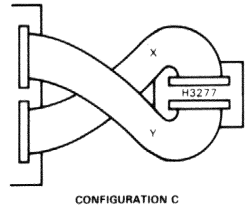
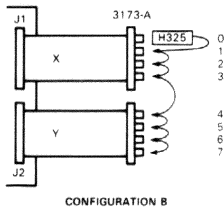
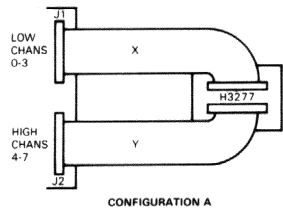
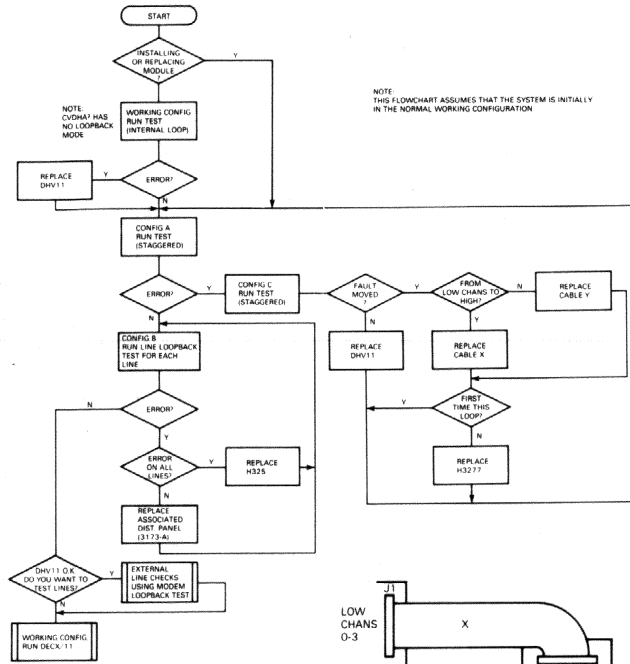


# TROUBLESHOOTING FLOWCHART



## Basic Installation Procedure

1. Unpack and check the components of the option.
2. Check and, if necessary, set up device address and vector switches.
3. Install BC05L cables to J1 and J2.
4. Install module in its correct bus slot.
5. Check backplane voltages.
6. Connect other end of BC05L cables to distribution panels as in interconnection diagram.
7. Check out system and perform installation tests.
8. Check cable routing and replace any covers.

# DIAGNOSTIC EXAMPLES

## 1. Error-free pass

R\_CVDHBA  
CVDHBA.BIN

DRSC7  
CVDHB-A-0  
DHV-11 FUNCT TEST PART2  
UNIT 1 IS DHV-11  
RESTART ADDR: 147670

DR>START

CHANGE HW (L) ? Y

\*UNITS (D) ? 1

UNIT 0

CSR ADDRESS: (0) 160460 ? 160500  
INTERRUPT VECTOR ADDRESS: (0) 300 ?\_  
ACTIVE LINE BIT MAP: (0) 377?\_

TYPE OF LOOPBACK (1=INTERNAL, 2=STAGGERED,  
3=25 PIN CONNECTOR, 4=MODEM): (0) 2 ?\_

INTERRUPT BR LEVEL: (0) 4 ?\_

CHANGE SW (L) ? Y

REPORT UNIT NUMBER AS EACH UNIT IS TESTED: (L) Y ?\_  
NUMBER OF INDIVIDUAL DATA ERROR TO REPORT ON A LINE: (D) 0 ?\_

CVDHB EOP 1  
0 CUMULATIVE ERRORS

DR>EXIT

## 2. Test with wrong device address selected

R\_CVDHBA  
CVDHBA.BIN

DRSC7  
CVDHB-A-0  
DHV-11 FUNCT TEST PART2  
UNIT IS DHV-11  
RESTART ADDR: 147670  
DR>START

CHANGE HW (L) ? Y

\*UNITS (D) ? 1

UNIT 0

CSR ADDRESS: (0) 160460 ? 160500  
INTERRUPT VECTOR ADDRESS: (0) 377 ?\_  
ACTIVE LINE BIT MAP: (0) 377 ?\_

TYPE OF LOOPBACK (1=INTERNAL, 2=STAGGERED,  
3=25PIN CONNECTOR, 4=MODEM): (0) 2 ?\_

INTERRUPT BR LEVEL: (0) 4 ?\_

CHANGE SW (L) ? Y

REPORT UNIT NUMBER AS EACH UNIT IS TESTED: (L) Y ?\_  
NUMBER OF INDIVIDUAL DATA ERRORS TO REPORT ON A LINE (D) 0 ?\_

CVDHB DVC PTL ERROR 00101 ON UNIT 00 TST 001 SUB 000 PC: 021354

DEVICE REGISTER ACCESS ERRORS  
BUS TIME-OUT TRAP CAUSED BY READ ATTEMPT  
BUS TIME-OUT TRAP CAUSED BY WRITE ATTEMPT  
DHV MAY BE AT THE WRONG Q-BUS ADDRESS.

UNIT 0 DROPPED FROM FURTHER TESTING

PASS ABORTED FOR THIS UNIT

CVDHB EOP 1  
1 CUMULATIVE ERRORS

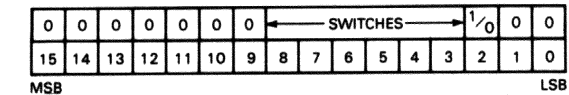
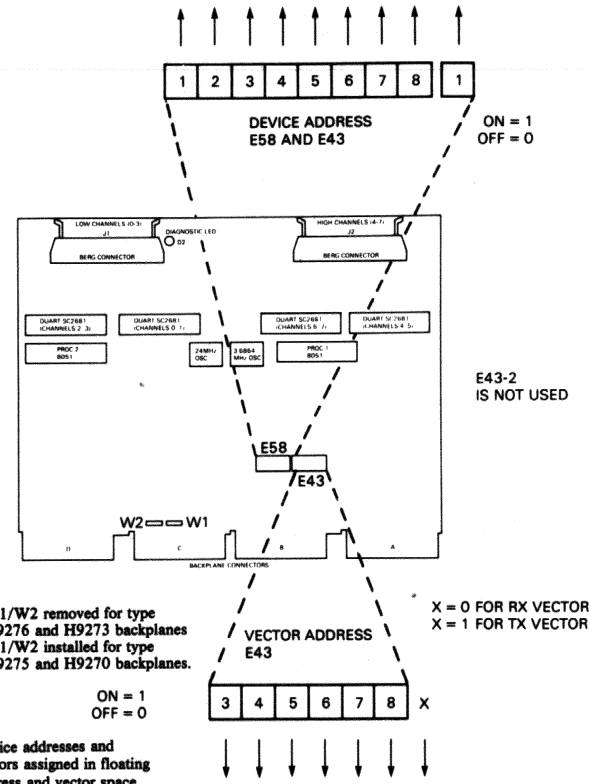
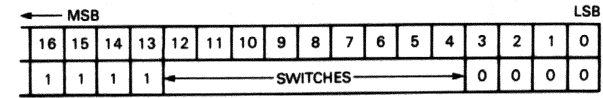
DR>

digital

EK-DHV11-MC

# DHV11 MAINTENANCE CARD

## JUMPER AND SWITCH LAYOUT



## DIAGNOSTICS

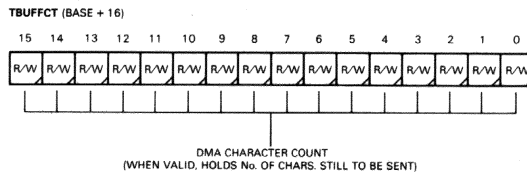
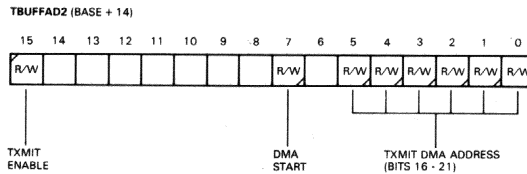
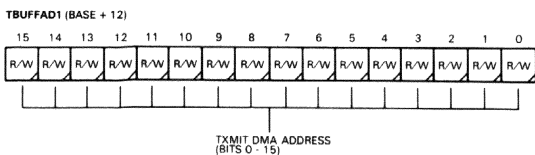
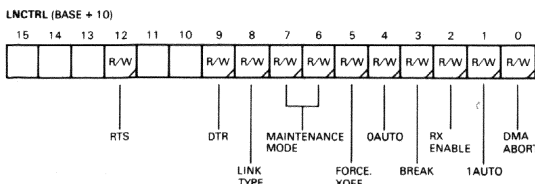
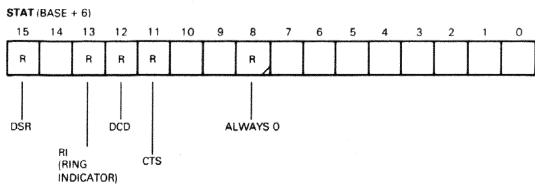
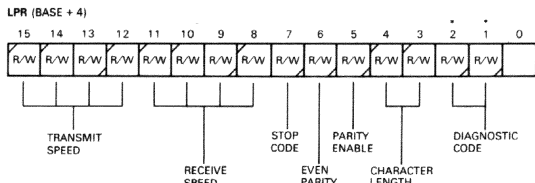
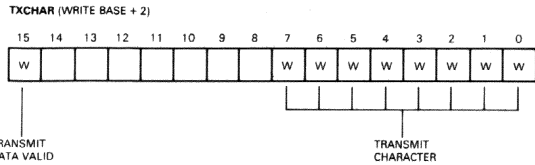
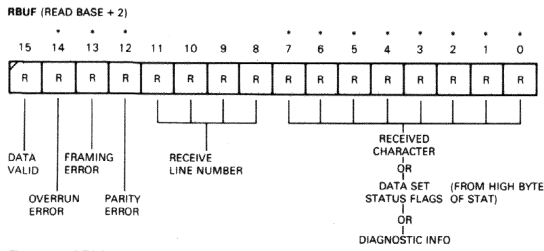
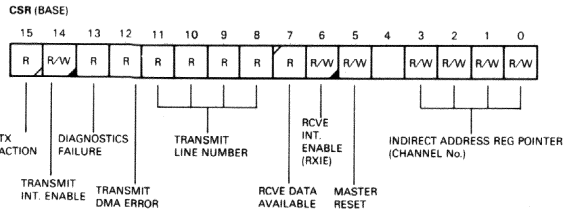
PDP-11 CVDHA?, CVDHB? and CVDHC? Functional Verification Test.

System needs: Q-bus CPU, 32K memory, console terminal, DHV11 and XXDP+ load device with DRS.

Prerequisites: All Q-bus diagnostics should run successfully.

Error-free execution time: CVDHA? (15 s) CVDHB? (70 s) CVDHC? (4 min)

# DHV11 REGISTERS



- = CLEARED BY MASTER RESET
- = SET BY MASTER RESET
- = CLEARED BY BIT, POWER-UP OR POWER-DOWN BUT NOT BY MASTER RESET

## REGISTER CODES

LPR<15:12> and <11:8> Data Rate.

Code	Rate(bits/s)	Group
0000	50	A
0001	75	B
0010	110	A and B
0011	134.5	A and B
0100	150	B
0101	300	A and B
0110	600	A and B
0111	1200	A and B
1000	1800	B
1001	2000	B
1010	2400	A and B
1011	4800	A and B
1100	7200	A
1101	9600	A and B
1110	19200	A and B
1111	38400	A

LPR<4:3> Character Length

Code	Length
00	5 bits
01	6 bits
10	7 bits
11	8 bits

LPR<2:1> Diagnostics Code

Code	Meaning
00	Normal operation
01	Request for BMP report

Note: Code 305g = no error  
All other BMP codes = error

LNCTRL<8> Link Type.

Code	Meaning
0	Data lines only
1	Full modem control

LNCTRL<7:6> Maintenance Mode

Code	Mode
00	Normal operation
01	Auto echo mode
10	Local loopback
11	Remote loopback

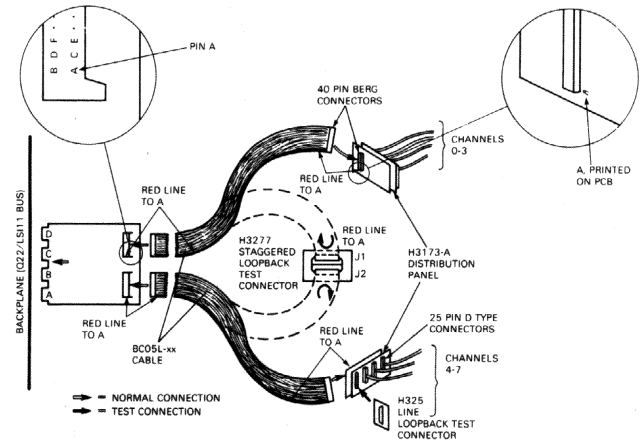
Self-Test Codes

Codes 201g or 203g = no error  
Code 0nnnnn1 indicates ROM version nnnnn.  
Other codes = error (Refer to DHV11 Technical Manual EK-DHV11-TM)

Note

After the DHV11 is reset, CSR<3:0> may point to a non-existent channel. To access channels 0 to 7, write channel number to CSR<3:0>.

## INTERCONNECTION DIAGRAM



NOTE: BC05L-01 = 30.48 CM (12 INCHES)  
BC05L-1K = 53.34 CM (21 INCHES)  
BC05L-2F = 76.2 CM (30 INCHES)

## FOUR STEPS TO RUN A SUPERVISOR DIAGNOSTIC

- Enter the start command.  
When the prompt DR> is issued, type:  
STA/PASS:1/FLAGS:HOE<CR>  
The switches and flags are optional.
- Answer the hardware parameter questions.  
The program prompts with:  
CHANGE HW?

You must answer Y to this query if you want to change the hardware parameter tables. The program will then ask a number of hardware parameter questions in sequence. For example, the first question is:

# UNITS?

At this point, enter the number of units to be tested.

NOTE

Some versions of the diagnostic supervisor do not ask the CHANGE HW? question at the first start command. Instead they go straight into the hardware parameter question sequence.

The answers to the questions are used to build hardware parameter tables (P-tables) in memory. A series of questions is posed for each device to be tested. A hardware P-table is built for each device.

- Answer the software parameter questions.  
When all the hardware P-tables are built the program responds with:  
CHANGE SW?

If other than default parameters are wanted for the software, type Y. If the default parameters are wanted, type N.

If you type Y, a series of software questions will be asked and the answers to these will be entered into the software P-table in memory. The software questions will be asked only once, regardless of the number of units to be tested.

- Diagnostic execution  
After the software questions have been answered, the diagnostic starts to run.

What happens next is determined by the switch options selected with the start command, or errors occurring during execution of the diagnostic.