# Control files to the System 6000

This document contains a description of the operation and loading of software by use of control files to the System 6000. Further it contains description of the self test commands.

It is possible to load System 6000 software from a diskette. The disk must contain some special files that contain commands to load the software.

There are 2 different files that can be used “M6kboot.ctl” and “M6kapplctl”. “M6kboot.ctl” contains commands that are handled by the H8 main boot program and is used to load Ethernet and H8 main application software. “M6kapplctl” contains commands that are handled by the H8 main application and is used to load DSP6000 software.

## *H8 main boot control file (M6kboot.ctl)*

When the power is turned on the H8 main boot program starts looking for a “M6kboot.ctl” file. If the file is found on the diskette the boot program will start processing the contents of this file. The result of executing the control commands is saved on the diskette and named “Resboot.txt”. It is important to read this file to see if the load command was successfully executed. When the control file has been processed the boot program always tries to start the Ethernet and application software.

The colour of the front LED indicates the following status.

**ORANGE**:
The Boot software is starting and processing the control file.

**RED**:
The Boot software could not start the Ethernet or H8 main board application. If a load command has been executed and it failed to load the boot program stops and turns on RED. This could be due to an older version found on diskette than already loaded or that an error occurred reading the disk.

**RED BLINK**:
The Boot software could not save the result file “Resboot.txt” on the diskette. This could be due to a write protected diskette.

**GREEN**:
The Boot software has started the Ethernet and H8 main board application. If any control file has been processed see the Resboot.txt file for any errors and status.

**The following commands are possible to used in the control file:**

Any lines starting with # will be ignored and is used for comments.

- **Loading H8 main board application software**

**LDH8A** <H8 software DOS name> <option>

If no option is given then the DOS file is loaded from diskette. It is only loaded if the version number is newer than already running on the System 6000.
<option> **-F** loads software forced
**-P** looking for software on PCMCIA DOS card
**-FP** forced from PCMCIA card

Example loading file forced from diskette:
**LDH8A** M6Kappl.M6k **-F**

- **Loading Ethernet card application software**

**LDETA** <Ethernet software DOS name> <option>

If no option is given then the DOS file is loaded from diskette. It is only loaded if the version number is newer than already running on the System 6000.
<option> **-F** loads software forced
**-P** looking for software on PCMCIA DOS card
**-FP** forced from PCMCIA card

Example loading file from diskette:
**LDETA** M6v2_4.eth

- **Setting Ethernet card IP address**

Example:
**CEIPA** 192.168.1.251

- **Setting Ethernet Sub net mask**

Example:
**CESNM** 255.255.255.0

- **Setting Ethernet Gateway**

Example:
**CEGTW** 0.0.0.0

- **Self test information of H8 and Ethernet**

Information of the H8 main board and Ethernet card software and configuration is saved in the result file.
**SFTH8**

In the following is shown and the result of loading, configuring Ethernet and reading self test information.

## Contents of the control file "M6kboot.ctl"

```
#=====================================================================#
# Copyright (c) 1999 T.C.Electronic A/S.                              #
# ------------------------------------------------------------------- #
# H8 Main boot configuration file                                     #
#                                                                     #
#                                                                     #
# Revision:                                                           #
# 1.0   2000 01 17 / KBJ                                              #
#                                                                     #
#=====================================================================#

# Load H8 application from disk forced
LDH8A M6KAppl.M6K -F

# Load Ethernet application from disk forced
LDETA ram.eth -F

# Configure Ethernet IP address
CEIPA 192.168.1.251

# Configure Ethernet Sub net mask
CESNM 255.255.255.0

# Configure Ethernet Gateway
CEGTW 0.0.0.0

# Self test information of H8 and Ethernet
SFTH8
```

## Contents of the result file "Resboot.txt"

```
Processing H8 boot control file commands. Serial no. 28xxxx
------------------------------------------------------------

*LDH8A filename M6KAPPL.M6K option -F
H8 Main application file M6KAPPL.M6K loaded

*LDETA filename RAM.ETH option -F
Ethernet application file RAM.ETH loaded

*CEIPA New ethernet IP 192.168.1.251 (c0a801fb)

*CESNM New ethernet subnet 255.255.255.0 (ffffff00)

*CEGTW New ethernet Gateway 0.0.0.0 (00000000)

*SFTH8 self test information

M6000 information:

H8 Main Bios Ver. 1.8 EEprom OK
H8 Application  : Appl.V.00.16.04
Date (DD.MM.YY) : 23.02.00
Version         : 0.16

Ethernet IP address  192.168.1.251
         Subnet mask 255.255.255.0
         Gateway     0.0.0.0
         Serial(MAC) 28xxxx

Ethernet Boot Ver. 1.0
Ethernet Flash Size 4096 Kb Type 0001:225b
Ethernet Appl.  : Shell
Date (DD.MM.YY) : 23.03.00
Version         : 3.0

---------------------------------------
Finished
```

## *H8 main application control file (M6kappl.ctl)*

When the power is turned on and the boot software has started the H8 main application program it starts looking for a control file "M6kappl.ctl". If the file is found on an inserted diskette the application program will start processing the contents of this file. The result of executing the control commands is saved in a result file on the diskette and named "Rs<serial no.>.txt". It is important to read this file for further information on the result. When the control file has been processed the program always tries to start the DSP6000 software and the rest of the System 6000 software.

The colour of front LED indicates the following status.

**ORANGE**:
The application software is starting and processing the control file.

**RED:**
The application software failed to load the DSP6000 software see the result file for more information.

**RED BLINK**:
The application software could not save the result file on the diskette.

**GREEN**:
The application software has started the DSP6000 software and running. If any control file has been processed see the result file for any errors and status.

**The following commands are possible to used in the control file:**

Any lines starting with # will be ignored and is used for comments.

- **Loading DSP6000 application software**

**LDARM** <DSP6000 software DOS name> <option>

If no option is given then the DOS file is loaded from diskette. It is only loaded if the version number is newer than already running on the DSP6000 card.
<option> **-F** loads software forced
**-P** looking for software on PCMCIA DOS card
**-FP** forced from PCMCIA card

Example loading file forced from card:
**LDARM** Appl.ARM **-FP**

- **System self test**

This command requires that a special DSP6000 test program is loaded before executing. The test covers communication with the Ethernet and DSP6000 card. It makes an internal loop back test between the DSP6000 card and ADAC cards. Normally the DRAM test will report an error because no DRAM is mounted on the DSP6000 card. If any other errors are detected the test is stopped and the number of test loop times it has tried is written at the bottom of the report. The original DSP6000 application must be loaded again after the test is completed.

**STEST** <option>

<option> -F running self test forever
-999 gives the number of times to run the test

Example of loading the test all program and then perform the self test 6 times.
**LDARM** TESTV1_2.ARM **–F**
**STEST 6**

**In the following is shown the result of loading and running the self test program. (RS28xxxx.TXT)**

```
Processing H8 Application control file commands. Serial no. 28xxxx
-----------------------------------------------------------------

*LDARM filename TESTV1_2.ARM option -F
DSP application file TESTV1_2.ARM loaded

*STEST system test option -F

No DSP6000 serial no. !
Arm Boot version 0.4

DSP6000 Test All results
      ARM - DSP host test OK
      DSP Sram test OK
      DSP Dram test ERROR code (1:65535:F:0:0) !
      DATA FPGA test OK
      ESSI0 test OK
      ESSI1 test OK

DSP6000 ADAC sine test on channels: B C
      ADAC sine test OK

DSP6000 ADAC loop test on channels: B C
     ADAC B loop test OK
     ADAC C loop test OK

Ethernet testing
Ethernet Card write/read test OK
Ethernet Appl.  : Shell
Date (DD.MM.YY) : 23.02.00
Version         : 2.4

---------------------------------------
Finished test loop 6 OK
```