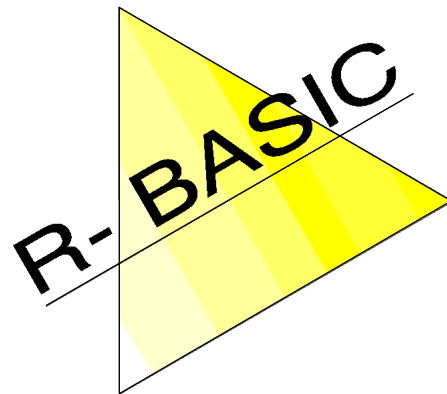


# ***R-BASIC***

The Simple PC/GEOS Programming Language  
Einfach unter PC/GEOS programmieren



## ***Quick Reference*** ***• Objects •***

International Version

Version 1.0

## R-BASIC Quick Reference • Objects

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All object classes, instance variables, hints and constants.



### Quick-Referenz • Objekte

Diese Referenz enthält alle R-BASIC Objektklassen, ihre Instance-Variablen und UI-Hints sowie alle dafür definierten Konstanten. Zusätzlich finden PC/GEOS-SDK Programmierer Informationen, welche PC/GEOS-SDK-Funktion zur Realisierung dieser verwendet wurde.



### Quick Reference • Objects

This reference contains all R-BASIC object classes, its instance variables, UI hints and all constants defined to use with these. Additionally, PC/GEOS-SDK programmers may be interested to know which PC/GEOS-SDK equivalent the R-BASIC features have.

# R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

## Table of Contents

GenericClass & VisualClass Basic Tree Features .....	4
GenericClass & VisualClass Other Common Features .....	4
GenericClass Basic Features .....	5
GenericClass Geometrie-Management .....	5
Input Handling - Keyboard, Focus, Target, Mouse .....	7
Application Class .....	9
BitmapContent Class .....	9
Button Class .....	10
Canvas Class .....	10
ColorSelector Class .....	11
Dialog Class .....	11
Display Class .....	12
DisplayControl Class .....	12
DisplayGroup Class .....	13
DocumentGuardian Class .....	13
DynamicList Class .....	14
FileSelector Class .....	15
GenContent Class .....	16
Group Class .....	16
Image Class .....	16
InputLine Class .....	17
LargeText Class .....	17
Memo Class .....	17
Menu Class .....	19
Number Class .....	19
Option Class .....	20
OptionGroup Class .....	20
PageSizeControl Class .....	21
Primary Class .....	21
PrintControl Class .....	22
RadioButton Class .....	23
RadioButtongroup Class .....	23
View Class .....	24
ViewControl Class.....	25
VisGroup Class .....	26
VisContent Class .....	27
VisObj Class .....	28
VisText Class .....	29

## **R-BASIC Quick Reference • Objects**

---

All object classes, instance variables, hints and constants.

(Leerseite)

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### GenericClass & VisualClass Basic Tree Features

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>Children</b>	MSG_GEN_ADD_CHILD                      MSG_VIS_~
<b>parent</b>	MSG_GEN_FIND_CHILD_AT_POSITION      MSG_VIS_~
	MSG_GEN_FIND_PARENT                  MSG_VIS_~
	MSG_GEN_ADD_CHILD                      MSG_VIS_~
	MSG_GEN_REMOVE_CHILD                MSG_VIS_~
<b>numChildren</b>	MSG_GEN_COUNT_CHILDREN              MSG_VIS_~
<b>FindChild</b>	MSG_GEN_FIND_CHILD                    MSG_VIS_~

### GenericClass & VisualClass Other Common Features

BASIC UI/Code Statement	SDK HINT's, ATTR's or instance variables
<b>Class\$</b>	not available in PC/GEOS-SDK
<b>ClpCopy</b>	MSG_META_COPY
<b>ClpPaste</b>	MSG_META_PASTE
<b>ClpTestPaste</b>	not available in PC/GEOS-SDK
<b>ClpTestCopy</b>	not available in PC/GEOS-SDK
<b>privData</b>	not available in PC/GEOS-SDK
<b>CustomHandler</b>	not available in PC/GEOS-SDK
<b>CustomAction</b>	not available in PC/GEOS-SDK
<b>CustomApply</b>	not available in PC/GEOS-SDK
<u>Size and position</u>	
<b>xSize</b>	VI_bounds.R_right - VI_bounds.R_left
<b>ySize</b>	VI_bounds.R_bottom - VI_bounds.R_top
<b>xPosition</b>	VI_bounds.R_left
<b>yPosition</b>	VI_bound.R_top
<u>Backdoor functions</u>	
<b>ObjAddHint</b>	MSG_META_ADD_VAR_DATA
<b>ObjRemoveHint</b>	MSG_META_DELETE_VAR_DATA

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### GenericClass Basic Features

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>Caption\$</b>	Gl_visMoniker (Text Moniker)
<b>CaptionImage</b>	Gl_visMoniker (GString Moniker)
<b>CaptionPicture</b>	Gl_visMoniker (GString Moniker)
<b>CaptionGString</b>	Gl_visMoniker (GString Moniker)
<b>CaptionIcon</b>	Gl_visMoniker (GString Moniker from Icon)
TOOL_ICON	1
TINY_ICON	1 (synonymus for TOOL_ICON)
SMALL_ICON	2
BIG_ICON	3
GRAY_ICON	4
RGB_ICON.	5
<b>justifyCaption</b>	
J_TOP	HINT_PLACE_MONIKER_ABOVE
J_LEFT	HINT_PLACE_MONIKER_TO_LEFT
J_RIGHT	HINT_PLACE_MONIKER_TO_RIGHT
J_CENTER	HINT_CENTER_MONIKER
<b>kbdSearchPath</b>	Gl_attrs = GA_SEARCH_PATH
<b>kbdShortcut</b>	MSG_GEN_SET_KBD_ACCELERATOR MSG_GEN_GET_KBD_ACCELERATOR
KSM_SHIFT	KS_SHIFT
KSM_CTRL	KS_CTRL
KSM_ALT	KS_ALT
KSM_PHYSICAL	KS_PHYSICAL
<b>readOnly</b>	Gl_attrs = GA_READ_ONLY
<b>enabled</b>	Gl_states = GS_ENABLED
<b>fullyEnabled</b>	MSG_GEN_CHECK_IF_FULLY_ENABLED
<b>visible</b>	Gl_states = GS_USABLE
<b>fullyVisible</b>	MSG_GEN_CHECK_IF_FULLY_USABLE
<b>helpFile\$</b>	ATTR_GEN_HELP_FILE
<b>helpContext\$</b>	ATTR_GEN_HELP_CONTEXT

### GenericClass Geometrie-Management

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<a href="#"><u>Arranging Objects</u></a>	
<b>orientChildren</b>	
ORIENT_HORIZONTALLY	HINT_ORIENT_CHILDREN_HORIZONTALLY
ORIENT_VERTICLLY	HINT_ORIENT_CHILDREN_VERTICALLY
ORIENT_SAME_AS_PARENT	HINT_SAME_ORIENTATION_AS_PARENT
ORIENT_ON_LARGER_DIMENSION	HINT_ORIENT_CHILDREN_ALONG_LARGER_DIMENSION
<b>justifyChildren</b>	
J_BOTTOM	HINT_BOTTOM_JUSTIFY_CHILDREN
J_LEFT	HINT_LEFT_JUSTIFY_CHILDREN
J_RIGHT	HINT_RIGHT_JUSTIFY_CHILDREN
J_TOP	HINT_TOP_JUSTIFY_CHILDREN
J_FULL_H	HINT_FULL_JUSTIFY_CHILDREN_HORIZONTALLY
J_FULL_V	HINT_FULL_JUSTIFY_CHILDREN_VERTICALLY
J_FULL	wirkt wie H + V
J_CENTER_H	HINT_CENTER_CHILDREN_HORIZONTALLY
J_CENTER_V	HINT_CENTER_CHILDREN_VERTICALLY
J_CENTER	wirkt wie H + V
J_CENTER_ON_CAPTION	HINT_CENTER_CHILDREN_ON_MONIKERS
J_CENTER_ON_CAPTION_LEFT:	HINT_LEFT_JUSTIFY_MONIKERS + HINT_CENTER_CHILDREN_ON_MONIKERS

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

<b>DivideHeightEqually</b>	HINT_DIVIDE_HEIGHT_EQUALLY
<b>DivideWidthEqually</b>	HINT_DIVIDE_WIDTH_EQUALLY
<b>childSpacing</b>	HINT_CUSTOM_CHILD_SPACING
<b>IncludeEndsInChildSpacing</b>	HINT_INCLUDE_ENDS_IN_CHILD_SPACING
<b>MinimizeChildSpacing</b>	HINT_MINIMIZE_CHILD_SPACING
<b>wrapAfterChild</b>	HINT_ALLOW_CHILDREN_TO_WRAP HINT_WRAP_AFTER_CHILD_COUNT
<b>Object Sizing</b>	
<b>ExpandWidth</b>	HINT_EXPAND_WIDTH_TO_FIT_PARENT
<b>ExpandHeight</b>	HINT_EXPAND_HEIGHT_TO_FIT_PARENT
<b>NoWiderThanChildren</b>	HINT_NO_WIDER_THAN_CHILDREN_REQUIRE
<b>NoHigherThanChildren</b>	HINT_NO_TALLER_THAN_CHILDREN_REQUIRE
<b>initialSize</b>	HINT_INITIAL_SIZE
<b>minimumSize</b>	HINT_MINIMUM_SIZE
<b>maximumSize</b>	HINT_MAXIMUM_SIZE
<b>fixedSize</b>	HINT_FIXED_SIZE
ST_PIXELS	SST_PIXELS
ST_LINES_OF_TEXT	SST_LINES_OF_TEXT
old name: ST_TEXT_LINES	SST_LINES_OF_TEXT
ST_AVG_CHAR_WIDTH	SST_AVG_CHAR_WIDTHS
ST_MAX_CHAR_WIDTH	SST_WIDE_CHAR_WIDTHS
ST_PCT_OF_SCREEN_WIDTH	SST_PCT_OF_FIELD_WIDTH
ST_PCT_OF_SCREEN_HEIGHT	SST_PCT_OF_FIELD_HEIGHT
<b>Object Placement</b>	
<b>placeObject</b>	0 = nothing special
MENU_BAR	HINT_SEEK_MENU_BAR
REPLY_BAR	HINT_SEEK_REPLY_BAR
TITLE_BAR_LEFT	HINT_SEEK_TITLE_BAR_LEFT
TITLE_BAR_RIGHT	HINT_SEEK_TITLE_BAR_RIGHT
For View objects only:	HINT_SEEK_X_SCROLLER_AREA
	HINT_SEEK_Y_SCROLLER_AREA
	HINT_SEEK_LEFT_OF_VIEW
	HINT_SEEK_TOP_OF_VIEW
	HINT_SEEK_RIGHT_OF_VIEW
	HINT_SEEK_BOTTOM_OF_VIEW
<b>fixedPosition</b>	ATTR_GEN_POSITION
<b>Special Drawing</b>	
<b>DrawInBox</b>	HINT_DRAW_IN_BOX
<b>MakeReplyBar</b>	HINT_MAKE_REPLY_BAR
<b>MakeToolBox</b>	HINT_TOOLBOX
<b>bgColor</b>	HINT_GADGET_BACKGROUND_COLORS
<b>tColor</b>	HINT_GADGET_TEXT_COLOR
<b>NoSeparatorLine</b>	HINT_SAME_CATEGORY_AS_PARENT
<b>RaisedFrame</b>	HINT_RAISED_FRAME
RF_LEFT	GRFI_LEFT = 0x8000
RF_TOP	GRFI_TOP = 0x2000
RF_RIGHT	GRFI_RIGHT = 0x1000
RF_BOTTOM	GRFI_BOTTOM = 0x4000
<b>Window-Hints and Methods</b>	
<b>SizeWindowAsDesired</b>	HINT_SIZE_WINDOW_AS_DESIRED
<b>NoTitleBar</b>	HINT_WINDOW_NO_TITLE_BAR
<b>NoSysMenu</b>	HINT_WINDOW_NO_SYS_MENU
<b>WindowNotMovable</b>	HINT_NOT_MOVABLE

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

<b>PositionWindowAtMouse</b>	HINT_POSITION_WINDOW_AT_MOUSE
<b>WindowPositionFromParent</b>	HINT_POSITION_WINDOW_AT_RATIO_OF_PARENT
<b>WindowSizeFromParent</b>	HINT_WINDOW_AS_RATIO_OF_PARENT
<b>WindowSizeFromScreen</b>	HINT_WINDOW_AS_RATIO_OF_FIELD
<b>ExtendWindowToBottomRight</b>	HINT_EXTEND_WINDOW_TO_BOTTOM_RIGHT
<b>ExtendWindowNearBottomRight</b>	HINT_EXTEND_WINDOW_NEAR_BOTTOM_RIGHT
<b>StaggerWindow</b>	HINT_WINDOW_STAGGER_WINDOW
<b>CenterWindow</b>	HINT_WINDOW_CENTER_WINDOW
<b>TileWindow</b>	HINT_WINDOW_TILE_WINDOW
<b>WindowNoConstraints</b>	HINT_WINDOW_NO_CONSTRAINTS
<b>BringToTop</b>	MSG_GEN_BRING_TO_TOP
<b>LowerToBottom</b>	MSG_GEN_LOWER_TO_BOTTOM
<b>MoveWin</b>	MSG_GEN_SET_WIN_POSITION
<b>ResizeWin</b>	MSG_GEN_SET_WIN_SIZE
<a href="#">Apply related</a>	
<b>Apply</b>	MSG_GEN_APPLY
<b>ApplyEvenIfNotModified</b>	ATTR_GEN_SEND_APPLY_MSG_ON_APPLY_EVEN_IF_NOT_ENABLED
<b>ApplyEvenIfNotEnabled</b>	ATTR_GEN_SEND_APPLY_MSG_ON_APPLY_EVEN_IF_NOT_MODIFIED
<b>MakeDelayedApply</b>	ATTR_GEN_PROPERTY
<a href="#">Input related</a>	
<b>defaultFocus</b>	HINT_DEFAULT_FOCUS
<b>defaultTarget</b>	HINT_DEFAULT_TARGET
<b>targetable</b>	GI_attrs: GA_TARGETABLE

### **Input Handling - Keyboard, Focus, Target, Mouse**

Specified object classes only

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b><u>Keyboard Handling</u></b> Related object classes:	Application, InputLine, Memo, View, VisContent, BitmapContent, VisObj
Handler Type: <b>KeyboardAction</b>	
<b>OnKeyPressed</b>	MSG_META_KBD_CHAR
KF_FIRST_PRESS	CF_FIRST_PRESS
KF_REPEAT_PRESS	CF_REPEAT_PRESS
KF_RELEASE	CF_RELEASE
KF_STATE_KEY	CF_STATE_KEY
KF_EXTENDED	CF_EXTENDED
KS_RSHIFT	SS_RSHIFT
KS_LSHIFT	SS_LSHIFT
KS_RCTRL	SS_RCTRL
KS_LCTRL	SS_LCTRL
KS_RALT	SS_RALT
KS_LALT	SS_LALT
KS_SCROLL_LOCK	TS_SCROLLLOCK
KS_NUM_LOCK	TS_NUMLOCK
KS_CAPS_LOCK	TS_CAPSLOCK
<b>inputFlags</b>	(not supported by PC/GEOS-SDK)



## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

IF_IGNORE_FIRST_PRESS	1	
IF_IGNORE_REPEAT_PRESS	2	
IF_IGNORE_RELEASE	4	
IF_IGNORE_ANY_KEY	7	( 7 = 1 + 2 + 4 )
IF_FILTER_GENERATED_EVENTS	8	
IF_HANDLER_NO_FIRST_PRESS	16	
IF_HANDLER_NO_REPEAT_PRESS	32	
IF_HANDLER_NO_RELEASE	64	
IF_HANDLER_GENERATED_EVENTS	128	
IF_DONT_MAP_NUM_PAD	256	
IF_MAPPED_NUM_PAD_EXT_BIT	512	
<b>KbdEvent</b> (Method)		send MSG_META_KBD_CHAR with scan code = 0 to object
<b>KbdEventWithScancode</b>		send MSG_META_KBD_CHAR to object
Related object classes:		All generic and visual class object classes
<b>Focus and Target</b>		
Related object classes:		Application, Primary, Dialog, Menu (Focus only), InputLine, Memo, View, VisContent, BitmapContent, Display, DisplayGroup, VisObj
Handler Type: <b>FocusAction</b>		
<b>OnFocusChanged</b>		MSG_META_GAINED_FOCUS_EXCL MSG_META_LOST_FOCUS_EXCL
Handler Type: <b>TargetAction</b>		
<b>OnTargetChanged</b>		MSG_META_GAINED_TARGET_EXCL MSG_META_LOST_TARGET_EXCL
<b>Mouse Handling</b>		
Related object classes:		View, BitmapContent, VisContent, VisObj, Canvas, Image
Handler Type: <b>MouseButton</b>		
<b>OnMouseButton</b>		see ME_consts
<b>OnMouseMove</b>		see ME_consts
<b>OnMouseOver</b>		see ME_consts
<b>sendMouseEvents</b>		
ME_LEFT_DOWN	1	MSG_META_START_SELECT
ME_LEFT_UP	2	MSG_META_END_SELECT
ME_LEFT_DOUBLE	4	MSG_META_START_SELECT
ME_LEFT_HOLD	8	MSG_META_DRAG_SELECT
ME_RIGHT_DOWN	16	MSG_META_START_MOVE_COPY
ME_RIGHT_UP	32	MSG_META_END_MOVE_COPY
ME_RIGHT_DOUBLE	64	MSG_META_START_SELECT
ME_RIGHT_HOLD	128	MSG_META_DRAG_MOVE_COPY
ME_MOVE	256	MSG_META_MOUSE_PTR
ME_ENTER	512	MSG_META_MOUSE_PTR
		For Contents: MSG_META_RAW_UNIV_ENTER
ME_LEAVE	1024	MSG_META_MSG_META_MOUSE_PTR
		For Contents: MSG_META_RAW_UNIV_LEAVE
REPLACE_BITS	0	
SET_BITS	1	
CLEAR_BITS	2	
<b>GrabMouse</b> (Method)		MSG_VIS_GRAB_MOUSE
<b>ReleaseMouse</b> (Method)		MSG_VIS_RELEASE_MOUSE
<b>TestInside</b> (Method)		not supported by the PC/GEOS-SDK
<b>TestInsideAC</b> (Method)		not supported by the PC/GEOS-SDK

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### Application Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<u><b>Application-Class</b></u>  <b>AppToken</b> <b>DocToken</b> <b>ExtraToken</b> <b>LongName\$</b> <b>userNotes\$</b> <b>crNote\$</b>  <b>ActionHandlers</b> <b>SystemAction</b> <b>OnClipChange</b>  <b>OnInit</b> <b>OnStartup</b> <b>OnExit</b> <b>OnConnection</b> AF_FOR_PRINT  AF_RESTORE AF_DATA_FILE AF_SHUTDOWN  <u>Other Action Handlers</u> <b>OnKeyPressed</b> <b>OnFocusChanged</b> <b>OnTargetChanged</b>  <u>Methods</u> <b>MarkBusy</b> <b>MarkNotBusy</b> <b>HoldUpInput</b> <b>ResumeInput</b> <b>IgnoreInput</b> <b>AcceptInput</b>	<b>GenApplicationClass</b> some of the functions are implemented by <b>GenProcessClass</b>  MSG_GEN_PROCESS_INSTALL_TOKEN MSG_GEN_PROCESS_INSTALL_TOKEN MSG_GEN_PROCESS_INSTALL_TOKEN longname statement in gp file (patched to launcher) usernotes statement in gp file (patched to launcher) LINKFLAGS -N statement in local.mk (patched to launcher)  ClipboardAddToNotificationList MSG_META_CLIPBOARD_NOTIFY_NORMAL_TRANSFER_ITEM_CHANGED MSG_GEN_PROCESS_OPEN_APPLICATION MSG_GEN_PROCESS_OPEN_APPLICATION MSG_GEN_PROCESS_CLOSE_APPLICATION MSG_META_IACP_NEW_CONNECTION AppLaunchBlock->ALF_LaunchFlags: ALF_LAUNCHED_FOR_PRINTING_ONLY attachFlags: AAF_RESTORE_FROM_STATE attachFlags: AAF_DATA_FILE_PASSED MSG_GEN_APPLICATION_GET_STATE returns AS_QUIT_DETACHING not set in CLOSE_APPLICATION

### BitmapContent Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<u><b>BitmapContent-Class</b></u>  <b>bitmapFormat</b> BF_MASK BF_PALETTE <b>defaultColor</b> <b>DefaultScreen</b> <b>editMask</b> <b>suspendDraw</b>  <u>Methods</u> <b>GetBitmapHandle</b> <b>NewBitmapFromHandle</b> <b>CopyBitmap</b> <b>Redraw</b> <b>GetPaletteEntry</b> <b>SetPaletteEntry</b> <b>GetFullPalette</b> <b>SetFullPalette</b> <b>PokeLine</b> <b>PeekLine</b>	<b>VisContentClass</b>  not available in PC/GEOS-SDK 1      Transparent bitmap 2      Bitmap with palette not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK  not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

<u>Other Action Handlers</u> <b>OnFocusChanged</b> <b>OnTargetChanged</b> <b>OnKeyPressed</b> <b>OnMouseButton</b> <b>OnMouseMove</b> <b>OnMouseOver</b>	see "Input Handling" see "Input Handling" see "Input Handling" see "Input Handling" see "Input Handling" see "Input Handling"
--	--

### Button Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b><u>Button-Class</u></b>  <b>actionData</b> <b>interactionCommand</b> IC_CLOSE IC_APPLY IC_RESET IC_OK IC_YES IC_NO IC_STOP IC_HELP <b>BringsUpWindow</b> <b>IsDestructive</b> <b>unhandledEvents</b>  <u>ActionHandlers</u> <b>ButtonAction</b> <b>ActionHandler</b>  <u>special ActionHandler</u> BringUpHelp  <u>Methods</u> <b>Activate</b>	<b>GenTriggerClass</b>  ATTR_GEN_TRIGGER_ACTION_DATA ATTR_GEN_TRIGGER_INTERACTION_COMMAND IC_DISMISS 1 IC_APPLY 3 IC_RESET 4 IC_OK 5 IC_YES 6 IC_NO 7 IC_STOP 8 IC_HELP 10  HINT_TRIGGER_BRINGS_UP_WINDOW HINT_TRIGGER_DESTRUCTIVE_ACTION No PC/GEOS-SDK equivalent  GTI_destination = process, GTI_actionMsg   MSG_META_BRING_UP_HELP   MSG_GEN_ACTIVATE

### Canvas Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b><u>Canvas-Class</u></b>  <b>buffered</b> <b>bufferedDataSize</b> DS_TINY DS_SMALL DS_MEDIUM DS_LARGE DS_HUGE <b>defaultColor</b>  <u>ActionHandlers</u> <b>DrawAction</b> <b>OnDraw</b>  <u>Methods</u> <b>Dirty</b>	GenInteractionClass  not available in SDK not available in SDK 0 1 2 3 4 not available in SDK  MSG_VIS_DRAW   MSG_VIS_REDRAW_ENTIRE_OBJECT

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### ColorSelector Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>ColorSelector-Class</b>	<b>GenColorSelectorClass</b>
<b>csFeatures</b> CSF_FILL_PATTERN CSF_DRAW_MASK CSF_RGB CSF_INDEX CSF_MORE_COLORS	ATTR_GEN_CONTROL_REQUIRE_UI CSF_FILL_PATTERN (1) CSF_DRAW_MASK (2) CSF_RGB (4) CSF_INDEX (8) CSF_MORE_COLORS (32)
<b>csColor</b> <b>csIndexColor</b> <b>csDrawMask</b> <b>csDrawMaskValue</b> <b>csFillPattern</b>	CSI_color CSI_color CSI_drawMask CSI_drawMask CSI_pattern
<u>ActionHandlers</u> <b>ColorAction</b> <b>ColorChangedHandler</b>	GCI_output = oself, MSG_META_COLORED_OBJECT_~SET_COLOR, ~SET_DRAW_MASK. ~SET_APTTERN

### Dialog Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>Dialog-Class</b>	<b>GenInteractionClass</b> , GII_visibility = GIV_DIALOG
<b>MakeResizable</b> <b>NoFocus</b> <b>isOpen</b>	HINT_INTERACTION_MAKE_RESIZABLE HINT_INTERACTION_NO_DISTURB not available in PC/GEOS-SDK, set by messages: MSG_GEN_INTERACTION_INITIATE MSG_GEN_INTERACTION_INITIATE_NO_DISTURB MSG_GEN_GUP_INTERACTION_COMMAND(IC_CLOSE)
<b>interactionCommand</b>	not available in PC/GEOS-SDK, set by message MSG_GEN_GUP_INTERACTION_COMMAND()
<b>attrs</b> DA_HIDDEN_UNTIL_OPENED DA_BLOCKING	GII_attrs = GIA_NOT_USER_INITIATABLE GII_attrs = GIA_INITIATED_VIA_USER_DO_DIALOG + GIA_MODAL + GIA_NOT_USER_INITIATABLE
<b>modal</b> NON_MODAL APP_MODAL SYS_MODAL	(default) GII_attrs = GIA_MODAL GII_attrs = GIA_SYS_MODAL
<b>dialogType</b> DT_NORMAL DT_PROGRESS DT_COMMAND DT_NOTIFICATION DT_QUESTION DT_DELAYED_APPLY	GII_type = GIT_ORGANIZATIONAL GII_type = GIT_PROGRESS GII_type = GIT_COMMAND GII_type = GIT_NOTIFICATION GII_type = GIT_AFFIRMATION GII_type = GIT_PROPERTIES
<u>ActionHandlers</u> <b>DialogAction</b> <b>OnOpen</b> <b>OnClose</b> <b>OnCommand</b>	MSG_GEN_INTERACTION_INITIATE MSG_GEN_GUP_INTERACTION_COMMAND(IC_DISMISS) MSG_GEN_GUP_INTERACTION_COMMAND(<other>)

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

<u>Other Action Handlers</u> <b>OnFocusChanged</b> <b>OnTargetChanged</b>	see "Input Handling" see "Input Handling"
<u>Methods</u> <b>Open</b> <b>OpenNoDisturb</b> <b>Close</b>	MSG_GEN_INTERACTION_INITIATE() MSG_GEN_INTERACTION_INITIATE_NO_DISTURB() MSG_GEN_GUP_INTERACTION_COMMAND(IC_DISMISS)
<u>Routines</u> <b>OpenBlockingDialog(obj)</b>	UserDoDialog()

### Display Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>Display-Class</b>  minimizedState  MinimizedOnStartup NotMinimizable  maximizedState  MaximizedOnStartup NotMaximizable  NotResizable NotRestorable  userDismissable  <u>ActionHandlers</u> <b>DialogAction</b> <b>OnClose</b>  <u>Other Action Handlers</u> <b>OnFocusChanged</b> <b>OnTargetChanged</b>  <u>Methods</u> <b>Close</b>	<b>GenDisplayClass</b>  MSG_GEN_DISPLAY_GET_MINIMIZED MSG_GEN_DISPLAY_SET_MINIMIZED MSG_GEN_DISPLAY_SET_NOT_MINIMIZED HINT_DISPLAY_MINIMIZED_ON_STARTUP HINT_DISPLAY_NOT_MINIMIZABLE  MSG_GEN_DISPLAY_GET_MAXIMIZED MSG_GEN_DISPLAY_SET_MAXIMIZED MSG_GEN_DISPLAY_SET_NOT_MAXIMIZED HINT_DISPLAY_MAXIMIZED_ON_STARTUP HINT_DISPLAY_NOT_MAXIMIZABLE  HINT_DISPLAY_NOT_RESIZABLE HINT_DISPLAY_NOT_RESTORABLE  GDI_Attributes = GDA_USER_DISMISSABLE MSG_GEN_DISPLAY_SET_ATTRS MSG_GEN_DISPLAY_GET_ATTRS  MSG_GEN_DISPLAY_CLOSE  see "Input Handling" see "Input Handling"
MSG_GEN_DISPLAY_CLOSE	MSG_GEN_DISPLAY_CLOSE

### DisplayControl Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>DisplayControl-Class</b>  nameOnPrimaryIfMaximized dcFeatures DCF_OVERLAPP_FULL DCF_TILE DCF_DISPLAY_LIST	<b>GenDisplayControlClass</b>  GDCII_attrs = GDCA_MAXIMIZED_NAME_ON_PRIMARY ATTR_GEN_CONTRO_REQUIRE_UI / PROHIBIT_UI GDCF_OVERLAPPING_MAXIMIZED = 4 GDCF_TILE = 2 GDCF_DISPLAY_LIST = 1

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### DisplayGroup Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b><u>DisplayGroup-Class</u></b>  fullSizedState  activeDisplay NoFullSizeMode NoOverlappingMode TileHorizontally TileVertically SizeIndependlyOfDisplays  Methods <b>TileDisplays</b> <b>SelectDisplay (n)</b>	<b>GenDisplayGroupClass</b>  MSG_GEN_DISPLAY_GROUP_GET_FULL_SIZED MSG_GEN_DISPLAY_GROUP_SET_FULL_SIZED MSG_GEN_DISPLAY_GROUP_SET_OVERLAPPING MSG_META_GET_TARGET_EXCL ATTR_GEN_DISPLAY_GROUP_NO_FULL_SIZED ATTR_GEN_DISPLAY_GROUP_NO_OVERLAPPING HINT_DISPLAY_GROUP_TILE_HORIZONTALLY HINT_DISPLAY_GROUP_TILE_VERTICALLY HINT_DISPLAY_GROUP_SIZE_INDEPENDENTLY_OF_DISPLAYS  MSG_GEN_DISPLAY_GROUP_TILE_DISPLAYS MSG_GEN_DISPLAY_CLOSE_SELECT_DISPLAY

### DocumentGuardian Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b><u>DocumentGuardian-Class</u></b>  <b>ButtonHandler</b> <b>configData</b> <b>documentState</b> DOCS_OPEN DOCS_MODIFIED DOCS_UNTITLED DOCS_READ_ONLY DOCS_EDIT_TEMPLATE <b>documentHandle</b> <b>documentName\$</b> <b>documentPath\$</b> <b>documentUserData</b>  <b>SetDocumentState</b> <b>CreateNewDocument</b> <b>OpenDocument</b> <b>CloseDocument</b> <b>HandleShutdown</b> <b>HandleRestart</b>	<b>GenInteractionClass</b>  not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK 1 2 4 8 16 not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK  not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK not available in PC/GEOS-SDK

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### DynamicList Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<p><b><u>DynamicList-Class</u></b></p> <p>DynamicList is a subclass of <b>RadioButtonGroup</b>. It inherits all instance variables, methods and handlers from this class.</p> <p>Internally, all BASIC instance variables &amp; Co of DynamicList class are implemented as copy of RadioButtonClass. This will look to the BASIC user, as if it is a subclass of RadioButtonClass, as it is in the PC/GEOS-SDK</p> <p><b>numItems</b>                      direct set in UI Code                      write in BASIC Code                      read in BASIC Code</p> <p><u>ActionHandlers</u> <b>ListAction</b>  <b>QueryHandler</b></p> <p><b>ItemText\$ (n)</b>  <b>ItemGString (n)</b></p> <p><u>Methods</u>  <b>InsertItems</b>  <b>RemoveItems</b></p> <p><u>Other ActionHandlers</u>  <b>ApplyHandler</b>  <b>DoublePressHandler</b>  <b>StatusHandler</b></p>	<p><b>GenDynamicListClass</b></p> <p>GDLI_numItems                      GDLI_numItems                      MSG_GEN_DYNAMIC_LIST_INITIALIZE()                      MSG_GEN_DYNAMIC_LIST_GET_NUM_ITEMS()</p> <p>GDLI_queryMsg</p> <p>MSG_GEN_DYNAMIC_LIST_REPLACE_ITEM_TEXT()                      MSG_GEN_DYNAMIC_LIST_REPLACE_ITEM_MONIKER()</p> <p>MSG_GEN_DYNAMIC_LIST_ADD_ITEMS                      MSG_GEN_DYNAMIC_LIST_REMOVE_ITEMS</p> <p>GIGI_destination, GIGI_applyMsg                      ATTR_GEN_ITEM_GROUP_CUSTOM_DOUBLE_PRESS                      ATTR_GEN_ITEM_GROUP_STATUS_MSG</p>

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### FileSelector Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>FileSelector-Class</b>	<b>GenFileSelectorClass</b>
<b>selection\$</b>	MSG_GEN_FILE_SELECTOR_GET_SELECTION MSG_GEN_FILE_SELECTOR_SET_SELECTION
<b>path\$</b>	MSG_GEN_FILE_SELECTOR_GET_FULL_SELECTION_PATH MSG_GEN_FILE_SELECTOR_SET_FULL_SELECTION_PATH
<b>fullPath\$</b>	MSG_GEN_FILE_SELECTOR_GET_FULL_SELECTION_PATH MSG_GEN_FILE_SELECTOR_SET_FULL_SELECTION_PATH
<b>initialPath</b>	MSG_GEN_PATH_SET
<b>entryFlags</b>	MSG_GEN_FILE_SELECTOR_GET_SELECTION
FEF_SUBDIR	GFSEF_TYPE : GFSET_SUBDIR   GFSET_VOLUME
FEF_OPEN	GFSEF_OPEN
FEF_NO_ENTRY	GFSEF_NO_ENTRY
FEF_ERROR	GFSEF_ERROR
FEF_TEMPLATE	GFSEF_TEMPLATE
FEF_READ_ONLY	GFSEF_READ_ONLY
FEF_PARENT	GFSEF_PARENT_DIR
<b>numFilesToShow</b>	HINT_FILE_SELECTOR_NUMBER_OF_FILES_TO_SHOW
<b>fileListWidth</b>	HINT_FILE_SELECTOR_FILE_LIST_WIDTH
<b>showFilesDisabled</b>	GFSI_attrs: FSA_SHOW_FILES_DISABLED
<b>matchToken</b>	ATTR_GEN_FILE_SELECTOR_TOKEN_MATCH
<b>matchCreator</b>	ATTR_GEN_FILE_SELECTOR_CREATOR_MATCH
<b>matchMask\$</b>	ATTR_GEN_FILE_SELECTOR_NAME_MATCH
<b>matchCriteria</b>	GFSI_fileCriteria
FMC_DIRS	FSMC_DIRS
FMC_DOS_FILES	FSMC_NON_GEOS_FILES
FMC_GEOS_EXEC	FSMC_GEOS_EXECUTABLES
FMC_GEOS_DATA	FSMC_GEOS_NON_EXECUTABLES
FMC_ALL_FILES	—
FMC_MASK_CASE_INSENSITIVE	FSMC_MASK_CASE_INSENSITIVE
FMC_USE_MASK_FOR_DIRS	FSMC_USE_MASK_FOR_DIRS
<b>hasMatchToken</b>	Get: ATTR_GEN_FILE_SELECTOR_TOKEN_MATCH
<b>hasMatchCreator</b>	Get: ATTR_GEN_FILE_SELECTOR_CREATOR_MATCH
<b>ActionHandlers FileAction</b>	
<b>NotificationHandler</b>	GFSI_destination = oself, GFSI_notificationMsg
<b>Methods</b>	
<b>ClearMatchToken</b>	Remove: ATTR_GEN_FILE_SELECTOR_TOKEN_MATCH
<b>ClearMatchCreator</b>	Remove: ATTR_GEN_FILE_SELECTOR_CREATOR_MATCH
<b>Suspend</b>	MSG_GEN_FILE_SELECTOR_SUSPEND
<b>EndSuspend</b>	MSG_GEN_FILE_SELECTOR_END_SUSPEND
<b>Rescan</b>	MSG_GEN_FILE_SELECTOR_RESCAN
<b>UpDirectory</b>	MSG_GEN_FILE_SELECTOR_UP_DIRECTORY,
	MSG_GEN_FILE_SELECTOR_SET_FULL_SELECTION_PATH
<b>OpenEntry</b>	MSG_GEN_FILE_SELECTOR_OPEN_ENTRY(currentSel)



## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### GenContent Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b><u>GenContent-Class</u></b>	<b>GenContentClass</b>
<b>contentAttrs</b> CA_SAME_WIDTH_AS_VIEW CA_SAME_HEIGHT_AS_VIEW CA_VIEW_DOC_BOUNDS_SET	GCI_attrs VCNA_SAME_WIDTH_AS_VIEW = 0x80 VCNA_SAME_HEIGHT_AS_VIEW = 0x40 MANUALLY VCNA_VIEW_DOC_BOUNDS_SET_MANUALLY = 0x04
<b>KeepFocusVisible</b>	HINT_CONTENT_KEEP_FOCUS_VISIBLE

### Group Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b><u>Group-Class</u></b>	<b>GenInteractionClass</b> , GII_visibility = GIV_SUB_GROUP
<b>CannotBeDefault</b>	HINT_INTERACTION_CANNOT_BE_DEFAULT

### Image Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b><u>Image-Class</u></b>	<b>GenInteractionClass</b>
<b>ImageFile</b>	not available in SDK
<b>ImagePicture</b>	not available in SDK
<b>ImageResource</b>	not available in SDK
<b>numPicts</b>	not available in SDK
<b>pictNum</b>	not available in SDK
<b>imgInfo</b>	not available in SDK
<b>imgState</b>	not available in SDK
IMGS_NO_IMAGE	0 No image or error
IMGS_BITMAP	1 Still picture, bitmap
IMGS_GSTRING	2 Still picture, gstring
IMGS_ANIMATION_RUNNING	3 animation, running
IMGS_ANIMATION_PAUSE	4 animation, paused
<b>scale</b>	not available in SDK, uses GrApplyScale
<b>drawPos</b>	not available in SDK, uses GrApplyTranslation
<b>borderColor</b>	not available in SDK
<b>bgColor</b>	not available in SDK
<b>autoSize</b>	not available in SDK
<b>autoStart</b>	not available in SDK
<b>currentFrame</b>	not available in SDK
<b>numFrames</b>	not available in SDK
<b>animationTics</b>	not available in SDK
<u>Methods</u>	
<b>AnimationStart</b>	TimerStart()
<b>AnimationStop</b>	TimerStop()
<b>AnimationNext</b>	not available in SDK
<b>Redraw</b>	not available in SDK

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### InputLine Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b><u>InputLine-Class</u></b>	<b>BASIC-MemoClass</b> ( GenTextClass ) GTXI_attrs = GTA_SINGLE_LINE_TEXT
<b>no own instance variables</b>	inherits all from <b>MemoClass</b>

### LargeText Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b><u>LargeText-Class</u></b>	<b>VisLargeTextClass</b>
<b>approxSize</b>	not available in SDK
<b>all other instance variables</b>	see <b>VisText Class</b>
<b>Note</b> VisText instance variables, that deal with the <b>geometry</b> as well as <b>drawable, detectable</b> and <b>managed</b> are <b>not supported</b>	

### Memo Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b><u>Memo-Class</u></b>	<b>GenTextClass</b>
<b>text\$</b>	GTXI_text
<b>maxLen</b>	GTXI_maxLength
<b>textLen</b>	MSG_VIS_TEXT_GET_TEXT_SIZE()
<b>cursorPos</b>	read: MSG_VIS_TEXT_GET_SELECTION_RANGE write: MSG_VIS_TEXT_SELECT_RANGE_SMALL
<b>selectionEnd</b>	read: MSG_VIS_TEXT_GET_SELECTION_RANGE write: MSG_VIS_TEXT_SELECT_RANGE_SMALL
<b>selectionLen</b>	read: MSG_VIS_TEXT_GET_SELECTION_RANGE write: MSG_VIS_TEXT_SELECT_RANGE_SMALL
<b>SelectedText\$</b>	MSG_VIS_TEXT_GET_SELECTION_PTR
<b>TextRange\$</b>	MSG_VIS_TEXT_GET_SELECTION_PTR
<b>fontID</b>	ATTR_GEN_TEXT_CHAR_ATTR: VTCA_fontID
<b>fontSize</b>	ATTR_GEN_TEXT_CHAR_ATTR: VTCA_pointSize
<b>textStyle</b>	ATTR_GEN_TEXT_CHAR_ATTR: VTCA_textStyles
TS_UNDERLINE	1
TS_STRIKE_THRU	2
TS_SUBSCRIPT	4
TS_SUPERSCRIPT	8
TS_ITALIC	16
TS_BOLD	32
TS_OUTLINE	64
<b>textColor</b>	ATTR_GEN_TEXT_CHAR_ATTR: VTCA_color
<b>backColor</b>	HINT_TEXT_WASH_COLOR
<b>justifyText</b>	ATTR_GEN_TEXT_PARA_ATTR: VTPA_attributes
<b>lineSpacing</b>	ATTR_GEN_TEXT_PARA_ATTR: VTPA_lineSpacing
<b>margins</b>	ATTR_GEN_TEXT_PARA_ATTR: VTPA_leftMargin, VTPA_rightMargin, VTPA_paraMargin
<b>topSpace</b>	ATTR_GEN_TEXT_PARA_ATTR: VTPA_spaceOnTop

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

<b>textFilter</b>	
TF_NONE	-
TF_NORMAL_ASCII	ATTR_GEN_TEXT_NORMAL_ASCII
TF_DOS_CHARACTER_SET	ATTR_GEN_TEXT_DOS_CHARACTER_SET
TF_ALPHA	ATTR_GEN_TEXT_ALPHA
TF_ALPHA_NUMERIC	ATTR_GEN_TEXT_ALPHA_NUMERIC
TF_DASHED_ALPHA_NUMERIC	ATTR_GEN_TEXT_DASHED_ALPHA_NUMERIC
TF_NUMERIC	ATTR_GEN_TEXT_NUMERIC
TF_SIGNED_NUMERIC	ATTR_GEN_TEXT_SIGNED_NUMERIC
TF_SIGNED_DECIMAL	ATTR_GEN_TEXT_SIGNED_DECIMAL
TF_FLOAT_DECIMAL	ATTR_GEN_TEXT_FLOAT_DECIMAL
TF_LEGAL_FILENAMES	ATTR_GEN_TEXT_LEGAL_FILENAMES
TF_LEGAL_DOS_FILENAMES	ATTR_GEN_TEXT_LEGAL_DOS_FILENAMES
TF_LEGAL_DOS_PATH	ATTR_GEN_TEXT_LEGAL_DOS_PATH
TF_LEGAL_DOS_VOLUME_NAMES	ATTR_GEN_TEXT_LEGAL_DOS_VOLUME_NAMES
TF_DATE	ATTR_GEN_TEXT_DATE
TF_TIME	ATTR_GEN_TEXT_TIME
TF_MAKE_UPPERCASE	ATTR_GEN_TEXT_MAKE_UPPERCASE
TF_ALLOW_SPACES	ATTR_GEN_TEXT_ALLOW_SPACES
TF_NO_SPACES	ATTR_GEN_TEXT_NO_SPACES
<b>TextFrame</b>	HINT_TEXT_FRAME
<b>TextNoFrame</b>	HINT_TEXT_NO_FRAME
<b>SelectableIfRO</b>	ATTR_GEN_TEXT_SELECTABLE
<b>textAttrs</b>	<b>GTXI_attrs (GTA_ ... ), HINT_TEXT_ ... ATTR_GEN_TEXT</b>
TA_DONT_SCROLL_TO_CHANGES	GTA_DONT_SCROLL_TO_CHANGES
TA_TAIL_ORIENTED	GTA_TAIL_ORIENTED
TA_ALLOW_TEXT_OFF_END	GTA_ALLOW_TEXT_OFF_END
TA_NO_WORD_WRAPPING	GTA_NO_WORD_WRAPPING
TA_INIT_SCROLLING	GTA_INIT_SCROLLING
TA_USE_TAB_FOR_NAVIGATION	GTA_USE_TAB_FOR_NAVIGATION
TA_NEVER_SCROLLABLE	ATTR_GEN_TEXT_NEVER_MAKE_SCROLLABLE
TA_SELECT_TEXT	HINT_TEXT_SELECT_TEXT
TA_CURSOR_AT_START	HINT_TEXT_CURSOR_AT_START
TA_CURSOR_AT_END	HINT_TEXT_CURSOR_AT_END
<b>modified</b>	GTXI_stateFlags = 0   GTSF_MODIFIED (0x40) MSG_GEN_TEXT_SET_MODIFIED_STATE() MSG_GEN_TEXT_IS_MODIFIED()
<b>ActionHandlers</b>	<b>TextAction</b>
<b>ApplyHandler</b>	GTXI_destination, GTXI_applyMsg
<b>OnModified</b>	MSG_META_TEXT_USER_MODIFIED()
<b>StatusHandler</b>	ATTR_GEN_TEXT_STATUS_MSG
<b>OnSelectionChanged</b>	MSG_META_KBD_CHAR, MSG_META_START_SELECT, MSG_META_PTR, MSG_VIS_TEXT_SELECT_RANGE
<b>Other Action Handlers</b>	
<b>OnKeyPressed</b>	see "Input Handling"
<b>OnFocusChanged</b>	see "Input Handling"
<b>OnTargetChanged</b>	see "Input Handling"
<b>Methods</b>	
<b>SendStatus</b>	MSG_GEN_TEXT_SEND_STATUS_MSG(0)
<b>Append</b>	MSG_VIS_TEXT_APPEND_PTR
<b>Insert</b>	MSG_VIS_TEXT_SELECT_RANGE(cursorPos) + MSG_VIS_TEXT_REPLACE_SELECTION_PTR
<b>ReplaceSelection</b>	MSG_VIS_TEXT_REPLACE_SELECTION_PTR
<b>DeleteSelection</b>	MSG_VIS_TEXT_DELETE_SELECTION
<b>DeleteRange</b>	MSG_VIS_TEXT_SELECT_RANGE + MSG_VIS_TEXT_DELETE_SELECTION
<b>ShowCursor</b>	MSG_VIS_TEXT_SELECT_RANGE(cursorPos) + MSG_VIS_TEXT_SHOW_POSITION
<b>ScrollDown</b>	MSG_VIS_TEXT_SCROLL_PAGE_DOWN
<b>ScrollUp</b>	MSG_VIS_TEXT_SCROLL_PAGE_UP
<b>Suspend</b>	MSG_META_SUSPEND
<b>EndSuspend</b>	MSG_META_UNSPEND

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

<u>File related Methods</u> <b>WriteToFile</b> <b>ReplaceFromFile</b> <b>InsertFromFile</b> <b>FileTextSize</b> <b>WriteToVMFile</b> <b>ReplaceFromVMFile</b> <b>InsertFromVMFile</b> <b>VMFileTextSize</b>	File related methods are not supported in SDK
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### Menu Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<u>Menu-Class</u>  <u>Other Action Handlers</u> <b>OnFocusChanged</b>	<b>GenInteractionClass</b> , GII_visibility = GIV_POPUP  see "Input Handling"

### Number Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>Number-Class</b>  <b>value</b> <b>minVal</b> <b>maxVal</b> <b>incVal</b>  <b>modified</b>  <b>displayFormat</b> DF_INTEGER DF_DECIMAL DF_POINTS DF_INCHES DF_CENTIMETERS DF_MILLIMETERS DF_PICAS DF_EUR_POINT DF_CICEROS DF_POINTS_OR_MILLIMETERS DF_INCHES_OR_CENTIMETERS  <b>decimal</b>  <b>NavigateToNextFieldOnReturn</b>  <b>look</b> LOOK_NORMAL LOOK_NOT_DIGITALLY_EDITABLE LOOK_NOT_INCREMENTABLE LOOK_X_SLIDER  LOOK_Y_SLIDER	<b>GenValueClass</b>  GVLI_value GVLI_minimum GVLI_maximum GVLI_increment  GVLI_stateFlags = 0   GVSF_MODIFIED  GVLI_displayFormat GVDF_INTEGER (0) GVDF_DECIMAL (1) GVDF_POINTS (2) GVDF_INCHES (3) GVDF_CENTIMETERS (4) GVDF_MILLIMETERS (5) GVDF_PICAS (6) GVDF_EUR_POINTS (7) GVDF_CICEROS (8) GVDF_POINTS_OR_MILLIMETERS (9) GVDF_INCHES_OR_CENTIMETERS (10)  ATTR_GEN_VALUE_DECIMAL_PLACES  HINT_VALUE_NAVIGATE_TO_NEXT_FIELD_ON_RETURN_PRESS  no special hints HINT_VALUE_NOT_DIGITALLY_EDITABLE HINT_VALUE_NOT_INCREMENTABLE HINT_VALUE_ANALOG_DISPLAY + HINT_VALUE_ORIENT_HORIZONTALLY HINT_VALUE_ANALOG_DISPLAY + HINT_VALUE_ORIENT_VERTICALLY

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

<p>Customize Sliders</p> <p><b>SliderNoDigitalDisplay</b> <b>SliderShowMinMax</b> <b>sliderShowIntervals</b></p> <p>ActionHandlers <b>NumberAction</b></p> <p><b>ApplyHandler</b> <b>StatusHandler</b></p> <p>Methods</p> <p><b>Increment</b> <b>Decrement</b> <b>SendStatus</b></p>	<p>HINT_VALUE_NO_DIGITAL_DISPLAY HINT_VALUE_SHOW_MIN_AND_MAX HINT_VALUE_DISPLAY_INTERVALS</p> <p>GVLl_destination=process, GVLl_applyMsg ATTR_GEN_VALUE_STATUS_MSG</p> <p>MSG_GEN_VALUE_INCREMENT MSG_GEN_VALUE_DECREMENT MSG_GEN_VALUE_SEND_STATUS_MSG(0)</p>
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### Option Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>Option-Class</b>	<b>GenBooleanClass</b>
identifier	GBI_identifier

### OptionGroup Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>OptionGroup-Class</b>	
<p><b>selection</b> <b>isSelected</b> <b>modified</b> <b>isModified</b> <b>look</b>     LOOK_NORMAL     LOOK_SCROLLABLE     LOOK_MINIMIZE_SIZE     LOOK_TOOLBOX</p>	<p>GBGI_selectedBooleans MSG_GEN_BOOLEAN_GROUP_IS_BOOLEAN_SELECTED GBGI_modifiedBooleans MSG_GEN_BOOLEAN_GROUP_IS_BOOLEAN_MODIFIED</p> <p>no special hints HINT_BOOLEAN_GROUP_SCROLLABLE HINT_BOOLEAN_GROUP_MINIMIZE_SIZE HINT_BOOLEAN_GROUP_TOOLBOX_STYLE</p>
<p>ActionHandlers <b>ListAction</b></p> <p><b>ApplyHandler</b> <b>StatusHandler</b></p>	<p>GBGI_destination, GBGI_applyMsg ATTR_GEN_BOOLEAN_GROUP_STATUS_MSG</p>
<p>Methods</p> <p><b>SendStatus</b> <b>MakeVisible</b></p>	<p>MSG_GEN_BOOLEAN_GROUP_SEND_STATUS_MSG(0) MSG_GEN_BOOLEAN_GROUP_MAKE_BOOLEAN_VISIBLE</p>

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### PageSizeControl Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>PageSizeControl-Class</b>  <b>pscFeatures</b> PSCF_MARGINS PSCF_CUSTOM_SIZE PSCF_LAYOUT PSCF_SIZE_LIST PSCF_PAGE_TYPE PSC_DEFAULT_FEATURES  <b>pageSize</b> PS_WIDTH PS_HEIGHT  <b>pageMargins</b> PS_LEFT_MARGIN PS_TOP_MARGIN PS_RIGHT_MARGIN PS_BOTTOM_MARGIN  <b>pageLayout</b> PL_PAPER PL_PAPER_LANDSCAPE PL_ENVELOPE PL_LABEL  Methods: <b>ShowDialog</b>	<b>GenPageSizeControl</b> PCZI_attrs = PCZA_ACT_LIKE_GADGET   PZCA_INITIALIZE  ATTR_GEN_CONTRO_REQUIRE_UI / PROHIBIT_UI PSIZECF_MARGINS = 16 PSIZECF_CUSTOM_SIZE = 8 PSIZECF_LAYOUT = 4 PSIZECF_SIZE_LIST = 2 PSIZECF_PAGE_TYPE = 1 = 15 ' margins are off by default PZCI_width, PZCI_height 4 5 PZCI_margins 0 1 2 3 PZCI_layout 0 8 2 4  MSG_GEN_INTERACTION_INITIATE

### Primary Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>Primary-Class</b>  <b>BreakButton</b> <b>FileMenuChildren</b> <b>Caption2\$</b> <b>PrimaryFullScreen</b> <b>NoFileMenu</b> <b>NoExpressMenu</b> <b>PrimaryNoHelpButton</b>  <u>Other Action Handlers</u> <b>OnFocusChanged</b> <b>OnTargetChanged</b>	<b>GenPrimaryClass</b>  No PC/GEOS-SDK equivalent. No PC/GEOS-SDK equivalent. MSG_GEN_PRIMARY_GET/SET_LONG_TERM_MONIKER HINT_PRIMARY_FULL_SCREEN HINT_PRIMARY_NO_FILE_MENU HINT_PRIMARY_NO_EXPRESS_MENU HINT_PRIMARY_NO_HELP_BUTTON  see "Input Handling" see "Input Handling"

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### PrintControl Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>PrintControl-Class</b>	<b>GenPrintControlClass</b> PCI_output = oself PCI_docNameOutput = oself
<b>pcAttrs</b>	PCI_attrs
PCA_NO_PRINTER_CONTROLS	PCA_NO_PRINTER_CONTROLS = &h8000
PCA_SEE_IF_DOC_WILL_FIT	PCA_SEE_IF_DOC_WILL_FIT = &h4000
PCA_MARK_APP_BUSY	PCA_MARK_APP_BUSY = &h2000
PCA_VERIFY_PRINT	PCA_VERIFY_PRINT = &h1000
PCA_SHOW_PROGRESS	PCA_SHOW_PROGRESS = &h800
PCA_PROGRESS_PERCENT	PCA_PROGRESS_PERCENT = &h400
PCA_PROGRESS_PAGE	PCA_PROGRESS_PAGE = &h200
PCA_FORCE_ROTATION	PCA_FORCE_ROTATION = &h100
PCA_COPY_CONTROLS	PCA_COPY_CONTROLS = &h80
PCA_PAGE_CONTROLS	PCA_PAGE_CONTROLS = &h40
PCA_QUALITY_CONTROLS	PCA_QUALITY_CONTROLS = &h20
PCA_USES_DIALOG_BOX	PCA_USES_DIALOG_BOX = &h10
PCA_GRAPHICS_MODE	PCA_GRAPHICS_MODE = &h8
PCA_TEXT_MODE	PCA_TEXT_MODE = &h4
PC_DEFAULT_ATTRS	= 0x48FC
<b>pcAppUI</b>	ATTR_PRINT_CONTROL_APP_UI
<b>pcDocSize</b>	PCI_docSizeInfo.PSR_width, ~.PSR_height
PS_WIDTH	4
PS_HEIGHT	5
<b>pcDocMargins</b>	PCI_docSizeInfo.PSR_margins
PS_LEFT_MARGIN	0
PS_TOP_MARGIN	1
PS_RIGHT_MARGIN	2
PS_BOTTOM_MARGIN	3
<b>pcLayout</b>	PCI_docSizeInfo.PSR_layout
PL_PAPER	0
PL_PAPER_LANDSCAPE	8
PL_ENVELOPE	2
PL_LABEL	4
<b>pcPaperSizeInfo</b>	MSG_PRINT_CONTROL_GET_PAPER_SIZE_INFO
PS_-constants	see above
<b>totalPageRange</b>	PCI_startPage, PCI_endPage
<b>userPageRange</b>	PCI_startUserPage, PCI_endUserPage
<b>printJobName\$</b>	not available in PC/GEOS-SDK
<b>printMode</b>	MSG_PRINT_CONTROL_GET_PRINT_MODE
<b>Action Handles</b> <b>DrawAction</b>	
<b>OnPrint</b>	MSG_PRINT_START_PRINTING
<b>OnVerifyPrint</b>	MSG_PRINT_CONTROL_VERIFY_PRINT_REQUEST
<b>Methods</b>	
<b>InitiatePrint</b>	MSG_PRINT_CONTROL_INITIATE_PRINT
<b>PrintingCompleted</b>	MSG_PRINT_CONTROL_PRINTING_COMPLETED
<b>PrintingCancelled</b>	MSG_PRINT_CONTROL_PRINT(ING_CANCELLED
<b>PrintingVerified</b>	MSG_PRINT_CONTROL_VERIFY_COMPLETED
<b>ReportProgress</b>	MSG_PRINT_CONTROL_REPORT_PROGRESS
RPT_PAGE	0
PRT_PERCENT	2
<b>ReportProgressText</b>	MSG_PRINT_CONTROL_REPORT_PROGRESS
<b>PrintNewPage</b>	GrNewPage()

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### RadioButton Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>RadioButton-Class</b>	<b>GenItemClass</b>
<b>identifier</b>	GII_identifier

### RadioButtonGroup Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>RadioButtonGroup-Class</b>	<b>GenItemGroupClass</b>
<b>behavior</b> LB_EXCLUSIVE LB_EXCLUSIVE_NONE LB_EXTENDED_SELECTION LB_NON_EXCLUSIVE	GIGI_behaviorType GIGBT_EXCLUSIVE (0) GIGBT_EXCLUSIVE_NONE (1) GIGBT_EXTENDED_SELECTION (2) GIGBT_NON_EXCLUSIVE (3)
<b>selection</b> NONE_SELECTED	GIGI_selection 0xFFFF (GIGS_NONE)
<b>isSelected</b>	MSG_GEN_ITEM_GROUP_IS_ITEM_SELECTED
<b>numSelections</b>	GIGI_numSelections
<b>modified</b>	GIGI_stateFlags = 0   GIGSF_MODIFIED
<b>ModifiedOnRedundantSelection</b>	ATTR_GEN_ITEM_GROUP_SET_MODIFIED_ON_REDUNDANT_SELECTION
<b>ActionHandlers ListAction</b>	
<b>ApplyHandler</b>	GIGI_destination GIGI_applyMsg
<b>DoublePressHandler</b>	ATTR_GEN_ITEM_GROUP_CUSTOM_DOUBLE_PRESS
<b>StatusHandler</b>	ATTR_GEN_ITEM_GROUP_STATUS_MSG
<b>DisplayCurrentSelection</b>	HINT_ITEM_GROUP_DISPLAY_CURRENT_SELECTION
<b>look</b> LOOK_NORMAL LOOK_SCROLLABLE LOOK_MINIMIZE_SIZE LOOK_TOOLBOX  LOOK_TABS_TOP LOOK_TABS_LEFT LOOK_TABS_RIGHT LOOK_TABS_BOTTOM	no special hints HINT_ITEM_GROUP_SCROLLABLE HINT_ITEM_GROUP_MINIMIZE_SIZE HINT_ITEM_GROUP_TOOLBOX_STYLE  Combinations of HINT_ITEM_GROUP_TAB_STYLE with HINT_ORIENT_CHILDREN_HORIZONTALLY/VERTICALLY HINT_EXPAND_WIDTH/HEIGHT_TO_FIT_PARENT HINT_RIGHT/BOTTOM_JUSTIFY_CHILDREN
<b>DontCenterTabbedChildren</b>	HINT_ITEM_GROUP_DONT_CENTER_TABBED_CHIDREN
<b>Methods</b>	
<b>SendStatus</b>	MSG_GEN_ITEM_GROUP_SEND_STATUS_MSG(0)
<b>MakeVisible</b>	MSG_GEN_ITEM_GROUP_MAKE_ITEM_VISIBLE
<b>SelectItem</b>	MSG_GEN_ITEM_GROUP_SET_ITEM_STATE



## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### View Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>View-Class</b>	<b>GenViewClass</b>
<u>Basic Configuration</u>	
<b>Content</b>	GVI_content
<b>contentSize</b>	GVI_docBounds
<b>Redraw</b>	MSG_GEN_VIEW_REDRAW_CONTENT()
<b>viewAttrs</b>	GVI_attrs
VA_CONTROLLED	GVA_CONTROLLED
VA_GENERIC_CONTENTS	GVA_GENERIC_CONTENTS
VA_DRAG_SCROLLING	GVA_DRAG_SCROLLING
VA_NO_WIN_FRAME	GVA_NO_WIN_FRAME
VA_SAME_COLOR_AS_PARENT_WIN	GVA_SAME_COLOR_AS_PARENT_WIN
VA_VIEW_FOLLOWS_CONTENT_GEOMETRY	GVA_VIEW_FOLLOWS_CONTENT_GEOMETRY
VA_SCALE_TO_FIT	GVA_SCALE_TO_FIT
VA_ADJUST_FOR_ASPECT_RATIO	GVA_ADJUST_FOR_ASPECT_RATIO
	Note: The GVI_attrs not listed here are either not available or are available using other instance variables
<u>Geometry</u>	
<b>hControl</b>	GVI_horizAttrs
<b>vControl</b>	GVI_vertAttrs
HVC_SCROLLABLE	GVDA_SCROLLABLE
HVC_TAIL_ORIENTED	GVDA_TAIL_ORIENTED
HVC_NO_SCROLLBAR	GVDA_DONT_DISPLAY_SCROLLBAR
HVC_NO_LARGER_THAN_CONTENT	GVDA_NO_LARGER_THAN_CONTENT
HVC_NO_SMALLER_THAN_CONTENT	GVDA_NO_SMALLER_THAN_CONTENT
HVC_KEEP_ASPECT_RATIO	GVDA_KEEP_ASPECT_RATIO
<b>viewColor</b>	GVI_color
<b>HideScrollersWhenNotScrollable</b>	HINT_VIEW_REMOVE_SCROLLERS_WHEN_NOT_SCROLLABLE
<u>Scaling and Scrolling</u>	
<b>scale</b>	GVI_scaleFactor
<b>scaleToFitOptions</b>	
SFO_PAGE_SIZE	ATTR_GEN_VIEW_PAGE_SIZE
SFO_BASED_ON_X	ATTR_GEN_VIEW_SCALE_TO_FIT_BASED_ON_X
SFO_BOTH_DIMENSIONS	ATTR_GEN_VIEW_SCALE_TO_FIT_BOTH_DIMENSIONS
<b>origin</b>	GVI_origin
<b>GetVisibleRect</b>	MSG_GEN_VIEW_GET_VISIBLE_RECT(RectDWord *rect)
<b>ScrollToOffset</b> xOffs, yOffs	MSG_GEN_VIEW_SCROLL
<b>ScrollCmd</b> cmd [, param]	
SC_TOP	MSG_GEN_VIEW_SCROLL_TOP()
SC_PAGE_UP	MSG_GEN_VIEW_SCROLL_PAGE_UP()
SC_UP	MSG_GEN_VIEW_SCROLL_UP()
SC_SET_Y_ORIGIN yOrigin	MSG_GEN_VIEW_SCROLL_SET_Y_ORIGIN(sdword yOrigin)
SC_DOWN	MSG_GEN_VIEW_SCROLL_DOWN()
SC_PAGE_DOWN	MSG_GEN_VIEW_SCROLL_PAGE_DOWN()
SC_BOTTOM	MSG_GEN_VIEW_SCROLL_BOTTOM()
SC_LEFT_EDGE	MSG_GEN_VIEW_SCROLL_LEFT_EDGE()
SC_PAGE_LEFT	MSG_GEN_VIEW_SCROLL_PAGE_LEFT()
SC_LEFT	MSG_GEN_VIEW_SCROLL_LEFT()
SC_SET_X_ORIGIN xOrigin	MSG_GEN_VIEW_SCROLL_SET_X_ORIGIN(sdword xOrigin)
SC_RIGHT	MSG_GEN_VIEW_SCROLL_RIGHT()
SC_PAGE_RIGHT	MSG_GEN_VIEW_SCROLL_PAGE_RIGHT()
SC_RIGHT_EDGE	MSG_GEN_VIEW_SCROLL_RIGHT_EDGE()
<b>viewIncrement</b>	GVI_increment
<b>DoNotWinScroll</b>	ATTR_GEN_VIEW_DO_NOT_WIN_SCROLL

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

<p><b>suspendUpdate</b>          TRUE:          FALSE:  <b>InitiateDragScroll</b>  <b>SetDragBounds</b>  <b>ImmediateDragUpdates</b>  <b>DelayedDragUpdates</b></p> <p><u>Change Pointer Image</u>  <b>SetPointerImage</b>  <b>ClearPointerImage</b></p> <p><u>Other Features</u>  <b>hLink</b>  <b>vLink</b></p> <p><b>inputOptions</b>          VIO_DONT_SEND_MOUSE_EVENTS          VIO_DONT_SEND_KBD_RELEASES</p> <p><b>focusable</b></p> <p><b>holdsLargeText</b></p> <p><u>Children of a View</u></p> <p><u>Other Action Handlers</u>  <b>OnFocusChanged</b>  <b>OnTargetChanged</b>  <b>OnKeyPressed</b>  <b>OnMouseButton</b>  <b>OnMouseMove</b>  <b>OnMouseOver</b></p>	<p>MSG_GEN_VIEW_SUSPEND_UPDATE()          MSG_GEN_VIEW_UNSPEND_UPDATE()          MSG_GEN_VIEW_INITIATE_DRAG_SCROLL()          MSG_GEN_VIEW_SET_DRAG_BOUNDS          HINT_VIEW_IMMEDIATE_DRAG_UPDATES          HINT_VIEW_DELAYED_DRAG_UPDATES</p> <p>MSG_GEN_VIEW_SET_PTR_IMAGE (...)          MSG_GEN_VIEW_SET_PTR_IMAGE (0)</p> <p>GVI_horizLink          GVI_vertLink</p> <p>GVI_attrs: GVA_DONT_SEND_PTR_EVENTS          GVI_attrs: GVA_DONT_SEND_KBD_RELEASES          GVI_attrs: GVA_FOCUSABLE</p> <p>not available in SDK</p> <p><b>placeObject, set for the child</b>          16 = HINT_SEEK_X_SCROLLER_AREA          32 = HINT_SEEK_Y_SCROLLER_AREA          64 = HINT_SEEK_LEFT_OF_VIEW          128 = HINT_SEEK_TOP_OF_VIEW          256 = HINT_SEEK_RIGHT_OF_VIEW          512 = HINT_SEEK_BOTTOM_OF_VIEW</p> <p>see "Input Handling"          see "Input Handling"          see "Input Handling"          see "Input Handling"          see "Input Handling"          see "Input Handling"</p>
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### ViewControl Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<p><b><u>ViewControl</u></b></p> <p><b>vcFeatures</b>          VCF_MAIN_100          VCF_MAIN_SCALE_TO_FIT          VCF_ZOOM_IN          VCF_ZOOM_OUT          VCF_REDUCE          VCF_100          VCF_ENLARGE          VCF_BIG_ENLARGE          VCF_SCALE_TO_FIT          VCF_ADJUST_ASPECT_RATIO          VCF_APPLY_TO_ALL          VCF_SHOW_HORIZONTAL          VCF_SHOW_VERTICAL          VCF_CUSTOM_SCALE          VCF_REDRAW</p>	<p><b><u>GenViewControlClass</u></b></p> <p>ATTR_GEN_CONTROL_FEATURES          GVCF_MAIN_100 = 0x4000          GVCF_MAIN_SCALE_TO_FIT = 0x2000          GVCF_ZOOM_IN = 0x1000          GVCF_ZOOM_OUT = 0x0800          GVCF_REDUCE = 0x0400          GVCF_100 = 0x0200          GVCF_ENLARGE = 0x0100          GVCF_BIG_ENLARGE = 0x0080          GVCF_SCALE_TO_FIT = 0x0040          GVCF_ADJUST_ASPECT_RATIO = 0x0020          GVCF_APPLY_TO_ALL = 0x0010          GVCF_SHOW_HORIZONTAL = 0x0008          GVCF_SHOW_VERTICAL = 0x0004          GVCF_CUSTOM_SCALE = 0x0002          GVCF_REDRAW = 0x0001</p>

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

<b>vcAttrs</b>	GVCi_attrs
VCA_ADJUST_ASPECT_RATIO	GVCa_ADJUST_ASPECT_RATIO = 0x8000
VCA_APPLY_TO_ALL	GVCa_APPLY_TO_ALL = 0x4000
VCA_SHOW_HORIZONTAL	GVCa_SHOW_HORIZONTAL = 0x2000
VCA_SHOW_VERTICAL	GVCa_SHOW_VERTICAL = 0x1000
<b>vcMinZoom</b>	GVCi_minZoom (default: 25)
<b>vcMaxZoom</b>	GVCi_maxZoom (default: 400)
<b>vcScale</b>	GVCi_scale = 100
<b>targetView</b>	-
<b>ScaleView100</b>	-
<b>ScaleViewToFit</b>	-
<b>ZoomInView</b>	MSG_GVC_ZOOM_IN
<b>ZoomOutView</b>	MSG_GVC_ZOOM_OUT
<b>RedrawView</b>	MSG_GVC_REDRAW
<b>ScrollLeftView</b>	MSG_GVC_PAGE_LEFT
<b>ScrollRightView</b>	MSG_GVC_PAGE_RIGHT
<b>ScrollUpView</b>	MSG_GVC_PAGE_UP
<b>ScrollDownView</b>	MSG_GVC_PAGE_DOWN

### VisGroup Class (VisContent and VisObj Common Features)

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<u>Drawing to Screen</u>	
<b>buffered</b>	not available in SDK
<b>bufferedDataSize</b>	not available in SDK
DS_TINY	0
DS_SMALL	1
DS_MEDIUM	2
DS_LARGE	3
DS_HUGE	4
<b>defaultColor</b>	not available in SDK
<b>clipDrawing</b>	GrSetClipRect()
<u>Drawing Related Methods</u>	
<b>Dirty</b>	MSG_VIS_REDRAW_ENTIRE_OBJECT
<b>Redraw</b>	MSG_VIS_REDRAW_ENTIRE_OBJECT
<u>ActionHandlers</u> <b>DrawAction</b>	
<b>OnDraw</b>	MSG_VIS_DRAW
<u>Managig Size and Position</u>	
<b>customManageChildren</b>	VCI_geoAttrs: VCGA_CUSTOM_MANAGE_CHILDREN
<b>visPosition</b>	VI_bounds
<b>visSize</b>	VI_bounds
<b>visSizeOptions</b>	MSG_VIS_RECALC_SIZE
VSO_AUTO_SIZE	0
VSO_VARIABLE_SIZE	1
VSO_FIXED_SIZE	2
VSO_FIXED_WIDTH	3
VSO_FIXED_HEIGHT	4
<b>visSizeFlags</b>	VCI_geoDimensionAttrs
VSF_EXPAND_WIDTH	32
VSF_DIVIDE_WIDTH_EQUALLY	16
VSF_EXPAND_HEIGHT	2
VSF_DIVIDE_HEIGHT_EQUALLY	1
<b>visMinimumSize</b>	MSG_VIS_COMP_GET_MINIMUM_SIZE VCI_geoAttrs: VCGA_HAS_MINIMUM_SIZE
<b>visOrientVertically</b>	VCI_geoAttrs: VCGA_ORIENT_CHILDRN_VERTICALLY
<b>visChildJustification</b>	VCI_geoDimensionAttrs
<b>visChildSpacing</b>	MSG_VIS_COMP_GET_CHILD_SPACING

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

<p><b>visSpacingIncludeEnds</b> <b>visMargins</b></p> <p><b>visWarpCount</b> <b>allowChildrenToWrap</b></p> <p><u>Other Action Handlers</u> <b>OnFocusChanged</b> <b>OnTargetChanged</b> <b>OnKeyPressed</b> <b>OnMouseButton</b> <b>OnMouseMove</b> <b>OnMouseOver</b></p> <p><u>Methods</u> <b>MarkInvalid</b></p> <p><u>SDK Programmers Support</u> <b>MarkInvalid2</b></p> <p><b>visClassAttrs</b> <b>visCompGeoAttrs</b> <b>visCompDimensionAttrs</b></p>	<p>VCI_geoAttrs: VCGA_INCLUDE_ENDS_IN_CHILD_SPACING MSG_VIS_COMP_GET_MARGINS</p> <p>MSG_VIS_COMP_GET_WRAP_COUNT VCI_geoAttrs: VCGA_ALLOW_CHILDREN_TO_WRAP</p> <p>see "Input Handling" see "Input Handling" see "Input Handling" see "Input Handling" see "Input Handling" see "Input Handling"</p> <p>MSG_VIS_MARK_INVALID(VOF_GEOMETRY_INVALID   VOF_IMAGE_INVALID, VUM_NOW);</p> <p>MSG_VIS_MARK_INVALID( visOptFlags, updateMode);</p> <p>VI_attrs VCI_geoAttrs VCI_geoDimensionAttrs</p>
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### VisContent Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<p><b><u>VisContent-Class</u></b></p> <p><u>Drawing to Screen</u> <u>Managig Size and Position</u> <u>Mouse, Keyboard,</u> <u>Focus, Target</u></p> <p><b>contentAttrs</b> CA_SAME_WIDTH_AS_VIEW CA_SAME_HEIGHT_AS_VIEW CA_VIEW_DOC_BOUNDS_SET_MANUALLY</p> <p><b>holdsLargeText</b></p> <p><u>Methods</u> <b>CreateVisObject</b> <b>DestroyVisObject</b></p>	<p><b>VisContentClass</b></p> <p>See: "VisComp Class" See: "VisComp Class"</p> <p>See: "Input Handling"</p> <p>VCNI_attrs VCNA_SAME_WIDTH_AS_VIEW = 0x80 VCNA_SAME_HEIGHT_AS_VIEW = 0x40 VCNA_VIEW_DOC_BOUNDS_SET_MANUALLY = 0x04</p> <p>not availabe in SDK</p> <p>ObjInstantiate() MSG_VIS_DESTROY</p>

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### VisObj Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<p><b><u>VisObj-Class</u></b></p> <p><u>Drawing to Screen</u>  <u>Managig Size and Position</u>  <u>Mouse, Keyboard,</u>  <u>Focus, Target</u></p> <p><b>managed</b>  <b>drawable</b>  <b>detectable</b>  <b>visDataValue</b></p> <p><b>grabFocusOnMouseEvents</b>  <b>grabTargetOnMouseEvents</b></p> <p><u>Dragging Instances</u>  <b>dragGString</b>  <b>isDragging</b>  <b>dragPosition</b>  <b>dragOffset</b></p> <p><u>Dragging-Methods</u>  <b>DragStart</b>  <b>DragMoveTo</b>  <b>DragEnd</b>  <b>DragAbort</b></p> <p><u>Other Tool Methods</u>  <b>DrawFrame</b>  <b>DrawInverse</b>  <b>DrawHandles</b>  <b>TestHandles</b></p> <p><u>Other Action Handlers</u>  <b>OnFocusChanged</b>  <b>OnTargetChanged</b>  <b>OnKeyPressed</b>  <b>OnMouseButton</b>  <b>OnMouseMove</b>  <b>OnMouseOver</b></p>	<p><b>VisCompClass</b></p> <p>See: "VisGroup Class"  See: "VisGroup Class"</p> <p>See: "Input Handling"</p> <p>VI_attrs: VA_MANAGED  VI_attrs: VA_DRAWABLE + check in MSG_VIS_DRAW  VI_attrs: VA_DETECTABLE  not available in SDK</p> <p>MSG_META_GRAB_FOCUS_EXCL()  MSG_META_GRAB_TARGET_EXCL()</p> <p>not available in SDK  not available in SDK  not available in SDK  not available in SDK</p> <p>not available in SDK  not available in SDK  not available in SDK  not available in SDK</p> <p>not available in SDK  not available in SDK  not available in SDK  not available in SDK</p> <p>see "Input Handling"  see "Input Handling"  see "Input Handling"  see "Input Handling"  see "Input Handling"  see "Input Handling"</p>

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

### VisText Class

BASIC UI Statement	SDK HINT's, ATTR's or instance variables
<b>VisText-Class</b>	<b>VisTextClass</b>
<b>text\$</b>	MSG_VIS_TEXT_GET_ALL_PTR
<b>textLen</b>	MSG_VIS_TEXT_GET_TEXT_SIZE()
<b>cursorPos</b>	read: MSG_VIS_TEXT_GET_SELECTION_RANGE
<b>selectionEnd</b>	write: MSG_VIS_TEXT_SELECT_RANGE
<b>selectionLen</b>	read: MSG_VIS_TEXT_GET_SELECTION_RANGE
<b>SelectedText\$</b>	write: MSG_VIS_TEXT_SELECT_RANGE
<b>TextRange\$</b>	read: MSG_VIS_TEXT_GET_SELECTION_RANGE
	write: MSG_VIS_TEXT_SELECT_RANGE
	MSG_VIS_TEXT_GET_SELECTION_PTR
	MSG_VIS_TEXT_GET_SELECTION_PTR
<b>fontID</b>	write: MSG_VIS_TEXT_SET_FONT_ID
<b>fontSize</b>	read: MSG_VIS_TEXT_GET_CHAR_ATTR: VTCA_fontID
<b>textStyle</b>	write: MSG_VIS_TEXT_SET_POINT_SIZE
	read: MSG_VIS_TEXT_GET_CHAR_ATTR: VTCA_pointSize
	write: MSG_VIS_TEXT_SET_CHAR_ATTR:
	read: MSG_VIS_TEXT_GET_CHAR_ATTR: VTCA_textStyles
TS_UNDERLINE	1
TS_STRIKE_THRU	2
TS_SUBSCRIPT	4
TS_SUPERSCRIPT	8
TS_ITALIC	16
TS_BOLD	32
TS_OUTLINE	64
<b>textColor</b>	write: MSG_VIS_TEXT_SET_CHAR_ATTR:
<b>backColor</b>	read: MSG_VIS_TEXT_GET_CHAR_ATTR: VTCA_color
<b>justifyText</b>	MSG_VIS_TEXT_SET_WASH_COLOR
	write: MSG_VIS_TEXT_SET_PARA_ATTR:
<b>lineSpacing</b>	read: MSG_VIS_TEXT_GET_PARA_ATTR: VTPA_attributes
<b>margins</b>	write: MSG_VIS_TEXT_SET_PARA_ATTR:
	read: MSG_VIS_TEXT_GET_PARA_ATTR: VTPA_lineSpacing
	write: MSG_VIS_TEXT_SET_PARA_ATTR:
	read: MSG_VIS_TEXT_GET_PARA_ATTR: VTPA_leftMargin,
	VTPA_rightMargin, VTPA_paraMargin
<b>topSpace</b>	write: MSG_VIS_TEXT_SET_PARA_ATTR:
	read: MSG_VIS_TEXT_GET_PARA_ATTR:
	VTPA_spaceOnTop
<b>textFilter</b>	MSG_VIS_TEXT_SET_FILTER ... ~_GET_FILTER
TF_NONE	VTFC_NO_FILTER
TF_NORMAL_ASCII	VTFC_NORMAL_ASCII
TF_DOS_CHARACTER_SET	VTFC_DOS_CHARACTER_SET
TF_ALPHA	VTFC_ALPHA
TF_ALPHA_NUMERIC	VTFC_ALPHA_NUMERIC
TF_DASHED_ALPHA_NUMERIC	VTFC_DASHED_ALPHA_NUMERIC
TF_NUMERIC	VTFC_NUMERIC
TF_SIGNED_NUMERIC	VTFC_SIGNED_NUMERIC
TF_SIGNED_DECIMAL	VTFC_SIGNED_DECIMAL
TF_FLOAT_DECIMAL	VTFC_FLOAT_DECIMAL
TF_LEGAL_FILENAMES	VTFC_LEGAL_FILENAMES
TF_LEGAL_DOS_FILENAMES	VTFC_DOS_FILENAMES
TF_LEGAL_DOS_PATH	VTFC_DOS_PATH
TF_LEGAL_DOS_VOLUME_NAMES	VTFC_DOS_VOLUME_NAMES
TF_DATE	VTFC_DATE
TF_TIME	VTFC_TIME
TF_MAKE_UPPERCASE	VTFC_UPCASE_CHARS
TF_NO_SPACES	VTFC_NO_SPACES
<b>textAttrs</b>	MSG_VIS_TEXT_SET_FILTER ... ~_GET_FILTER

## R-BASIC Quick Reference • Objects

All object classes, instance variables, hints and constants.

TA_USE_TAB_FOR_NAVIGATION	VTFC_NO_TABS
<b>modified</b>	read: MSG_VIS_TEXT_GET_USER_MODIFIED write: MSG_VIS_TEXT_SET_USER_MODIFIED MSG_VIS_TEXT_SET_NOT_USER_MODIFIED
<u>ActionHandlers</u> <b>TextAction</b>	
<b>OnModified</b>	MSG_META_TEXT_USER_MODIFIED()
<b>OnSelectionChanged</b>	MSG_META_KBD_CHAR, MSG_META_START_SELECT, MSG_META_PTR, MSG_VIS_TEXT_SELECT_RANGE For LargeText: MSG_META_LARGE_START_SELECT, MSG_META_LARGE_PTR
<u>Other Action Handlers</u>	
<b>OnKeyPressed</b>	see "Input Handling"
<b>OnFocusChanged</b>	see "Input Handling"
<b>OnTargetChanged</b>	see "Input Handling"
<u>Methods</u>	
<b>Append</b>	MSG_VIS_TEXT_APPEND_PTR
<b>Insert</b>	MSG_VIS_TEXT_SELECT_RANGE(cursorPos) + MSG_VIS_TEXT_REPLACE_SELECTION_PTR
<b>ReplaceSelection</b>	MSG_VIS_TEXT_REPLACE_SELECTION_PTR
<b>DeleteSelection</b>	MSG_VIS_TEXT_DELETE_SELECTION
<b>DeleteRange</b>	MSG_VIS_TEXT_SELECT_RANGE + MSG_VIS_TEXT_DELETE_SELECTION
<b>ShowCursor</b>	MSG_VIS_TEXT_SELECT_RANGE(cursorPos) + MSG_VIS_TEXT_SHOW_POSITION
<b>Suspend</b>	MSG_META_SUSPEND
<b>EndSuspend</b>	MSG_META_UNSPEND
<u>File related Methods</u>	
<b>WriteToFile</b>	File related methods are not supported in SDK
<b>ReplaceFromFile</b>	
<b>InsertFromFile</b>	
<b>FileTextSize</b>	
<b>WriteToVMFile</b>	
<b>ReplaceFromVMFile</b>	
<b>InsertFromVMFile</b>	
<b>VMFileTextSize</b>	
<u>VisClass-level instances</u>	
<b>managed</b>	VI_attrs: VA_MANAGED
<b>drawable</b>	VI_attrs: VA_DRAWABLE + check in MSG_VIS_DRAW
<b>detectable</b>	VI_attrs: VA_DETECTABLE
<b>visPosition</b>	VI_bounds
<b>visSize</b>	VI_bounds
<b>visTextFrame</b>	not available in SDK, MSG_VIS_DRAW overwritten
<b>visTextFrameOptions</b>	not available in SDK, MSG_VIS_DRAW overwritten
<u>SDK Programmers Support</u>	
<b>MarkInvalid2</b>	MSG_VIS_MARK_INVALID( visOptFlags, updateMode);
<b>visClassAttrs</b>	VI_attrs