

MCC_HexEdit

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Chapter 1

MCC_HexEdit

1.1 MCC_HexEdit.doc

```
--background--
MUIA_HexEdit_ActiveField()
MUIA_HexEdit_AddressChars()
MUIA_HexEdit_BaseAddressOffset()
MUIA_HexEdit_BytesPerColumn()
MUIA_HexEdit_BytesPerLine()
MUIA_HexEdit_ByteValue()
MUIA_HexEdit_ColumnsPerLine()
MUIA_HexEdit_CursorAddress()
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MUIA_HexEdit_PropObject()
MUIA_HexEdit_SelectMode()
MUIA_HexEdit_VisibleLines()
MUIM_HexEdit_CreateDisplayAddress()
MUIM_HexEdit_FilterChar()
MUIM_HexEdit_ReadMemoryByte()
MUIM_HexEdit_Redraw()
MUIM_HexEdit_WriteMemoryByte()
```

1.2 HexEdit/--background--

NAME
HexEdit -- ... (V14)

FUNCTION
This class provides you with an easy way to present hexadecimal

dump of a memory region to the user. Additionally, memory contents are visible in ASCII representation. Editing in both modes is possible. HexEdit class is very flexible, with many settable parameters and some critical methods (like byte reading and writing) waiting to be overloaded.

1.3 HexEdit/MUIA_HexEdit_ActiveField

NAME

MUIA_HexEdit_ActiveField, LONG [ISG] -- ... (V14)

SPECIAL INPUTS

MUIV_HexEdit_ActiveField_HexDump

MUIV_HexEdit_ActiveField_Chars

FUNCTION

With MUIA_HexEdit_ActiveField you can decide over which field of the object (hexdump or character) active cursor should be positioned.

NOTES

BUGS

No known bugs.

SEE ALSO

1.4 HexEdit/MUIA_HexEdit_AddressChars

NAME

MUIA_HexEdit_AddressChars, LONG [I.G] -- ... (V14)

SPECIAL INPUTS

MUIV_AddressChars_Auto

FUNCTION

This attribute lets you define how many characters will be devoted to representing addresses displayed by HexEdit. For example, if you specify a value of 4, all addresses will be displayed as 16 bit. Default is 8, i.e. 32 bit.

Address calculation's precision is not dependant on this attribute, it's for display purposes only. Internally all addresses are treated as LONGs.

NOTES

This value ranges from 1 to 8, but please see MUIM_HexEdit_CreateDisplayAddress().

BUGS

No known bugs.

SEE ALSO
MUIM_HexEdit_CreateDisplayAddress()

1.5 HexEdit/MUIA_HexEdit_BaseAddressOffset

NAME
MUIA_HexEdit_BaseAddressOffset, LONG [ISG] -- ... (V14)

FUNCTION
The value of this attribute is added to the current address every time when it is about to be displayed. For example, if you have your data at 0x04000000 and you want the addresses to be shown as starting from 0, set this attribute to -0x04000000.

NOTES

BUGS
No known bugs.

SEE ALSO

1.6 HexEdit/MUIA_HexEdit_BytesPerColumn

NAME
MUIA_HexEdit_BytesPerColumn, LONG [I.G] -- ... (V14)

FUNCTION
With MUIA_HexEdit_BytesPerColumn you can define how many bytes should constitute one column. For example, default value of 4 groups memory dump in a following way:

```
01234567 01234567 01234567 01234567
```

By changing it to 3, you would get:

```
012345 670123 456701 234567
```

NOTES

BUGS
No known bugs.

SEE ALSO

1.7 HexEdit/MUIA_HexEdit_BytesPerLine

NAME
MUIA_HexEdit_BytesPerLine, LONG [..G] -- ... (V14)

FUNCTION

With this attribute you can learn how many bytes are displayed in a single line of HexEdit object.

BUGS

No known bugs.

SEE ALSO

1.8 HexEdit/MUIA_HexEdit_ByteValue

NAME

MUIA_HexEdit_ByteValue, LONG [.SG] -- ... (V14)

FUNCTION

This attribute lets you read and modify the value of byte under the cursor.

NOTES

BUGS

No known bugs.

SEE ALSO

MUIA_HexEdit_NibbleValue()

1.9 HexEdit/MUIA_HexEdit_ColumnsPerLine

NAME

MUIA_HexEdit_ColumnsPerLine, LONG [I.G] -- ... (V14)

FUNCTION

By querying this attribute you can learn how many columns are currently displayed in one line of HexEdit object. By default, the number of columns varies with the size of the object. If, however MUIA_HexEdit_ColumnsPerLine is set at the creation time, the object will always use a value then specified.

BUGS

No known bugs.

SEE ALSO

1.10 HexEdit/MUIA_HexEdit_CursorAddress

NAME

MUIA_HexEdit_CursorAddress, LONG [.SG] -- ... (V14)

FUNCTION

Reading this attribute will return the cursor's current address.

Setting it will move the cursor to a new location, possibly scrolling and/or redrawing the display.

NOTES

Address, as usual, is specified as byte offset from `MUIA_HexEdit_LowBound()`

BUGS

No known bugs.

SEE ALSO

`MUIA_HexEdit_LowBound()`, `MUIA_HexEdit_HighBound()`, `MUIA_HexEdit_CursorNibble()`

1.11 HexEdit/MUIA_HexEdit_CursorNibble

NAME

`MUIA_HexEdit_CursorNibble`, LONG [ISG] -- ... (V14)

FUNCTION

With this attribute you can set or get the nibble over which the cursor is currently positioned.

RESULTS

0 for upper nibble, 1 for lower nibble.

NOTES

BUGS

No known bugs.

SEE ALSO

`MUIA_HexEdit_CursorAddress()`

1.12 HexEdit/MUIA_HexEdit_CursorVisible

NAME

`MUIA_HexEdit_CursorVisible`, BOOL [ISG] -- ... (V14)

FUNCTION

With this attribute you can set and get the state of cursor's visibility.

NOTES

Please do not attempt to switch off the cursor's while in the edit mode, as it may confuse the user.

BUGS

No known bugs.

SEE ALSO

1.13 HexEdit/MUIA_HexEdit_EditMode

NAME

MUIA_HexEdit_EditMode, BOOL [ISG] -- ... (V14)

FUNCTION

This attribute determines if HexEdit object will let the user edit a memory space that is under its control. If it is set to TRUE, user can input 0-9/a-f digits while in the hexdump part of the display and alphanumerics while in the character part.

NOTES

BUGS

No known bugs.

SEE ALSO

MUIA_HexEdit_CursorVisible(), MUIM_HexEdit_WriteMemoryByte(), MUIM_HexEdit_FilterChar()

1.14 HexEdit/MUIA_HexEdit_First

NAME

MUIA_HexEdit_First, LONG [ISG] -- ... (V14)

FUNCTION

MUIA_HexEdit_First specifies offset (counting from MUIA_HexEdit_LowBound()) of the first byte to be displayed at the top of HexEdit object. This attribute is always rounded down to a multiply of MUIA_HexEdit_BytesPerLine().

NOTES

In certain cases this attribute does not change, despite set()ting a value different from the current - for example when there are not enough data lines below to fill the entire HexEdit object. If you want to highlight certain position, please rather use MUIA_HexEdit_CursorAddress().

BUGS

No known bugs.

SEE ALSO

MUIA_HexEdit_CursorAddress()

1.15 HexEdit/MUIA_HexEdit_FirstLine

NAME

MUIA_HexEdit_FirstLine, LONG [.S.] -- ... (V14)

SPECIAL INPUTS

MUIV_HexEdit_FirstLine_Up
MUIV_HexEdit_FirstLine_Down

MUIV_HexEdit_FirstLine_PageUp
MUIV_HexEdit_FirstLine_PageDown
MUIV_HexEdit_FirstLine_Top
MUIV_HexEdit_FirstLine_Bottom

FUNCTION

Changing this attribute lets you move around your memory space.

NOTES

Only values listed above are allowed as input.

BUGS

No known bugs.

SEE ALSO

1.16 HexEdit/MUIA_HexEdit_FullRefresh

NAME

MUIA_HexEdit_FullRefresh, BOOL [.S.] -- ... (V14)

FUNCTION

Setting this attribute to TRUE will force redraw of the entire object area next time MUIA_HexEdit_First() is set. Normally, only parts that are new on display would be drawn.

NOTES

This attribute may be helpful with some more exotic subclasses of HexEdit. Usually, you won't need to touch it, though.

BUGS

No known bugs.

SEE ALSO

MUIA_HexEdit_First()

1.17 HexEdit/MUIA_HexEdit_HighBound

NAME

MUIA_HexEdit_HighBound, LONG [I.G] -- ... (V14)

FUNCTION

With MUIA_HexEdit_HighBound you can define where in Amiga memory space ends the area you want HexEdit to operate on.

NOTES

This attribute MUST be specified, even if you overload MUIM_HexEdit_ReadMemoryByte() or MUIM_HexEdit_WriteMemoryByte()!

BUGS

No known bugs.

SEE ALSO
MUIA_HexEdit_LowBound(), MUIM_HexEdit_ReadMemoryByte(),
MUIM_HexEdit_WriteMemoryByte()

1.18 HexEdit/MUIA_HexEdit_LowBound

NAME
MUIA_HexEdit_LowBound, LONG [I.G] -- ... (V14)

FUNCTION
With MUIA_HexEdit_LowBound you can define where in Amiga memory space begins the area you want HexEdit to operate on.

NOTES
This attribute MUST be specified, even if you overload MUIM_HexEdit_ReadMemoryByte() or MUIM_HexEdit_WriteMemoryByte()!

BUGS
No known bugs.

SEE ALSO
MUIA_HexEdit_HighBound(), MUIM_HexEdit_ReadMemoryByte(),
MUIM_HexEdit_WriteMemoryByte()

1.19 HexEdit/MUIA_HexEdit_MoveCursor

NAME
MUIA_HexEdit_MoveCursor, LONG [.S.] -- ... (V14)

SPECIAL INPUTS
MUIV_HexEdit_MoveCursor_Up
MUIV_HexEdit_MoveCursor_Down
MUIV_HexEdit_MoveCursor_Left
MUIV_HexEdit_MoveCursor_Right
MUIV_HexEdit_MoveCursor_PageUp
MUIV_HexEdit_MoveCursor_PageDown
MUIV_HexEdit_MoveCursor_Top
MUIV_HexEdit_MoveCursor_Bottom
MUIV_HexEdit_MoveCursor_WordLeft
MUIV_HexEdit_MoveCursor_WordRight
MUIV_HexEdit_MoveCursor_LineStart
MUIV_HexEdit_MoveCursor_LineEnd

FUNCTION
With MUIA_HexEdit_MoveCursor you can control cursor movements exactly as if you were using the keyboard. Of course, they do not make much sense if the cursor is actually turned off.

NOTES
Only values listed above are allowed as input.

BUGS

No known bugs.

SEE ALSO
MUIA_HexEdit_CursorVisible()

1.20 HexEdit/MUIA_HexEdit_NibbleValue

NAME
MUIA_HexEdit_NibbleValue, LONG [.SG] -- ... (V14)

FUNCTION
This attribute lets you read and modify the value of nibble under the cursor. The value is always passed in a lower four bits.

NOTES

BUGS
No known bugs.

SEE ALSO
MUIA_HexEdit_ByteValue()

1.21 HexEdit/MUIA_HexEdit_PropObject

NAME
MUIA_HexEdit_PropObject, LONG [.SG] -- ... (V14)

FUNCTION
With MUIA_HexEdit_PropObject you can easily connect proportional gadget with the HexEdit object. Simply pass a pointer to prop object as the value of this attribute and you're done. HexEdit will handle all house-keeping for you. How convenient! ;)

NOTES

BUGS
No known bugs.

SEE ALSO

1.22 HexEdit/MUIA_HexEdit_SelectMode

NAME
MUIA_HexEdit_SelectMode, LONG [I.G] -- ... (V14)

SPECIAL INPUTS
MUIV_HexEdit_SelectMode_Nibble
MUIV_HexEdit_SelectMode_Byte

FUNCTION

This attribute defines if the cursor moving over hexadecimal data should span entire bytes or just single nibbles.

NOTES

BUGS

No known bugs.

SEE ALSO

1.23 HexEdit/MUIA_HexEdit_VisibleLines

NAME

MUIA_HexEdit_VisibleLines, LONG [..G] -- ... (V14)

FUNCTION

With this attribute you can learn how many text lines are currently visible in the HexEdit object. It may be useful for notifications.

BUGS

No known bugs.

SEE ALSO

1.24 HexEdit/MUIM_HexEdit_CreateDisplayAddress

NAME

MUIM_HexEdit_CreateDisplayAddress (V14)

SYNOPSIS

```
DoMethod(obj, MUIM_HexEdit_CreateDisplayAddress, UBYTE **cp, ULONG address);
```

FUNCTION

HexEdit class calls this method to generate ASCII representation of current address. If you want to create some fancy-looking addresses, you can overload this method in your subclass.

NOTES

If you're overloading this method, you HAVE TO set MUIA_HexEdit_AddressChars() to length of the largest output of your address creator, so that HexEdit knows how much space allocate for it.

EXAMPLE

This is HexEdit's implementation of MUIM_HexEdit_CreateDisplayAddress method:

```
ULONG __asm _CreateDisplayAddress(REG(A0) struct IClass *cl, REG(A2) Object *obj ←  
    , REG(A1) struct MUIM_HexEdit_CreateDisplayAddress *msg)  
{  
    struct Data *d = INST_DATA(cl,obj);
```

```

ULONG address;
UBYTE i;
UBYTE *hextable = "0123456789ABCDEF";

address = (d->base_address + msg->address) << (HE_MAX_ADDRESS_LEN - d-> ←
address_chars * 4);

for(i = 0; i < d->address_chars; i++)
{
    *(*msg->cp)++ = hextable[address >> (HE_MAX_ADDRESS_LEN - 4)];
    address <<= 4;
}

return(TRUE);
}

BUGS
No known bugs.

SEE ALSO
MUIA_HexEdit_AddressChars()

```

1.25 HexEdit/MUIM_HexEdit_FilterChar

```

NAME
MUIM_HexEdit_FilterChar (V14)

SYNOPSIS
DoMethod(obj, MUIM_HexEdit_FilterChar, ULONG value, UBYTE *buffer);

FUNCTION
HexEdit class calls this method to generate ASCII representation
of character it is currently processing. You can overload it to
e.g. show only characters you want and replace others with dots.

EXAMPLE
This is example implementation of MUIM_HexEdit_FilterChar:

ULONG __asm _FilterChar(REG(A0) struct IClass *cl, REG(A2) Object *obj, REG(A1) ←
struct MUIP_HexEdit_FilterChar *msg)
{
    if(isascii(msg->value))
        *msg->buffer = msg->value;
    else
        *msg->buffer = '.';

    return(TRUE);
}

NOTES

BUGS
No known bugs.

```

SEE ALSO

1.26 HexEdit/MUIM_HexEdit_ReadMemoryByte

NAME

MUIM_HexEdit_ReadMemoryByte (V14)

SYNOPSIS

DoMethod(obj, MUIM_HexEdit_ReadMemoryByte, UBYTE *value, ULONG address);

FUNCTION

HexEdit class calls this method to read a byte from memory. You can overload it in your subclass, so that operation on areas which are not present in Amiga's memory space is possible.

NOTES

Address, as usual, is specified as byte offset from MUIM_HexEdit_LowBound()

EXAMPLE

This is HexEdit's implementation of MUIM_HexEdit_ReadMemoryByte method:

```
ULONG __asm _ReadMemoryByte(REG(A0) struct IClass *cl, REG(A2) Object *obj, REG(←
    A1) struct MUIM_HexEdit_ReadMemoryByte *msg)
{
    struct Data *d = INST_DATA(cl, obj);

    *msg->value = *(UBYTE *) (d->bound_low + msg->address);

    return(TRUE);
}
```

BUGS

No known bugs.

SEE ALSO

MUIM_HexEdit_WriteMemoryByte()

1.27 HexEdit/MUIM_HexEdit_Redraw

NAME

MUIM_HexEdit_Redraw (V14)

SYNOPSIS

DoMethod(obj, MUIM_HexEdit_Redraw);

FUNCTION

Redraws the entire object's contents.

NOTES

BUGS
No known bugs.

SEE ALSO

1.28 HexEdit/MUIM_HexEdit_WriteMemoryByte

NAME
MUIM_HexEdit_WriteMemoryByte (V14)

SYNOPSIS
DoMethod(obj, MUIM_HexEdit_ReadMemoryByte, ULONG value, ULONG address);

FUNCTION
HexEdit class calls this method to write a byte to memory. You can overload it in your subclass, so that operation on areas which are not present in Amiga's memory space is possible.

NOTES
Address, as usual, is specified as byte offset from MUIM_HexEdit_LowBound()

EXAMPLE
This is HexEdit's implementation of MUIM_HexEdit_WriteMemoryByte method:

```
ULONG __asm _WriteMemoryByte(REG(A0) struct IClass *cl, REG(A2) Object *obj, REG ←  
    (A1) struct MUIM_HexEdit_WriteMemoryByte *msg)  
{  
    struct Data *d = INST_DATA(cl,obj);  
  
    *(UBYTE *) (d->bound_low + msg->address) = msg->value;  
  
    return(TRUE);  
}
```

BUGS
No known bugs.

SEE ALSO
MUIM_HexEdit_ReadMemoryByte()