



Doc. no. DSCA160A
BACKUP_RESTORE en
Rev. ind. In Review
Date 2007-07-25
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Description Backup Restore of DSCA160A

To

Copy to PA/XA/SV

DSCA160A Programming Backup Restore

- 1) Using MA21x , MA220 , AS100ES.
 - 1.1) Connect to DSCA160A.
 - 1.1.1) Answer from DSCA160A in different startup modes.
 - 1.2) Backup.
 - 1.3) Restore.
 - 1.4) Programming.
 - 1.4.1) Source code entered by hand.
 - 1.4.2) List program in DSCA160
 - 1.4.3) Backup file
- 2) Using HyperTerminal in Windows.
 - 2.1) Connect to DSCA160A
 - 2.2) Backup, using "List of program"
 - 2.3) Restore, using "Source code programming"
- 3) Analyze of transmitted characters.

Find out what type of backup, the customer have:

- a) A file 80kb that can be read by AS100-EDIT. See 1.4.3 below.
- b) A list file according to 1.4.2 below.
- c) A source code file according to 1.4.1 below.

1) Using MA21x , MA220 , AS100ES.

DSCA160A is hardware set to 4800, 7, Even, 1 stop bit. This cannot be changed.



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1.1) Connect to DSCA160A.

Start MA220 , AS100ES with target AS100ES.
Difference in Word length and Parity, don't affect the result here.

```
*ETTY
Select system ( MA7 / DS101 / Other=<CR> ) :           MA7 <CR>

Defaults for MA7 : B=4800, W=8, P=NONE, S=1, E=ON, X=XON      <CR>

Select parameters to be changed :
Baudrate,Wordlength,Parity,Stopbits,Echo,XonXoff
( B,W,P,S,E,X,<CR>=none ) :                               <CR>

MasterAid Terminal Emulation   (Press <SHIFT-F4> to exit from ETTY)
```

Startup mode on DSCA160A in position 1 (RUN) . It works also in other modes.
Press INIT. "TO LED" will start flashing for 1-2 seconds.

1.1.1) Answer from DSCA160A in different startup modes.

Start mode 0 (USER)and INIT

ABB BASIC - Version A 3.2/2
The current program has no identity.

```
T=      0.00
Z=      0.00
Y=      0.00
X=      0.00
>
```

Start mode 1 (RUN) and INIT

```
T=      0.00
Z=      0.00
Y=      0.00
X=      0.00
>
```

Start mode 2 (PROM) and INIT

No PROM'ed application program found
The current program has no identity.



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T= 0.00
Z= 0.00
Y= 0.00
X= 0.00
>

Start mode 3 (USER) and INIT

ABB BASIC - Version A 3.2/2
The current program has no identity.

T= 0.00
Z= 0.00
Y= 0.00
X= 0.00
>

1.2) Backup program from DSCA160A.

Connect to DSCA160A according to above.

> CHANNEL 0 <CR>

> BACKUP <CR>

Press <SHIFT-F4> to exit from ETTY

*RECV

Enter volume identity (4 chars) :

SRCE <CR>

Enter segment identity (segment.extension) :

DSCA160.LO <CR>

Enter target computer (MA7 / DS) :

MA7 <CR>

Is the segment format ASCII (Y/N) ?

Y <CR>

Possible options are : L=List, S=Suppress all output, Q=query for variables,
N=segment not recreated

Enter options (if any) required :

<CR>

Enter segment size (in blocks of 1024 bytes) :

100 <CR>

Now the transmission start and it will finish after 80062 Bytes
80062 , H'00138BE bytes transmitted

The saved program will be 80kb on disk.



1.3) RESTORE a saved program to DSCA160A.

Connect to DSCA160A according to above.

> CHANNEL 0 <CR>

> RESTORE <CR>

Press <SHIFT-F4> to exit from ETTY

*SEND

Enter volume identity (4 chars) :

SRCE <CR>

Enter segment identity (segment.extension) :

DSCA160.LO <CR>

Enter target computer (MA7 / DS) :

MA7 <CR>

Is the segment format ASCII (Y/N) ?

Y <CR>

Possible options are : L=List, S=Suppress all output, Q=query for variables

Enter options (if any) required :

<CR>

Now the transition start and it will finish after 80669 Bytes

80669 , H'0013B1D bytes transmitted

1.4) PROGRAMING

1.4.1) Source code entered by hand.

~

This character will toggle Run mode/Program mode

ENTER 100

STORE 1

CLEARX

CLEARX\$

FORMAT 0

UAINIT 2,6,7,3,1

CHANNEL 2

LABEL 100

OPEN 2

CLEARX\$

~

2) Using HyperTerminal in Windows.

You need to manufacture a new cable between PC and DSCA160A.

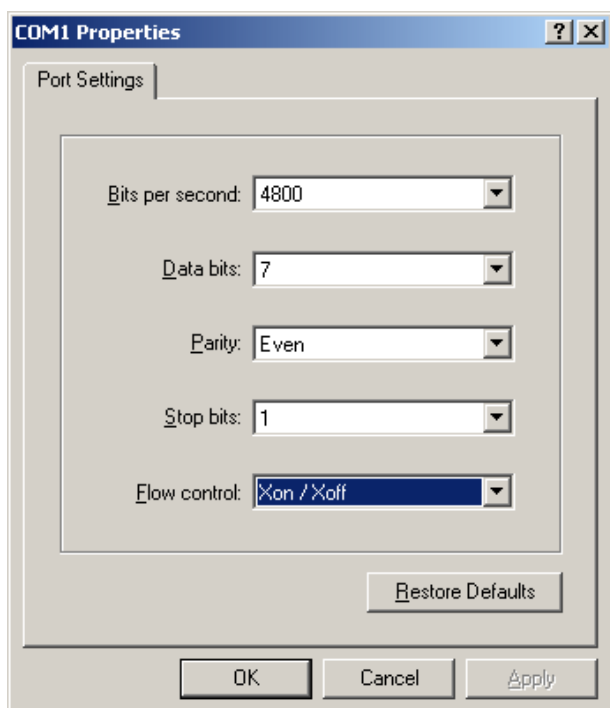
PC side db9	DSCA160A
2 -----	3
3 -----	4
5 -----	5

If DSCA160A have the correct program running in it, continue with connect Hyper Terminal.
If DSCA160A is empty and you only have a backup , made with MA214,MA220 or AS100ES, you need to load the program again via RESTORE 1.3 above.

2.1) Connect to DSCA160A

Start > Hyper Terminal.





After make init on DSCA160A . Se under 1.1.1 above.

2.2) Backup, using "List of program"

To find out how big the program is, list row 1 until 1000

Connect Hyper Terminal> Transfer > Capture Text file.
 Write name of file to save.

> L 1,1000

2.3) Restore, using "Source code programming"

2.3.1) Edit the captured text file from backup 2.2).

- a) Take away row numbers .
- b) Take away all spaces on each line.

The resulting file should look like 1.4.1) above with less than 1kb for 100 rows

Don't forget "~" in the beginning and end of the file.

Normally programming start at row 2. To get programming from row 1, put - 1 before command.

2.3.2) Connect with HyperTerminal.

Transfer > Send Text file.

Select the source code file .

2.3.3) When ready, list the program according to 2.2) above, and compare , so that your source code file is correct.



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3) Analyze of transmitted characters.

Backup

CHANNEL 0 > BACKUP. Now the DSCA will send H'05 0D every second and wait for MA214,MA220 or AS100ES, to send H'06 0D.

DSCA160A	H'05 0D
AS100ES	H'06 0D
DSCA160A	H'01 45 44 30 02 41 41 41 41 30 30.....17 0D
AS100ES	H'06 0D
DSCA160A	H'01 41 41 31 0217 0D
AS100ES	H'06 0D

There is a header in each line. I don't know the syntax for the header. The resulting file don't include the header.

Restoring one backup file, the system add one header to each line.