



National Aeronautics and  
Space Administration

**Lyndon B. Johnson Space Center**  
**Houston, Texas 77058**

January 2000

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Version Description Document  
for the  
Human Research Facility (HRF)  
Workstation Operating System,  
Hardware Drivers, and Diagnostics Software

LS-71042-11

# PROJECT DOCUMENT APPROVAL SHEET

DOCUMENT NUMBER

LS-71042-11

DATE

01/11/00

NO. OF  
PAGES

12

**TITLE:**

Version Description Document  
for the  
Human Research Facility (HRF)  
Workstation Operating System,  
Hardware Drivers, and Diagnostics Software

APPROVED:

NT3/GFE Assurance Branch

Original Signature on File / 1/11/00

APPROVED:

EA5/L. Bauer  
Technical Monitor

Original Signature on File

DATE

PREPARED BY

CHANGE APPROVALS

CHANGE  
NUMBER

Report Number

LS-71042-11

Date

11/22/99

**Version Description Document  
for the  
Human Research Facility (HRF)  
Workstation Operating System,  
Hardware Drivers, and Diagnostics Software**

Prepared by: Original Signature on File 11/18/99  
 Samme Lansdowne  
 Project Engineer Date

Approved: Original Signature on File 11/18/99  
 Keith Tucker  
 Software Development Project Manager Date

Approved: Original Signature on File 11/22/99  
 Mark Scott  
 HRF Software Quality Assurance Date

Approved: Original Signature on File 11/22/99  
 Jerry McDonald  
 Manager, Hardware Development Section Date

Prepared by:

Lockheed Martin Space Operations  
 Houston, Texas  
 for  
 National Aeronautics and Space Administration  
 Johnson Space Center

**REVISION/CHANGE APPROVALS**

Date	Revision Letter	Change Number	Prepared by	Approved by:		
				Unit Manager	SR&QA Manager	Project Manager

DOCUMENT NUMBER LS-71042-11	<b>DOCUMENT CHANGE/ REVISION LOG</b>	PAGE <u>1</u> OF <u>1</u>
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CHANGE/ REVISION	DATE	DESCRIPTION OF CHANGE	PAGES AFFECTED
Basic	1/11/00	Baseline Issue	All

Altered pages must be typed and distributed for insertion.

## CONTENTS

Section		Page
1.0	<u>SCOPE</u>	1
2.0	<u>REFERENCED DOCUMENTS</u>	1
3.0	<u>VERSION DESCRIPTION</u>	1
3.1	INVENTORY OF MATERIALS RELEASED	1
3.2	INVENTORY OF SOFTWARE CONTENTS	2
3.3	CHANGES INSTALLED	7
3.4	ADAPTATION DATA	7
3.5	RELATED DOCUMENTS	7
3.6	INSTALLATION INSTRUCTIONS	7
3.7	POSSIBLE PROBLEMS AND KNOWN ERRORS	12
3.8	COMPUTER SOFTWARE CONFIGURATION ITEM (CSCI) ENVIRONMENT INFORMATION	12
4.0	<u>NOTES</u>	12

## LIST OF TABLES

Table		Page
3.1-1	FLIGHT OPERATING SYSTEM AND HARDWARE DRIVERS	1
3.1-2	FLIGHT WORKSTATION DIAGNOSTICS SOFTWARE	2
3.2-1	CONTENTS OF “WSOS1-1.FLT”	2
3.2-2	CONTENTS OF “WSLD4-2.FLT”	3
3.6-1	FLIGHT OPERATING SYSTEM AND HARDWARE DRIVERS LOAD ON MAIN HARD DRIVE	8
3.6-2	FLIGHT OPERATING SYSTEM AND HARDWARE DRIVERS LOAD ON BACKUP HARD DRIVE	9
3.6-3	FLIGHT DIAGNOSTICS SOFTWARE LOAD ON HRF WORKSTATION	10
3.6-4	“ETHERNET TEST” LOAD ON HRF PORTABLE COMPUTER	11
3.8-1	CSCI ENVIRONMENT INFORMATION	12

## ACRONYMS AND ABBREVIATIONS

A/D	Analog/Digital
CD	Compact Disk
COTS	Commercial-Off-the-Shelf
CSCI	Computer Software Configuration Item
DSP	Digital Signal Processor
GFS	Government Furnished Software
HRF	Human Research Facility
ICBM	Isolated Circuit Board Module
IP	Internet Protocol
IRIG	Inter-Range Instrumentation Group
MS-DOS	Microsoft Disk Operating System
N/A	Not Applicable

## 1.0 SCOPE

This document describes the software release for the Human Research Facility (HRF) Workstation Diagnostics, Operating System, and Hardware Drivers. It includes all custom, Government Furnished Software (GFS), and Commercial-Off-the-Shelf (COTS) software. This software load is used for flight.

## 2.0 REFERENCED DOCUMENTS

<u>Document Number</u>	<u>Document Title</u>
LS-71042-10	Predelivery Acceptance Test Procedures for the Human Research Facility (HRF) Workstation

## 3.0 VERSION DESCRIPTION

### 3.1 INVENTORY OF MATERIALS RELEASED

The flight operating system and hardware drivers for the HRF Workstation have been integrated and consolidated into a single image file, which has been placed in Bonded Storage. The flight operating system and hardware drivers are COTS software. One master copy and two working copies have been generated, each on a single compact disk (CD). The part numbers and serial numbers of the flight operating system and hardware drivers are shown in Table 3.1-1.

TABLE 3.1-1. FLIGHT OPERATING SYSTEM AND HARDWARE DRIVERS

Part Number	Description	Serial Number
WSOS1-1.FLT	Workstation Operating System and Hardware Drivers, version 1.1, Master Copy	1001
WSOS1-1.FLT	Workstation Operating System and Hardware Drivers, version 1.1, Working Copy	1002
WSOS1-1.FLT	Workstation Operating System and Hardware Drivers, version 1.1, Working Copy	1003

The flight diagnostics software for the HRF Workstation is custom-built software, which has been placed in Bonded Storage. One master copy and two working copies are generated, each on a single CD. A software installation setup program and all source codes are included on the CD. The part numbers and serial numbers of the flight diagnostics software are shown in Table 3.1-2.

TABLE 3.1-2. FLIGHT WORKSTATION DIAGNOSTICS SOFTWARE

Part Number	Description	Serial Number
WSLD4-2.FLT	Workstation Diagnostics Software, version 4.2, Master Copy	1001
WSLD4-2.FLT	Workstation Diagnostics Software, version 4.2, Working Copy	1002
WSLD4-2.FLT	Workstation Diagnostics Software, version 4.2, Working Copy	1003

3.2 INVENTORY OF SOFTWARE CONTENTS

Table 3.2-1 shows the contents of “WSOS1-1.FLT,” the Workstation Operating System and Hardware Drivers. The items shown were installed on the HRF Workstation when a single image file was created. The name of the image file is “WSOS1-1.FLT.”

TABLE 3.2-1. CONTENTS OF “WSOS1-1.FLT”

Name	Version	Description
Windows NT	4.0, with Service Pack 4	Operating System
SeaMAC	2.02.01 with patch for dual processor systems	RS422 board driver
Bc620AT WinSDK	1.0	Inter-Range Instrumentation Group (IRIG) board driver
Digital Signal Processor (DSP) 21k Toolkit	5.05	DSP board driver
NI-DAQ	6.0	Analog/Digital (A/D) board driver
RealZmDrv (Z13/Z25/V13/V25)	4.02.00.39	Graphics board driver
Indy 3D	3.0	Graphics board benchmark software
FlashBus MV	3.7	Framegrabber board driver
Easy CD Creator	3.5c	Compact Disk Reader Writer software
Ghost	4.1a	Compression Utility

Table 3.2-2 shows the contents of “WSLD4-2.FLT,” the Workstation Diagnostics Software.

TABLE 3.2-2. CONTENTS OF “WSLD4-2.FLT”

Folder	Filename	Version	Description
\Workstation5A-1	Analog78.21k	1.1	DSP executable for talk-through test
\Workstation5A-1	DSPMemory.bat	1.5	Batch file which is used to launch the COTS DSP memory test
\Workstation5A-1	Dvin4.21k	1.1	DSP executable for compressing and recording voice during record and playback test
\Workstation5A-1	Exit.ico	1.1	Exit icon used on display
\Workstation5A-1	Help.ico	1.1	Help icon used on display
\Workstation5A-1	IRIG.dll	1.2	Custom-Built Dynamic Link Library for interfacing with IRIG board
\Workstation5A-1	Indy3D_batch.bat	1.3	Batch file which is used to launch the COTS graphics board test
\Workstation5A-1	LogView.bat	1.2	Batch file which is used to launch log files in a notepad window
\Workstation5A-1	LogFile.ico	1.1	Logfile icon used on display
\Workstation5A-1	Out78.21k	1.1	DSP executable for decompressing and playing voice during record and playback test
\Workstation5A-1	SeaMAC32.dll	1.3	COTS Dynamic Link Library for interfacing with RS422 board
\Workstation5A-1	Veg.bmp	1.5	Bitmap file which is copied from drive to drive during hard drive test.
\Workstation5A-1	Workstation.bas	1.56	Visual Basic module
\Workstation5A-1	Workstation.cnt	1.11	Help contents file
\Workstation5A-1	Workstation.hlp	1.11	Help file
\Workstation5A-1	Workstation5A-1.exe	1.58	Workstation Diagnostics Software executable
\Workstation5A-1	Workstation5A-1.vbp	1.58	Visual Basic project file
\Workstation5A-1	Workstation5A-1.vbw	1.58	File generated by Visual Basic
\Workstation5A-1	Workstation_Main.frm	1.61	Visual Basic form file
\Workstation5A-1	Workstation_Main.frx	1.58	File generated by Visual Basic
\Workstation5A-1	Dspmem.txt	1.2	Text file template for the DSP memory test
\Workstation5A-1	Dsptest.dll	1.7	Custom-Built Dynamic Link Library for interfacing with the DSP board
\Workstation5A-1	Left.ico	1.1	Left arrow icon used on display
\Workstation5A-1	Nidaq32.dll	1.1	COTS Dynamic Link Library for interfacing with the A/D board
\Workstation5A-1	Winmsd.txt	1.12	Text file template for the Central Processing Unit test

TABLE 3.2-2. CONTENTS OF “WSLD4-2.FLT” (Cont'd)

Folder	Filename	Version	Description
\\Workstation5A-1 \DSP\DLL	Dsp21k.h	1.3	COTS header file for interfacing with the DSP board
\\Workstation5A-1 \DSP\DLL	Closebrd.c	1.8	C source code for closing the DSP board
\\Workstation5A-1 \DSP\DLL	Compress.c	1.8	C source code for receiving compressed audio data from the Digital Signal Processor board and saving to file
\\Workstation5A-1 \DSP\DLL	Ctrlregs.h	1.1	COTS header file for interface with Digital Signal Processor board
\\Workstation5A-1 \DSP\DLL	Download.c	1.7	C source code for downloading Digital Signal Processor executables to the DSP board
\\Workstation5A-1 \DSP\DLL	Dsp.h	1.7	Custom-build header file
\\Workstation5A-1 \DSP\DLL	Dsptest.def	1.5	Definition file to enable C functions to be called from Visual Basic subroutines
\\Workstation5A-1 \DSP\DLL	Dsptest.dll	1.7	Custom-Build Dynamic Link Library for interfacing with the Digital Signal Processor board
\\Workstation5A-1 \DSP\DLL	Dsptest.dsp	1.4	Visual C++ Project file
\\Workstation5A-1 \DSP\DLL	Dsptest.dsw	1.4	Visual C++ Project Workspace
\\Workstation5A-1 \DSP\DLL	Dsptest.ncb	1.4	File generated by Visual C++
\\Workstation5A-1 \DSP\DLL	Dsptest.opt	1.4	File generated by Visual C++
\\Workstation5A-1 \DSP\DLL	Dsptest.plg	1.4	File generated by Visual C++
\\Workstation5A-1 \DSP\DLL	Hil32m.lib	1.1	COTS library file for interface with Digital Signal Processor board
\\Workstation5A-1 \DSP\DLL	Openbrd.c	1.7	C source code for opening Digital Signal Processor board
\\Workstation5A-1 \DSP\DLL	Recover.c	1.7	C source code for reading compressed voice packets from file and sending them to Digital Signal Processor board
\\Workstation5A-1 \DSP\DLL	Verifybrd.c	1.7	C source code for verifying that the Digital Signal Processor board
\\Workstation5A-1 \DSP\ DSPBoard\talkthru	Analog78.21k	1.1	Digital Signal Processor executable for talk-through test
\\Workstation5A-1 \DSP\ DSPBoard\talkthru	Analog78.bat	1.1	Batch file for command line compile of talk-through test dsp code
\\Workstation5A-1 \DSP\ DSPBoard\talkthru	Analog78.c	1.1	C source code for talk-through test
\\Workstation5A-1 \DSP\ DSPBoard\talkthru	Bitdvs.h	1.1	COTS header file for interface with DSP audio daughter card
\\Workstation5A-1 \DSP\ DSPBoard\talkthru	Dvsi.h	1.1	COTS header file for interface with DSP audio daughter card
\\Workstation5A-1 \DSP\ DSPBoard\talkthru	Sharc6xc.ach	1.1	COTS file for interface with Sharc DSP processors

TABLE 3.2-2. CONTENTS OF “WSLD4-2.FLT” (Cont'd)

Folder	Filename	Version	Description
\\Workstation5A-1 \DSP\ DSPBoard\compress	Dvin4.21k	1.1	Digital Signal Processor executable for compressing and recording voice during record and playback test
\\Workstation5A-1 \DSP\ DSPBoard\compress	Dvin4.bat	1.1	Batch file for command line compile of record and playback test dsp code
\\Workstation5A-1 \DSP\ DSPBoard\compress	Dvin4.c	1.1	C source code for record and playback test
\\Workstation5A-1 \DSP\ DSPBoard\compress	Bitdvs1.h	1.1	COTS header file for interface with DSP audio daughter card
\\Workstation5A-1 \DSP\ DSPBoard\compress	Dvs1.h	1.1	COTS header file for interface with DSP audio daughter card
\\Workstation5A-1 \DSP\ DSPBoard\compress	Sharc6xc.ach	1.1	COTS file for interface with Sharc DSP processors
\\Workstation5A-1 \DSP\ DSPBoard\recover	Out78.21k	1.1	Digital Signal Processor executable for decompressing and playing voice during record and playback test
\\Workstation5A-1 \DSP\ DSPBoard\recover	Dvout78.bat	1.1	Batch file for command line compile of record and playback test dsp code
\\Workstation5A-1 \DSP\ DSPBoard\recover	Out78.c	1.1	C source code for record and playback test
\\Workstation5A-1 \DSP\ DSPBoard\recover	Bitdvs1.h	1.1	COTS header file for interface with DSP audio daughter card
\\Workstation5A-1 \DSP\ DSPBoard\recover	Dvs1.h	1.1	COTS header file for interface with DSP audio daughter card
\\Workstation5A-1 \DSP\ DSPBoard\recover	Sharc6xc.ach	1.1	COTS file for interface with Sharc DSP processors
\\Workstation5A-1 \Help Files	Workstation.hlp	1.10	Help file
\\Workstation5A-1 \Help Files	Workstation.cnt	1.10	Help contents file
\\Workstation5A-1 \Help Files	Workstation.fts	1.10	File generated by Help Workshop
\\Workstation5A-1 \Help Files	Workstation.hpj	1.10	Help Workshop project file
\\Workstation5A-1 \Help Files	Workstation.rtf	1.10	Rich-text format help file
\\Workstation5A-1 \IRIGDLL	Irig.dsp	1.1	Visual C++ Project file
\\Workstation5A-1 \IRIGDLL	Irig.dsw	1.1	Visual C++ Project Workspace
\\Workstation5A-1 \IRIGDLL	Irig.opt	1.1	File generated by Visual C++
\\Workstation5A-1 \IRIGDLL	Irig.plg	1.1	File generated by Visual C++
\\Workstation5A-1 \IRIGDLL	Irig.dll	1.2	COTS library file for interfacing with the IRIG board
\\Workstation5A-1 \IRIGDLL	Irig.ncb	1.1	File generated by Visual C++
\\Workstation5A-1 \IRIGDLL	Bcutil.lib	1.2	COTS library file for interfacing with the IRIG board
\\Workstation5A-1 \IRIGDLL	Irig.c	1.3	C source code for interfacing with the IRIG board
\\Workstation5A-1 \IRIGDLL	Irig.def	1.3	Definition file to enable C functions to be called from Visual Basic subroutines

TABLE 3.2-2. CONTENTS OF “WSLD4-2.FLT” (Cont'd)

Folder	Filename	Version	Description
\Workstation5A-1 \Installation_ Disks\Disk1	Asycfilt.dll	1.11	Visual Basic setup files
	Msvbvm50.dl_	1.11	
	OleAut32.dl_	1.11	
	OlePro32.dl_	1.11	
	Setup.exe	1.11	
	Setup.lst	1.11	
	St5unst.ex_	1.11	
	StdOle2.tl_	1.11	
	VB5StKit.dl_	1.11	
Setup1.ex_	1.11		
\Workstation5A-1 \Installation_ Disks\Disk2	Analog78.21_	1.9	Visual Basic setup files
	Axdist.ex_	1.7	
	AsycFilt.dl2	1.9	
	Comdlg32.oc_	1.8	
	ComCat.dl_	1.9	
	Ctl3d32.dl_	1.9	
	DSPMemory.ba_	1.10	
	Dvin4.21_	1.9	
	IRIG.dl_	1.1	
	Indy3D_batch.ba_	1.5	
	LogView.ba_	1.2	
	Mswinsck.oc_	1.7	
	Out78.21_	1.2	
	Veg.bm1	1.1	
	Workstation5A-1.ex_	1.27	
	Dspmем.tx_	1.10	
	Dsptest.dl_	1.12	
Left.ic_	1.2		
\Workstation5A-1 \Installation_ Disks\Disk3	Veg.bm2	1.1	Visual Basic setup files
	Workstation.cn_	1.3	
	Workstation.hl_	1.3	
	Winmsd.tx_	1.3	
\Workstation5A-1 \Laptop_Enet	Laptop_Enet.exe	1.7	Ethernet Test executable
\Workstation5A-1 \Laptop_Enet	Laptop_Enet.vbp	1.6	Visual Basic Project file
\Workstation5A-1 \Laptop_Enet	Laptop_Enet.vbw	1.6	File generated by Visual Basic
\Workstation5A-1 \Laptop_Enet	Laptop_Ethernet.frm	1.8	Visual Basic form file
\Workstation5A-1 \Laptop_Enet	Laptop_Ethernet.frx	1.6	File generated by Visual Basic
\Workstation5A-1 \Laptop_Enet \Installation_ Disks\Disk1	Asycfilt.dll	1.1	Visual Basic setup files
	Msvbvm50.dl_	1.1	
	OleAuto32.dl_	1.1	
	OlePro32.dl_	1.1	
	Setup.exe	1.1	
	Setup.lst	1.1	
	St5unst.ex_	1.1	
	StdOle2.tl_	1.1	
	Vb5StKit.dl_	1.1	
Setup1.ex_	1.1		
\Workstation5A-1 \Laptop_Enet \Installation_ Disks\Disk2	AXDist.ex_	1.1	Visual Basic setup files
	AsycFilt.dl2	1.1	
	Comdlg32.oc_	1.1	
	ComCat.dl_	1.1	
	Ctl3d32.dl_	1.1	
	Laptop_Enet.ex_	1.4	
Mswinsck.oc_	1.1		

### 3.3 CHANGES INSTALLED

None.

### 3.4 ADAPTATION DATA

None.

### 3.5 RELATED DOCUMENTS

<u>Document Number</u>	<u>Rev.</u>	<u>Document Title</u>
LS-71001	A	Functional Requirements Document for the Human Research Facility
LS-71020	Ch 1	Software Development Plan for the Human Research Facility
LS-71042-10		Predelivery Acceptance Test Procedures for the Human Research Facility (HRF) Workstation
LS-71042-2		Hardware Requirements Document for the Human Research Facility Workstation
LS-71042-5	A	Software Test Plan for the Human Research Facility (HRF) Workstation
TPS 7V9920115		Qualification Test of HRF Workstation Test Load #4.1, Flight Software
TPS 7V9920150		Qualification Test of HRF Workstation Diagnostic Software, Version 4.2

### 3.6 INSTALLATION INSTRUCTIONS

The flight operating system and hardware drivers for the HRF Workstation are compressed into a single image file using the COTS compression utility program Ghost. The complete hard drive is erased, and the operating system with installed drivers is restored each time the ghost image file is loaded. The steps for loading the flight operating system and hardware drivers are shown in Table 3.6-1.

The HRF Workstation has a backup hard drive, which is loaded with the identical software as the main hard drive. The steps for loading the flight operating system and hardware drivers on the backup drive are shown in Table 3.6-2.

The steps for loading the flight Diagnostics Software onto the HRF Workstation are shown in Table 3.6-3.

The steps for loading the “Ethernet Test” helper application on the HRF Portable Computer are shown in Table 3.6-4.

**TABLE 3.6-1. FLIGHT OPERATING SYSTEM AND HARDWARE  
DRIVERS LOAD ON MAIN HARD DRIVE**

<b>1</b>	<b>Install “WSOS1-1.FLT” software onto the HRF Workstation “C:” drive:</b>
	a) Insert “WSOS1-1.FLT” CD from Bonded Storage into the CD Drive.
	b) When the “Select OS” menu appears, select “Microsoft Disk Operating System (MS-DOS),” press the “Enter” key.
	c) At the “C:\>” prompt, type “ghost,” then press the “Enter” key.
	d) At the “About Ghost” screen, press the “Enter” key.
	e) At the “Connection Type” menu, use the arrow keys to highlight “LOCAL/SERVER,” then press the “Enter” key.
	f) At the “Transfer Option” menu, use the arrow keys to highlight “Load disk from image file...,” then press the “Enter” key.
	g) At the “File name to load image from” menu, use the Tab key to highlight “Device” option, then press the “Enter” key. Use the arrow keys to highlight the drive to load FROM. (The FROM drive is the CD drive.) Press the “Enter” key.
	h) At the next window, use the arrow keys to highlight “WSOS1-1.FLT,” then press the “Enter” key.
	i) At the “Select local destination drive” menu, use the arrow keys to highlight drive ‘1,’ then press the “Enter” key.
	j) At “Destination Drive Details” screen, under the field “New Size in Mb,” type “2014,” then press the “Enter” key. Select the “Yes” option by pressing the Tab key until the “Yes” option is highlighted, then press the “Enter” key.
	k) The load procedure will now commence. If the computer locks up during the procedure, power off the computer and return to step b) and repeat steps b) through l).
	l) When prompted to restart the system, press the keys “Ctrl” + “Alt” + “Delete” simultaneously to reboot.
	m) When the “Select OS” menu appears, select “MS-DOS,” press the “Enter” key.
	n) At the “C:\>” prompt, type “chkdsk,” then press the “Enter” key.
	o) Verify that there are no error messages.
	p) At the “C:\>” prompt, press the keys “Ctrl” + “Alt” + “Delete” simultaneously to reboot.
	q) Remove the “BUILD” disk from the CD drive.
	r) Boot up the HRF Workstation into Windows NT 4.0. Log on as “hrf” and “hrf.” If “Service Control Manager” window appears, select “OK.”
<b>2</b>	<b>Shut Down the HRF Workstation.</b>
	a) From the “Start Menu,” choose “Shut Down.”
	b) Select “Shut Down the computer?”
	c) Select “Yes.”
	d) Shut the Main Power switch off.

**TABLE 3.6-2. FLIGHT OPERATING SYSTEM AND HARDWARE  
DRIVERS LOAD ON BACKUP HARD DRIVE**

<b>1</b>	<b>Change to Backup “C:” drive on HRF Workstation:</b>
	a) Open lid of Workstation drawer.
	b) Locate switch SI of cable SEG46113973-301 mounted on the top of the Isolated Circuit Board Module (ICBM) assembly. Set the switch to position “1” to switch power to the “C:” backup hard drive.
	c) Locate the hard disk drive data cable SEG46114232-302. Disconnect its connector P4 from J4 and connect P5 to J4 instead.
	d) Close lid of Workstation drawer.
	e) Power on the HRF Workstation.
<b>2</b>	<b>Install “WSOS1-1.FLT” software onto the HRF Workstation “C:” backup drive:</b>
	a) Insert the “WSOS1-1.FLT” CD from Bonded Storage into the CD Drive.
	b) When the “Select OS” menu appears, select “MS-DOS,” press the “Enter” key.
	c) At the “C:>” prompt, type “ghost,” then press the “Enter” key.
	d) At the “About Ghost” screen, press the “Enter” key.
	e) At the “Connection Type” menu, use the arrow keys to highlight “LOCAL/SERVER,” then press the “Enter” key.
	f) At the “Transfer Option” menu, use the arrow keys to highlight “Load disk from image file...,” then press the “Enter” key.
	g) At the “File name to load image from” menu, use the Tab key to highlight “Device” option, then press the “Enter” key. Use the arrow keys to highlight the drive to load FROM. (The FROM drive is the CD drive.) Press the “Enter” key.
	h) At the next window, use the arrow keys to highlight “WSOS1-1.FLT,” then press the “Enter” key.
	i) At the “Select local destination drive” menu, use the arrow keys to highlight drive ‘1,’ then press the “Enter” key.
	j) At “Destination Drive Details” screen, under the field “New Size in Mb,” type “2014,” then press the “Enter” key. Select the “Yes” option by pressing the Tab key until the “Yes” option is highlighted, then press the “Enter” key.
	k) The load procedure will now commence. If the computer locks up during the procedure, power off the computer and return to step b) and repeat steps b) through j).
	l) When prompted to restart the system, press the keys “Ctrl” + “Alt” + “Delete” simultaneously to reboot.
	m) When the “Select OS” menu appears, select “MS-DOS,” press the “Enter” key.
	n) Remove the “WSOS1-1.FLT” disk from the CD drive.
	o) Boot up the HRF Workstation into Windows NT 4.0. Log on as “hrf” and “hrf.” If “Service Control Manager” window appears, select “OK.”
<b>3</b>	<b>Shut Down the HRF Workstation.</b>
	a) From the “Start Menu,” choose “Shut Down.”
	b) Select “Shut Down the computer?”
	c) Select “Yes.”
	d) Shut the Main Power switch off.
<b>4</b>	<b>Restore to Main “C:” drive on HRF Workstation:</b>
	a) Open lid of Workstation drawer.
	b) Locate switch SI of cable SEG46113973-301 mounted on the top of the ICBM assembly. Set the switch to position “3” to switch power to the “C:” backup hard drive.
	c) Locate the hard disk drive data cable SEG46114232-302. Disconnect its connector P5 from J4 and connect P4 to J4 instead.
	d) Close lid of Workstation drawer.

TABLE 3.6-3. FLIGHT DIAGNOSTICS SOFTWARE LOAD ON HRF WORKSTATION

<b>1</b>	<b>Power on the HRF Workstation.</b>
<b>2</b>	<b>Boot up the HRF Workstation into Windows NT 4.0. Log on as “Administrator” and “hrf.”</b>
<b>3</b>	<b>Install “Workstation” Software on the HRF Workstation:</b>
	a) Insert the “WSLD4-2.FLT” CD from Bonded Storage into the CD Drive.
	b) Double click on “My Computer.”
	c) Double click on the CD Drive.
	d) Double click on “Workstation5A-1.”
	e) Double click on “Installation Disks.”
	f) Double click on “Disk 1.”
	g) Double click on “Setup.exe” to launch the Workstation installation program.
	h) Select “OK” in the Workstation menu.
	i) Select “Change Directory.”
	j) Type in “c:\test\Workstation” in the path text box.
	k) If a dialog appears asking if you want to create a new directory, select “Yes.”
	l) Click on the button with the big blue computer to install the Workstation software in the specified destination directory.
	m) Select “OK” at the successful installation dialog.
	n) Select “Yes” at the “Do you want to restart Windows now?” dialog if it appears.
	o) Close all open windows.
<b>4</b>	<b>Boot up the HRF Workstation into Windows NT 4.0. Log on as “hrf” and “hrf.”</b>
<b>5</b>	<b>Add “Workstation” shortcut to Start Menu:</b>
	a) Copy shortcut named “Workstation” from “c:\winnt\profiles\Administrator\Start Menu\Programs.”
	b) Paste shortcut named “Workstation” to “c:\winnt\profiles\hrf\Start Menu\Programs.”
	c) Close all open windows.
<b>6</b>	<b>Shut down the HRF Workstation.</b>
	a) From the “Start Menu,” choose “Shut Down.”
	b) Select “Shut down the computer?”
	c) Select “Yes.”
	d) Power off the HRF Workstation.

TABLE 3.6-4. "ETHERNET TEST" LOAD ON HRF PORTABLE COMPUTER

<b>1</b>	<b>Power on the HRF Portable Computer and log in.</b>
<b>2</b>	<b>Install "Ethernet Test" Software onto the HRF Portable Computer:</b>
	a) Insert the "WSLD4-2.FLT" CD from Bonded Storage into the CD Drive.
	b) Double click on "My Computer."
	c) Double click on the CD Drive.
	d) Double click on "Workstation5A-1."
	e) Double click on "Laptop_Enet."
	f) Double click on "Installation Disks."
	g) Double click on "Disk 1."
	h) Double click on "Setup.exe" to launch the Ethernet Test installation program.
	i) Select "OK" in the Ethernet Test menu.
	j) Click on the button with the big blue computer to install the Ethernet Test software in the specified destination directory.
	k) Select "OK" at the successful installation dialog.
	l) If a dialog box comes up asking if you want to reboot, select "Yes." Log in.
<b>3</b>	<b>Shut down the HRF Portable Computer.</b>
	a) From the "Start Menu," choose "Shut Down."
	b) Select "Shut down the computer?"
	c) Select "Yes."
	d) Power off the HRF Workstation.

### 3.7 POSSIBLE PROBLEMS AND KNOWN ERRORS

Cables must be connected to the HRF Workstation and the HRF Portable Computer as described in LS-71042-10, "Predelivery Acceptance Test Procedures for the Human Research Facility (HRF) Workstation." The Internet Protocol (IP) address on the HRF Portable Computer must be set to "100.120.120.21" in order for the Ethernet test to function properly.

### 3.8 COMPUTER SOFTWARE CONFIGURATION ITEM (CSCI) ENVIRONMENT INFORMATION

TABLE 3.8-1. CSCI ENVIRONMENT INFORMATION

CSCI Name	Description	Operating System	Compilers	Other Tools
Workstation	Workstation Diagnostics Software	Windows NT 4.0, Service Pack 4	Visual Basic 5.0, Visual C++ 5.0, Analog Devices GNU Tools 3.3	N/A
Ethernet Test	Helper application to Workstation Diagnostics Software that runs on HRF Portable Computer	Windows NT 4.0, Service Pack 4	Visual Basic 5.0	N/A

### 4.0 NOTES

None.

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