VSV21 Version 2.0
Software Installation Guide

AA-FV66B-TC

February 1986

This guide describes how to install the VSV21 Version 2.0 software from the supplied medium to the host computer.

This guide is part of the VSV21 V2.0 document set that supersedes the VSV21 V1.0 document set.

Operating Systems: RSX-11M-PLUS Version 3.0
Micro/RSX Version 3.0
MicroVMS Version 4.2

Software: RSX-11M-PLUS VSV21 V3.0
Micro/RSX VSV21 V3.0
MicroVMS VSV21 V4.2

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PREFACE

This guide is designed to allow you to install the VSV21 software on an RSX-11M-PLUS, Micro/RSX or MicroVMS system. It is assumed that the VSV21 hardware has already been connected to the host computer. It is also assumed that you have experience of using the relevant operating system utilities and commands.

CHAPTER 1
SOFTWARE INSTALLATION ON RSX SYSTEMS

1.1 INTRODUCTION

The steps to install the VSV21 software on the RSX-11M-PLUS and Micro/RSX systems are as follows:

1. Boot the system, and check that the necessary library files are included (see Section 1.2).

2. On RSX-11M-PLUS systems, restore the VSV21 software distribution kit to disk, using the Backup and Restore Utility (BRU) (see Section 1.3).

3. Invoke the command procedure, and select software installation options from the options table (see Section 1.4).

4. Modify the startup command file (see Section 1.5).

A complete installation and verification procedure is shown in Appendix A.

1.2 PREPARING TO INSTALL THE VSV21 SOFTWARE

Before starting the software installation procedure, check that the system files listed in Appendix B exist.

The following utilities must already be installed:

PIP (ANSI version)
MACRO-11 assembler
TKB

Check that there is sufficient disk space to complete the installation. The maximum disk block utilization is 2500.

The disk or tape is labeled as in the following example:

BB-FV63B-BC
RSX-11M-PLUS VSV21RSX V02.00 BIN

The disk or tape contains all the software components of the distribution kit. Load it into the appropriate drive and put it on-line. If the kit is on two RX50 diskettes and you are using only one drive, load the first diskette. This is labelled 'Part 1 of 2'.

Before starting to install the software, make sure that the disk to which the software will be copied is not write-protected.

1.3 RESTORING THE SOFTWARE DISTRIBUTION KIT TO DISK

RSX-11M-PLUS users should now read Section 1.3.1. Micro/RSX users should proceed to Section 1.3.2.

1.3.1 Copying the Software on RSX-11M-PLUS Systems

The commands described in the following paragraphs are shown along with the prompt in each case.

1.3.1.1 Set UIC – To set the UIC, log in to a privileged account, and change the UIC to [200,200].

```
>SET/UIC=[200,200]
```

1.3.1.2 Mount Disk or Tape – The RSX-11M-PLUS software is available on the following media:

- A 600-foot 1600 bits/in magnetic tape
- An RL02 disk
- Two RX50 diskettes

Mount the disk or tape if it is not mounted already.

```
>MOU dduu:/FOR
```

1.3.1.3 Backup and Restore – The distribution kit is in RSX-11 BRU (Backup and Restore Utility) format. If BRU is installed, invoke it by typing:

```
>BRU
```

If BRU is not installed, invoke it by typing:

```
>RUN $BRU
```

BRU prompts for a command by displaying the 'BRU>' prompt.

If the distribution kit is on an RL02 disk, a TK50 cassette or on magnetic tape, mount the medium as described in Section 1.2.

If the distribution kit is on two RX50 diskettes, proceed as follows:

1. Type the following command to restore the distribution kit to disk:

   ```
   BRU>/MOU/BAC:VSV21RSX/NOINIT/UFD/NEW ddnn: dduu:
   ```

   where ddnn: is the input disk or tape, for example DU1:, and
   dduu: is the output disk, for example, DU0:.

2. Exit from BRU by entering CTRL/Z.

3. Dismount the first disk by entering

   ```
   >DMO DU1:
   ```

4. Mount the second disk as described in Section 1.2.

5. Run BRU again:

   ```
   >RUN $BRU
   ```

6. Repeat the /MOU command, substituting 'VSV212RSX' for 'VSV21RSX':

   ```
   BRU>/MOU/BAC:VSV212RSX/NOINIT/UFD/NEW ddnn: dduu:
   ```

If you are loading the software from RX50 diskettes, BRU outputs the following message during the restore process for each disk:

```
BRU-Completed
```

The software distribution kit is restored to the disk you selected, in DIRECTORY [200,200].

BRU prompts you for another command line after these messages. There are no further commands for BRU, so terminate BRU by pressing CTRL/Z. Dismount and remove the tape, disk or disks.

1.3.2 Copying the Software on Micro/RSX Systems

1.3.2.1 Set UIC – To set the UIC, log in to a privileged account, and change the UIC to [1,2]:

```
>SET /UIC=[1,2]
```

The Micro/RSX software is available only on two RX50 diskettes.

1.3.2.2 Copying the Files – OPTION is a utility provided on all Micro/RSX systems to enable you to install software options on your system. For a complete description of OPTION, refer to the system documentation.

At the prompt, enter the OPTION command:

```
>@OPTION
```

From the menu, enter 'I' to select the option 'Install a new software option'. When you are asked to enter the diskette drive name, enter 'DU1:' and insert the first diskette, labelled 'Part 1 of 2' into drive 1.

When prompted for the second diskette, remove the first diskette and insert the second diskette, labelled 'Part 2 of 2' into the same drive. Follow the instructions displayed on the screen until you reach the VSV21 IVP command procedure.

Note that you can ignore the command to invoke the VSVIVP table. This command is not necessary on Micro/RSX systems.

1.4 SELECTING INSTALLATION OPTIONS

1.4.1 Invoke the Command Procedure

To invoke the installation command procedure, type the following command:

```
@VSVIVP
```

The option table is then displayed:

```
VSV21 IVP Option Table

E-Execute complete VSV21 Installation and Verification

D-Distribute Files

B-Build and Install VSV21 Driver

S-Set VSV21 Characteristics
```

```
V-Verify VSV21

R-Remove files

H-Help

Q-Quit IVP

option [S D:'E']:
```

If you want a complete installation, enter 'E'. This performs all the options sequentially.

Otherwise select one of the other options. Options D, B, S, and V are described in the following sections:

1.4.2 Option D – Distribute Files

If you select option D, the system offers you the option of purging after distribution. It then distributes the VCP and driver files and tests for the existence of directories.

The VSV21 system copies utility VCP to LB:[3,54] and driver source files to LB:[11,10] and VSL to LB:[1,1]. This takes about 60 seconds.

1.4.3 Option B – Build and Install the Driver

If you select option B, the system issues a series of prompts. Defaults are provided.

Prompt	Permitted Input	Default
Do you want to purge after build?	Y or N	Y
What is the device for driver list and map files?	Device name	NL: (null device)
How many VSV21s in this configuration?	1, 2, 3, or 4	1
Enter vector address for VSO:	A three-character octal value	320
Enter CSR address for VSO:	A six-character octal value	172010

The system prompts you for vector address and a CSR address for each VSV21 in the configuration.

Prompt	Permitted Input	Default
`Are these values correct?`	Y or N	Y

The driver can take up to 4 minutes to build.

If no VS: driver is already installed, the system prompts:

```
In which partition is the driver to be loaded?
```

GEN is the default partition. If your system has DRVPAR with at least 4K free bytes, you can install the driver into DRVPAR.

If a device driver is already installed, a warning is issued and you are instructed to reboot the system before the new driver can be loaded.

The system issues more prompts and supplies a default for each.

The build process performs the following operations:

- Assembles and task-builds the device driver for the VSV21.
- Copies the device driver to the system UIC.

1.4.4 Option S – Set Characteristics

The installation process uses VCP with the file VSV21.SET as the default. You should keep this file for use later, even if another file is currently in use. If you do not want to use the existing version, the IVP allows you to create a new version.

1.4.5 Option V – Verification Procedure

Use the Verification Procedure to check that you have installed the RSX-11 VSV21 device driver correctly. The verification procedure checks the driver interface and displays test pictures.

Press the RETURN key to display the following test pictures on the VSV21 screen.

- A picture to check alignment and color quality
- A VSV21 graphics example

At the end of the verification procedure the option table is displayed, but the VSV21 graphics example is not cleared from the screen.

1.4.6 Option R – Remove Files

Select this option to delete all the files that were created during installation, with the exception of VSVIVP.CMD.

1.5 MODIFYING THE STARTUP COMMAND FILE

To make sure that the VSV21 software is loaded each time you boot the system, you should modify your system startup command file, STARTUP.CMD.

For example, the following lines will load the VSV21 driver and the VCP utility, and load the VSV11 emulator. The VSV21 is now ready for use.

```
!----- Load and install the driver for one VSV21
!
LOAD VS:/PAR=GEN
CON ONL VSA
CON ONL VSO:
!
!----- Make assignment for FORTRAN Draw package
!
ASSIGN VSO: VL:
!
!----- Install the VCP utility
!
INSTALL$VCP/TASK=...VCP
!
!----- Configure the VSV21 for VSV11 emulation
!
VCP LOAD KERNEL
VCP LOAD JSTICK
VCP LOAD VS11EM
!
!-------------------------------------------------------------
```

For directions on how to use the VCP utility, refer to the *VSV21 User's Guide (AZ-FV70B-TC).*

CHAPTER 2
SOFTWARE INSTALLATION ON MICROVMS SYSTEMS

2.1 INTRODUCTION

The steps to install the MicroVMS software are as follows:

1. Boot the system.

2. Run the VMSINSTAL procedure.

3. Run the VSVIVP prodedure.

An example of a complete installation and verification procedure is given in Appendix C.

2.2 RESTORING THE SOFTWARE DISTRIBUTION KIT TO DISK

The MicroVMS software is distributed on two RX50 diskettes or one TK50 cassette.

Execute the command procedure VMSINSTAL in the directory SYS$UPDATE with the following commands:

```
SET DEF SYS$UPDATE
@VMSINSTAL
```

The system asks if your system disk is backed up, and asks for the logical unit name of the drive where the disk or tape will be mounted. Enter the product name.

The system reminds you to put the disk or tape in the drive and confirm that the medium is in place by entering a 'Y'.

If your software is on two RX50 diskettes, the system requests that you remove the first disk and mount the second in the same drive.

You have the option of purging files from a previous installation.

The system prompts for the number of VSV21 modules being installed. It then prompts for an octal or decimal CSR and vector value for each device, and prompts for confirmation that the values you have entered are correct.

The system asks if you want to install the device driver, and reminds you to edit the startup file to include execution of the file VSV21GEN.COM.

When the installation is complete, the system prompts as follows:

```
* Products
```

Enter CTRL/Z to finish the installation and display the MicroVMS '$' prompt.

2.3 VERIFYING THE INSTALLATION

The installation verification procedure is in the library command file VSVIVP.COM. Execute the file by entering the command

```
@SYS$LIBRARY:VSVIVP
```

The system prompts for the number of VSV21 units to be verified. For each unit, it offers to display two test pictures. When all the units have been verified, the procedure terminates and the MicroVMS prompt is again displayed. The software installation is now verified.

APPENDIX A
EXAMPLE OF RSX INSTALLATION AND VERIFICATION PROCESS

This example of an installation and verification process is from an RX50 distribution kit for a single VSV21 module.

```
>SET /UIC=[200,200]
>MOU DU1:/FOR
>RUN $BRU
BRU>/MOU/VER/BAC:VSV21RSX/NOINIT/UFD/NEW DU1: DU0:
BRU - Starting verify pass

BRU - Completed

BRU>^Z
>DMO DU1:
11:47:38  *** DU1:  -- Dismount complete
DMO -- TT0:    dismounted from DU1:    *** Final dismount initiated ***
>MOU DU1:/FOR
>RUN $BRU

BRU>/MOU/VER/BAC:VSV212RSX/NOINIT/UFD/NEW DU1: DU0:
BRU - Starting verify pass

BRU - Completed

BRU>^Z
>DMO DU1:
11:55:18  *** DU1:  -- Dismount complete
DMO -- TT0:    dismounted from DU1:    *** Final dismount initiated ***
>@VSVIVP
>!      11:55:42 24-JAN-86
>!
>!              VSV21 Version 2  IVP Option Table:
>!              ==================================
>!
>!      E - Execute complete VSV21 installation and verification.
>!
>!      D - Distribute files.
>!
>!      B - Build and install VSV21 driver.
>!
>!      S - Set VSV21 characteristics.
>!
>!      V - Verify VSV21.
>!
>!      R - Remove files
>!
>!      H - Help
>!
>!      Q - Quit IVP.
>* option [S D:'E']: E
>!
>!      The complete installation may take up to 6 minutes
>!
>* Do You want to purge after distribution? [Y/N D:Y]:
>!
>!      Distributing VCP files...
>!
>!
>!      Distributing driver files...
>!
>!      Test to verify directory [11,10] exists
UFD-E, directory already exists
```

```
>!
>!      Distributing VSL library file...
>!
>!
>!      Test to verify directories [1,24] and [1,34] exist
>!
UFD-E, directory already exists
UFD-E, directory already exists
>* Do you want to purge after build? [Y/N D:Y]:
>* What is the device for driver list and map files (dduu:) [S D:'NL:']:
>* How many VSV21s in this configuration  ? [0 R:1-4 D:1]:
>* Enter vector address for VS0 (three character octal) [0 D:320]:
>* Enter CSR address for VS0 (six character octal ) [0 D:172010]:
>!
>!      For vs0: you have chosen vector and CSR addresses 320 and 172010.
>!
>* Are these values correct? [Y/N D:Y]:
>!
>!      This may take up to 4 minutes to build.
>!
>!      Building the VSV21 driver...
>!
>* In which partition is the driver to be loaded ? [S D:'GEN']:
>!      This option can create LB:[3,54]VSV21.SET, a sample VSV21
>!      setup command file, that will contain VCP commands to LOAD
>!      the KERNEL, the VIVID interpreter and a pointing device driver.
>* Do you want LB:[3,54]VSV21.SET to be created? [Y/N D:Y]:
>* Do you want to modify LB:[3,54]VSV21.SET? [Y/N D:N]:
>* Do you want to setup the VSV21(s) using LB:[3,54]VSV21.SET? [Y/N D:Y]:
>!
>!      Setting VSV21 Characteristics...
>!
>* Do you want to display the first VS11 test picture? [Y/N D:Y]:
>
>!
>!      Displaying first VS11 picture on VS0: ...
>RUN LB:[200,200]BARGEN
>!
>* Do you want to display the next VS11 test picture? [Y/N D:Y]:
>
>!
>!      Displaying next VS11 picture on VS0: ...
>RUN LB:[200,200]VSVGEN
>!
>!
>!               VSV21 Version 2  IVP Option Table:
>!               ==================================
>!
>!      E - Execute complete VSV21 installation and verification.
>!
>!      D - Distribute files.
>!
>!      B - Build and install VSV21 driver.
>!
>!      S - Set VSV21 characteristics.
>!
>!      V - Verify VSV21.
>!
>!      R - Remove files
>!
>!      H - Help
>!
>!      Q - Quit IVP.
```

APPENDIX B
DISTRIBUTION OF VSV21 FILES UNDER RSX

The deliverables are moved onto the host system, as shown in the following table:

File	[200,200]	[11,10]	SYSTEM UIC	[3,54]	[1,1]
VSVIVP.CMD	BRU				
BARGEN.TSK	BRU				
VSVGEN.TSK	BRU				
VECFNT.FNT	BRU				
SBDR40.FNT	BRU				
VSDRV.MAC	BRU	DISTRIBUTE			
VSTAB.MAC	BRU	DISTRIBUTE			
VCP.TSK	BRU			DISTRIBUTE	
HELP.VCP	BRU			DISTRIBUTE	
PRIV.VCP	BRU			DISTRIBUTE	
UNPRIV.VCP	BRU			DISTRIBUTE	
VIVID.V21	BRU			DISTRIBUTE	
VS11EM.V21	BRU			DISTRIBUTE	
KERNEL.V21	BRU			DISTRIBUTE	
JSTICK.V21	BRU			DISTRIBUTE	
PGSTICK.21	BRU			DISTRIBUTE	
VT220EM.V21	BRU			DISTRIBUTE	
TRANSP.V21	BRU			DISTRIBUTE	
DFONT.VIV	BRU			DISTRIBUTE	

The following output files are generated in the directories indicated:

File	[200,200]	[11,10]	SYSTEM UIC	[3,54]	[1,1]
VSDRV.TSK			BUILD		
VSDRV.STB			BUILD		
VSV21.SET				User option	

The system files used by the VSV21 reside in the directories indicated below.

File	[200,200]	[11,10]	SYSTEM UIC	[3,54]	[1,1]
EXEMC.MLB					COMPILE
RSXMC.MAC			COMPILE		
RSX11M.STB			BUILD		
EXELIB.OLB					BUILD

APPENDIX C
EXAMPLE OF MICROVMS INSTALLATION AND VERIFICATION PROCESS

```
$ set def sys$update
$ @VMSINSTAL

        VAX/VMS Software Product Installation Procedure V4.2


It is 28-JAN-1986 at 16:56.
Enter a question mark (?) at any time for help.

%VMSINSTAL-W-DECNET, Your DECnet network is up and running.
* Do you want to continue anyway [NO]? Y
* Are you satisfied with the backup of your system disk [YES]? Y
* Where will the distribution volumes be mounted: DUA1:

Enter the products to be processed from the first distribution volume set.
* Products: VS020
Please mount the first volume of the set on DUA1:.
* Are you ready? Y
%MOUNT-I-MOUNTED, VS01          mounted on _DUA1:

The following products will be processed:

  VS V2.0


        Beginning installation of VS V2.0 at 16:57

%VMSINSTAL-I-RESTORE, Restoring product saveset A...
%BACKUP-I-READYREAD, mount volume 2 on _DUA1: for reading
Enter "YES" when ready: Y

*****************************************************
*                                                   *
*             VSV21 DRIVER V2.0                     *
*                                                   *
*            INSTALLATION PROCEDURE                 *
*                                                   *
*  Copyright 1985, Digital Equipment Corporation    *
*                                                   *
*****************************************************

* Do you want to purge files replaced by this installation [YES]? Y
      Enter number of VSV21s being installed [D: 1]: 1

If you wish to use octal numbers as answers to the following
questions please precede each number with the 2 characters
'%O' where the 'O' denotes OCTAL

     Enter the CSR for VSA0 [D: %O172010]:
     Enter the VECTOR for VSA0 [D: %O320]:
For VSA0 you have chosen CSR and vector addresses %O172010 and %O320
     Are these values correct [D: Y]: Y


            File distribution starting...

*       Do you want to install the driver?: Y
```

```
                Be sure to add the line:

                 $@SYS$MANAGER:VSV21GEN

                to SYS$MANAGER:SYSTARTUP.COM


            To verify, run SYS$LIBRARY:VSVIVP.COM

%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
%DCL-I-SUPERSEDE, previous value of VAXVCP has been superseded
%SYSGEN-E-NOUNLOAD, driver is not unloadable

__Driver_____Start____End____Dev___DDB_______CRB_______IDB_____Unit__UCB____
VSDRIVER    800F1470 800F21B0
                             VSA 801C6680 801C6920 801C6740
                                                              0 800F21B0

        Installation of VS V2.0 completed at 17:02


Enter the products to be processed from the next distribution volume set.
* Products:  Exit

        VMSINSTAL procedure done at 17:03


$ @SYS$LIBRARY:VSVIVP.COM
To exit this command procedure at any time enter CTRL/Y

      Enter number of VSV21s being verified [D: 1]: 1

      Do you want to verify VSA0 [D: Y]: Y
      Do you want to display the VSV11 test picture on VSA0 [D: Y]: Y
      Do you want to display the VIVID test picture on VSA0 [D: Y]: Y

End of VSV21 verification
```

READER'S COMMENTS

Your comments and suggestions will help us in our efforts to improve the quality and usefulness of our publications.

1. **Which of the following most closely describes your job?** 1 ○a ○b ○c ○d ○e ○f ○g ○h ○i

   (a) Administrative support (d) Scientist/Engineer (g) Educator/Trainer
   (b) Programmer/Analyst (e) Systems Manager (h) Computer Operator
   (c) Software support (f) Sales (i) Other _____

2. **How many years of experience do you have with computers?** 2 ○a ○b ○c ○d ○e

   (a) Less than 1 (b) 1 to 3 (c) 4 to 6 (d) 7 to 9 (e) 10 or more

3. **What did you like *most* about this manual?**

4. **What did you like *least* about this manual?**

5. **How do you rate this manual?**

   Indicate your opinion of the quality of the manual. For each aspect of quality, darken your response on the five-point scale, where (1) = POOR and (5) = EXCELLENT

(a)	Accuracy	○1	○2	○3	○4	○5
(b)	Completeness	○1	○2	○3	○4	○5
(c)	Usefulness of Examples/Figures	○1	○2	○3	○4	○5
(d)	Clearness of Language	○1	○2	○3	○4	○5
(e)	Helpfulness of Index/Table of Contents	○1	○2	○3	○4	○5
(f)	Consistency in Presenting Information	○1	○2	○3	○4	○5
(g)	Logical Organization	○1	○2	○3	○4	○5
(h)	Visual Appeal	○1	○2	○3	○4	○5
(i)	Relevance of Information	○1	○2	○3	○4	○5
(j)	Ease of Learning	○1	○2	○3	○4	○5
(k)	Ease of Use	○1	○2	○3	○4	○5
(l)	YOUR OVERALL IMPRESSION	○1	○2	○3	○4	○5
(m)	Quality Relative to Other Digital Manuals	○1	○2	○3	○4	○5
(n)	Quality Relative to Other Companies' Manuals	○1	○2	○3	○4	○5

6. **List any errors you found in the manual. (Reference page, table, or figure numbers.)**

7. **Do you have any additional comments?**

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VSV21 SOFTWARE INSTALLATION GUIDE ADDENDUM

AD-FV66B-T1

PAGE 10 SECTION 2.3

Add the following text:

VMS Autoconfigure

MicroVMS Autoconfigure does not currently support the VSV21 and because of the restrictions imposed by MDM (MicroVAX II diagnostic system), systems will have to be manually configured.

To do this, follow the procedure detailed below:

1. Install VSV21 software as defined in the VSV21 Software Installation Guide.

2. Edit SYS$MANAGER:CONFIG.COM to include:

   - $@SYS$MANAGER:VSV21GEN

   - ALL other options to be built into the system

3. Disable AUTOCONFIGURE permanently:

```
$ MCSYSGEN
SYSGEN> USE CURRENT
SYSGEN> SET NOAUTO 1
SYSGEN> WRITE CURRENT
SYSGEN> EXIT
```

4. Reboot the system.