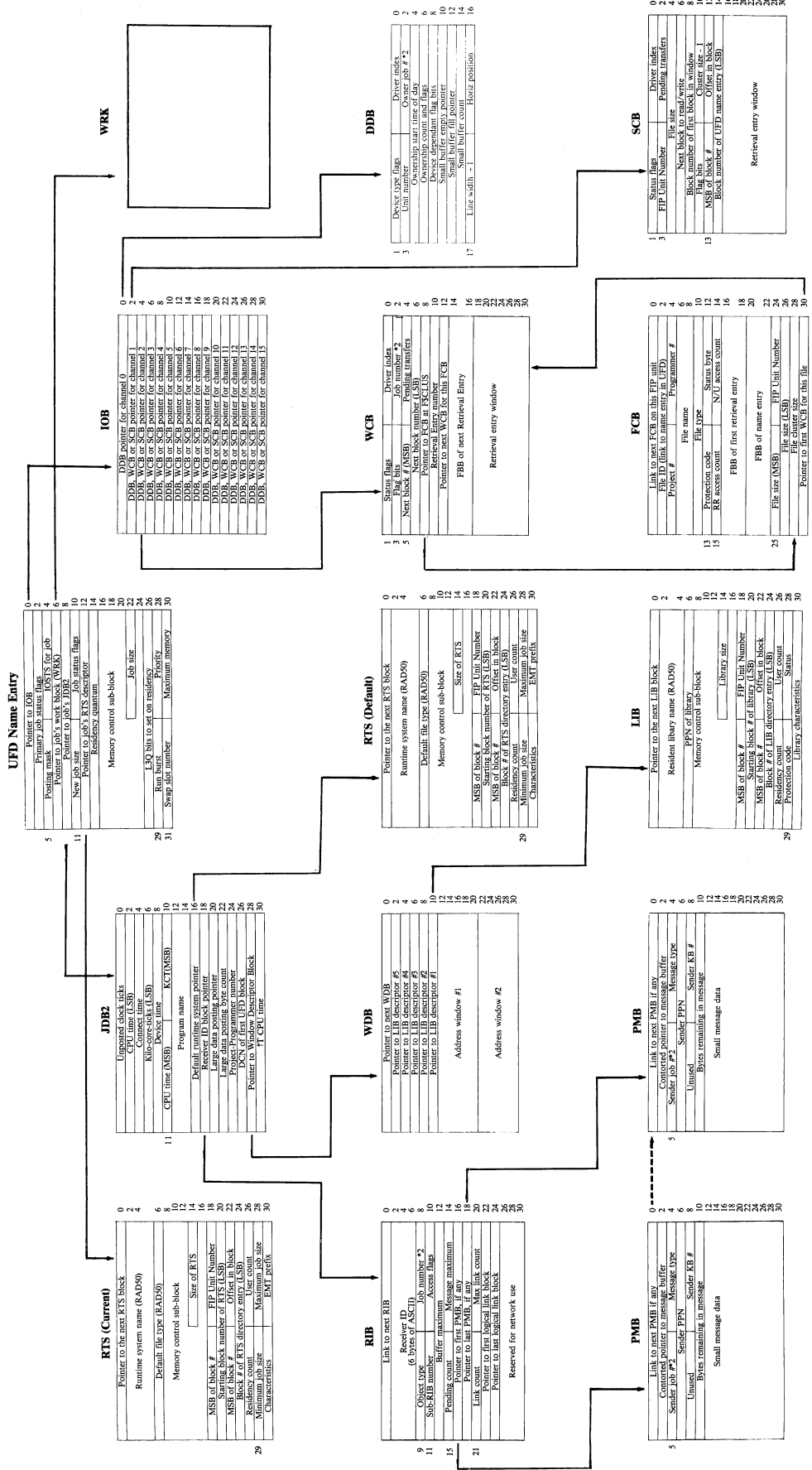


JOB CONTROL TABLES



JOB CONTROL TABLES

FIXED MEMORY LOCATIONS

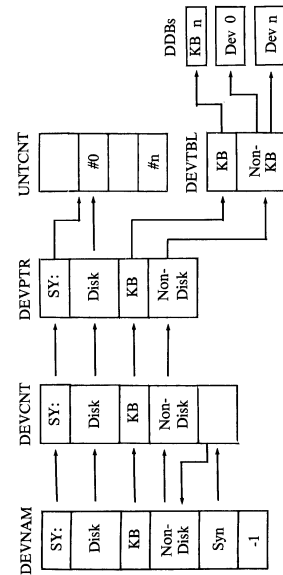
Octal	Decima	Symbol	Description
44	36	IDATE	System startup date, as (Year-1970)*1000 + (day of year).
46	38	ITIME	System startup time in minutes before midnight.
50	40	HALT	Start at this location to do a system reload.
52	42	HALT	Start at this location for system crash.
54	44	HALT	Start at this location for system reload.
56	46	DATE	Today's date, as (Year-1970)*1000 + (day of year).
1000	512	TIME	Current time in minutes before midnight.
1004	516	TIMSEC	Seconds to next minute.
1006	518	TIMCLK	Ticks to next second.
1007	519	JOB	Job number of current job (times 2).
1010	520	NEXT	Job number (times 2) of the next job to run.
1012	522	JOBDA	Pointer to current job's Job Data Block (JDB).
1014	524	IOBST	Pointer to current job's flags (JDIFLG).
1016	526	IOBWRK	Pointer to current job's Work Block (WRK).
1020	528	IOBJD2	Pointer to current job's Secondary Job Data Block (JDB2).
1022	530	IOBRTS	Pointer to current job's Runtime System Descriptor Block (RTS).
1024	532	CPUTIM	Pointer to current job's CPU time bucket (JZTICK).
1026	534	IOBWBDB	Pointer to current job's Window Descriptor Block (WDB) at offset W.WINI.
1040	544	MEMLST	Root of memory control list.
1100	576	DFTKTS	RTS Block for default runtime system.
1200	648	ERLRLB	RTS Block for null runtime system.
1202	650	NULLRTS	Job number (times 2) of job currently using FIP.
1204	652	FIPRTV	IP number of current job's FIP.
1300	704	FIPUSR	PPN of current job's FIP.
1302	706	FIPBDA	Pointer to the Job Data Block (JDB) for the current job in FIP.
1304	708	FIPBDA	Pointer to the Secondary Job Data Block (JDB2) for the current job in FIP.
1306	710	FIPBDA2	Job number (times 2) of the system job currently using FIP.
1310	712	FIPSNJN	Top of the monitor's stack when the null job is not running. The monitor's stack is 256 words deep.
2070	1080	SYSTAK	Top of FIP's stack. FIP's stack is 124 words deep.
2600	1408	FISTAK	

FIRQB

Symbol	Oct	Dec	Symbol
FQFUN	3	0	Returned status
FQJOB	3	2	Job number *2
FQFIL	4	4	Channel number *2
FQPPN	6	6	Programmer number
FQNAMI	8	10	File name (in RAD 50)
	10	12	File type (in RAD 50)
	12	14	File size (LSB)
	14	16	Buffer length (in bytes)
	16	20	Open mode
	18	22	Status flags
FQPROT	27	23	Protection code
	24	24	Code "real" flag
	26	26	Device name (in ASCII)
	28	28	Unit "real" flag
	30	30	Device unit #
	32	32	Cluster size
	34	34	Number of entries in directory lookup
	36	36	

XRBLKM

Symbol	Oct	Dec	Symbol
XRBLKM	7	7	Buffer length (in bytes)
	8	8	Transfer byte count
	10	10	Buffer address
	12	12	Block # (MSB)
	14	14	Channel # *2
	16	16	Block number (LSB)
	18	18	Terminal input wait time
	20	20	Record modifier
	22	22	
	24	24	
	26	26	
	28	28	
	30	30	
	32	32	
	34	34	
	36	36	



Entries in UNTCNT - Disk Unit Status Table

Flag Bits	Current Open File Count	Description
15	1	LC.TOP - Order directory with New Files First
16	2	LC.WLO - Mounted read only
17	3	LC.DLW - Update access with date last written
18	4	LC.NFS - Current processing is non-file structured
19	5	LC.LCK - Don't allow non-privileged opens
20	6	LC.PRI - Private pack mounted
21	7	LC.MNT - No pack mounted. Bits 9-14 meaningless

DDB

Symbol	Offset	Symbol
DDSTS	1	DDIDX
DDUNT	3	DDIBNO
	4	DDTIME
	6	DDCNLG
	8	DDBLFC
	10	DDHORZ
	12	
	14	
	16	
	17	Driver specific data

DDSTS - Device Characteristics Flags

Flag Bits	Driver Index	Description
15	1	DDPRVO - Ownership requires privileges
16	2	DDRLO - Read privileges never given
17	3	DDNLO - Write privileges never given
18	4	DDNET - Units elsewhere in DECNET
19	5	DDAUX - Can use KMC11 bridge blocks
20	6	DDAUXA - Currently bridged to a KMC11
21	7	DDSTAT - Bit not used by monitor but is cleared when device is closed

DDCNT - Device Flags

Flag Bits	Unused	Device Ownership Count	Description
15	1	1	DDCONS - Device is its owner's console terminal
16	2	2	DDUTIL - Device is temporarily assigned to FIP
17	3	3	DDASN - Device is explicitly assigned to job in DDIBNO

COMMON MEMORY LOCATIONS

DEVICE DRIVERS

ENTRY POINTS (cont.)

ASN\$xx - Assign
 Input: R0 Job number of assigner times 2.
 R1 Pointer to DDB for this unit.
 Output: All registers must be preserved.
 Exit: RETURN ;No error
 or: ERROR ;if error in assignment

DEAS\$xx - Deassign
 Input: R1 Pointer to DDB for this unit.
 Output: All registers must be preserved.
 Exit: RETURN

OPAS\$xx - Open
 Input: R0 Unit number times two.
 R1 Pointer to DDB for this unit.
 R2 Pointer to FIRQB (in WRK block). Default values have been loaded for
 FQFLAG and FQBUFL.
 R3 Pointer to job's IOB entry for this channel.
 Output: Random
 R4 Random
 R5 Must be preserved
 R6 Must be preserved
 Exit: RETURN ;For successful open
 or: CALLX RETDEV ;For unsuccessful open
 ERROR code

CL\$xx - Close
 Input: R0 Unit number times 2
 R1 Pointer to DDB
 R2 Pointer to DDB
 R3 Pointer to DDB
 Z Set: This is a real close
 Clear: This is a "reset" close
 Output: R0 Random
 R1 Random
 R5 Must be preserved
 Exit: RETURN

SER\$xx - I/O Service
 Input: R0 Unit number times 2
 R1 Pointer to DDB for this unit
 R2 Function code: 2 (READ) or 4 (WRITE)
 R3 Pointer to XRB (contained in WRK block)
 R4 Calling job number times 2
 R5 Pointer to user's buffer (mapped through APR6)
 Z Set: This is the first entry for this request
 Clear: This entry is for an IOREDO
 C Set: This entry is for an IOREDO
 Clear: This is the first entry for this request
 All registers random
 Output: XRBX Adjusted for the number of bytes transferred to or from the user's
 buffer XRLLOC Adjusted for the bytes transferred to or from the
 user's buffer.
 0 for non-block structured devices. Next virtual block number for
 block structured devices.
 XRBX
 IOEXIT ;I/O completed without error
 SETERR code:@IOSTS ;I/O completed with error
 JMPX IOEXIT
 or: JMPX ;Stall the job and then reenter
 or: JMPX IOREDO ;SEK\$xx when the job is uninstalled

SFCS\$xx - Special Service
 Input: R0 Unit number times 2
 R1 Pointer to DDB for this unit
 R2 Special function code
 R3 Pointer to XRB (in WRK block)
 R4 Calling job number times 2
 R5 Pointer to XRB (mapped through APR6)
 Output: All registers random
 Exit: JMPX RTIS ;If no error
 or: ERROR ;If error
 code

INT\$xx - Interrupt Service
 Input: R0 Unit number times 2
 R1 Priority is device interrupt priority
 PR All register random
 Output: All register random
 Exit: CALLX IOFINI.R5.JS.xx
 or: RETURN ;Normal return from interrupt
 ;Reschedule stalled job
 ;Return from interrupt

ENTRY POINTS (xxDVR PSECT)

TMOS\$xx - Timeout
 Input: R0 Unit number times 2
 R1 Pointer to DDB for this unit
 R3 Pointer to device CSR (loaded from CSRTBL)
 PR Priority is PR3
 Output: All registers are random
 Exit: RETURN

ERL\$xx - Error Logging
 Input: R1 Pointer to DDB for this unit
 R3 Pointer to CSR for this unit
 Output: All registers are random
 Exit: RETURN

SLPS\$xx - Sleep Check
 Input: R0 Unit number times 2
 R1 Pointer to DDB for this unit
 R4 Pointer to job's IOB entry for this channel
 Output: R0 Random
 R1 Random
 R4 Random
 C Set: Don't let the job sleep
 Clear: Let the job sleep
 Exit: RETURN

UMR\$xx - Unit Mapping Register Available
 Input: R0 Pointer to base root of DSQ list for disk device drivers. Random for non-disk
 drivers.
 R3 Pointer to CSR for disk drivers. Random for non-disk drivers.
 PR Priority is PR5
 Output: None
 Exit: RETURN

nm\$xx - Level Three Queue Reentry
 Input: All registers are random
 PR Priority is PR3
 C Clear
 Output: All registers are random
 PR Must be preserved
 Exit: JMPX RTIS

SYMBOLIC VALUES

STS\$xx - DDB Status Byte
 Value: @DDBR.VO.DDRLOIDDWLODDNETIDDAUXIDDAIDSTAT>/400
 File: xxDVR.MAC
 Scope: Global

FLG\$xx - Device Dependent Flags
 Purpose: FLGRND|FLGKB|FLGFR|FLGMD|FLGPOS|DDWLO|DDRLO|
 Value: DDNFS-index
 File: xxDVR.MAC
 Scope: Global

SIZ\$xx - Line Width
 Purpose: Define line width for the device
 Value: 5*14, +1: Line width does not apply
 width + 1: Line width is fixed
 0: Line width is variable
 File: xxDVR.MAC
 Scope: Global

BUF\$xx - I/O Buffer Size
 Purpose: Define default buffer size in BUFTBL
 Value: Buffer size, in bytes
 File: xxDVR.MAC
 Scope: Global

CNT\$xx - Number of Units for Device
 Purpose: Define the number of units of device
 Value: Number of units for this device
 File: xxDVR.MAC
 Scope: Local

DBS\$xx - DDB Size
 Purpose: Define the size of the DDB for this device
 Value: DDB size, in bytes
 File: xxDVR.MAC
 Scope: Global

SYMBOLIC VALUES (cont.)

CCC\$xx - IC Flag
 Purpose: Signifies whether the device is IC interruptable
 Value: Non-zero: Device can be interrupted by a IC
 File: xxDVR.MAC
 Scope: Local

BFO\$xx - Buffer Quota
 Purpose: Define small buffer quota
 Value: Small buffer quota for first small buffer chain
 File: xxDVR.MAC
 Scope: Global

HOR\$xx - Horizontal Line Width
 Purpose: Specify horizontal line width for device
 Value: Desired line width
 File: xxDVR.MAC
 Scope: Local

SLP\$xx - Check Before Sleeping Flag
 Purpose: Specify whether the driver needs notification before honoring a conditional sleep
 request
 Value: Non-zero: Check with driver before sleeping
 File: xxDVR.MAC
 Scope: Local

UMR\$xx - Notify Driver When UMR is Available
 Purpose: Specify that the driver contains a UMR\$xx entry point and should be notified when
 a unit mapping register becomes available
 Value: Non-zero: Notify driver if UMR is available
 File: xxDVR.MAC
 Scope: Local

ALT\$xx - Alternate Device Name
 Purpose: Alternate device name
 File: TBL.MAC
 Scope: Global

TIM\$xx - Timeout Check Setting
 Purpose: Specify the amount of time to wait on a device operation request before aborting
 Value: TBL.MAC
 Scope: Global

IDX\$xx - Driver Index
 Purpose: Defines the driver index
 Value: TBL.MAC
 Scope: Global

JS\$xx - JBWAIT/JBSTAT Status Bit
 Purpose: Bit set in JBWAIT and JBSTAT
 File: TBL.MAC
 Scope: Global

CSR\$xx - Pointer to CSR Address
 Purpose: Point to the entry in CSRTBL for this device
 File: TBL.MAC
 Scope: Global

DEV\$xx - Pointer to DDB for Unit n
 Purpose: Entry in DEVTBL where the DDB pointers for this device start.
 File: TBL.MAC
 Scope: Global

xxDDDB - Address of Unit 0 DDB
 Purpose: Point to first DDB for this device
 File: TBL.MAC
 Scope: Global

LOG\$xx - Enter Error Logging
 Purpose: Initiate error logging
 File: TBL.MAC
 Scope: Global

WAITZ - Reenter After Two Clock Ticks
 Purpose: Reenter L3Q entry point after two clock ticks
 File: Not applicable
 Scope: Global

DEVICE DRIVERS
ENTRY POINTS
SYMBOLIC VALUES

**DEVICE DRIVERS
MONITOR SUBROUTINES**

DEVICE DRIVERS
ODT
SYSTEMS MACROS
INTERRUPT SERVICE
DEVICE FLAGS