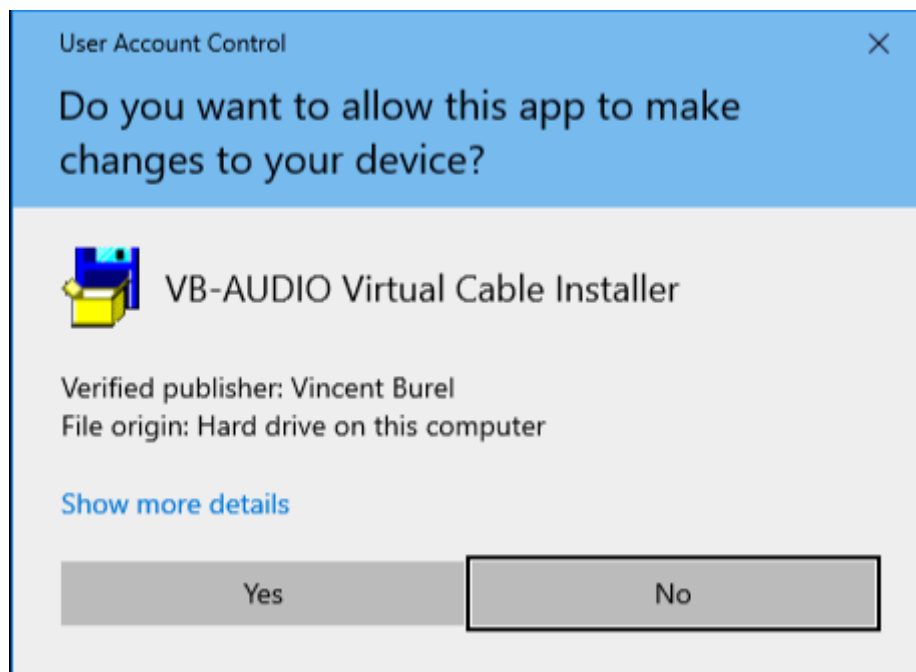
Then, a screen which is specifying the folder name where the files are extracted popped up. Then click the "Extract" button.



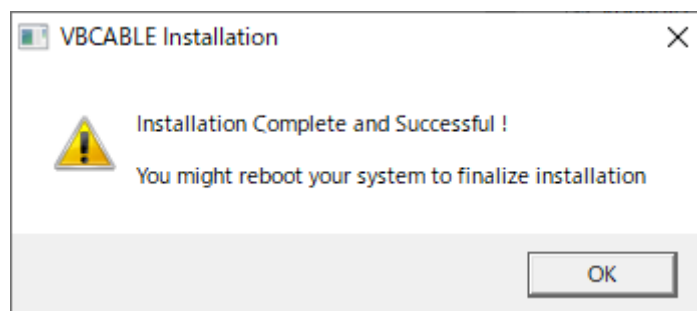
Then, extracted file list are appear in the VBCABLE_Driver_Pack43 folder.



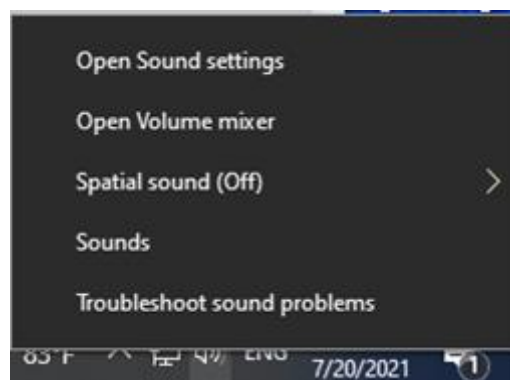
Then click "VBCABLE_Setup" in the list .The following screen will pop up and click the "Yes" button on the screen.

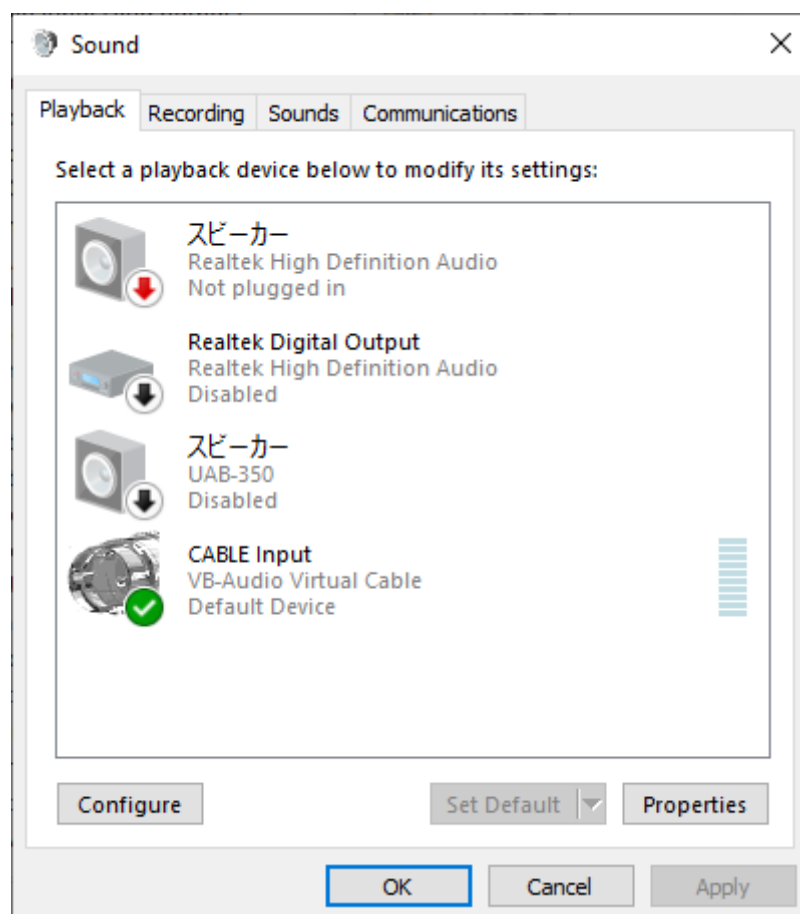
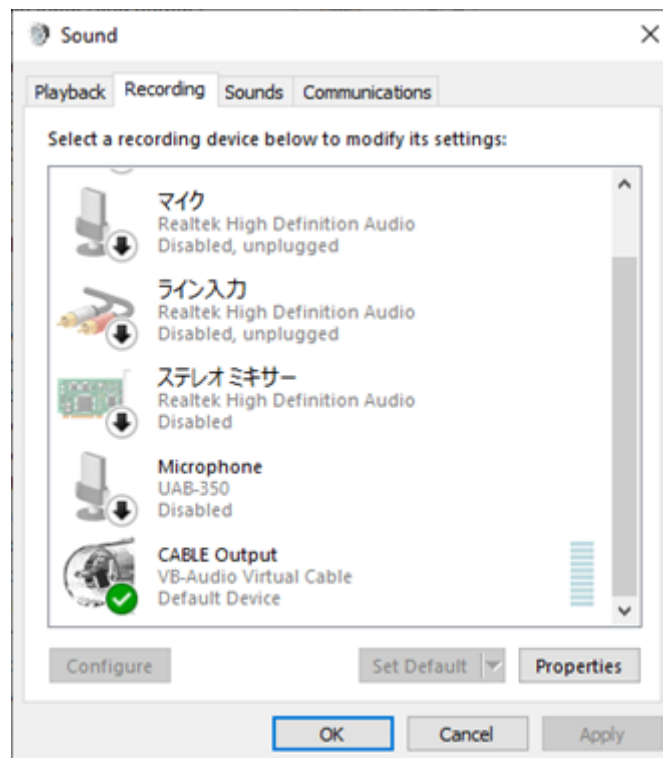


Then click the "Install Driver" button on the pop-up screen to exit.

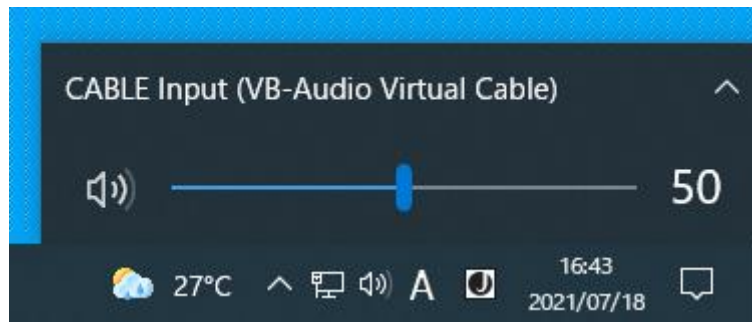


Right-click the speaker icon on the taskbar of the desktop screen, select "Sound(S)" in the list to open, and confirm that VB-Audio Virtual Cable is added to the list of recording tags and playback tags. The taskbar is usually at the bottom of the desktop screen, so the speaker icon is near the right edge of the taskbar.





You can display the slide bar for volume control by left-clicking the speaker icon on the taskbar.



6 APPENDIX 3

1 . INSTALL BPQ32

Click <https://www.cantab.net/users/john.wiseman/Downloads/LatestInstaller/> to open download page.

Then click “bpq32 6.0.21.1 20201214.zip” on the page.

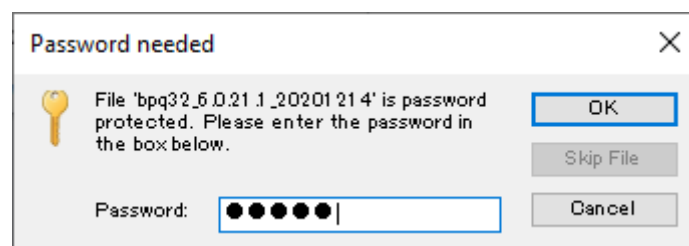
Then start download and finish download (download style is different between 32bit and 64bit)



As you know, after finish download you will have comment like "open the file or save the file".

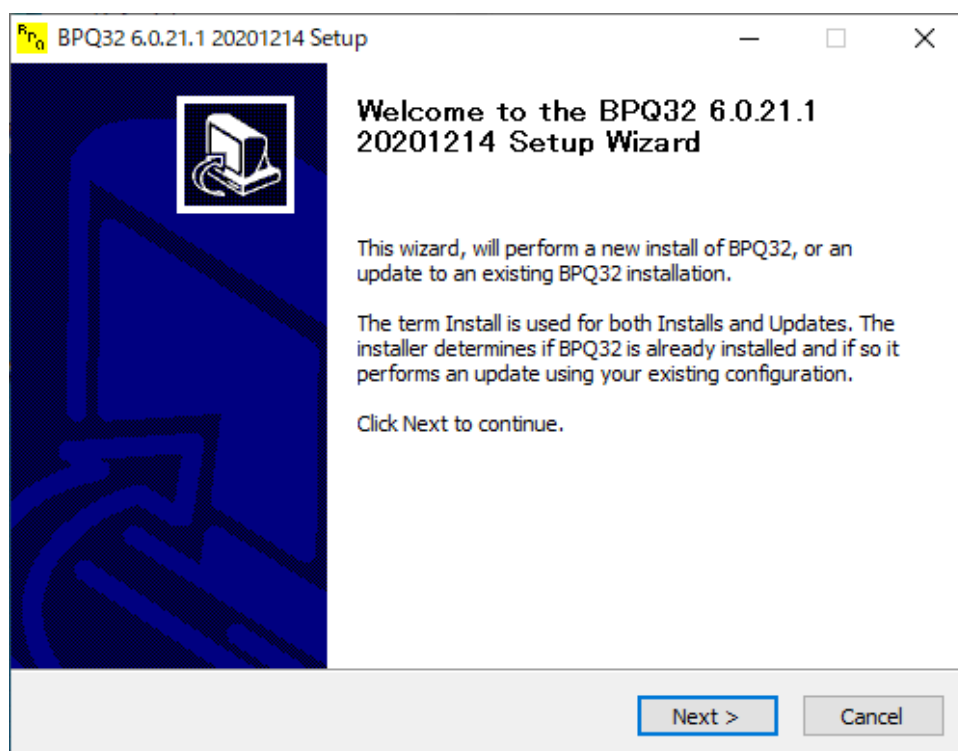
Then I select "open"

Then, the password input screen will pop up. Enter the password "bpq32" and click the "OK" button. Installation will start.

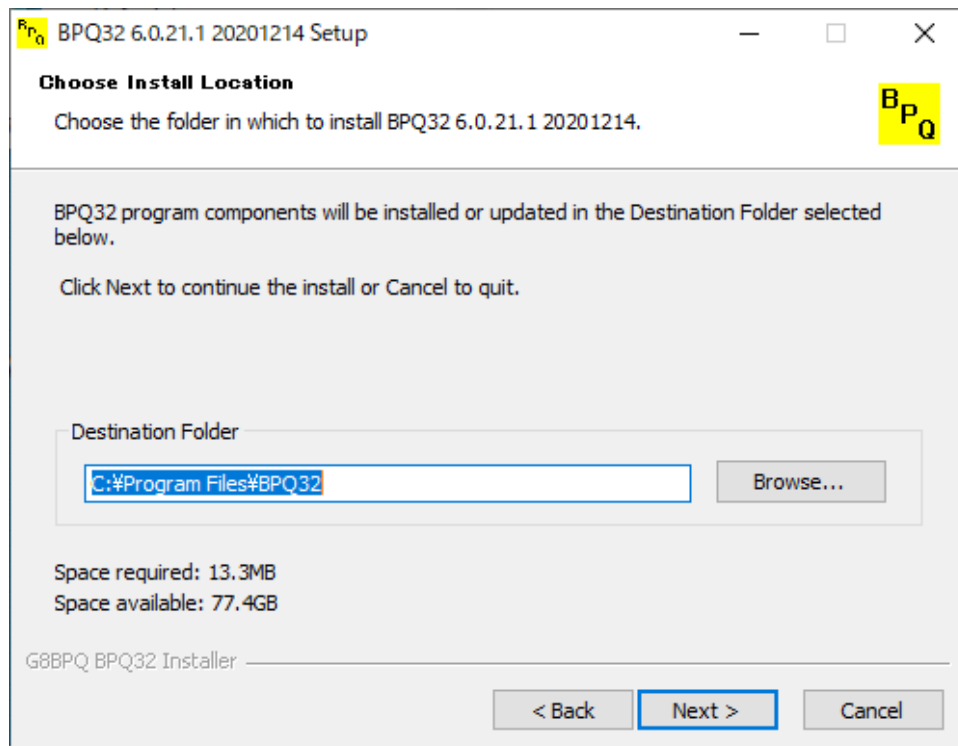


To proceed with the installation, click the buttons such as "Next" and "Install" on the pop-up screen.

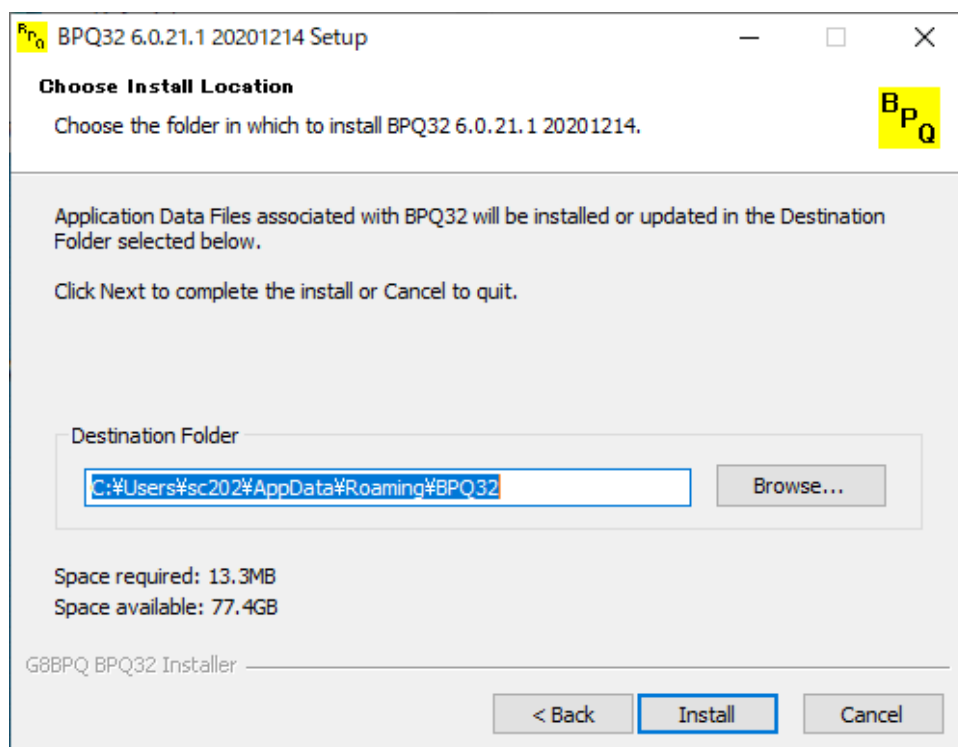
Click the "Finish" button on the last screen to finish the installation.



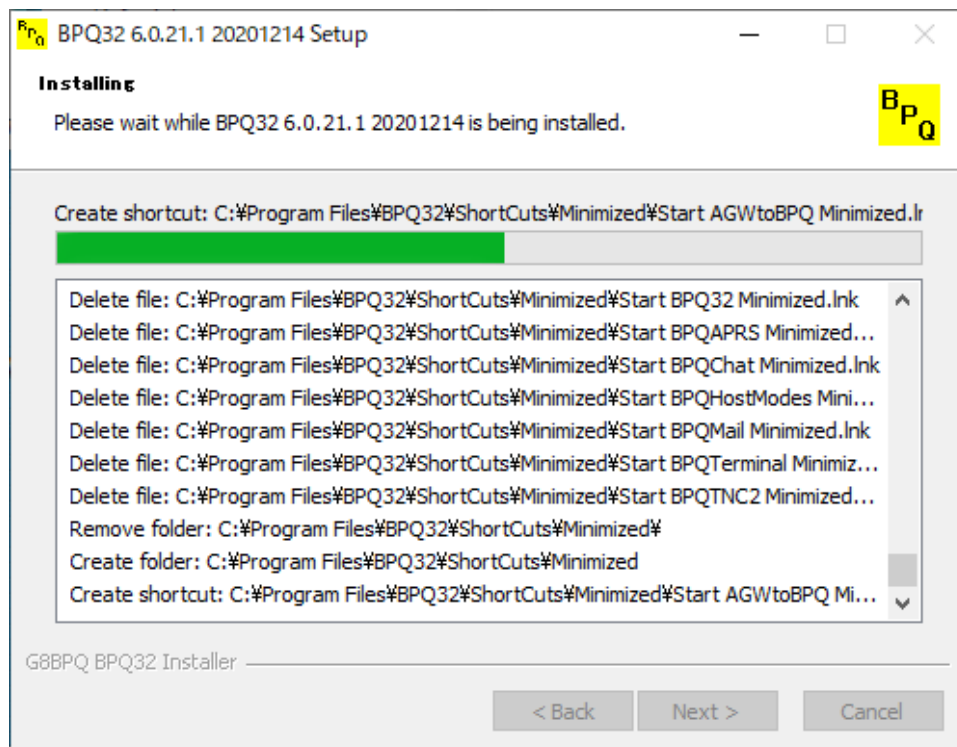
Here, the difference from installing other programs is that you first click the "Next>" button on the destination screen of the following folder.



Then, the following destination screen of another folder will pop up, so click the "Install" button.

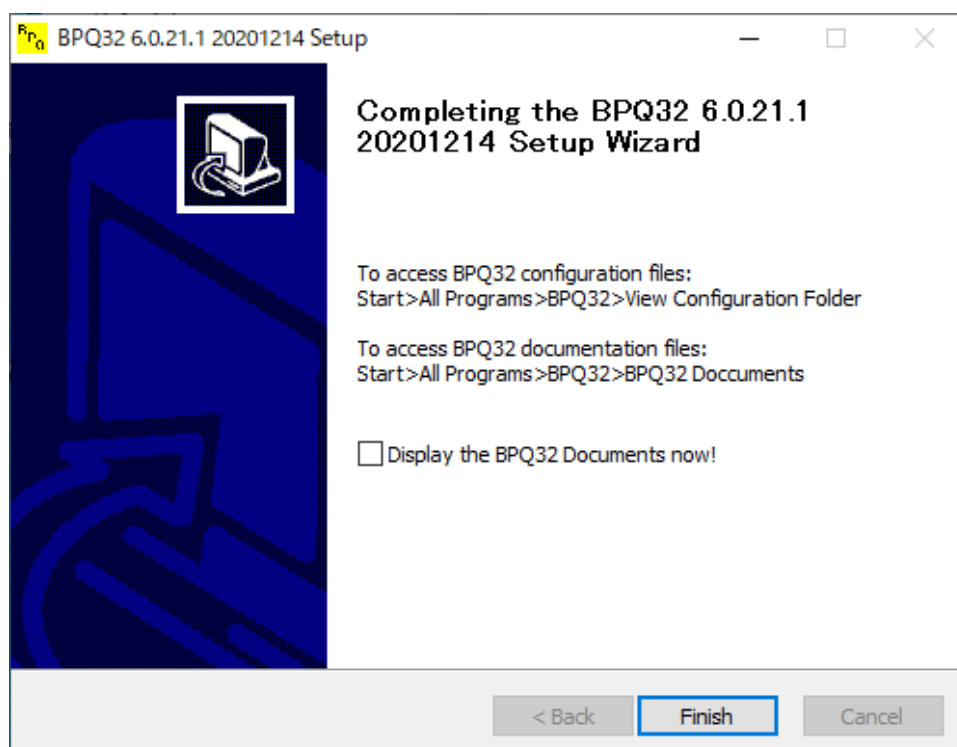


Apparently, as shown in the next screen, shortcuts are generated in the appropriate folder, so when I opened the folder later, many shortcut files were generated. However, we don't know at this point how to take advantage of this.



When the screen that says "Completing the BPQ32 6,0,21,1 20201214 Setup Wizard" appears, press the "Finish" button to finish the installation. At that time, please note the following comment on the screen.

"To access BOQ32 configuration files; Start> All Programs> BPQ32> View Configuration Folder"

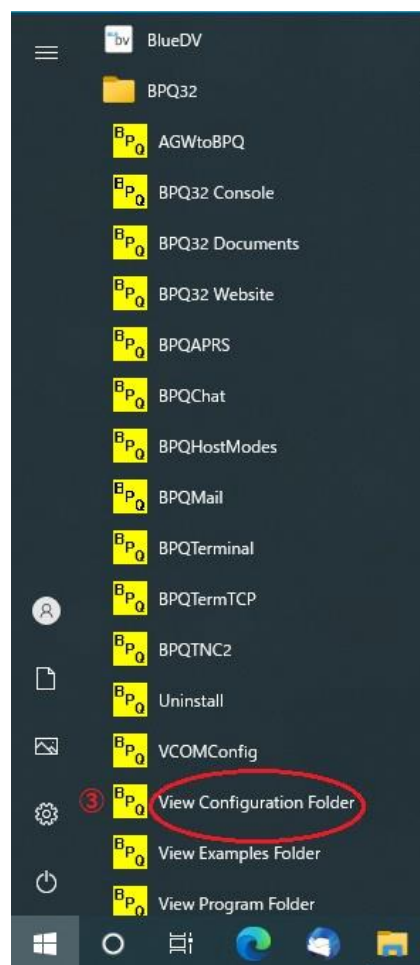
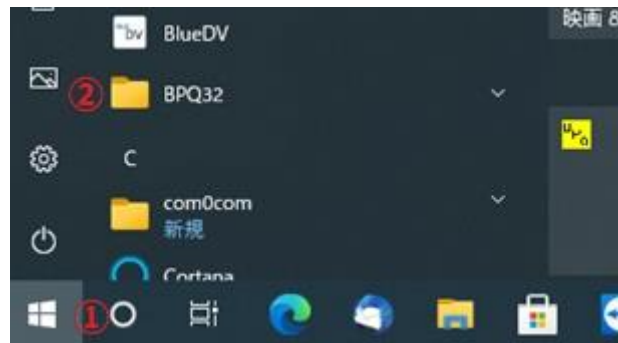


2. Find the configuration files needed to use BPQ32

Now that the installation is complete, configure the settings to use BPQ32 (required). The setting is done in the BPQ32.cnf file somewhere in the installation folder.

The file is in the "View Configuration Folder" in "To access BOQ32 configuration files:

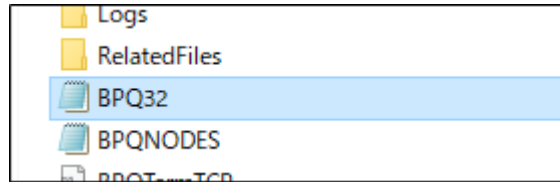
Click the Start icon① at the right end of the taskbar > All Programs list > Click BPQ32 Folder② >
Find View Configuration③ (Next page) "



3. Configure BPQ32 before Use

Many files (including programs) such as above figure are generated in the BPQ32 folder.

Click "View Configuration folder" ③ in the list. The notepad icon BPQ32 in the opened folder is the BPQ32.cnf file.



Open Notepad icon BPQ32 and erase all its contents.

Then copy and paste contents of following " BPQ32.cnf contents "

Then change the part in red of "1.4.2 Configure BPQ32"as follows.

LOCATOR= **your own Grid Locator**

NODECALL= **your own call**

NODEALIAS= **your own name**

The "PATH C:\UZ7HO\SoundModem.exe" on the line near the bottom should be the root of the folder where your soundmodem.exe is located. (See APPENDEX 4)

----- **Beginning of BPQ32.cnf contents** -----

```

/* This begins a multi-line comment
CONFIGURATION FILE FOR BPQ32: G8BPQ SWITCH SOFTWARE

The purpose of this configuration is simply to confirm that the basic BPQ32
system is operable. It contains only a LOOPBACK port.

To perform the basic test, execute BPQTerminal.exe, and in the lowest window enter:

C 1 MYNODE v MYCALL

You should receive the following response:

MYNODE:MYCALL] Connected to MYNODE

This is the CTEXT.

MYNODE:MYCALL] CONNECT BYE INFO NODES ROUTES PORTS USERS MHEARD

If you get the above response the basic test has succeeded.

..\Examples\Minimal

*/ ;This ends a multi-line comment

LOCATOR=JO22MB           ; Node locator
NODECALL=PA7LIM          ; Node callsign
NODEALIAS=PA7UTR        ; Node alias (6 characters max)

IDMSG:                      ; UI broadcast text from NODECALL to fixed dest ID

This is the IDMSG text.

***                          ; Denotes end of IDMSG text

BTEXT:                      ; UI broadcast text from BCALL to destination UNPROTO=

This is the BTEXT text.

***                          ; Denotes end of BTEXT text

INFOMSG:                    ; The INFO command text follows:

```

```

This is the INFOMSG text.

***                               ; Denotes end of INFOMSG text

CTEXT:                           ; The CTEXT text follows:

Minimal BPQ32 installation successful.

MYNODE:MYCALL} CONNECT BYE INFO NODES ROUTES PORTS USERS MHEARD

***                               ; Denotes end of CTEXT text

FULL_CTEXT=0                     ; 0=send CTEXT to L2 connects to NODEALIAS only
; 1=send CTEXT to all connectees


; Network System Parameters:

OBSINIT=6                        ; Initial obsolescence set when a node is included
; in a received nodes broadcast. This value is then
; decremented by 1 every NODESINTERVAL.

OBSMIN=4                         ; When the obsolescence of a node falls below this
; value that node's information is not included in
; a subsequent nodes broadcast.

NODESINTERVAL=15                 ; Nodes broadcast interval in minutes

IDINTERVAL=15                    ; 'IDMSG' UI broadcast interval in minutes, 0=OFF

BTINTERVAL=15                    ; The BTEXT broadcast interval in minutes, 0=OFF

L3TIMETOLIVE=25                  ; Max L3 hops

L4RETRIES=3                      ; Level 4 retry count

L4TIMEOUT=60                     ; Level 4 timeout in seconds s/b > FRACK x RETRIES

L4DELAY=10                       ; Level 4 delayed ack timer in seconds

L4WINDOW=4                      ; Level 4 window size

MAXLINKS=63                      ; Max level 2 links

MAXNODES=512                     ; Max nodes in nodes table

MAXROUTES=64                     ; Max adjacent nodes

MAXCIRCUITS=128                  ; Max L4 circuits

MINQUAL=144                      ; Minimum quality to add to nodes table
; INP3 Routing is experimental. The two parms which follow will be ignored
; unless activated in the ROUTES: section.

MAXHOPS=4                        ; INP3 hop limit to add to tables

MAXRTT=90                        ; INP3 max RTT in seconds

BUFFERS=255                      ; This parameter is no longer used in the Win32 version.
; BPQ32 allocates an adequate number automatically.
; I have the line commented out just to remind me it's gone!!

; TNC default parameters:

PACLEN=236                       ; Max packet size (236 max for net/rom)
; 236 is suitable for reliable and fast connections, such

```

```

; as AX/IP/UDP or a dedicated 9600 RF Link

; 120 is suitable for a typical shared VHF packet radio connection

; PACLEN is defined for each port individually in the ports sections
TRANSDelay=1          ; Transparent node send delay in seconds


; Level 2 Parameters:

; T1 (FRACK), T2 (RESPTIME) and N2 (RETRIES) are now in the PORTS section
T3=120                ; Link validation timer in seconds
IDLETIME=720          ; Idle link shutdown timer in seconds


; Configuration Options:

AUTOSAVE=1            ; Saves BPQNODES.dat upon program exit
BBS=0                 ; 1 = BBS support included, 0 = No BBS support
NODE=1                ; Include switch support
HIDENODES=1           ; If set to 1, nodes beginning with a #
; require a 'N *' command to be displayed.

/*
The *** LINKED command is intended for use by gateway software, and concern
has been expressed that it could be misused. It is recommended that it be
disabled (=N) if unneeded.

*/

ENABLE_LINKED=A       ; Controls processing of *** LINKED command
; Y = allows unrestricted use
; A = allows use by application program
; N = disabled

/*
AX25 port definitions:

The LOOPBACK port simulates a connection by looping input to output. To test,
start BPQTerminal and enter: 'C 1 MYNODE via MYCALL'

In this example '1' is the LOOPBACK port number. The LOOPBACK port is provided
for testing purposes and would rarely be included in an established system.

*/

; LOOPBACK sport specification
; PORT
; PORTNUM=1           ; Optional but sets port number if stated
; ID=LOOPBACK         ; Defines the Loopback port name
; TYPE=INTERNAL       ; Loopback is an internal type
; ENDPOR

```

```
PORT

ID=UZ7HO

DRIVER=UZ7HO

PORT=1

CHANNEL=A

QUALITY=0

MAXFRAME=4

FULLDUP=0

FRACK=8000

RESPTIME=3000

RETRIES=10

PACLEN=128

TXDELAY=200

SLOTTIME=100

PERSIST=64

KISSOPTIONS=ACKMODE
```

```
CONFIG

ADDR 127.0.0.1 8000 PATH C:\UZ7HO\SoundModem.exe

MAXSESSIONS=4

ENDPORT
```

```
/*

ROUTES:                ; Locked routes (31 maximum)

;There are no locked routes in this example.

***                    ; Denotes end of locked routes

*/
```

```
/*

Applications:

There are no associated applications, thus no active APPLICATION statements.

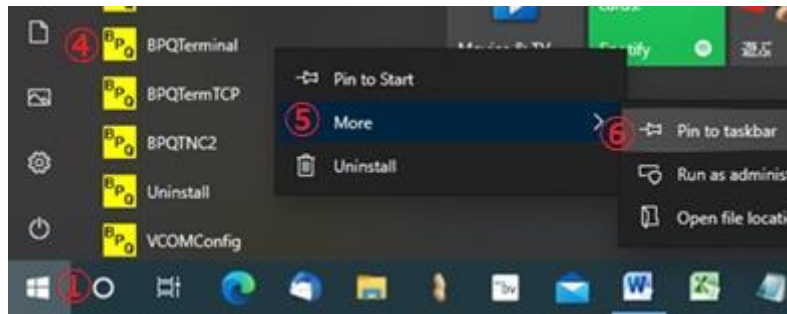
*/
```

----- End of BPQ32.cnf contents -----

4. Start BPQ32

Create a shortcut icon for BPQ32 Terminal on the taskbar

Click the Start ① at the right end of the taskbar → open the BPQ32 folder → right-click BPQ32 Terminal ④ → select "More" ⑤ on the pop-up screen → click "Pin to taskbar" ⑥ on the pop-up screen to create an icon ⑦.



When you click the created icon, BPQ32Terminal, Soundmodem, and BPQ32consol required for packet operation will start at the same time.

To end packet operation, click X on the upper right of BPQ32 Terminal to end all programs at the same time.

7 APPENDIX 4

Configure soundmodem

Click [here](#) to open download page.

Download "soundmodem113.zip" in the middle of the page.



A screenshot of a file list on a dark blue background. The list contains several files with their names, dates, times, and sizes. The file 'soundmodem113.zip' is circled in red. Below the list, there is a line of text: 'If you like the program and wish to make a donation, just send me an'.

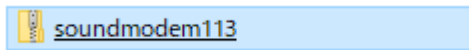
CHANGELOG.txt	10-Feb-21 07:15	9.88K
hs_soundmodem27.zip	11-Feb-21 09:15	454.19K
other-versions.zip	22-May-21 12:02	6.99M
ptt-dll.zip	30-Oct-19 22:39	247.22K
soundmodem113.zip	11-Feb-21 09:14	465.15K
user_guide_v045b_FR.pdf	11-Oct-13 19:13	333.12K
user_guide_v105_EN.pdf	03-Dec-19 18:01	504.65K
utils.zip	28-Feb-15 04:59	68.21K

If you like the program and wish to make a donation, just send me an

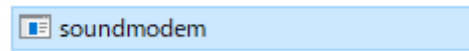
Subsequent steps are the same as the download steps you always follow.

As you know, after finish download you will have comment like "open the file or save the file".

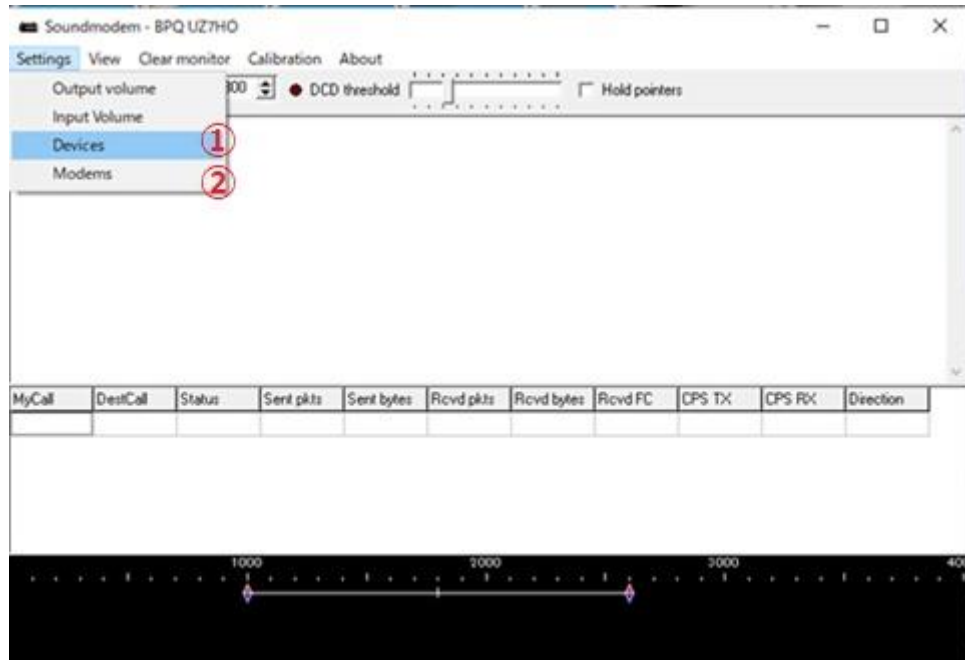
Then I select "save". Then file is downloaded in Windows default folder "Download".



Clicking on it will open a folder with the following soundmodem executable.



Click on it to boot the soundmodem to configure.



① Device Setting

Click "Settings"> Select "Devices" ① and click it > Make sure the correct "Output and Input devices" is selected.

Make sure that "Single channel output" and "AGWPE Server Port 8000" are checked and are correct.

"KISS Server Port" "KISS Server Port" is not important unless you use another program that "communicate with KISS such as Winlink Express".

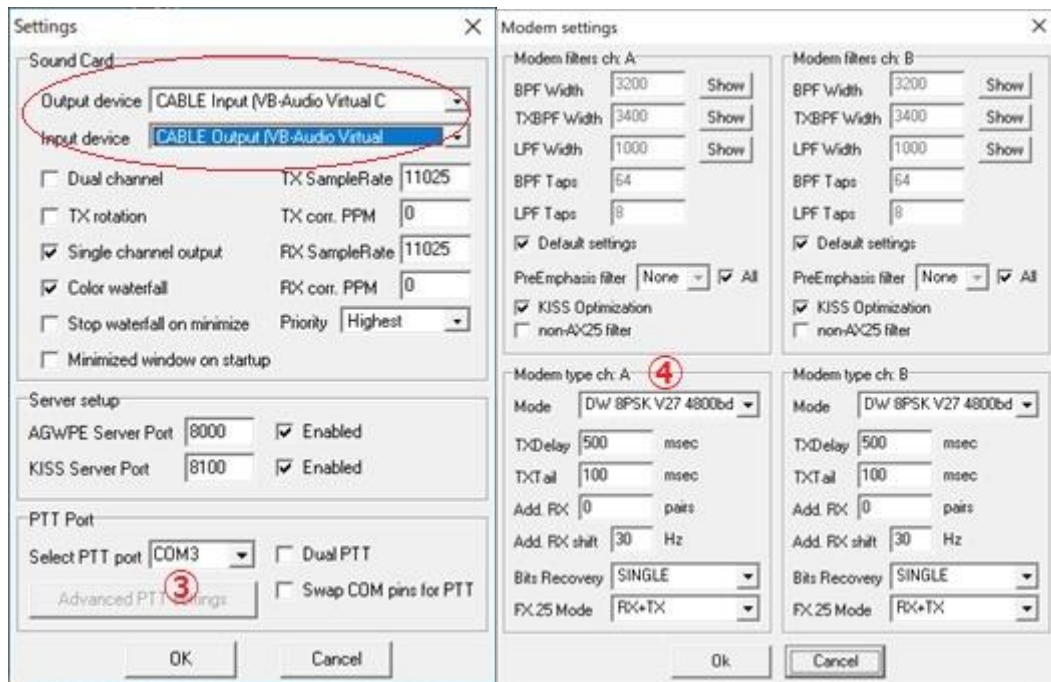
Checking "Color waterfall" makes it easier to set the audio input level. Checking "Stop waterfall on minimize" will reduce CPU usage.

"Select PTT Port" sets COM3 (number is up to your computer).

Uncheck "Dual PTT". Then click "OK".

① Device Setting

② Modems Setting



(In my case, enter COM3③ of the installed virtual COM port)

② Modems Setting

Click "Settings"> "Modem"② and check "Default settings". Check "KISS Optimization" and "non-AX25 filter". Then click OK

The Peanut packet Mode is "DW 8PSKV 274800bd"④.

Soundmodem must be closed and reboot for the change to take effect.

Soundmodem.exe file directory

In my case, I clicked the zip file in the download folder as it was, so the soundmodem113 folder was generated in the "Download" folder, and there was the unzipped soundmodem executable file in it.

In order to use BPQ32, it is necessary to specify the directory of this soundmodem executable file with BPQ32.cnf. So, I think it's a good idea to move this executable to a folder that is easy to understand.