

C

BOOT SYSTEM

Appendix C, "BOOT SYSTEM", consists of the following sections:

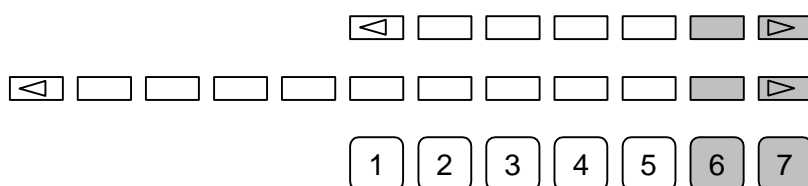
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C.1.2 Starting the Boot System

In ordinary system activation, the boot system automatically transfers files from Flash ROM to DRAM in the background.

The user is not aware of this operation. However, the boot system must be operated manually, from menu screen, when maintenance is to be carried out or when the Flash ROM does not contain a required file.

- (1) In system maintenance, for example, to replace a file in ROM
 Operation : Turn the power on by simultaneously pressing the two soft keys at the right end. If no soft keys are provided as with a touch panel, use MDI numeric keys 6 and 7.



After an FROM ID and other items are displayed on the CNC screen, releasing the key brings you to the SYSTEM MONITOR screen.

- (2) When the flash memory does not contain a file required to start the CNC
 Immediately after the CNC is turned on, the boot system starts transferring files from Flash ROM to DRAM. If, for some reason, a file required to start the CNC (NC BASIC) is not in Flash ROM or has been destroyed, the boot system is automatically started.

C.1.3 System Files and User Files

The boot system organizes files in Flash ROM into two main groups : system files and user files. These two file types have the following characteristics :

System files

CNC and servo control software provided by FANUC

User files

PMC sequence program (ladder), P-CODE macro program, and other user-created files

C.2 SCREEN CONFIGURATION AND OPERATING PROCEDURE

When the boot system is first started, the MAIN MENU screen is displayed. This screen is described below :

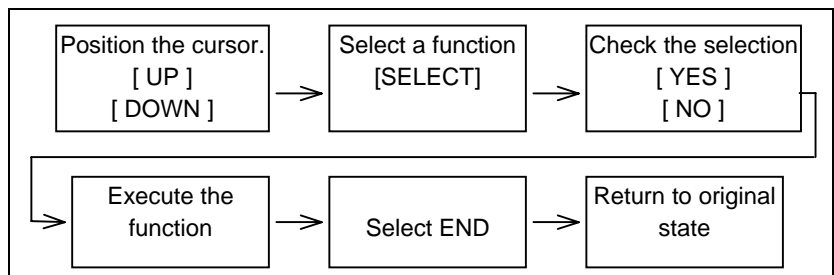
MAIN MENU screen

<p>(1) SYSTEM MONITOR MAIN MENU 60W1 - 01</p> <p>(2) 1.END</p> <p>(3) 2.USER DATA LOADING</p> <p>(4) 3.SYSTEM DATA LOADING</p> <p>(5) 4.SYSTEM DATA CHECK</p> <p>(6) 5.SYSTEM DATA DELETE</p> <p>(7) 6.SYSTEM DATA SAVE</p> <p>(8) 7.SRAM DATA BACKUP</p> <p>(9) 8.MEMORY CARD FORMAT</p> <p>*** MESSAGE ***</p> <p>(10) SELECT MENU AND HIT SELECT KEY.</p> <p>[SELECT][YES][NO][UP][DOWN]</p>	<p>(1) Screen title. The series and edition of the BOOT SYSTEM are displayed at the right end.</p> <p>(2) Function for terminating the boot system and starting the CNC.</p> <p>(3) Function for writing data to Flash ROM.</p> <p>(4) Function for writing data to Flash ROM.</p> <p>(5) Function for checking the edition of a file in ROM.</p> <p>(6) Function for deleting a file from Flash ROM or Memory card.</p> <p>(7) Function for making a backup copy of the data stored on the Memory card.</p> <p>(8) Function for backing up and restoring the SRAM area</p> <p>(9) Function for formatting a Memory card.</p> <p>(10) Simple operating instructions and error messages are displayed.</p>
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Operating procedure

Press the [UP] or [DOWN] soft key to select the desired function. After positioning the cursor to the desired function, press the [SELECT] soft key. Before executing a function, for a confirmation, it maybe need to press the [YES] or [NO] soft key.

Basic operation



C.2.5 SRAM DATA BACKUP Screen

Description

This screen is used to collectively save and restore parameters, tool compensation memories, and other data, retained after the CNC power in SRAM is turned off, to and from a Memory card.

Screen configuration

<p>(1) SRAM DATA BACKUP</p>	<p>(1) Screen title.</p>
<p>(2) 1.SRAM BACKUP (CNC -> MEMORY CARD) 2.RESTORE SRAM (MEMORY CARD -> CNC)</p>	<p>(2) Menu</p>
<p>(3) 3.END</p>	<p>(3) Returning to the MAIN MENU.</p>
<p>(4) SRAM FILE SIZE : 1MBYTE</p>	<p>(4) The SRAM file size is displayed. (Displayed after a processing option is selected.)</p>
<p>(5) SRAMBAK.001</p> <p>*** MESSAGE *** SET MEMORY CARD NO.001 ARE YOU SURE ? HIT YES OR NO. [SELECT][YES][NO][UP][DOWN]</p>	<p>(5) The name of the file currently being saved or loaded is displayed. (Displayed after a processing option is selected.)</p>
<p>(6) *** MESSAGE *** SELECT MENU AND HIT SELECT KEY. [SELECT][YES][NO][UP][DOWN]</p>	<p>(6) Message</p>

Operating procedure (Backing up data)

- (1) Select "1.SRAM BACKUP" The following confirmation message is displayed. To start backup, press the [YES] soft key.
- (2) If the data cannot be saved entirely onto a single Memory card, a message such as that shown below is displayed. With the power still on, insert the second Memory card and press the [YES] key. Press the [NO] key to cancel saving.

```
*** MESSAGE ***
SET MEMORY CARD NO.002
ARE YOU SURE ? HIT YES OR NO.
[SELECT][ YES ][ NO ][ UP ][ DOWN ]
```

- (3) In this way, you can divide SRAM data onto a maximum of 999 Memory card for backup.

- (4) Upon the termination of backup, the system displays the following message. Press the [SELECT] soft key.

```
*** MESSAGE ***  
SRAM BACKUP COMPLETE. HIT SELECT KEY.  
  
[SELECT][ YES ][ NO ][ UP ][ DOWN ]
```

Operating procedure (Restoring the data)

- (1) Select "2.RESTORE SRAM" The following confirmation message is displayed. To start restoration, press the [YES] soft key.
- (2) A message such as that shown below is displayed. Insert the first Memory card containing SRAMBACK.001 and press the [YES] key. Press the [NO] key to cancel restoration.

```
*** MESSAGE ***  
SET MEMORY CARD INCLUDING SRAMBAK.001  
ARE YOU SURE ? HIT YES OR NO.  
[SELECT][ YES ][ NO ][ UP ][ DOWN ]
```

- (3) If another Memory card is required, a message such as that shown below is displayed. With the power still on, insert the second Memory card and press the [YES] key. Press the [NO] key to cancel restoration.

```
*** MESSAGE ***  
SET MEMORY CARD INCLUDING SRAMBAK.002  
ARE YOU SURE ? HIT YES OR NO.  
[SELECT][ YES ][ NO ][ UP ][ DOWN ]
```

- (4) Replace the second card with another, if required. Repeat this step until backing up all data.
- (5) Upon the termination of restoration, the system displays the following message. Press the [SELECT] soft key.

```
*** MESSAGE ***  
SRAM RESTORE COMPLETE. HIT SELECT KEY.  
  
[SELECT][ YES ][ NO ][ UP ][ DOWN ]
```

CAUTION

- 1 Backup files will be created with a file name of SRAMBAK.xxx, where xxx is replaced with a number between 001 and 999 sequentially. On the first Memory card, a backup file is created with a name of SRAMBAK.001. If all data is not contained on the single card, a backup file containing the excess data is created with a name of SRAMBAK.002 on the second Memory card. In this way, you can divide data onto a maximum of 999 Memory card for saving.
- 2 Check that the Memory card used for backup does not contain a file with a name of SRAMBAK.xxx before performing a BACKUP operation. You can check a list of file names on a Memory card by using the SYSTEM DATA LOADING function.
- 3 The Memory card used for backup needs to be formatted in FAT16.
- 4 Depending on the boot software edition, the file contents to be backed up and the file name differ:
 - 60W1/06 edition or earlier
File contents: SRAM data
File name: SRAMBAK.xxx
 - 60W1/07 edition or later
File contents: SRAM data, NC program (ATA PROG in flash ROM)
File name: SRAM_BAK.xxxData previously backed up by an older edition of boot software can be restored by a newer one.