

# EUNHA RF TERMINAL

## (ERT2x)

### USER MANUAL



**EUNHA**  
ELECTRONICS

Office/Factory : 335-6 Doksan-1Dong,  
GumChun-Gu, Seoul, 153-814 KOREA  
TEL. 82-2-837-6926  
FAX. 82-2-837-6925  
E-mail. [eunhaelc@kornet.net](mailto:eunhaelc@kornet.net)



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# 1. Composition

## 1-1. Functional features

- Application of bluetooth module.
- Capable of connection maximum 99 devices if any kinds to one host.
- No locational limitation of devices due to the communication distance of 100m.
- Free from intervention because of no physical connection between devices.
- No electromagnetic interference and easy maintenace.
- NC Data's edit is available in Terminal.
- Can mark NC Data's storage space by each machine.
- Can use in various OS environment of DOS, Windows etc..

## 1-2. ERT Module specitication and composition

- RF Module                BLUETOOTH (Clase1)
- Frequency                2.4GHz
- Antenna Form             Dipole ANT (125mm)
- Comm. distance        100m (Opened space standard)
- max channel number 99Ch
- Use power
  - HOST Module    ADAPTER 100~240V 50/60Hz (OUT DC 5.0V)
  - M/C용 Module   Use power DC 5.0V
- Power consumption    300mA
- Size                      W114 x D55 x H24mm (Excep ANT (L124mm))
- Computer minimum specification. : IBM Computer is compatible.
  - RS232 Port more than 1
  - 3.5" Floppy Driver More than 1
  - Composure space more than HDD 40 MB
- ERT Module composition
  - ERT-HOST    - Communicate with Module for machine by Eunha radio Terminal Host Module.
  - ERT-RS232   - It is Module for machine that do standard RS232 communication.
  - ERT-PNTTY   - It is PANASERT TTY PORT dedicated Module.
  - ERT-VC5     - It is AVISERT VC5 TTY PORT dedicated Module.

## 1-3. SOFT WARE Composition

- \* ERT                    : Eunha RF Terminal MAIN Software
- \*\* RT\_USM             : Dyna/Pert (SEQUENCER, VCD, DIP)
- \*\* RT\_BP                : Board-Pecker (M-10)
- \*\* RT\_PNR               : Panasert (RS232 Port)
- \*\* RT\_PNC               : Panasert (TTY Port)
- \*\* RT\_VC5               : Avisert (VC-5)
- \*\* RT\_VC5A             : Avisert (VC-5A, VC-5B)
- \*\* RT\_UIC               : Universal

## 2. Install

### 2-1. Explain ERT-HOST Module status lamp

#### POWER / ON LINE Lamp

- Red Lamp lighted : Power is inputted situation.
- Yellow Lamp lighted: It is situation that become machine Module and connection (ON LINE).

#### TXD / RXD Lamp

- Yellow Lamp blinks : Is sending Data by machine Module.
- Green Lamp blinks : Is receiving Data from machine Module.

### 2-2. Explain ERT-RS232 / PNTTY / VC5 Module lamp

#### POWER / ON LINE Lamp

- Red Lamp lighted : Power is inputted situation.
- Yellow Lamp lighted: It is situation that become host Module and connection (ON LINE).

#### STATUS / DATA Lamp

- Green Lamp blinks : Blink at initialization progress by when input all, More than 3 seconds RESET Switch after initialization completion.
- Green Lamp lighted: When is System Mode (EXE DOWN Loading) in Universal, TDK VC5 kinds of machine, is lighted and when receives Data, change by yellow lamp, and blinks.
- Red Lamp blinks : Blink at HOST Module and DATA send-receive.

#### RTS / CTS Lamp

- Red Lamp : Is lighted or blinks according to RTS (Data Busy) signal.
- Yellow Lamp : Is lighted or blinks according to CTS(Rader Start) signal.

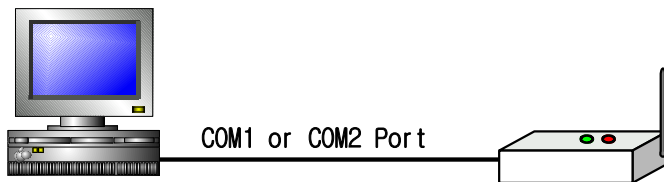
#### RESET Switch

- ERT Module is initialized if press more than 3 seconds, Status Lamp flickers.
- If press within 3 seconds, ERT Module cancels System Data Mode.



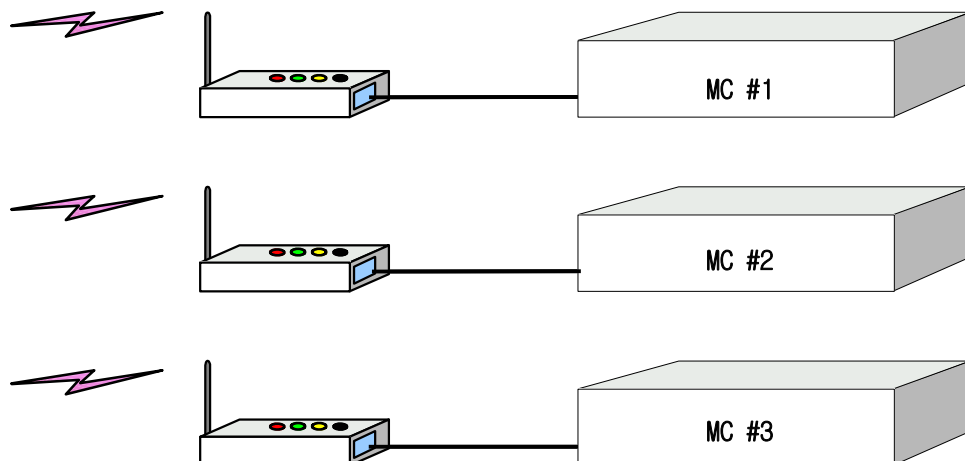
## 2-3. Install ERT-HOST

- Can use Computer's communication port COM1 or COM2 without division.
- ERT-HOST at Program operation recognizes PORT that is placed automatically.
- ERT-HOST Module installs possible height in position that obstacle does not exist because communicate with Modules for maximum 99 machine.
- Connect COM1 or COM2 of computer and HOST-Module by cable.
- Plug of 5V Power adaptor inserts outlet and connects Adapta cable to ERT-HOST.



## 2-4. Install ERT-RS232 / PNTTY / VC5 Module

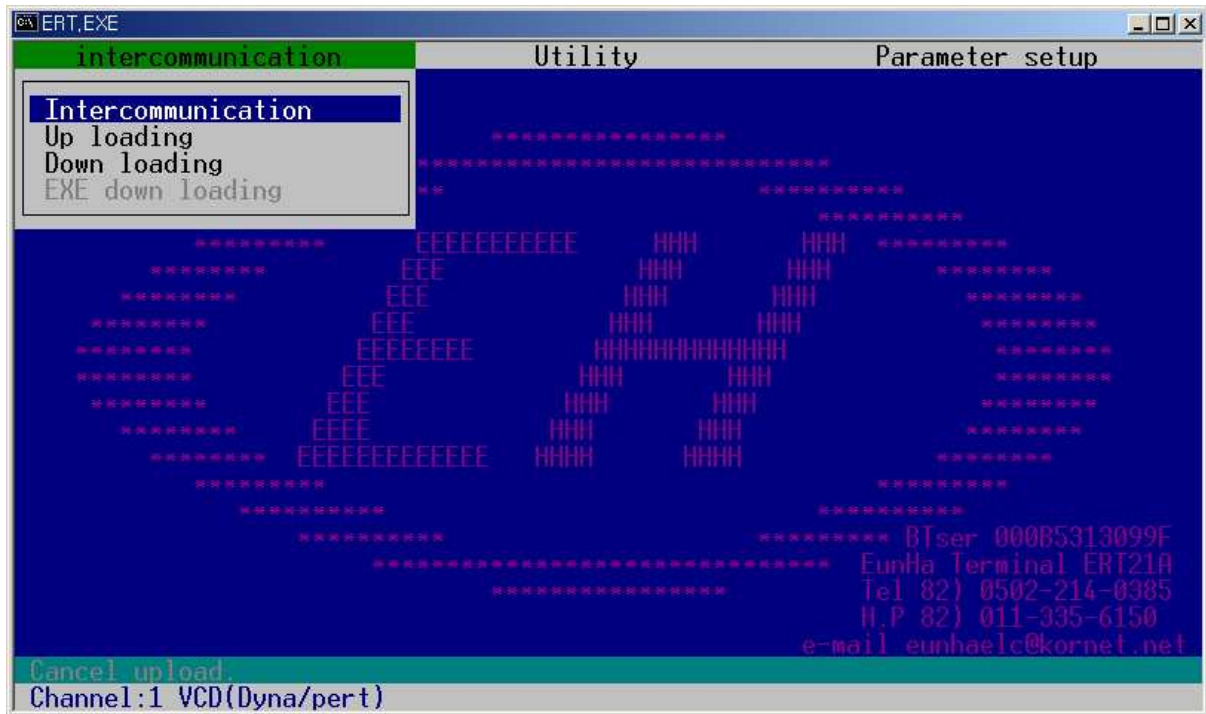
- Module for machine installs possible height in position that obstacle does not exist because communicate with HOST Module.
- Refer use method by machine because installation method by machine is different.



### 3. Operate ERT

- 1) Power makes sure whether have been lighted to ERT-HOST Module.
- 2) Turn on COMPUTER power.
- 3) Execute ERT Terminal Software.

- MAIN SCREEN



- 4) In case Terminal MAIN MENU does not appear on screen and contents such as lower part appear on screen.

Check COM1 port.      COM1 CTS = OFF  
 Check COM2 port.      COM2 CTS = OFF

Not found master radio modul(BT) serial(000b53130099f)

- It is registered when CABLE of COMPUTER and ERT-HOST unconnected and when power has turned off or when there is no HOST Module.
- Refer to above contents and executes Eunha radio Terminal Software again after confirmation and action.

Check COM1 port.      COM1 CTS = OFF  
 Check COM2 port.  
 Get Master Radio modul(BT) info. in COM2 port.

Not found master radio modul(BT) serial(000b53130560)

- When ERT-HOST Module Serial number is mistaken with Software's Serial number, Software's Serial number with upside becomes display.
- Execute Terminal Software again after install HOST Module such as Software's Serial number.



## 4. Function of MENU

### 4-1. Intercommunication

- \* Intercommunication : Do machine of appointed channel and communication.
- \* Up loading : Write to DISK receiving data from machine of appointed channel.
- \* Down loading : Transmit DATA by machine of appointed channel.
- \* EXE Down loading : Send System Data by machine of appointed channel.

### 4-2. Utility

- \* File menatement : Do work of copy, edit, delete etc.. of file stored to PC or Floppy disk.
- \* Reserved : Is not used.
- \* Reserved : Is not used.
- \* Reserved : Is not used.
- \* Disk format : Floppy disk for data storage does Format.
- \* Quit : End Terminal Program.

### 4-3. Parameter setup

- \* Set Channel Path Name : Specify Path life to be used in each channel.
- \* Set Port parameter : Specify communication condition of connected machine of each channel.
- \* Set machine parameter : Specify revision Data of each channel and communication style.

### 4-4. Explain menu select

- Select Meun from MAIN MENU to "← →" KEY.
- If press Enter Key after select menu to work from SUB MENU to "↑ ↓" KEY, work that choose is executed.

### 4-5. Explain Channel select

- Mark channel wanting to Page Up, Page Down KEY or function key (ALT Key+ channel number (1 ~ 99)).
- Channel No. and M/C name are connected by appointed Channel if appear and execute Intercommunication relationship SUB Munu on screen lower column.
- Path that basis work Directory that is executed in File Management relationship SUB Meun is set to present Channel is applied.

#### \*\*\* Warning \*\*\*

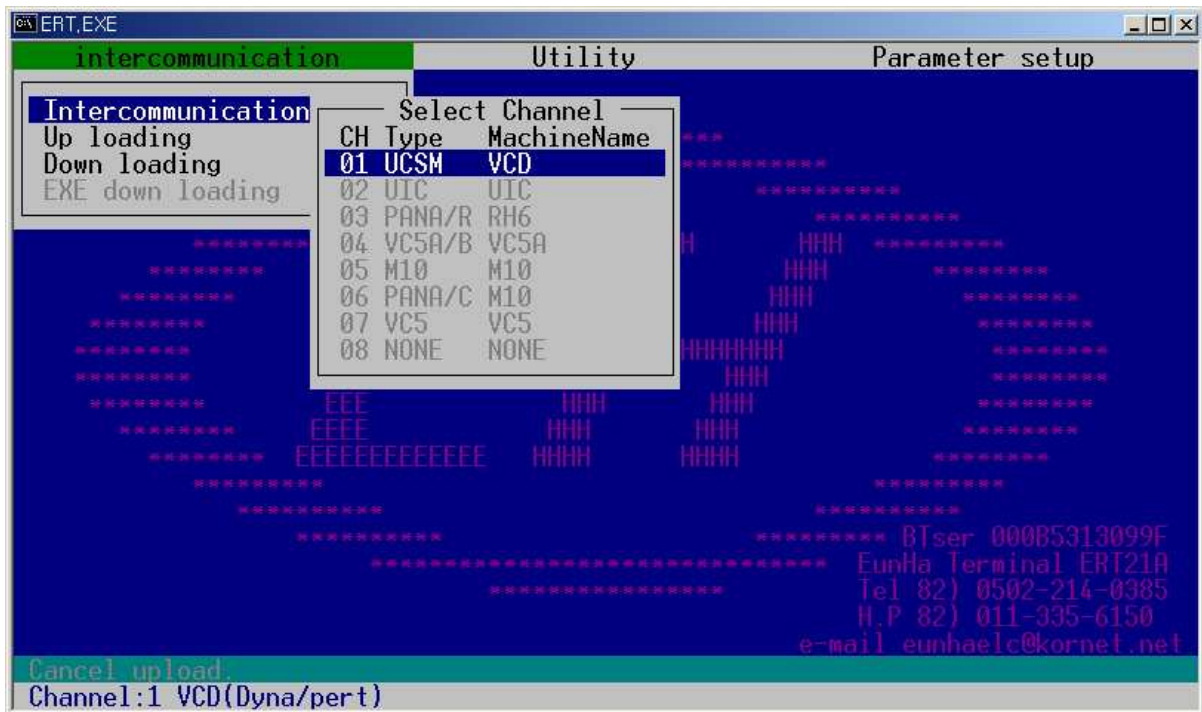
- \* While act, ERT Module's power that do not ON/OFF .  
(Wrong data can be transmitted by connected machine.)

## 5. Use method by function

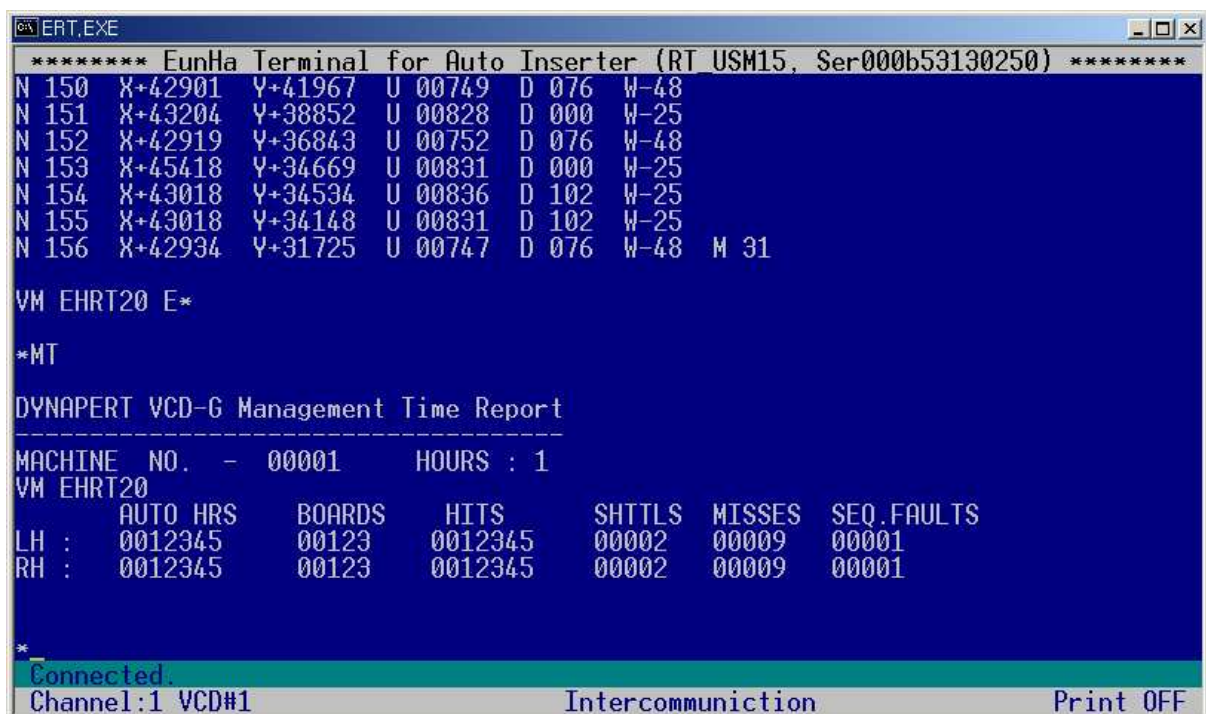
### 5-1. Intercommunication menu

#### 5-1-1. Intercommunication

: Connect and operates with machine or information does send-receive.



- When selected Channel appears brightly and changes Channel present, change using "↑ ↓" KEY.
- Is executed by Intercommunication Mode if input Enter Key after confirm or change Channel.



- Is returned by Main menu if input ESC KEY.

- Explain function Key's use.

**ALT + U : Up Loading function key**

Change by Up Load Mode if press together ALT Key and U Key and File choice window becomes display.

**ALT + D : Down Loading function key**

Change by Down Load Mode if press together ALT Key and D Key and File choice window becomes display.

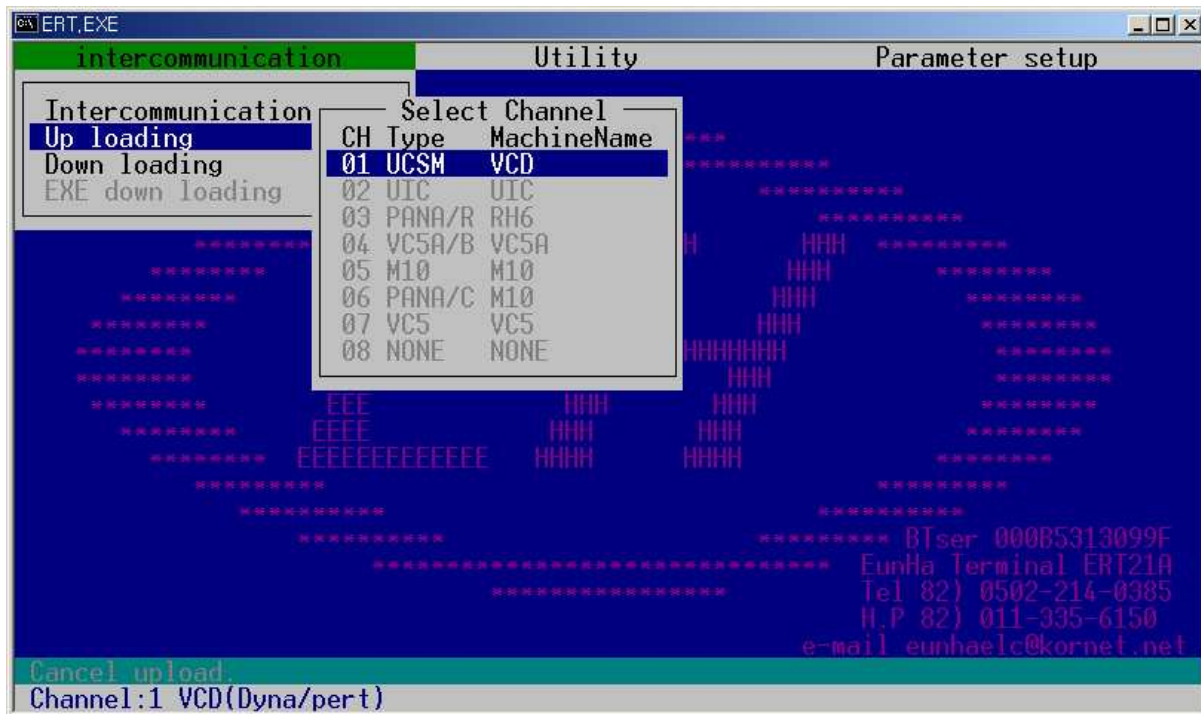
Up Loading/Down Loading function Key is used in Intercommunication Mode.

Change by Intercommunication Mode automatically after Up Loading or Down Loading work completion.  
Is converted automatically by Intercommunication Mode if cancel work by Key "ESC" in File choice display of Up Loading or Down Loading.

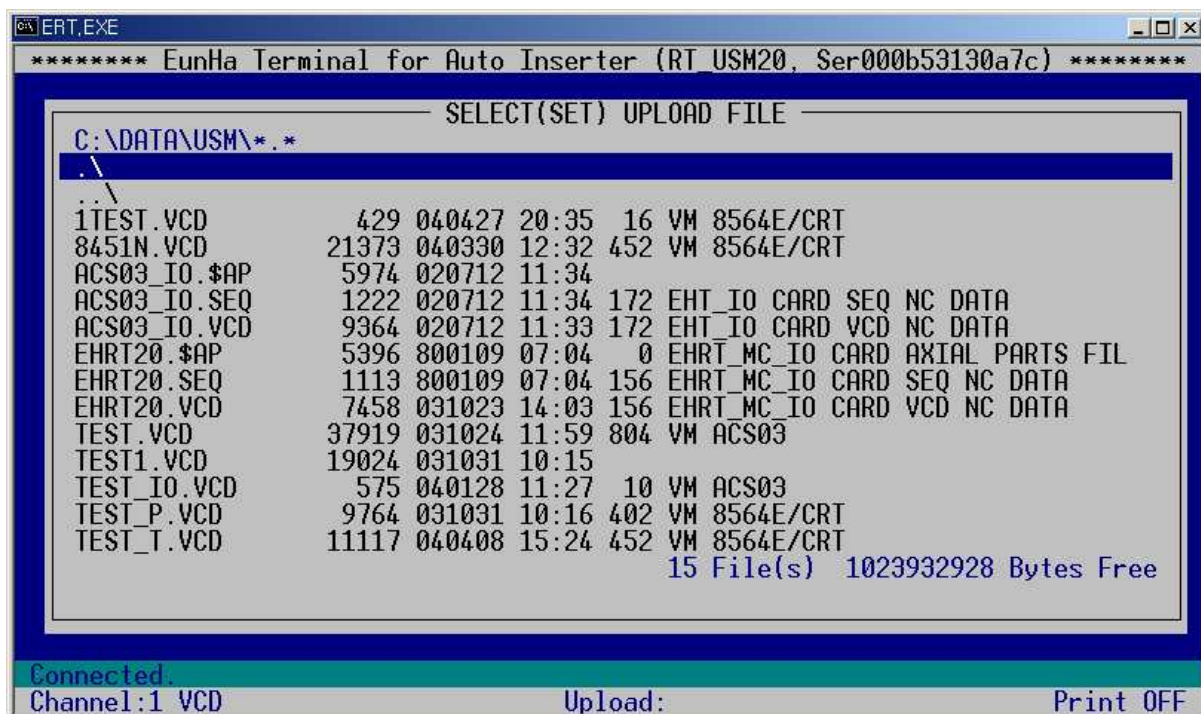
### 5-1-2. Up loading ( ALT + U )

; To COMPUTER's DISK receiving data from machine data storage.

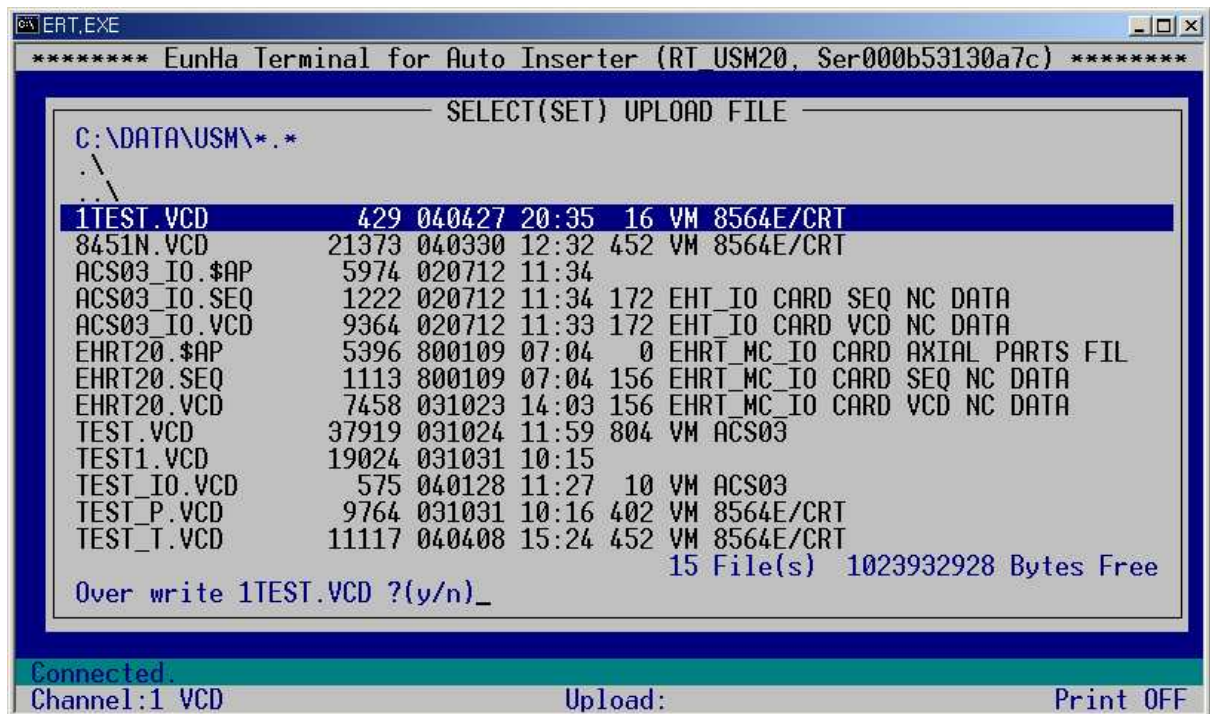
- Select Channel of machine to connect.
- Appear as follows on screen if select **Intercommunication-Up Loading** in MAIN MENU.



- When selected Channel appears brightly and changes Channel present, change using "↑ ↓" KEY.
- If confirm but modifies Channel and presses Enter Key, File choice window becomes display.



- ". \ " of file table of contents LIST that appear on screen means top-level (ROOT) directory, and ".. \ " as far as above directory mean .
- Input with "\*" .VCD" in case of see particular extension and can work selecting File that extension consists of "VCD".
- Mark File begun by character that input if input ENTER Key after input character to search in case find File begun by specification character on screen, and mark first part of File table of contents if there is no correct File to condition.
- inputs Enter Key if input directory, file table of contents is seen equivalent to directory that is set again.
- Can specify file name by arrow KEY, and become display on screen lower column if input file name directly by KEY.
- Select or input file name and inputs Enter Key.



- On screen lower column in case of File that specify exists Over write file name ? (y/n) becomes display.
- In an equal File name if input "Y" KEY Up Load done Data write .
- Selected file is canceled if input "N" KEY and is converted in Up Load File choice screen.
- Also, File table of contents is loaded in case of cancel File choice by ESC Key and is converted by Intercommunication Mode.



- On screen lower column after Up Loading completion "Completed upload . (File : Up file name)" display do, and is converted by Intercommunication Mode.

```

***** EunHa Terminal for Auto Inserter (RT USM20, Ser000b53130a7c) *****
N 153 X+08191 Y+15737 U 01206 D 114 W-25
N 154 X+09682 Y+17334 U 01026 D 090 W-25
N 155 X+09683 Y+17587 U 01024 D 090 W-25
N 156 X+09681 Y+17841 U 01027 D 114 W-25
N 157 X+09680 Y+18098 U 01025 D 114 W-25
N 158 X+09684 Y+18601 U 01018 D 114 W-25
N 159 X+09684 Y+18861 U 01022 D 114 W-25
N 160 X+09683 Y+19116 U 01027 D 090 W-25
N 161 X+09682 Y+19359 U 01027 D 090 W-25
N 162 X+09684 Y+19621 U 01024 D 114 W-25
N 163 X+09683 Y+19878 U 01025 D 114 W-25
N 164 X+09685 Y+20140 U 01021 D 114 W-25
N 165 X+09685 Y+20383 U 01020 D 114 W-25
N 166 X+08277 Y+19881 U 00764 D 090 W-25
N 167 X+06875 Y+19881 U 00767 D 090 W-25
N 168 X+05452 Y+20245 U 00813 D 090 W-25
N 169 X+06748 Y+20392 U 01023 D 114 W-25
N 170 X+06841 Y+20140 U 01209 D 114 W-25
N 171 X+08153 Y+20139 U 01025 D 114 W-25
N 172 X+08251 Y+20391 U 01200 D 114 W-25 M 31

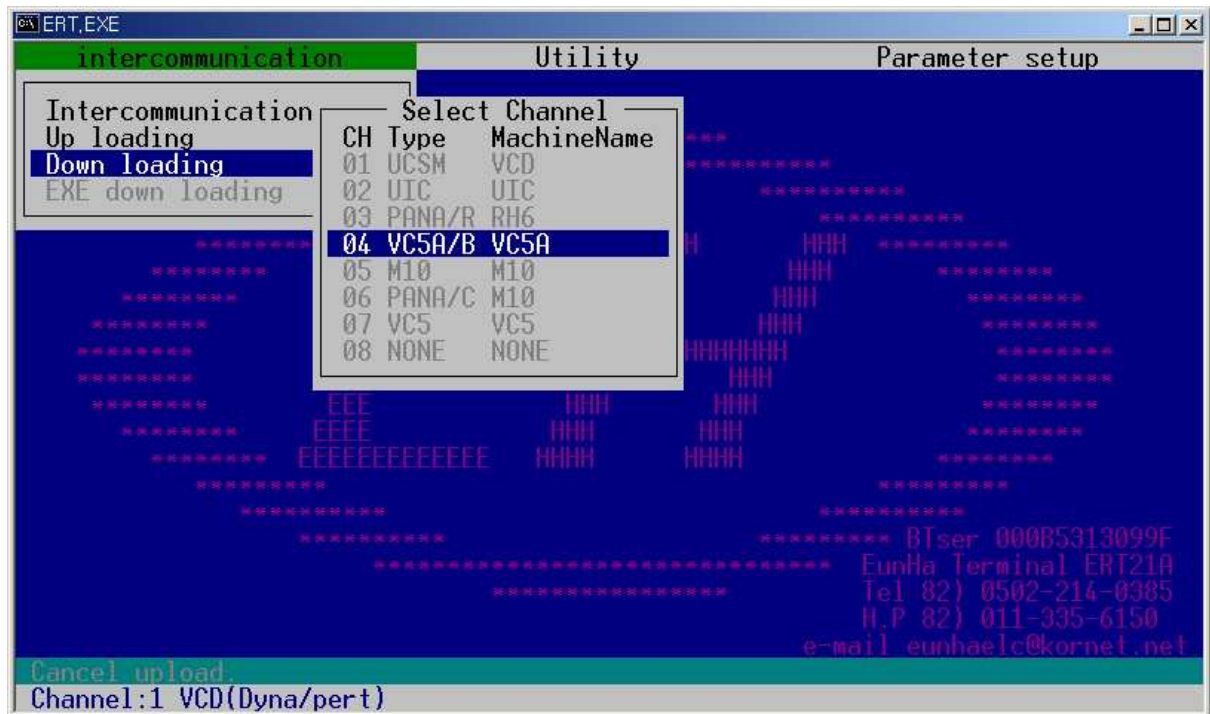
VM ACS03 E*
* Completed upload. (file:ACS03.VCD)
Channel:1 VCD Intercommunication Print OFF
  
```

(Reference) Use method by machine refers to "Machine by manual".

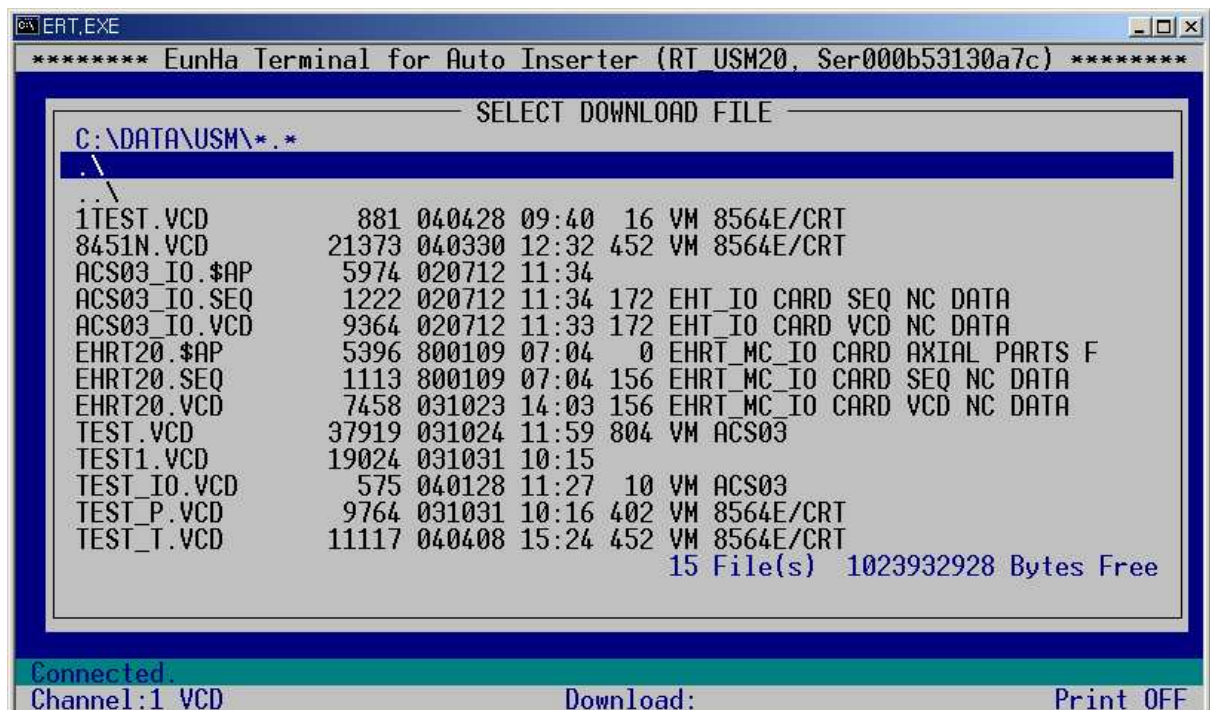
### 5-1-3. Down loading ( ALT + D )

; Transmit DATA in COMPUTER's DISK by machine.

- Select Channel of machine to connect.
- Appear as follows on screen if select **Intercommunication-Down Loading** in MAIN MENU.



- When selected Channel appears brightly and changes Channel present, change using "↑ ↓" KEY.
- If confirm but modifies Channel and presses Enter Key, File choice window becomes display.



- ". \ " of file table of contents LIST that appear on screen means top-level (ROOT) directory, and ".. \ " as far as above directory mean .
- Input with "\* .VCD" in case of see particular extension and can work selecting File that extension consists of "VCD".
- Mark File begun by character that input if input ENTER Key after input character to search in case find File begun by specification character on screen, and mark first part of File table of contents if there is no correct File to condition.
- inputs Enter Key if input directory, file table of contents is seen equivalent to directory that is set again.
- Can specify file name by arrow KEY, and become display on screen lower column if input file name directly by KEY.
- Select or input file name and inputs Enter Key.
- Also, File table of contents is loaded in case of cancel File choice by ESC Key and is converted by Intercommunication Mode.
- On screen lower column after Down Loading completion "Completed Download . (File : Up file name)" display do, and is converted by Intercommunication Mode.

```

***** EunHa Terminal for Auto Inserter (RT USM20, Ser000b53130a7c) *****
N 157 X+09680 Y+18098 U 1025 D 114 W-25
N 158 X+09684 Y+18601 U 1018 D 114 W-25
N 159 X+09684 Y+18861 U 1022 D 114 W-25
N 160 X+09683 Y+19116 U 1027 D 090 W-25
N 161 X+09682 Y+19359 U 1027 D 090 W-25
N 162 X+09684 Y+19621 U 1024 D 114 W-25
N 163 X+09683 Y+19878 U 1025 D 114 W-25
N 164 X+09685 Y+20140 U 1021 D 114 W-25
N 165 X+09685 Y+20383 U 1020 D 114 W-25
N 166 X+08277 Y+19881 U 0764 D 090 W-25
N 167 X+06875 Y+19881 U 0767 D 090 W-25
N 168 X+05452 Y+20245 U 0813 D 090 W-25
N 169 X+06748 Y+20392 U 1023 D 114 W-25
N 170 X+06841 Y+20140 U 1209 D 114 W-25
N 171 X+08153 Y+20139 U 1025 D 114 W-25
N 172 X+08251 Y+20391 U 1200 D 114 W-25 W31

*
*
* Completed download. (file:ACS03_IO.VCD)
Channel:1 VCD Intercommunication Print OFF

```

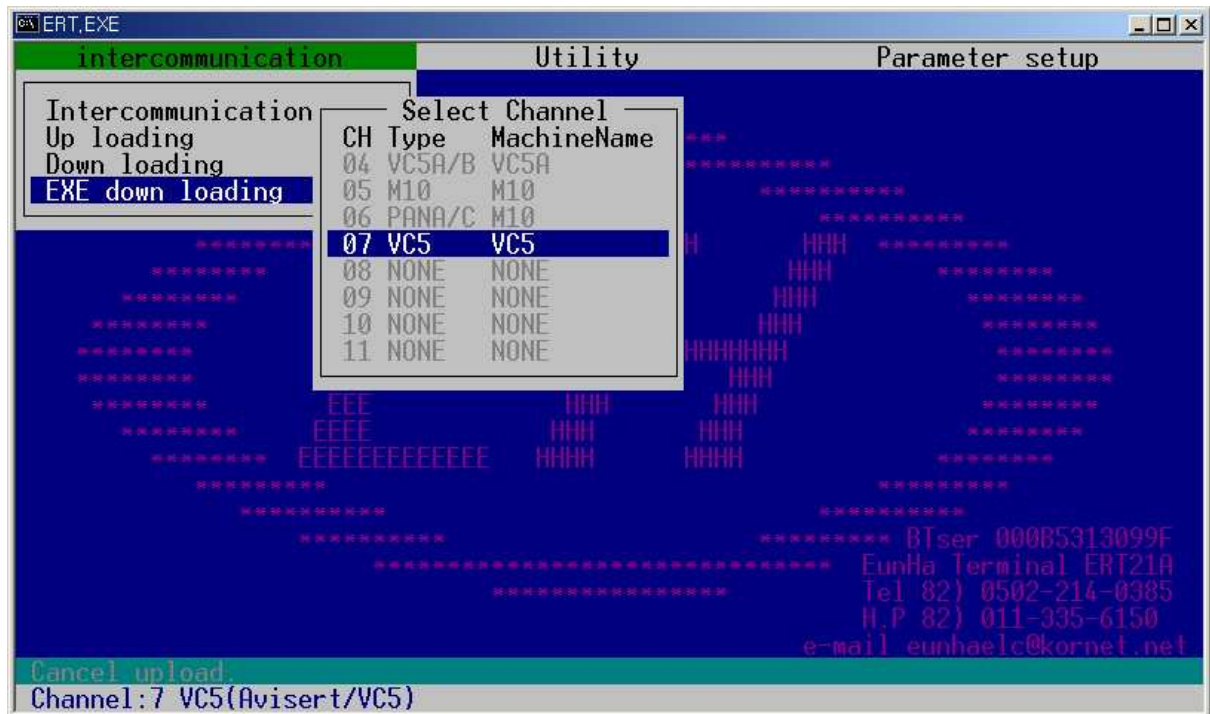
(Reference) Use method by machine refers to "Machine by manual".



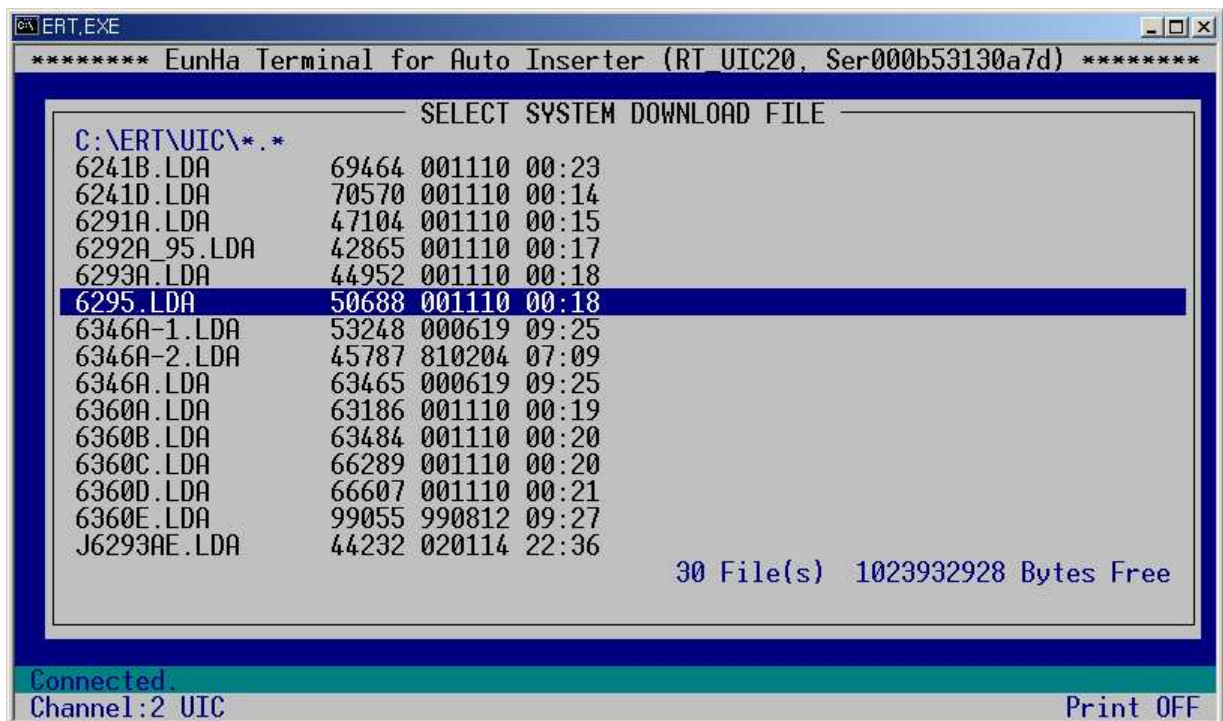
#### 5-1-4. EXE Down loading

; Transmit SYSTEM DATA of equipment in COMPUTER's DISK by machine.

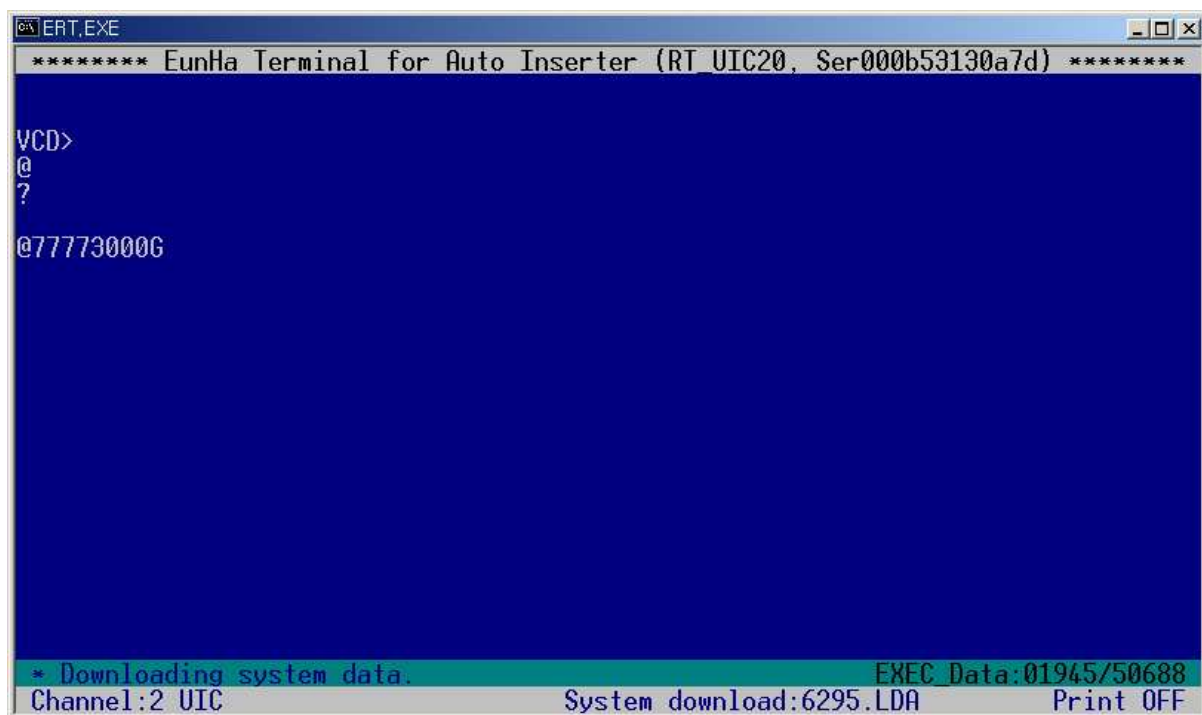
- Select Channel of machine to connect.
- Appear as follows on screen if select **Intercommunication-EXE Down Loading** in MAIN MENU.



- When selected Channel appears brightly and changes Channel present, change using "↑ ↓" KEY.
- If confirm but modifies Channel and presses Enter Key, File choice window becomes display.



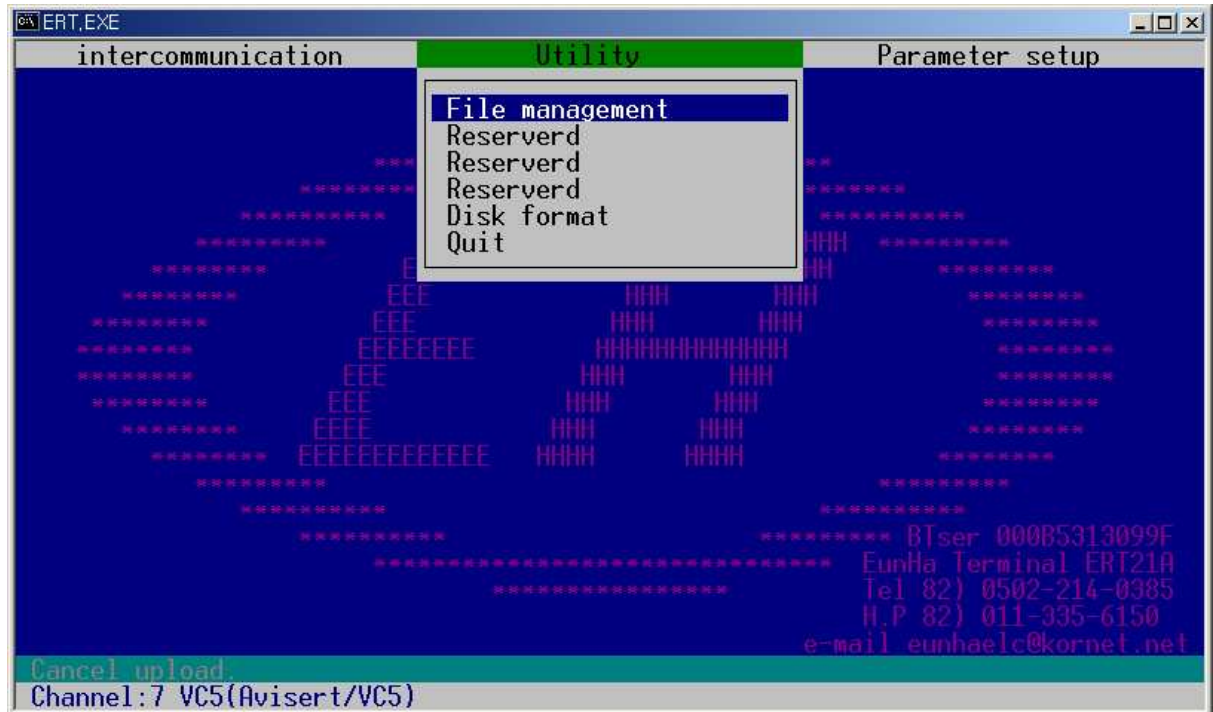
- ". \ " of file table of contents LIST that appear on screen means top-level (ROOT) directory, and ".. \ " as far as above directory mean .
- Input with "\* .VCD" in case of see particular extension and can work selecting File that extension consists of "VCD".
- Mark File begun by character that input if input ENTER Key after input character to search in case find File begun by specification character on screen, and mark first part of File table of contents if there is no correct File to condition.
- If specify file table of contents, file list is seen equivalent to pieces of wood material appointed pathname.
- Can specify file name by arrow KEY, and become display on screen lower column if input file name directly by KEY.
- Select system file of machine and inputes Enter Key.



- Transmit System DATA by machine and situation is displayed on screen lower column.  
EXEC\_Data:01945/50688  
└──┬── It is System Data's full capacity.  
└──┬── It is capacity that transmit System Data.
- On screen lower column if send is completed message "\* Set system initial data" display .
- Input ESC Key that is return by Main Memu after System Data Down Loading completion.
- \* Press ERT Module's "RESET" S/W certainly after System Data Down Loading is completed or power must initialize ERT Module because do OFF-ON.

(Reference) Use method by machine refers to "Machine by manual". (Special machine is used)

## 5-2. Utility



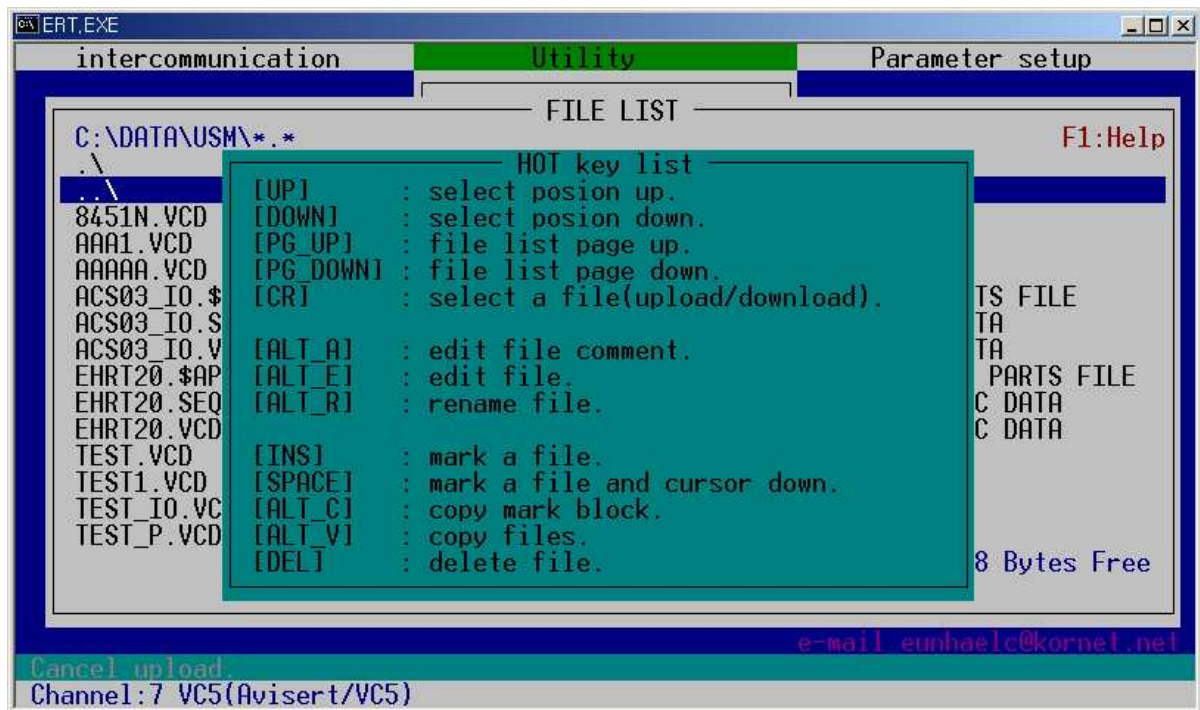
### 5-2-1. File Management

; File in DISK is displayed and do explanation addition and edit, File's edit, copy, delete, edit of a File name because uses function key.

- On screen if select **Utility-File management** in MAIN MENU lower part and Program table of contents display .



- ". \ " of file table of contents LIST that appear on screen means top-level (ROOT) directory, and ".. \ " as far as above directory mean .
- Can specify directory by arrow KEY and move and moves by Page unit using PG\_UP, PG\_DOWN KEY and finds file.
- inputs Enter Key if input directory, file table of contents is seen equivalent to directory that is set again.
- Input with "\* .VCD" in case of see particular extension and can work selecting File that extension consists of "VCD".
- Mark File begun by character that input if input ENTER Key after input character to search in case find File begun by specification character on screen, and mark first part of File table of contents if there is no correct File to condition.
- If press "F1" Key if see function Key used in File List, explanation about function Key with lower part screen is registered.



- Is returned in File List screen if any key presses.

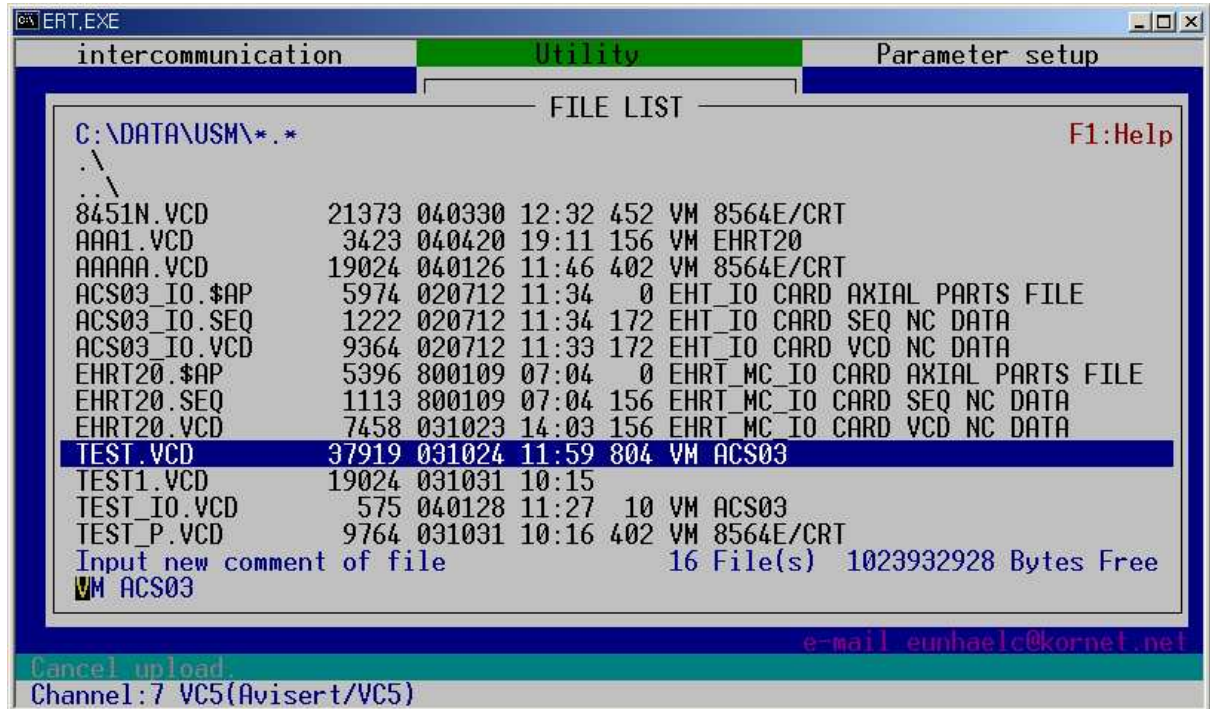


## 5-2-2. Explain function Key

ALT + A : Edit file comment.

; Add or modify explain in file.

- Is displayed as follows on screen if select file mane to add or modify explain in File List and presses together ALT Key and A Key.

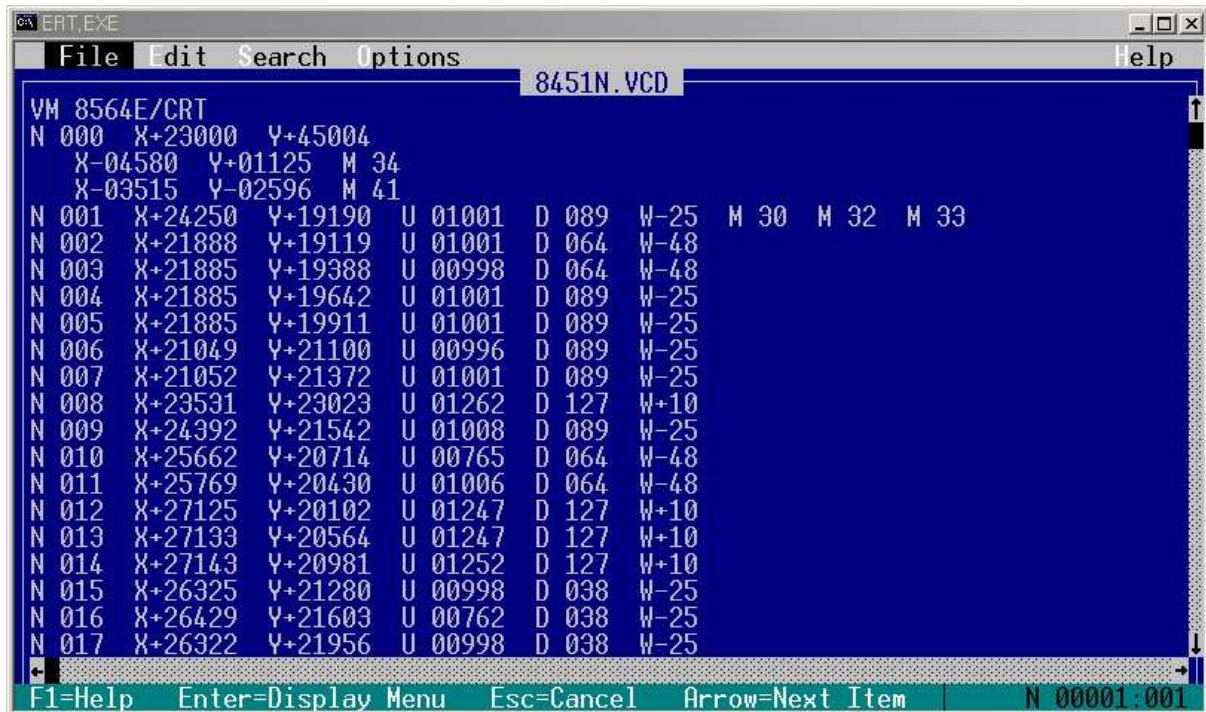


- If there is explain in selecting file, "Current explain" is displayed on screen lower column, Is marked "Selecting file name" if there is no explanation in selecting file.
- Input by wanted explanation and presses Enter key.
- \* Explanation to situation 33 letters of input that digit have .

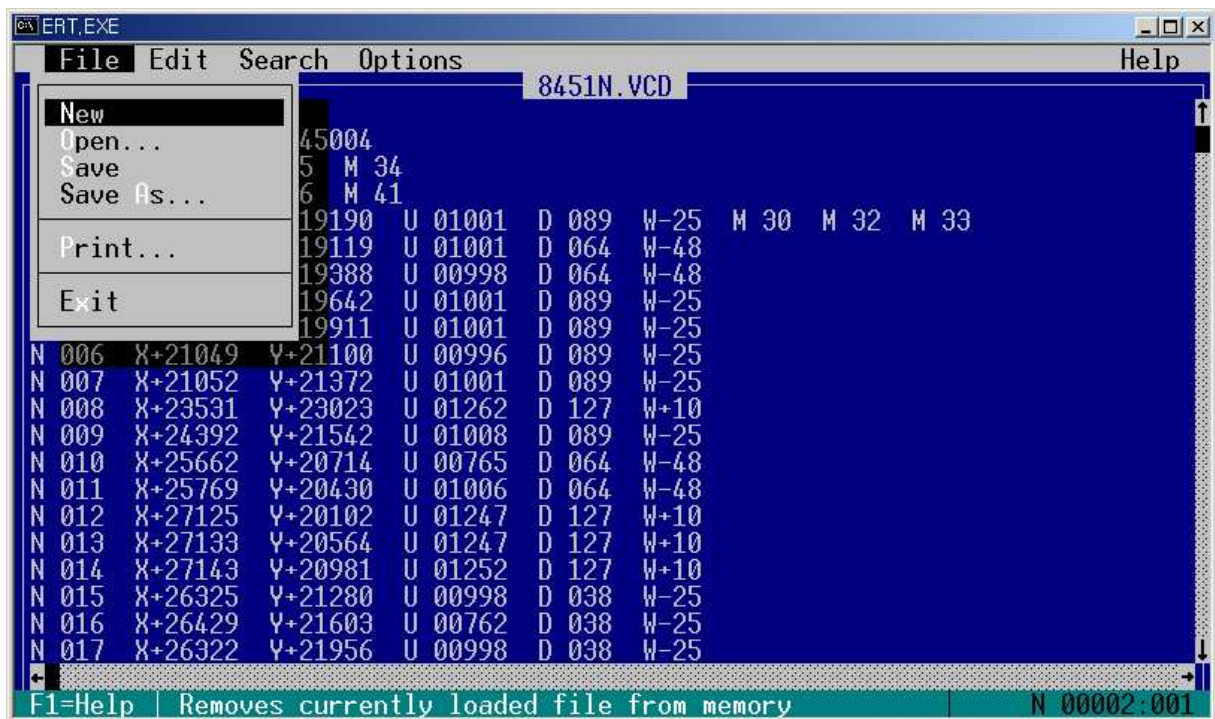
**ALT + E : Edit file.**

; Edit NC data file.

- If select file to modify in File List and presses together ALT Key and E Key, contents of file that specify as is converted in Edit screen as follows on screen appear on screen.



- Change according to Data Format of machine.(reference OS help )
- Correction completion or contents that modify if press Alt-F on the way and hits "S" KEY to disk write.



- When finish Edit and returns by Terminal, press "X" KEY after press Alt-F.

**ALT + R : Rename file.**

; Modify a FILE name.

- Appear as follows on screen if select file to edit in File List and presses together ALT Key and R Key.



- "Type New File Name : Selecting file" is displayed on screen lower column. Edit to wanted file and presses Enter key.
- In case of file such as file is extant to be modified, "Permission denied" is displayed and returns in file choice screen on screen lower column.
- If amendment of file is completed, "Renamed existing file to changed file" is displayed on screen lower column.

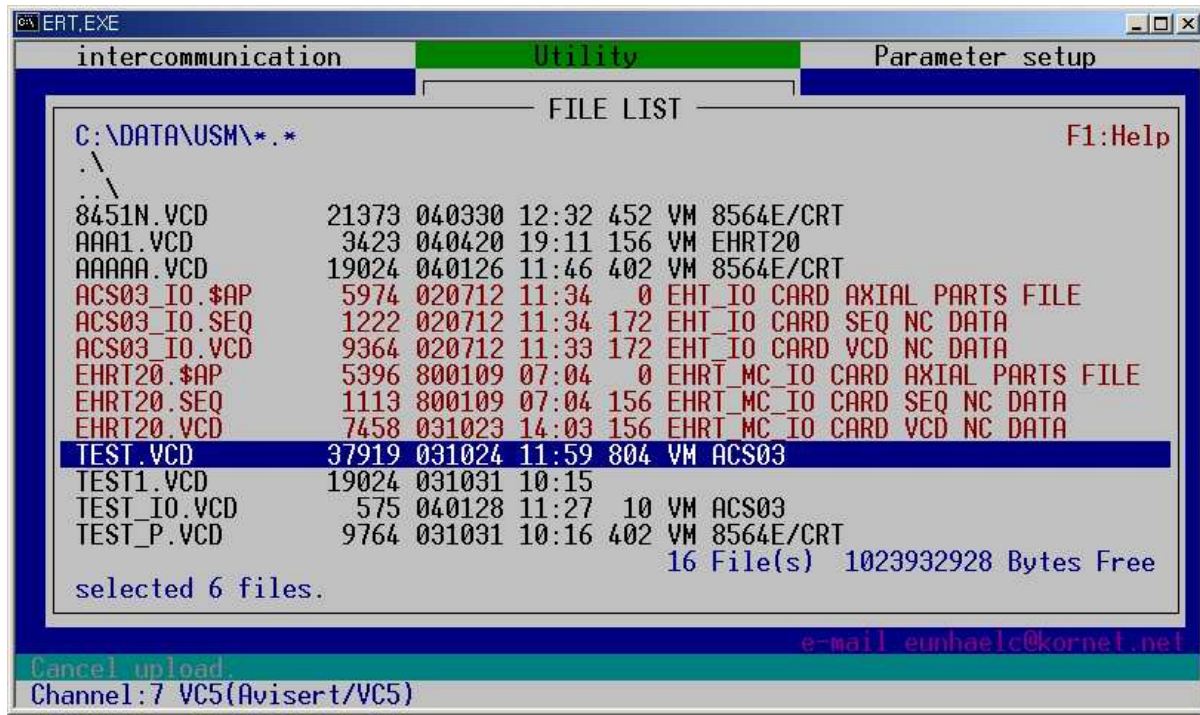


INS : mark a file

SPACE : mark a file and cursor down

; Select several file to copy or erase FILE stored to DISK.

- Select using INS Key or SPACE Key in case of file to copy or erase in File List is several.



- INS Key selects File that is situated present and position does not change after choice.

- SPACE Key selects File that is situated present and position moves by below File after choice.

- Selected File is been changed and confirms easily red color..

- The File is canceled in choice table of contents in case of select selected File again by INS Key or SPACE Key.

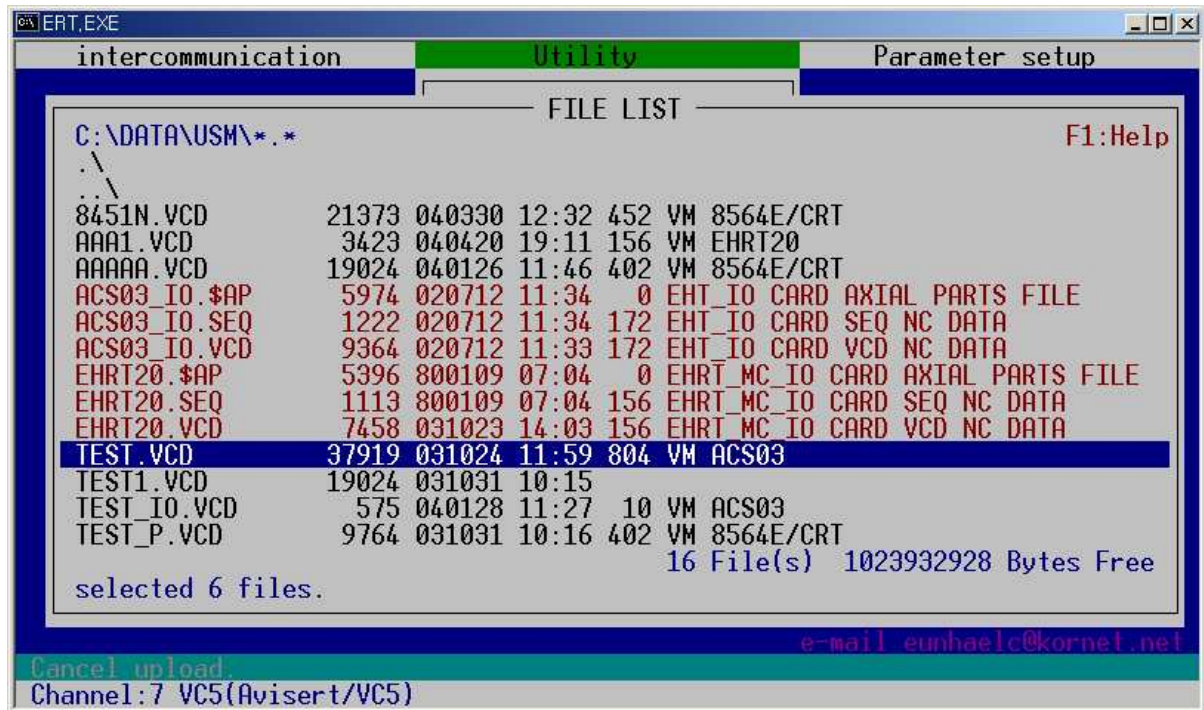


ALT + C : copy mark block

ALT + V : copy file

; Copy FILE stored to DISK by other Disk or directory.

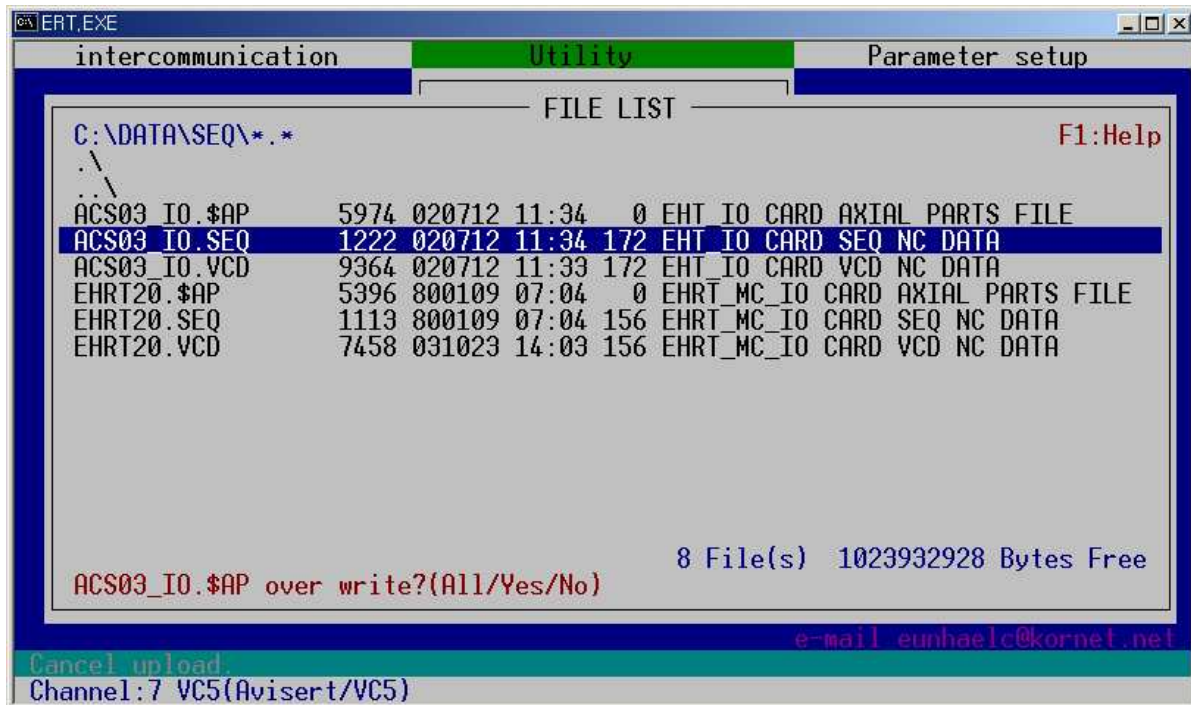
- Is display as follows on screen if press together ALT Key and C Key after select multiplex to use INS Key or SPACE Key in case of file to copy is several, and file in case of copies 1 file.



- Is copied and marks File's number that is copied with screen if press together ALT Key and V Key after File that select selects Directory or Disk to be stored.



- Is display like lower part in case of File that File is equal to Directory or Disk to be stored exists.

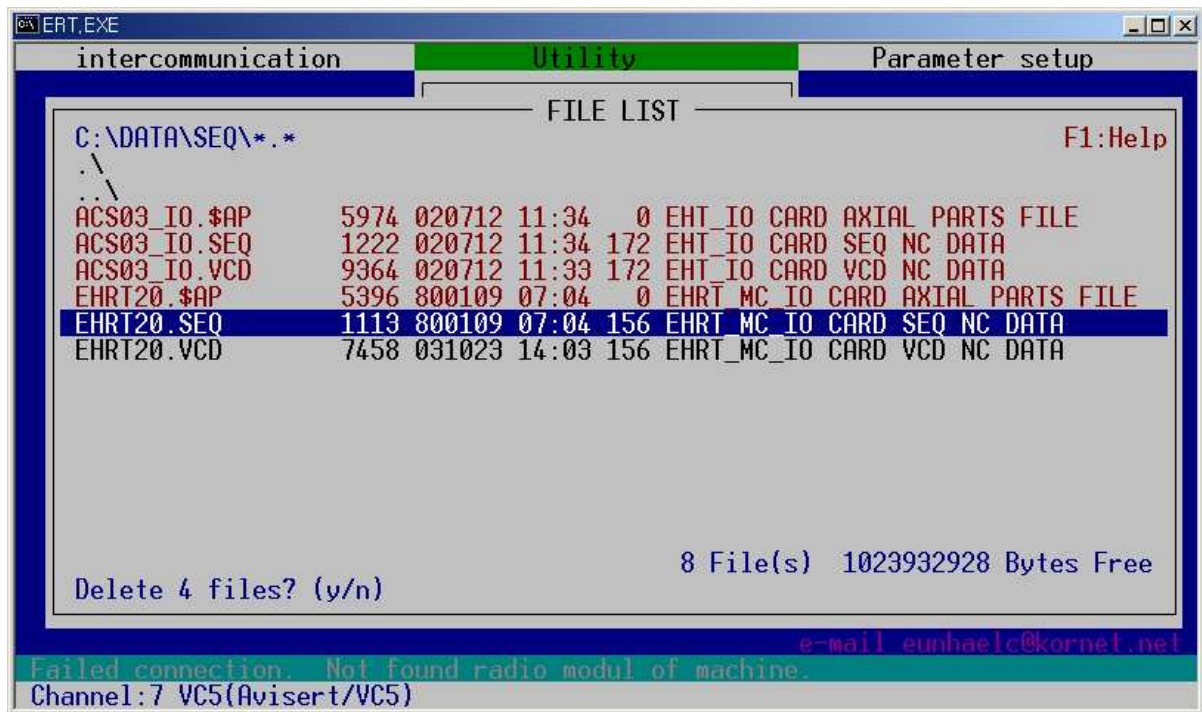


- Remove all existent File that is duplicate since including current File if selects "A" and copies by selected File.
- Remove current File and duplicate File if selects "Y" and copies selected File, and message such as upside is marked again in case of equal File exists since.
- Copy File after is selected canceling copy of current File and duplicate File if select "N", and message such as upside is marked again in case of equal File exists since.

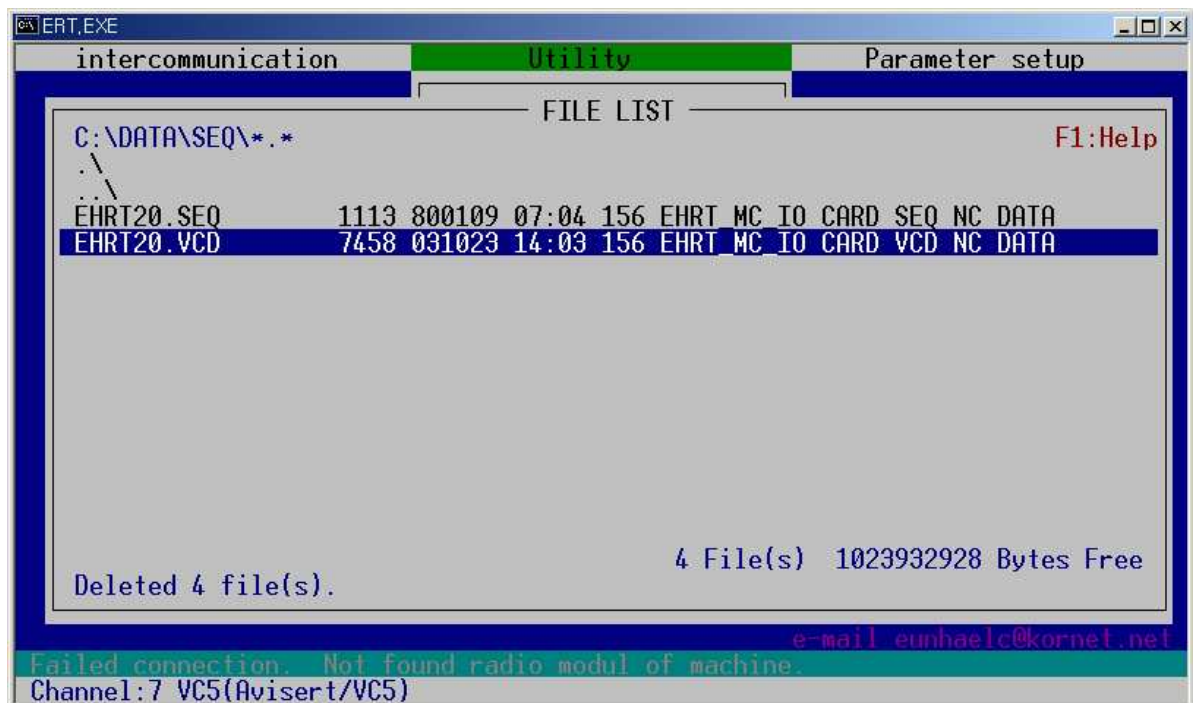
**DEL : delete file.**

; Erase file stored to disk.

- Is displayed as follows on screen if press DEL Key after select multiplex to use INS Key or SPACE Key in case of file to erase is several, and file in case of erases 1 file.



- If input "Y", selected file is erased.
- Is canceled delete of selected file and returns in file choice screen if input "N".



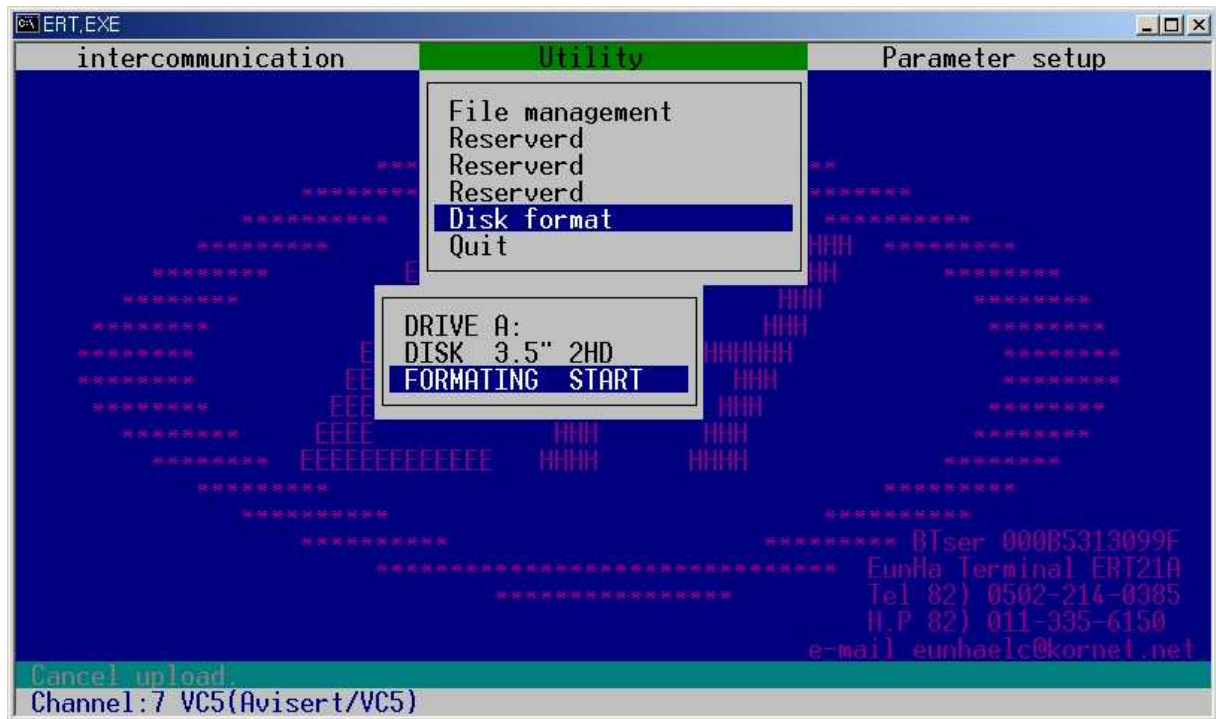
### 5-2-3. Reserverd

; It is menu that is not used.

### 5-2-4. Disk Format

; Format new disk by data storage.

- Is display as follows on screen if select **Utility-Disk format** in MAIN MENU.



- Specify Drive to do Format using Page UP, Page Down Key.
  - \* DRIVE A:
  - \* DRIVE B:
- Specify OPTION by Disk's kind using Page Up, Page Down Key.
  - \* 5.25" 2DD : 360 Kb
  - \* 5.25" 2HD : 1.2 Mb
  - \* 3.5" 2DD : 720 Kb
  - \* 3.5" 2HD : 1.4 Mb
- When change specifying contents again, change according to method that move by where change using ↑ ↓ KEY and explains above.
- If input Enter Key moving by FORMATING START, Format work is begun.
- \* Refer OS MANUAL at error.
- \* Is returned after work completion in phenomenon that Format command more than screen occurs by DOS COMMAND use on the way format work.

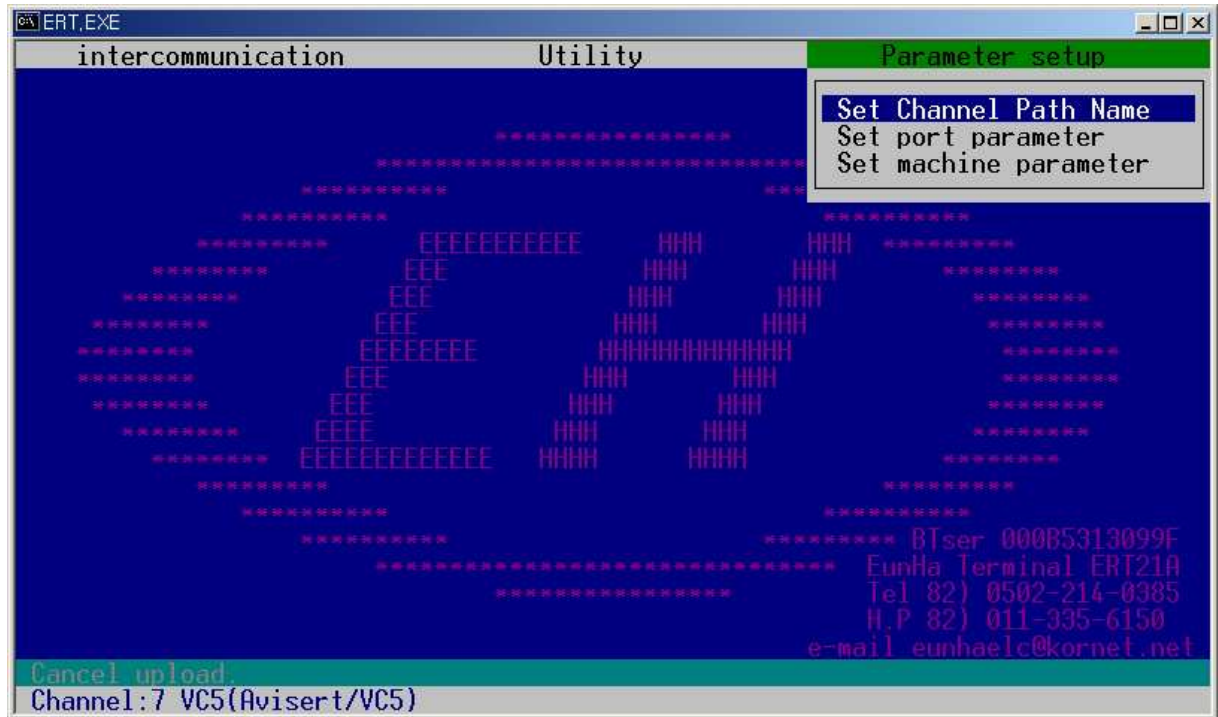
### 5-2-5. Quit

; End Terminal Program.

- End Terminal Program and returns by previous OS if select **Utility-Quit** in MAIN MENU.



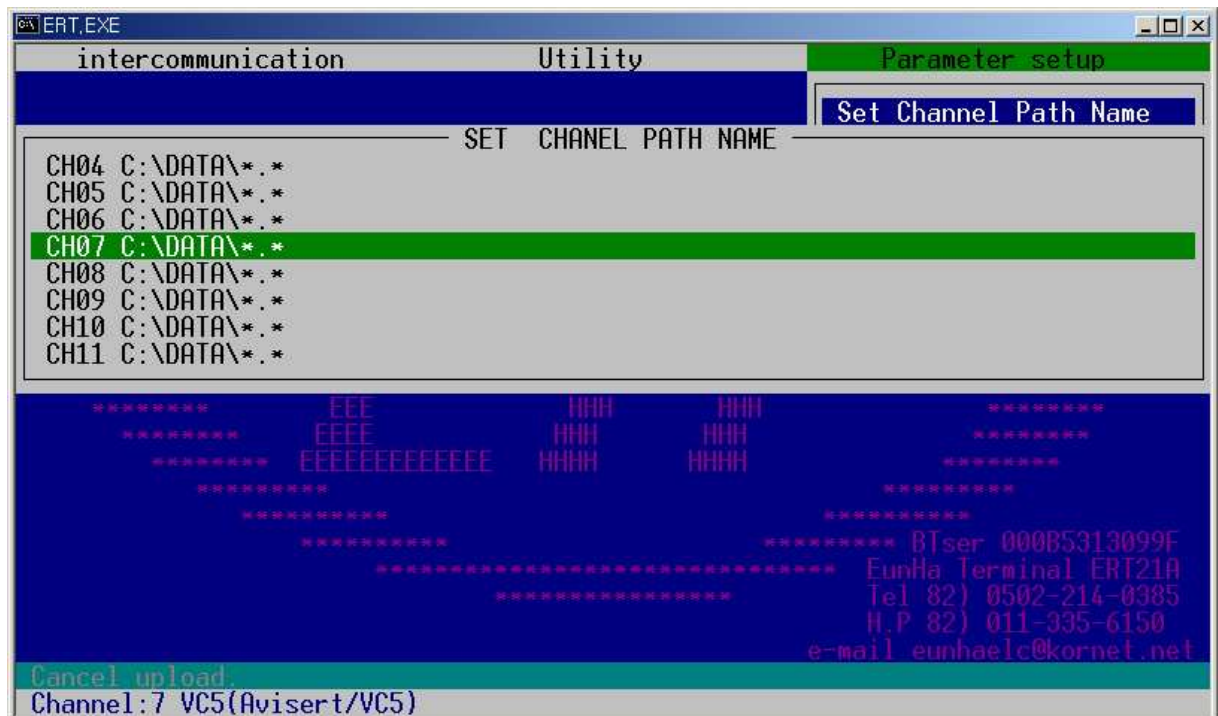
### 5-3. Parameter setup



#### 5-3-1. Set Channel Path Name

;Specify basis pathname to be used in each channel.

- Is display as follows on screen if select Parameter **Setup-Set** Channel Path Name in MAIN MENU.



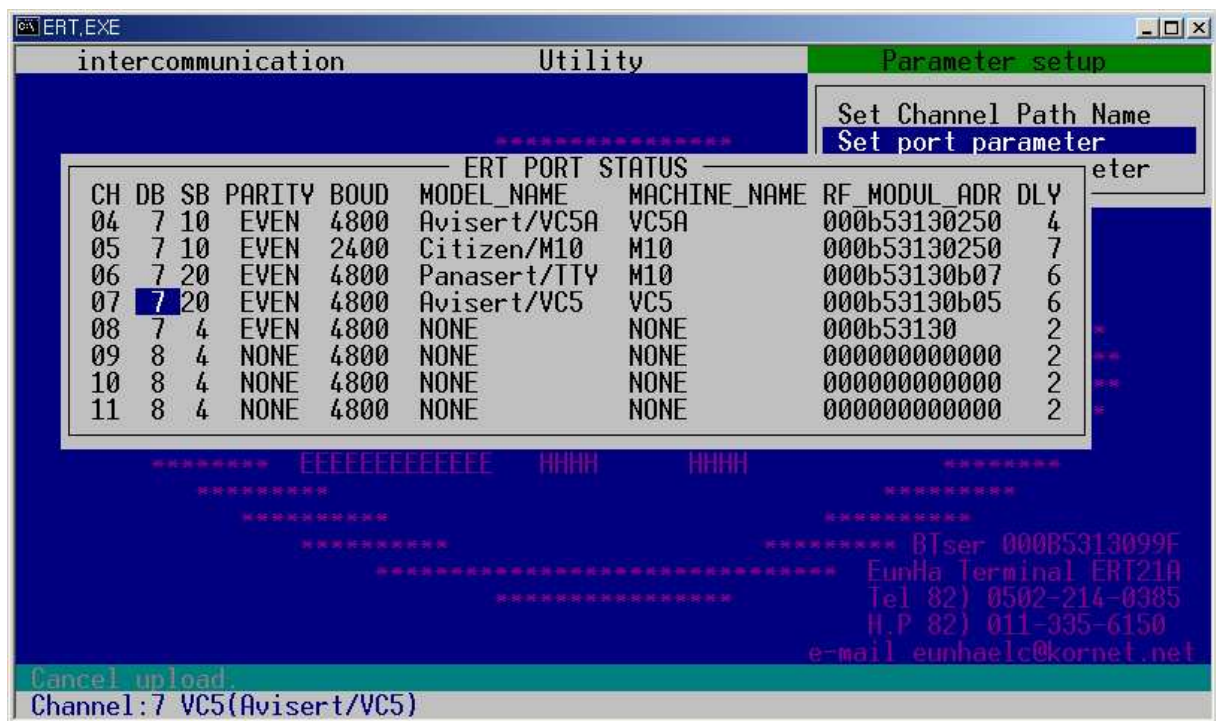
- Input Enter Key after input Path to be used moving channel furnace to set or modify.

- Path that is set here is begun pathname that is used when user selects File in Up Loading/Down Loading and so on before in pathname that is ignored and set here.
- Behind Path, all files of directory that is set in case of specify file and extension as "\*.\*" are display, and identical file of extension is marked in case of specify extension with "\*.VCD".
- Create directory automatically in case of directory that set is not to DISK.
- When returns by Menu, store changed DATA if input ESC Key and returns.

### 5-3-2. Set Port Parameter

; Specify communication condition of machine linked to channel.

- Is display as follows on screen if select **Parameter Setup - Set Port Parameter** in MAIN MENU.



- Move to field of channel to set by "↑ ↓" Key and "← →" Key.
- DB (Data bit), SB (Stop bit), PARITY, BOUD, MODEL\_NAME field use and set ENTER, Page Up, Page Down Key.
- DATA BIT, PARITY BIT, BOUD RATE refer to and set relevant machine manual.
- MODEL\_NAME sets kind of machine to be linked to channel.
- MACHINE\_NAME, RF\_MODUL\_ADR field inputes contents KEY.
- MACHINE\_NAME is character that is display on screen lower column at channel conversion, record called name (VCD#1 etc.) ordinarily.
- RF\_MODUL\_ADR inputes unique number of radio module that is linked in machine.

- SB (1 ~ 99) value modifies SB value when communication Error occurs because send-receive reason does not fit when communicate with machine.  
(Input into bigger value than present value at communication Error occurrence and finds value that ERROR is not produced.  
As value is big, transmission speed becomes slow.)
- DLY value in SB value in into optimum value automatically set.
- Keep modified contents and returns by MENU inputting ESC KEY if correction is completed.

**\* Communication condition by machine**

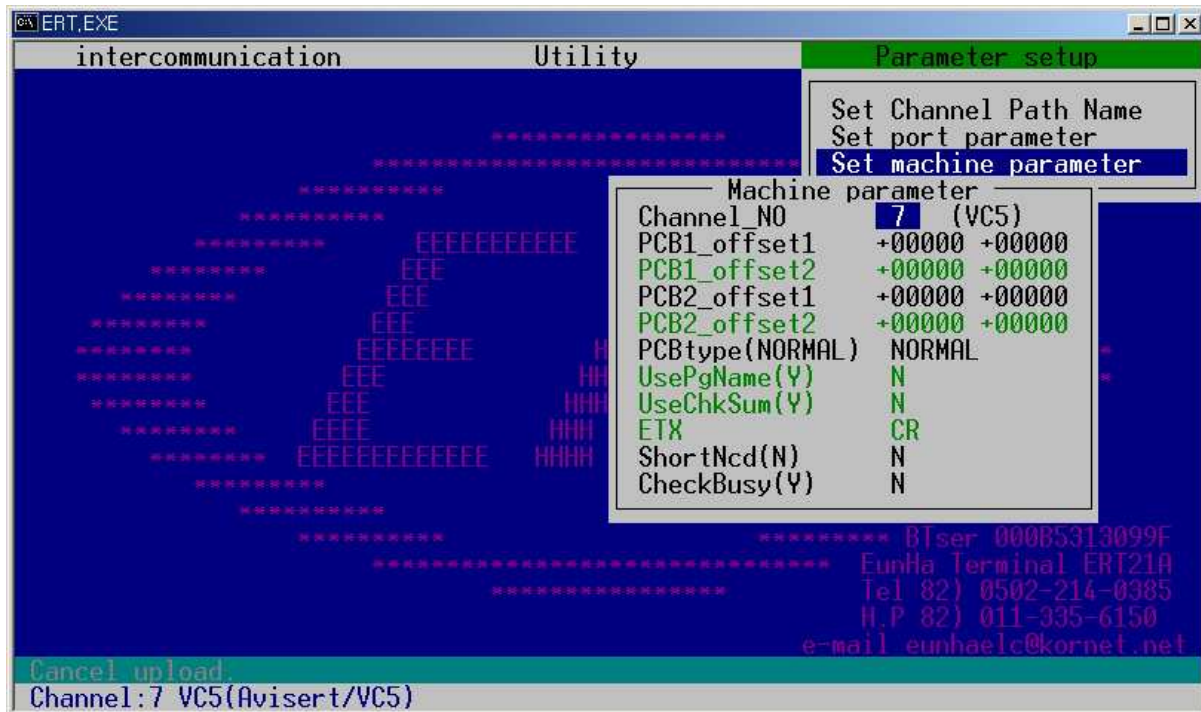
M/C	DATA BIT	SB	PARITY	BOUD RATE	DLY
VCD & SEQUENCER	8	4	NONE	4800	2
Board/Pecker(M-10)	7	10	EVEN	2400	7
Panasert(RHU, RH6)	7	4	EVEN	4800	2
Panasert(RT, RH)	7	4	EVEN	4800	6
Avisert(VC-4,VC-5)	7	20	EVEN	4800	6
Avisert(VC-5A)	7	10	EVEN	4800	4
Universal	8	10	NONE	9600	2

- \* Communication condition is machine drawing that is set as alteration is available and different from above chart in each machine itself.

### 5-3-3. Set machine Parameter

; Specify Offset Data of each channel and communication style.

- Is display as follows on screen if select **Parameter Setup-Set machine Parameter** in MAIN MENU.



- Parameter used in present Channel's machine is marked green.
- Move to field of channel to set by ↑ ↓Key.
- "Channel\_NO" can be registered, and select other Channel because uses Page Up, Page Down Key or Enter Key current Channel.  
Selected Channel's Parameter cost is display on screen, and Parameter used according to kind of machine is mistaken.  
Parameter that used Parameter is not used as is display as "Green" is display as "Black color".
- PCB Offset value inputes numerical value to correct deviation of NC DATA coordinate value and machine coordinate value.  
The first value is X value and the second value is Y value.  
Input of value inputes by "X value, y value" or "X value y value".
- Channel\_NO, PCB\_TYPE, UsePgName, UseChkSum, ETX, ShortNcd (N), CheckBusy (Y) field use and set Page Up, Page Down Key or Enter Key.

**"PCB\_Type"** : Select Type to use in revision among over establish PCB Offset value (PCB1, PCB2).

NORMAL : Transmit by machine as NC Data's situation without Offset Data's revision.

PCB1 : Correct Offset value by command of PCB1 and transmits NC Data by machine.

PCB2 : Correct Offset value by command of PCB2 and transmits NC Data by machine.

**"UsePgName"** : Select Down Load city Program Name's use availability in Panasert machine.

Y : Do not use Program Name.

N : Use Program Name.



**"UseChkSum"** : Select use availability of Up Load, Down Load city Chksum in Panasert machine.  
Y : Do not use Chksum.  
N : Use Chksum.

**"ETX"** : Select Line END Code used at Data send-receive in Panasert machine.

CR : Set END Code as "CR".  
^C : Set END Code as "^C".

**"ShortNcd"** : Erase and becomes Downloading in case of Data cost is same with NC Data's blank character and move line in Down Load.  
Data that is not used in NC Data in Avisert machine erases and becomes downloading.  
Y : Use ShortNcd function.  
N : Do not use ShortNcd function.

**"CheckBusy"** : Establish use of sync signal out from machine for perfect communication at machine and communication.  
Set "CheckBusy" as "N" in case of Reader Start signal is not display from System Data  
Down Load city machine in Avisert machine and does not use inspect of quality function of Busy signal.

Can not transmit Data by machine if there is no Reader Start signal when set as "Y".

Y : Examine Reader Start sign out from machine.  
N : Do not examine Reader Start sign out from equipment.

**\* Reference**

CheckBusy function in some machine Data function applied to Down Loading by machine be.

## 6. Contents and action method of error

### 6-1. Communication (RFM) error.

HOST and communication Error of radio module for machine .

- Press Reset button of radio module or Power does OFF-> ON.
- Execute again after end Terminal Program.

### 6-2. Can not connect. Target address is not valid.

Radio module Serial No. of selected channel was not registered.

- Input radio module Serial No. of relevant channel in Menu "Set ERT port data".

### 6-3. Failed connection. Not found radio module of machine.

Can not control equipment radio module in HOST Module.

- Power check of equipment radio module .
- Check whether radio module and Serial No of placed radio module of relevant channel are same..
- Press Reset button of radio module or Power does OFF-> ON.

### 6-3. D210 : Check machine status. [Continue / Retry / Exit]

D300 : Check machine status. [Continue / Retry / Exit]

D410 : No response down data. [Retry / Exit]

There is no response of machine or power of machine OFF do .

- Check HOST or Power OFF of radio module for machine or Cable's disconnection.

### 6-4. A: Drive status code is 08H

Press [ESC] to main meun.

Press [Enter] to drive check.

Other key to input new path name.

Occurrence when there is no DISK to Disk drive .

- Is converted by Main menu, and puts Disk if input ESC key and reperuses if press Enter Key.  
Or, input other Drive or directory.

### 6-5. Drive D: is not available.

Occurrence when Drive to use does not exist to Computer .

- Enroll correct Drive and pathname in Menu "Set Paht Name".

### 6-6. File not found.

Occurrence when file that specify is not extant to DISK .

- Input correct file name again.

## 7. Use system disk

- 1) SYSTEM DISK offered with SCALE need not to use normal times because it is situation that is placed to COMPUTER when deliver from a warehouse but use in case of produce following circumstance.
- 2) Occasion to change COMPUTER.  
When COMPUTER does terminal program's rehabilitation impossibility that is stored because taint or damage to virus .  
Erased terminal program through user's mistake or when program does not act.
- 3) SCALE PROGRAM does SETUP using SYSTEM DISK in case of it is circumstance such as clause "2)".  
It does terminal program setup after treatment from virus that in case of was caught to virus.
- 4) Insert SYSTEM DISK to DRIVER "A:".   
If execute "INSTALL.BAT" in System disk, terminal program is placed to Computer.
- 5) System disk offered by CD inserts to CD ROM Driver.  
If execute "INSTALL.BAT" in ERT directory of CD, terminal Program is placed to Computer.
- 6) On screen if Inatall is completed Eunha RF terminal setup completion Display do .
- 7) When execute in MS-DOS, terminal program is executed if input "ERT" in situation "C : W >".
- 8) Make and uses Eunha Terminal icon on desktop in Windows.
- 9) Must examine "Port Parameter" and "Machine Parameter" because there is in case of Channel's Parameter mistakes in case of installed Terminal Program.

## \* Dyna/pert VCD/SEQ Terminal \*

### 1. Up Loading

- When use Read Only Memory of topology that input several NC Program to Sequencer's CPU Board, look like go "PROG:" on screen, input Program No and Enter Key.
- "Press 'H' or 'L' ?" is registered on screen lower column.  
If input Key 'H', the Data Downloading speed becomes fast and safe Down Loading.  
If input Key 'L', the Data Downloading speed is slow.
- "\* No program [Retry/Exit]" In case of Error occurs .  
(When PROGRAM does not exist into tool of VCD, SEQUENCER, DIP etc., it is Error that is produced if try UP LOADING.)

R KEY : Up Load File choice window Display do and is converted by Up load Mode.

E KEY : Up Load Mode is canceled and is converted by Intercommunication Mode.

### 2. Down Loading

- When use Read Only Memory of topology that input several NC Program to Sequencer's CPU Board, look like go "PROG:" on screen, input Program No and Enter Key.
- Press 'H' or 'L' appears on screen lower column and input "H" KEY if input "L" KEY if wants data type Long type, wants Short type.  
Sequencer's occasion inputs "T" Key ordinarily.
- Cause appears when Error was produced into this or machine while when try DOWN LOADING in MANUAL MODE, or machine operates in case of Error "Dxxx : Check machine status . [Continue/Retry/Exit]" occurs.

C KEY : Begin selected File's Down Loading again in present state.

R KEY : Down Load File choice window Display do and is converted by Down load Mode.

E KEY : Down Load Mode is canceled and is converted by Intercommunication Mode.

### 3. DYNA/PERT SEQUENCER, VCD M/C SETUP

\* Occasion EUNHA TERMINAL and machine and communication that set of JUMPER of CPU BOARD of machine is done wrongly are not been.

\* 기계의 CPU BOARD 종류에 따라 아래의 표를 참고하여 JUMPER를 설정한다.

#### Outside backup memory style CPU BOARD

CUR — 39  
┌ 38 ---> RXD  
RS232 └ 37  
  
┌ 26  
└ 25 ---> DSR  
  
┌ 28  
└ 27 ---> CTS  
  
┌ 30  
└ 29 ---> RTS  
  
┌ 22  
└ 23 ---> TXD  
  
RS232 ┌ 3  
└ 2  
CUR — 1

#### Inside backup memory style CPU B'D

┌ 67  
└ 68 ---> DSR  
  
┌ 65  
└ 64 ---> CTS  
  
┌ 69  
└ 63 ---> RTS

## 4. CABLE CONNECTION

### 1) Computer to ERT-HOST Module Cable (2m)

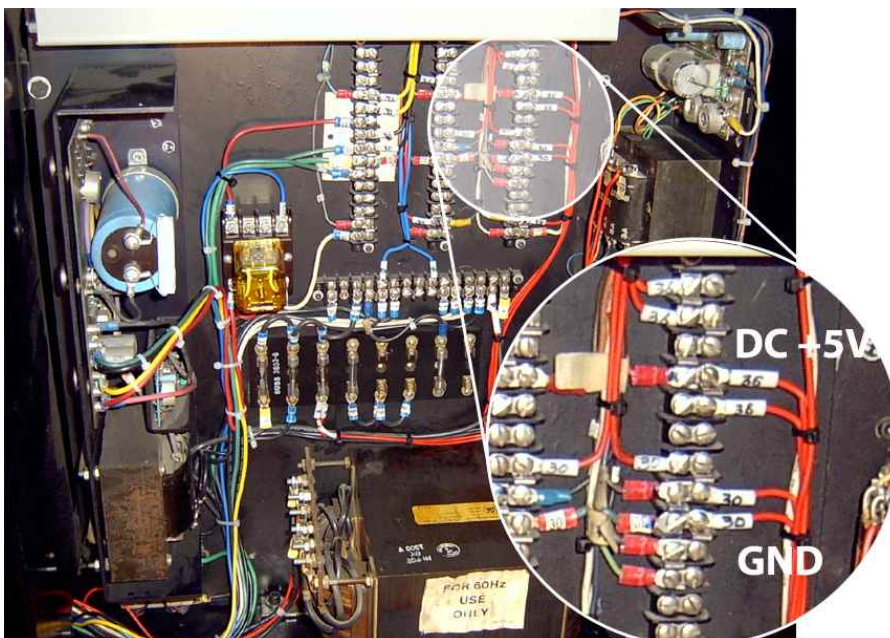
(COMPUTER 9PIN(-),(*25PIN(-)))		(ERT-HOST 9PIN(+))
(RX) 2 (*3) (RED)	<-----	2 (TX)
(TX) 3 (*2) (YEL)	----->	3 (RX)
(GND) 5 (*7) (BLK)	-----	5 (GND)
(DTR) 4 (*20) ( )	-----	4 (DSR)
(DSR) 6 (*6) ( )	<-----	6 (DTR)
(RTS) 7 (*4) (ORG)	----->	7 (CTS)
(CTS) 8 (*5) (WHT)	<-----	8 (RTS)
F.G (BRN)	-----	F.G
(WHT) +5V (GRN)	----->	9 DCIN(+)
(BLK) GND (BLU)	-----	1 DCIN(-)

### 2) ERT-RS232 Module to Dyna/Pert(Sequencer, VCD) Cable (4m)

(ERT-RS232 9PIN(-))		(MACHINE 25PIN(+))
(RX) 2 (RED)	<-----	3 (RX)
(TX) 3 (YEL)	-----	2 (TX)
(GND) 5 (BLK)	-----	7 (GND)
(DTR) 4 ( )	-----	20 (DTR)
(DSR) 6 ( )	-----	6 (DSR)
(RTS) 7 (ORN)	----->	4 (RTS)
(CTS) 8 (WHT)	<-----	5 (CTS)
F.G (BRN)	-----	F.G
DCIN(+) 9 (GRN)	<-----	
DCIN(-) 1 (BLU)	-----	
		+5V (WHT) Power Cable (1.5m)
		GND (BLK)

### 3) 5V Power Connection ( \* Connect after voltage verification certainly \* )

- VCD : TB4 terminal block of backside Power Unit of machine.(No.36 -> +5V, No.30 -> GND)



## \* Avisert VC4/5 Terminal \*

### 1. Up Loading

- If press ENTER KEY after input "WR program name", NC Data is transmitted and is write to DISK by appointed file name from Avisert.

### 2. Down loading

- Transmit file that specify if input ENTER KEY after input "RE program name" by Avisert.

**(Reference)** In Parameter Setup Menu-Set port parameter if input is not been by machine while transmit Program and ERROR is produced value "SB" if input bigger numerical value than present value, transmission speed becomes slow but can transmit perfectly Program .

### 3. System data Down Loading

- \* **Warning** : Can do System Data Down Loading though set relevant Channel as "Data bit 8, Parity Bit EVEN, Boud rate 4800, SB 20" in MAIN MEUN's Parameter Setup Menu-Set port parameter certainly before begin System Data Down loading work.

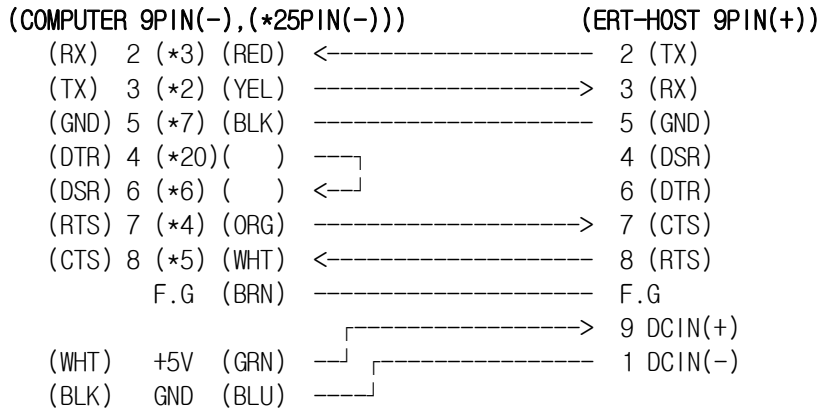
**(Reference)** In Parameter Setup Menu-Set port parameter if input is not been by machine while transmit Program and ERROR is produced value "SB" if input bigger numerical value than present value, transmission speed becomes slow but can transmit perfectly Program.

- \* **Warning** : Avisert System Data's file name consists of ". SYS".

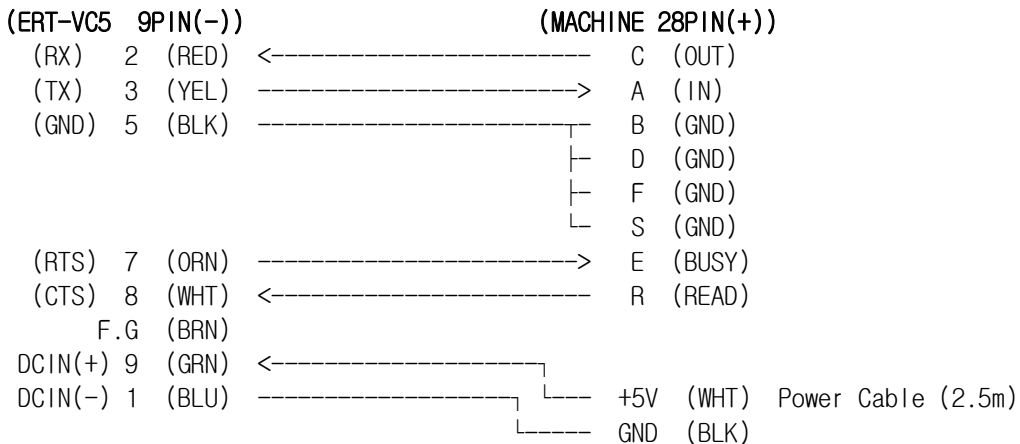
- \* Press ERT Module's "RESET" S/W certainly if System Data Down Loading is completed or power must initialize ERT Module because do OFF-ON.

## 4. CABLE CONNECTION

### 1) Computer to ERT-HOST Module Cable (2m)



### 2) ERT-VC5 Module to Avisert VC4/5 Cable (4m)





## \* Avisert VC5A/B Terminal \*

### 1. Up loading

- Input NC Data's TC command in Avisert.
    - \* [F4] function of screen selects "[F4] PIP" and "[F2] PUNCH" after set so that "PIP" becomes pressing [EXTEND] of manufacturing panel left side lower column of machine.
    - \* "Program name stored to machine to transmit", TT if "> P" appears on screen lower column : [ENTER]
- ex) >P *SAMPLE,TT:*

### 2. Down loading

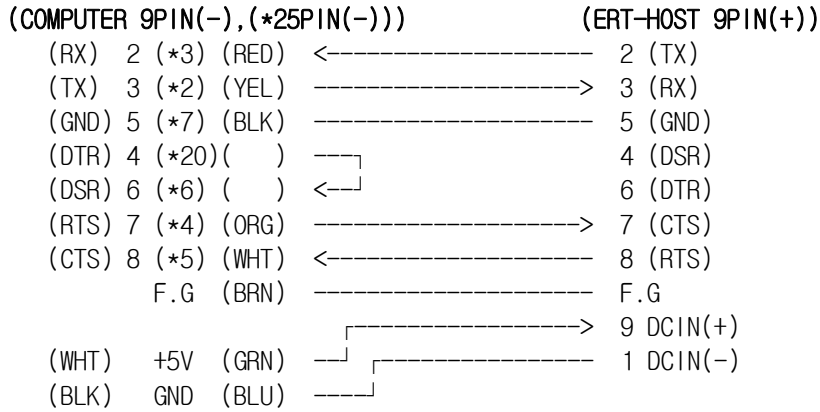
- Input NC data's receive command in Avisert.
    - \* [F4] function of screen selects "[F4] PIP" and "[F1] READ" after set so that "PIP" becomes pressing [EXTEND] of manufacturing panel left side lower column of machine.
    - \* "TT : Program name to store in machine" [ENTER] if "> R" appears on screen lower column
- ex) >R *TT:,SAMPLE*

### 3. AVISERT (VC-5A, VC-5B) M/C SETUP

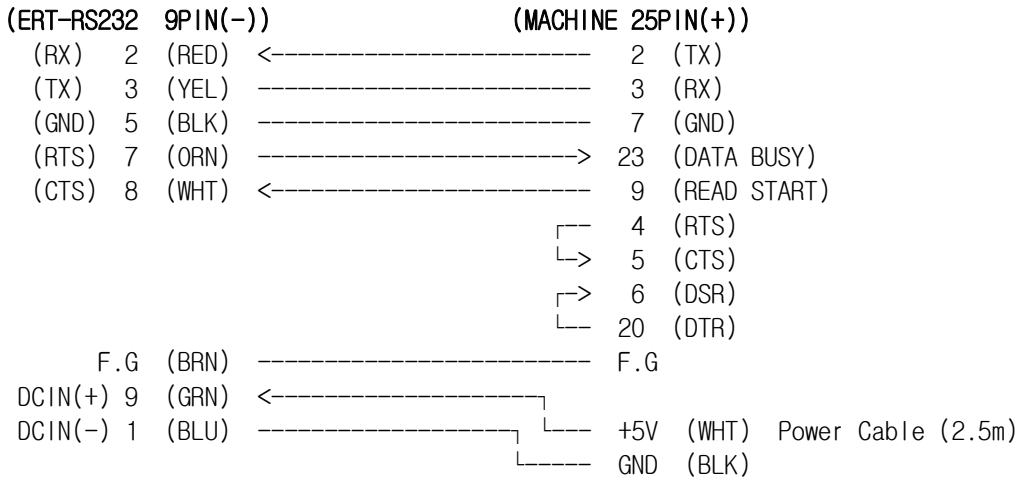
- When Data send-receive Error occurs, confirm and modifies subsequent Parameter.
- Select "SYSTEM" in AVISERT's operation panel and sets BIT of the first field as "1 0 0 0 0 0 0 1" in Page "\* OPTIONAL PARAMETER BIT \*" during SYSTEM PARAMETER.

## 4. CABLE CONNECTION

### 1) Computer to ERT-HOST Module Cable (2m)

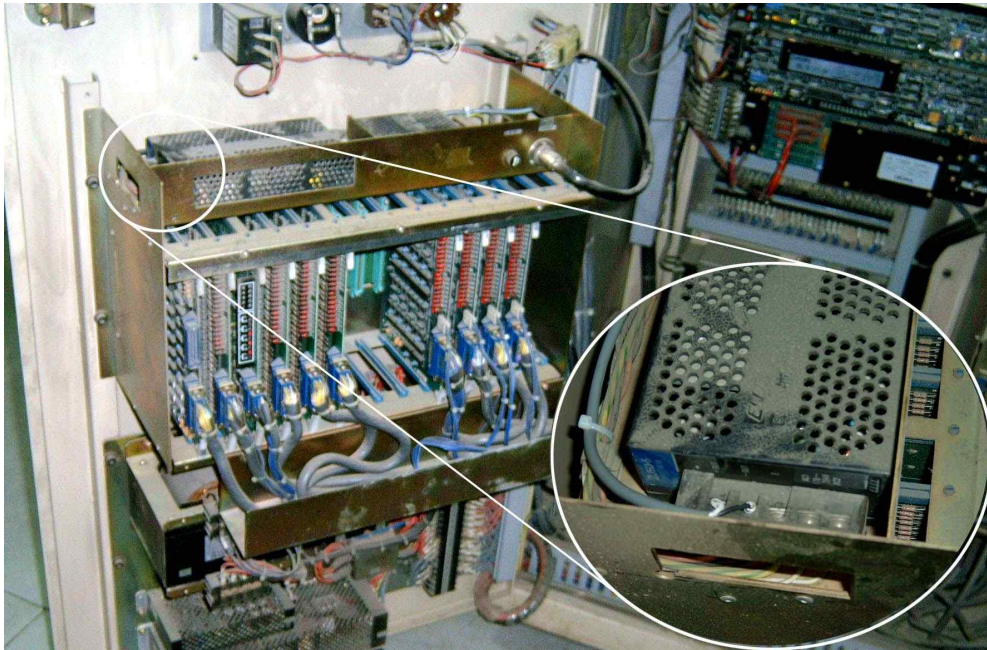


### 2) ERT-RS232 Module to Avisert VC5A/B Cable (4m)

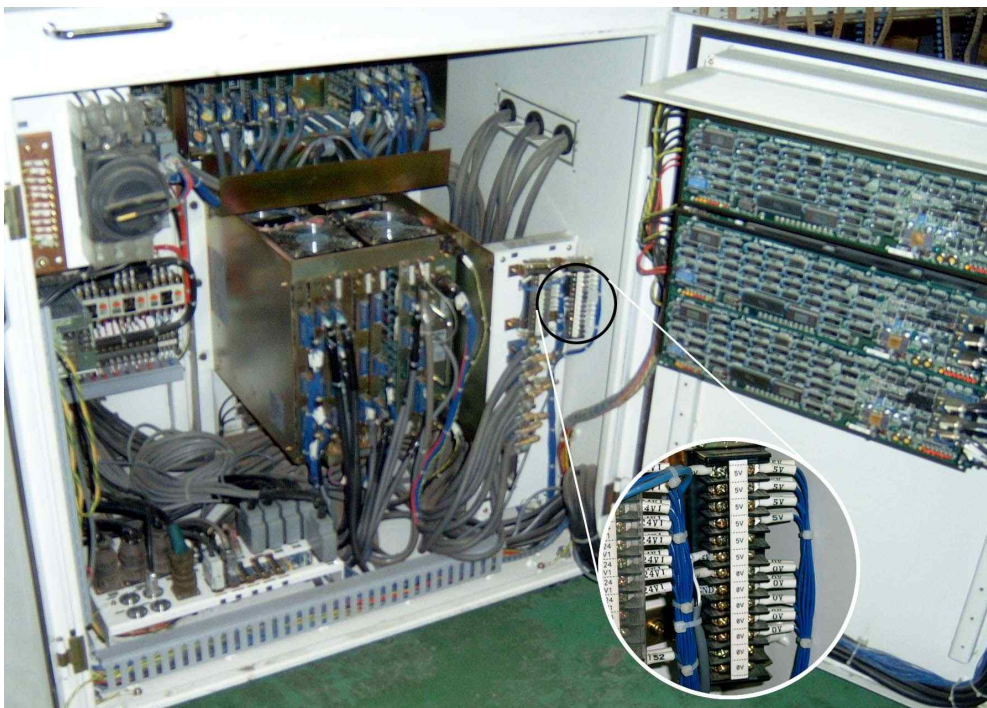


### 3) 5V Power Connection

– TDK VC5A



– TDK VC7B



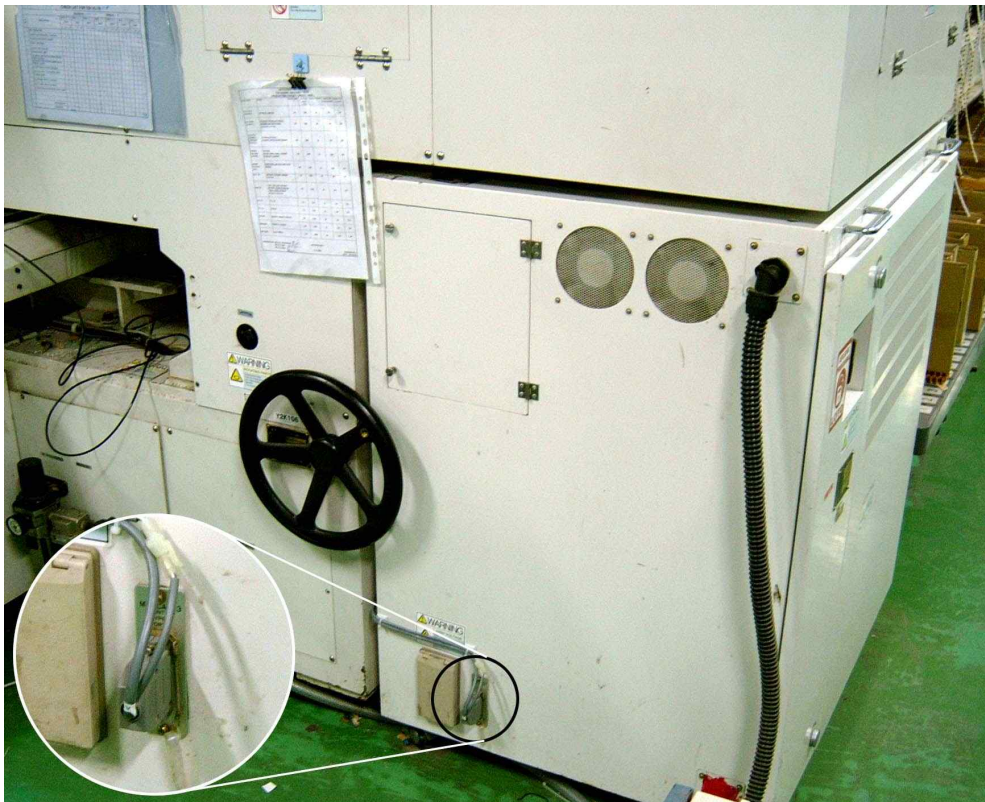


#### 4) Data Cable Connection

- TDK VC5A



- TDK VC7B



## \* Panaser t(RS232port) \*

- \* Panaser t RH6, RHU etc..
  - Sets Mode S/W of operation panel by "MANUAL", "EOP", "CPU".
  - "Parameter Setup-Set Machine Parameter" in Menu set as "UsePgName = N, UseChkSum = Y, ETX = ^ C".



- \* Panaser t AVK2, AVK2B, JVK2, RHU2, RH2, RH3
  - set "ON-LINE", "EOP" in ON state after suspend machine.
  - "Parameter Setup-Set Machine Parameter" in Menu set as "UsePgName = Y, UseChkSum = Y, ETX = ^ C".



### 1. Up loading

- "PG Name : P000" is registered on screen after select Up Load File in the case of AVK2, AVK2B, JVK2, RHU2, RH2, RH3.
- If input Enter Key after input File "P123" had stored in machine, appointed File is transmitted by Terminal.

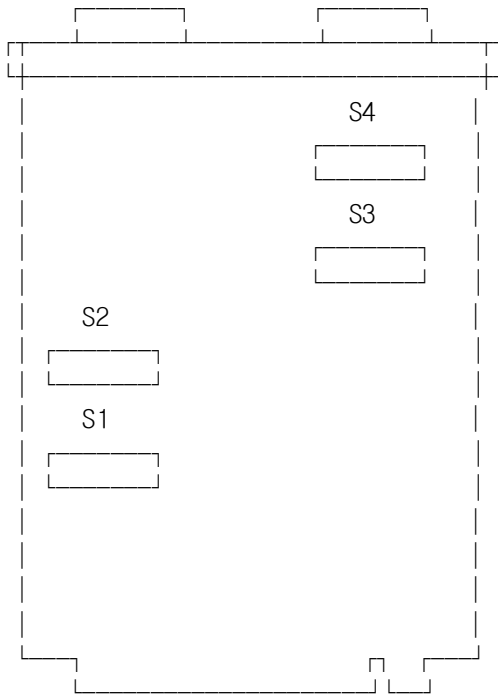
### 2. Down loading

- "PG Name : P000" is displayed on screen after select Down Load File in the case of AVK2, AVK2B, JVK2, RHU2, RH2, RH3.
- If input Enter Key after input File "P123" to be stored into machine, appointed File is transmitted by machine.

**(Warning)** Data had inputted into existing tool in case of specify File such as File had stored into tool is removed and newly inputted Data is stored.

### 3. PANASERT (RH6, RHU) M/C SETUP

#### \* MONI21 CARD



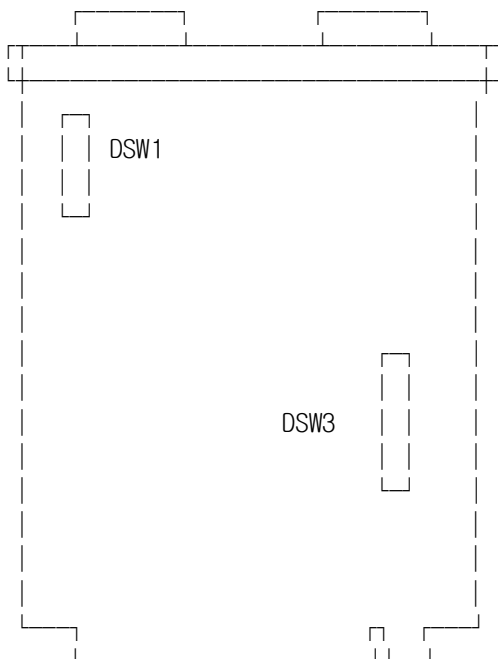
#### \* S3 SWITCH SETUP

- 1 OFF
- 2 OFF
- 3 OFF END CODE “^C” SET
- 4 OFF TIMEOUT TREATMENT “Yes”
- 5 OFF MT MOMENTALIZED “NO”
- 6 OFF REAL COMMAND “Yes”
- 7 OFF CHECK SUM “Yes”
- 8 ON BREAK CHARACTER “NO”

#### \* S1 SWITCH SETUP

- 1 OFF 9600 BAUD DESIGNATION
- 2 ON 4800 BAUD DESIGNATION
- 3 OFF 2400 BAUD DESIGNATION
- 4 OFF 1200 BAUD DESIGNATION
- 5 OFF 600 BAUD DESIGNATION
- 6 OFF 300 BAUD DESIGNATION

#### \* MONI1 CARD



#### \* DS3 SWITCH SETUP

- 1 OFF
- 2 OFF
- 3 OFF END CODE “^C” SET
- 4 OFF TIMEOUT TREATMENT “Yes”
- 5 OFF MT MOMENTALIZED “NO”
- 6 OFF REAL COMMAND “Yes”
- 7 OFF CHECK SUM “Yes”
- 8 ON BREAK CHARACTER “NO”

#### \* DS1 SWITCH SETUP

- 1 OFF 9600 BAUD DESIGNATION
- 2 ON 4800 BAUD DESIGNATION
- 3 OFF 2400 BAUD DESIGNATION
- 4 OFF 1200 BAUD DESIGNATION
- 5 OFF 600 BAUD DESIGNATION
- 6 OFF 300 BAUD DESIGNATION



## 4. CABLE CONNECTION

### 1) Computer to ERT-HOST Module Cable (2m)

(COMPUTER 9PIN(-),(*25PIN(-)))		(ERT-HOST 9PIN(+))
(RX) 2 (*3) (RED)	<-----	2 (TX)
(TX) 3 (*2) (YEL)	----->	3 (RX)
(GND) 5 (*7) (BLK)	-----	5 (GND)
(DTR) 4 (*20) ( )	-----	4 (DSR)
(DSR) 6 (*6) ( )	<-----	6 (DTR)
(RTS) 7 (*4) (ORG)	----->	7 (CTS)
(CTS) 8 (*5) (WHT)	<-----	8 (RTS)
F.G (BRN)	-----	F.G
(WHT) +5V (GRN)	----->	9 DCIN(+)
(BLK) GND (BLU)	-----	1 DCIN(-)

### 2) ERT-RS232 Module to Panaset RS232 Cable (4m)

(ERT-RS232 9PIN(-))		(MACHINE 25PIN(+))
(RX) 2 (RED)	<-----	2 (TX)
(TX) 3 (YEL)	-----	3 (RX)
(GND) 5 (BLK)	-----	7 (GND)
(DTR) 4 ( )	-----	20 (DTR)
(DSR) 6 ( )	-----	6 (DSR)
(RTS) 7 (ORN)	----->	5 (CTS)
(CTS) 8 (WHT)	<-----	4 (RTS)
F.G (BRN)	-----	F.G
DCIN(+) 9 (GRN)	<-----	+5V (WHT) Power Cable (1.5m)
DCIN(-) 1 (BLU)	-----	GND (BLK)

### 3) 5V Power Connection

( \* Connect after voltage verification certainly \* )

RH6, RHU Kinds : Connect to "+5V, G1" terminal of power terminal block of PANADAC-770 of machine right side lower column.

JVK2 Kinds : Connect to 5V Power Unit's "+5V, GND" terminal inside panel of Main power S/W region of machine right side lower column.

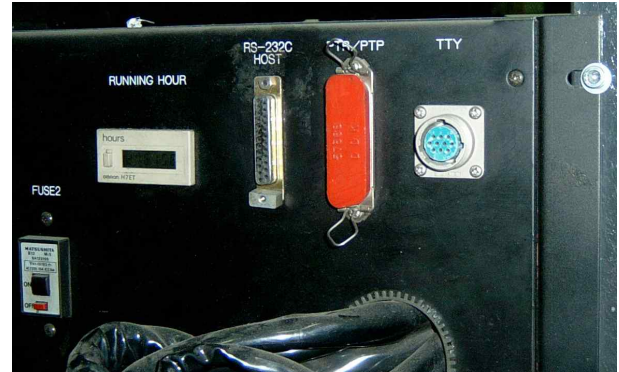
RH2, RH3, RHU2, AVK2B Kinds : Use 5V adapter.



#### 4) Panaset Data Cable Connection

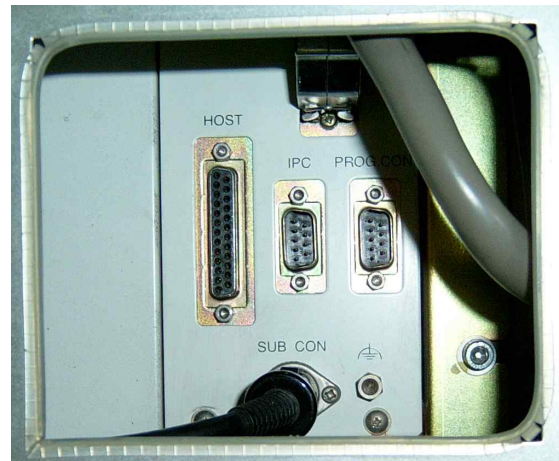
RH6, RHU Kinds :

Connect to RS-232 HOST Connector of machine center lower column.



AVK2, AVK2B Kinds :

Connect to HOST Connector of machine right side lower column.



RHU2, RH2, RH3 Kinds :

Connect to HOST CPU Connector of machine right side lower column.



JVK2 Kinds : Connect to RS232 #1 Connector of machine right side lower column.

## \* Panaser t (TTY port) \*

- Machine of Panaser t RT, RH etc.. sets Mode S/W of operation panel by "MANUAL", "EOP", "TTY".



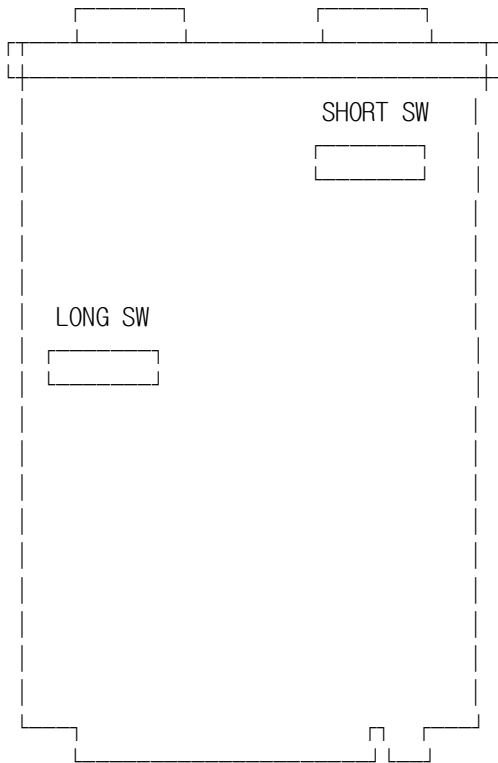
1. Up loading

2. Down loading

**(Reference)** In Parameter Setup Menu-Set port parameter if input is not been by machine while transmit Program and ERROR is produced value "SB" if input bigger numerical value than present value, transmission speed becomes slow but can transmit perfectly Program .

### 3. PANASERT (RT, RH) M/C SETUP

#### \* OBC CARD



#### \* SHORT SWITCH SETUP

- 1 ON
- 2 ON
- 3 ON
- 4 OFF
- 5 ON
- 6 OFF

#### \* LONG SWITCH SETUP

- 1 OFF
- 2 ON
- 3 OFF
- 4 OFF
- 5 OFF
- 6 OFF

## 4. CABLE CONNECTION

### 1) Computer to ERT-HOST Module Cable (2m)

(COMPUTER 9PIN(-),(*25PIN(-)))		(ERT-HOST 9PIN(+))
(RX) 2 (*3) (RED)	<-----	2 (TX)
(TX) 3 (*2) (YEL)	----->	3 (RX)
(GND) 5 (*7) (BLK)	-----	5 (GND)
(DTR) 4 (*20) ( )	-----	4 (DSR)
(DSR) 6 (*6) ( )	<-----	6 (DTR)
(RTS) 7 (*4) (ORG)	----->	7 (CTS)
(CTS) 8 (*5) (WHT)	<-----	8 (RTS)
F.G (BRN)	-----	F.G
(WHT) +5V (GRN)	----->	9 DCIN(+)
(BLK) GND (BLU)	-----	1 DCIN(-)

### 2) ERT-PNTTY Module to Panaset TTY Cable (4m)

(ERT-PNTTY 9PIN(-))		(MACHINE 10PIN(+))
(RXD) 2 (RED)	<-----	1 (OUT)
(READ) 8 (WHT)	<-----	7 (READ)
(RX-GND) 6 (BRN)	-----	2(OUT-GND)
(RD-GND) 4 ( )	-----	8 (RD-GND)
(TXD) 3 (YEL)	----->	5 (IN)
(BUSY) 7 (ORN)	----->	6 (BUSY)
(T/B-GND) 5 (BLK)	-----	3(I/B-GND)
DCIN(+) 9 (GRN)	<-----	
DCIN(-) 1 (BLU)	-----	
		+5V (WHT) Power Cable (1.5m)
		GND (BLK)

### 3) 5V Power Connection

( \* Connect after voltage verification certainly \* )

RT, RH, JV kinds: Connect to "+5V, G1" terminal of power terminal block of PANADAC-770 of machine right side lower column.



#### 4) Panasert Data Cable Connection

RT, RH, JV kinds :

Connect to TTY Connector of machine  
center lower column.





## \* Citizen M10 Terminal \*

### 1. Up loading

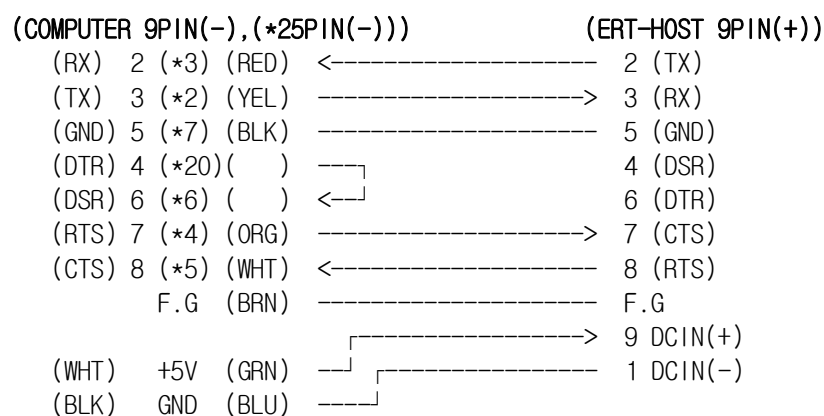
- If input "~~RESET-EDIT-P-001-Q-696-SEND-DATA~~ START" in Board/Pecker's operation panel,  
NC Data is transmitted by Terminal.

### 2. Down loading

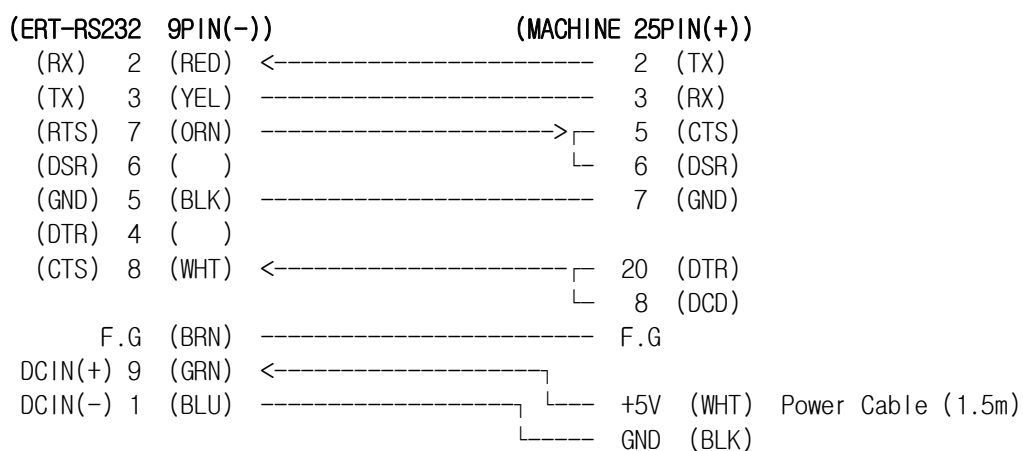
- If input "~~RESET-EDIT-P-001-'-'-696-RECV-DATA~~ START" in Boaed/Pecker's operation panel,  
ready NC Data is transmitted by M/C in Terminal.

### 3. CABLE CONNECTION

#### 1) Computer to ERT-HOST Module Cable (2m)



#### 2) ERT-RS232 Module to Citizen M10 Cable (4m)



#### \* Citizen M10 Data Cable

Connect to Host Computer Connector.

#### \* 5V Power Connection

Connect to "+5V, GND" of Power terminal block on Host Computer Connector.

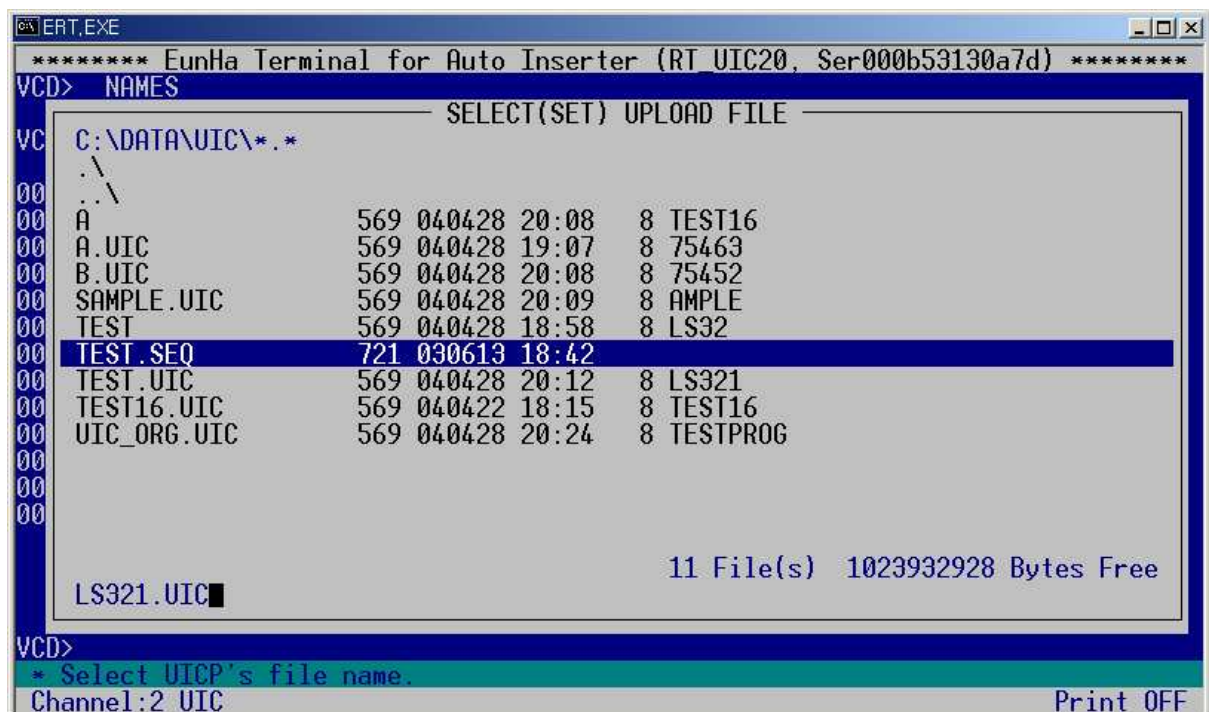
## \* Universal Terminal \*

### 1. Up loading

- Is displayed as follows on screen if do "Intercommunication-Up loading" channel confirmation and correction in MAIN MENU.
- File list had stored into tool is displayed, and "\* Select UICP's files name" is displayed on screen lower column.



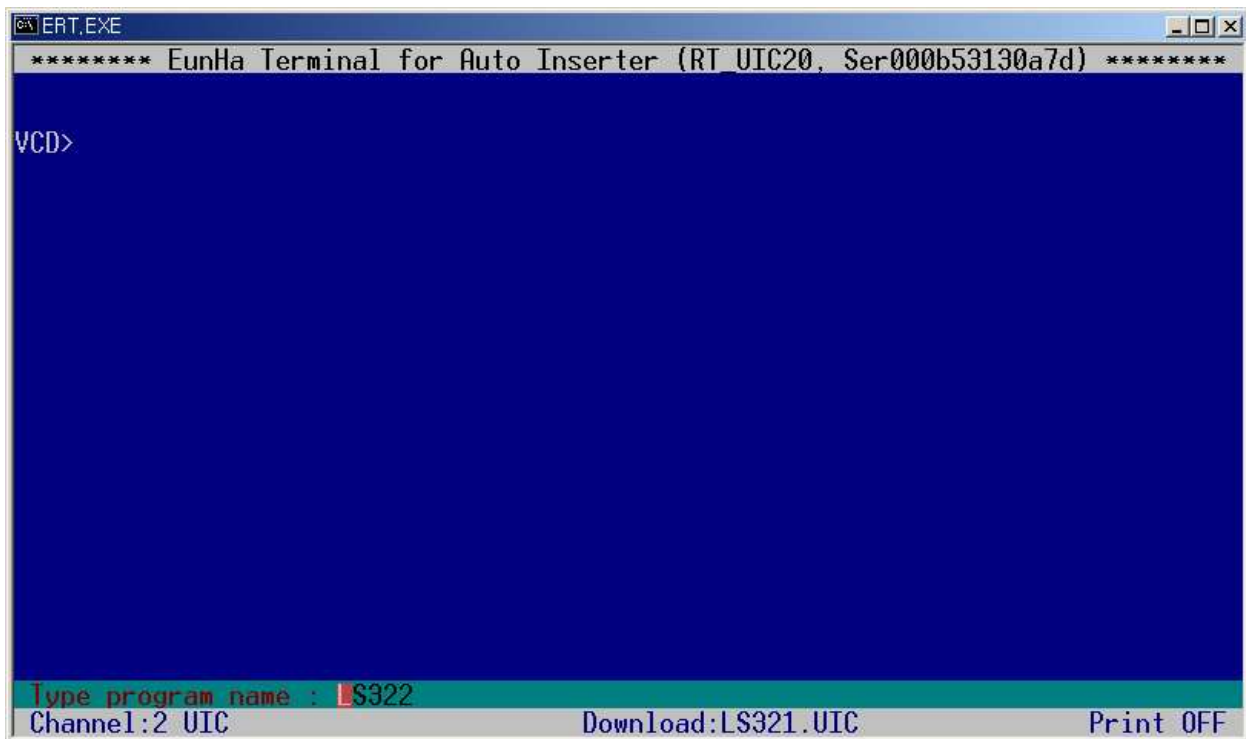
- If specify File to do Up load among File that is stored into machine by arrow KEY and presses Enter Key, File choice display to store to Disk as follows is display.



- If specify File to be write by arrow KEY or input File in case of uses other File, File is display and presses Enter Key after verification or input on screen lower column.
- NC DATA is transmitted and write NC DATA that is received to DISK in specify file name from UIC.
- File's CMD (explanation) is set in a File name that is stored in machine.

## 2. Down loading

- File's CMT is display on screen lower column if specify File, and if there is no CMD to File, appointed File is displayed on screen lower column.
- Name stored into machine if input Enter Key after confirmation or correction appointed File by machine transmit.



## 3. System Data Down Loading

- Initialize Universal machine before System Data Downloading.  
(Set to position "RUN" again after move switch of System Board (PS) as "HLT" on right side of machine.)
- If complete System Data's down loading, UIC Setup message is displayed on screen.  
Setup Message registered this time differs according to kind of machine, System Data's version etc..
- \* Press ERT Module's "RESET" S/W certainly after System Data's Down Loading is completed or power must initialize ERT Module because do OFF-ON.

## 4. System Configured

\* **Reference** : Setup Message differs according to kind of machine, System Data's version etc..

```
RESTART UICS1
  UNIVERSAL INSTRUMENTS CORP.
  TRADE SECRET and/or COPYRIGHT 1982
  ALL RIGHTS RESERVED
SYSTEM IS NOT CONFIGURED; ENTER ONLY "SYSTEM<RETURN>" OR "HELP<RETURN>"
```

\*> **SY**

```
*>SYSTEM>
PERIOD OF SYSTEM CLOCK ?
(USUALLY 1,16, OR 20 (FOR 1.04 ms, 16.66ms, OR 20ms)) 1
```

```
*>SYSTEM>
METRIC AXES ? (Y FOR YES, N FOR NO) Y
```

```
*>SYSTEM>
SYSTEM IDENTIFICATION ? (ONE TO THREE CHARACTERS) V10
```

```
V10>SYSTEM>
ENTER THE NUMBER OF PATTERN NAMES DESIRED
THE RANGE IS FORM 24 TO 100 NAMES 24
```

```
V10>SYSTEM>
LINE    MACHINE TYPE
0001>   P/T II 6241X VCD SEQUENCER/INSERTER MACHINE CONTROL
```

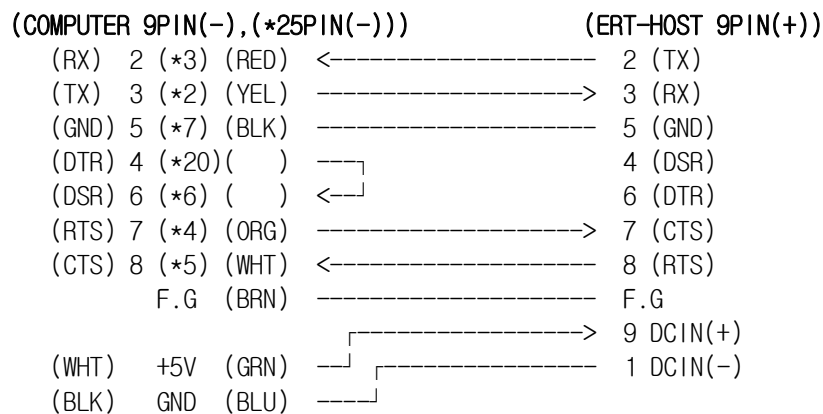
```
USING THIS TABLE DEFINE THE MACHINES IN THE SATELLITE SYSTEM
SATLEETE MACHINE NUMBERS ARE FROM "1" TO "4"
ENTER AS <MACHINE-NUMBER>=<LINE-NUMBER-of-MACHINE-TYPE>
EXAMPLE: "1=1, 2=2<RETURN>"
(NOTE: ENTER "1=0<RETURN>" IF NO MACHINES ARE ON SYSTEM)
V10>SYSTEM> 1=1,2=1
```

```
V10>SYSTEM>
UICS 1.3EMO
PROGRAM MIX 405913-384 REV-D
  42453000B  08/27/87 P/T II 6421X VCD SEQUENCER/INSERTER
  41974800   06/10/86 VCD PATTERN CONVERSION ROUTINE
  41601400B  01/20/87 BOARD ERROR CORRECTION 1 LIBRARY UICS
  41618400A  05/05/87 MACHINE SELF-DIAGNOSTICS OPTION
  40651300E  05/05/87 UICS SATELINK II LOLINK
  40591300Q  07/22/87 UICS 1.3EMO BASE OPERATOR
01 MESE CLOCK
0 TAPE PUNCHES
0 TAPE READERS
1 DATA LINKS
1 OPERATOR TERMINALS
0 MACHINE TERMINALS
METRIC AXES
0001> P/T II 6241X VCD SEQUENCER/ INSERTER MACHINE CONTROL
0002> P/T II 6241X VCD SEQUENCER/ INSERTER MACHINE CONTROL
```

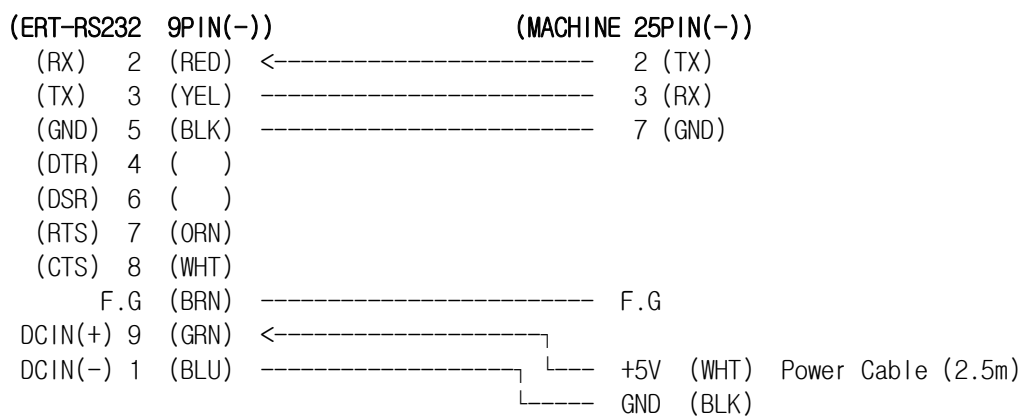
V10>

## 5. CABLE CONNECTION

### 1) Computer to ERT-HOST Module Cable (2m)



### 2) ERT-RS232 Module to Universal Cable (4m)





### 3) 5V Power Connection

Connect to "+5V, GND" of 5V Power Unit of machine inside or 5V Adapter.

### 4) Universal Data Cable Connection

– UIC AXIAL

