

cia

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REVISION HISTORY

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Chapter 1

cia

1.1 cia.doc

```
AbleICR()           RemICRVector()
AddICRVector()      SetICR()
```

1.2 cia.resource/AbleICR

NAME

AbleICR -- enable/disable ICR interrupts

SYNOPSIS

```
oldMask = AbleICR(mask), Resource
D0              D0              A6
```

FUNCTION

This function provides a means of enabling and disabling 6526 CIA interrupt control registers. In addition it returns the previous enable mask.

INPUTS

mask - a bit mask indicating which interrupts to be modified. If bit 7 is clear the mask indicates interrupts to be disabled. If bit 7 is set, the mask indicates interrupts to be enabled. Bit positions are identical to those in 6526 ICR.

RESULTS

oldMask - the previous enable mask before the requested changes. To get the current mask without making changes, call the function with a null parameter.

EXAMPLES

```
Get the current mask:
    mask = AbleICR(0)
Enable both timer interrupts:
    AbleICR(0x83)
Disable serial port interrupt:
```

AbleICR(0x08)

EXCEPTIONS

Enabling the mask for a pending interrupt will cause an immediate processor interrupt (that is if everything else is enabled). You may want to clear the pending interrupts with SetICRx prior to enabling them.

SEE ALSO

SetICR

1.3 cia.resource/AddICRVector

NAME

AddICRVector -- attach an interrupt handler to a CIA bit

SYNOPSIS

```
interrupt = AddICRVector(iCRBit, interrupt), resource
D0                      D0      A1      A6
```

FUNCTION

Assign interrupt processing code to a particular interrupt bit of the CIA ICR. If the interrupt bit has already been assigned, this function will fail, and return a pointer to the owner interrupt. If it succeeds, a null is returned.

This function will also enable the CIA interrupt for the given ICR bit.

INPUTS

iCRBit - bit number to set (0..4)
interrupt - pointer to interrupt structure

RESULT

interrupt - zero if successful, otherwise returns a pointer to the current owner interrupt structure.

SEE ALSO

RemICRVector

1.4 cia.resource/RemICRVector

NAME

RemICRVector -- detach an interrupt handler from a CIA bit

SYNOPSIS

```
RemICRVector(iCRBit, interrupt), resource
D0          A1          A6
```

FUNCTION

Disconnect interrupt processing code for a particular interrupt bit of the CIA ICR.

This function will also disable the CIA interrupt for the given ICR bit.

INPUTS

icRBit - bit number to set (0..4)
interrupt - pointer to interrupt structure

RESULT

SEE ALSO

AddICRVector

1.5 cia.resource/SetICR

NAME

SetICR -- cause, clear, and sample ICR interrupts

SYNOPSIS

```
oldMask = SetICR(mask), Resource
D0          D0      A6
```

FUNCTION

This function provides a means of resetting, causing, and sampling 6526 CIA interrupt control registers.

INPUTS

mask - a bit mask indicating which interrupts to be effected. If bit 7 is clear the mask indicates interrupts to be reset. If bit 7 is set, the mask indicates interrupts to be caused. Bit positions are identical to those in 6526 ICR.

RESULTS

oldMask - the previous interrupt register status before making the requested changes. To sample current status without making changes, call the function with a null parameter.

EXAMPLES

```
Get the interrupt mask:
mask = SetICR(0)
Clear serial port interrupt:
SetICR(0x08)
```

EXCEPTIONS

Setting an interrupt bit for an enabled interrupt will cause an immediate interrupt.

SEE ALSO
