Table 8

Address Assignments
Standard DEC I/O Devices

Sheet 11 Address Field 770000 to 773776

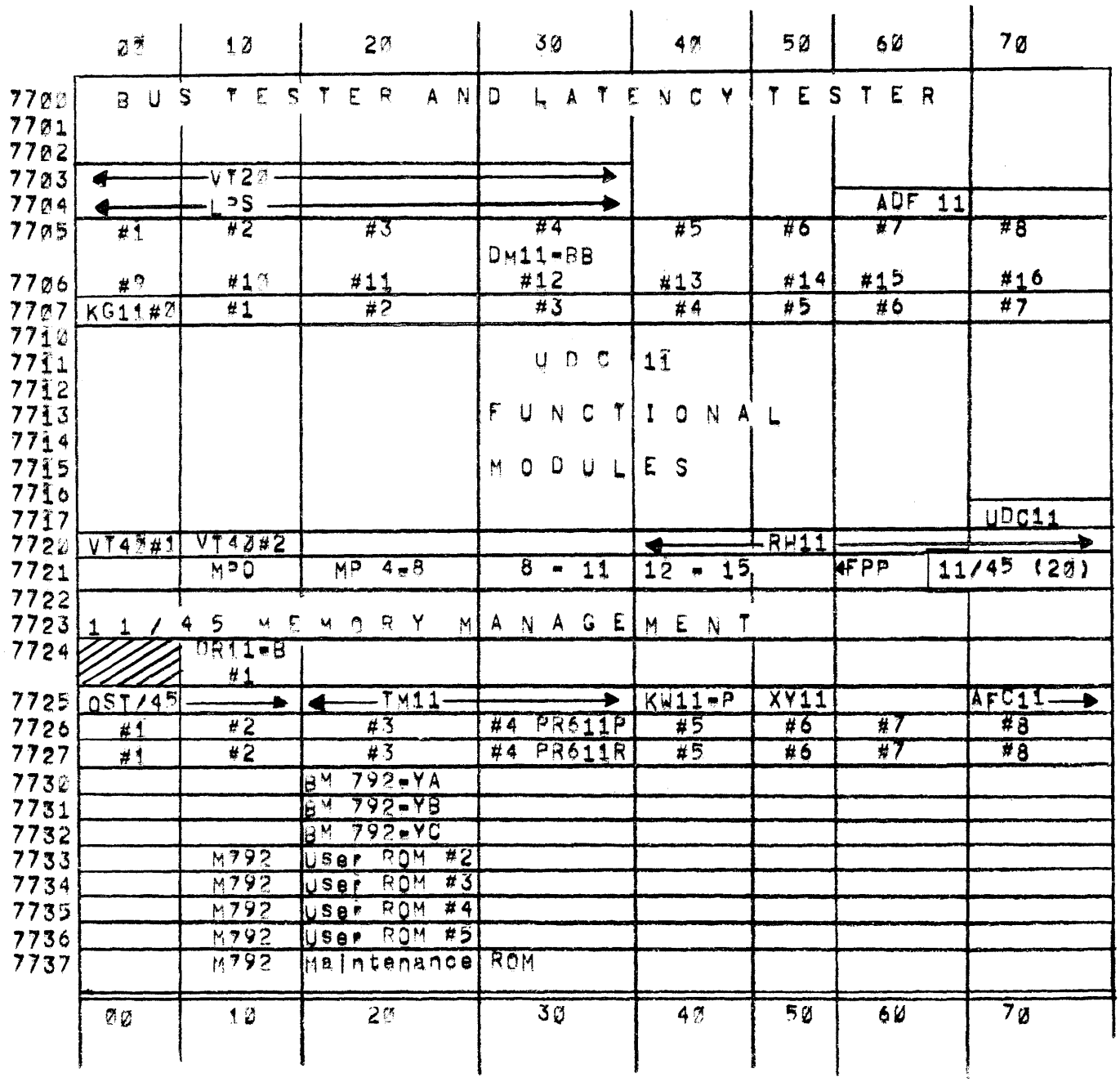

Table 8

Address Assignments
Standard DEC I/O Devices

Sheet 21 Address Field 774000 to 777776

| | 00 | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
|---|---|---|---|---|---|---|---|---|
| 7740 | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 |
| 7741 | #9 | #10 | #11 | #12 DC11 | #13 | #14 | #15 | #16 |
| 7742 | #17 | #18 | #19 | 20 | #21 | #22 | #23 | #24 |
| 7743 | #25 | #26 | #27 | #28 | #29 | #30 | #31 | #32 |
| 7744 | #32 | #31 | #30 | #29 | #28 | #27 | #26 | #25 |
| 7745 | #24 | #23 | #22 | #21 DP11 | #20 | #19 | #18 | #17 |
| 7746 | #16 | #15 | #14 | #13 | #12 | #11 | #10 | #9 |
| 7747 | #8 | #7 | #6 | #5 | #4 | #3 | #2 | #1 |
| 7750 | #1 | #2 | #3 | #4 DM11 | #5 | #6 | #7 | #8 |
| 7751 | #9 | #10 | #11 | #12 | #13 | #14 | #15 | #16 |
| 7752 | #1 | #2 | #3 | #4 DN11 | #5 | #6 | #7 | #8 |
| 7753 | #9 | #10 | #11 | #12 | #13 | #14 | #15 | #16 |
| 7754 | ← DS11 → | | | | | | | |
| 7755 | | | | | | | | |
| 7756 | DS11 | #1 | #2 | #3 DL11,C,D,E | #4 | #5 | #6 | #7 |
| 7757 | #8 | #9 | #10 | #11 | #12 | #13 | #14 | #15 |
| 7760 | #16 | #17 | #18 | #19 | #20 | #21 | #22 | #23 |
| 7761 | #24 | #25 | #26 | #27 | #28 | #29 | #30 | #31 |
| 7762 | ← DX11 → | | | | | | | |
| 7763 | | | | | | | | |
| 7764 | AA11=#2 | | AA11=#3 | | AA11=4 | | AA11=5 | |
| 7765 | 1 | 2 | 3 | 4 KL11 or DL11A,B | 5 | 6 | 7 | 8 |
| 7766 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 7767 | | ← RP11 → | | | | AA11 | #1 | AD01 |
| 7770 | | | | | | | | |
| 7771 | | | | | | | CR11 ← | CM11 CD11 SL111 |
| 7772 | | | | | | | | |
| 7773 | KF11 | =1 | KE11=2 | | TC11 | | ← DC14/SLI11 → | |
| 7774 | ← RK11 → | | ← DT11 (8) → | | ← RC11 → | | ← RF11 → | |
| 7775 | TA11 | LP11 | | | KW11=L | PC11 | CTY | CPU=SR |
| 7776 | ← KT → | | | | | | | |
| 7777 | CPU | Register ← | | | | | CPU | |
| | 00 | 10 | 20 | 30 | 40 | 50 | 60 | 70 |

DR11A,C Start at 167770 Down

Table 1

Timing Characteristics of Standard PDP-11 NPR Devices

| NPR Priority | Device | Latency (Worst Case) (usec) | Time Between Data Available (usec) |
|---|---|---|---|
| 1 | RK11/RK03 | 8.5 | 11.1 |
| 2 | RP11 | 11 | 14.8# |
| 3 | RC11 | 12 | 16 |
| 4 | RF11 | 13 | 16 |
| 5 | RK11/RK02 | 19 | 22.2 |
| 6 | TM11 | 29 | 32 (@ 800 bpi) |
| 7 | TC11 | 67 | 200 |
| 8 | DM11 | 100 | 119 (@ 1200 baud) |
| 9 | CD11 | 800 | |
| 10 | DR11-B | * | |

# The RP11 transfers two words each 14.8 usec.
* Depends on Customer Application.

Table 2

Priority of Devices Affected by BR Latency

| Priority | BR7 | BR6 | BR5 | BR4 |
|---|---|---|---|---|
| 1 | AD01(1) | KW11-L | DP11 @ 9600 baud or higher | KL11 |
| 2 | DT11-B | TC11 | DC11 @ 1800 baud | UNC11 (Def'd) |
| 3 | | CR11 | DP11 @ 4800 baud | AFC11(2) |
| 4 | | CM11 | DC11 @ 1200 baud | |
| 5 | | KW11-P(2) | DP11 @ 2400 baud | |
| 6 | | UDC11 (Immediate) | DC11 @ 600 BAUD | |
| 7 | | | DP11 @ 2000 baud | |
| 8 | | | DC11 @ 300 baud | |
| 9 | | | DM11 | |
| 10 | | | DR11-A(2) | |
| 11 | | | DR11-B | |

Notes:

1. For AD01 sampling at high rates, Can be assigned to lower level for slow input applications.

2. Priority positions depends on customer application.

Table 3

Fixed Vector Interrupt Devices

| UNIBUS OPTION NO. | DEVICE ADDRESS | INTERRUPT VECTOR | BR LEVEL | X=NPR | BUS LOAD | MOUNTING | AMPS @+5 Vdc | AMPS (1) @ 115 Vac | POWER DISSIPATION (W) | PERIPHERAL |
|---|---|---|---|---|---|---|---|---|---|---|
| AA11 | 77675Ø | 140 | 4 | | 1(3) | SU | 2,9 | | (2) | VRØ1, VR14, VTØ1 |
| ADØ1 | 77677Ø | 130 | 5,7 | | 1 | Panel | | 1 | 100 | |
| AFC-11 | 772570 | 134 | 4 | | 1 | Cabinet | | 15 | 1700 | |
| CRI11/CM11 | 777160 | 230 | 6 | | 1 | SPC | 1,5 | | (2) | GDI 100, M200/ GDI 100M |
| CTY | 777560 | Ø60,Ø64 | 4 | | 1 | SPC | 1,5 | | (2) | Console Teleprinter |
| KW11-L | 777546 | 100 | 6 | | 1 | Module* | Ø,8 | | (2) | (*Mounts in KA11 or KC11) |
| KW11-P | 772540 | 104 | 6 | | 1 | SPC | 1,Ø | | (2) | |
| LP11 | 777514 | 200 | 4 | | 1 | SPC | 1,Ø | | (2) | LPØ1 |
| PC11/PR11 | 777550 | Ø70,Ø74 | 4 | | 1 | SPC | 1,5 | 3 | 350 | PCØ5 |
| RC11 | 777440 | 210 | 5 | X | 1 | Panel | | 2,2 | 250 | RS64 |
| RF11 | 777460 | 204 | 5 | X | 1 | Cabinet | | 11 | 1200 | RS11 |
| RK11 | 777400 | 220 | 5 | X | 1 | Cabinet | | 5 | 500 | RKØ2, RKØ3 |
| RP11 | 776710 | 254 | 5 | X | 4 | Cabinet | | 10 | 1100 | RPØ2 |
| TC11 | 777340 | 214 | 6 | X | 1 | Cabinet | | 3 | 350 | TU56 |
| TM11 | 772520 | 224 | 5 | X | 1 | Cabinet | | 9 | 1000 | TU1Ø |
| UDC11 | 771770 | 234 | 4,6 | | 2 | Cabinet | | 24 | 2700 | |
| XY11 | 772554 | 120 | 5 | | 1 | SPC | 1,Ø | | (2) | XY Plotter |

1. Maximum AC operating current for controller and one peripheral when mounted in same cabinet.

2. Power dissipation is included in BA11 Mounting Box - see Equipment Power Requirements, Table 6.

3. AA11 presents two unit bus loads if it includes Scope Control.

Table 4

Floating Vector Interrupt Devices

| UNIBUS Option No. | Max. No. of Units | Address of First | Second | ... Last Unit | Full(1) Duplex | BR Level | X= NPR | Bus Load | Mounting | Amps (6) @ +5 Vdc |
|---|---|---|---|---|---|---|---|---|---|---|
| DC11 | 32 | 774000 | 774010 | ... 774370 | X | 5 | | 1 | SU | 2.0 |
| KL11 | 16 | 776500 | 776510 | ... 776670 | X | 4 | | 1 | SPC | 1.5 |
| DP11 | 32 | 774770 | 774760 | ... 774400 | X | 5 | | 1 | SU | 2.5 |
| DM11 | 16 | 775000 | 775010 | ... 775170 | X | 5 | X | 1 | 2-SU(8) | 4.9 |
| DN11 | 16 | 775200 | 775210 | ... 775370 | | 4 | | 1 | SU | 4.0 |
| DM11-BB | 16 | 770500 | 770510 | ... 770670 | | 4 | | 1 | Module(9) | 2.5 |
| DR11-A | (2) | 767770 | 767760 | ... | X | 5 | | 1 | SPC | 1.5 |
| DT11 | 8 | 777420 | 777422 | ... 777436 | X | 7 | | (4) | Panel | (5) |
| DR11-B | 4(3) | 772410 | 772430 | ... 772470 | (7) | 5 | X | 1 | SU | 3.3 |

1. Full duplex devices require two consecutive vectors.

2. The maximum number of DR11-A's is limited only by available vector space. Addresses are assigned in User Address Space starting at 767770 and counting down.

3. Additional DR11-B's may be installed with addresses in User Address Space.

4. DT11 presents three Unit Bus Loads to each processor bus and three loads to the switched bus.

5. DT11 requires 1.2 amps at 115 Vac; power dissipation is 125 watts.

6. Power dissipation of SPC and SU devices is included in BA11 Mounting Box - see Equipment Power Requirements, Table 6.

7. DR11-B requires only one vector, but it must be of the form XX4.

8. DM11 also includes Distribution Panel and power supply.

9. DM11-BB module set mounts in DM11 SU.

Table 7

I/O Device Vector Assignments

| 000-174 | | 200-374 | | 400-574 | 600-774 |
|---|---|---|---|---|---|
| 000 | Reserved | 200 | LP11 | 400 | 600 |
| 004 | Time out error | 204 | RF11 | 404 | 604 |
| 010 | Reserved inst. | 210 | RC11 | 410 | 610 |
| 014 | "T" trap | 214 | TC11 | 414 | 614 |
| 020 | "IOT" trap | 220 | RK11 | 420 | 620 |
| 024 | Power fail | 224 | TM11 | 424 | 624 |
| 030 | "EMT" trap | 230 | CR11, CM11 | 430 | 630 |
| 034 | "TRAP" trap | 234 | UDC11 | 434 | 634 |
| 040 | Reserved | 240 | 11/45 PIRQ | 440 | 640 |
| 044 | Reserved | 244 | FPP | 444 | 644 |
| 050 | Reserved | 250 | KT error | 450 | 650 |
| 054 | Reserved | 254 | RP11 | 454 | 654 |
| 060 | CTY Input | 260 | TA11 | 460 | 660 |
| 064 | CTY Output | 264 | Reserved | 464 | 664 |
| 070 | PC11 Reader | 270 | * | 470 | 670 |
| 074 | PC11 Punch | 274 | * | 474 | 674 |
| 100 | KW11-L | 300 | # | 500 | 700 |
| 104 | KW11-P | 304 | | 504 | 704 |
| 110 | Reserved | 310 | | 510 | 710 |
| 114 | MEM PARITY | 314 | | 514 | 714 |
| 120 | XY11 | 320 | | 520 | 720 |
| 124 | DR11-B | 324 | | 524 | 724 |
| 130 | AD01 | 330 | | 530 | 730 |
| 134 | AFC11 | 334 | | 534 | 734 |
| 140 | AA11 Display | 340 | | 540 | 740 |
| 144 | AA11 Light Pen | 344 | | 544 | 744 |
| 150 | Reserved | 350 | | 550 | 750 |
| 154 | Reserved | 354 | | 554 | 754 |
| 160 | Reserved | 360 | | 560 | 760 |
| 164 | Reserved | 364 | | 564 | 764 |
| 170 | * | 370 | | 570 | 770 |
| 174 | * | 374 | | 574 | 774 |

*User reserved

#Start floating vector assignments at location 300. Note that full duplex devices require two consecutive vectors! e.g., DC11 #1 at 300 and 304.