

July 1977

This manual describes the procedures used to install the BASIC-PLUS-2 Language system on RSTS/E version 6B.

BASIC-PLUS-2
RSTS/E
Installation Guide

Order No. AA-0156A-TC

OPERATING SYSTEM AND VERSION: RSTS/E V06B

SOFTWARE VERSION: PDP-11 BASIC-PLUS-2 V01

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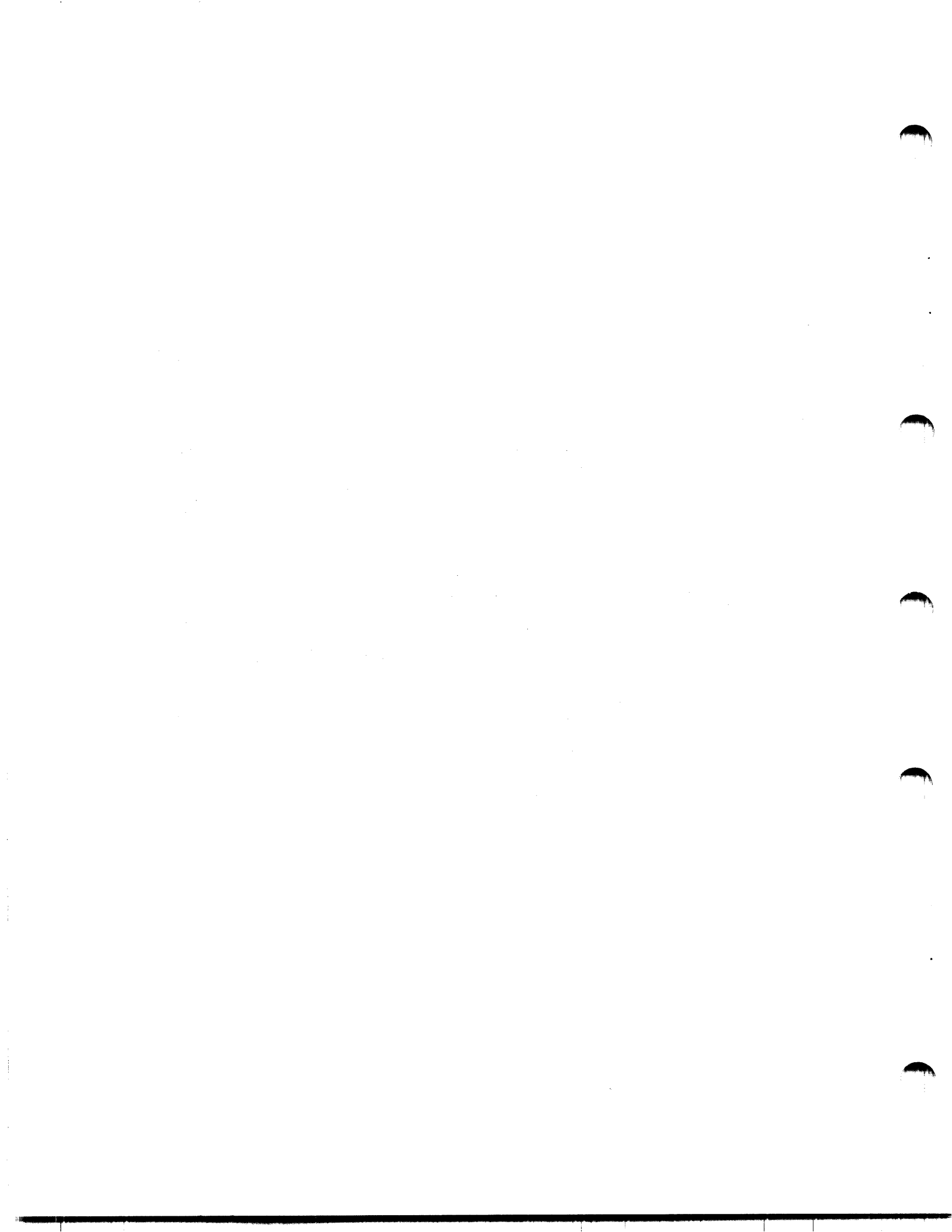
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PREFACE

The BASIC-PLUS-2 RSTS/E Installation Guide describes the procedures used to install the BASIC-PLUS-2 Compiler and run-time system on RSTS/E V6B. Included in the description are installation procedures for media that are distributed on magnetic tape and disk cartridge kits.

It is recommended that you read the entire manual before attempting to install BASIC-PLUS-2.

ASSOCIATED DOCUMENTS

For information on the BASIC-PLUS-2 language, refer to the BASIC-PLUS-2 Language Manual. For details on the implementation of BASIC-PLUS-2, refer to the BASIC-PLUS-2 RSTS/E User's Guide. For additional information on installation procedures that are specific to the system, refer to the RSTS/E System Generation Manual.

DOCUMENTATION CONVENTIONS

The following conventions are used throughout this manual to illustrate the BASIC-PLUS-2 installation procedures:

<code>RET</code>	The symbol <code>RET</code> represents the non-printing carriage return key.
lower case UPPER CASE	Lower-case text indicates variable information that you supply; upper-case text indicates literal information that you enter as shown.
color	Information that you type during the installation procedure is indicated in red.



CHAPTER 1

INTRODUCTION

This manual is a guide to the installation and verification of BASIC-PLUS-2 on the RSTS/E V6B system. The manual does not supersede the system generation procedures that currently exist for your system. Rather, it contains the additional procedures required for you to install the BASIC-PLUS-2 language system. You should use this guide in conjunction with the section entitled Building Optional Software in the RSTS/E System Generation Manual.

1.1 INSTALLATION OVERVIEW

The information in this manual is organized in the following manner:

Chapter 2 contains the software and hardware requirements for installing BASIC-PLUS-2, the procedures for mounting the distribution media, and the information you need to answer the compiler option prompts that appear during the installation.

Chapter 3 contains a sample of the installation dialogue and verification procedure and includes the BASIC-PLUS-2 build program output.

Chapter 4 contains the procedures for tailoring your system to obtain the optimal use of BASIC-PLUS-2.



CHAPTER 2
RSTS/E INSTALLATION PROCEDURES

2.1 SYSTEM REQUIREMENTS

The following software systems are required to install BASIC-PLUS-2:

- RSTS/E Version 6B
- BASIC-PLUS default run-time system
- RSX.RTS - The RSX run-time system
- SYSLIB.OLB - The RSX system library
- TKB.TSK - The Task Builder

The following auxiliary software can be installed on RSTS/E for use by BASIC-PLUS-2:

- RMS-11 Version 1 (if RMS Record I/O is desired)
- RMS-11K (if RMS indexed Record I/O is desired)
- MAC.TSK - Macro-11 assembler
- LBR.TSK - Librarian Utility

Note that the support for RMS auxiliary software is included as an option in the BASIC-PLUS-2 installation. For information on installing auxiliary software, refer to the RSTS/E V06B Release Notes (Section 20.1.1).

The following minimum system configuration is required:

- CPU - 11/34, 11/40, 11/45, 11/50, 11/60, or 11/70 with memory mapping.

- MEMORY - 64K words.

- TERMINAL - any one (hard copy is preferable).

- TAPE - TU10, TS03, TU16, or TU45 drive.

- SWAP MAX - A minimum 28K system swap space is required.

DISK SPACE - The following amounts of disk space are required:

- 176 blocks in account [1,1] if RMS-11 support is installed
- 278 blocks in account [1,1] if RMS-11K support is installed

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353 blocks in account [1,2] for the compiler
41 blocks in account [1,2] for the translator
78 contiguous blocks in account [0,1]
23 blocks in account [0,1]

2.1.1 Procedures for Mounting Media

For magtape distribution:

- Log into the system under a privileged account.
- Mount the tape on a free unit with the write enable ring removed. The distribution tape is labeled:

DEC-11-LRBPA-A-MC9 for a 9-track TU10,
TS03, TU16, or TU45 drive.

DEC-11-LRBPA-A-MC7 for a 7-track TU10 drive.
- Ensure that the FILE PROT (file protection) indicator light is lit.
- Ensure that the tape is at its load point (the LD PT indicator light is lit).
- Set the ON LINE/OFF LINE switch on the tape unit to ON LINE and ensure that the RDY (ready) indicator light is lit.
- Ensure that the console terminal is on line.

For disk cartridge distribution:

To mount the disk cartridge, proceed as follows:

- Log into the system under a privileged account.
- In a free unit, insert the cartridge labeled:

DEC-11-LRBPA-A-HC for an RK05 disk drive.
DEC-11-LRBPA-A-BC for an RK06 disk drive.
- Place the LOAD/RUN switch (RK05) or RUN/STOP switch (RK06) on the drive to its RUN position.
- Ensure that the RDY (ready) indicator light is lit.
- Ensure that the WR PROT (write protect) indicator light is lit.
- Ensure that the console terminal is on line.

If the distribution medium is a disk cartridge, you must logically mount it. Ensure that the disk is write protected and use the following command:

```
MOUNT dev: BF2/RO
```

where dev is DK or DM with a unit number and /RO is a read only switch that prevents modification of the disk.

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If the MOUNT is successful, RSTS/E returns a READY prompt.

After the distribution is mounted, use an OLD command to access the BASIC-PLUS-2 BUILD program (BASBLD) located in account [1,100] on the distribution medium:

```
OLD dev:11,1001BASBLD   
READY
```

Note that when device assignment specifications are called for in response to installation dialogue prompts (dev:), use MT0: or MT1: for magtape and BP2: for RK05 and RK06 disk.

2.2 BASIC-PLUS-2 CONTROL FILES

The BASBLD program generates the BASIC-PLUS-2 run-time system. You must run the BASBLD program to select the run-time system that is appropriate for your use as follows:

```
OLD dev:11,1001BASBLD   
READY  
RUN   
  
BASBLD V01-00 RSTS V06B-02 TS1 9327(19 JUN)  
SOURCE INPUT DEVICE? MTn: or BP2:   
LIBRARY OUTPUT DEVICE<SY:>?   
LIBRARY ACCOUNT<11,21>?   
CONTROL FILE IS?
```

You answer the SOURCE INPUT DEVICE prompt with the device specification for your distribution. In response to the LIBRARY OUTPUT DEVICE prompt, you type the RETURN key to accept the default, which writes the library to the public disk structure. In response to the LIBRARY ACCOUNT prompt, type the RETURN key to accept the [1,2] default.

The CONTROL FILE IS prompt allows you to select the BASIC-PLUS-2 run-time system that is best suited to your system. The selection possibilities are as follows:

- If there is no floating-point processor on your system, type:
dev:11,1001BASIC.CTL
- If your system uses an FIS floating-point processor, type:
dev:11,1001BASIC1.CTL
- If your system uses an FPP floating-point processor, type:
dev:11,1001BASIC2.CTL

Note that if you select a run-time system that is incompatible with your system's floating-point processor, the system will behave in an unpredictable manner.

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- If sequential and relative RMS Record I/O is present on the system, type:

```
dev:11,100IRMS11.CTL
```

If sequential, relative, and indexed RMS Record I/O is present on the system, type:

```
dev:11,100IRMS11K.CTL
```

This procedure does not install RMS Record I/O on the system. The procedure does install the BASIC-PLUS-2 interface to RMS. The RMS code itself is auxiliary software that must be separately installed on the system. Note that the RMS interface should be installed after you install either BASIC.CTL, BASIC1.CTL, or BASIC2.CTL.

- If your system contains an old version of BASIC-PLUS-2, type:

```
dev:11,100IREMOVE.CTL
```

The BASBLD program proceeds to build the specified BASIC-PLUS-2 run-time system. This process is directed by commands contained in the program and causes lines of text to print on the terminal. Included in the text are prompts for system options. As each option is printed, the build dialogue halts and awaits a reply from the terminal. The complete text is shown in Chapter 3. The option prompts and the selections available to you are described in Section 2.3.

If you type REMOVE to delete a previous version of BASIC-PLUS-2, the BASBLD program runs the complete dialogue until it prints:

```
BUILD COMPLETE
```

on the terminal. This indicates that the previous version of BASIC-PLUS-2 is removed. To build a new version of BASIC-PLUS-2, you must reinitiate the BASBLD program with an OLD command and follow the directions in this section. You then turn to Section 2.3 for the compiler options.

Note that you can specify only one CTL file in response to the CONTROL FILE IS? prompt. For example, to build a system with both RMS Record I/O and FIS floating-point processing, you must run the installation twice. That is, you must answer the CONTROL FILE IS? prompt with BASIC1.CTL, answer the option prompts as indicated in Section 2.3, and let the installation proceed until BUILD COMPLETE is printed on the terminal. You must then rerun BASBLD and answer the CONTROL FILE IS? prompt with RMS11.CTL. When BASBLD is run for the second time, the option prompts are not printed and no responses are called for.

Note that when you run BASBLD for the second time or when you answer the CONTROL FILE IS? prompt with REMOVE, the BASBLD program controls the installation. No responses are needed.

RSTS/E INSTALLATION PROCEDURES

2.3 SELECTING COMPILER OPTIONS

The BASBLD program dialogue allows you to select BASIC-PLUS-2 options. These options include:

1. Compiler size
2. Single or double precision arithmetic
3. Default scale factor
4. Default enabling of the /NOLINE switch
5. Default object modules
6. BASIC-PLUS-2 prompt
7. BASIC-PLUS-2 CCL command name

Details on each of these options are contained in the following subsections.

2.3.1 Compiler Size

The first prompt to appear in the BASBLD dialogue is:

```
COMPILER SIZE <32>?
```

This option allows you to specify the size in words of the compiler that BASBLD generates. You can specify a size in the range of 25K to 32K words or type a RETURN key to accept the 32K default size.

If you type a size that is outside of the legal range, BASBLD prints the correct range and reissues the prompt:

```
COMPILER SIZE <32>? 20 (RET)
25 TO 32 ONLY
COMPILER SIZE <32>?
```

If you build a large compiler, the speed of compilations is increased. However, you must consider the memory amount and maximum swap size available on your RSTS/E system. That is, a 28K word task cannot run on a system that provides less than 28K of memory to user programs. Therefore, a larger compiler means that an equally large memory area is swapped to disk. Note that the system swap size must be large enough to swap the BASIC-PLUS-2 compiler. This is true even though individual users can be limited to task sizes that are less than the compiler size.

2.3.2 Precision Arithmetic

Following the COMPILER SIZE option, BASBLD prompts for single or double precision arithmetic:

```
PRECISION <Single>?
```

In answer to the prompt, you can type a RETURN key and accept the single precision default or specify DOUBLE for double precision.

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If you accept the default, the single-precision math package is installed on the system. However, a programmer can specify the use of double precision at run time with the `COMPILE /DOUBLE` command. Refer to the BASIC-PLUS-2 RSTS/E User's Guide for information on this command.

If you specify `DOUBLE`, the double-precision math package is installed as the `BASIC-PLUS-2` default. Note that this disallows the use of single precision at run time. To use single precision, you must rebuild the `BASIC-PLUS-2` run-time system and select single as the precision option.

2.3.3 Scale Factor

After the `PRECISION` option, `BASBLD` prompts for the default scale factor:

```
SCALE FACTOR <0>?
```

This option allows you to specify a factor in the range of 0 to 6, which becomes the default for scaled arithmetic. To select a 0 scale factor, type the `RETURN` key in response to the prompt. To specify a non-0 scale factor, type the desired number in response to the prompt. Note that if you type a number that is outside of the legal range, `BASBLD` prints the correct range and reinitiates the prompt:

```
SCALE FACTOR <0>? 9 (RET)
0 TO 6 ONLY
SCALE FACTOR <0>?
```

The factor you select with this option becomes the default. However, a programmer can override the default at run time with the `SCALE` command. Refer to the BASIC-PLUS-2 RSTS/E User's Guide for information on the `SCALE` command.

2.3.4 /NOLINE Switch

After the scale factor is selected, `BASBLD` issues a `/NOLINE` switch prompt:

```
NOLINE SWITCH ON <No>?
```

This option allows you to set the `/NOLINE` switch for all program compilations. This switch disables internal line headers and saves at least two words of memory for each program line compiled.

The `BASBLD` option default is not to set the `/NOLINE` switch for each compilation. If you accept the `BASBLD` default, type the `RETURN` key in response to the prompt. However, even if you accept the `BASBLD` default, a programmer can specify the `/NOLINE` switch at run time with a `COMPILE /NOLINE` command. This command is described in the BASIC-PLUS-2 RSTS/E User's Guide.

If you wish to set the `/NOLINE` switch for all compilations, type `YES` in response to the prompt. Note that even with `/NOLINE` set as the default, the compilation of a program that contains an `ERL` reference or a `RESUME` statement with no line number specification overrides the

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switch. When an override occurs, the compiler prints one of the following diagnostic messages:

```
%ERL overrides NOLINE
```

```
%RESUME overrides NOLINE
```

2.3.5 Default Object Modules

Following the NOLINE option, BASBLD prompts for default compilation of object modules:

```
DEFAULT TO OBJ OUTPUT <No>?
```

This option allows you to specify the production of an object module when a program is compiled. If you desire this option, type YES in response to the prompt. The system default is to produce an executable task image when a program is compiled. If you wish to maintain the system default, type the RETURN key in response to the prompt.

If you maintain the system default (type the RETURN key), a run-time COMPILE command produces an executable task image with a .TSK extension from a BASIC-PLUS-2 source program. Note that if a BASIC-PLUS-2 program contains any RMS OPEN statement, or a CALL or SUB statement, task compilation is overridden and BASIC-PLUS-2 produces an object module. This condition is described in the BASIC-PLUS-2 RSTS/E User's Guide.

If you specify object modules as the compilation default (type YES in response to the prompt), a run-time COMPILE command produces an object module with an .OBJ extension from a BASIC-PLUS-2 source program. Note that a programmer must input an object module to the Task Builder before it can be executed. If a programmer specifies task output and the program contains an OPEN, CALL, or SUB statement, a fatal error occurs. Object modules and the Task Builder are described in the BASIC-PLUS-2 RSTS/E User's Guide.

2.3.6 BASIC Prompt Message

Following the OBJ option, BASBLD asks for the desired BASIC-PLUS-2 prompt message:

```
PROMPT MESSAGE <Ready>?
```

This option allows you to specify the message that BASIC-PLUS-2 prints as a prompt on the terminal. The default message is READY, which is the same as the RSTS/E system prompt. If READY is satisfactory, type the RETURN key in response to the option. If you wish to specify a different prompt message, type any 1- to 6-character alphanumeric combination. For example:

```
PROMPT MESSAGE <Ready>? BASIC2
```

causes BASIC-PLUS-2 to print the prompt message BASIC2 instead of READY.

RSTS/E INSTALLATION PROCEDURES

2.3.7 BASIC CCL Command

After the prompt message option, BASBLD issues a CCL command option:

```
CCL COMMAND NAME <BASIC2>?
```

This option allows you to specify the CCL command name by which a programmer invokes BASIC-PLUS-2. If the default name (BASIC2) is satisfactory, type a RETURN key in response to the prompt. If you desire a different name, type any 1- to 6-character alphanumeric combination. If you type a name that is outside of the legal range, BASBLD prints the correct range and reissues the prompt:

```
CCL COMMAND NAME <BASIC2>? NEWBASIC (RET)
& CHARACTERS MAXIMUM
CCL COMMAND NAME <BASIC2>?
```

Note that the BASIC-PLUS-2 CCL command name (and abbreviation) must be added to the RSTS/E system before it can be used. For information on adding CCL commands, refer to Section 4.1.

2.4 COMPLETING THE INSTALLATION

After the option dialogue is completed, the BASBLD program continues with the BASIC-PLUS-2 installation. This process is controlled by BASBLD and requires no additional input from you. When the installation is successfully accomplished, BASBLD prints the following message on the terminal:

```
BUILD COMPLETE
```

There are two possible errors that can occur during the installation. First, there may be an insufficient amount of disk space available for the installation. Refer to Section 2.1 for the required disk space and ensure that these requirements are satisfied on your system.

Also, if BASBLD encounters a previously installed run-time system of the same name as BASIC-PLUS-2, an error results. Refer to Section 2.2 for information on removing previous versions of BASIC-PLUS-2.

When the installation is completed, remove the distribution medium and store it in a secure location. If the distribution medium is disk, you must logically dismount it before you remove it from the drive. To dismount the disk, type:

```
RUN #UTILTY (RET)
UTILTY V06B-03 RSTS V06B-02 TSI 9327
# DISMOUNT dev: (RET)
# ^Z
```

```
READY
```

The UTILTY program logically dismounts the disk. If the dismount is successful, remove the disk from its drive. You should store the distribution medium (disk or magtape) in a safe place. This ensures that BASBLD is available should you have to reinstall BASIC-PLUS-2.

CHAPTER 3

RSTS/E BASIC-PLUS-2 INSTALLATION AND VERIFICATION

The sample installation dialogue in this chapter contains all of the BASBLD program output including the option selections and the BASIC-PLUS-2 verification. Note that the verification is automatically made by the BASBLD program. At certain points in this sample, the output is interrupted by text. This text is not generated by BASBLD, but is used to explain the installation process.

3.1 SAMPLE INSTALLATION DIALOGUE

LOG 1/8

PASSWORD:

Ready

OLD MTO: E1,100|BASBLD

Ready

RUN

BASBLD 07:13 PM 27-Jun-77
Basbld V01-00 RSTS V06B-02 TS1 9327(19JUN)
SOURCE INPUT DEVICE? MTO:
LIBRARY OUTPUT DEVICE <SY|>?
LIBRARY ACCOUNT <E1,2|>?
CONTROL FILE IS? MTO: E1,100|BASIC

At this point, you are logged onto the RSTS/E system under a privileged account. The BASBLD program, contained on magtape, is run and MTO: is specified as the input device. The BASIC.CTL control file is selected, which indicates that there is no floating-point processor on the system. BASBLD then assumes control of the installation.

^C

HELLO

LOGIN RSTS V06B-02 TS1 9327(19JUN) JOB 16 [0,0] KB27: 27-Jun-77 07:14 PM

1 / 8

PASSWORD:

1 OTHER USER(S) ARE LOGGED IN UNDER THIS ACCOUNT

Jobs 15 are detached under this account.

Job number to attach to ?

Ready

RSTS/E BASIC-PLUS-2 INSTALLATION AND VERIFICATION

ASSIGN [1,2]

Ready

```
RUN $PIF
PIF V06B-03 RSTS V06B-02 TS1 9327(19JUN)
#C1,1]BASIC2.ERR=MT0:C1,100]BASIC2.ERR/BL
#C1,1]BASIC2.ERR<40>/RE
#BASBL1.TSK=MT0:C1,100]BASBL1.TSK/BL
#BASBL1.TSK<124>/RE
#^C
```

Ready

```
RUN $UTILTY
UTILTY V06B-03 RSTS V06B-02 TS1 9327(19JUN)
#NAME RSX=BASBL1.TSK
#^C
```

Ready

RUN BASBL1

The BASBLD program logs itself onto the system with the current programmer, project number and password. It detaches the current job and runs a control file that contains a series of commands. These commands cause PIP to copy the files required for compiler option selections. They also cause UTILTY to install the files on RSTS/E for execution. The RUN BASBL1 command executes the option selection file.

Basic Plus 2 Compiler build - V01-00 RSTS/E

```
Compiler size <32>? 
Precision <Single>? 
Scale Factor <0>? 
Noline switch on <No>? 
Default to OBJ output <No>? 
Prompt message <Ready>? Basic2 
6 characters max
Prompt message <Ready>? Basic2 
CCL Command name <BASIC2>? 
```

At this point in the installation, BASBLD halts and prompts for the compiler options as described in Section 2.3. In this sample, defaults are selected for compiler size, precision arithmetic, scale, noline, and OBJ output. The prompt message selection in this sample is greater than six characters in the first instance (BAASIC2), which causes a message and another prompt. The CCL selection is the default. Following the compiler options, BASBLD again assumes control of the installation.

RSTS/E BASIC-PLUS-2 INSTALLATION AND VERIFICATION

Ready

OPEN 'CO,1JBASIC2,RTS/SI:78/MODE:16' FOR OUTPUT AS FILE #1%

Ready

CLOSE #1%

Ready

OPEN 'CO,1JBP2COM,RTS/SI:23/MODE:16' FOR OUTPUT AS FILE #1%

Ready

CLOSE #1%

Ready

^C

Ready

```
RUN $PIP
PIP      V06B-03 RSTS V06B-02 TS1 9327(19JUN)
#CO,1JBASIC2,RTS/MODE:16=MT0:C1,100JBASIC,RTS/CO/UP
#CO,1JBASIC2,RTS<40>/RE
#CO,1JBP2COM,RTS/MODE:16=MT0:C1,100JBP2CO,RTS/CO/UP
#CO,1JBP2COM,RTS<40>/RE
#^C
```

Ready

```
RUN $UTILITY
UTILITY V06B-03 RSTS V06B-02 TS1 9327(19JUN)
#ADD BASIC2
#ADD BP2COM
#^C
```

Ready

```
RUN $PIP
PIP      V06B-03 RSTS V06B-02 TS1 9327(19JUN)
#C1,1JBASIC2,TSK=MT0:C1,100JBASIC,TSK/BL
#C1,1JBASIC2,TSK<40>/RE
#C1,1JBASIC2,STB=MT0:C1,100JBASIC,STB/BL
#C1,1JBASIC2,STB<40>/RE
#C1,1JBASIC2,OLB=MT0:C1,100JBASIC,OLB/BL
#C1,1JBASIC2,OLB<40>/RE
#C1,1JBP2COM,TSK=MT0:C1,100JBP2CO,TSK/BL
#C1,1JBP2COM,TSK<40>/RE
#C1,1JBP2COM,STB=MT0:C1,100JBP2CO,STB/BL
#C1,1JBP2COM,STB<40>/RE
#C1,1JBP2COM,OLB=MT0:C1,100JBP2CO,OLB/BL
#C1,1JBP2COM,OLB<40>/RE
#BASICC,OLB=MT0:C1,100JBASCC,OLB/BL
#C1,1JBASRMS,OLB=MT0:C1,100JBASRMS,OLB/BL
#BASCCMP,ODL=MT0:C1,100JBASCCMP,ODL/BL
#B2CRMS,OLB=MT0:C1,100JB2CRMS,OLB/BL
#BASICC,ODL=MT0:C1,100JBASICC,ODL/BL
#^C
```

RSTS/E BASIC-PLUS-2 INSTALLATION AND VERIFICATION

Ready

```
RUN $TKB
TKB>@BASICC
TKB>^C
```

Ready

```
RUN $PIP
PIP      V06B-03 RSTS V06B-02 TS1 9327(19JUN)
#C1,2JBASIC2.TSK<232>/RE
#BASICC.OLB,BASICC.CMD,BASICC.ODL/DE
#B2CRMS.OLB,BASCMP.ODL,C1,1JBASRMS.OLB/DE
#TRANS.BAS=MTO:C1,100JTRANS.BAS/BL
#C1,1JTRANS.KEY=MTO:C1,100JTRANS.KEY/BL
#C1,1JTRANS.KEY<40>/RE
#^C
```

BASBLD uses the OPEN statements to preallocate contiguous space in account [0,1]. PIP copies the run-time system files into the reserved space and changes the protection codes. UTILTY installs the files on the system. PIP then copies the files required for the compiler that was specified in the option selections. The Task Builder is used to build and install the compiler. With the compiler built and installed, PIP deletes all unnecessary files.

Ready

```
RUN TRANS
TRANS  Y01-14
TARGET SYSTEM ?
INPUT FILE ? TRANS
OUTPUT FILE ?
EXTEND MODE ?
OLD NAME ?
%NO VARIABLE SUBSTITUTIONS
INPUT FILE?^C
```

Ready

```
RUN C1,2JBASIC2
Basic Plus 2    X01-03
```

RSTS/E BASIC-PLUS-2 INSTALLATION AND VERIFICATION

Basic2

OLD TRANS

Basic2

COMPILE [1,2]<104>

Basic2

UNSAVE TRANS.BAS

Basic2

UNSAVE TRANS.B2S

Basic2

^C

Basic2

^C

Basic2

HELLO

LOGIN RSTS V06B-02 TS1 9327(19JUN) JOB 16 [1,8] KB27: 27-Jun-77 07:36 PM
1 OTHER USER(S) ARE LOGGED IN UNDER THIS ACCOUNT
Jobs 15 are detached under this account.
Job number to attach to ? 15
[Attaching to Job 15]

BUILD COMPLETE

The Translator is used to convert a BASIC-PLUS program (TRANS.BAS) to BASIC-PLUS-2 (TRANS.B2S). This procedure verifies the installation of BASIC-PLUS-2. The BASIC-PLUS-2 Translator is compiled and BASBLD returns control to the current job. The BUILD COMPLETE message signifies the end of the installation.

At this point, BASIC-PLUS-2 is installed and verified on the RSTS/E system. If you wish to add RMS support, you must reinitiate the BASBLD program as described in Section 2.2. In the following example, BASBLD is reinitiated to add RMS sequential, relative, and indexed file support (RMS11K.CTL):

Ready

OLD MTO:[1,100]BASBLD

Ready

RUN

BASBLD 07:37 PM 27-Jun-77

RSTS/E BASIC-PLUS-2 INSTALLATION AND VERIFICATION

Bashld V01-00 RSTS V06B-02 TS1 9327(19JUN)

SOURCE INPUT DEVICE? MTO:

LIBRARY OUTPUT DEVICE <SY:;>?

LIBRARY ACCOUNT <C1,2J>?

CONTROL FILE IS? MTO:C1,100J RMS11K

^C

HELLO

LOGIN RSTS V06B-02 TS1 9327(19JUN) JOB 16 [0,0] KB27: 27-Jun-77 07:38 PM

1 / 8

PASSWORD:

2 OTHER USER(S) ARE LOGGED IN UNDER THIS ACCOUNT

Jobs 15 are detached under this account.

Job number to attach to ?

Ready

ASSIGN [1,2]

Ready

RUN \$PIP

PIP V06B-03 RSTS V06B-02 TS1 9327(19JUN)

#[1,1]BASRMS.OLB=MTO:[1,100]BASRMS.OLB/BL

#[1,1]BASIC1.ODL=MTO:[1,100]BASIC1.ODL/BL

#[1,1]BASIC2.ODL=MTO:[1,100]BASIC2.ODL/BL

#[1,1]BASIC3.ODL=MTO:[1,100]BASIC3.ODL/BL

#[1,1]BASIC4.ODL=MTO:[1,100]BASIC4.ODL/BL

#[1,1]BASIC5.ODL=MTO:[1,100]BASIC5.ODL/BL

#[1,1]BASIC6.ODL=MTO:[1,100]BASIC6.ODL/BL

#[1,1]BASIC7.ODL=MTO:[1,100]BASIC7.ODL/BL

#[1,1]BASIC1.ODL<40>/RE

#[1,1]BASIC2.ODL<40>/RE

#[1,1]BASIC3.ODL<40>/RE

#[1,1]BASIC4.ODL<40>/RE

#[1,1]BASIC5.ODL<40>/RE

#[1,1]BASIC6.ODL<40>/RE

#[1,1]BASIC7.ODL<40>/RE

#[1,1]BASRMS.OLB<40>/RE

^C

^C

Ready

HELLO

LOGIN RSTS V06B-02 TS1 9327(19JUN) JOB 16 [1,8] KB27: 27-Jun-77 07:42 PM

1 OTHER USER(S) ARE LOGGED IN UNDER THIS ACCOUNT

Jobs 15 are detached under this account.

Job number to attach to ? 15

[Attaching to Job 15]

BUILD COMPLETE

Ready

RSTS/E BASIC-PLUS-2 INSTALLATION AND VERIFICATION

3.2 BASIC-PLUS-2 FILES

The installation of BASIC-PLUS-2 on RSTS/E deposits the following files in system areas [0,1], [1,1], and [1,2].

AREA	FILENAME	CONTENT
[0,1]	BP2COM.RTS	Compiler run-time system
[0,1]	BASIC2.RTS	User run-time system
[1,1]	BP2COM.OLB	Compiler library
[1,1]	BP2COM.TSK	Compiler
[1,1]	BASIC2.OLB	Run-time system library
[1,1]	BASIC2.TSK	Run-time system
[1,1]	TRANS.KEY	Translator key table
[1,1]	BASIC2.STB	Run-time system symbol table
[1,1]	BP2COM.STB	Compiler symbol table
[1,1]	BASIC2.ERR	Error text
[1,2]	BASIC2.TSK	Compiler
[1,2]	TRANS.TSK	Translator

If RMS11.CTL is specified in response to the CONTROL FILE IS? prompt, the following files are added to the system:

AREA	FILENAME	CONTENT
[1,1]	BASRMS.OLB	BASIC-PLUS-2/RMS interface routines
[1,1]	BASIC1.ODL	RMS overlay (sequential)
[1,1]	BASIC2.ODL	RMS overlay (relative)
[1,1]	BASIC3.ODL	RMS overlay (sequential, relative)

If RMS11K.CTL is specified in response to the CONTROL FILE IS? prompt, the following files are added to the system:

AREA	FILENAME	CONTENT
[1,1]	BASRMS.OLB	BASIC-PLUS-2/RMS interface routines
[1,1]	BASIC1.ODL	RMS overlay (sequential)
[1,1]	BASIC2.ODL	RMS overlay (relative)
[1,1]	BASIC3.ODL	RMS overlay (sequential, relative)
[1,1]	BASIC4.ODL	RMS overlay (indexed)
[1,1]	BASIC5.ODL	RMS overlay (indexed, sequential)
[1,1]	BASIC6.ODL	RMS overlay (indexed, relative)
[1,1]	BASIC7.ODL	RMS overlay (indexed, sequential, relative)



CHAPTER 4
TAILORING THE SYSTEM

With BASIC-PLUS-2 installed and verified on your system, you can tailor BASIC-PLUS-2 to your specific needs. This chapter describes the following operations:

1. Add the BASIC-PLUS-2 CCL command (see Section 2.3.7) to the RSTS/E system.
2. Edit the control files to add the BASIC2 and BP2COM run-time systems.

4.1 ADDING BASIC-PLUS-2

The RSTS/E startup control file START.CTL contains the required initialization routines (INIT) and the indirect command file specifications that perform routine operations. To add the BASIC-PLUS-2 CCL command and run-time systems to RSTS/E, you can edit the control file or the appropriate command file (CCL.CMD or RTS.CMD). To accomplish this, you must log into the system under a privileged account and then use an editor to input the following lines:

```
FORCE KBO: CCL BAS-IC2= [1,2] BASIC2.TSK#30000  
FORCE KBO: ADD BASIC2  
FORCE KBO: ADD BP2COM
```

Note that the CCL command name (BASIC2) can be replaced with the 1- to 6-character name that you specified as the default BASIC-PLUS-2 CCL command (see Section 2.3.7).

Refer to the RSTS/E System Manager's Guide for detailed information on START.CTL and the command files.



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Did you find this manual understandable, usable, and well-organized? Please make suggestions for improvement.

Is there sufficient documentation on associated system programs required for use of the software described in this manual? If not, what material is missing and where should it be placed?

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