

Testfile

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Testfile

# **Contents**

Testnie		1
1.1	Table Of Contents	1
1.2	popupmenu.library/background	2
1.3	popupmenu.library/hooks	2
1.4	popupmenu.library/PM_AbortHook	3
1.5	popupmenu.library/PM_AlterState	4
1.6	popupmenu.library/PM_ExLstA	4
1.7	popupmenu.library/PM_FilterIMsgA	5
1.8	popupmenu.library/PM_FindItem	6
1.9	popupmenu.library/PM_FreePopupMenu	6
1.10	popupmenu.library/PM_GetItemAttrsA	7
1.11	popupmenu.library/PM_GetVersion	7
1.12	popupmenu.library/PM_InsertMenuItemA	8
1.13	popupmenu.library/PM_ItemChecked	9
1.14	popupmenu.library/PM_LayoutMenuA	9
1.15	popupmenu.library/PM_MakeIDListA	10
1.16	popupmenu.library/PM_MakeItemA	11
1.17	popupmenu.library/PM_MakeMenuA	14
1.18	popupmenu.library/PM_OpenPopupMenuA	14
1.19	popupmenu.library/PM_ReloadPrefs	16
1.20	popupmenu.library/PM_RemoveMenuItem	16
1.21	popupmenu.library/PM SetItemAttrsA	17

Testfile 1 / 18

# **Chapter 1**

# **Testfile**

#### 1.1 Table Of Contents

TABLE OF CONTENTS

--background--

--hooks--

PM\_AbortHook

PM\_AlterState

PM\_ExLstA

PM\_FilterIMsgA

PM\_FindItem

PM\_FreePopupMenu

PM\_GetItemAttrsA

PM\_GetVersion

PM\_InsertMenuItemA

PM\_ItemChecked

PM\_LayoutMenuA

PM\_MakeIDListA

PM\_MakeItemA

PM\_MakeMenuA

PM\_OpenPopupMenuA

Testfile 2 / 18

```
PM_ReloadPrefs

PM_RemoveMenuItem

PM SetItemAttrsA
```

### 1.2 popupmenu.library/--background--

PURPOSE

The popupmenu.library provides developers with an easy way of adding user configurable popup and pulldown menus to their applications.

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### 1.3 popupmenu.library/--hooks--

```
CALLBACK HOOKS
```

Callback hooks are used by popupmenu.library for several purposes, including handling of localized strings, handling of user input (ie. menu selection) and building dynamic menus. All of theese hooks have some things in common, and they will be described here.

For general information about callbacks hooks, see the utility.library documentation and utility/hooks.h.

When a callback hook function is called by popupmenu.library, the register contents are as follows:

- o a pointer to the functions hook structure is in AO.
- o a pointer to the affected object is put in A2. This is usually a struct PopupMenu pointer. Some future functions may use other objects.
- o a pointer to an array of arguments is passed in Al. Theese are specific to each hook.

#### EXAMPLE

Testfile 3 / 18

## 1.4 popupmenu.library/PM\_AbortHook

```
NAME
    PM_AbortHook -- Find out if user wants to abort menu operation. (V9)
SYNOPSIS
    abort = PM_AbortHook(handle);
    BOOL PM_AbortHook (APTR);
FUNCTION
     This function is used to find out if the user has moved the mouse
    pointer outside of the region which opens the menu. It should be
    called periodically (as often as possible).
    PM_AbortHook() may redraw the menu when it is called, if the delay
    since last call has passed a certain treshold (default is 80 ms).
INPUTS
    handle - pointer to private data passed to the hook function through
              a pointer in A1.
RESULT
    Returns TRUE if you should stop doing whatever you are doing, and
     If FALSE is returned, just keep on like nothing happened.
EXAMPLE
     struct PopupMenu * __saveds __asm SubConstructFunc(
             register __a0 struct Hook *hook,
```

Testfile 4 / 18

```
register __a2 struct PopupMenu *selected,
    register __a1 APTR *handle)
{
    BOOL abort=FALSE;

    do {
        /* Do something to the menu */
        abort = PM_AbortHook(*handle); /* Abort? */
    } while(!abort);
}
SEE ALSO
    PM_MakeItemA(), libraries/pm.h>
```

## 1.5 popupmenu.library/PM\_AlterState

```
NAME
    PM_AlterState -- Simulate a (de-)selection of a checked item. (V5)
SYNOPSIS
    PM_AlterState(base, ids, action);
                   Α1
                        A2
                              D1
    void PM_AlterState(struct PopupMenu *pm, struct PM_IDLst *ids,
                     UWORD action);
FUNCTION
    This function will change the state of checkable/mx items in the
    list 'ids', depending on their kind (exclude/include/reflect/inverse)
    and the value of 'action'.
INPUTS
           - pointer to a PopupMenu structure.
    base
           - linked PM_IDLst list.
     action - either PMACT_DESELECT (2) or PMACT_SELECT (3).
```

# 1.6 popupmenu.library/PM\_ExLstA

Testfile 5 / 18

```
struct PM IDLst *PM ExLst(ULONG id1, ...);
   FUNCTION
       This function is used to build lists of ID numbers, that are needed
        for the PM Exclude tag.
       The array of ID's is ended by NULL.
   INPUTS
        id - array of ID numbers
   RESULT
        Returns a list of ID's, or NULL if it ran out of memory.
        You don't really need to care about what it returns, just pass it
       on to PM_MakeItemA().
   SEE ALSO
       PM_MakeIDListA(), PM_MakeItemA(), libraries/pm.h>
1.7 popupmenu.library/PM FilterlMsgA
   NAME
       PM_FilterIMsgA -- Handle keyboard shortcuts. (V6)
   SYNOPSIS
        userdata = PM_FilterIMsgA(window, menu, imsg, tags);
                                 Α1
                                         Α2
                                              A3
       userdata = PM_FilterIMsq(window, menu, imsq, tags, ...);
       APTR PM_FilterIMsgA(struct Window *, struct PopupMenu *,
                struct IntuiMessage *, struct TagItem *);
       APTR PM_FilterIMsg(struct Window *, struct PopupMenu *,
                struct IntuiMessage *, ULONG, ...);
   FUNCTION
        This function handles keyboard shortcuts.
        It compares 'imsg' against IDCMP_VANILLAKEY, if one is found, that
        item's UserData is returned, or the MenuHandler hook is called.
        Remember to set IDCMP_VANILLAKEY for the window(s) you use for user
        input.
   INPUTS
       window = pointer to the parent window.
       menu = pointer to a popup menu.
             = IntuiMessage to be filtered.
        imsg
   TAGS
       Accepts the same tags as PM_OpenPopupMenuA, in addition to those
       listed below:
       PM_AutoPullDown - (BOOL) Set this to TRUE if you want a pulldown
                          menu opened automatically, when the user presses
                          RMB.
                          You will have to use WFLG_RMBTRAP and
```

Testfile 6 / 18

```
RESULT
    The UserData of the item that was selected, or NULL.
    If MultiSelect is enabled, this result should not be used, since it would not be reliable when the user selects several items.
    (The user can ofcourse only select more than one item if the tag PM_AutoPullDown is used)

SEE ALSO
    PM_OpenPopupMenuA()
```

## 1.8 popupmenu.library/PM\_FindItem

## 1.9 popupmenu.library/PM\_FreePopupMenu

```
NAME

PM_FreePopupMenu -- Free a menu list created by PM_MakeMenuA()

PM_MakeMenuA}.

SYNOPSIS

PM_FreePopupMenu(popupmenu);

al

void PM_FreePopupMenu(struct PopupMenu *);

FUNCTION

This function is used to free the list of menu items created by PM_MakeItemA(), and PM_MakeMenuA().

INPUTS
```

Testfile 7 / 18

```
popupmenu - pointer to a popup menu to free.

SEE ALSO
    PM_MakeItemA(), PM_MakeMenuA()
```

## 1.10 popupmenu.library/PM\_GetItemAttrsA

```
NAME
     PM_GetItemAttrsA -- Get attribute values for an object. (V3)
SYNOPSIS
     result = PM_GetItemAttrsA(item, tags);
                               Α2
     ULONG PM_GetItemAttrsA(struct PopupMenu *, struct TagItem *);
     result = PM_GetItemAttrs(item, tag1, ...);
     ULONG PM_GetItemAttrs(struct PopupMenu *, ULONG, ...);
FUNCTION
    Used to get attributes from an item.
     item can be directly taken from PM_FindItem() as the input is
     checked against NULL pointers.
EXAMPLE
     struct PopupMenu *menu;
     struct Image *image;
     BOOL checked;
     /* Initialize the menu */
     PM_GetItemAttrsA(PM_FindItem(menu, itemid),
             PM_SelectImage, &image,
             PM_Checked,
                            &checked,
             TAG_DONE);
INPUTS
     item = pointer to a popup menu item.
     tags = array of TagItem structures with attribute/value pairs.
RESULT
     Returns the number of successfully copied attributes.
SEE ALSO
     PM_FindItem()
```

#### 1.11 popupmenu.library/PM\_GetVersion

Testfile 8 / 18

```
NAME
    PM_GetVersion -- Get the library version string (V9)

SYNOPSIS
    version = PM_GetVersion();
    D0

STRPTR PM_GetVersion(void);

FUNCTION
    This function is used by the preferences program to find out which settings that are supported by the library.

RESULT
    A version string containing version number & date.

EXAMPLE

puts(PM_GetVersion());

Outputs the string:
    "$VER: popupmenu.library 9.0 (01.05.00)"
```

#### 1.12 popupmenu.library/PM InsertMenuItemA

```
NAME
    PM_InsertMenuItemA -- Insert menu items in a menu after creation.
SYNOPSIS
     success = PM_InsertMenuItemA(menu, tags);
     success = PM_InsertMenuItem(menu, tag1, ...);
    LONG PM_InsertMenuItemA(struct PopupMenu *, struct TagItem *);
    LONG PM_InsertMenuItem(struct PopupMenu *, ULONG tag1, ...);
FUNCTION
     This function inserts one or more items in a menu, after it has
    been created with PM_MakeMenuA().
    menu - pointer to the menu that will recieve the new items.
    tags - see below.
RETURNS
     The function returns the number of successfully inserted items.
     (0 if none was inserted)
TAGS
    PM_Insert_Item
                        (struct PopupMenu *)
                        This tag inserts the item pointed to by ti_Data
                        at the position formerly given by one of the
```

Testfile 9 / 18

```
tags below. (see example)
     PM_InsertAfter
                        (struct PopupMenu *)
                        Insert the item(s) after this item.
     PM_InsertAfterID
                        (ULONG)
                        Insert the item(s) after an item with this ID.
     PM_InsertSub_First (struct PopupMenu *)
     PM_InsertSub_Last
                        (struct PopupMenu *)
                        Insert the item(s) at the top/bottom of the
                        submenu pointed to by ti_Data.
EXAMPLE
     PM_InsertMenuItem(mypopupmenu,
             PM_InsertAfterID,
             PM_Insert_Item,
                                 PM_MakeItem(
                                       PM_Title, "New item",
                                       TAG DONE),
             PM_InsertSub_First, a_submenu,
             PM_Insert_Item,
                                 another_new_item,
             TAG_DONE);
SEE ALSO
     PM_RemoveMenuItem(), PM_MakeMenuA(), libraries/pm.h>
```

## 1.13 popupmenu.library/PM\_ItemChecked

## 1.14 popupmenu.library/PM\_LayoutMenuA

Testfile 10 / 18

```
NAME
    PM_LayoutMenuA -- Prepare the menu for opening. (V9)
SYNOPSIS
     success = PM_LayoutMenuA(window, menu, tags);
                              Α0
                                      Α1
     success = PM_LayoutMenu(window, menu, tag1, ...);
    BOOL PM_LayoutMenuA(struct Window *, struct PopupMenu *,
                     struct TagItem *);
     BOOL PM_LayoutMenu(struct Window *, struct PopupMenu *, ULONG, ...);
FUNCTION
     Loads and remaps images and lays out the menu. Use with large menus
     that will only be used on one screen. This will speed up the menu
     significantly.
INPUTS
    window = window on the screen you want to open the menu on later. The
              window must remain open until the menu is freed.
              You must not attempt to open the menu on another screen than
              the one the window is on. It may work sometimes, but don't
              count on it.
            = pointer to a popup menu list (PM_MakeMenuA).
    menu
TAGS
    No tags have been defined yet.
RESULT
     TRUE (-1L) if successful, FALSE (0L) otherwise. Even if the function
     would fail, you can still safely call PM_OpenPopupMenu().
```

## 1.15 popupmenu.library/PM\_MakeIDListA

Testfile 11 / 18

```
INPUTS
     taglist - pointer to a taglist.
TAGS
                    (ULONG) ID of a item that should be unselected when
     PM ExcludeID
                    when this item is selected.
                    (ULONG) ID of a item that should be selected when
     PM_IncludeID
                    when this item is selected.
     PM_ReflectID
                    (ULONG) ID of a item that should copy the state
                    of this item, when it gets selected/unselected.
    PM_InverseID
                    (ULONG) ID of a item that should copy the inverse
                    state of this item, when it gets selected/
                    unselected.
                    Useful if you want to make sure only one of two
                    items is selected at a time.
RETURNS
    Returns a pointer to a list of id's if successful.
SEE ALSO
    PM MakeItemA(), PM ExLstA(), libraries/pm.h>
```

#### 1.16 popupmenu.library/PM\_MakeItemA

```
NAME
     PM_MakeItem -- Create a new menu item.
SYNOPSIS
     menu = PM_MakeItemA(taglist);
                      a1
     struct PopupMenu *PM_MakeItemA(struct TagItem *tags);
     menu = PM_MakeItem(tag1, ...);
     struct PopupMenu *PM_MakeItem(ULONG, ...);
FUNCTION
     This function is used to create a new menu item to be passed to
     PM_MakeMenuA(), for linking.
INPUTS
     taglist - pointer to a taglist listing your menu items.
TAGS
     PM_Title
                    (STRPTR) Pointer to the menu text you want.
     PM_UserData
                    (ULONG) Anything of your choice, can be used to
                    identify the item when it is selected. The value
                    stored here will be returned from PM_OpenPopupMenuA()
                    when the user selects this item.
```

Testfile 12 / 18

PM ID (ULONG) An ID number, only needed if you want to be able to read or change the attributes of this item later. (for example, to find out if an item is checked) PM\_Sub (struct PopupMenu \*) A pointer to a menu list returned from PM\_MakeMenuA(). The item will automatically get an arrow to the right showing that it has a sub menu. (ULONG) Used internally. Do not use this tag! PM\_Flags PM NoSelect (BOOL) Make the item unselectable. If this attribute is set to FALSE for items with submenus, they will become selectable. Note that this is not currently (V8) reversable. PM\_FillPen (BOOL) Draw the item title in FILLPEN. PM Checkit (BOOL) Leave some space for a checkmark. PM Checked (BOOL) Put a checkmark to the left of the item. (BOOL) Draw the text in italic. PM Italic PM\_Bold (BOOL) Make the text bold. PM\_Underlined (BOOL) Underline the text. PM\_WideTitleBar (BOOL) PM\_TitleBar (BOOL) Draw a horizontal separator instead of text. (BOOL) Draw the text in SHADOWPEN color. PM\_ShadowPen PM ShinePen (BOOL) Draw the text in SHINEPEN color. (struct PM\_IDLst \*) List of items to be selected PM Exclude or unselected when this item gets selected. The list should be created with PM\_MakeIDListA(). PM Disabled (BOOL) Makes the item unselectable, and draws a disable pattern over the item. PM\_ImageSelected (struct Image \*) PM\_ImageUnselected (struct Image \*) Specifies an image to be rendered under the item title. PM\_IconSelected (struct Image \*) PM\_IconUnselected (struct Image \*) Specifies an image to be rendered to the left of the item title. (BOOL \*) A pointer to a BOOL that will reflect the PM AutoStore state of the checkmark. The best way to find out

if an item is checked or not.

Testfile 13 / 18

PM\_TextPen (ULONG) A pen number for the text. You are

responsible for allocating/deallocating a pen

yourself.

PM\_Shadowed (BOOL) Give the text a shadow using SHADOWPEN.

PM\_CommKey (STRPTR) Keyboard shortcut for this item.

Only the first character will be used. This is a string pointer just to make it easier to use locale  $% \left\{ 1\right\} =\left\{ 1\right$ 

strings for the shortcuts.

PM\_ColourBox (ULONG) Draws a filled rectangle in using the

specified pen.

The box will be drawn at the end of the line in

PM\_CheckIt items, and at the beginning in other items.

PM\_SubConstruct (struct Hook \*)

This hook will be called before the submenu pointed to by PM\_Sub is opened. Using this hook you can create the menu just before it is opened, and show directory contents etc in the menu. Remember to always free the pm->Sub pointer before replacing it with the new one. The hook function will recieve a pointer to the hook

structure in  ${\tt A0}$  and a pointer to the selected (parent)

menuitem in A2.

PM\_SubDestruct (struct Hook \*)

This hook is called after the submenu has been closed, and is typically used when you need to free user data. The hook function will recieve a pointer to the hook structure in AO and a pointer to the parent menuitem

in A2. (NOT the submenu!)

PM\_Hidden (BOOL)

Setting this tag to TRUE will prevent the item from  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

being drawn.

PM\_TitleID (ULONG)

Locale string  ${\tt ID.}$  Will be passed to the  ${\tt GetString}$ 

hook. (see PM\_OpenPopupMenuA()).

PM\_Object (Object \*)

A BOOPSI object should be used to render this item.

PM\_Members (PopupMenu \*)

Turns this item into a group, and adds the objects pointed to by ti\_Data. The list of objects are created just like a (sub)menu with PM\_MakeMenuA().

The default layout mode is PML\_Horizontal.

PM LavoutMode (ULONG)

Layout method (applies only to group items).

Available layout methods are:

PML\_Horizontal - Items are laid out horizontally.
PML\_Vertical - Items are laid out vertically.

Testfile 14 / 18

```
RETURNS
     Returns a pointer to an item if successful.

SEE ALSO
     PM_MakeMenuA(), PM_MakeIDListA(), PM_ExLstA(), PM_OpenPopupMenuA()
```

## 1.17 popupmenu.library/PM\_MakeMenuA

```
NAME
     PM MakeMenu -- Create a new menu list.
SYNOPSIS
     menu = PM_MakeMenuA(taglist);
                      a1
     struct PopupMenu *PM_MakeMenuA(struct TagItem *tags);
     menu = PM_MakeMenu(tag1, ...);
     struct PopupMenu *PM_MakeMenu(ULONG, ...);
FUNCTION
     This function is used to link menu items returned by
     PM MakeItemA().
INPUTS
     taglist - pointer to a taglist listing your menu items.
TAGS
     PM_Item - pointer to a menuitem returned from PM_MakeItemA().
RETURNS
     Returns a pointer to a list of items if successful.
SEE ALSO
    PM_MakeItemA()
```

# 1.18 popupmenu.library/PM\_OpenPopupMenuA

Testfile 15 / 18

```
ULONG PM_OpenPopupMenu(struct Window *, ULONG, ...);
FUNCTION
    This function is used to open a popup menu based on an item list
    created with PM_MakeMenuA()
INPUTS
    prevwnd - pointer to parent window, used to find out screen, font
               and other drawing attributes.
     taglist - pointer to a taglist of menu options.
TAGS
    PM_Menu
                         (struct PopupMenu *) Pointer to a menu list
                         created by PM_MakeMenuA().
    PM_RecessSelected
                         OBSOLETE!
    PM_WideSelectBar
                         OBSOLETE!
    PM_Compact
                         OBSOLETE!
    PM SubMenuTimer
                         OBSOLETE!
     PM OldLook
                         OBSOLETE!
    PM SameHeight
                         OBSOLETE!
    PM_CheckMark
                        OBSOLETE!
    PM_ExcludeMark
                         OBSOLETE!
                         OBSOLETE!
     PM SubMenuMark
    PM_SmartRefresh
                         OBSOLETE!
     PM_Left
                         (ULONG) Horizontal position of the menu, relative
                         to the menus left edge. (V3)
                         (ULONG) Vertical position of the menu, relative
     PM_Top
                         to the menus top edge. (V3)
    PM_Code
                         OBSOLETE!
     PM PullDown
                         (BOOL) Turn the menu into a pulldown menu. (V5.1)
                         (struct Hook *) Menu handler function (hook). (V6.0
     PM_MenuHandler
     PM Right
                         (ULONG) Horizontal position of the menu, relative
                         to the menus right edge. (V7.3)
     PM Bottom
                         (ULONG) Vertical position of the menu, relative
                         to the menus bottom edge. (V7.3)
     PM_CenterScreen
                         (BOOL) Center the menu on the screen. (V7.3)
    PM_UseLMB
                         (BOOL) Reverses the function of the mouse buttons.
                         Left button will be used to select items, and right
                         button to select multiple items. This tag is only
                         required when multiselect is used, and the menus is
                         opened with LMB. (V7.3)
    PM_LocaleHook
                         (struct Hook *)
                         'GetString' hook used to get localized strings.
                         The hook function will recieve a pointer to the
                         menu item (struct PopupMenu *) in A2. A pointer
```

)

Testfile 16 / 18

```
to the Hook structure will be in AO, and an APTR
                         pointer ("pointer to pointer") will be in A1.
                         At the first location in this array is the string
                         ID stored.
                         A0. (V9)
     PM_ForceFont
                         (struct TextFont *)
                         Render the menus using this font only. (V9)
     PM_HintBox
                         (BOOL)
                         Make the menu dissappear when the mouse is moved.
                         Intended for displaying "ToolTips". (Like the
                         Help Bubbles in MUI, only they don't look like
                         bubbles, and you have to handle the opening
                         yourself. (V9)
RETURNS
     Returns the value of UserData of the selected item, if no item
     was selected, NULL is returned.
SEE ALSO
    PM_MakeMenuA()
```

#### 1.19 popupmenu.library/PM\_ReloadPrefs

```
NAME

PM_ReloadPrefs -- Reload preferences. (V9)

SYNOPSIS

PM_ReloadPrefs();

void PM_ReloadPrefs(void);

FUNCTION

This function is used by the preferences program to tell the library to reload the settings file. ("ENV:popupmenu.cfg")
```

## 1.20 popupmenu.library/PM\_RemoveMenuItem

```
NAME

PM_RemoveMenuItem -- Remove a menu item.

SYNOPSIS

item = PM_RemoveMenuItem(menu, item);

d0 a0 a1

struct PopupMenu *PM_RemoveMenuItem(struct PopupMenu *, struct PopupMenu *);

FUNCTION

This function removes an item from a popup menu.
```

Testfile 17 / 18

```
The removed item is NOT freed, you MUST free this item with PM_FreePopupMenu(), unless you plan to reuse in another menu. You may, for example, insert this item in another menu or at another position in this menu, using the function PM_InsertMenuItemA(). (but then ofcourse, you MUST NOT free the item)

INPUTS

menu - pointer to the holds the item to be removed.

item - pointer to the item to be removed.

RETURNS

Returns a pointer to the removed item, or NULL if the item was not present in the specified menu.

You are responsible for freeing this item!

SEE ALSO

PM_MakeMenuA(), PM_FreePopupMenu(), PM_InsertMenuItemA()
```

## 1.21 popupmenu.library/PM\_SetItemAttrsA

```
NAME
     PM_SetItemAttrsA -- Specify attribute values for an object. (V3)
SYNOPSIS
     result = PM_SetItemAttrsA(item, tags);
                            A2
                                  Α1
     ULONG PM_SetItemAttrsA(struct PopupMenu *, struct TagItem *);
     result = PM_SetItemAttrs(item, tag1, ...);
     ULONG PM_SetItemAttrs(struct PopupMenu *, ULONG, ...);
FUNCTION
     Specifies a set of attribute/value pairs with meaning as
     defined in libraries/pm.h.
     item can be directly taken from PM_FindItem as the input is
     checked against NULL pointers.
EXAMPLE
     struct PopupMenu *menu;
     /\star Initialize the menu... \star/
     PM_SetItemAttrsA( PM_FindItem( menu, itemid ),
             PM_Checkit,
                            TRUE,
             PM_Checked,
                             TRUE,
             TAG_DONE);
INPUTS
     item = pointer to a popup menu item.
```

Testfile 18 / 18

tags = array of TagItem structures with attribute/value pairs.

RESULT

Returns the number of successfully changed attributes.