How to load and run TTY_Echo and TTY_Burp

Load the Binary Loader

The the PROGRAM LOAD" switch on the front panel, but if that feature isn't enabled or isn't working properly then enter the following bootstrap loader:

In the following listings the first two columns at the left give each memory location and its contents for a 4K memory. The remaining columns are a standard program listing. To load the program simply use the switches to place the octal numbers in the locations specified. For a memory of any other size, load the bootstrap beginning at a location whose address is 20_8 less than the largest address.

```
;BOOTSTRAP LOADER, TELETYPE VERSION
07757    126440    GET:      SUBO      1,1        ;Clear AC1, Carry
07760    063610              SKPDN     TTI
07761    000777              JMP       .−1        ;Wait for Done
07762    060510              DIAS      0,TTI      ;Read into AC0 and restart reader

07763    127100              ADDL      1,1        ;Shift AC1 left 4 places
07764    127100              ADDL      1,1
07765    107003              ADD       0,1,SNC    ;Add in new word
07766    000772              JMP       GET+1      ;Full word not assembled yet
07767    001400              JMP       0,3        ;Got full word, exit

07770    060110    BSTRP:    NIOS      TTI        ;Enter here, start reader
07771    004766              JSR       GET        ;Get a word
07772    044402              STA       1,.+2      ;Store it to execute it
07773    004764              JSR       GET        ;Get another word
                            . . .                 ;This will contain an STA (first STA 1,.+1)
                            . . .                 ;This will contain JMP  .−4
```

1. Prepare the Terminal Emulator application to send the file:
   "091-000004-04__Binary_Loader__1969-1973.bl"
   but don't actually send the file yet.
2. Press RESET.
3. For a 4K system, set the data switches to 007770 (7 less than the largest address of core memory).
4. Press START.
5. On the Terminal Emulator program, click "Send File". The Nova will halt after the Binary Loader has been sent.

To use the bootstrap to load the binary loader or any other program in the special format, follow these steps:
1. Put the special format tape in the reader and turn it on.
2. Press RESET.
3. For a 4K system set the data switches to 007770 (7 less than the largest address).
4. Press START.

Load the program using the Binary Loader

1. Prepare the Terminal Emulator application to send one of the binary files:
   TTY_Burp.ab or TTY_Echo.ab
   but don't actually send the file yet.
2. Start the binary loader as described below. For a 4K system enter 007777 in the data switches.
3. Press START.
4. On the Terminal Emulator program, click "Send File". The Nova will halt after the Binary Loader has been sent.

> The Binary Loader must be loaded using the Bootstrap Loader and the special format tape, 091-000004.
>
> The Binary Loader is started by entering SXX777 in the data switches and depressing START. "XX" represent the two most significant octal digits of the highest memory address available, for example, XX = Ø7 for a 4K system and 17 for an 8K system. "S" represents bit Ø of the data switches and should be set if input is to be via the paper tape reader and reset if via the teletype.