FA-7 Setup for USB Serial operations

Setup the FA-7 speed to 9600 bps. Three dip switches on the units' backside. Slide the RS232 switch on the left side to ON.

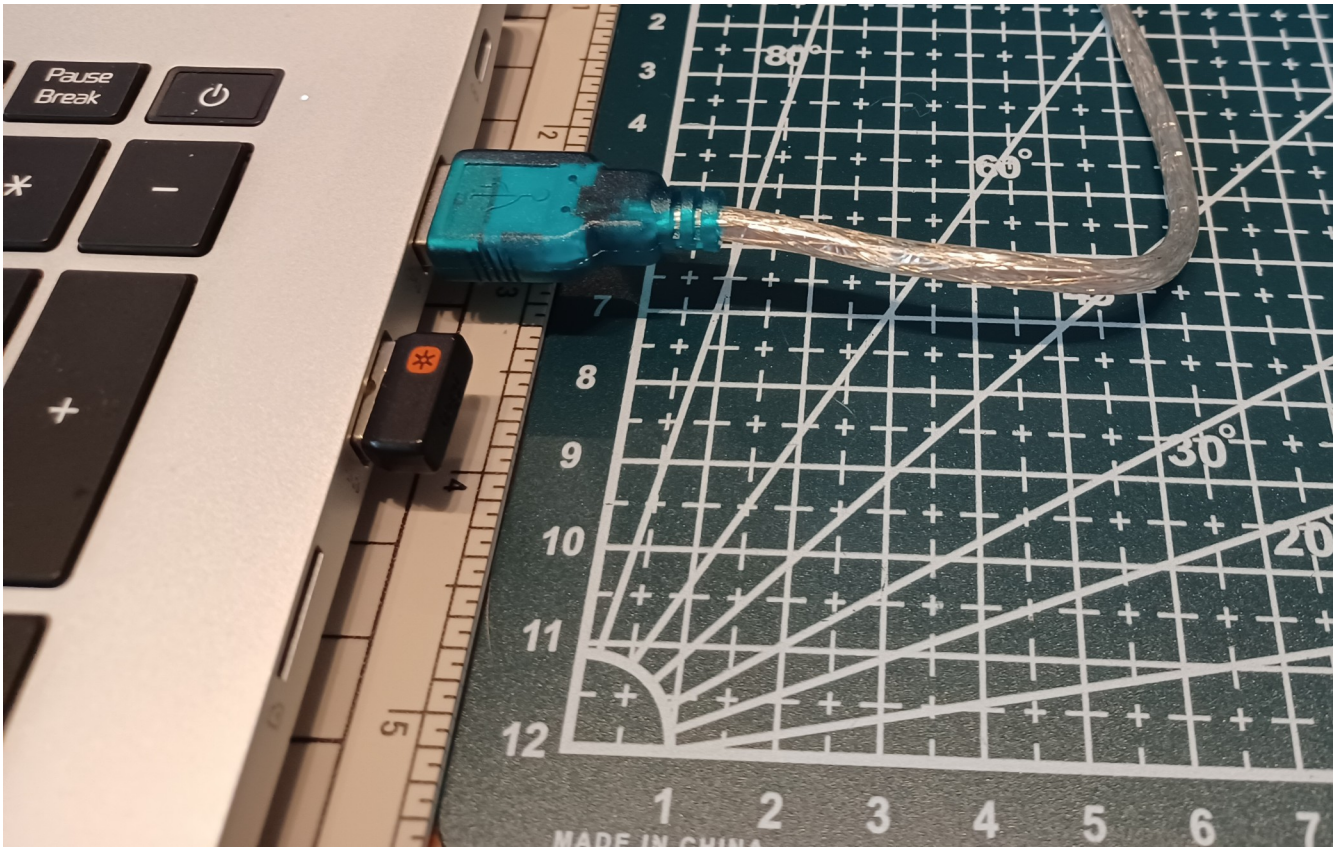


Install batteries or connect the FA-7 to a proper power adapter.

Insert an FA-7 compatible pocket computer into the FA-7
The FA-7 will turn on when the pocket computer is turned on.
Connect the Null Modem cable to the DB25 RS232 port on the back of the FA-7.
Connect the DB9 of the Null Modem cable to the DB9 of the Serial USB connector.



Connect the USB connector to your PC.

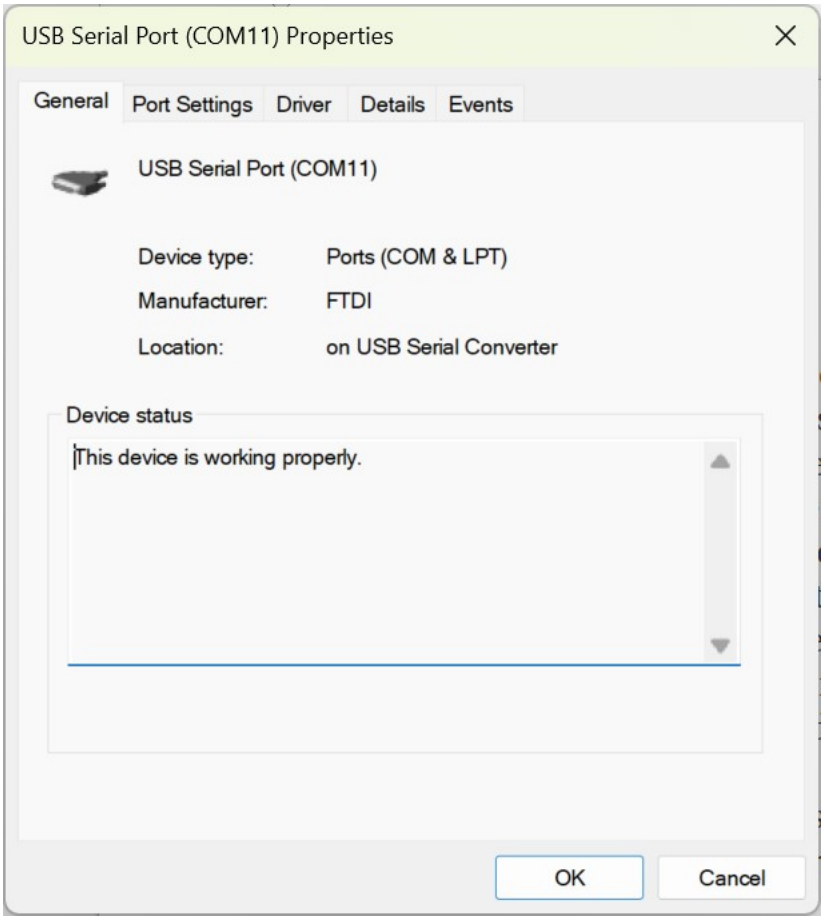


On Windows
Open Device Manager

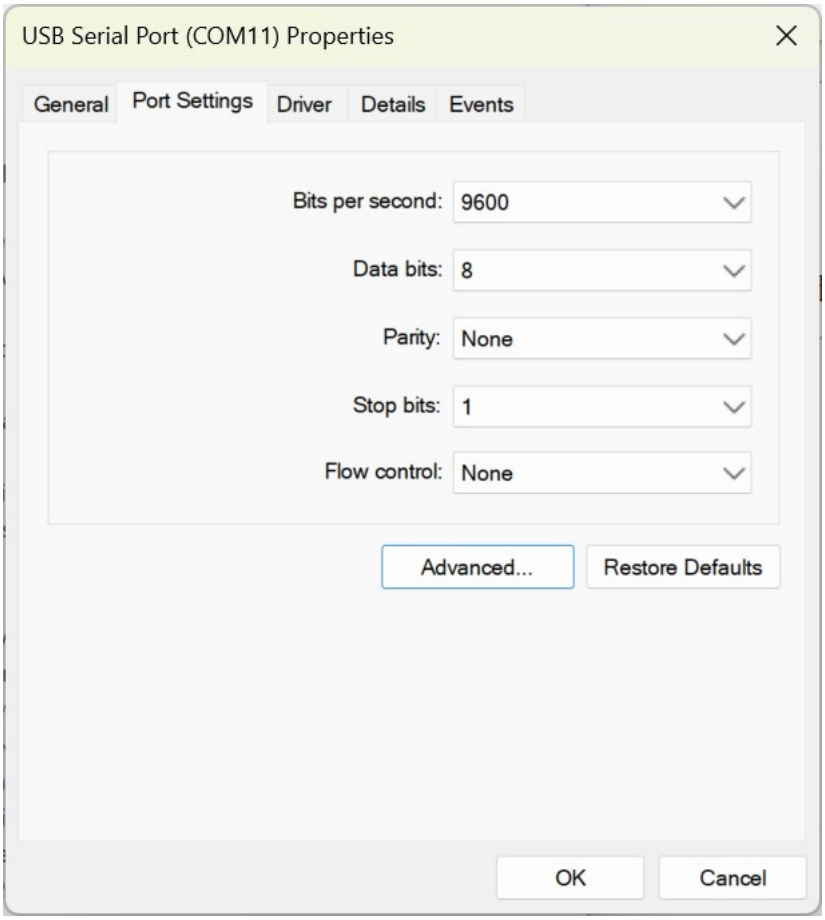
Under Ports (COM & LPT) you should see one USB Serial Port (the port number will vary)



Double click on the port and confirm that the device is working properly:

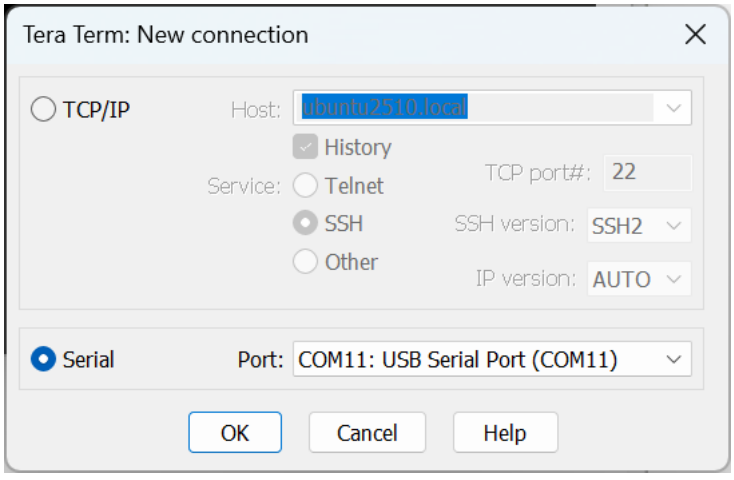


These are the default settings for the port's properties.
They can change in the configuration of the serial port in TeraTerm.

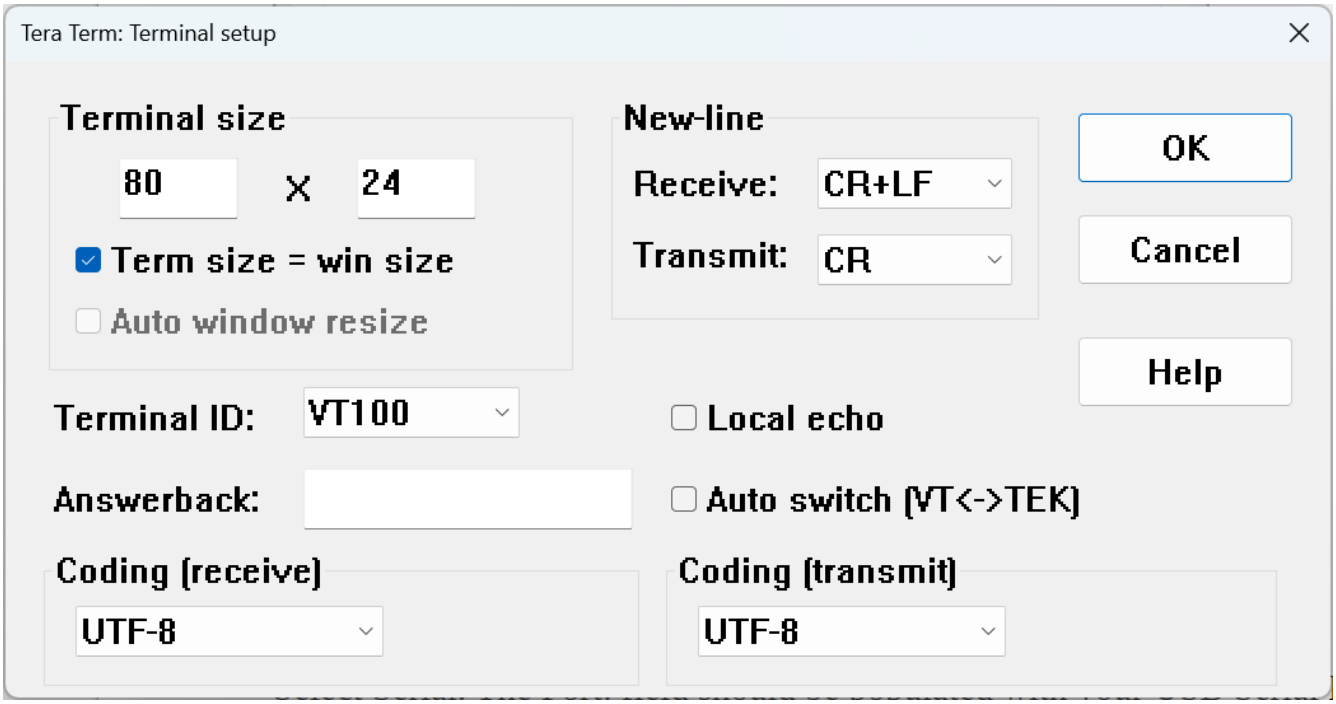


Install a terminal application (Using TeraTerm in the following examples)

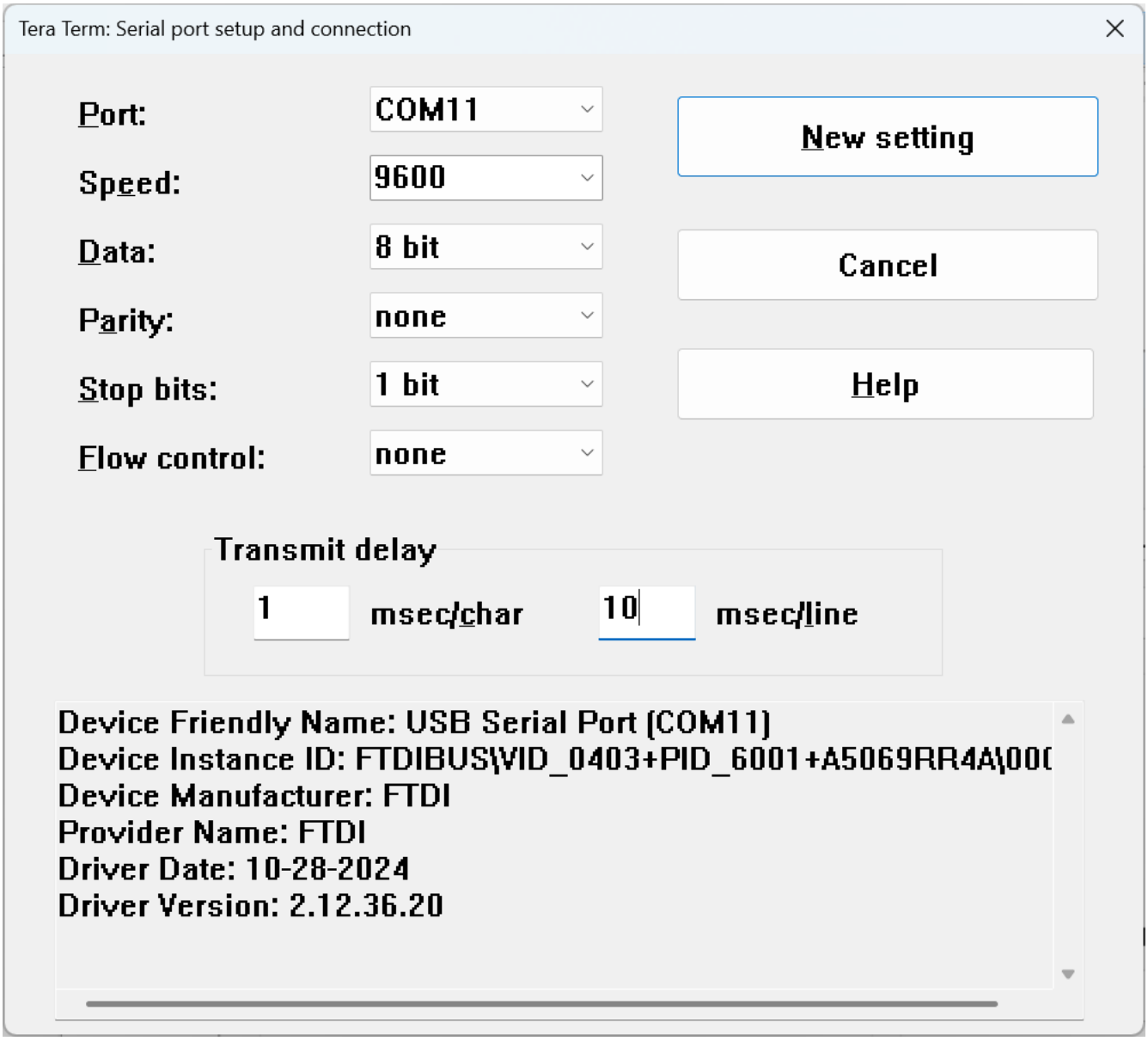
Open TeraTerm select File → New connection …
Select Serial. The Port: field should be populated with your USB Serial Port



Select Setup → Terminal…
Change Receive to CR+LF
Press [OK] to confirm


Tera Term: Terminal setup
Terminal size
80
x
24
Term size = win size
Auto window resize
New-line
Receive:
CR+LF
Transmit:
CR
OK
Cancel
Help
Terminal ID:
VT100
Local echo
Answerback:
Auto switch (VT<->TEK)
Coding (receive)
UTF-8
Coding (transmit)
UTF-8

Select Setup → Serial port…
Increase the transmit delay fields.



Press [New setting] to confirm

Sending a file to the pocket computer attached to the FA-7
Turn on the pocket computer
Press MENU
Press ETC. (next to the four function keys) until you see the [load] option
Press the function key associated with the [load] option



Press the function key associated with the [RS232C] option
Make sure that the COM0 parameters match the values in TeraTerm
In this case 9600 bps 8 bits 1 stop bit and no flow control
The cursor should be blinking on top of the 7



Press [EXE]
The cursor should stop blinking. Indicating that the pocket computer is waiting to receive input from the serial port. There is no other indication that traffic is being processed.

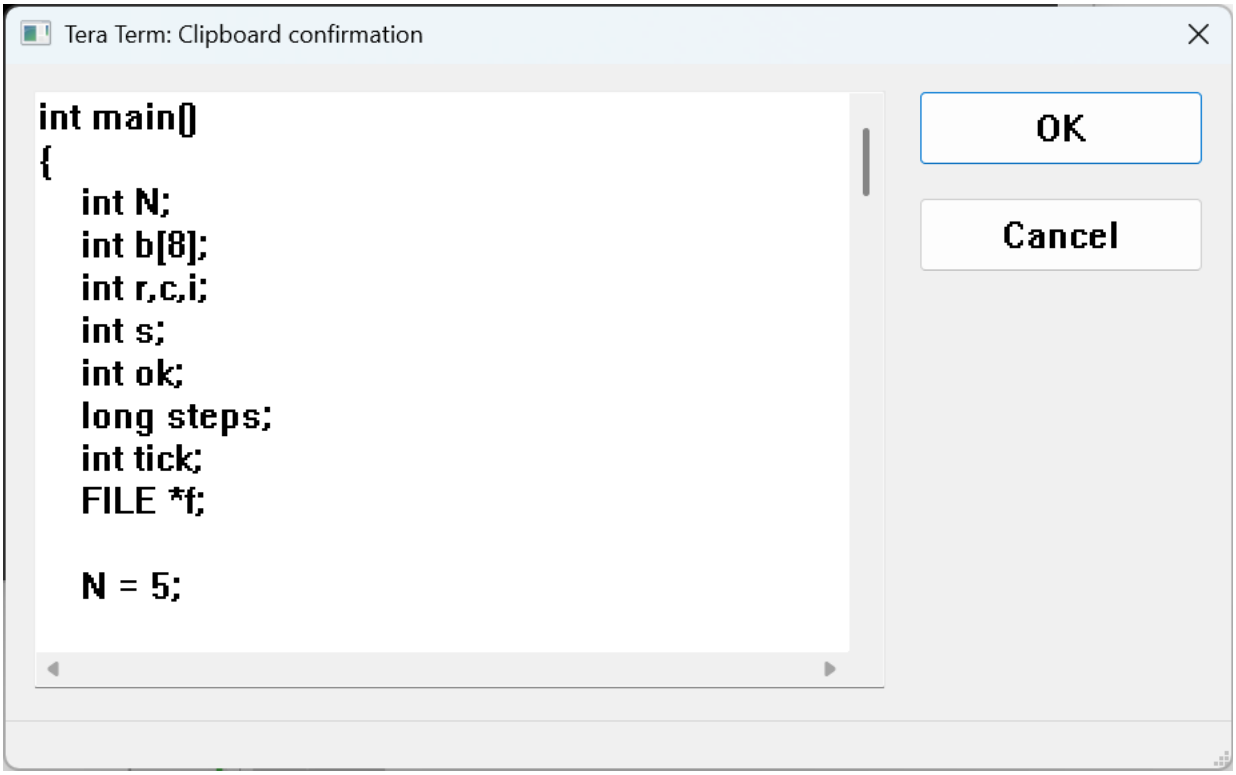
On Windows
The file transfer process using TeraTerm is via copy-paste
Open the file that you want to transfer (usually a text file containing a c program)

This example uses the file queens.c - An example of the classic n-Queens problem (n=5)
Select all text and copy it to the clipboard

```c
int main()
{
    int N;
    int b[8];
    int r,c,i;
    int s;
    int ok;
    long steps;
    int tick;
    FILE *f;

    N = 5;

    printf("start\n");

    f = fopen("QUEENS.TXT","w");
    if(!f){
        printf("file error\n");
        return 1;
    }

    /* top separator */
    for(i=0;i<2*N;i++) fprintf(f,"=");
    fprintf(f,"\n");

    s = 0;
    r = 0;
    steps = 0;
    tick = 100;

    for(i=0;i<N;i++) b[i]=0;

    while(r >= 0){
        steps++;

        tick--;
        if(tick <= 0){
            printf("step %ld r=%d\n", steps, r);
            tick = 100;
        }

        if(r == N){
            s++;

            /* separator before each solution */
            for(i=0;i<2*N;i++) fprintf(f,"=");
            fprintf(f,"\n");

            for(i=0;i<N;i++){
                for(c=0;c<N;c++){
                    if(b[i]==c) fprintf(f,"Q ");
                    else fprintf(f,". ");
                }
                fprintf(f,"\n");
            }
            fprintf(f,"\n");

            r--;
            if(r>=0) b[r]++;
        }
        else if(b[r] >= N){
            b[r] = 0;
            r--;
            if(r>=0) b[r]++;
```

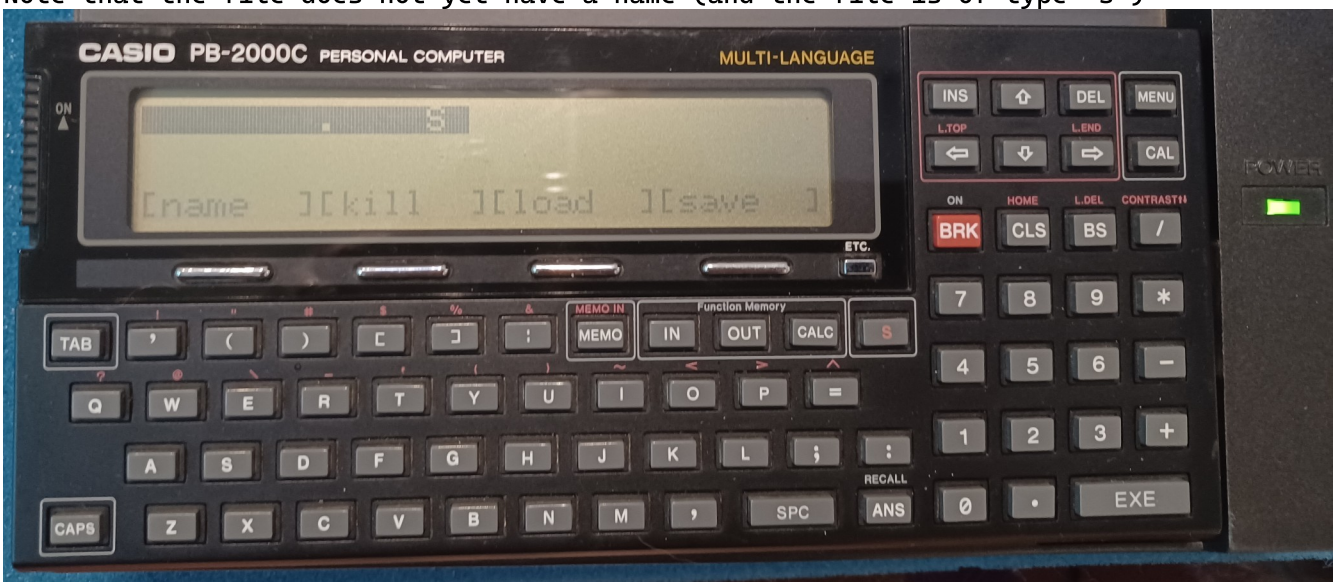
C source file

Go to the TeraTerm window.
Make sure that it is selected.
Right-click and press [OK] to confirm the paste function.
There will be no screen feedback

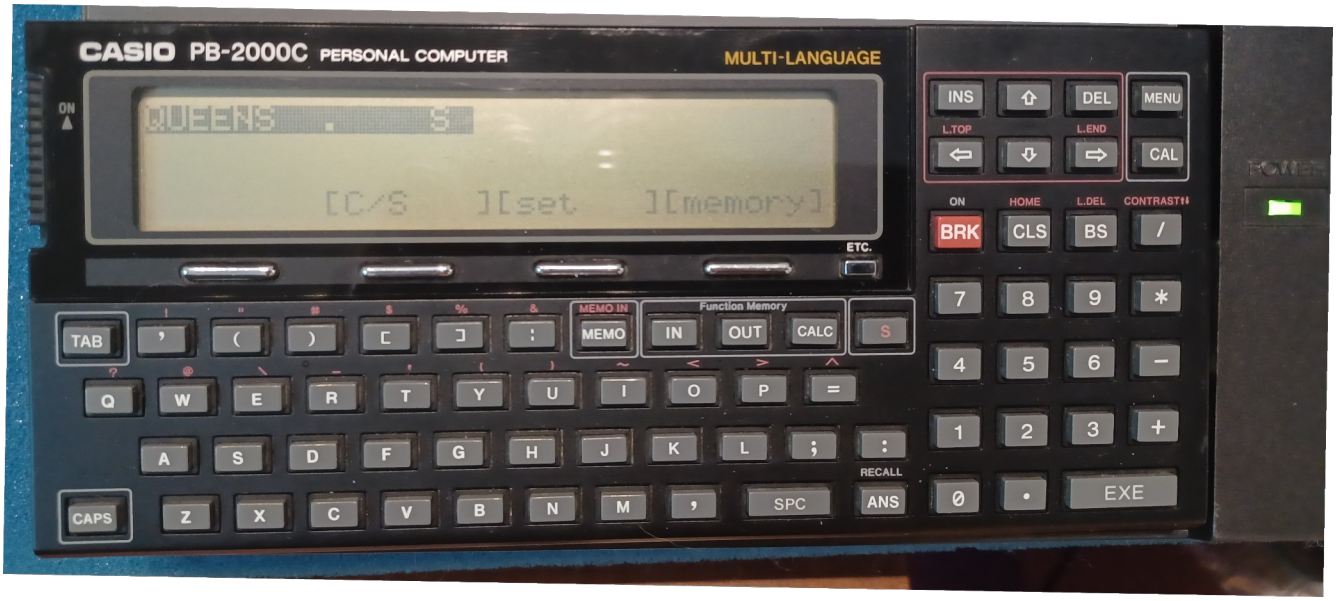


TeraTerm nor the pocket computer attached to the FA-7 provide any feedback about the transfer.
Wait a few seconds.
On TeraTerm (make sure that the TeraTerm screen is selected)
Press ctrl-Z to indicate end of file to the pocket computer.

On the pocket computer the screen should change to the following indicating that the file transfer ended.
Note that the file does not yet have a name (and the file is of type “S”)



At this point you can [name] the file to QUEENS.S



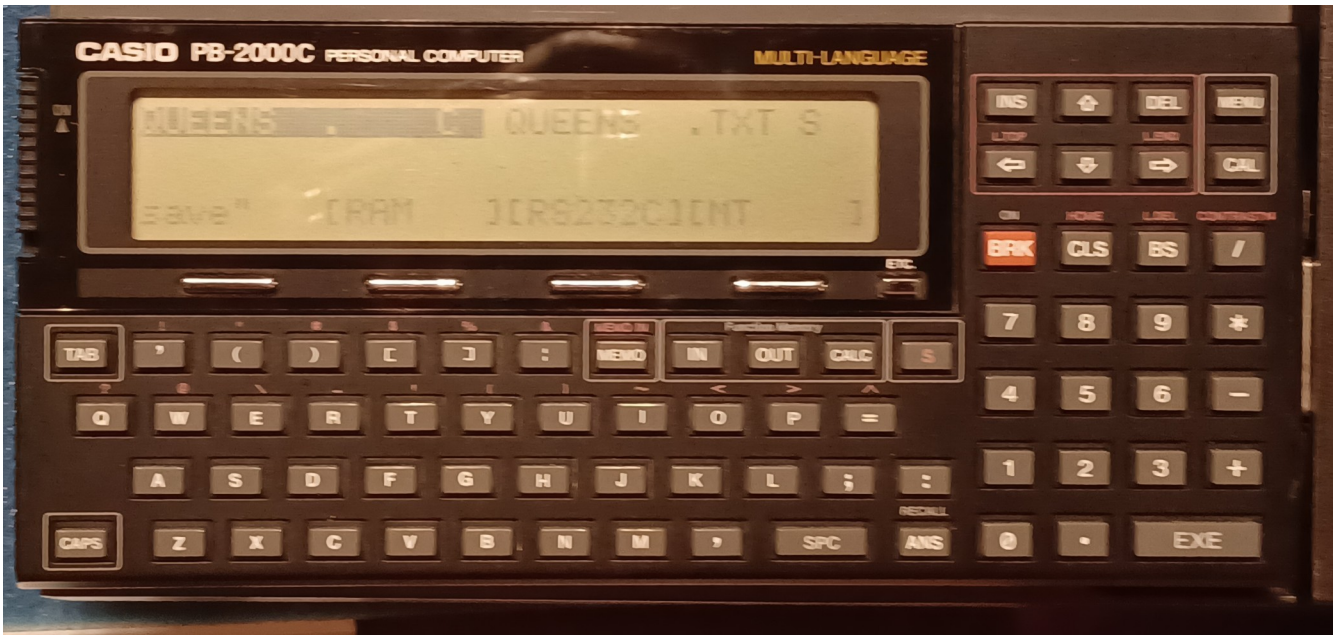
Change the name of the file and press [EXE]
Note that the file type is S. This is a “serial” file.
If you want to use the PB-2000C c interpreter you need to change the file type to C
Press the Etc. key until you see the [C/S] option
Select it.
Note that the file type changed.



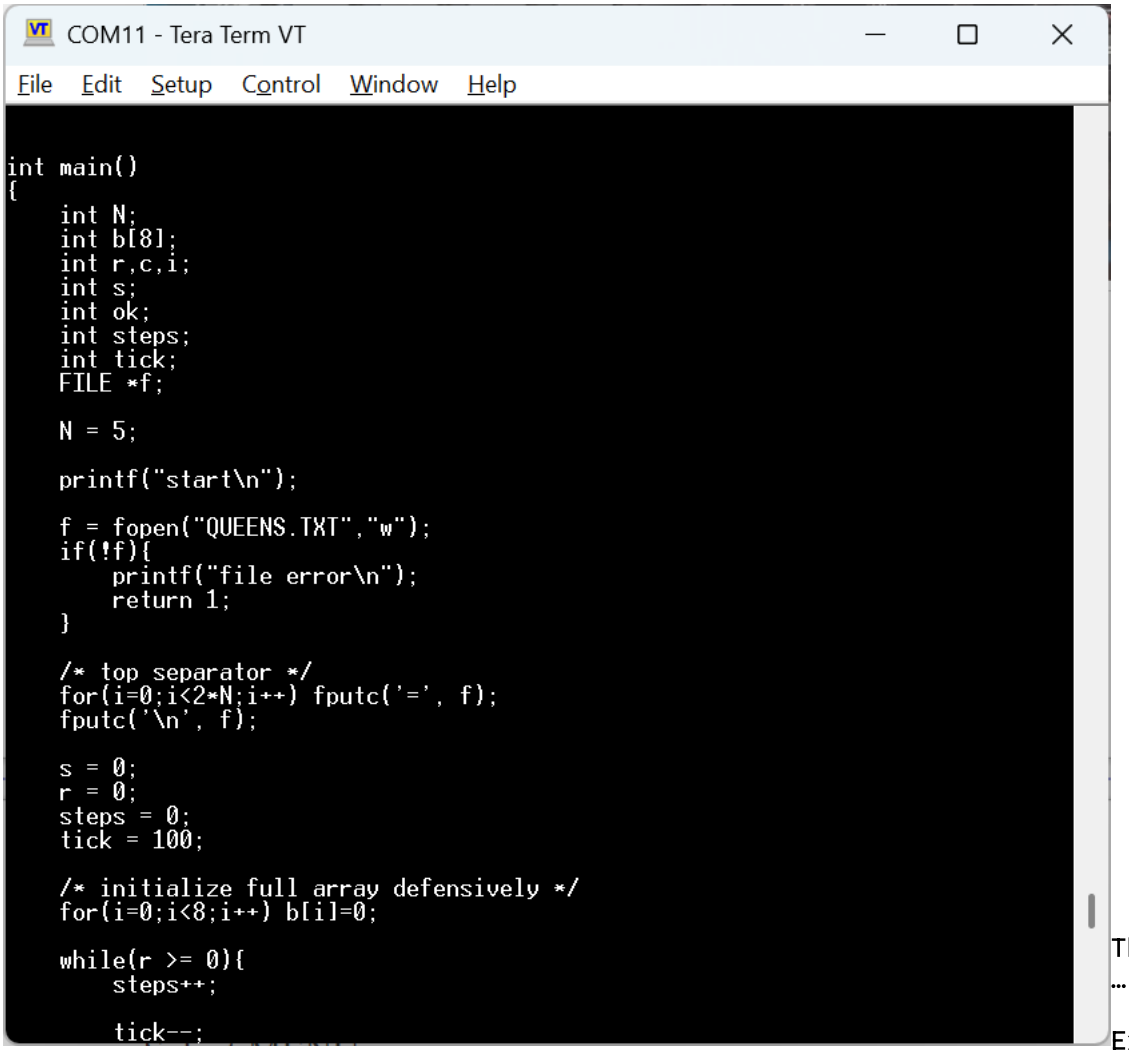
Sending the QUEENS.C file back to TeraTerm
Select MENU
Select the QUEENS.C file (highlighted)



Press the ETC. key until you see the [save] function key
Select [save]
Select [RS232C]



TeraTerm should now show your file



Things to do …

Experiment with data flow control RTS/CTS
Run the QUEENS.C program
Transfer the results QUEENS.TXT to TeraTerm
Use Linux. lsusb, minicom … and more.

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Total: 10
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Acknowledgments

This User Guide was produced by Xandrian Labs. 付喪神.

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