



```

NN      NN      LL      DDDDDDDD      RRRRRRRR      IIIIII      VV      VV      EEEEEEEEEE      RRRRRRRR
NN      NN      LL      DDDDDDDD      RRRRRRRR      IIIIII      VV      VV      EEEEEEEEEE      RRRRRRRR
NN      NN      LL      DD          DD      RR          RR      II          VV      VV      EE          RR          RR
NN      NN      LL      DD          DD      RR          RR      II          VV      VV      EE          RR          RR
NNNN    NN      LL      DD          DD      RR          RR      II          VV      VV      EE          RR          RR
NNNN    NN      LL      DD          DD      RR          RR      II          VV      VV      EE          RR          RR
NN      NN      NN      LL      DD          DD      RRRRRRRR      II          VV      VV      EEEEEEEE      RRRRRRRR
NN      NN      NN      LL      DD          DD      RRRRRRRR      II          VV      VV      EEEEEEEE      RRRRRRRR
NN      NNNN    NN      LL      DD          DD      RR          RR      II          VV      VV      EE          RR          RR
NN      NNNN    NN      LL      DD          DD      RR          RR      II          VV      VV      EE          RR          RR
NN      NN      LL      DD          DD      RR          RR      II          VV      VV      EE          RR          RR
NN      NN      LL      DD          DD      RR          RR      II          VV      VV      EE          RR          RR
NN      NN      LL      DD          DD      RR          RR      II          VV      VV      EE          RR          RR
NN      NN      LL      DD          DD      RR          RR      II          VV      VV      EE          RR          RR
NN      NN      LL      DD          DD      RR          RR      II          VV      VV      EE          RR          RR
NN      NN      LLLLLLLLLL DDDDDDDD      RR          RR      IIIIII      VV          VV      EEEEEEEEEE      RR          RR
NN      NN      LLLLLLLLLL DDDDDDDD      RR          RR      IIIIII      VV          VV      EEEEEEEEEE      RR          RR

```

```

LL      IIIIII      SSSSSSSS
LL      IIIIII      SSSSSSSS
LL      II          SS
LL      II          SS
LL      II          SS
LL      II          SS
LL      II          SSSSSS
LL      II          SSSSSS
LL      II          SS
LL      II          SS
LL      II          SS
LL      II          SS
LLLLLLLLLLL IIIIII      SSSSSSSS
LLLLLLLLLLL IIIIII      SSSSSSSS

```

N  
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8  
  
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:  
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T  
  
1  
T  
M

NLDRIVER  
Table of contents

- NULL DEVICE DRIVER

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16-SEP-1984 00:38:24 VAX/VMS Macro V04-00

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(1)	96	NULL DEVICE FUNCTION DECISION TABLE ROUTINES

```

0000 1      .TITLE  NLDRIVER - NULL DEVICE DRIVER
0000 2      .IDENT  'V04-000'
0000 3
0000 4
0000 5      :*****
0000 6      :
0000 7      :*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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0000 20     :*  CORPORATION.
0000 21     :
0000 22     :*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
0000 23     :*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0000 24     :
0000 25     :
0000 26     :*****
0000 27
0000 28     D. N. CUTLER 8-AUG-77
0000 29
0000 30     NULL DEVICE DRIVER
0000 31
0000 32     MODIFIED BY:
0000 33
0000 34     V03-001 KDM0002      Kathleen D. Morse      28-Jun-1982
0000 35     Added $DCDEF and $DYNDEF.
0000 36
0000 37     MACRO LIBRARY CALLS
0000 38
0000 39
0000 40     $DCDEF      ;DEFINE DEVICE TYPE CODES
0000 41     $DYNDEF    ;DEFINE DATA STRUCTURE TYPES
0000 42     $IODEF     ;DEFINE I/O FUNCTION CODES
0000 43
0000 44
0000 45     LOCAL DATA
0000 46
0000 47     DRIVER PROLOGUE TABLE
0000 48
0000 49
00000000 50     .PSECT $$$105_PROLOGUE
0000 51     NL$DPT::
0000 52     DPTAB      -      ;DEFINE DRIVER PROLOGUE TABLE
0000 53     END=NL END,-      ;END OF DRIVER
0000 54     ADAPTER=UBA,-    ;ADAPTER TYPE
0000 55     UCBSIZE=116,-   ;UCB SIZE
0000 56     NAME=NLDRIVER   ;DRIVER NAME
0038 57     DPT_STORE INIT  ;CONTROL BLOCK INIT VALUES

```

```
0038 58 DPT_STORE REINIT ;CONTROL BLOCK RE-INIT VALUES
0038 59 DPT_STORE END ;
0000 60
0000 61
0000 62 :: DRIVER DISPATCH TABLE
0000 63 ::
0000 64
0000 65 DDTAB NL,- ;DRIVER DISPATCH TABLE
0000 66 0,- ;START I/O OPERATION
0000 67 0,- ;UNSOLICITED INTERRUPT
0000 68 FUNCTABLE,- ;FUNCTION DECISION TABLE ADDRESS
0000 69 0,- ;CANCEL I/O ENTRY POINT
0000 70 0,- ;ADDRESS OF REGISTER DUMP ROUTINE
0000 71 0,- ;SIZE OF DIAGNOSTIC BUFFER
0000 72 0 ;SIZE OF ERROR LOG BUFFER
```

```
0038 74 .SBTTL NULL DEVICE FUNCTION DECISION TABLE
0038 75 :+
0038 76 : NULL DEVICE FUNCTION DECISION TABLE
0038 77 :-
0038 78
0038 79 FUNCTABLE: ;FUNCTION DECISION TABLE
0038 80 FUNCTAB ;- ;LEGAL FUNCTIONS
0038 81 <READLBLK,- ;READ LOGICAL BLOCK
0038 82 READVBLK,- ;READ VIRTUAL BLOCK
0038 83 WRITEOF,- ;WRITE EOF
0038 84 WRITELBLK,- ;WRITE LOGICAL BLOCK
0038 85 WRITEVBLK> ;WRITE VIRTUAL BLOCK
0040 86 FUNCTAB ;- ;BUFFERED I/O FUNCTIONS
0040 87 <> ;NO BUFFERED I/O FUNCTIONS
0048 88 FUNCTAB READ,- ;READ FUNCTIONS
0048 89 <READLBLK,- ;READ LOGICAL BLOCK
0048 90 READVBLK> ;READ VIRTUAL BLOCK
0054 91 FUNCTAB WRITE,- ;WRITE FUNCTIONS
0054 92 <WRITELBLK,- ;WRITE LOGICAL BLOCK
0054 93 WRITEOF,- ;WRITE EOF
0054 94 WRITEVBLK> ;WRITE VIRTUAL BLOCK
```

```

0060 96 .SBTTL NULL DEVICE FUNCTION DECISION TABLE ROUTINES
0060 97 :+
0060 98 : READ - READ FUNCTIONS
0060 99 : WRITE - WRITE FUNCTIONS
0060 100 :
0060 101 : THE NULL DEVICE IS A SPECIAL DEVICE IN THAT ALL WRITES ARE DISCARDED AND ALL
0060 102 : READS RETURN AN END OF FILE STATUS. THERE IS NO ACTUAL DRIVER, BUT RATHER ALL
0060 103 : PROCESSING IS DONE BY FUNCTION DECISION TABLE ROUTINES.
0060 104 :
0060 105 : INPUTS:
0060 106 :
0060 107 : R0 = SCRATCH.
0060 108 : R1 = SCRATCH.
0060 109 : R2 = SCRATCH.
0060 110 : R3 = ADDRESS OF I/O REQUEST PACKET.
0060 111 : R4 = CURRENT PROCESS PCB ADDRESS.
0060 112 : R5 = ASSIGNED DEVICE UCB ADDRESS.
0060 113 : R6 = ADDRESS OF CCB.
0060 114 : R7 = I/O FUNCTION CODE BIT NUMBER.
0060 115 : R8 = FUNCTION DECISION TABLE DISPATCH ADDRESS.
0060 116 : R9 = SCRATCH.
0060 117 : R10 = SCRATCH.
0060 118 : R11 = SCRATCH.
0060 119 : AP = ADDRESS OF FIRST FUNCTION DEPENDENT PARAMETER.
0060 120 :
0060 121 : OUTPUTS:
0060 122 :
0060 123 : IF THE FUNCTION IS A READ, THEN $$$_ENDOFFILE IS RETURNED.
0060 124 :
0060 125 : IF THE FUNCTION IS A WRITE, THEN $$$_NORMAL IS RETURNED.
0060 126 :-
0060 127 :
0060 128 .ENABL LSB
00000060 129 .PSECT $$$115 DRIVER
50 0000'8F 3C 0060 130 READ: MOVZWL #$$$_ENDOFFILE,R0 ;SET END OF FILE STATUS
0060 131 BRB 10$ ;
50 0000'8F 3C 0067 132 WRITE: MOVZWL #$$$_NORMAL,R0 ;SET NORMAL COMPLETION
00000000'EF 17 006C 133 10$: JMP EXE$FINISHIOC ;FINISH I/O OPERATION
0072 134 .DSABL LSB
0072 135 NL_END: ;ADDRESS OF LAST LOCATION IN DRIVER
0072 136
0072 137 .END

```

NLDRIVER  
Symbol table

- NULL DEVICE DRIVER

K 15

16-SEP-1984 00:38:24 VAX/VMS Macro V04-00  
5-SEP-1984 03:45:31 [SYS.SRC]NLDRIVER.MAR;1

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(1)

```

$$$ = 00000020 R 02
ATS_UBA = 00000001
DPTSC_LENGTH = 00000038
DPTSC_VERSION = 00000004
DPT$INITAB 00000038 R 02
DPT$REINITAB 00000038 R 02
DPT$TAB 00000000 R 02
DYN$C_DPT = 0000001E
EXE$FINISHIOC ***** X 03
FUNCTABLE 00000038 R 03
FUNCTAB_LEN = 00000028
IOS_READBLK = 00000021
IOS_READVBLK = 00000031
IOS_VIRTUAL = 0000003F
IOS_WRITEBLK = 00000020
IOS_WRITEOF = 00000028
IOS_WRITEVBLK = 00000030
IOCSMNTVER ***** X 03
IOCSRETURN ***** X 03
MASKH = 00010101
MASKL = 00000000
NL$DDT 00000000 RG 03
NL$DPT 00000000 RG 02
NL_END 00000072 R 03
READ 00000060 R 03
$$$_ENDOFFILE ***** X 03
$$$_NORMAL ***** X 03
WRITE 00000067 R 03

```

-----+  
! Psect synopsis !  
-----+

PSECT name	Allocation	PSECT No.	Attributes
. ABS	00000000 ( 0.)	00 ( 0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$AB\$\$	00000000 ( 0.)	01 ( 1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
\$\$\$105_PROLOGUE	00000039 ( 57.)	02 ( 2.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE
\$\$\$115_DRIVER	00000072 ( 114.)	03 ( 3.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC LONG

-----+  
! Performance indicators !  
-----+

Phase	Page faults	CPU Time	Elapsed Time
Initialization	35	00:00:00.05	00:00:02.11
Command processing	117	00:00:00.50	00:00:02.97
Pass 1	249	00:00:07.07	00:00:23.30
Symbol table sort	0	00:00:01.12	00:00:03.89
Pass 2	43	00:00:01.24	00:00:05.23
Symbol table output	5	00:00:00.05	00:00:00.05
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	453	00:00:10.06	00:00:37.57

The working set limit was 1350 pages.



39622 bytes (78 pages) of virtual memory were used to buffer the intermediate code.  
There were 40 pages of symbol table space allocated to hold 751 non-local and 1 local symbols.  
137 source lines were read in Pass 1, producing 15 object records in Pass 2.  
18 pages of virtual memory were used to define 15 macros.

↑-----↑  
! Macro library statistics !  
↑-----↑

Macro library name	Macros defined
-----	-----
_\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	7
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2	6
TOTALS (all libraries)	13

975 GETS were required to define 13 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LISS:NLDRIVER/OBJ=OBJ\$:NLDRIVER MSRC\$:NLDRIVER/UPDATE=(ENH\$:NLDRIVER)+EXECMLS/LIB

