

disk

COLLABORATORS

	<i>TITLE :</i> disk		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY		March 28, 2025	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

disk

1.1 disk.doc

AllocUnit ()	GetUnit ()	GiveUnit ()
FreeUnit ()	GetUnitID ()	

1.2 disk.resource/AllocUnit

NAME

AllocUnit - allocate a unit of the disk

SYNOPSIS

```
Success = AllocUnit( unitNum ), DRResource
D0                      D0          A6
```

FUNCTION

This routine allocates one of the units of the disk. It should be called before trying to use the disk (via GetUnit).

INPUTS

unitNum -- a legal unit number (zero through three)

RESULTS

Success -- nonzero if successful. zero on failure.

EXCEPTIONS

SEE ALSO

BUGS

1.3 disk.resource/FreeUnit

NAME

FreeUnit - deallocate the disk

SYNOPSIS

```
FreeUnit( unitNum ), DRResource
          D0          A6
```

FUNCTION

This routine deallocates one of the units of the disk. It should be called when done with the disk. Do not call it if you did not successfully allocate the disk (there is no protection -- you will probably crash the disk system).

INPUTS

unitNum -- a legal unit number (zero through three)

RESULTS

EXCEPTIONS

SEE ALSO

BUGS

1.4 disk.resource/GetUnit

NAME

GetUnit - allocate the disk for a driver

SYNOPSIS

```
lastDriver = GetUnit( unitPointer ), DRResource
          D0          A1          A6
```

FUNCTION

This routine allocates the disk to a driver. It is either immediately available, or the request is saved until the disk is available. When it is available, your unitPointer is sent back to you (via ReplyMsg). You may then reattempt the GetUnit.

Allocating the disk allows you to use the disk's resources. Remember however that there are four units to the disk; you are only one of them. Please be polite to the other units (by never selecting them, and by not leaving interrupts enabled, etc.).

When you are done, please leave the disk in the following state:

```
dmacon dma bit ON
dsklen dma bit OFF (write a #DSKDMAOFF to dsklen)
adkcon disk bits -- any way you want
entena:disk sync and disk block interrupts -- Both DISABLED
CIA resource index interrupt -- DISABLED
8520 outputs -- doesn't matter, because all bits will be
      set to inactive by the resource.
8520 data direction regs -- restore to original state.
```

INPUTS

unitPtr - a pointer to your disk resource unit structure.
Note that the message field of the structure MUST

be a valid message, ready to be replied to.

RESULTS

lastDriver - if the disk is not busy, then the last unit to use the disk is returned. This may be used to see if a driver needs to reset device registers. (If you were the last user, then no one has changed any of the registers. If someone else has used it, then any allowable changes may have been made). If the disk is busy, then a null is returned.

EXCEPTIONS

SEE ALSO

BUGS

1.5 disk.resource/GetUnitID

NAME

GetUnitID - find out what type of disk is out there

SYNOPSIS

```
idtype = GetUnitID( unitNum ), DRResource
D0          D0          A6
```

FUNCTION

INPUTS

RESULTS

idtype -- the type of the disk drive. Standard types are defined in the resource include file.

EXCEPTIONS

SEE ALSO

BUGS

1.6 disk.resource/GiveUnit

NAME

GiveUnit - Free the disk back up

SYNOPSIS

```
GiveUnit(), DRResource
A6
```

FUNCTION

This routine frees the disk after a driver is done with it. If others are waiting, it will notify them.

INPUTS

RESULTS

EXCEPTIONS

SEE ALSO