

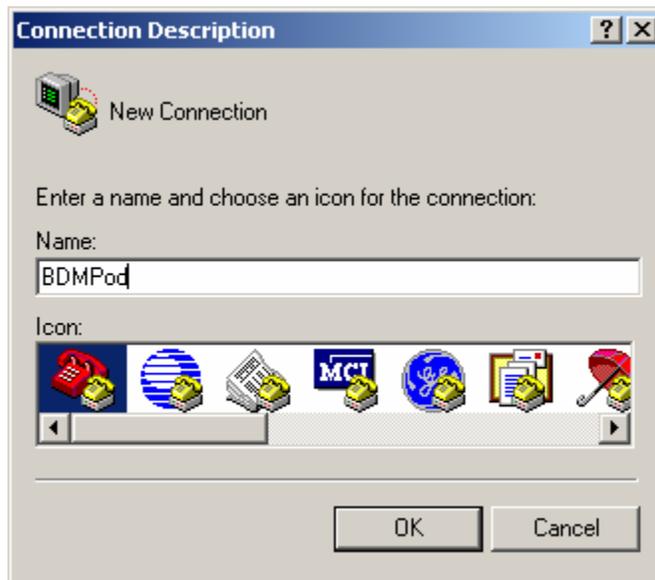
How to use BDM Pod with HyperTerm

The procedures are for WinXP. May differ with different OS.

1. Start – Programs – Accessories – Communications – HyperTerminal



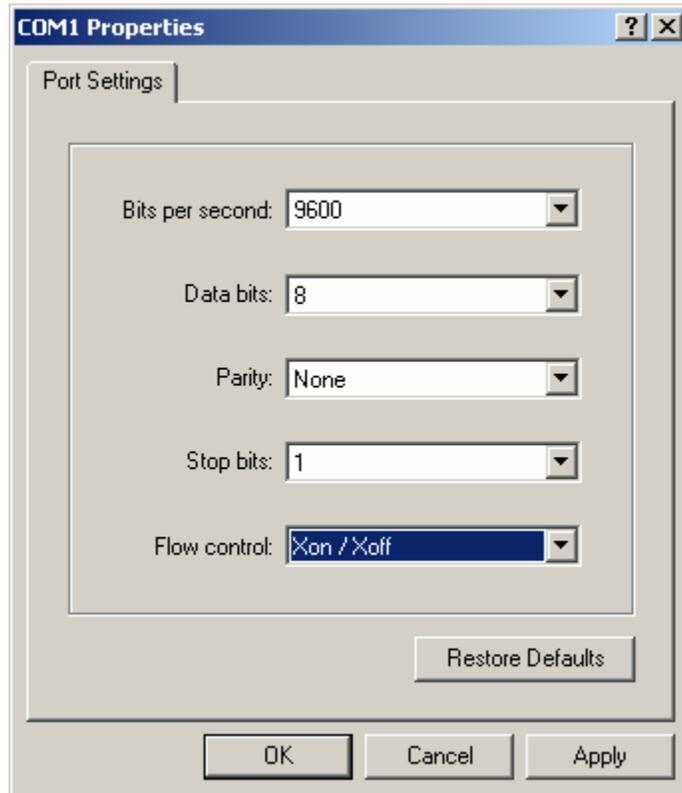
Give it a name.



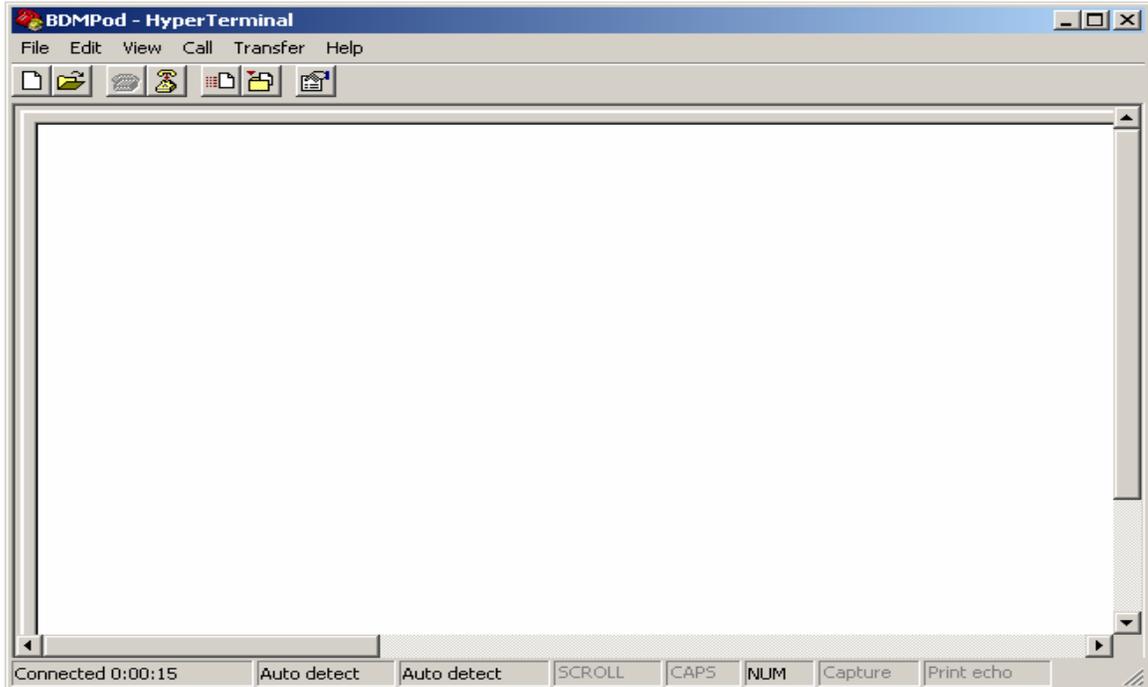
Select COM Port



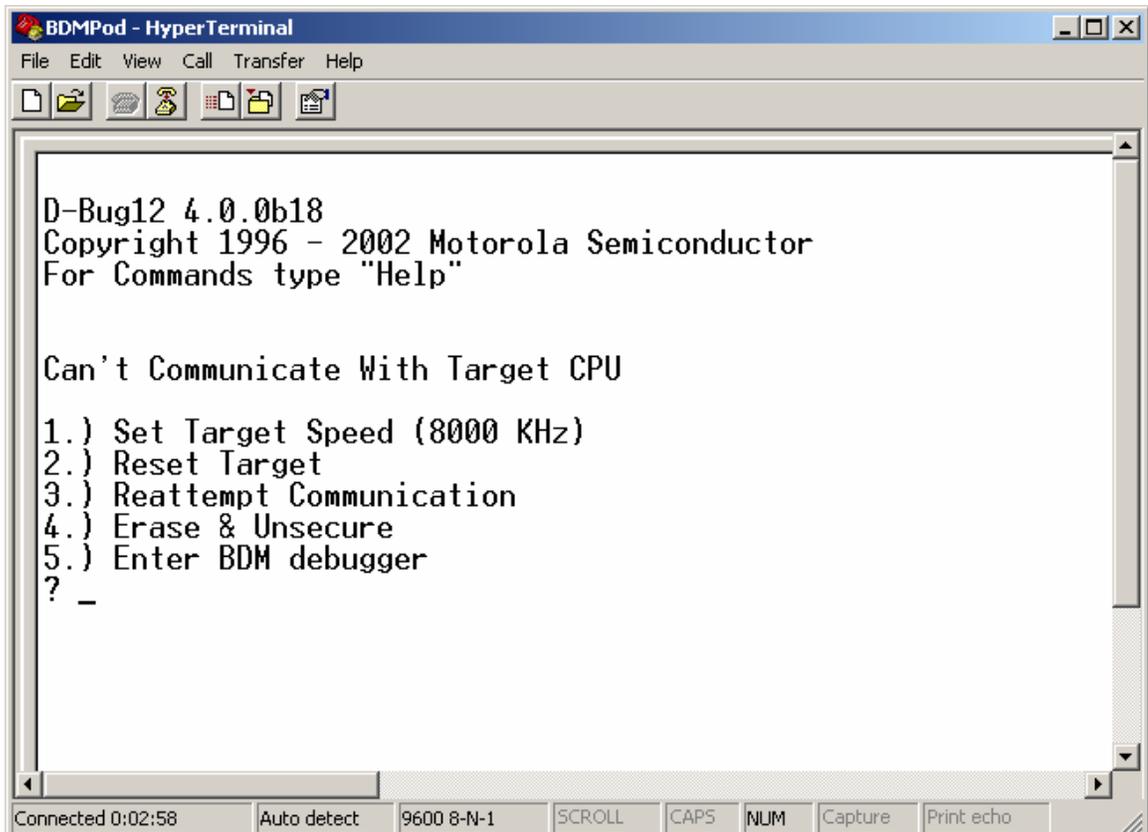
Select the BAUD options



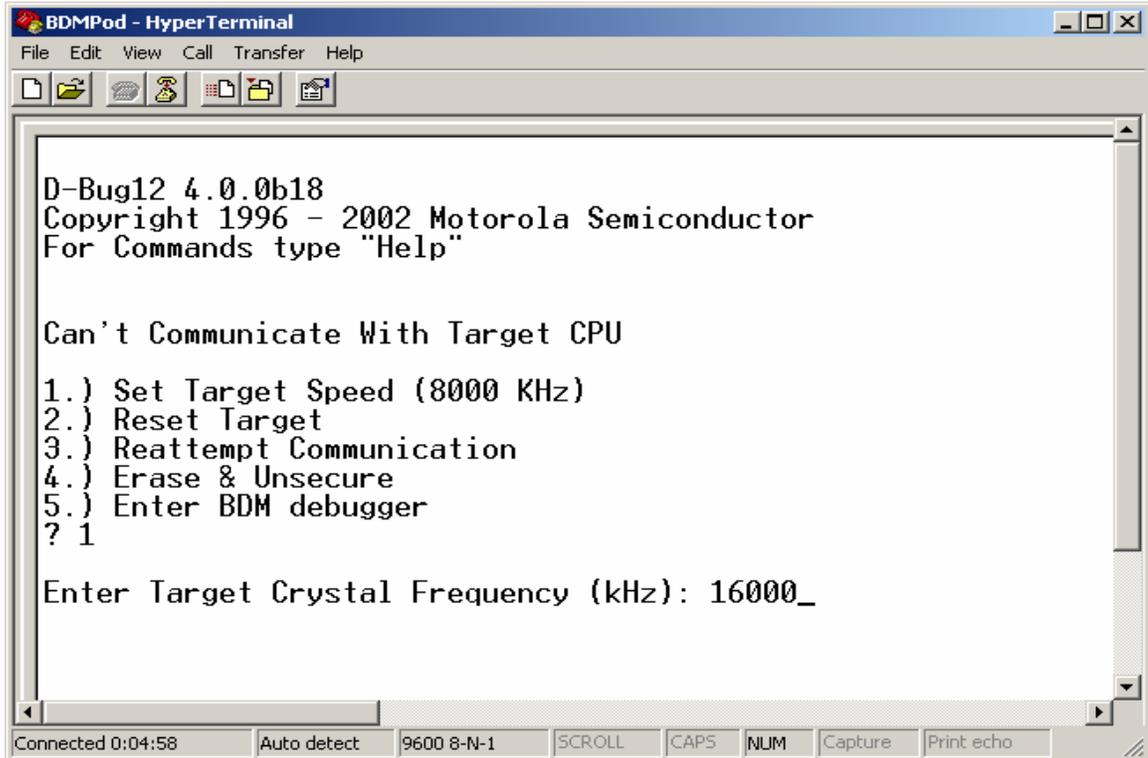
After the setup.



Connecting to a Target



Choose *I* to set Target's frequency.



```
BDMPod - HyperTerminal
File Edit View Call Transfer Help

D-Bug12 4.0.0b18
Copyright 1996 - 2002 Motorola Semiconductor
For Commands type "Help"

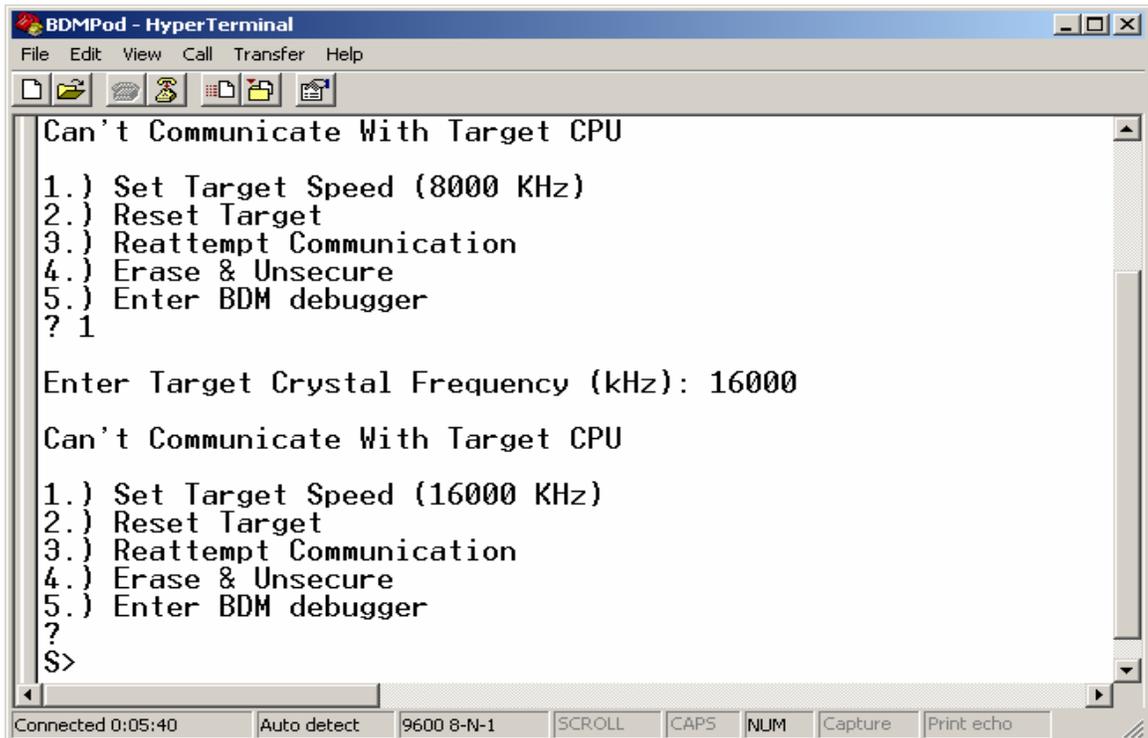
Can't Communicate With Target CPU

1.) Set Target Speed (8000 KHz)
2.) Reset Target
3.) Reattempt Communication
4.) Erase & Unsecure
5.) Enter BDM debugger
? 1

Enter Target Crystal Frequency (kHz): 16000_

Connected 0:04:58  Auto detect  9600 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```

Press CR several times for Target to sync up with BDM Pod so S> or R> will appear.



```
BDMPod - HyperTerminal
File Edit View Call Transfer Help

Can't Communicate With Target CPU

1.) Set Target Speed (8000 KHz)
2.) Reset Target
3.) Reattempt Communication
4.) Erase & Unsecure
5.) Enter BDM debugger
? 1

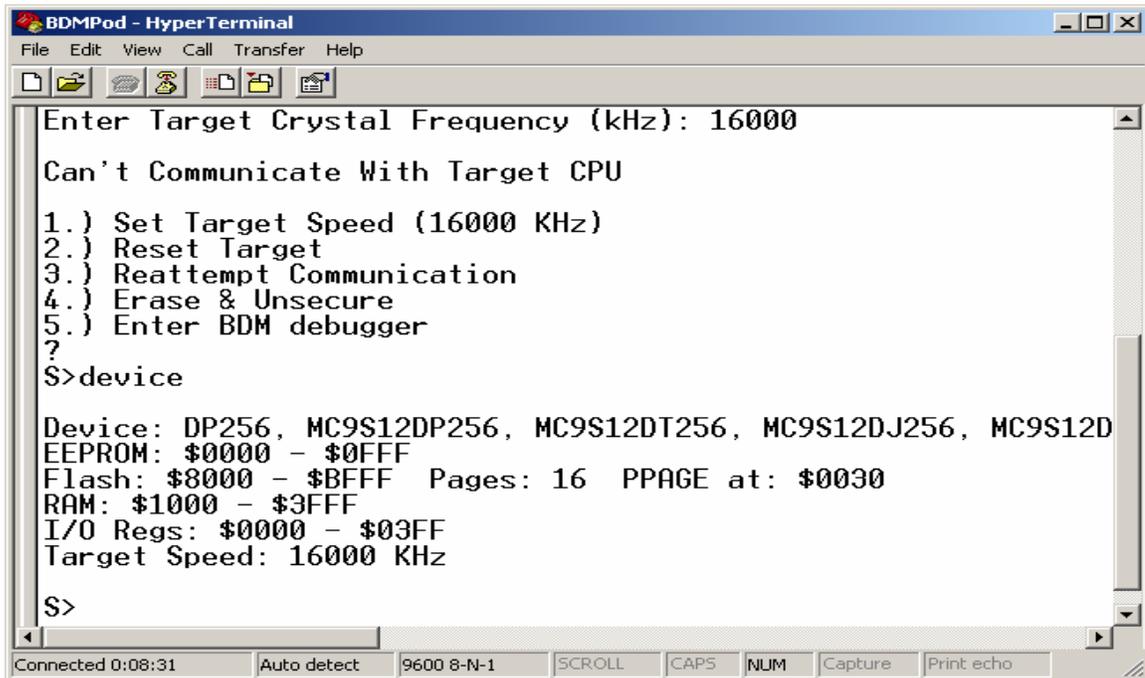
Enter Target Crystal Frequency (kHz): 16000

Can't Communicate With Target CPU

1.) Set Target Speed (16000 KHz)
2.) Reset Target
3.) Reattempt Communication
4.) Erase & Unsecure
5.) Enter BDM debugger
?
S>

Connected 0:05:40  Auto detect  9600 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```

Check *Device* type of Target to make sure that is the actual *device* you are working with.



The screenshot shows a HyperTerminal window titled "BDMPod - HyperTerminal". The menu bar includes "File", "Edit", "View", "Call", "Transfer", and "Help". Below the menu bar is a toolbar with icons for file operations. The main text area contains the following text:

```
Enter Target Crystal Frequency (kHz): 16000

Can't Communicate With Target CPU

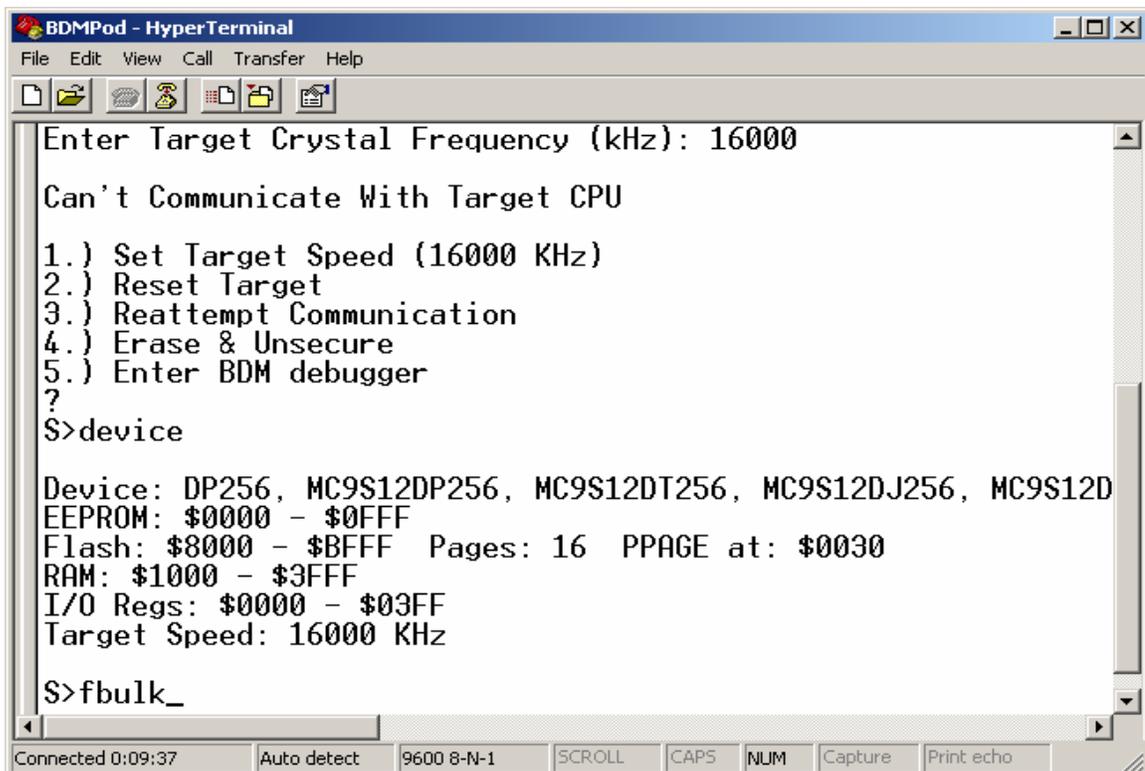
1.) Set Target Speed (16000 KHz)
2.) Reset Target
3.) Reattempt Communication
4.) Erase & Unsecure
5.) Enter BDM debugger
?
S>device

Device: DP256, MC9S12DP256, MC9S12DT256, MC9S12DJ256, MC9S12D
EEPROM: $0000 - $0FFF
Flash: $8000 - $BFFF Pages: 16 PPAGE at: $0030
RAM: $1000 - $3FFF
I/O Regs: $0000 - $03FF
Target Speed: 16000 KHz

S>
```

At the bottom of the window, a status bar shows "Connected 0:08:31", "Auto detect", "9600 8-N-1", "SCROLL", "CAPS", "NUM", "Capture", and "Print echo".

To erase Flash type *FBULK*.



The screenshot shows a HyperTerminal window titled "BDMPod - HyperTerminal". The menu bar includes "File", "Edit", "View", "Call", "Transfer", and "Help". Below the menu bar is a toolbar with icons for file operations. The main text area contains the following text:

```
Enter Target Crystal Frequency (kHz): 16000

Can't Communicate With Target CPU

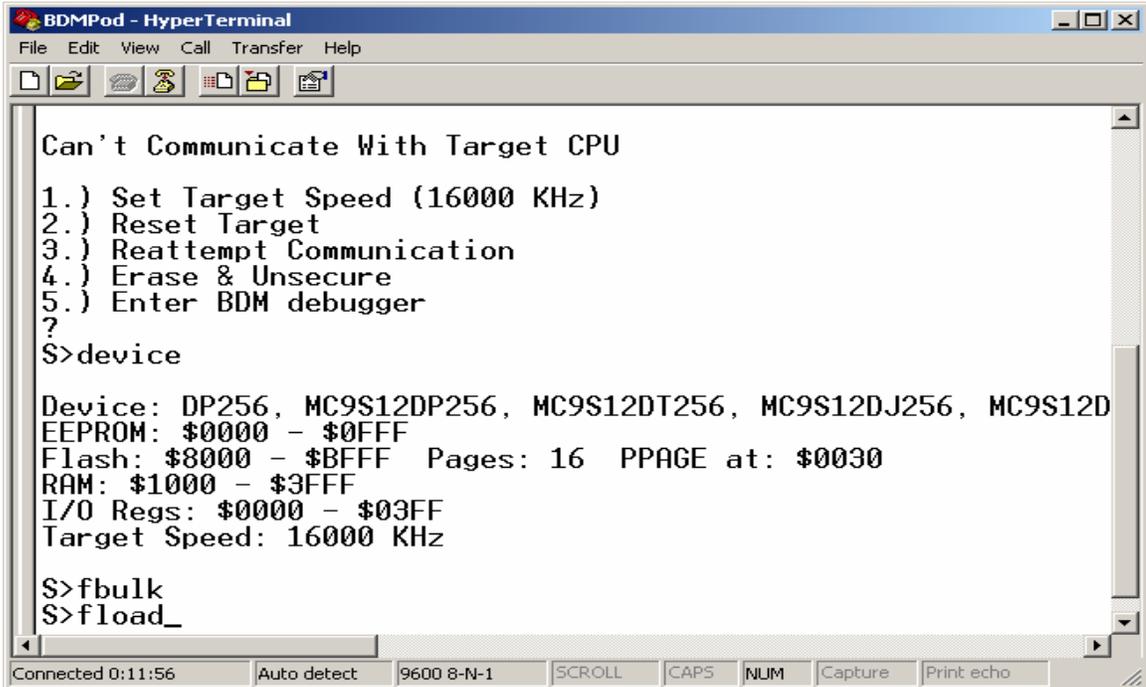
1.) Set Target Speed (16000 KHz)
2.) Reset Target
3.) Reattempt Communication
4.) Erase & Unsecure
5.) Enter BDM debugger
?
S>device

Device: DP256, MC9S12DP256, MC9S12DT256, MC9S12DJ256, MC9S12D
EEPROM: $0000 - $0FFF
Flash: $8000 - $BFFF Pages: 16 PPAGE at: $0030
RAM: $1000 - $3FFF
I/O Regs: $0000 - $03FF
Target Speed: 16000 KHz

S>fbulk_
```

At the bottom of the window, a status bar shows "Connected 0:09:37", "Auto detect", "9600 8-N-1", "SCROLL", "CAPS", "NUM", "Capture", and "Print echo".

To Program Flash type *FLOAD*.



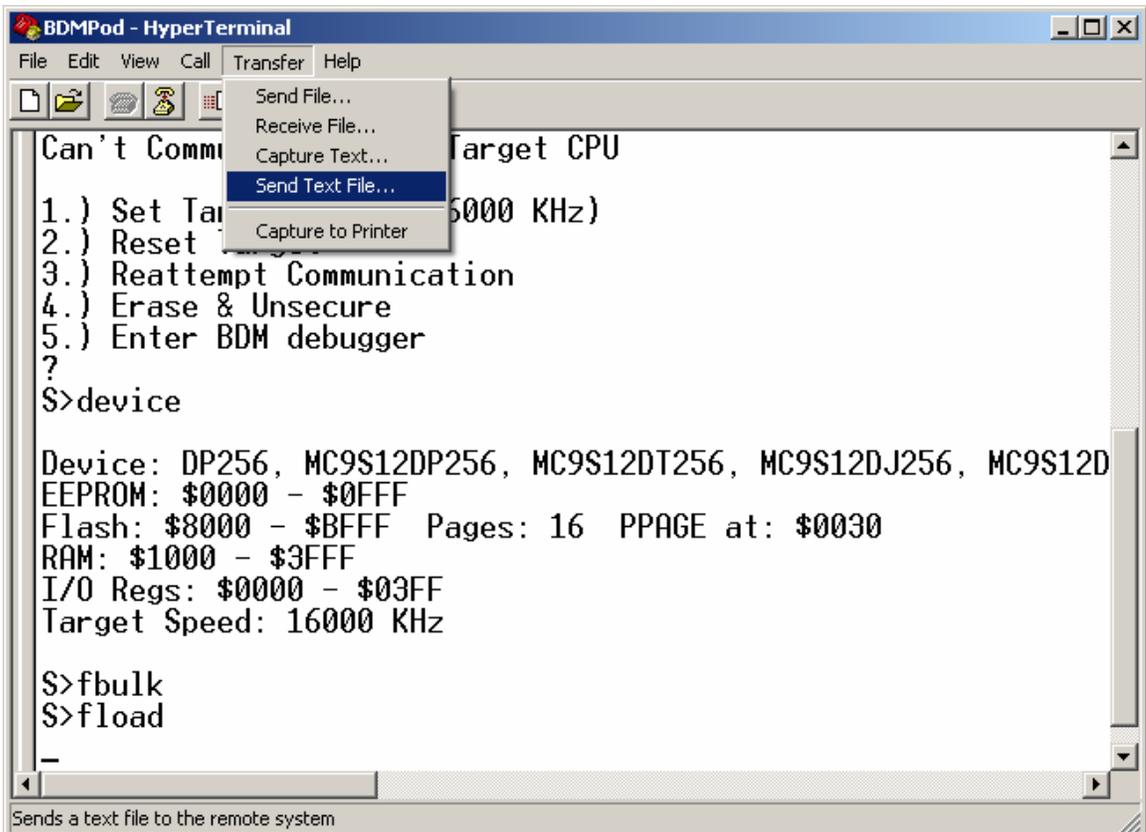
```
BDMPod - HyperTerminal
File Edit View Call Transfer Help
Can't Communicate With Target CPU
1.) Set Target Speed (16000 KHz)
2.) Reset Target
3.) Reattempt Communication
4.) Erase & Unsecure
5.) Enter BDM debugger
?
S>device

Device: DP256, MC9S12DP256, MC9S12DT256, MC9S12DJ256, MC9S12D
EEPROM: $0000 - $0FFF
Flash: $8000 - $BFFF Pages: 16 PPAGE at: $0030
RAM: $1000 - $3FFF
I/O Regs: $0000 - $03FF
Target Speed: 16000 KHz

S>fbulk
S>fload_

Connected 0:11:56 Auto detect 9600 8-N-1 SCROLL CAPS NUM Capture Print echo
```

BDM Pod is waiting for the File to be uploaded. Send file as text



```
BDMPod - HyperTerminal
File Edit View Call Transfer Help
Can't Commu Target CPU
1.) Set Tar 5000 KHz)
2.) Reset
3.) Reattempt Communication
4.) Erase & Unsecure
5.) Enter BDM debugger
?
S>device

Device: DP256, MC9S12DP256, MC9S12DT256, MC9S12DJ256, MC9S12D
EEPROM: $0000 - $0FFF
Flash: $8000 - $BFFF Pages: 16 PPAGE at: $0030
RAM: $1000 - $3FFF
I/O Regs: $0000 - $03FF
Target Speed: 16000 KHz

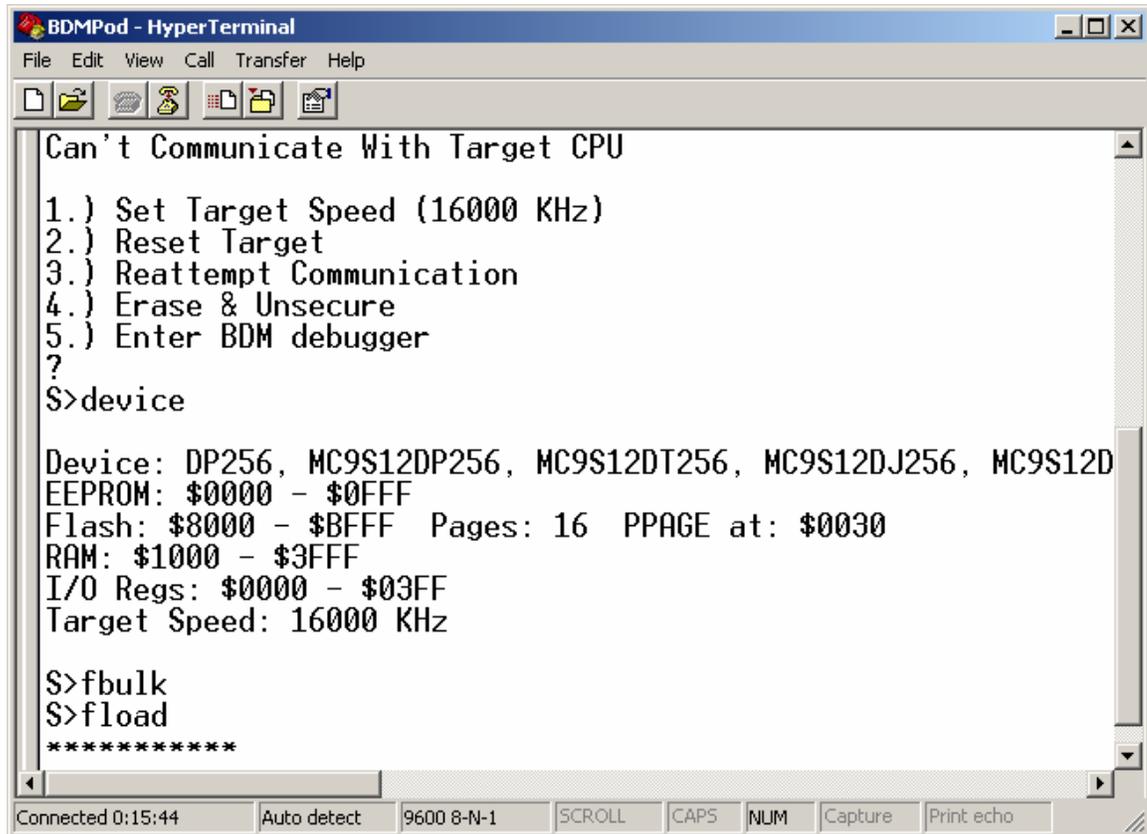
S>fbulk
S>fload

Sends a text file to the remote system
```

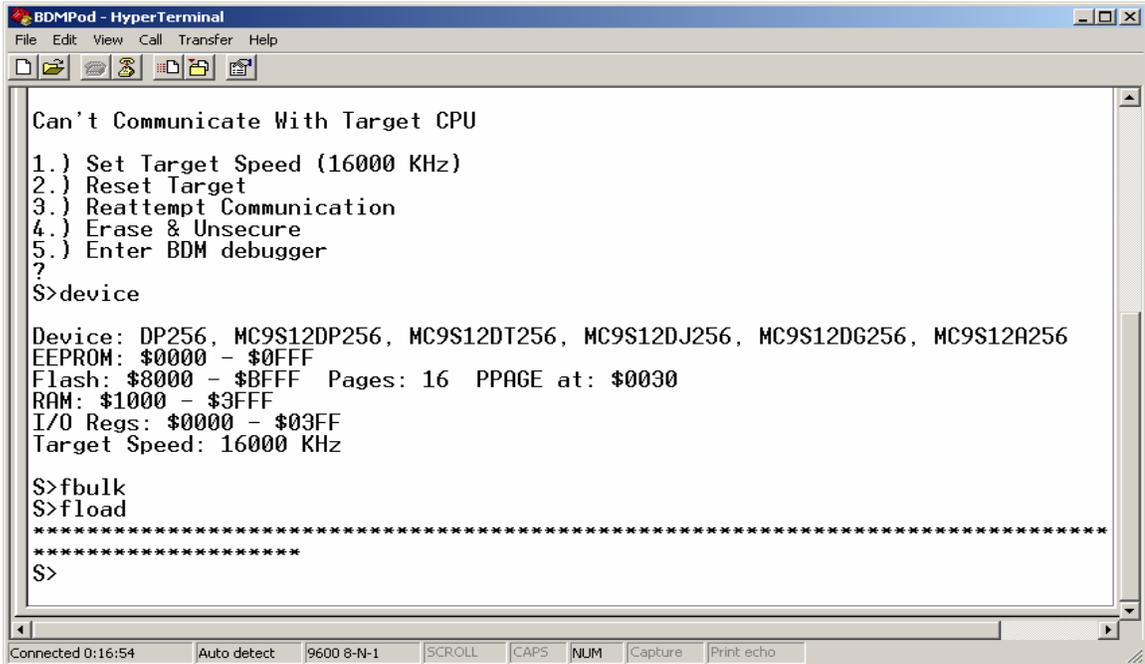
Locate File to be uploaded and double click on that file to initiate upload.



The characters *** shows the File being uploaded



The `S>` will appear again to indicate file is uploaded.



```
BDMPod - HyperTerminal
File Edit View Call Transfer Help
[Icons]

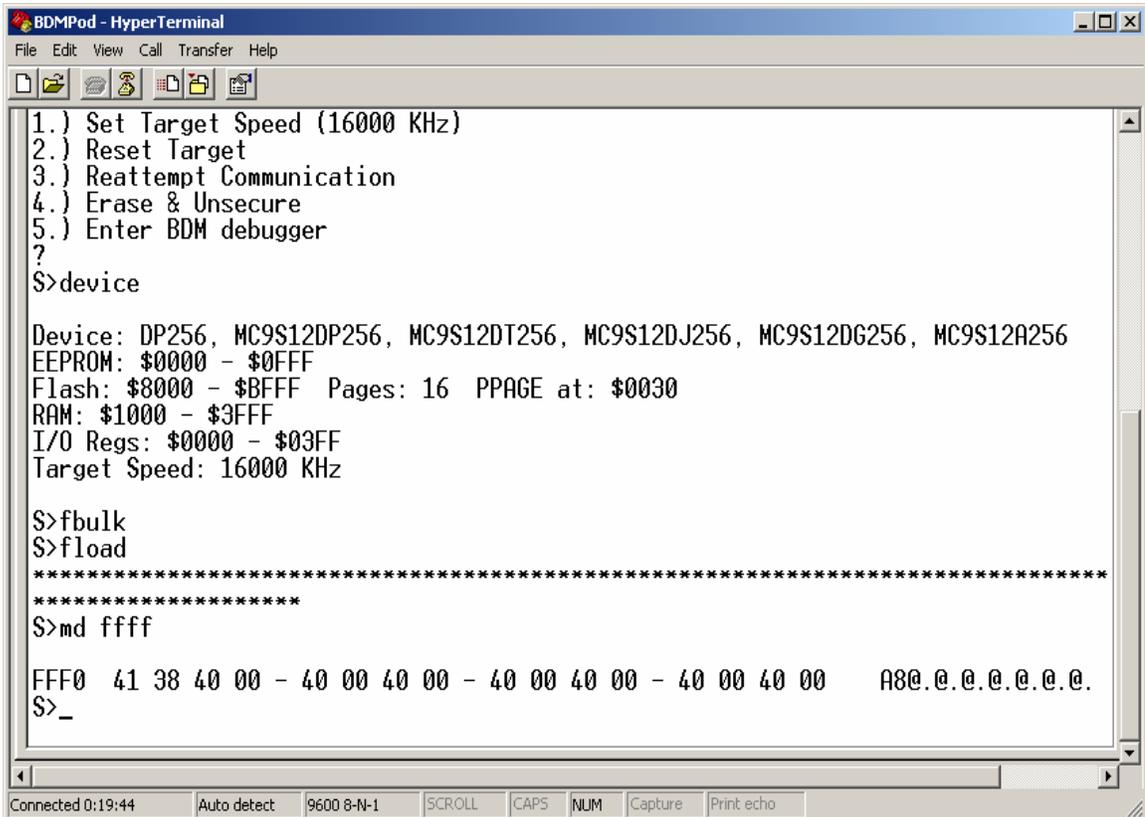
Can't Communicate With Target CPU
1.) Set Target Speed (16000 KHz)
2.) Reset Target
3.) Reattempt Communication
4.) Erase & Unsecure
5.) Enter BDM debugger
?
S>device

Device: DP256, MC9S12DP256, MC9S12DT256, MC9S12DJ256, MC9S12DG256, MC9S12A256
EEPROM: $0000 - $0FFF
Flash: $8000 - $BFFF Pages: 16 PPAGE at: $0030
RAM: $1000 - $3FFF
I/O Regs: $0000 - $03FF
Target Speed: 16000 KHz

S>fbulk
S>fload
*****
*****
S>
```

Connected 0:16:54 Auto detect 9600 8-N-1 SCROLL CAPS NUM Capture Print echo

Check Power up Vector by using memory Dump at \$FFFF. It should always be non-FFs. Here it is showing the Power on/Reset Vector will start at \$4000.



```
BDMPod - HyperTerminal
File Edit View Call Transfer Help
[Icons]

1.) Set Target Speed (16000 KHz)
2.) Reset Target
3.) Reattempt Communication
4.) Erase & Unsecure
5.) Enter BDM debugger
?
S>device

Device: DP256, MC9S12DP256, MC9S12DT256, MC9S12DJ256, MC9S12DG256, MC9S12A256
EEPROM: $0000 - $0FFF
Flash: $8000 - $BFFF Pages: 16 PPAGE at: $0030
RAM: $1000 - $3FFF
I/O Regs: $0000 - $03FF
Target Speed: 16000 KHz

S>fbulk
S>fload
*****
*****
S>md ffff

FFF0 41 38 40 00 - 40 00 40 00 - 40 00 40 00 - 40 00 40 00 A8@.@.@.@.@.
S>_
```

Connected 0:19:44 Auto detect 9600 8-N-1 SCROLL CAPS NUM Capture Print echo

Getting to know the DBUG12 command set by typing *help*.

```
BDMPod - HyperTerminal
File Edit View Call Transfer Help

ASM <Address> Single line assembler/disassembler
  <CR> Disassemble next instruction
  <.> Exit assembly/disassembly
BAUD <baudrate> [;t] Set communications rate for the terminal
BDMDB Enter the BDM command debugger
BF <StartAddress> <EndAddress> [<data>] [;nv] Fill memory with data
BR [<Address>] Set/Display breakpoints
BS <StartAddress> <EndAddress> '<String>' | <Data8> [<Data8>] Block Search
BULK Erase entire on-chip EEPROM contents
CALL [<Address>] Call user subroutine at <Address>
DEVICE [<DevName>] display/select target device
EEBASE <Address> Set base address of on-chip EEPROM
FBULK [;np] Erase entire target FLASH contents
FLOAD [<AddressOffset> | ;b] [;np] [;nf] Load S-Records into target FLASH
G [<Address>] Begin/continue execution of user code
GT <Address> Set temporary breakpoint at <Address> & execute user code
HELP Display D-Bug12 command summary
LOAD [[<AddressOffset>] [;f]] | [;b] Load S-Records into memory
MD <StartAddress> [<EndAddress>] Memory Display Bytes
MDW <StartAddress> [<EndAddress>] Memory Display Words
MM <StartAddress> Modify Memory Bytes
  <CR> Examine/Modify next location
  </> or <=> Examine/Modify same location
Press Any Key For More_

Connected 0:22:43 Auto detect 9600 8-N-1 SCROLL CAPS NUM Capture Print echo
```

More help

```
BDMPod - HyperTerminal
File Edit View Call Transfer Help

  </> or <=> Examine/Modify same location
  <^> or <-> Examine/Modify previous location
  <.> Exit Modify Memory command
MMW <StartAddress> Modify Memory Words (same subcommands as MM)
MOVE <StartAddress> <EndAddress> <DestAddress> Move a block of memory
NOBR [<address>] Remove One/All Breakpoint(s)
PCALL [<Address>] Call user subroutine in expanded memory at <Address>
RD Display CPU registers
REGBASE <Address> Set base address of I/O registers
RESET Reset target CPU
RM Modify CPU Register Contents
SO Step Over subroutine calls
STOP Stop target CPU
T [<count>] Trace <count> instructions
TCONFIG [<Address>=<Data8>] | [DLY=<mSDelay>] | NONE Configure Target Device
UPLOAD <StartAddress> <EndAddress> [;f] [;SRecSize] S-Record Memory display
USEHBR [ON | OFF] Use Hardware/Software Breakpoints
VER Display D-Bug12's Version Number
VERF [[<AddressOffset>] [;f]] | [;b] Verify S-Records against memory contents
<Register Name> <Register Value> Set register contents
  Register Names: PC, SP, X, Y, A, B, D, PP
  CCR Status Bits: S, XM, H, IM, N, Z, V, C
S>help_

Connected 0:22:02 Auto detect 9600 8-N-1 SCROLL CAPS NUM Capture Print echo
```