

**in**

<b>COLLABORATORS</b>
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	TITLE :  in		
ACTION	NAME	DATE	SIGNATURE
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<b>REVISION HISTORY</b>
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NUMBER	DATE	DESCRIPTION	NAME

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# Chapter 1

## in

### 1.1 ModuleInformation

```
ShowModule v1.10 (c) 1992 $#%!
now showing: "intuition/intuition.m"
NOTE: don't use this output in your code, use the module instead.
```

```
(----) OBJECT tablethookdata
(  0)   screen:PTR TO screen
(  4)   width:LONG
(  8)   height:LONG
( 12)   screenchanged:LONG
(----) ENDOBJECT      /* SIZEOF=16 */

(----) OBJECT tabletdata
(  0)   xfraction:INT
(  2)   yfraction:INT
(  4)   tabletX:LONG
(  8)   tabletY:LONG
( 12)   rangex:LONG
( 16)   rangey:LONG
( 20)   taglist:PTR TO tagitem
(----) ENDOBJECT      /* SIZEOF=24 */

(----) OBJECT easystruct
(  0)   structsize:LONG
(  4)   flags:LONG
(  8)   title:PTR TO CHAR
( 12)   textformat:PTR TO CHAR
( 16)   gadgetformat:PTR TO CHAR
(----) ENDOBJECT      /* SIZEOF=20 */

(----) OBJECT colorspec
(  0)   colorindex:INT
(  2)   red:INT
(  4)   green:INT
(  6)   blue:INT
(----) ENDOBJECT      /* SIZEOF=8 */

(----) OBJECT remember
(  0)   nextremember:PTR TO remember
```

```
( 4)    remembersize:LONG
( 8)    memory:PTR TO CHAR
(----) ENDOBJECT      /* SIZEOF=12 */

(----) OBJECT extnewwindow
( 0)    leftedge:INT
( 2)    topedge:INT
( 4)    width:INT
( 6)    height:INT
( 8)    detailpen:CHAR
( 9)    blockpen:CHAR
(10)    idcmpflags:LONG
(14)    flags:LONG
(18)    firstgadget:PTR TO gadget
(22)    checkmark:PTR TO image
(26)    title:PTR TO CHAR
(30)    screen:PTR TO screen
(34)    bitmap:PTR TO bitmap
(38)    minwidth:INT
(40)    minheight:INT
(42)    maxwidth:INT
(44)    maxheight:INT
(46)    type:INT
(48)    extension:PTR TO tagitem
(----) ENDOBJECT      /* SIZEOF=52 */

(----) OBJECT nw
( 0)    leftedge:INT
( 2)    topedge:INT
( 4)    width:INT
( 6)    height:INT
( 8)    detailpen:CHAR
( 9)    blockpen:CHAR
(10)    idcmpflags:LONG
(14)    flags:LONG
(18)    firstgadget:PTR TO gadget
(22)    checkmark:PTR TO image
(26)    title:PTR TO CHAR
(30)    screen:PTR TO screen
(34)    bitmap:PTR TO bitmap
(38)    minwidth:INT
(40)    minheight:INT
(42)    maxwidth:INT
(44)    maxheight:INT
(46)    type:INT
(----) ENDOBJECT      /* SIZEOF=48 */

(----) OBJECT window
( 0)    nextwindow:PTR TO window
( 4)    leftedge:INT
( 6)    topedge:INT
( 8)    width:INT
(10)    height:INT
(12)    mousey:INT
(14)    mousex:INT
(16)    minwidth:INT
(18)    minheight:INT
```

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```
( 20)    maxwidth:INT
( 22)    maxheight:INT
( 24)    flags:LONG
( 28)    menustrip:PTR TO menu
( 32)    title:PTR TO CHAR
( 36)    firstrequest:PTR TO requester
( 40)    dmrequest:PTR TO requester
( 44)    reqcount:INT
( 46)    wscreen:PTR TO screen
( 50)    rport:PTR TO rastport
( 54)    borderleft:CHAR
( 55)    bordertop:CHAR
( 56)    borderright:CHAR
( 57)    borderbottom:CHAR
( 58)    borderrport:PTR TO rastport
( 62)    firstgadget:PTR TO gadget
( 66)    parent:PTR TO window
( 70)    descendant:PTR TO window
( 74)    pointer:PTR TO INT
( 78)    ptrheight:CHAR
( 79)    ptrwidth:CHAR
( 80)    xoffset:CHAR
( 81)    yoffset:CHAR
( 82)    idcmpflags:LONG
( 86)    userport:PTR TO mp
( 90)    windowport:PTR TO mp
( 94)    messagekey:PTR TO intuimessage
( 98)    detailpen:CHAR
( 99)    blockpen:CHAR
(100)    checkmark:PTR TO image
(104)    screentitle:PTR TO CHAR
(108)    gzzmousex:INT
(110)    gzzmousey:INT
(112)    gzzwidth:INT
(114)    gzzheight:INT
(116)    extdata:PTR TO CHAR
(120)    userdata:PTR TO CHAR
(124)    wlayer:PTR TO layer
(128)    ifont:PTR TO textfont
(132)    moreflags:LONG
(----) ENDOBJECT      /* SIZEOF=136 */

(----) OBJECT ibox
(  0)    left:INT
(  2)    top:INT
(  4)    width:INT
(  6)    height:INT
(----) ENDOBJECT      /* SIZEOF=8 */

(----) OBJECT extintuimessage
(  0)    intuimessage:intuimessage (or ARRAY OF intuimessage)
( 52)    tabletdata:PTR TO tabletdata
(----) ENDOBJECT      /* SIZEOF=56 */

(----) OBJECT intuimessage
(  0)    execmessage:mn (or ARRAY OF mn)
( 20)    class:LONG
```

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```
( 24)  code:INT
( 26)  qualifier:INT
( 28)  iaddress:LONG
( 32)  mousex:INT
( 34)  mousey:INT
( 36)  seconds:LONG
( 40)  micros:LONG
( 44)  idcmpwindow:PTR TO window
( 48)  speciallink:PTR TO intuimessage
(----) ENDOBJECT      /* SIZEOF=52 */
```

```
(----) OBJECT image
(  0)  leftedge:INT
(  2)  topedge:INT
(  4)  width:INT
(  6)  height:INT
(  8)  depth:INT
( 10)  imagedata:PTR TO INT
( 14)  planepick:CHAR
( 15)  planeonoff:CHAR
( 16)  nextimage:PTR TO image
(----) ENDOBJECT      /* SIZEOF=20 */
```

```
(----) OBJECT border
(  0)  leftedge:INT
(  2)  topedge:INT
(  4)  frontpen:CHAR
(  5)  backpen:CHAR
(  6)  drawmode:CHAR
(  7)  count:CHAR
(  8)  xy:PTR TO INT
( 12)  nextborder:PTR TO border
(----) ENDOBJECT      /* SIZEOF=16 */
```

```
(----) OBJECT intuitext
(  0)  frontpen:CHAR
(  1)  backpen:CHAR
(  2)  drawmode:CHAR
(  4)  leftedge:INT
(  6)  topedge:INT
(  8)  itextfont:PTR TO textattr
( 12)  itext:PTR TO CHAR
( 16)  nexttext:PTR TO intuitext
(----) ENDOBJECT      /* SIZEOF=20 */
```

```
(----) OBJECT stringinfo
(  0)  buffer:PTR TO CHAR
(  4)  undobuffer:PTR TO CHAR
(  8)  bufferpos:INT
( 10)  maxchars:INT
( 12)  disppos:INT
( 14)  undopos:INT
( 16)  numchars:INT
( 18)  dispcount:INT
( 20)  cleft:INT
( 22)  ctop:INT
( 24)  extension:PTR TO stringextend
```

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```
( 28)   longint:LONG
( 32)   altkeymap:PTR TO keymap
(----) ENDOBJECT      /* SIZEOF=36 */

(----) OBJECT propinfo
(  0)   flags:INT
(  2)   horizpot:INT
(  4)   vertpot:INT
(  6)   horizbody:INT
(  8)   vertbody:INT
( 10)   cwidth:INT
( 12)   cheight:INT
( 14)   hpotres:INT
( 16)   vpotres:INT
( 18)   leftborder:INT
( 20)   topborder:INT
(----) ENDOBJECT      /* SIZEOF=22 */

(----) OBJECT boolinfo
(  0)   flags:INT
(  2)   mask:PTR TO INT
(  6)   reserved:LONG
(----) ENDOBJECT      /* SIZEOF=10 */

(----) OBJECT extgadget
(  0)   nextgadget:PTR TO extgadget
(  4)   leftedge:INT
(  6)   topedge:INT
(  8)   width:INT
( 10)   height:INT
( 12)   flags:INT
( 14)   activation:INT
( 16)   gadgettype:INT
( 18)   gadgetrender:LONG
( 22)   selectrender:LONG
( 26)   gadgettext:PTR TO intuitext
( 30)   mutualexclude:LONG
( 34)   specialinfo:LONG
( 38)   gadgetid:INT
( 40)   userdata:LONG
( 44)   moreflags:LONG
( 48)   boundsleftedge:INT
( 50)   boundstopege:INT
( 52)   boundswidth:INT
( 54)   boundsheight:INT
(----) ENDOBJECT      /* SIZEOF=56 */

(----) OBJECT gadget
(  0)   nextgadget:PTR TO gadget
(  4)   leftedge:INT
(  6)   topedge:INT
(  8)   width:INT
( 10)   height:INT
( 12)   flags:INT
( 14)   activation:INT
( 16)   gadgettype:INT
( 18)   gadgetrender:LONG
```

---



```
( 22)    selectrender:LONG
( 26)    gadgettext:PTR TO intuitext
( 30)    mutualexclude:LONG
( 34)    specialinfo:LONG
( 38)    gadgetid:INT
( 40)    userdata:LONG
(----) ENDOBJECT      /* SIZEOF=44 */

(----) OBJECT requester
(  0)    olderrequest:PTR TO requester
(  4)    leftedge:INT
(  6)    topedge:INT
(  8)    width:INT
( 10)    height:INT
( 12)    relleft:INT
( 14)    reltop:INT
( 16)    reggadget:PTR TO gadget
( 20)    reqborder:PTR TO border
( 24)    reqtext:PTR TO intuitext
( 28)    flags:INT
( 30)    backfill:CHAR
( 32)    reqlayer:PTR TO layer
( 36)    reqpad1[32]:ARRAY OF CHAR
( 68)    imagebmap:PTR TO bitmap
( 72)    rwindow:PTR TO window
( 76)    reqimage:PTR TO image
( 80)    reqpad2[32]:ARRAY OF CHAR
(----) ENDOBJECT      /* SIZEOF=112 */

(----) OBJECT menuitem
(  0)    nextitem:PTR TO menuitem
(  4)    leftedge:INT
(  6)    topedge:INT
(  8)    width:INT
( 10)    height:INT
( 12)    flags:INT
( 14)    mutualexclude:LONG
( 18)    itemfill:LONG
( 22)    selectfill:LONG
( 26)    command:CHAR
( 28)    subitem:PTR TO menuitem
( 32)    nextselect:INT
(----) ENDOBJECT      /* SIZEOF=34 */

(----) OBJECT menu
(  0)    nextmenu:PTR TO menu
(  4)    leftedge:INT
(  6)    topedge:INT
(  8)    width:INT
( 10)    height:INT
( 12)    flags:INT
( 14)    menuname:PTR TO CHAR
( 18)    firstitem:PTR TO menuitem
( 22)    jazzx:INT
( 24)    jazzy:INT
( 26)    beatx:INT
( 28)    beaty:INT
```

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```
(----) ENDOBJECT      /* SIZEOF=30 */

CONST IDCMP_MENUPICK=$100,
      AUTOITEXTFONT=0,
      WA_DETAILPEN=$80000068,
      ALERT_TYPE=$80000000,
      GTYP_GADGETTYPE=$FC00,
      GACT_ALTKEYMAP=$1000,
      WA_ACTIVATE=$80000089,
      WFLG_ACTIVATE=$1000,
      FREEHORIZ=2,
      NOSUB=31,
      IDCMP_DELTAMOVE=$100000,
      IDCMP_MOUSEMOVE=16,
      CURSORDOWN=$4D,
      MIDDLEDOWN=$6A,
      MENUDOWN=$69,
      SELECTDOWN=$68,
      IDCMP_GADGETDOWN=$20,
      OKCANCEL=2,
      MENUCANCEL=2,
      WA_AMIGAKEY=$80000094,
      IDCMP_VANILLAKEY=$200000,
      WFLG_WINDOWACTIVE=$2000,
      REQACTIVE=$2000,
      COMMSEQ=4,
      WA_HELPGROUP=$8000009B,
      GFLG_RELSPECIAL=$4000,
      KNOBHIT=$100,
      GTYP_GADGET0002=2,
      TABLETA_DUMMY=$8003A000,
      TABLETA_INPROXIMITY=$8003A008,
      WA_NEWLOOKMENUS=$80000093,
      WA_PUBSCREENFALLBACK=$8000007A,
      WFLG_NEWLOOKMENUS=$200000,
      IDCMP_MENUVERIFY=$2000,
      IDCMP_REQVERIFY=$800,
      IDCMP_SIZEVERIFY=1,
      GTYP_SDOWNBACK=$70,
      GTYP_WDOWNBACK=$60,
      GACT_RELVERIFY=1,
      MENUUP=$E9,
      WA_PUBSCREEN=$80000079,
      WA_CUSTOMSCREEN=$80000070,
      WFLG_ZOOMED=$10000000,
      TABLETA_BUTTONBITS=$8003A007,
      WFLG_REFRESHBITS=$C0,
      GFLG_GADGHIGHBITS=3,
      SIMPLEREQ=16,
      CHECKIT=1,
      WA_SMARTREFRESH=$8000008D,
      WA_SIMPLEREFRESH=$8000008C,
      WA_NOCAREREFRESH=$80000087,
      WFLG_WINDOWREFRESH=$1000000,
      WFLG_NOCAREREFRESH=$20000,
      WFLG_OTHER_REFRESH=$C0,
      WFLG_SIMPLE_REFRESH=$40,
```

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```
WFLG_SMART_REFRESH=0,
GFLG_DISABLED=$100,
DEFERREFRESH=$8000,
ITEMENABLED=16,
MENUENABLED=1,
WA_TABLETMESSAGES=$8000009A,
IDCMP_MOUSEBUTTONS=8,
WA_CHECKMARK=$8000006D,
WA_POINTERDELAY=$80000099,
WFLG_MENUSTATE=$8000,
IDCMP_IDCMPUPDATE=$800000,
MENUNULL=$FFFF,
KNOBHMIN=6,
NOITEM=$3F,
HIGHITEM=$2000,
WFLG_NW_EXTENDED=$40000,
GFLG_EXTENDED=$8000,
MENUTOGGLED=$4000,
IDCMP_NEWPREFS=$4000,
WBENCHOPEN=1,
MENUWAITING=3,
TABLETA_RESOLUTIONX=$8003A009,
TABLETA_RESOLUTIONY=$8003A00A,
GACT_IMMEDIATE=2,
AUTOTOPEDGE=3,
AUTOLEFTEdge=6,
IG_LEFTEdge=0,
BOOLMASK=1,
GTYT_SYSTYPEMASK=$F0,
GTYT_GTYPEMASK=7,
GFLG_LABELMASK=$3000,
GD_LEFTEdge=4,
WA_DRAGBAR=$80000082,
WFLG_DRAGBAR=2,
WA_BACKDROP=$80000085,
WFLG_BACKDROP=$100,
IDCMP_DISKINSERTED=$8000,
AUTOFRONTPEN=0,
SUPER_UNUSED=$FCFC0000,
GTYT_SUNUSED=$70,
TABLETA_ANGLEX=$8003A003,
TABLETA_ANGLEY=$8003A004,
WA_REPORTMOUSE=$80000086,
WFLG_REPORTMOUSE=$200,
GACT_FOLLOWMOUSE=8,
GFLG_LABELIMAGE=$2000,
GFLG_GADGIMAGE=4,
GFLG_GADGHIMAGE=2,
USEREQIMAGE=$20,
HIGHIMAGE=0,
TABLETA_ANGLEZ=$8003A005,
GTYT_SUPFRONT=$50,
GTYT_WUPFRONT=$40,
WA_GADGETS=$8000006C,
GFLG_IMAGEDISABLE=$800,
IDCMP_REQCLEAR=$1000,
GACT_BORDERSNIFF=$8000,
```

```
KNOBVMIN=4,
GACT_STRINGEXTEND=$2000,
GACT_BOOLEXTEND=$2000,
GFLG_STRINGEXTEND=$400,
AMIGAKEYS=$C0,
WA_COLORS=$8000007C,
WBENCHCLOSE=2,
GTYP_CLOSE=$80,
WA_CLOSEGADGET=$80000084,
WA_DEPTHGADGET=$80000083,
WA_SIZEGADGET=$80000081,
WFLG_CLOSEGADGET=8,
WFLG_DEPTHGADGET=4,
WFLG_SIZEGADGET=1,
GTYP_CUSTOMGADGET=5,
GTYP_STRGADGET=4,
GTYP_PROPGADGET=3,
GTYP_BOOLGADGET=1,
GTYP_REQGADGET=$1000,
GTYP_GZZGADGET=$2000,
GTYP_SCRGADGET=$4000,
GTYP_SYSGADGET=$8000,
GACT_ACTIVEGADGET=$4000,
GACT_ENDGADGET=4,
WA_GIMMEZEROZERO=$80000091,
WFLG_GIMMEZEROZERO=$400,
GFLG_LABELSTRING=$1000,
AUTONEXTTEXT=0,
GFLG_LABELITEXT=0,
ITEMTEXT=2,
WA_RMBTRAP=$8000008A,
WFLG_RMBTRAP=$10000,
WFLG_INREQUEST=$4000,
SYSREQUEST=$4000,
IDCMP_DISKREMOVED=$10000,
GTYP_SDRAGGING=$30,
GTYP_WDRAGGING=$20,
WA_SCREENITLE=$8000006F,
WA_TITLE=$8000006E,
IDCMP_RAWKEY=$400,
MAXPOT=$FFFF,
GACT_TOGGLESELECT=$100,
WA_RPTQUEUE=$80000080,
WA_MOUSEQUEUE=$8000007E,
DEFAULTMOUSEQUEUE=5,
GACT_LONGINT=$800,
GFLG_GADGHBOX=1,
HIGHBOX=$80,
NOMENU=31,
MENUHOT=1,
AUTOBACKPEN=1,
WA_BLOCKPEN=$80000069,
GFLG_GADGHNONE=3,
HIGHNONE=$C0,
PREDRAWN=2,
ISDRAWN=$1000,
MIDRAWN=$100,
```

---

```
WA_TOP=$80000065,  
KEYCODE_B=$35,  
GFLG_GADGHCOMP=0,  
HIGHCOMP=$40,  
AUTODRAWMODE=1,  
DEADEND_ALERT=$80000000,  
RECOVERY_ALERT=0,  
WA_ZOOM=$8000007D,  
WFLG_HASZOOM=$20000000,  
GTYW_ZOOM=$60,  
WA_SIZEBOTTOM=$8000008F,  
WFLG_SIZEBOTTOM=$20,  
GFLG_SELECTED=$80,  
GFLG_RELBOTTOM=8,  
CURSORRIGHT=$4E,  
AMIGARIGHT=$80,  
ALRIGHT=$20,  
WA_BUSYPOINTER=$80000098,  
WA_POINTER=$80000097,  
WA_SIZEBRIGHT=$8000008E,  
WA_INNERHEIGHT=$80000077,  
WA_MAXHEIGHT=$80000075,  
WA_MINHEIGHT=$80000073,  
WA_HEIGHT=$80000067,  
WFLG_SIZEBRIGHT=16,  
GACT_STRINGRIGHT=$400,  
GACT_STRINGCENTER=$200,  
GFLG_RELHEIGHT=$40,  
GFLG_RELRIGHT=16,  
OKOK=1,  
KEYCODE_M=$37,  
KEYCODE_N=$36,  
GTYW_SIZING=16,  
POINTREL=1,  
KEYCODE_Q=16,  
IDCMP_REQSET=$80,  
KEYCODE_LESS=$38,  
WA_BORDERLESS=$80000088,  
WFLG_BORDERLESS=$800,  
PROPBORDERLESS=8,  
KEYCODE_V=$34,  
WA_OBSOLETE=$80000096,  
KEYCODE_X=$32,  
CURSORLEFT=$4F,  
AMIGALEFT=$40,  
ALTLEFT=16,  
WA_LEFT=$80000064,  
GMORE_SCROLLRASTER=4,  
GACT_STRINGLEFT=0,  
KEYCODE_Z=$31,  
WFLG_WINDOWTICKED=$4000000,  
CHECKED=$100,  
WFLG_VISITOR=$80000000,  
IDCMP_GADGETUP=$40,  
FREEVERT=4,  
IDCMP_LONELYMESSAGE=$80000000,  
IDCMP_WBENCHMESSAGE=$20000,
```

```
NOISYREQ=4,
WA_NOTIFYDEPTH=$80000095,
CWCODE_DEPTH=1,
GMORE_BOUNDS=1,
GTYT_SDEPTH=$50,
GTYT_WDEPTH=$40,
MAXBODY=$FFFF,
AUTOKNOB=1,
TABLETA_TABLETZ=$8003A001,
WA_HELPGROUPWINDOW=$8000009C,
WA_WBENCHWINDOW=$8000008B,
WFLG_WBENCHWINDOW=$2000000,
IDCMP_CHANGEWINDOW=$2000000,
IDCMP_INTUITICKS=$400000,
IDCMP_INACTIVIEWINDOW=$80000,
IDCMP_ACTIVIEWINDOW=$40000,
IDCMP_CLOSEWINDOW=$200,
IDCMP_REFRESHWINDOW=4,
REQOFFWINDOW=$1000,
OKABORT=4,
GFLG_TABCYCLE=$200,
MIDDLEUP=$EA,
CURSORUP=$4C,
MENUTOGGLE=8,
TABLETA_PRESSURE=$8003A006,
PROPNEWLOOK=16,
LOWCOMMWIDTH=16,
LOWCHECKWIDTH=13,
COMMWIDTH=27,
CHECKWIDTH=19,
WA_INNERWIDTH=$80000076,
WA_MAXWIDTH=$80000074,
WA_MINWIDTH=$80000072,
WA_WIDTH=$80000066,
GFLG_RELWIDTH=$20,
HC_GADGETHELP=1,
WA_MENUHELP=$80000092,
WA_AUTOADJUST=$80000090,
WA_IDCMP=$8000006A,
IDCMP_GADGETHELP=$4000000,
IDCMP_MENUHELP=$1000000,
GMORE_GADGETHELP=2,
KEYCODE_GREATER=$39,
GACT_BOTTOMBORDER=$80,
GACT_TOPBORDER=$40,
GACT_LEFTBORDER=$20,
GACT_RIGHTBORDER=16,
WA_BACKFILL=$8000007F,
NOREQBACKFILL=$40,
CWCODE_MOVESIZE=0,
IDCMP_NEWSIZE=2,
WA_SUPERBITMAP=$80000071,
WFLG_SUPER_BITMAP=$80,
TABLETA_RANGEZ=$8003A002,
SELECTUP=$E8,
WA_WINDOWNAME=$8000007B,
WA_PUBSCREENNAME=$80000078,
```

```
WA_FLAGS=$8000006B,  
HIGHFLAGS=$C0
```

```
#define FULLMENUNUM/3  
#define MENUNUM/1  
#define SHIFTSUB/1  
#define SHIFITEM/1  
#define SHAKNUM/1  
#define SHIFTMENU/1  
#define ITEMNUM/1  
#define SPARNUM/1  
#define SSBNUM/1  
#define SWBNUM/1  
#define SRBNUM/1  
#define SUBNUM/1
```