GX Toolbar Customisation

1. Introduction

GX V2.8, and later, support a customisable toolbar where the individual button icons and text can be modified at initialisation time via various INI file settings and also at run-time via two subroutine calls. This section describes the various settings in the [toolbar] section of GX.INI and how icons need to be created for use on the toolbar.

For GX V3.5e, and earlier, the standard toolbar consists of 12 buttons and their actions. The buttons are (from left to right):

Button Number	Default text	Action
1	Function 1	Return UF1 response
2	Function 2	Return UF2 response
3	Function 3	Return UF3 response
4	Next	Return NXT response
5	Home	Return HME response
6	Clear	Return CLR response
7	Enquire	Return ENQ response
8	Delete	Return DEL response
9	Insert	Return INS response
10	Abort	Return ABO response
11	Help	Initiate external help or return HLP response
12	Launch	Start program specified in [programs] section

For GX V3.5f, and later, the standard toolbar consists of 13 buttons and their actions. The buttons are (from left to right):

Button Number	Default text	Action
1	Function 1	Return UF1 response
2	Function 2	Return UF2 response
3	Function 3	Return UF3 response
4	Next	Return NXT response
5	Home	Return HME response
6	Clear	Return CLR response
7	Enquire	Return ENQ response
8	Delete	Return DEL response
9	Insert	Return INS response
10	Abort	Return ABO response
11	Move	Return MOV response

12	Help	Initiate external help or return HLP response
13	Launch	Start program specified in [programs] section

2. The GX.INI [toolbar] Section

The following settings are recognised in the [toolbar] section.

2.1 ButtonWidth

This setting specifies the width (in pixels) to be used for ALL buttons on the toolbar and needs to take account of the longest text description for the buttons. The default value is sufficient for the default text descriptions.

The default value is 60.

2.2 *xxxx*Text

The following settings specify the text description for the toolbar buttons.

2.2.1 F1Text

This setting specifies the text description of Button Number 1.

The default setting is "Function 1".

2.2.2 F2Text

This setting specifies the text description of Button Number 2.

The default setting is "Function 2".

2.2.3 F3Text

This setting specifies the text description of Button Number 3.

The default setting is "Function 3".

2.2.4 NextText

This setting specifies the text description of Button Number 4.

The default setting is "Next".

2.2.5 HomeText

This setting specifies the text description of Button Number 5.

The default setting is "Home".

2.2.6 ClearText

This setting specifies the text description of Button Number 6.

The default setting is "Clear".

2.2.7 EnquireText

This setting specifies the text description of Button Number 7.

The default setting is "Enquire".

2.2.8 DeleteText

This setting specifies the text description of Button Number 8.

The default setting is "Delete".

2.2.9 InsertText

This setting specifies the text description of Button Number 9.

The default setting is "Insert".

2.2.10 AbortText

This setting specifies the text description of Button Number 10.

The default setting is "Abort".

2.2.11 HelpText

This setting specifies the text description of Button Number 11 (GX V3.5e and earlier) or Button Number 12 (GX V3.5f, and later).

The default setting is "Help".

2.2.12 LaunchText

This setting specifies the text description of Button Number 12 (GX V3.5e and earlier) or Button Number 13 (GX V3.5f, and later).

The default setting is "Launch".

2.2.13 MoveText

This setting specifies the text description of Button Number 11. Note that this setting is only available with GX V3.5f, and later.

The default setting is "Move".

2.2.14 Extra1Text to Extra20Text

See section 2.6 for full details of the optional, extra toolbar buttons.

2.3 xxxxIcon

The following settings specify the filenames of the icons for the buttons. Each setting specifies two bitmap names as follows:

*xxxx*Icon=Standard icon,Hot icon

The standard icon is used for normal toolbar displays and the hot icon is used when the mouse cursor passes over that particular button. This usually requires the hot icon to be more colourful than the standard icon to make the "selected" button stand out. Note that when the toolbar buttons are disabled another greyed out image is displayed but a third icon is not required to be specified since the toolbar control derives the greyed out version from the standard icon. If no file extension is included in the GX.INI setting a ".BMP" extension is appended to the bitmap filename (e.g. F1Icon=RICK,HRICK is equivalent to F1Icon=RICK.BMP,HRICK.BMP).

If the icon is not configured then that button will be removed from the toolbar. Note that once a button is removed, it cannot be restored at run time and any attempts to call a sub-routine to update the button text or icon will be ignored. If none of the icons are specified then the internal toolbar bitmap will be used and all 12 (GX V3.5e, and earlier) or 13 (GX V3.5f, and later)) buttons will appear. Also, if GX is unable to load any of the toolbar icons specified then the internal bitmap will be used.

For example, to replace the internal toolbar bitmap by a toolbar that excludes the F2 and F3 buttons, and with the text of the F1 button replaced by "Search", the [toolbar] section of the GX.INI file should contain:

```
[toolbar]
ButtonWidth=60
F1Text=Search
NextText=Next
HomeText=Home
ClearText=Clear
EnquireText=Enquire
DeleteText=Delete
InsertText=Insert
AbortText=Abort
HelpText=Help
MoveText=Move
LaunchText=Launch
MoveText=Move
Folder=.\TOOLBAR
F1Icon=F1.bmp,HF1.bmp
NextIcon=NEXT.bmp,HNEXT.bmp
HomeIcon=HOME.bmp,HHOME.bmp
ClearIcon=CLEAR.bmp,HCLEAR.bmp
EnquireIcon=ENQUIRE.bmp,HENQUIRE.bmp
DeleteIcon=DELETE.bmp,HDELETE.bmp
InsertIcon=INSERT.bmp,HINSERT.bmp
AbortIcon=ABORT.bmp,HABORT.bmp
HelpIcon=HELP.bmp,HHELP.bmp
LaunchIcon=LAUNCH.bmp,HLAUNCH.bmp
MoveIcon=MOVE.bmp,HMOVE.bmp
```

In this example, all the bitmap files are in the folder "toolbar" relative to the current GX folder. For example, if the GX folder is C:\GX\ then the toolbar folder is C:\GX\TOOLBAR\.

2.3.1 F1Icon
This setting specifies the Standard Icon and Hot Icon for Button Number 1.

There are no defaults for any of these settings but the supplied bitmaps F1,HF1 correspond to the internally stored toolbar bitmap.

2.3.2 F2Icon
This setting specifies the Standard Icon and Hot Icon for Button Number 2.

There are no defaults for any of these settings but the supplied bitmaps F2,HF2 correspond to the internally stored toolbar bitmap.

2.3.3 F3Icon
This setting specifies the Standard Icon and Hot Icon for Button Number 3.

There are no defaults for any of these settings but the supplied bitmaps F3,HF3 correspond to the internally stored toolbar bitmap.

2.3.4 NextIcon
This setting specifies the Standard Icon and Hot Icon for Button Number 4.

There are no defaults for any of these settings but the supplied bitmaps NEXT,HNEXT correspond to the internally stored toolbar bitmap.

2.3.5 HomeIcon
This setting specifies the Standard Icon and Hot Icon for Button Number 5.

There are no defaults for any of these settings but the supplied bitmaps HOME,HHOME correspond to the internally stored toolbar bitmap.

2.3.6 ClearIcon
This setting specifies the Standard Icon and Hot Icon for Button Number 6.

There are no defaults for any of these settings but the supplied bitmaps CLEAR,HCLEAR correspond to the internally stored toolbar bitmap.

2.3.7 EnquireIcon
This setting specifies the Standard Icon and Hot Icon for Button Number 7.

There are no defaults for any of these settings but the supplied bitmaps ENQUIRE,HENQUIRE correspond to the internally stored toolbar bitmap.

2.3.8 DeleteIcon
This setting specifies the Standard Icon and Hot Icon for Button Number 8.

There are no defaults for any of these settings but the supplied bitmaps DELETE,HDELETE correspond to the internally stored toolbar bitmap.

2.3.9 InsertIcon
This setting specifies the Standard Icon and Hot Icon for Button Number 9.

There are no defaults for any of these settings but the supplied bitmaps INSERT,HINSERT correspond to the internally stored toolbar bitmap.

2.3.10 AbortIcon
This setting specifies the Standard Icon and Hot Icon for Button Number 10.

There are no defaults for any of these settings but the supplied bitmaps ABORT,HABORT correspond to the internally stored toolbar bitmap.

2.3.11 HelpIcon
This setting specifies the Standard Icon and Hot Icon for Button Number 11 (GX V3.5e and earlier) or Button Number 12 (GX V3.5f, and later).

There are no defaults for any of these settings but the supplied bitmaps HELP,HHELP correspond to the internally stored toolbar bitmap.

2.3.12 LaunchIcon
This setting specifies the Standard Icon and Hot Icon for Button Number 12 (GX V3.5e and earlier) or Button Number 13 (GX V3.5f, and later).

There are no defaults for any of these settings but the supplied bitmaps LAUNCH,HLAUNCH correspond to the internally stored toolbar bitmap.

2.3.13 MoveIcon
This setting specifies the Standard Icon and Hot Icon for Button Number 11. Note that this setting is only available with GX V3.5f, and later.

There are no defaults for any of these settings but the supplied bitmaps MOVE,HMOVE correspond to the internally stored toolbar bitmap.

2.3.14 Extra1Icon to Extra20Icon
See section 2.6 for full details of the optional, extra toolbar buttons.

2.4 Icon*N*

This range of settings (*N* = 1 to 9999) allow other icons (i.e. toolbar button bitmaps) to be specified which can then be selected at run-time via the GXTBI$ subroutine call. These settings are configured in the same way as the *xxxx*Icon settings described in section 2.3:

Icon*N*=*Standard icon,Hot icon*

For example:

Icon1=MyIcon.bmp,MyHotIcon.bmp

All toolbar button bitmaps can be created using a suitable bitmap editor and must conform to the following standard:

● They must be standard 16 colour (or 4-bit) bitmaps, 20 pixels wide by 15 pixels deep (the resulting file will therefore be exactly 298 bytes in size);

● The background must be a mid-grey colour (RGB value 192,192,192) for it to be correctly merged onto the prevailing background colour (i.e. all mid-grey pixels in the bitmap will be effectively transparent).

Two bitmaps are required for each button, a normal image and a hot image. Usually they both use the same basic design but the hot image is more colourful to make the button stand out when it is displayed.

2.4.1 Updating the Toolbar at Runtime
The initial toolbar can be modified using two subroutines GXTBT$ and GXTBI$. GXTBT$ allows the text and button width to be altered and reset, GXTBI$ allows the icon to be altered and reset. Both subroutines address each button via its Button Number as described above. **Important Note:** GXTBI$ can only be used if the initial toolbar icons have been customised in the INI file (i.e. at least one of the xxxxIcon settings, see section 2.3, must have been set up successfully).

2.5 Folder
The various *xxxx*Icon settings (see section 2.3) and Icon*N* settings (see section 2.4) all rely on specifying filenames for the appropriate bitmaps. The filename can specify a full path name or one relative to the current GX directory. If the folder option is used then any non-absolute (i.e. relative) filename settings will be assumed to be in this folder. This setting allows all toolbar icons to be grouped in a single directory.

2.6 Advanced Techniques
This section describes a number of techniques that could be considered "advanced".

2.6.1 Toolbar Button Grouping
The various buttons on the built-in GX Toolbar are grouped with horizontal lines between "groups" of buttons:

F1	F2	F3	Next	Home	Clear Enquire	Delete Insert	Abort	Move	Help	Launch

The group separators are tagged to the button immediately to the right of a vertical separator line rather than the simple index number of the button. For example, using the technique described in section 2.9.9 to remove the F2 button will result in the (correctly separated) toolbar:

F1	F3	Next	Home	Clear Enquire	Delete Insert	Abort	Move	Help	Launch

rather than the (incorrectly separated) toolbar:

F1	F3	Next	Home	Clear	Enquire Delete	Insert Abort	Move	Help	Launch

2.6.2 Special Option For The F1 Button Text

By default, the text of the F1 toolbar icon is replaced by the string "Command" when GX detects that the GSM Menu Handler is running. This is normally appropriate because <F1> function is recognised as the "command" button by the Menu Handler. However, it is possible to suppress this automatic update of the F1 button text by the following setting in the [menu] section of the GX.INI file:

```
[menu]
UpdateF1Text=Off
```

The default setting is On.

2.7   Extra Application Specific Buttons

For GX V3.3c, and later, it is possible to add up to 20 extra application specific buttons to the GX Toolbar. **Important Note**: The Extra Application Specific Button settings are only recognised if a customised toolbar is being used (i.e. if one, or more, *xxxx*Icon settings are defined to override the standard toolbar built into GX.EXE).

No default icons are supplied for these buttons so they can only be added by specifying a bitmap for each extra button in the [toolbar] section of GX.INI. The range of settings is "Extra1Icon" to "Extra20Icon".   Another range of GX.INI settings "Extra1Text" to "Extra20Text" can be used to set up the initial caption to be displayed on the appropriate toolbar entry. The purpose of each extra button is defined by the run menu maintenance program, $RUNMEN, that allows a toolbar button to be associated with a particular entry in the Run Menu.

Note that the extra Toolbar buttons are supported by the GXTBT$ and GXTBI$ sub-routines.

2.8 Differences Between Standard & Extra Application Buttons

There are some subtle differences in the way that the GX.INI file settings for Standard buttons and Extra Application buttons are recognised by GX.

2.8.1 Summary of Standard Button Customisation

By default (i.e. without any *xxxx*Icon or *xxxx*Text settings in the [toolbar] section of the GX.INI file) the standard Toolbar that is included within GX.EXE is displayed.

One, or more, button text strings in the standard, built-in toolbar can be replaced by entries from the *xxxx*Text range of GX.INI file settings (see section 2.2).

However, if **any** entry from the xxxxIcon range of GX.INI file settings (see section 2.3) are specified the standard, built-in toolbar is replaced by a fully customised toolbar defined solely by the various *xxxx*Icon settings. Note that the presence of one, or more, xxxxIcon settings in the GX.INI file triggers GX to ignore its built-in toolbar, rather than the load of the Icon file(s). Thus, if an xxxxIcon setting is present in the GX.INI file, but the Icon file cannot be loaded, that icon will be absent from the toolbar. Furthermore, if at least one xxxxIcon setting is present in the GX.INI file, but **none** of the associated Icon files can be loaded, the toolbar will be **empty**.

The following table summarizes the situation for the Standard toolbar buttons:

*Xxxx*Icon setting	*xxxx*Text setting	Comments
All absent from GX.INI	Absent from GX.INI	Standard built-in toolbar.
All absent from GX.INI	Present in GX.INI	The standard built-in toolbar is displayed but the standard text of the *xxxx* button is replaced by the text from the *xxxx*Text setting.
A particular xxxxIcon setting absent from GX.INI, but other xxxxIcon settings present	Present in GX.INI	Meaningless. The absence of the xxxxIcon results in the removal of the toolbar button which means that the corresponding xxxxText setting is ignored.
Present in GX.INI	Absent from GX.INI	The built-in toolbar will be replaced entirely by the *xxxx*Icon setting(s). Note that it is NOT possible to replace icons in the built-in toolbar in a piecemeal fashion. The standard text-string for button *xxxx* will be used for the customised toolbar buttons.
Present in GX.INI	Present in GX.INI	The built-in toolbar will be replaced entirely by the *xxxx*Icon setting(s). Note that it is NOT possible to replace icons in the built-in toolbar in a

		piecemeal fashion. For buttons with both the *xxxx*Icon and xxxxText settings defined, the customised text-strings will be used for the toolbar button.

2.8.2 Summary of Extra Application Specific Button Customisation

The following table summarizes the situation for the Extra Application Specific toolbar buttons:

Extra*M*con setting	Extra*N*Text setting	Comments
Absent from GX.INI	Absent from GX.INI	No Extra Application Button added to the customised toolbar
Absent from GX.INI	Present in GX.INI and set to "Extra*N*"	No Extra Application Button added to the customised toolbar
Absent from GX.INI	Present in GX.INI and not set to "Extra*N*"	Extra toolbar button allocated with no icon but with text set to the text of the Extra*N*Text setting.
Present in GX.INI	Absent from GX.INI	Extra toolbar button allocated with icon defined by Extra*N*con setting but no text.
Present in GX.INI	Present in GX.INI and set to "Extra*N*"	Extra toolbar button allocated with icon defined by Extra*N*con setting but no text.
Present in GX.INI	Present in GX.INI and not set to "Extra*N*"	Extra toolbar button allocated with icon defined by Extra*M*con setting and text set to Extra*N*Text setting.

2.9   Example GX.INI File Settings

This section includes some example GX.INI file settings:

2.9.1 Changing the Text of a Single Built-In Button

Changing the text of the F1 button:

```
[toolbar]
F1Text=Search
```

2.9.2 Changing the Text of Multiple Built-In Buttons

Changing the text of the F1, F2 and F3 buttons:

```
[toolbar]
F1Text=Search
F2Text=Func-2
F3Text=Func-3
```

2.9.3 Changing the Text of All Built-In Buttons

Changing the text of all buttons:

```
[toolbar]
F1Text=Search
F2Text=Func-2
F3Text=Func-3
NextText=NEXT
HomeText=HOME
ClearText=CLEAR
EnquireText=ENQUIRE
DeleteText=DELETE
InsertText=INSERT
AbortText=ABORT
HelpText=HELP
MoveText=MOVE
LaunchText=LAUNCH
```

2.9.4 Replacing the Built-In Toolbar With a Single Button (No Text)

Note that the inclusion of one, or more, *xxxx*Icon settings immediately overrides the built-in toolbar:

```
[toolbar]
Folder=.\TOOLBAR
F1Icon=F1.bmp,HF1.bmp
```

The files F1.BMP and HF1.BMP must be in the "Toolbar" folder.

Note that if the equivalent *xxxx*Text setting is absent the button will not contain any text.

2.9.5 Replacing the Built-In Toolbar With a Single Button (With Text)

Note that the inclusion of one, or more, *xxxx*Icon settings immediately overrides the built-in toolbar:

```
[toolbar]
Folder=.\TOOLBAR
F1Icon=F1.bmp,HF1.bmp
F1Text=Search
```

The files F1.BMP and HF1.BMP must be in the "Toolbar" folder.

2.9.6 Replacing the Built-In Toolbar With Multiple Buttons (With Text)

Note that the inclusion of one, or more, *xxxx*Icon settings immediately overrides the built-in toolbar:

```
[toolbar]
Folder=.\TOOLBAR
F1Icon=F1.bmp,HF1.bmp
F2Icon=F2.bmp,HF2.bmp
F3Icon=F3.bmp,HF3.bmp
F1Text=Search
F2Text=Func-2
F3Text=Func-3
```

The various *.BMP files must be in the "Toolbar" folder.

2.9.7 Replacing All the Built-In Toolbar Buttons (With Text)

Note that the inclusion of one, or more, *xxxx*Icon settings immediately overrides the built-in toolbar:

```
[toolbar]
Folder=.\TOOLBAR
F1Text=Search
F2Text=Func-2
F3Text=Func-3
NextText=NEXT
HomeText=HOME
ClearText=CLEAR
EnquireText=ENQUIRE
DeleteText=DELETE
InsertText=INSERT
AbortText=ABORT
HelpText=HELP
MoveText=MOVE
LaunchText=LAUNCH
F1Icon=F1.bmp,HF1.bmp
F2Icon=F2.bmp,HF2.bmp
F3Icon=F3.bmp,HF3.bmp
NextIcon=NEXT.bmp,HNEXT.bmp
HomeIcon=HOME.bmp,HHOME.bmp
ClearIcon=CLEAR.bmp,HCLEAR.bmp
EnquireIcon=ENQUIRE.bmp,HENQUIRE.bmp
DeleteIcon=DELETE.bmp,HDELETE.bmp
InsertIcon=INSERT.bmp,HINSERT.bmp
AbortIcon=ABORT.bmp,HABORT.bmp
MoveIcon=MOVE.bmp,HMOVE.bmp
HelpIcon=HELP.bmp,HHELP.bmp
LaunchIcon=LAUNCH.bmp,HLAUNCH.bmp
```

The various *.BMP files must be in the "Toolbar" folder.

2.9.8 Removing the F3 Button

Note that the inclusion of one, or more, *xxxx*Icon settings immediately overrides the built-in toolbar:

```
[toolbar]
Folder=.\TOOLBAR
F1Text=Search
F2Text=Func-2
NextText=NEXT
HomeText=HOME
ClearText=CLEAR
EnquireText=ENQUIRE
DeleteText=DELETE
InsertText=INSERT
AbortText=ABORT
HelpText=HELP
MoveText=MOVE
LaunchText=LAUNCH
```

```
F1Icon=F1.bmp,HF1.bmp
F2Icon=F2.bmp,HF2.bmp
NextIcon=NEXT.bmp,HNEXT.bmp
HomeIcon=HOME.bmp,HHOME.bmp
ClearIcon=CLEAR.bmp,HCLEAR.bmp
EnquireIcon=ENQUIRE.bmp,HENQUIRE.bmp
DeleteIcon=DELETE.bmp,HDELETE.bmp
InsertIcon=INSERT.bmp,HINSERT.bmp
AbortIcon=ABORT.bmp,HABORT.bmp
MoveIcon=MOVE.bmp,HMOVE.bmp
HelpIcon=HELP.bmp,HHELP.bmp
LaunchIcon=LAUNCH.bmp,HLAUNCH.bmp
```

The various *.BMP files must be in the "Toolbar" folder.

2.9.9 Removing the F2 and F3 Buttons (With Text)

Note that the inclusion of one, or more, *xxxx*Icon settings immediately overrides the built-in toolbar:

```
[toolbar]
Folder=.\TOOLBAR
F1Text=Search
NextText=NEXT
HomeText=HOME
ClearText=CLEAR
EnquireText=ENQUIRE
DeleteText=DELETE
InsertText=INSERT
AbortText=ABORT
HelpText=HELP
MoveText=MOVE
LaunchText=LAUNCH
F1Icon=F1.bmp,HF1.bmp
NextIcon=NEXT.bmp,HNEXT.bmp
HomeIcon=HOME.bmp,HHOME.bmp
ClearIcon=CLEAR.bmp,HCLEAR.bmp
EnquireIcon=ENQUIRE.bmp,HENQUIRE.bmp
DeleteIcon=DELETE.bmp,HDELETE.bmp
InsertIcon=INSERT.bmp,HINSERT.bmp
AbortIcon=ABORT.bmp,HABORT.bmp
MoveIcon=MOVE.bmp,HMOVE.bmp
HelpIcon=HELP.bmp,HHELP.bmp
LaunchIcon=LAUNCH.bmp,HLAUNCH.bmp
```

The various *.BMP files must be in the "Toolbar" folder.