in

COLLABORATORS			
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Chapter 1

in

1.1 main

```
                                  *** Gui4Cli ***
          An interpretive GUI programming language
               (c) 1995-1999 by D.C.Keletsekis


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   ---------------------------------------------------------------------

                 Click on the Demo.gc icon to begin.

                                    *

   **** Gui4Cli WWW Page - http://users.hol.gr/~dck/gcmain.htm ****
      ** EMail me at dck@hol.gr to join the Gui4Cli EMail List **


                                    *
```

1.2 action

```
                    ACTION  <action>   Source   <destination>

This is a command which will recursively scan the directory tree
and perform the given <action> to the Source.
```

LVAction
will do the same things, but to all the selected
files/dirs of a given dir listview.

The ESCAPE key - hit while a Gui4Cli window is active - will
abort any operation taking place.

The "Source" can be a File or a Directory - *not* a device.

The Actions that can be performed, are :

COPY Will copy the file or dir to the destination.
ex : ACTION COPY dh0:MyDirectory ram:

COPYNEW Same as copy but will only copy files created at a later date
than the destination files (if they exist).

MOVE Will move the Source to the destination (or just rename them
if they are on the same device).

DELETE Will delete the source file or dir.
You *must* give a destination. This can be anything or "NOREQ".
If you state "NOREQ" you will suppress a "Delete Files ?" kind
of requester that will otherwise appear.

ex : Action delete Ram:t/MyDir NOREQ
- Will delete dir Ram:t/MyDir, without asking you first.

SIZE Here, <destination> must be the name of a variable where the
total size of the File or Directory (or all dirs/files for
lvaction) will be stored.

ex : Action SIZE ram:t/MyDir MyVariable

Starting with V3.2, the sizes will be shown in the listview
for each directory.

PROTECT Protect requires that the <destination> argument be a MASK
denoting the protection bits you want to set the file to.
This MASK, is a 7-digit number, where each number can be a
1 or a 0, showing that you want the given bit set.

Each digit represents :
1st Delete -> 1 means file can NOT be deleted, 0 it can.
2nd Execute -> Used by shell commands - set to 0 (I think)
3rd Write -> 1 = File is writable
4th Read -> 1 = File is readable
5th Archive -> 1 = File has not changed
6th Pure -> 1 = File is program that can be made resident
7th Script -> 1 = File is a script

ex : Action Protect DH0:MyDir 1000000
- Protect all files in dh0:MyDir from deletion.

CLI This is new with V3.0 and it allows you to execute a command
recursively through a directory and all it’s subdirectories,
for all files found therein.

There is a special internal variable called $$FILE which will be valid whenever Gui4Cli is recursing through the files of a directory. Using it you can do this (for example) :

ACTION CLI MyDirectory 'search $$FILE string'

and all the files within the directory and it's subdirs, will be searched. This command is very important, because it can take simple CLI commands and make them recursive - saves on a lot of code repetition..

1.3 advantages

THE ADVANTAGES OF Gui4Cli

Gui4Cli is a new way of programming. It's event driven, logical, easy and interpreted (i.e. made from plain ascii files and not compiled)

This gives it many advantages, such as :

1.- The GUI is separate from the program, which means that :

(a) You can have many GUIs loaded, without the programs they are meant to control being also loaded. This means less memory is used.

(b) A programmer can write a program without bothering about the Wait() loops, intuition messages, resizable, font sensitive windows, workbench start-up code and all the other stuff he is supposed to do to make a GUI for his program. Just grab the command line arguments and run ! (like the good old days :)

(c) The program thus written will not only be smaller, but will also be more flexible since the user can use it as he sees fit.

2.- The user can change the GUI to fit his preferences.

With the new Visual Editing facility, the gui becomes completely plastic and changeable by the user at will, while it's running! This is very important because many programs fail on the functionality of their GUIs, not being as intuitive as the user would want them. A GUI is, just a way to communicate with the user, so let the user decide how he wants to be told what to do..

3.- The user can incorporate the GUI, with other GUIs.
There are many wonderful small utilities for the Amiga, which can be combined into common GUIs, as functions would in a program.

4.- With the (simple but sufficient) ARexx capability that Gui4Cli
    has, the user can make many different GUIs to take advantage
    of a program's ARexx interface (look at the CygnusEd demo).

5.- The user gets standard keyboard shortcuts and a standard working
    environment with every GUI. Much easier to remember.

Apart from the above, Gui4Cli is also simple and stand alone.
This means that anyone can use it, without programming knowledge
compilers, libraries and/or patience.

Some of the other Features it has, are :

- Can open unlimited resizable, windows of various types.

- Can handle all Gadtools Gadgets & Menus, easily.

- Visual Editing makes it *very* easy to construct guis.

- Keyboard shortcuts for gadgets & menus

- Can use icons as Buttons, Window background or in Menus

- ARexx interface (for sending and receiving ARexx commands)

- C interface (for adding new commands)

- Can use different fonts for gadgets, menus and graphics.

- Has Graphics commands for lines, boxes, circles etc.

- Standard keyboard shortcuts which apply to all windows.

- Much more..

- Give me a break.. isn't the above enough ?

Apart from the above, Gui4Cli programs, being 7 bit ASCII
files, can be sent through the Internet.
- So what ? I hear you say.
- Well.. ok, I just thought I'd mention it..

1.4 all_the_commands

L T W H
 Values you can use.

Parser Commands :

```
                NewFile
                 NewFileName

                TextFile
                 FileName

 -------------------------- GLOBAL COMMANDS -----------------------



                WinBig
                 L T W H Title

                WinSmall
                 L T W H

                WinType
                 MASK (Close|Drag|Zoom|Depth|Borderless|Backdrop|RIGHT|BOTTOM)

                WinOut
                 ConsoleSpecification

                WinOnWin
                 GuiName LeftOffset TopOffset

                WinOnMouse
                 LeftOffset TopOffset

                Screen
                 PublicScreenName

                WinFont
                 FontName Size  UL|BD|IT(Mask)

                WinBackground
                 SOLID|PATTERN|ICON|IMAGE APen|Name BPen

                UseTopaz

                NoFontSense

                VarPath
                 VariableSearchPath

                ResInfo
                 FontHeight ScreenWidth ScreenHeight

                ShareMenu
                 GuiFile


 -------------------------- GRAPHICS COMMANDS ----------------------



                Graphics
                The following commands :
```

```
  BOX      L T W H  IN|OUT  BUTTON|RIDGE|ICONDROP
  CTEXT    L T Text FontName size FGpen BGpen UL|BD|IT|EMBOSS|SIZE(mask)
  LINE     L T L T ColorNo
  SQUARE   L T W H ColorNo FILL|NOFILL
  CIRCLE   centerL centerT xradius yradius ColorNo FILL|NOFILL
  ICON     L T IconName (no info)


             Images
             The following commands :
  LOADIMAGE    ImageFile Alias ScreenName|NoRemap
  FREEIMAGE  Alias
  IMAGE        Left Top Alias
  CHANGEIMAGE  GuiFile GadID Left Top Alias


             Sound Effects
             The following commands :
  LOADSOUND FileName Alias
  FREESOUND Alias
  PLAYSOUND Alias
  SETSOUND  Alias VOLUME/SPEED value

------------------------------ EVENTS ------------------------------



              xButton
               L T W H Title

              xCheckBox
               L T W H Title Variable OnText OffText ON|OFF

              xVSlider
               L T W H Title Variable Min Max Current ShowStr

              xHSlider
               L T W H Title Variable Min Max Current ShowStr

              xTextIn
               L T W H Title Variable StartingText Bufflength

              xCycler
               L T W H Title Variable

              xRadio
               L T W H Variable Spacing

              xArea
               L T W H COMP|BOX|NONE

              xPalette
               L T W H

              Gauge
               L T W H IN|OUT BUTTON|RIDGE|ICONDROP APEN BPEN PERCENT
```

```
xListview
 L T W H Title Variable File|Dir Offset NUM|TXT|MULTI|DIR

LV Hooks
 LVDirHook HookID, LVHook HookID


xMemu
 Menu Item SubItem Shortcut

xIcon
 L T IconName (no .info)

xAppMenu
 AppMenuName Variable ONOFF

xAppIcon
 L T IconName Title Variable ON|OFF

xAppWindow
 Variable


xPipe
 PipeFileName ON|OFF

xTimer
 TIME|SINGLE|REPEAT Time|Interval  ON|OFF

xNotify
 File|Dir ON|OFF

xHotKey
 KeyCombination ON|OFF


xRoutine
 RoutineName

xOnKey
 Letter|#KeyValue

xOnReturn
 LaunchID

xOnJump
 Variable

Text
 L T W H Text Length BOX|NOBOX

System Events
 xOnLoad, xOnOpen, xOnClose, xOnQuit

Other Events
 xOnActive, xOnFail, xOnDiskIn etc..
```

```
  --------------------------- GADGET MODIFIERS -------------------------


Gadget Modifiers :


                GadID
                IDNumber

                GadHelp
                HelpText

                GadFont
                FontName  FontSize  MASK(Underline|Bold|Italics)

                GadTitle
                ABOVE|BELOW|LEFT|RIGHT

                GadKey
                Letter (or #ASCII value)

                GadTxt
                LEFT|CENTER|RIGHT

                LVDirHook
                HookID

                Attr
                AttributeName Value

                Local
                Variables/var/var...


  --------------------------- EVENT COMMANDS ---------------------------


Controlling Gadgets :


                SetGad
                GuiFile GadIDs ON|OFF|SHOW|HIDE  (Arexx capable)

                Update
                GuiFile GadID Value   (Arexx capable)

                ChangeArg
                GuiFile GadID ArgNumber NewValue

                ChangeGad
                GuiFile GadID L T W H Title

                ReDraw
                GuiFile
```

```
                PartReDraw
                GuiFile L T W H

                ChangeIcon
                GuiFile GadID L T NewIconName

                SetAttr
                GuiFile/GadID AttributeName Value


                SetGadValues
                GuiFile

Control Statements :


                If/ElseIf/Else/Endif/And..
                Argument
               Operator
                Argument

                IfExists/Else/EndIf..

                SYSTEM
                Name|~Name

                While/EndWhile/And/Or
                Argument
               Operator
                Argument

                Mark/Goto
                MarkName

                Gosub/Return
                GuiName RoutineName  (ARexx capable)

                DoCase/Case/Break/EndCase
                (DoCase) Argument - Case
               Operator
                Argument

                Stop
                         --- All Commands below this line are ARexx capable ----


                Quit
               DOS Commands :


                Run, CLI
                CommandLine

                SendRexx
                PortName  CommandLine

                Wait
```

```
                SYSTEM
                Name|~Name TimeOut

                MakeDir
                DirName

                Assign
                Device: Path|REMOVE

                Rename
                OldFile NewFile

                Launch
                LaunchID CommandLine


                FailAt
                ErrorNumber

Recursive commands :


                Copy
                FileName (with wild characters) Destination

                Delete
                FileName (with wild characters)

                Action
                COPY|COPYNEW|MOVE|DELETE|SIZE|PROTECT|CLI File/Dir Destination

                LVAction
                COPY|COPYNEW|MOVE|DELETE|SIZE|PROTECT|CLI Destination

Note : DOS and Recursive Commands always set the
                $$RetCode
               Handling GUIs :


                Load/Open...
                GuiLoad GuiFullPathName - GuiOpen/GuiClose/GuiQuit GuiName

                GuiRename
                OldGuiName NewGuiName

                Status

                Info
                GUI|GADGET|PALETTE|IMAGE Guiname|Guiname/GadID|ImageAlias

Handling Variables :


                SetVar
                Variable String (or var = string)
```

```
DelVar
Variable

AppVar
Variable Text

CutVar
SourceVar CUT|COPY CHAR|WORD|LINE Amount DestinationVar

Counter
Variable INC|DEC Amount

Append
File String

Extract
Var  Root|Path|File|Guipath|Clean|Unquote|Ext|Upper|Lower Var

JoinFile
Path File Variable

ParseVar
Variable

CalcVar
ResultVar  Argument operator Argument

ReadVar
FileName Start Length Variable

SearchVar
Variable String CI|CS FIRST|NEXT

RepVar
Variable OldString NewString CI|CS


ListView Commands
:


LVUse
GuiFile GadID

LVDel
LineNumber

LVPut
NewText

LVChange
NewFromFile

LVSort
ASC|DSC|%FieldName

LVFind
```

```
                String

                LVAdd
                String

                LVInsert
                (Before)LineNumber String

                LVClear

                LVSave
                FileName

                LVMove
                +-Offset|#LineNumber

                LVGo
                first|next|prev|last|#LineNumber

                LVSearch
                string CI|CS First|Next

                LVRep
                OldString NewString CI|CS

                LVMode
                NUM|TXT|MULTI|DIR

                LVClip
                CUT|COPY lines|-1 ADD|PASTE|INSERT Gui ID

                LVSwitch
                Gui ID


                LVMulti
                First|Next|On|Off|All|None|Show

                LVDir
                Parent|Root|Disks|All|None|Refresh|NoRefresh|#DirName


                DataBase ListView Commands
                :


                DBSum
                ALL|SELECTED|UNSELECTED %FieldName ResultVar

                RecSort
                %FieldName

Various Commands :


                Speak
                Text
```

```
 SetScreen
 GuiFile ScreenName

 GuiScreen
 GuiFile FRONT|BACK

 GuiWindow
 GuiFile ON|BIG|SMALL|FRONT|BACK|WAIT|RESUME

 SetWinTitle
 GuiFile NewTitle

SetScreenTitle
 GuiFile NewTitle

 ReqFile
 L T W H Title SAVE|LOAD|MULTI|DIR Variable DirName

 CD
 NewDirectoryName

 Delay
 Ticks

 EZReq
 Text Choices Variable

 Say
 Text

 Set
 [parameter]  [value]

 SetStack
 StackSize

 MakeScreen
 ScreenName Depth|(W/H/D/Mode) Title

 KillScreen
 ScreenName

 SetColor
 GuiFile ColorNumber R G B

 TTGet
 FullPath/IconName (without ".info")

 BreakTask
 TaskName CDEF(signals)

 Flash

 MoveScreen
 GuiName/#ScreenName X Y
```

```
                Workbench
                Open/Close
```

1.5 append

```
  APPEND  File  String

This command attaches the specified String to the end of
the File.

File     - A File name
String   - Any character, sentence, or whatever.

Example :

  .MyVar = "This is a "   <-- Note the space
  Append Env:.MyVar "Test"

Now .MyVar should contain "This is a Test"
You can use this command to append a String to any file.
```

1.6 appvar

```
                AppVar  Variable  Text

This command will append the Text you provide to the Variable.

If the variable does not exist it will be created.

Note that you can not have a variable larger than the size of
Gui4Cli's buffer (which, by default, is about 1000 characters).

You can increase the buffer size if you want with the "BUFFERS" Tool
Types option.

OR - use an env: variable and the APPEND command.

  ------------------------------------------------------------------
  See also :

                Options

                Variables
```

1.7 arexx

```
                ARexx & Gui4Cli

Gui4Cli tries to be as ARexx friendly as possible.
Communication between them is achieved in two ways :

- Sending messages to ARexx :

This is done with the
               SendRexx
               command.

- Sending ARexx messages to Gui4Cli :

Most of the event commands of Gui4Cli are "ARexx capable"
i.e. they can be sent to Gui4Cli as arexx messages and
be executed as if they existed in a gui.

The
               detailed list
               of commands will show you which are
ARexx capable and which are not.

When sending arexx commands to Gui4Cli from an arexx
program, there is a
               global variable
               named *REXXVAR which has
special meaning.

You use it as you would any global variable from within
Gui4Cli, but if the arexx program sending the command has
declared OPTIONS RESULTS then the contents of this variable
will be returned to arexx and will be available from within
arexx as variable RESULT. So...

    SetVar  "*REXXVAR"  "'$mygui.gc/myvar'"

..would put whatever is in $mygui.gc/myvar into RESULT.
Note the use of the quotes: one set for arexx, another for
Gui4Cli (since $mygui.gc/myvar could be a string of words).

Also, if you set OPTIONS RESULTS you will cause the Gui4Cli
command you have sent from an ARexx program to be executed
synchronously. This has the advantage of returning a result.

Without OPTIONS RESULTS the execution is asynchronous.
```

1.8 assign

```
  ASSIGN  Device  Path|REMOVE
```

```
This is a simple command that will assign a path to a device.

ex:  Assign GUIs: dh0:Mydir/Gui4Cli

If, instead of a Path you give the keyword "REMOVE", the assign
will be removed.

Multiple assigns are not implemented yet.
```

1.9 attr

```
  ATTRIBUTES
  ------------------------------------------------------------

  Attributes are a way of telling Gui4Cli various details of
  how you want your gadgets to look and behave.

  There are 2 ways in which attributes can be set :

  o  At file loading - with the ATTR gadget modifier
  o  While running   - with the SETATTR command

  The templates are as follows :

  ATTR     AtributeName  Value
  SETATTR  GuiName/GadID  AttributeName  Value

  Note that with SETATTRIBUTE, you will probably have to redraw
  the gui or gadget, in order to make the change visible. This
  allows you to issue many SetAttribute commands and redraw once.

  The attributes and values you can use are:

  ------------------------------------------------------------
  LISTVIEW Gadgets :
  ------------------------------------------------------------

  Example :  Run Gui   Source

  -  LVSTYLE     StyleMask

     Will set the style for the whole listview. The StyleMask is
     defined as a 3 or 4 digit number, each digit meaning :
        1st digit  - ForeGround color (the pen number)
        2nd digit  - Background color (normal lines)
        3rd digit  - Selected Background color (selected lines)
        4th digit  - (optional) Color of "shadow" which will be
                     used to give the text a 3D effect.
     ex : ATTR LVStyle 2031  ; set white on black 3D text

  -  DIRSTYLE    StyleMask

     Will set the style for DIRs, VOL, ASN etc in Dir LVs
```

```
  -  FIELDSTYLE  %FieldName/StyleMask

     Sets the style for each field.
     ex: SETATTR MyGui.gc 1 FieldStyle %field/2031

  -  LVLINEDIST  Pixels

     Will set the distance between lines in a listview.
     By default this distance is 0.

  -  LVFILTER    Pattern

     Will filter the files in a dir listview according to the
     pattern you give - examp - make a LV hide all the icons:
     > SetAttr MyGui.gc/1 LVFILTER "~(#?.info)"
     Must <LVDir refresh> for the change to actually take place.

  ------------------------------------------------------------
  TEXTIN Gadgets :
  ------------------------------------------------------------

  Example :  Run Gui   Source

  - TITYPE  INT/FLOAT/HEX/DATE/UPPER/LOWER/STRING

    Will let you define what kind of data can be entered in the
    gadget. <Attr TiType FLOAT> for example will only let you
    enter numbers and '.' into it. DATE will allow numbers and /.-
    STRING allows anything. (*** still needs work on formating ***)

  - TITRANS ON|OFF

    The text in the textin gadget will, by default, be translated
    as soon as you've finished entering data. Set this attribute to
    OFF to stop translation.

  ----------------------
  More will be added..
```

1.10 breaktask

```
                    BreakTask  TaskName CDEF(signals)

This command is usefull for stopping any programs you may
have run/cli/launched. It does the same as the c:BREAK
and c:STATUS commands combined.

Most programs will respond to one or more CONTROL signals.
There are 4 possible control signals C, D, E and F.
The most common is CONTROL-C - which will stop a program
executing.
```

```
example :

if you have started a program with :
->   run 'c:search dh0:MyBankAccount OneBillionDollars'

you can stop it (if the taxman walks by), by issuing :
->   BreakTask c:search C

You can also send multiple signals like :
->   BreakTask c:search CF
which would send both Control-C and Control-F signals

**** IMPORTANT ****

You *MUST* give the *exact* name that the program was
launched under, otherwise it will not be found.
i.e. :
"c:search" is *not* the same as "dh0:c/search" or "search"

  ---------------------------------------------------------------------
  See also :

                 Run
```

1.11 calcvar

```
                 CALCVAR ResultVar  Argument operator Argument

  ******* THIS COMMAND IS OBSOLETE *********

  You can use instead the
                $(expression)
                method to do complex
  math calculations using flaoting point numbers etc.

  However, the command still works for compatibility, but it does
  not handle floating point numbers - it converts them to whole
  numbers - which may sometimes prove useful..

  ****************************************

  This command is a feeble attempt at giving Gui4Cli some mathematical
  abilities. Gui4Cli is not meant to be a programming language in
  the usual sense, so maths is usually not needed, still...

  CalcVar Result 2 + 3
  - will place the number 5 into variable Result.

  You can also (like in the SetVar command) use :
  Result == 2 + 3
  - which is easier to the eye.

  All calculations are *Integer* only!
```

```
Operators are : + - * / also % (modulus) and ^ (to the power of)
```

1.12 call

```
                    CALL PortName Command Arg1 Arg2... Arg6

  Gui4Cli has a special message type (something like an arexx
  message) which can be used by programs to help gain access
  to Gui4Cli's internal structure and manipulate or read them.

  The CALL command is used to send commands to such programs.

  PortName  - is the name of the Public Message port of the
  program you want to call.
  Note : You must have run the program first..
  Note2: PortNames are *case sensitive*

  Command   - this would usually be one word - a command
  recognisable to the outside program. For
  convenience, this is always converted to upper
  case by Gui4Cli before sending the message.

  Arguments - up to 6 arguments can also be passed. You need
  to know the template of each command.

  When you send such a message, there may be some return value.
  If there is it will be in
              internal variable
              $$CALL.RET
  It may be a number, a word, or a sentence..

  ex :

run 'guis:ext/lvform'   ; load the program
lvuse mygui.gc 1  ; make an lv "current"
call LVFORM indent "\t" ; send the lvform program the command
      ; to indent the current lv by a tab.
say 'Ret: $$call.ret\n" ; it won't return anything..
```

1.13 cd

```
  CD  NewDirectoryName

 This command will change the current directory of the program.

 This is useful when launching programs :

 When you run a program, and unless specified otherwise by this command,
 the default directory of the program you launch will be the directory
 Gui (the gui launcher) resides in, i.e. c:

 With this command you can change the default directory before you launch
 the program.
```

1.14 changearg

```
                  CHANGEARG
                GuiFile
                GadID  ArgumentNumber  NewValue

This command enables you to dynamically change a GUI, by changing the
values of a gadget, while the program is running. If you just want to
change the size position or title, use CHANGEGAD instead.

The gadget you want to change is specified with :

GuiFile - which is the GUI program file the gadget resides in.
GadID   - which is the ID you have given to the gadget.

All gadgets have a number of arguments, which are counted from left to
right, starting from 0.

A xBUTTON, for example, has the following arguments :

xBUTTON            Left   Top   Width   Height   Title
Argument Number     0      1      2       3        4

So, if you wanted to change the width of a button :

ChangeArg  MyGui.gc  5  2  100

This would set the width of a button which has an ID of 5 and resides
in file "MyGui.gc", to 100 pixels wide.

This command has no immediate effect, unless and until the
                 ReDraw
                command is used. Then the window will be redrawn with this (and ↩
                   any
other gadgets you may have changed) redrawn to their new dimensions
and/or values.

  Example :  Run Gui   Source
```

```
***** IMPORTANT ****

- Be very careful with changing string arguments, such as the Title.

  Gui4Cli (for reasons best left untold), will only store a string
  which is less than or equal to the length of the existing string.

  So if you want to replace the title "My Button" with "My Other Button"
  declare the title as "My Button       ", so the new title fits.

  GOLDEN RULE :
  When replacing strings, always keep the string lengths same.

- Fonts & Font sizes can not be changed.

- Menus can NOT be changed.

- Icons must be changed with the
                ChangeIcon
                command.

- If the GuiFile or the GadID are not found, NOTHING will happen
  and the user will NOT be told (unless in DEBUG mode).
```

1.15 changegad

```
                    CHANGEGAD   GuiFile GadID  Left Top Width Height Title

Similar to the CHANGEARG command, but this is easier and, if you
want to change more than one of the gadgets arguments, faster.

Read the CHANGEARG command for more details.
All the restrictions specified there, apply here as well.

This command has no immediate effect, unless and until the
                ReDraw
               command is used. Then the window will be redrawn with this (and ↩
                  any
other gadgets you may have changed) redrawn to their new dimensions
and/or values.

New with V2.1 is that you can change the size of the WINDOW also,
with this command, by giving 0 as the GadID. If you give -1 for either
of the Left or Top arguments, these will remain unchanged.
Negative values for width & height have the same meaning as the
WinBig command. Currently the Title argument is disregarded.

Example :

ChangeGad  MyFile 2  10 20 100 20 "New Title"
```

```
- will set the size of the gadget bearing a gad-ID of 2, to 100
  pixels wide by 20 pixels high, position it at 10,20 and give
  it the "New Title" - This will all happen after you have given
  the REDRAW command.

ChangeGad MyFile 0 -1 -1 100 200 ""

- Will resize MyFile's window to 100x200 (+ any resizing you may
  have done) and not change it's position.
```

1.16 changeicon

```
                CHANGEICON  GuiFile GadID  Left  Top  NewIcon (no .info  ↩
                   extension)

 This command will change the Icon of Gadget "GadID" in file
 "GuiFile" to the "NewIcon" and place it at Left, Top.

 The effect will be immediate.

 You can ONLY use this command on xICON or ICON gadgets.
 It will have no effect on others.

 Icons in menus can NOT be changed.

 NOTHING, will happen, if the Icon is not found.

 You can also state "" as the icon name, to make the icon
 disappear.

 You can pass a negative value (-1) for either the Left or Top.
 In this case, these will remain unchanged.

  ------------------------------------------------------------------
  See also :

                 xIcon
```

1.17 clipboard

```
                                ClipBoard support


               Listviews
               now have Clipboard support for text clips.

  The amiga ClipBoard is a device somewhere in ram to which
  you can read or write text blocks, temporarily. It's the
  place where text that you CUT or COPY from various editors
```

```
  etc is stored until it can be PASTEd somewhere by the same
  or some other program. (Note that some editors do not use
  the clipboard and so no-one else but them has access to
  their cut/copy/paste text blocks).

  As far as I know, the clipboard can have 256 such "units"
  numbered 0 to 255. By default the clipboard unit is No. 0
  and most programs will only use this unit.

  This is how the clipboard is accessed from Gui4Cli :

  Reading the clipboard :
  -----------------------
  If you try to load a file into the listview (either on startup
  or via
                 LVCHANGE
                ) then this file will be checked first and :

  o If the path starts with "CLIPS:" and has a clipboard unit
    number (0-255), Gui4Cli will read into the listview whatever
    happens to be in the clipboard unit specified.
    ex : LVCHANGE Clips:1
    - will load into the lv the contents of clipboard unit 1

  o Otherwise, if the file is a standard IFF FTXT clip file
    it will be loaded as such - i.e. only the text

  Writing to the clipboard :
  --------------------------
  Again, if you try to save the contents of a listview with

                 LVSAVE
                 and if the filename path is something like CLIPS:0 then
  the lv contents will be written to the given clipboard unit.

  ex : LVSAVE Clips:3
  - will save the lv contents into clipboard unit No 3

  Note that if you give LVSAVE Ram:clipboards/1 (or Clips:myfile)
  the file will be saved normally - not as iff - and you'll confuse
  the hell out of everybody..

  Here is a ClipBoard viewer gui :   Run gui   -   See source
```

1.18 command_lines

```
   CONSTRUCTING COMMAND LINES
   ==========================

*** NOTE *** All special characters below, are preceded by a BackSlash
character. Some versions of AmigaGuide will not show you the backslash
unless it's preceded by another backslash, i.e. \
```

```
     So when you see \n as just an "n", remember it should be \n

Special Characters :
--------------------
You can use the following special characters inside command lines :

     \n   = (BackSlash + n) NewLine
     \r   = Carriage return
     \t   = Tab

     \#   = starts a character expressed as a decimal value
               ex : Say '\#7'
          will cause the screen to flash (7 is the decimal value
          of the "beep" or "bell" character). Another example :
               ex : Say "\#155\1;33;40;>0mText is now color 3"
          will print "Text is now color 3" in your console in
          color 3. All text will now be in color 3, until reset.

          The Amiga console device has *many*  such commands, with
          which you can output to and control a shell as you need.

     Also, any character preceded by a \ will be written literally.
     So, you can write :

        \   = the BackSlash character
        \"   = the " character
        \'   = the ' character
        \$   = the $ character
        \A   = character A
    ..... etc

     This is especially usefull when messing about with variable names,
     because the slash "\" character will also end a variable name.

     So if you wanted for example to append ".info" to a filename which
     you have stored in a variable, you can do this :

     filename = MyFile
     say "$filename\.info"
     - will print "MyFile.info"

     It can also be done with the appvar command but this is faster..

Weird Stuff :

   For some reason the console device will replace $$ with
   nothing. So if you want to, say, send a rexx command to Gui4Cli
   with GRX, containing an internal variable, you must do this:

   grx Gui4Cli say \$\$G4C.dir

   This will print out Gui4Cli's current dir.
```

1.19 copy

```
   COPY  File/Dir(with wildcards)  DestinationFile/Dir
```

This is a recursive command which will copy files or directories
to the destination.

```
ex:  Copy dh0:myfile#?  ram:
or:  Copy dh0:myfile    ram:MyNewFile
```

If a directory is given as destination then the file(s) will be
copied into that dir. Otherwise the destination file will be
overwritten or created (if it did not exist).

1.20 counter

```
   COUNTER  Variable  INC|DEC  Amount
   ++/--Variable
```

This is a command which (INC)reases or (DEC)reases Variable by
a given Amount.

```
  Example :

  MyVar =  20
  COUNTER  MyVar  INC  10

  The variable MyVar will now contain "30"
```

This command is perfect for using in "DoWhile" loops, as a counter.
It also has a simpler and easier form, like the C notation:

```
  ++MyVar    - will increase whatever number MyVar
               contains by 1, or
  --MyVar    - which will decrease it by 1.

  MyVar = 10
  ++MyVar ; now it's 11
  --MyVar ; now it's 10
```

MyVar must be a number for this to work.

1.21 cutvar

```
  CutVar  SourceVar  CUT|COPY  CHAR|WORD|LINE  Amount  DestinationVar
```

This command allows you a little control over what your variables contain.

```
It allows you to CUT or COPY a specific AMOUNT of CHARacters, WORDs or LINEs
from SourceVar and put it into DestinationVar.

SourceVar      - The source variable.

CUT|COPY       - CUT will cut the CHARacters, WORDs or LINEs from SourceVar
                 whereas COPY will just copy them into DestinationVar, without
                 changing the SourceVar contents.

CHAR|WORD|LINE - Keywords denoting whether you want an Amount of CHARacters,
                 WORDs or LINEs cut or copied.

Amount         - How many CHARacters, WORDs or LINEs to cut or copy.
                 A Positive amount means CUT or COPY from the beginning of
                 the variable, whereas a negative amount means from the end.

DestinationVar - The destination variable to put the stuff cut or copied.

example :
MyVar = "This is a variable"
CutVar MyVar CUT CHAR -2 MyOtherVar

After these 2 lines have executed, MyVar should contain "This is a variab"
and MyOtherVar should contain "le"

Example gui :  Run Gui   Source
```

1.22 c_control

```
                  Control Statements :

  These control the flow of execution of your program


                 If/ElseIf/Else/Endif/And..
                 Argument
                Operator
                 Argument

                 IfExists/Else/EndIf..

                 SYSTEM
                 Name|~Name

                 While/EndWhile/And/Or
                 Argument
                Operator
                 Argument
```

```
                Mark/Goto
                MarkName

                DoCase/Case/Break/EndCase
                (DoCase) Argument - Case
               Operator
                Argument

                Stop
                ARexx capable control statements :


                Gosub/Return
                GuiName RoutineName  (ARexx capable)

                Quit
```

1.23 c_dos

```
                  DOS and Recursive Commands :

   These do the actual work - launch programs, copy files,
   send rexx commands and more:


                Run, CLI
                CommandLine

                SendRexx
                PortName  CommandLine

                Wait

                SYSTEM
                Name|~Name TimeOut

                MakeDir
                DirName

                Assign
                Device: Path|REMOVE

                Rename
                OldFile NewFile

                Launch
                LaunchID CommandLine


                FailAt
                ErrorNumber

 Recursive commands :
```

```
                Copy
                FileName (with wild characters) Destination

                Delete
                FileName (with wild characters)

                Action
                COPY|COPYNEW|MOVE|DELETE|SIZE|PROTECT|CLI File/Dir Destination

                LVAction
                COPY|COPYNEW|MOVE|DELETE|SIZE|PROTECT|CLI GuiFile GadID  ↩
                   Destination

Note : DOS and Recursive Commands always set the
                $$RetCode
```

1.24 c_events

```
                 Events :

 These are what drives Gui4Cli - they are gadgets, user actions
 etc, which, when triggered, will start the execution of commands.


                xButton
                 L T W H Title

                xCheckBox
                 L T W H Title Variable OnText OffText ON|OFF

                xVSlider
                 L T W H Title Variable Min Max Current ShowStr

                xHSlider
                 L T W H Title Variable Min Max Current ShowStr

                xTextIn
                 L T W H Title Variable StartingText Bufflength

                xCycler
                 L T W H Title Variable

                xRadio
                 L T W H Variable Spacing

                xArea
                 L T W H COMP|BOX|NONE

                xPalette
                 L T W H

                Gauge
                 L T W H IN|OUT BUTTON|RIDGE|ICONDROP APEN BPEN PERCENT
```

```
xListview
 L T W H Title Variable File|Dir Offset NUM|TXT|MULTI|DIR

LV Hooks
 LVDirHook HookID, LVHook HookID


xMemu
 Menu Item SubItem Shortcut

xIcon
 L T IconName (no .info)

xAppMenu
 AppMenuName Variable ONOFF

xAppIcon
 L T IconName Title Variable ON|OFF

xAppWindow
 Variable


xPipe
 PipeFileName ON|OFF

xTimer
 TIME|SINGLE|REPEAT Time|Interval  ON|OFF

xNotify
 File|Dir ON|OFF

xHotKey
 KeyCombination ON|OFF


xRoutine
 RoutineName

xOnKey
 Letter|#KeyValue

xOnReturn
 LaunchID

xOnJump
 Variable

Text
 L T W H Text Length BOX|NOBOX

System Events
 xOnLoad, xOnOpen, xOnClose, xOnQuit

Other Events
```

```
xOnActive, xOnFail, xOnDiskIn etc..
```

1.25 c_gadcontrol

```
Controlling Gadgets :

These event commands can be used to control the behaviour
of gadgets and guis.


SetGad
GuiFile GadIDs ON|OFF|SHOW|HIDE  (Arexx capable)

Update
GuiFile GadID Value   (Arexx capable)

ChangeArg
GuiFile GadID ArgNumber NewValue

ChangeGad
GuiFile GadID L T W H Title

ReDraw
GuiFile

PartReDraw
GuiFile L T W H

ChangeIcon
GuiFile GadID L T NewIconName

SetAttr
GuiFile/GadID AttributeName Value


SetGadValues
GuiFile
```

1.26 c_gadmod

```
Gadget Modifiers :

These commands are attached to gadgets and modify their
appearance or behaviour in some way.


GadID
IDNumber
```

```
GadHelp
HelpText

GadFont
FontName  FontSize  MASK(Underline|Bold|Italics)

GadTitle
ABOVE|BELOW|LEFT|RIGHT

GadKey
Letter (or #ASCII value)

GadTxt
LEFT|CENTER|RIGHT

LVDirHook
HookID

Attr
AttributeName Value

Local
Variables/var/var...
```

1.27 c_global

```
 GLOBAL COMMANDS

These are usually be declared at the start of the file.
They describe the general appearance and behaviour of the
window:


WinBig
 L T W H Title

WinSmall
 L T W H

WinType
 MASK (Close|Drag|Zoom|Depth|Borderless|Backdrop|RIGHT|BOTTOM)

WinOut
 ConsoleSpecification

WinOnWin
 GuiName LeftOffset TopOffset

WinOnMouse
 LeftOffset TopOffset

Screen
 PublicScreenName
```

```
WinFont
 FontName Size  UL|BD|IT(Mask)

WinBackground
 SOLID|PATTERN|ICON|IMAGE APen|Name BPen

UseTopaz

NoFontSense

VarPath
 VariableSearchPath

ResInfo
 FontHeight ScreenWidth ScreenHeight

ShareMenu
 GuiFile
```

1.28 c_graphics

```
 Graphics Commands:

These can appear anywhere in the file, outside the body
of an event. Use them to make nicer guis.


            Graphics
            The following commands :
   BOX      L T W H  IN|OUT
   CTEXT    L T Text FontName size FGpen BGpen UL|BD|IT|EMBOSS|SIZE(mask)
   LINE     L T L T ColorNo
   SQUARE   L T W H ColorNo FILL|NOFILL
   CIRCLE   centerL centerT xradius yradius ColorNo FILL|NOFILL
   ICON     L T IconName (no info)


            Images
            The following commands :
   LOADIMAGE    ImageFile Alias ScreenName|NoRemap
   FREEIMAGE    Alias
   IMAGE        Left Top Alias
   CHANGEIMAGE  GuiFile GadID Left Top Alias


            Sound Effects
            The following commands :
   LOADSOUND FileName Alias
   FREESOUND Alias
   PLAYSOUND Alias
   SETSOUND  Alias VOLUME/SPEED value
```

1.29 c_gui

```
                ******* c:Gui *** NOTE : NEW VERSION WITH G4C 3.6 ***

Gui is a "LOADER" for Gui4Cli.

*ALWAYS* use it to load your GUIs or to start up
Gui4Cli, as it will make sure that Gui4Cli knows your
default paths, even if started from the workbench.
(The code to achieve this was written by Ralph Babel
and can be found in Guis:Docs/WBPath).

You pass it the same options as you would pass to
Gui4Cli, i.e. PORT, DEBUG, OUTPUT, BUFFERS etc -
(see
              ToolType&Options
              )

It will then look if Gui4Cli is already running, and
if it is, it will pass it the gui's filename to load,
with the options specified.

Otherwise, it will start-up Gui4Cli with the filename
& options given.

Gui4Cli will also do the same (i.e. look for itself)
but this program is much smaller and faster.

GUI will look for Gui4Cli in the default path of your
system and if not found there, it will look for it
under GUIs:Gui4Cli.

This program is now pure and can be made resident (for
faster loading) by putting this command in your
user-startup file :

> Resident c:gui pure add

It is Workbench capable, so you can put it as the
default tool in your  Gui4Cli program icons.

If a gui script is started by clicking on it's icon,
then the icon of the gui script will be read by GUI
and any tool types found therein will be passed to
Gui4Cli.

Most of the tooltypes will not do anything if Gui4Cli
is already running, but some like the PORT=NewPortName
tooltype *will*, i.e. Gui4Cli will be started again
under a new port name.
```

1.30 c_handle

```
                Handling GUIs :

These enable you to open/close guis, get info etc.


               Load/Open...
               GuiLoad GuiFullPathName - GuiOpen/GuiClose/GuiQuit GuiName

               GuiRename
               OldGuiName NewGuiName

               Status

               Info
               GUI|GADGET|PALETTE|IMAGE Guiname|Guiname/GadID|ImageAlias
```

1.31 c_parser

```
                Parser Commands :

These are executed while the file is being loaded.


               NewFile
                NewFileName

               TextFile
                FileName
```

1.32 c_programs

```
                C Programmers Interface :

If you can program in C, there is a special type of message
that Gui4Cli understands that will enable you to interface
with Gui4Cli and in effect provide extensions to Gui4Cli's
command set, as follows :
```

```
- From outside programs -to-> Gui4Cli

  a) Send message and LOCK Gui4Cli, look at it's internal
     structures, manipulate variables, listviews etc, and then
     unlock it again, and let it continue, or

  b) Send command lines for it to execute (like rexx msgs)

- From Gui4Cli -to-> outside programs

  Use the new command :

  >
               CALL
               PortName Command Arg1 Arg2... Arg6

  to send special Gui4Cli messages containing commands
  to outside programs, who should then process the commands
  using, if they want, any of Gui4Cli's internal structures,
  and give control back to Gui4Cli (maybe returning something)

The place to start if you are interested is the guis:ext
directory, which contains :

- the  Gui4Cli.h  include file, showing all the internal Gui4Cli
  structures that you can access and

- Many examples showing you all possible ways you can interface,
  as well as how to manipulate listviews and other internal
  structures. They are kept as simple as possible and are well
  commented.

If you write any such extension binaries, I want them!
```

1.33 c_various

```
                Various Commands :

These are various usefull commands :


               Speak
               Text

               SetScreen
               GuiFile ScreenName

               GuiScreen
               GuiFile FRONT|BACK
```

```
GuiWindow
GuiFile ON|BIG|SMALL|FRONT|BACK|WAIT|RESUME

SetWinTitle
GuiFile NewTitle

SetScreenTitle
GuiFile NewTitle

ReqFile
L T W H Title SAVE|LOAD|MULTI|DIR Variable DirName

CD
NewDirectoryName

Delay
Ticks

EZReq
Text Choices Variable

Say
Text

Set
[parameter]  [value]

SetStack
StackSize

MakeScreen
ScreenName Depth|(W/H/D/Mode) Title

KillScreen
ScreenName

SetColor
GuiFile ColorNumber R G B

TTGet
FullPath/IconName (without ".info")

BreakTask
TaskName CDEF(signals)

Flash

MoveScreen
GuiName/#ScreenName X Y

Workbench
Open/Close
```

1.34 c_vars

```
                 Handling Variables :

With these commands you can manipulate variables, numbers
and strings in various ways.


               SetVar
               Variable String (or var = string)

               DelVar
               Variable

               AppVar
               Variable Text

               CutVar
               SourceVar CUT|COPY CHAR|WORD|LINE Amount DestinationVar

               Counter
               Variable INC|DEC Amount

               Append
               File String

               Extract
               Var  Root|Path|File|Guipath|Clean|Unquote|Ext|Upper|Lower Var

               JoinFile
               Path File Variable

               ParseVar
               Variable

               CalcVar
               ResultVar  Argument operator Argument

               ReadVar
               FileName Start Length Variable

               SearchVar
               Variable String CI|CS FIRST|NEXT

               RepVar
               Variable OldString NewString CI|CS
```

1.35 dbase_lvs

```
                DATABASE LISTVIEWS:
--------------------
```

A DataBase listview is not declared through a keyword such
as NUM or MULTI etc. - It is declared by loading a special
type of file.

Example : Run Gui   Source

The file structure is simple :
- It must start with the header "GCDB"
- The next line must state the number of records in the file
- The next line is the number of Fields
- Then come the Field definitions (Name Size Type)
- Then come the data - i.e. the records - which are all the
  same size. Their size will be equal to the length of all the
  fields added together. Records are separated with NewLine
  characters (Enter)

---------- Example file :
```
GCDB
1
3
%number 10 N
%item 30 S
%price 10 N
35        This is a dummy item          15000
```
---------- end of file

The above file, when loaded into a listview, will be understood
as a DataBase file, and the listview will become a DataBase LV.

It will have 3 fields (or columns), %number, %item and %price
and 1 record (the last line shown).

If you thereafter load another (normal) text file, the LV will
become a normal LV again. And so on..

The LV's other atributes will remain the same - i.e. if it's a
MULTI or a TXT etc listview, it will remain so..

FIELDS :

Each line of a Database (or Dbase) LV is called a "record" and
must be the same length as all the other lines.

Each record has fields which are just consecutive pieces of
each record. You can think of them as columns.

They are declared in the header. In the above example file, there
will be 3 fields :

Name	Length	Type	Start
%number	10	N (number)	0
%item	30	S (string)	10
%price	10	N (number)	40

```
   -------------------------------
   Record is  50 characters long
```

The 2nd field (%item), for example, starts at the 10th character
(i.e. where the previous field ends) and is 30 characters long.
The next field starts where this one ends.

- As you see field names *MUST* start with the % character.
  Unlike normal variables though, they are not case-sensitive.

- The "Type" definition is :

  N means a number
  S means a string - i.e. any word, words, numbers..
  D date (currently treated as if it were a string)

When their LV is CURRENT, fields can be used like variables :

```
lvuse gui 1                 ; use the above lv
lvgo #0                     ; goto the 1st record
%number = 15                ; set the "%number" field to 15
%price == $%number * 3      ; do a pointless calculation..
%item = "Another item"      ; change the %item field
say '$%price = $%item\n'    ; print out..
```

    should print out : 15 = Another item.

Each field has the value of whatever the CURRENT record of
it's listview contains.

So, if you added a lot of records to the above lv, you could,
for example, do this :

```
lvuse gui 1
lvgo first                        ; use the lv & goto top
while $$lv.line > ''              ; do for all records
   total == $%number * $%price    ; calculate CURRENT record
   say '$%item costs $total\n'    ; print info
   lvgo next                      ; get next record
endwhile
```

It is important to understand that the %fields exist ONLY
when the listview in which they are defined is CURRENT.
If you LVUse another listview, then they will disappear and
the other listview's records (if any) will appear.

COMMANDS and DBASE LVs

There are some commands which behave differently if they are
given a dbase listview to deal with.

LVADD

string - the line added will be of "record" length
    i.e. as long as all the lengths of all

```
                    the fields added together.


                LVINSERT
                string  - again, a record length line will be added.


                LVPUT
                string  - will Overwrite the current record, without
                    changing it's length.


                LVSORT
                %Field - will sort the listview according to the
                    given field. Nice eh?

In general, Gui4Cli will help you in making sure that the record
lengths are kept the same. You can, however, circumvent that
and trash a database listview if you handle it carelessly, so
BEWARE!! - keep record lengths the same.


   DATABASE COMMANDS :
   ---------------------

There are a few new commands which are specifically for DBase LVs :

-
                DBSUM
                ALL|SELECTED|UNSELECTED %FieldName ResultVar

  will add the values of a certain field for all or the selected/
  unselected records and put them into a variable.

-
                RECSORT
                %FieldName

  will sort the current record into the current listview according
  to the %field given.

... that's it for now...
```

1.36 dbsum

```
  DBSUM ALL|SELECTED|UNSELECTED %FieldName ResVar

  This command is for DataBase listviews.

  It will add the fields of ALL or the SELECTED or the UNSELECTED
  records of the listview and place the result into ResVar.
```

```
  ex:

  ; use a listview and go to the 1st record
  lvuse mygui 1
  lvgo first
  ; hide the listview for speed..
  setgad mygui 1 HIDE
  ; unselect all records that may have been selected
  lvmulti NONE
  ; go through all records, selecting all for which the field "%amount"
  ; is over 1000
  while $$lv.line > ''
     if $%amount > 1000
        lvmulti ON
     endif
     lvgo next
  endwhile
  ; sum all selected records
  dbsum SELECTED %amount result
  ; print the result
  say 'The total of all amounts over 1000 is : $result\n'
  ; set the listview back on
  setgad mygui 1 SHOW
```

1.37 delay

```
   DELAY  ticks
```

This command will delay all activity performed by Gui4Cli for the number
of ticks you gave. One tick = 1/50th of a second. Therefore...

```
eg :   DELAY 100
```

will give a delay period of 2 seconds.

1.38 delete

```
    DELETE  FileName/Dir
```

This deletes the file "FileName". Now delete is recursive and will
also delete directories.

This argument can have wildcards in it :

```
  Delete #?.bak
```

for example, will delete all files(or directories) ending with ".bak",
in the current directory.

The Amiga is notorious at getting invalidated hard disks, if something goes wrong during writing or deleting a file. So be careful when deleting stuff.

The FileName is translated, before being parsed for wild characters.

1.39 delvar

```
   DelVar   Variable
```

Delete a variable or variables. Can use wildcards for deleting Gui4Cli variables

```
ex : DelVar MyVar           - Delete MyVar
or:  DelVar MyVar#?         - Delete all variables starting with
                              MyVar.
```

You can use this command for deleting both NORMAL or ENVIRONMENT variables (env: variables have a . (full stop) as the first character) If you want to use wildcards in deleting env: variables, use the DELETE command.

Nothing drastic happens if the variable does not exist.

Also, nothing happens if at end of the program you do not delete all the ENV: variables that you have declared. They just remain in the ENV: directory of your ram: wasting space.

The NORMAL variables will be automatically be deleted when Gui4Cli quits.

1.40 dirlist

Directory ListViews

ex : xListView 10 10 200 100 ListView Var dh0:MyDirectory 10 DIR

A Directory ListView is a listing of the files devices etc on your computer. It’s difference from an ASL requester is that it’s easily Muli-Selected and provides much more control.

A Directory Listview will not "Happen" unless double clicked upon.

This is how it works :

Clicking on a file or directory (single click) :

A DIR type Listview will not "happen" when the user just clicks an

```
  item once - only when he double clicks on it.

  If you need to be notified everytime the user single-clicks an item
  you have to declare a
                xLVHook
                event.

Double clicking on a directory :
--------------------------------
  In this case, the directory will be entered into and displayed
  automatically. If an
                xLVDirHook
                event has been
  declared for this gadget, it will be executed.

  This enables you to refresh the current LV directory name in some
  other part of your GUI.

Double clicking on a file :
---------------------------
  In this case, the full path of the file will be stored into the Variable
  (quoted if needed), and the event commands attached to this particular
  ListView, executed.

Reading the MultiSelected files :
---------------------------------
  The files which you may have multiselected can be read with
  the
                LVMulti
                command, at any time.

General :
---------
  In controlling DirLVs, you can also use :

  The
                LVDir
                command.
  The LV Internal Variables (see Internal Variables).
```

1.41 docase

```
                  DOCASE   Argument
     CASE   Operator Argument
            (commands....)
            BREAK
     CASE   Operator Argument     <- you may have many case statements
     CASE   Operator Argument
            (commands....)
            BREAK
   ENDCASE

This command structure is like a multiple IF with OR ability (confused ?)
```

```
It lets you choose easily between more than 1 choices.

example :

TestVar = "TEST"
DoCase $TestVar
  Case = "EHH?"
  Case = "REAL"
        Say Real
        BREAK
  Case = "TEST"
        Say Test
        BREAK
EndCase

The above should print the word "Test"

You can have as many case statements as you want.
The
                OPERATOR
                argument has the same meaning as for IF and WHILE.

You can have DoCase within DoCase etc...

When docase finds a case which is true, it will start executing until
it encounters an ENDCASE or a BREAK. - like in a C program

This means that you can have multiple case arguments, providing a
rudimentary OR facility.
```

1.42 extract

```
                EXTRACT Variable ITEM ToVariable

 Will extract form the given Variable the given ITEM and place it
 into ToVariable.

 Say you have a variable containing "Work:MyDir/This is my file   "

 These are the ITEMs that can be extracted and placed into Variable :

ROOT    => Work:         - It will not give the actual device (yet)
PATH    => Work:MyDir
FILE    => "This is my file   "
CLEAN   => Work:MyDir/This is my file    - delete the spaces also
UNQUOTE => Work:MyDir/This is my file    - will not delete the spaces
UPPER   => WORK:MYDIR/THIS IS MY FILE
LOWER   => work:mydir/this is my file

EXT     => This will extract the file's extension (including the dot)
           ex : Extract MyFile.gc EXT var
```

```
           -> var will now contain ".gc"

GUIPATH    must be given a GUI name name as string, and it will place
           the full path (without the filename) of the GUI given, into
           the Variable.

           This is useful in loading helper GUIs which reside in the same
           directory as the main GUI. See also
                 Paths
                HEX        must be given a number in Variable and will convert it  ↩
                   to
           HEXadecimal notation.
OCT        same as above, but in OCTal notation.
```

1.43 ezreq

```
   EZReq   Text  Choices  Variable

This command will put up a system requester (in the same screen as the
GUI that called it) and wait for the user to click on a choice.

Text     - This is the text that will appear in the requester

Choices  - These are the choices which will appear as buttons in the
           requester. The format for specifying them is to separate the
           choices with | characters i.e.: "Quit|Cancel" will supply
           you with 2 choices: "Quit" and "Cancel"

Variable - Will contain the number of the requester button chosen:

The Right most button (which will usually be CANCEL) will put a 0
into Variable. The other choices will put the number of the button,
reading from left to right.

Example:

   EZReq "Quit?" "Abort|Quit|Exit|Cancel" MyVar

- will make a requester with 4 buttons, which will place the
  following values into Variable, if they are clicked :

   Abort = 1, Quit = 2, Exit = 3, Cancel = 0.
```

1.44 failat

```
   FAILAT   ErrorNumber
```

When you use CLI (without run) and other commands, you get a "return code" ($$RETCODE) when whatever you did with this command finishes executing.

This return code is stored in the internal variable $$RETCODE.

If this return code is equal or more than the ErrorNumber you have set with the FAILAT command, then Gui4Cli will stop execution immediately, and return to the waiting for something to happen.

The default value for ErrorNumber is 10, which most programs return if a pretty serious (but not fatal) error occurs. You can set this to 20 for example, if you do not want anything but a very serious error interrupting your CLI commands. (or 1000 for kamikaze pilots)

You can also declare an event type xONFAIL (see "Other Events"), whose commands will be executed if such an error occurs.

This command eliminates the need for constantly checking $$RETCODE to see if an error occurred, before proceeding to other commands.

$$RETCODE is reset to 0, after such an error.

1.45 flash

FLASH

Will flash the screen, indicating an error.

Don't flash all over the place, it can get tiring..

1.46 fonts

FONT COMMANDS :

In the Font Commands below, there are two very important keywords you can use, instead of actual font names :

#MONO - specifies the user's preferred MONOSPACE font
#SCREEN - specifies the user's prefferre SCREEN font which will usually be PROPORTIONAL.

Use these instead of actual font names where ever possible, since they will change as per the user's preferences.

There are various FONT commands you can use :

Globals :

WINFONT - will set a default font for all the gadgets which have no GADFONT declared. - it is the default window font.

```
  USETOPAZ - This command will force Gui4Cli to disregard all fonts
             declared and use topaz 8 instead.

  Event specific :
  ----------------------
  GADFONT  - This, attached to a Gadget will define the font for that
             gadget.

  If none of the above commands are declared, then the SCREEN font will
  be used.

  Gui4Cli comes also with a Graphic font, courtesy of G.Maddox.
  It has arrows, disk images, smileys etc.. and you can easily use
  it as text in buttons.

  Also see
                Font Sensitivity
```

1.47 font_sensing

```
   FONT SENSITIVITY :

Gui4Cli is Font Sensitive!

Well, ok.. not so much font-sensitive as font-aware..
(font-respectful ?.. font-give-a-damn ?..)

You can turn this feature off with the NOFONTSENSE global command.

What it does, is the following :

- On opening the GUIs window, it will check to see if the text, using
  the default window font, will fit into the respective gadget, and if not,
  it will enlarge the window and resize the gadgets, so that the text
  does fit.

The following restrictions apply (for now) :

- Only xBUTTON, xCYCLER, TEXT and xTEXTIN gadgets will be checked and
  even then, only when no GADFONT command has been declared for them.

  Other gadgets, such as sliders etc do not have text in them, and
  others, such as listviews, are self-adjusting, so no action is taken
  on their behalf.

  This means that if you do not have any of these gadgets in your
  GUI, the GUI will not adjust itself.

- Resizing is done only to increase the GUI's size.

- Currently, width is not checked -  (tried it and didn't like it..)
  The width is resized proportionally to the height.
```

```
    NOTES ON DESIGNING GUIs :

The Left & Top sizes you declare will be offsets INSIDE the window.
Do not account for the window border, it will be added automatically.

If you want to make a GUI which other people might use, it is best
to make it so it looks good using TOPAZ 8 font, on a High-Res,
Non-Interlaced screen. Then Gui4Cli can resize the window for a
bigger font, if needed.

Use the #MONO and #SCREEN keywords instead of actual font names
whereever possible, since they denote the users preferred monospace
and screen (proportional) font.

Buttons, Text and Cycler type gadget heights will be resized to the
font-height + 2 pixels, whereas xTEXTIN type gadgets will be resized
to font-height + 5 pixels. - So make the xTEXTIN gads a little taller.
```

1.48 gadfont

```
                GADFONT   FontName  FontSize  MASK(Underline|Bold|Italics)

Gadget text is drawn in the default font, or the font declared by the
WinFont command.

You can, however, have a different font for every gadget.
This is the command that does it.

The MASK is a 3 number string (see the WinType command)
1st Number  : Underline ?      -   1=Yes, 0=NO
2nd Number  : Bold
3rd Number  : Italic

e.g. GadFont times.font 11 010

This defines Bold 11 point times font

For a font name, it is always best to use the #MONO or #SCREEN keywords.
You can find more on them
                 Here
                With Dir Listviews specially, you want to use the #MONO font,  ↩
                   since
you want the filename etc lined up and a proportional font would look
ugly..
```

1.49 gadhelp

```
    GadHelp  HelpText

Very nice gadget modifier added in V3.2, provides on line help.

xButton 10 10 60 12 MyButton
  GadHelp "This is some help text"

Now, if the on-line help system is on, whenever the mouse pointer
hovers over this button (could have been any gadget) the text declared
will be shown in the TitleBar of the Screen the gui is open on.

To set HELP on/off you can either:

- Press the HELP key, or
- Use the command SET HELP ON|OFF
```

1.50 gadid

```
                  GADID  IDNumber

  This command assigns IDNumber to the gadget you attach it to.

  > XButton 10 10 100 10 "Example"
  >   GadID 10

  The IDNumber is used by other commands to reference the gadget.
  You need not give a GadID to a gadget if you are not going to
  change it.

  Other commands will usually reference the Gadget as follows :

  > Update GuiName GadID Value

  In the above example, GuiName is the name of the file that the
  gadget resides in and the GadID is the ID you have given it.

  In this way, you can SetGad, Update etc any gadget, in any GUI.

  Note that you can give the same GadID to many gadgets.
  This is useful if you want to, say, setgad lots of gadgets on/off
  all together.

  ------------------------------------------------------------
  See also :

                  LVHook

                  LVUse

                  SetGad
```

1.51 gadkey

```
 GADKEY    Letter

This is to assign a short cut to a gadget.
The effect of the short cut varies with different gadgets.

If you can not express the letter, you can assign it with
its decimal ASCII value by putting a "#" character in front of it.

GadKey #13    for example is ENTER

IMPORTANT :
Note that you may also assign a short cut to a gadget by specifying
it in it's Title. All you do is put an _ (underscore) character
before the letter in the Title that you want as a short cut.

The letter will be underscored when the gadget is drawn.

example :

xBUTTON 10 15 80 15 "Hit _Me"  <- here the M is underscored and becomes
                                  the button's keyboard shortcut.

To avoid confusion, the underscore method takes precedence over
the GadKey command, if both are used on the same gadget.

Example :  Run Gui   Source
```

1.52 gadtitle

```
 GADTITLE  ABOVE|BELOW|LEFT|RIGHT

Usually the titles of the gadgets are placed to their left.

With this command you can change this :

GadTitle ABOVE

..for example will put the title above the gadget.


Example :  Run Gui   Source
```

1.53 gadtxt

```
     GadTXT  LEFT|CENTER|RIGHT

This command will only work on a TEXT type gadget.

It will justify the text of the gadget on the LEFT, CENTER or the
RIGHT side of the gadget box.

Example :  Run Gui   Source
```

1.54 gauge

```
  GAUGE L T W H IN|OUT BUTTON|RIDGE|ICONDROP APEN BPEN PERCENT

  It's one of those pretty little thingies which show you how
  far you have progressed in some action.

  A Gauge is not actually an event, since it can not be selected
  with your mouse, so it will never "happen". If you attach
  commands to it, they will never be executed.

  You can however, give it a GADID and UPDATE it at any time.

  The arguments are the same as for a BOX except for

  APEN    = the number of the foreground color,
  BPEN    = background color
  PERCENT = the starting percentage.

  Example :  Run Gui   Source
```

1.55 gosub

```
                                                          AREXX capable
   GOSUB  GuiName RoutineName
   RETURN

A Routine is an Event declared with the
                xROUTINE
                command and is nothing
more than a bunch of commands that can be called and executed from
another event.

GOSUB, is the command that does this. You can call GOSUB for routines
       in other GUI files. This enables you to have GUI files which
       contain only routines, which you can call on from other GUIs.

GuiName     : The name of the GUI in which the xROUTINE exists.
              Note that if the GUI is not loaded, the routine will NOT
```

```
              be executed, and the User will NOT be told.

RoutineName : The name of the routine to execute

GOSUB can also take up to 6
                 Arguments
                 and pass them
to the routine it calls, as internal variables $$ARG.0 to 5


RETURN, returns from the routine which GOSUB went to and continues
        execution with the command following the relevant GOSUB.

  RETURN can also be used in xONLOAD etc type events and can
  *also* take up to 6 arguments, which it returns to the calling
  GoSub, Guiload etc. as internal variables $$RET.0 to 5

Example :  Run Gui   Source
```

1.56 graphics

```
                                GRAPHICS COMMANDS
================================================================================

These are the graphics commands that you can use to tart-up your GUI.
No commands can be attached to them and they can appear anywhere in
the program, outside the body of an event.

For clarity sake though, I usually put them at the beginning of the program,
after the Global Commands.

  Example :  Run Gui   Source

Note that you can give a GadID to these commands, as if they were Events,
and then can setgad/changegad them and redraw them to new positions.

You can not, however, attach any commands to them, as a graphic does not
"happen" so they will never be executed..


BOX    L T W H  IN|OUT  BUTTON|RIDGE|ICONDROP

    Draw a beveled box of size L T W H.
    IN means that the box will be recessed, OUT means the opposite.
    You can have 3 types of boxes : BUTTON, RIDGE or ICONDROP. These
    have different border types - try them out.


CTEXT  L T Text FontName size FGpen BGpen UL|BD|IT|EMBOSS|SIZE(Mask)

    Draw colored text, starting at (L)eft, (T)op.
    (New with V3.2 is that you can add a "Shading" or 3D effect)
```

```
    Text     = The text to be drawn
    FontName = the font to use (ex: topaz.font or #MONO or #SCREEN)
    Size     = The size of the font
    FGpen    = Foreground pen number
    BGpen    = Background pen number (-1 means leave the background alone)
    Mask     = This is a mask (see the WinType command for explanation)
    Digit 1 = Undelined (1=yes, 0=no)
    Digit 2 = Bold
    Digit 3 = Italic
    Digit 4 = The color number you want to use for "shading"
    Digit 5 = The offset of the shade (defaults to 1)

    Example : CTEXT 10 30 "Test text" times.font 11 2 -1 01032


LINE   X Y x y ColorNo

    Draw a line from X,Y to x,y, of ColorNo color.


SQUARE X Y x y ColorNo FILL|NOFILL

    Draw a square from X,Y to x,y, of color ColorNo.
    FILL means filled - NOFILL means that only an outline is drawn.


CIRCLE centerL centerT xradius yradius ColorNo FILL|NOFILL

    Draw a circle at centreL, centerT, with the respective radii.
    FILL it or NOFILL it with ColorNo color.


ICON  Left Top IconName

    Display icon as image at Left, Top. The only difference from
    the xIcon event, is that this is not clickable.
```

1.57 guiedit

```
    VISUAL EDITING

 Gui4Cli GUIs can be edited in real-time, i.e. while they are
 running. This is done by using the CONTROL key together with
 the mouse :


    Moving Gadgets :

 Press CONTROL-MouseClick on a Gadget or Graphic to Select it.
 You will see that an outline of the gadget is drawn. You can
 now let go of the CONTROL button and move the gadget outline
 around in your window.

 When you are satisfied with the new position, just click the
```

mouse and the gadget/graphic will be redrawn to this new position.

You can also use CONTROL-H instead of CONTROL-MouseClick to
select a gadget, and CONTROL-H again to place it where you
want.

This comes in handy if :
(a) you are running programs like CycleToMenu etc which may
interfere with your mouse clicks, or
(b) you are trying to paste some gadget over another gadget
in which case GadTools may eat-up the mouse clicks.

There is also a GRID available, which makes lining up the gadgets much
easier. By default the grid size is 1 which means "no grid".
You can set the grid size to any size you want, with "SET GRID 5"
(5 is a good size..) - or through the Prefs gui.

Resizing Gadgets :

You can resize a gadget by clicking on it's bottom right corner.

Note that some gadgets (such as ICONs, Images, xICONs and
CTEXT) can not be resized.

Also note that to resize a listview you have to click on the
listview's bottom right corner - *not* on the arrow buttons
(unless you use control-h).

Since LVs adjust their size automatically to show as many
lines as possible, they may be a little difficult to select
correctly for resizing..

Resizing the window :

You can enlarge or reduce the window size by resizing the
window while holding down the CONTROL key. In this case, the
window is resized, while the gadget sizes/positions remain the
same.

Cloning gadgets :

After selecting a gadget you can "clone" it (i.e. make a copy) by
using the CONTROL-J shortcut. In this case a copy of the gadget will
be created and drawn where the mouse is at.

Note that *only* the gadget information is copied.
The gadgets modifiers and it's commands are *not* copied.

Inter-GUI Cloning :

After selecting a gadget you can also place it in another
Gui4Cli window. In this case a copy of the gadget will be created
and drawn into the window where you clicked.

This enables you to make new guis by copying gadgets from other
guis - in effect, a gui editor.

Here also, *only* the gadget information is copied.

    Deleting gadgets :

You can delete a gadget or graphic by selecting it and pressing
the DELETE key.

    Saving your GUIs :

Once you have made the GUI of your dreams, you can save it by
pressing CONTROL-G. A simple requester will ask you if you
want to save the gui.

    IMPORTANT notes on saving :

- NEVER - load a gui, then change it's file by manually editing
  it and then edit & save the gui. To keep all your file notes
  etc in tact, Gui4Cli remembers the line numbers of the gadgets
  when the file is loaded, and then, when saving, it goes and
  changes only these lines, leaving everything else untouched.

  So if you have meanwhile changed the gui manually the gadget
  line numbers will have changed and ... well you're looking
  for trouble, that's what!

  Same will happen if you visually edited the file before and
  added 1 or more xCYCLER or xRADIO type gadgets. Since these need
  extra lines to describe the fields they'll have, it throws the
  whole numbering scheme off if you try to save the gui again
  without having reloaded it first.

  Hitting CONTROL-R to reload the gui (if you have changed it
  manually or have added cycler/radio gads) *before* starting
  to visually edit it, will reload and thereby refresh the correct
  line numbers etc.

  Gui4Cli will check and tell you if it doesn't find the edited
  gadget where it should be in the file.

- BE VERY CAREFUL when saving multi-gui files, if you are trying
  to edit more than one of the file's guis at the same time.
  Reloading the gui will *not* refresh the gadget line numbers
  of the other guis, since only the active gui is reloaded..

  If you must edit many guis of a multi-gui file at the same time,
  then reload *all* the file's guis everytime you save any one of
  them.

- If you have deleted existing gadgets, then the lines of
  the original GUI describing the gadget and all it's attached
  commands will be commented (i.e. a ; will be added in front)

```
  This will be done for all the lines following the gadget, until
  the next gadget is declared, or the end of file is reached.

- If you have created new gadgets, these will be added at the
  bottom of the GUI file. If it's a multi-gui file, then at
  the end of the given gui within the file.

- Any RESIZE_BIG/RESIZE_SMALL commands that the gui file may
  contain will be commented out and the gui will be saved at
  it's current size.


     Quirks :

- Circles are selected by clicking on their lower right quarter.

- Boxes (even filled ones) are selected by clicking on their border.
  You have to click *exactly* on a pixel on their border.

- TextIn gads (and maybe some others) will give you a little
  trouble if you try to paste them over themselves (i.e. move
  them a tiny bit. Try to pick them up from their edges..


     Final word :

Visual editing is very helpful for creating and setting up a gui
just the way you want it. However, a gui will do nothing unless you
tell it what to do - this can only be achieved by actually
programming them.

So Press CONTROL-E and get on with it..

Example :  Run Gui   Source
```

1.58 guiload

```
                  GuiLoad    GuiFullPathName
  GuiOpen
               GuiName
                 GuiClose   GuiName
  GuiQuit    GuiName

These commands load,open,close and unload(quit) GUIs.

When loading a GUI, you have to give the GUIs full path, i.e. :

   GuiLoad   GUIs:MyGUIS/ThisGui.gc

Thereafter, the GUIs are referred to by the file name only, i.e. :

   GuiOpen   ThisGui.gc    (or GuiOpen #This)
```

```
When opening/closing etc the GUIs, the respective events :


                xOnLoad, xOnOpen, xOnClose and xOnQuit
                are executed, if defined.

Starting with V3.2, these commands can also take
                Arguments
                This ability makes them very powerfull, allowing for function- ↩
                   type
guis which can be called at will. (see guis:tools/rtn)

***** IMPORTANT note about GuiQuit :

When an GuiQuit is encountered, the file which has been instructed
to quit is marked as such and the execution of the commands
continues uninterrupted.

When all the commands have executed, then Gui4Cli looks around to
see if there are any files marked for deletion, and deletes
(unloads) them.

So, if you want a gui to quit immediately, you have to issue a STOP
command after the GuiQuit command :

   Guiquit mygui.gc
   Stop
   ; more commands here..

otherwise the commands following GuiQuit *will* be executed, and
the file will be unloaded afterwards..
```

1.59 guinames

```
                 Using Gui names :

 You will only ever need to give a gui's full path when you
 first load it with :

 >  GuiLoad  dh0:mypath/mygui.gc

 Note that if the gui is in the same directory as the gui from
 where you issue the GuiLoad command, you can :

 > GuiLoad  :mygui.gc

 and the path will be automatically substituted for the ':'

 Thereafter you can refer to the gui with only it's name:

 > GuiOpen mygui.gc
```

```
If the command you issue exists in the same file as the gui
it wants to act upon, the you can use the "#This" keyword:

> GuiOpen #This

meaning - open the gui in which this command is located.
This indirection is very usefull in many cases, such as when
you want to change the gui name and do not want to change
the GuiName in all the commands in the file.

It gives you more independent code, which is always good.

If you want to load the same gui many times, you can also play
around with the
               GuiRename
               command.
```

1.60 guirename

```
   GUIRENAME  OldGuiName NewGuiName

This renames a GUI.
It is useful in many instances, for example if you want to load
many copies of a certain GUI, or reloading a GUI in the middle
of a command sequence, like so :

GuiRename MyGui MyGui2      ; Reload a GUI
GuiLoad   MyGui
GuiQuit   MyGui2

Be careful though..
A renamed GUI has no file, so you can't edit it, or save the
resize BIG|SMALL commands into it.
```

1.61 guiscreen

```
 GUISCREEN   GuiFile  FRONT|BACK

This will bring the screen that the GuiFile is open on, to the
FRONT or move it to the BACK.

No action will be taken if the GUI is not open.

You can also give the ScreenName directly, by putting a # char
in front :
```

```
   GuiScreen #Workbench Front

 will bring the workbench to the front.
 Note that screen names are case-sensitive.
```

1.62 guiwindow

```
   GUIWINDOW  GuiFile  ON|BIG|SMALL|FRONT|BACK|WAIT|RESUME

With this command you can do various things to a GUI.

ON      - will activate the GUI

BIG     - will zoom the GUI to its WinBig size (if it was zoomed small)
SMALL   - will zoom the GUI to its small size

FRONT   - bring the GUI to the front
          (also done by double-clicking on the window)
BACK    - Move GUI to the back of other windows.

WAIT    - Will change the pointer to a wait pointer and disable the GUI
RESUME  - will break the WAIT above.


WAIT and RESUME are usefull for when you launch a command, or do
something which will take some time. You can set the gui to wait so that
you don't have to worry about the user clicking buttons while he's waiting.
```

1.63 if

```
                  IF   Argument
               OPERATOR
                Argument
    ELSEIF, ELSE, ENDIF
    AND, OR

This is the standard If/Else/EndIf stuff, common in any computer language.
The way to use it, is to think logically.

    var = 1
    IF     $var = 2
    OR     $var = 3
         say 'var = 2 or 3\n'
    ELSEIF $var = 5
    AND    $var = 1
         say 'var = 1 and 5\n'
```

```
    ELSEIF $var = 1
         say 'var = 1 - correct\n'
    ELSE
         say 'don't know..\n'
    ENDIF

The above should print out 'var = 1 - correct'

Rules of the game :
- In any if construct, you MUST start with IF and end with ENDIF.
- In between you may use only one ELSE
- You can have as many ELSEIF's as you want - only the commands
  attached to the 1st ELSEIF which satisfies the criteria will
  be executed.
- You can have many AND or OR statements - these MUST follow
  exactly after an IF or ELSEIF or ELSE.
- You can have if within if within if constructs, up to 126
  levels.

If you don't understand how it works, run gui4cli in debug mode.
This will show you what it's doing.

The Arguments can be strings, or numbers or variables.
Note that if you want to compare a variable you MUST place a $ character
in front of it (to indicate that you mean the contents of the variable).

See the OPERATOR explanation to see what operators you can use.

IF (as well as WHILE etc) is smart enough to understand the comparison
of Numbers. So if you compare :

   IF  2 > 10

...the answer will be FALSE, since 2 is less than 10, although if they
were compared strictly as strings 2 would be more that 10.

IF can also be replaced by the IFEXISTS command. This has different
arguments (see its explanation), but otherwise replaces IF in
every way.

IMPORTANT :
The most common mistake I make when writing GUIs is this :

If  variable = 10      <- This compares 10 to the name of the variable

    instead of :

If  $variable = 10     <- Correct. Compares 10 to the contents of "variable"

Example :  Run Gui   Source
```

1.64 ifexists

```
                  IFEXISTS
               SYSTEM
                 NAME|~NAME
    ElseIfExists, Else, EndIf
    AndIfExists, OrIfExists

This command works exactly the same as the "IF" command, but with
different arguments. Look at the if command to understand it.

It lets you see if various things such as PORT, FILE, DEVICE etc..
exist in your system, or not.

Example :

TestVar = "MyWindow"
IfExists WINDOW $TestVar
  Say "My Window is open."
Else
  Say "My Window is closed"
EndIf

You can also use a negative form to check if something does
*not* exist, by puting a ~ character in front of the item
you're looking for :

IfExists PORT ~AREXX
    ; Port AREXX doesn't exist
    run 'RexxMast'
endif
```

1.65 images

```
                IMAGES (pictures, brushes, JPGs etc)

  Images can be used, via the datatypes.library (OS V39+ only)

  Images are handled differently from icons, so that memory is saved.
  You first load an image and give it a "Alias" (i.e. any name you want,
  to which you can thereafter refer). Then you can use it in many guis,
  as a background or as an Image, without having to load another copy
  of it. When you're done, you unload it..

  Image Commands :
  --------------------
  o LoadImage ImageFile Alias ScreenName|NoRemap
    will load the ImageFile, call it the Alias you gave and if you give
    a screen name, the image will be remapped to that screen's colors.
    If "NoRemap" is given, the image will not be remapped.
```

```
o FreeImage Alias
  will unload a previously loaded image. If you don't unload your
  images they will be automatically freed when Gui4Cli quits.

o ChangeImage GuiFile GadID Left Top Alias
  will change the specified picture, to the "Alias" named picture
  which must have already been loaded.
  L T of -1 means position unchanged.

The IMAGE Event :
---------------------
o IMAGE Left Top Alias
  will place the (already loaded) picture at the position specified.
  L T of -1 means center in window.

Note that no commands can be attached to this event, since it
is not selectable and does not "happen". You can, however, give
it an ID and use "ChangeImage" on it to show an other image.

You can also SHOW or HIDE it with the
               SETGAD
               and
               REDRAW
               commands.

If you want to be able to select an image, or any part of it (if you
need an image map for example), you can use the
               xAREA
               Event and overlay
invisible gadgets on the image where ever you want it to be clickable.

You can get some information on images via it's
               internal vars
              .

o Images can also be used as background for windows, with the
  WinBackGround Global Command.

Example :
G4C
WinBig -1 -1 200 100 "Test.gc"
; declare the Alias of the image you want as a background

               WinBackground
               IMAGE MyPicure ""

xOnLoad
; here, load the image, so that when the window opens and
; tries to use the image for it's background, it will find
; it already loaded and ready.
LoadImage Ram:MyImage.iff  MyPicture  Workbench
; now open the window..
GuiOpen Test.gc

xOnQuit
; on quiting, unload the image (unless you need it elsewhere)
```

```
  FreeImage MyPicture
```

Sometime in the future I will try to make the image loading a
background process, so that Gui4Cli doesn't have to stop and wait till
the datatype has loaded the image.. Till then, grin and bear it :)

1.66 important_topics

```
                 * T h i n g s   y o u   s h o u l d   k n o w :


                Variables :
                Must read.

                Normal Variables
                The most common ones

                Env: Variables
                files in Ram:env

                Internal Variables
                Get information on guis, gadgets etc

                Internal Variables List
                (there's lots of them)


                Passing Arguments
                Pass args to routines & guis

                Translation
                Interpretation of arguments

                Making Commands Lines
                Tricks & tips of forming commands


                C Programs interface
                Talk to Gui4Cli & add new commands


                DataBase Listviews
                Columns, Fields etc

                Mathematical Calculations
                Floats & functions

                Using the Clipboard
                How to Load/Save clips.

                ARexx
                How to talk to ARexx
```

Finding Paths
Make GUIs run from anywhere.

Resizable Windows
How to make Guis resizable.

Window Shortcuts
Very usefull shortcuts.

Gui Names
Using #This

Fonts
Fonts & Font commands.

Font Sensitivity
Font Sensing

Writing Programs:

Gui4Cli is "line oriented", i.e. the commands can not span lines. A line can be 1000 characters long (you can increase this with BUFFERS)

A ";" character ends the line (unless it is inside a quoted string), and you may place comments or anything else after it.

A "parser" is computer-jargon for that part of the program that reads your program file and tries to make sense out of it.

The parser, in this case, is pretty simple-minded. It's designed to be as fast as possible - not as intuitive as possible. Do not try to confuse it because you probably will.

When you write commands, separate each argument with a space or a comma.

```
IF $Variable= 10      <- is NOT correct.
IF $Variable=10       <- is NOT correct.
IF $Variable = 10     <- IS correct.
```

Use of Quotes:

A string which starts with " ends with a " and if it starts with a ' it ends with another '

If you load files and put them in a variable, and if these files contain a space they will be quoted e.g. "Ram Disk:MyFile"

So, if your arguments are likely to contain such quoted strings, it is vital that you use single quotes ' to surround each argument.

```
Debugging :

When writing a GUI, apart from the DEBUG option, there are 2
very useful keys you should know.

Control E - will run "c:ed" loading the GUI for editing.
            (can be changed to any name with the SET command)

Control R - will Re-Load the active GUI.

These will make editing much easier, especially for seeing the
positions of the gadgets and graphics.
```

1.67 info

```
               - INFO GUI|GADGET|PALETTE|IMAGE Guiname|Guiname/GadID|ImageAlias

When a window or a gadget is clicked on by the user, it becomes
the CURRENT one. All
               internal variables
               will reflect it's values.

You may want though to know the values of some gadget or window
at other times, when the user has not specifically selected them.

This is the command that will do it for you. After this command
is issued, the specified item becomes CURRENT and all the internal
variables will reflect *it's* values.

The arguments you can use are :

GUI  GuiName
     - will select another gui. The WIN & SCREEN int vars
       will show you that gui's values.

GADGET GuiName/GadID
     - will select another gadget.
       Note - For Listview specific variables, such as $$LV.LINE
              etc, you must use the LVUse command - not INFO -
              Info will only change the $$GAD.soandso variables.

PALETTE GuiName/GadID
     - select another palette gadget
       Note - Again, this is for the palette specific internal
              variables only, such as $$PAL.colors

IMAGE Alias
     - select another image (for the image specific intvars).
```

1.68 introduction

```
                                INTRODUCTION & BASICS
                        -------------------------

A Graphical User Interface (GUI), is the Buttons, Cyclers,
Sliders,  Menus and all the other gadgets you play with when
using a program.

Gui4Cli is a program which enables anyone to write such a GUI
and  from it, issue CLI or ARexx commands to other programs.

What you do, is write a script in the Gui4Cli programming
language, (which is very easy) and just run it!

How it works :
--------------

Gui4Cli is and Event-Driven language. This means that it reacts
to various events, such as the clicking of a gadget by the user,
or a command to close the window etc.

Events can be Gadgets, Menus, AppMenuItems, User Actions etc.

A GUI program is a series of such events, defined by the
programmer, and attached to these events are commands that are
executed each time the event "happens"

Gui4Cli relies heavily on the use of Variables.

Variables are temporary storage places where you can place any
sentence or sentences (strings). You can think of them as little
files.

These Variables are referenced as follows :

    MyVar   - is the name of a variable called MyVar (case sensitive)
    $MyVar  - is the contents of a variable called MyVar

Example :

> MyVar = "DPaint"     ; This stores "DPaint" into variable MyVar
> Say $MyVar

Gui4Cli will actually execute :

> Say  DPaint

We will call this process
                Translation
                (because I don't know what else to call it)
```

This translation is done on ALL the arguments of ALL the Event Commands, making Gui4Cli very flexible.

Using this Translation method, Gui4Cli is able to provide a GUI that will form any CLI or ARexx command and run it.

For example, a Cycler (that's the gadget which looks like a button with a bent arrow at one end and when you click on it it changes the text displayed on the button), is declared in the following way:

```
xCYCLER  100 12 100 15   "This is a cycler"   CyclerFile
CSTR  "DPaint"     "DH0:Dpaint/Dpaint"
CSTR  "PlaySound"  "DH0:Music/Playsound"
CSTR  "LightWave"  "DH0:MyDir/MyOtherDir/LightWave"
```

This declares a CYCLER type gadget (or EVENT), with it's top left corner at position 100,12 (pixels) of your window, 100 pixels long, and 15 pixels high. The title next to the CYCLER will be "This is a cycler", and the name of the Variable that it will put it's value in will be "CyclerFile".

This CYCLER will have 3 choices : Dpaint, PlaySound and LightWave. Every time you click on the CYCLER, the text shown above next to each of the choices will be placed in the Variable "CycleFile".

So, if you click on the CYCLER several times and at the end the choice displayed is "PlaySound", then the Variable CyclerFile will contain the words "DH0:Music/Playsound".

Now, say you declare a BUTTON gadget as follows :

```
xBUTTON  10 30 100 15  "RUN"
CLI 'Run >NIL: $CyclerFile'
```

This declares a BUTTON at position 10,30, 100 pixels wide and 15 pixels high, with the text <RUN> on it.

Attached to this Gadget, is the Gui4Cli command "CLI", which means run whatever is declared after it as if it were typed at a shell.

If you hit this button, the command that will actually be performed will be :

```
Run >NIL: DH0:Music/Playsound
```

Using other gadgets, you can declare other variables, such as the File name you want loaded (with file requesters), the program's Cli options (with checkboxes or cyclers), the volume/rate etc (with sliders), and have a command line like :

```
Run >NIL: DH0:Music/Playsound MyFile Volume=64 Option1 Option2 etc...
```

This, in effect, provides a GUI for Cli based programs.

This, is the simplest way in which Gui4Cli can be used. There are many other uses it can be put to, as you will see in the Demos.

In the above example for the BUTTON gadget, we "attached" the command <CLI 'run NIL: $CyclerFile'> to the BUTTON gadget or EVENT.

There are many such commands which can be attached to all types of Events, forming small programs which are executed every time the the user makes the Event happen (i.e. clicks on the gadget, chooses the menu, closes the window, deactivates the window... etc).

These are called "EVENT COMMANDS" and provide control of what you want to achieve (with commands such as if/endif, gosub/return, while/endwhile etc), the ability to perform Cli commands, send ARexx messages, tell other Gui4Cli windows to open or close and more.

Apart from the EVENTS and their EVENT COMMANDS there are also GLOBAL COMMANDS, which control the size of your window, which screen it opens on etc. and GRAPHICS COMMANDS which allow you to draw lines, boxes, circles, color text etc, in order to give your GUI a nicer appearance.

Simple Example : Run Gui Source

The best way to learn how to make a GUI yourself, is to look at the tutorials (which are plain ASCII files with Gui4Cli commands in them) and which are commented. Feel free to change them and try them out to see what happens.

If you make a mistake, Gui4Cli will tell you what line and what type the mistake was.

There is also a DEBUG option that can be used, which shows you what commands Gui4Cli performs every time you click on a Gadget or choose a Menu, making it easier to work out the logic of your program.

1.69 iv_g4c

These are the system internal variables, which are valid all the time.

G4C.PORT	Gui4Cli's port name (normally Gui4Cli)
G4C.VERSION	Gui4Cli version number => version 3.0 = 30
G4C.BUFFERS	The buffer size - (see the Set command)
G4C.LOADED	No of guis loaded
G4C.OPEN	number of guis whose window is currently open
G4C.DIR	current directory
G4C.FAIL	current failat level
G4C.DEFSCREEN	The screen name which all guis get (default = '*')
G4C.OUTPUT	The default console output spec
G4C.FILEPATTERN	The default ASL requester file pattern
G4C.EDITOR	The default editor name (c:Ed)
G4C.GUIPATTERN	The dafault gui extension (#?.gc - for the requester)
G4C.GUILOADDIR	The dir that the G4C load requester will open at

```
 G4C.TAB         The current tab setting (default=8)
 G4C.GRID        The current grid size
```

1.70 iv_gadget

```
---------------------------- ALL GADGETS ----------------------------

Made current upon being clicked upon or by being chosen with the
INFO command. These variables are valid for all types of gadgets.

GAD.L           gadget left edge in window
GAD.T           gadget top edge
GAD.W           gadget width
GAD.H           gadget height
GAD.GUI         gui file name gadget resides in
GAD.TYPE        type of gadget (i.e. XBUTTON, XLISTVIEW etc)
GAD.ID          gadget's ID
GAD.VAR         the name of the variable the gadget will store it's value in.
GAD.VALUE       gadget's value (varies - same value as you would
                give with the update command)
```

1.71 iv_gadkey

```
---------------------------- KEY CODES ----------------------------

These are the codes & qualifiers of the last key pressed.
You can learn what code each key has, by setting DEBUG ON (in the
new debug mode) and pressing any key.

RAWKEY.CODE     code of last raw key (arrow, help F1-F10) pressed
RAWKEY.QUAL     it's qualifier (i.e. if key was shifted, alt etc)

VANKEY.CODE     code of last vanilla key pressed (except control-key)
VANKEY.QUAL     it's qualifier
VANKEY.LETTER   the letter of the key pressed
```

1.72 iv_image

```
---------------------------- IMAGES -----------------------------

Images can not "happen" so they become current *only* by being
chosen with the info command.

These are their internal variables :

IMAGE.W         current image's width
```

```
IMAGE.H         height
IMAGE.DEPTH     depth in bitplanes
IMAGE.COLORS    number of colors (as per bitplanes)
```

1.73 iv_listview

```
---------------------------- LISTVIEWS -----------------------------

Listviews are special. They are made current upon being clicked on,
or upon being specifically chosen with the LVUSE command.

All types of Listviews have lines. The vars $$LV.LINE, $$LV.TYPE
and $$LV.REC, refer to the CURRENT LINE, which is the line that was
last clicked on or the line that was last acted upon with something
like an LVMULTI, LVSEARCH, LVFIND or LVGO command.

Each Listview keeps track of it's own current line, so you can
have many listviews and use the LVUSE command to switch between them.
The current line of each listview will be remembered when you get
back to it (with an LvMulti-next command, for example).

LV.LINE         Current line No (or "" for no current line)
LV.REC          The text of the current line
LV.TYPE         Type of current line (DEV,VOL,ASN,DIR,FILE,NONE)
LV.SEL          = 1 if line is selected, 0 if not
LV.MODE         What the mode of the lv is (NUM,TXT,MULTI,DIR)
LV.DIR          (for directory LVs) The current directory
LV.TOTAL        The total number of lines the lv has
LV.GUI          the LV's gui name
LV.ID           the LV's ID (or 0 for no ID declared)
LV.VAR          the (full path of) the name of the listview variable.
                eg: mygui.gc/myvar

Note that in Gui4Cli the number 0 is a valid number (like in C)
The first line of a listview is line number 0. So if there is
no current line you will get a "" i.e. nothing (not 0)

  example :

  lvuse mygui 1             ; make LV No 1 in mygui, "current"
  lvgo first                ; go to the first record (no 0)
  say 'Line = $$LV.LINE\n'  ; will print : Line = 0
  while $$LV.LINE > ""      ; while line is more than nothing..
     say '$$LV.REC\n'       ; print the text of the current line
     lvgo next              ; go to the next line
  endwhile

The above will print out all the lines in a listview.
```

1.74 iv_mem

```
  MEMORY information

  These variables show you the current memory information.

  $$MEM.CHIP   - the remaining chip memory
  $$MEM.FAST   - the remaining fast memory
  $$MEM.ALL    - all the remaining memory
  $$MEM.CLARGE - largest chip memory block
  $$MEM.FLARGE - largest fast mem block

  The last 2 are a little slow to get the info.
```

1.75 iv_mouse

```
--------------------------- MOUSE -------------------------------

These values show you the mouse data when the mouse was last
clicked on (while any Gui4Cli window was active).

MOUSE.X         mouse x position in screen
MOUSE.Y         mouse y position
MOUSE.WX        x position inside currently active window
MOUSE.WY        y position inside currently active window
MOUSE.COLOR     Color number of pixel at mouse position
```

1.76 iv_obsolete

```
OBSOLETE VARIABLES

These are the old variables names which you shouldn't use anymore,
although they still work, for compatibility. They have their new
equivalents.

LOADED_GUIS
OPEN_GUIS
LASTLV
CURRENT_DIR
```

1.77 iv_palette

```
--------------------------- PALETTES ----------------------------

A palette is made current by being clicked on or chosen with info.
```

```
COLOR.R         Palette's chosen color - red value
COLOR.G         green
COLOR.B         blue
COLOR.NUMBER    chosen color number
COLOR.TOTAL     total number of colors
```

1.78 iv_parsevar

```
--------------------------- PARSEVAR ---------------------------

These variables become valid after calling the ParseVar command.
They will remain valid throughout the life of G4C, until an
other parsevar command is issued.

PARSE.n         ex: $$PARSE.0, $$PARSE.1 etc, are words No 0, 1,
                etc respectively. Note the first word is No 0.
PARSE.TOTAL     The total number of words parsed. (Maximum is 30)
```

1.79 iv_rand

```
  Random number generator

  $$RAND.xxx

  Will supply you a random number from 0 to "xxx".

  ex:
  > $$Rand.100
    - will give you a random number from 0 to 100.

  Note that if you wanted a range of 1-100, you would have to do
  > x = $($$rand.99 + 1)

  You can also use a variable as the last part. This must be a
  simple variable - i.e. no variable paths, vars within vars etc.

  Ex:
  > var = 100
  > number = $$RAND.$var

  The function used to generate the number is SAS's drand48() which
  generates the number using a linear congruential algorithm and 48bit
  arithmetic... I don't know what it means, but it sure sounds good :)
```

1.80 iv_retcode

```
                  $$RetCode

  There are certain commands which set the $$RETCODE.

  This tells you the "return code" of the command, i.e. whether
  the command succeeded or failed. Usually a 0 means success.

  RetCode will be valid for recursive Gui4Cli commands such as
  copy etc, as well as ARexx commands given with SendRexx.

  Also, if you issue a CLI command you can afterwards check the
  $$RETCODE, to see if the command was successful.

  Example :

     CLI 'c:copy Myfile to ram:myfile'
     if $$RETCODE = 0
        say "File copied"
     else
        say "Error during copy"
     endif

  The $$retcode will only make sence in CLI commands which are
  not "run >nil:" because otherwise it will tell you if the "run"
  commmand succeeded and not the command itself..

  See also
                $$RexxRet
```

1.81 iv_rexxret

```
                  $$RexxRet

  If you send ARexx commands with SendRexx or otherwise, there may
  be a value returned by the program to which you sent the command.

  If so, then an internal variable named $$REXXRET will contain
  this value (RESULT_2)

  Usually programs don't return anything though..

  See also
                $$RetCode
```

1.82 iv_screen

```
---------------------------- SCREENS -----------------------------

These values show you the data of the screen that the current gui
```

```
is (or will) open on.

While the current gui is usually the active one this can be changed
with the info command. So, you can see any public screen's data by
say, making a dummy gui and setscreening it to the screen you
want (don't open it), and then choosing it with the info command.

SCREEN.W        screen width
SCREEN.H        screen height
SCREEN.BAR      screen's title bar height
SCREEN.NAME     screen's name
SCREEN.DEPTH    number of bitplanes of screen's bitmap
SCREEN.COLORS   number of colors screen can show
```

1.83 iv_search

```
                ---------------------------- SEARCHVAR  ----------------------------

These variables show the results from the
                 SearchVar
                 or
                 LVSearch
                commands :

SEARCH.POS  contains the number of the character where the string
          found begins (the 1st character is 0) or "" if nothing
                was found.

SEARCH.LENGTH   is the total length of the variable.
```

1.84 iv_system

```
  SYS internal variables

  These try to tell you some things about the amiga system:

  ========= >>> Time & date

  $$SYS.TIME - the current time (ex: 10:30:25 - hh:mm:ss)
  $$SYS.TS   - the seconds part of the above time (i.e. 25)
  $$SYS.TM   - the minutes part (i.e. 30)
  $$SYS.TH   - the Hours part (i.e. 10)

  $$SYS.DATE - the date (see below for formats)
  - following available *only* for dd-mm-yy (CDN) format:
  $$SYS.DD   - the Day part of the above date
  $$SYS.DM   - the month part
  $$SYS.DY   - the year part
```

```
$$SYS.DAY  - the day of the week (i.e. Monday)

By default the date format is DD-MM-YY (15-07-98)
You can change this with the SET command :
> SET DATEFORMAT number - where number can be:
0 = DOS format -> dd-mmm-yy  (15-Apr-98)
1 = INT format -> yy-mm-dd
2 = USA format -> mm-dd-yy
3 = CDN format -> dd-mm-yy (default)

NOTE : the $$SYS.DD/DM/DY vars expect that the day is 1st,
the month 2nd etc. If you use the USA mode for example,
the $$SYS.DD will contain the month. With DOS format all
hell breaks loose..

========= >>> Screens & windows

$$SYS.AW    - will give you the title of the Active Window.
              Any window.. not just a Gui4Cli window

$$SYS.AS    - will give the active screen title
$$SYS.ASN   - Active Screen Name (if it's a public screen)

$$SYS.FS    - Frontmost Screen Title
$$SYS.FSN   - Frontmost Screen Name (if it's public)

 - Screens : Note that, if you need other data for a screen
(width etc) you can do this :
.temp = "G4C\nScreen MyScreenName\n"  ; create a temp gui
GuiLoad env:.temp                     ; load it
info gui .temp                        ; make it "current"
; now all the $$SCR.xx vars will show you this screen's info
delete env:.temp ; be tidy :)
```

1.85 iv_textin

```
xTextIn Internal variables :

These vars give you information on the latest xTEXTIN gadget
to have been made current.

$$TI.POS    - the cursor position in the current textin gadget
$$TI.LENGTH - total length of string in the gadget
$$TI.REC    - the string in the gadget
$$TI.ID     - the ID of the gadget
$$TI.GUI    - the name of the gui it's in
```

1.86 iv_window

```
                ---------------------------- WINDOWS -----------------------------

These are the values of the currently active window, or of the
window you have specifically chosen with the
                 INFO
                 command

WIN.L           current window's left edge in screen
WIN.T           top edge
WIN.W           external width (i.e. full window)
WIN.H           external height
WIN.IW          internal width (i.e. inside window)
WIN.IH          internal height
WIN.SCREEN      name of window's screen
WIN.NAME        name of gui file
WIN.PATH        the path of the gui file
```

1.87 joinfile

```
   JOINFILE  Path File Variable

Will join the path to the file and place it into Variable.
It's there to make life easier when dealing with paths or filename
which contain spaces in them.

Path and File are STRINGS not Variables.

ex:

path = "Ram Disk:"
JoinFile $path MyFile Var
Say '$Var\n'

will print out "Ram Disk:MyFile"
```

1.88 killscreen

```
   KILLSCREEN   ScreenName

This command will delete the screen "ScreenName".
ScreenName IS case-sensitive.

IMPORTANT :

1.- All windows must be closed before the screen can close. If they are
    not, you will be notified with an EasyRequester.

2.- Gui4Cli will try to close the Public Screen you tell it.
```

```
    It will NOT check if this screen has been opened by Gui4Cli.
    Becarefull, therefore, not to close a screen of another program !!

You can check if the screen closed, with the IFEXISTS command.
```

1.89 launch

```
                    LAUNCH LaunchID CommandLine

This is a command that allows multitasking to take place within
Gui4Cli itself. Thanks to Michael Van Elst for the help.

Some programs (like c:search for example) take a long time to
finish their work. You need however to know when they are finished,
so that you can display their results, or go on to another command.

In this case you can not use RUN, because Gui4Cli would run the
program and return to whatever it was doing and you wouldn't know
when the program you ran had finished it's work.

If you use the CLI command, then Gui4Cli would start the command
and sit around waiting for it to finish, thereby blocking all other
operations.

   In these cases, you can use LAUNCH.

LAUNCH will create a new process which will run the command, thereby
freeing Gui4Cli to do something else..

When the command finishes executing, it will return to a
                 xONRETURN
                event with the same LaunchID and do the commands declared there.
(unless the ESCAPE key has meanwhile been pressed by the user)

example :

xButton 10 10 100 15 "Click Me!"
Launch  1  'c:search dh0:PlanetEarth IntelligentLife'
; now Gui4Cli is free to continue with other commands etc

xOnReturn 1
Say 'The Search has finished\nNo Intelligent Life found..'
; just kidding...
```

1.90 licence

```
                          BUGS :
                  ------------------
```

Many mosquitoes, some cockroaches, but hopefully no tarantulas.

Gui4Cli is (in my experience) a stable program and it is difficult to crash it (I earnestly hope). As of version 3.6 I have caught all enforcer hits I could find (about 10 of them) and various bugs that came up when I recompiled it with SAS 6.58. So it should be quite clean.

However, since I mostly program the binary instead of making GUIs for it, there are and will forever continue to be minor errors, unless and until someone tells me about them.

If something doesn't seem to work correctly, use the DEBUG option to see what the program is doing and if you see a fault, please tell me. Also if you see enforcer hits... you know..

Licence to use Gui4Cli :

The program Gui4Cli, the concept, the language and the logic it uses as well as any and all other aspects of Gui4Cli are the copyright (c) of Dimitris C. Keletsekis. All rights are reserved. Commercial usage is forbidden, without the prior written consent of the Author. Use of the program is at your own risk. No warranty is made or implied. Permission to use this program in Magazine cover disks, Aminet CDs or Fish Cds, is hereby granted. A small charge for copying the program, is allowed.

For personal use, this program FREEWARE.

There are no rules for the GUIs you make and may want to distribute. Do with them as you like. You may include Gui4Cli in your distribution, but make sure that you also include c:gui and you state clearly in your documentation where the latest version of Gui4Cli can be found.

Latest versions of this package can always be found :
- on AmiNet, under Dev/Gui/Gui4Cli.lha, or
- at my web page, http://users.hol.gr/~dck/gcmain.htm

Contacting the Author

Gui4Cli is my first attempt at writing a computer language. I hope it doesn't show too much. Writing the manual was absolutely the worst part and I hope it shows.

In general, Gui4Cli is just a matter of reading in arguments given by you, the user, and passing them to the Amiga OS, which has all these commands and many more, built into it's amazing ROM. The windows, gadgets, menus and all the other stuff, the Amiga does itself, as it has been doing since before mud was invented, so get down on your knees and thank the Lord for the fact that such a computer, made for people who love and not just use computers, still exists.

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Additional Code by :

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1.91 listview

LISTVIEWS

Listviews are very powerfull gadgets. They can take many forms and have many dedicated commands. This is their template :

```
xLISTVIEW L T W H Title Variable File|Dir Offset Mode
```

where :

Title : is a string that will be placed to the left (by default) of the listview. Usually you'll give a "" i.e. no title.

Variable : is the variable where the lv's value will be stored. This "value" varies according to the type of listview: DIR type LVs will store the file name you clicked on. NUM type LVs will store the number of the line. All other types will store the text of the line.

File|Dir : This argument is the name of the file that the LV should load. When Gui4Cli loads your gui, it will look for this file, and if it finds it, it will load it.

Listviews will display any kind of file, text or binary. There is one special kind of text file though that will

```
            be interpreted as a
                DataBase
                file. This allows you the
            use of %fields and other neat stuff.

            You can create a file on the fly if you want, with the
            TextFile command. The file can be changed any time with
            the LVChange command.

            For DIR type LVs this argument is the name of the
            directory the LV should open on. You can therafter change
            this with the
                LVDir
                command.

Offset   : LVs can be shifted right/left by clicking on the left
           or right quarter of the gadget. This "Offset" argument
           specifies the number of characters it should shift.
           You can set a 0 value, to disable this feature.

           Also, Gui4Cli will automatically move the CURRENT LV
           if you use the arrow keys:

           - Up/Down/Left/Right arrows - normal movement
           - Control key + arrows - Fast movement
           - Shift + arrows - go to top,bottom,left,right of document.

Mode     : The mode can be NUM, TXT, SHOW, MULTI, or DIR.
           This argument defines the LV's type. Listviews come in 3
           basic types, according to the last keyword you use :


Normal  :  (NUM or TXT or SHOW)
-------------------------------

Example :  Run Gui   Source

The normal listview is a single-select simple listing of a file.

    xListView 10 10 200 100 ListView Var dh0:MyFile 10 TXT

This is a listview which will show the file "dh0:myfile" and when
clicked upon, the Text (TXT or SHOW) of the line you clicked on
will be placed into the "Var" variable. If you had given the NUM
keyword (instead of TXT or SHOW) then the line number of the line
would have  been stored into the variable.

The difference between TXT and SHOW, is that SHOW will show you
the selected item i.e. the line clicked on will remain
highlighted, until an other line line is clicked.


Multi-Listviews : (MULTI)
-------------------------

Example :  Run Gui   Source
```

This is how a multi-select listview is defined :

```
xListView 10 10 200 100 ListView Var dh0:MyFile 10 MULTI
```

(i.e. change the last keyword) - This kind allows you to make multiple selections and read them afterwards. This listView will only "Happen" if the user double-clicks on an item - then this will be stored into the variable. You can "read" the selected items at any time.

See the Directory ListView explanation - they both work in the same way.

Directory Listviews : (DIR)

Example : Run Gui Source

These are File/Dir listers and this is how to get them :

```
xListView 10 10 200 100 ListView Var dh0:MyDirectory 10 DIR
```

These types have more dedicated commands and need more explanation
.

DataBase Listviews:

NUM,TXT,SHOW and MULTI listviews can also load a special type of file which will make them into DataBase Listviews
.

Database listviews allow you the use of Fields and other goodies.

Understanding ListViews & their Commands :

Listviews have the following dedicated commands
Listviews are governed by the notion of CURRENT LISTVIEW and CURRENT LINE (of the current listview).

The CURRENT LISTVIEW is the one on which all listview commands will act on.

A ListView becomes current when the user clicks on it. All listview commands executed thereafter will refer to that Listview.

The Current ListView can be changed with :

```
>  LVUSE  GuiFile GadID
```

```
Now, all commands will use the specified listview.

Each listview is made up of a number of lines (or "records").
Commands that act on individual lines (like LVPUT) will act on
the CURRENT LINE of the listview.

The current line is the line that the user last clicked upon,
but that can also be changed to any line you want with the
LVGO command.

More over, commands like LVSEARCH, LVADD etc will change the
CURRENT LINE to the line they return or add etc.

The
                internal variables
                $$LV.LINE, $$LV.REC and $$LV.TYPE will
always show you what the CURRENT LINE of the CURRENT LISTVIEW
is. Each listview will keep track of it's own CURRENT LINE,
and remember it throughout it's life.


                 COLORED TEXT IN LISTIVIEWS :
                 ----------------------------

Starting with V3.2, listviews will interpret ANSI sequences such
as "\#27[32mText is now white", and render text in colors or bold
italics etc.

Example :  Run Gui   Source

And it was a real bitch to get it right, too...
```

1.92 local

```
                 LOCAL  var1/var2/var3...

 This command allows the use of
                LOCAL
                variables, i.e. variables
 which are visible only inside a given event.

 This is usefull for small throw-away variables.
 You can declare as many of them as you want, separated by slashes.

 Example :

 xButton 10 10 60 12 'test'
 Local a/b       ; declare 2 local variables
 a = 3           ; use them normally, together with other vars..
```

```
  b == $a * $var  ; they will not be visible outside this event

  You can hit CONTROL-V for a full listing of all variables
  used at any time.
```

1.93 ltwh

```
   L T W H   -> (L)eftEdge, (T)opEdge, (W)idth, (H)eight

These 4 values are the sizes you declare for windows, gadgets & ASL
requesters. Apart from normal numbers, you can also use the following
numbers, which have special meaning :

L = LeftEdge  - if L is a negative value :
                - If used with a window or requester, then these will be
                  centered horizontally on the screen.
                - If used with a gadget, then the gadget will be centered
                  horizontally in it's window.

T = TopEdge   - if T is a negative value :
                - If used with a window or requester, then these will be
                  centered vertically on the screen.
                - If used with a gadget, then the gadget will be centered
                  vertically in it's window.

NOTE : The Left & Top sizes you declare will be offsets INSIDE the window.
Do not account for the window border, it will be added automatically.

W = Width     - if W is less than or equal to 0, then :
                - If used with a window or requester, their width will
                  be the SCREEN WIDTH minus this number
                  i.e. -1 will make a window 1 pixel smaller than the
               screen size, and if 0 it will be screen sized.
                - If used with a gadget, the width of the gadget will
                  be the width of it's window minus this number.

H = Height    - if H is less than or equal to 0, then :
                - If used with a window or requester, their height will
                  be the SCREEN Height minus this number
                - If used with a gadget, the height of the gadget will
                  be the height of it's window minus this number.

The only case where the above does not apply, is to the WinSmall
command - look at it to see the meanings.
```

1.94 lvaction

```
                    LVACTION  <action>  <Destination>

This command is practically the same as the
                 ACTION
                 command.
See it for more information.

The difference is that ALL SELECTED Files and/or Directories of
the CURRENT listview will be operated on.

The "CURRENT" listview is the one you choose with the
                 LVUse
                 command.

All needed updating of the listview will be done automatically.
With the SIZE action, the dir sizes will be displayed next to their names
as they are being processed.

Makes life a lot easier in dealing with dir listviews..
```

1.95 lvadd

```
                    LVADD     String

    Add a new line (or record) to the current listview.

    The current record will become the line added.

    If the listview is a
                 DataBase
               , then the line added will be
    as long as all the other records, whatever length the string
    may be.
```

1.96 lvchange

```
    LVCHANGE  NewFromFile

    Load another file into the CURRENT ListView.
    The current record will be reset to 0 - i.e. the top line.
```

1.97 lvclear

```
    LVCLEAR


    Clear the listview.

    All records will be deleted and the current line will be
    "" i.e. nothing.
```

1.98 lvclip

```
- LVClip  CUT|COPY  lines|-1  ADD|PASTE|INSERT  gui  ID

  Will CUT or COPY the amount of lines specified (or all if -1is given)
  from the current LV (starting at the current record) and ADD or PASTE
  or INSERT them into the destination LV given :

  example :

  lvuse MyGui.gc 1              ; make an lv "current"
  lvgo #10                      ; goto the 10th line
  lvclip CUT 5 ADD MyGui.gc 2   ; cut lines 10-14 from lv No.1 and
                                ; add them to lv No.2

  If we used INSERT, the lines would be inserted after the current
  record of lv No.2 - which you must have previously gone to.

  If the destination lv is not found, or if you give "" as the dest
  gui, LVClip will go ahead and execute the first part, i.e. CUT|COPY
  lines from the source lv - this is a easy way of deleting many
  records from a lv :

  lvclip cut 10 add "" 0   ; will delete 10 lines from the current lv.
```

1.99 lvcolors

```
                  LVCOLORS  GuiFile GadID ForeGround BackGround Selected Dirs

   This is a gadget modifier and will set the colors of
   the listview to which it is attached :

    ForeGround is the color the normal text is drawn in
    Background is the background
    Selected   is the background color of the selected items
    Dirs       is the color of the directories in DirListViews

    The defaults are : LVColors MyGui GadID 1 0 3 2
```

```
This command has been superceeded by the
              Attr
              modifier,
although it still works.
```

1.100 lvdel

```
LVDEL  LineNumber (or -1 for current line)

Will delete the line with the line number given, or, if -1
is given, the current line the LV is at.

IMPORTANT : if the current line is deleted then the previous line
becomes the current one, unless it's the first line in the listview,
whereby the new top line becomes the current line.
```

1.101 lvdir

```
 LVDir Parent|Root|Disks|All|None|Refresh|NoRefresh#DirName

This will do one of the following things to the CURRENT Dir Listview:

Parent   Will change the directory to the parent directory

Root     Will change to the Root dir.

Disks    Will change to the Device List

All      Will select all the files or dirs

None     Will clear all selections

NoRefresh - This takes some explanation :

         The DirListView, loads the files it finds on your computer, and
         then places them as strings in the listview. Thereafter it acts
         like a normal multiselect listview. Now, if you were to e.g. delete
         some files and not refresh the listview accordingly, the files
         shown would be wrong, so any further actions on them would
         result in errors...

         Gui4Cli will automatically check and if there is any change in
         the directory, it will ABORT all commands, and instead re-read
         the current directory. (Don't I think of everything...)

         If though you have correctly deleted all entries in the listview
         according to the files you actually deleted, then you can give
         this command, so as to stop this automatic refreshing.
```

```
Refresh  Will reload the current directory.

#DirName Give this, to change to a specific directory.
         ex : LVDir #DF0:MyDir
```

1.102 lvfind

```
                  LVFIND    String

    This command is a little weird..

    It's for sorted LVs and it will find the line containing the
    String and visually move the ListView to it.

    If the line is not found, it will stop at the closest alphabetic
    match to the line.

    The
                internal variables
                $$lv.line, $$lv.rec etc will tell you
    the line found.
```

1.103 lvgo

```
    LVGO      first|next|prev|last|#LineNumber

    This command will change the current record of the LV *without*
    visually moving it.

    The arguments you can use are :

    First     go to the top record (Number 0)
    Last      go to the last record
    Prev      go to the previous record
    Next      go to the next record
    #Number   go to given record number (top = 0)

    For example - the following code will print out the LV's contents:

    LVUse MyGui 1                 ; use LV No1 in MyGui
    LVGo first                    ; goto the 1st record
    while $$lv.line > ''          ; while there are records (or lines)
       say '$$lv.rec\n'           ; print the line
       LVGo next                  ; go to next record
    endwhile                      ; end of while loop
    say 'Boy.. that was easy!\n'  ; superfluous comment :)
```

1.104 lvhook

```
                  LVDIRHOOK HookID    - only for directory & multi listviews

    ---- YOU NO LONGER HAVE TO DECLARE THIS MODIFIER. ---

If you do not declare it, the HookID will be the same as the GadID
if this gadget.

The HookID is a number of a
                 XLVDirHook
                 event which will be
executed every time you change directories, or in an xLVHOOK

The Directory ListView will show you the file list, but it will
not show you what directory you are in.. You have to do this yourself,
using this modifier and the event it points to.
```

1.105 lvinsert

```
                  LVINSERT  RecordNumber String

    Insert a new line (or record) to the current listview,
    *before* RecordNumber (-1 means before current record)

    The line added will become the new "current" record.

    ex:
    LVInsert 0 "New Top Line"
    - will insert a new first line.

    If the ListView is a
                DataBase
               , then the line added will be
    the same length as the other lines - which may be less than
    the string you give. The rest of the space will be filled
    with blanks.
```

1.106 lvmode

```
    LVMODE  NUM|TXT|MULTI|DIR


    This command will change the mode of the LV on the fly, to the
    mode you give.

    Be careful with this command as it can get confusing..
```

1.107 lvmove

```
                    LVMOVE    +-Offset|0|#RecordNumber

    This command will visually move a listview, *without* changing
    the current record.

    You can move :

    + or - Offset : Move the display left or right.
                    Ex - LVMove +5

    LVMove 0      : This will have the effect of refreshing a listview's
                    display. It allows you to HIDE an LV with
                SETGAD
                                    and thereby speed up all the actions you take  ↩
                                       immensly.
                    When you're done, you SETGAD it on again, and refresh
                    it with LVMove 0.

    #RecordNumber : will move the LV to the record given.
```

1.108 lvmulti

```
   LVMulti First|Next|On|Off|All|None|Show


This allows you to read the selections made on multiple and directory
listviews. It will act on the CURRENT LISTVIEW.

The First & Next keywords are the ones that do this.
You MUST start with :

- LVMULTI FIRST

This will store into the given ListView's variable, the text of the
first selection in the list. (or "" i.e. nothing, if there is none).

Thereafter you read selections in some kind of loop, usually using the
WHILE/ENDWHILE commands :
```

```
- LVMULTI NEXT

This will store the next selection into the listview's variable.
You will call this many times, until it stores a "" (i.e. nothing)
into the variable, whereby you know that the selections have finished.


Example : (Filename = MyGui)
-----------------------------------------------------
G4C
WinBig  -1 -1 320 100 "My Directory"

xListView 10 10 200 100 "" LVar dh0:MyDir 10 DIR
GadID 1

xButton 210 10 100 15 "List Selections"
LVUse MyGui 1             ; use the above LV
LVMulti First             ; goto the 1st selected record
while $$lv.line > ""      ; while there are records
    Say '$LVar\n'         ; print it
    LVMulti Next          ; goto next selected record
EndWhile                  ; close while loop

-----------------------------------------------------

The rest of the keywords have the following meanings :

  ON      : set current line ON (select it)
  OFF     : set current line OFF

  ALL     : select *all* the lines of the LV
  NONE    : un-select all lines

  SHOW    : redraw the LV. This is important in speeding up
            lv processing. It is *much* faster to HIDE an lv
            (with SetGad) and act on it (with lvadd, lvput etc)
            and then SHOW it again, than to have the LV updated
            continuously while actions are going on. When you show
            it again, you must "nudge" it into redrawing itself
            with LVMulti SHOW (can also be done with LVMOVE 0)


-----------------------------------------------------

     *** Not Implemented yet ***

Many programs can take myltiple files as arguments, so there
is no need to feed each file one by one to them.

By using these two, the DirListView's Variable will be filled with
all selections made (i.e. the file names you've selected, listed
one after the other), until the first xxx bytes (ex: First_910)
of your "buffer" are full.

By default, the "Buffer" in Gui4Cli is 1024 bytes. This means your
variables can not have more than 1024 characters (spaces inclusive).
```

The buffer size can be changed with the "ToolTypes and Options".

So when executing a command line you would give a command :

CLI 'MyProgram $MyFiles $Option1 $Option2 etc etc'

Here, you must calculate approximately the size that the program name
and all the other options will take up in the command line, and ask
for First_xxx Next_xxx number of bytes in the $MyFiles variable to
be filled, so that the complete resulting command line fits into
the 1024 bytes (or whatever) buffer available.

You got all that ?

1.109 lvput

LVPUT string

will change the text of the current record the LV is at,
to what ever you give in "String".

ex:
lvuse gui 1
lvgo #5
lvput "This line has new text"

If the ListView is a
DataBase
, the old line will not be deleted
and replaced with the new (like normal listviews) but will be
copied over with the string given. The rest of the buffer, will
be filled with blanks.

It's better to use %Fields that LVPut when dealing with DataBases.

1.110 lvrep

LVREP OldString NewString CI|CS

Replace all occurances of "OldString" with "NewString" in all
the records of the current listview.

BECAREFULL if the listview is a DataBase listview, because it
may trash your records if the string you are replacing is
longer or shorter than the new string.

Again, CS means "Case-Sensitive" and CI, not.

1.111 lvsave

```
LVSAVE    SaveFileName

Save the listview as "SaveFileName"

If it's a DataBase listview it will be automatically saved
with the correct header.
```

1.112 lvsearch

```
                LVSEARCH  String CS|CI First|Next

Search the LV for "String"

CS|CI means = Case Sensitive (CS) or Case Insensitive (CI)

First|next are for control :

  LVSearch "MyString" cs first
  - will return with the first line containing "MyString".

    You can get the line number, text etc of the line found,
    via the
               Listview internal variables
                    You can get the position of the string within the line
    via the
               Search internal variables
                You can thereafter call :

  LVSearch "MyString" CS next
  - again and again, to get the rest of the lines or strings.

If there are 2 or more occurences of the same string in the
same line, LVSearch will stop as many times as there are
strings for. (This has been added in version 3.6+)

When there are no more more lines containing the given text,
then the $$lv.line internal variable will contain "" (nothing)
and that's how you know you're finished.

Note : "" is *not* the same as 0 in Gui4Cli.
       "" means Nothing - 0 means the top line.
```

1.113 lvsort

```
                LVSORT    ASC|DSC|%FieldName

This command will sort the Current listview alphabetically,
in ascending order.

You can give the following arguments :

ASC or DSC  - meaning Ascending or Descending. Currently
              however, only ASC works..

or..
%FieldName  - If the file loaded is a
             DataBase
            , then you
              can give a fieldname and the LV will be sorted
              according to the Field name.

The current record will be reset to 0.

Example :  Run Gui   Source
```

1.114 lvswitch

```
LVSwitch Gui ID

Will switch the data of the current listview with the one
specified. Everything else (IDs, gadget attributes, lvmode
etc) will remain the same.

ex:

lvuse gui 1         ; use lv No.1
lvswitch gui 2      ; switch all the data with lv No.2

This is helpfull when you use LVs as databases, or want to
have one visible lv gadget and many lists.
```

1.115 lvuse

```
LVUSE     GuiFile GadID

Select another listview and make it the CURRENT LISTVIEW.

A ListView becomes CURRENT when the user clicks on a line.
```

```
You can thereafter change the Current listview with this
command :

    LVUse MyGui.gc 1

This is an important command, because most of the  other
ListView commands will act on the CURRENT LV, and this is
the command that can set or change it.
```

1.116 lv_commands

```
                                LISTVIEW COMMANDS
                 ----------------------------

Listviews have the following dedicated Event Commands.

All the commands (except LVUse) will act on the CURRENT listview,
or the CURRENT RECORD of the current listview.


               LVUSE
               GuiFile GadID

- Loading saving files :


               LVCHANGE
               NewFromFile

               LVSAVE
               SaveFileName

               LVCLEAR
                - Handling listviews :


               LVGO
               first|next|prev|last|#LineNumber

               LVMOVE
               +-offset (do also #rec)


               LVFIND
               String

               LVSORT
               ASC|DSC|%FieldName

               LVSEARCH
               string cs|ci first|next

               LVREP
               OldString NewString CI|CS
```

```
               LVSWITCH
               Gui ID

- Acting on records :


               LVADD
               String

               LVINSERT
               RecordNumber String

               LVPUT
               string

               LVDEL
               LineNumber (or -1 for current line)

               LVCLIP
               CUT|COPY lines|-1 ADD|PASTE|INSERT gui ID

- MultiSelect listviews :


               LVMULTI
               First|Next|ON|OFF

- Commands for DIRECTORY LISTVIEWS :


               LVDIR
               All|None|Parent|Root|Disks|#dirname(string)

               LVACTION
               COPY|COPYNEW|MOVE|DELETE|SIZE|PROTECT|CLI Dest|REQ|NOREQ|Var|Mask

- Various :


               LVMODE
               NUM|TXT|MULTI|DIR

- Gadget modifier :


               LVCOLORS
               GuiFile GadID ForeGround BackGround Selected Dirs
                (it is better to use
               attributes
               for colors etc)

- DataBase listview commands :


               DBSUM
```

```
                ALL|SELECTED|UNSELECTED %FieldName ResultVar

                RECSORT
                %FieldName

  ------------------------------------------------------------------------
  An example gui :  Run Gui   Source

  *** IMPORTANT: A note about acting on listviews ***

  It is *much* faster to
                HIDE
                an lv and act on it (with commands
  like lvadd, lvput etc) and then SHOW it again, than to have the LV
  updated continuously while actions are going on. When you show it
  again, you must "nudge" it into redrawing itself - with LVMULTI SHOW
  or LVMOVE 0
```

1.117 makedir

```
  MAKEDIR  NewDirName

Create a new directory, named NewDirName.

That's all really...
```

1.118 makescreen

```
     MAKESCREEN  ScreenName  Depth|(Width/Height/Depth/Mode)  Title

  This command will make a public screen, on which you can open windows.

  ScreenName   The name of the screen you want to make.
               The name is case sensitive, so when referring to it, you
               have to have the same case letters.

  Depth        A number, signifying the bitplanes of the screen. It can be
               from 1-8. If it isn't, the depth will be set to 2.
  -OR-
  Width/Height/Depth/ViewMode
               You can also give the full size of the screen, if you want,
               instead of just the depth. The viewmode is optional.
               ex>  MakeScreen MyScreen 640/512/4/0x21004 'my screen'

  Title        A string which will be the default title of the screen.
```

```
  Ex : MakeScreen MyScreen 4 "Hey! - This is my Screen!"

  If you only give the depth (instead of full size string), the new
  screen will be the same size, resolution etc as the Workbench screen,
  and at a TEXT sized overscan.

     Example :  Run Gui   Source

  You can check if the screen opened with the IFEXISTS command.

  IMPORTANT :

  The Screen will NOT be automatically closed when Gui4Cli quits.
  You MUST (if you want) specifically close it, after closing all the
  windows that you have opened on it.

  If you do not close it, it will just stay there.
```

1.119 mark

```
   MARK   MarkName
   GOTO   MarkName

This is a simple way to jump around inside an Event's commands.
You don't really need this command, since it may be confusing.

When you declare MARK, you are just marking a point in the program.
No action is taken when the command is encountered.

GOTO goes to the MARK which bears the same MarkName as itself.

You can not jump to a Mark of a different Event.
```

1.120 maths

```
  Mathematical Calculations & Expression Evaluation:
  --------------------------------------------------

  Gui4Cli will evaluate a mathematical expression, if enclosed in
  brackets with a $ (dollar sign) in front.

  x = $(4*2)     ; will set x to 8

  This can be used anywhere, just as if it were a variable :

  Say 'The result is $(45/(2*4.56))\n'

  Gui4Cli will read brackets as if they were quotes - i.e. you
  can have spaces inside the brackets without having to quote
```

```
the whole thing :

x = $( 4 * 2 )

You can also have variables in the brackets, but..
BECAREFULL : Gui4Cli allows almost any character to be a part
of a variable name. (This is done because file names - which can
have almost any character in them - can also be variables (env:)
or part of the specification of variables (GuiName/VarName))

So Gui4Cli will also consider things such as +, *, -, / etc to
be included in the variable name if there is no space between
the end of the name and the operator :

x = $($var*3)      ; <- wrong

is wrong, because Gui4Cli will try to find variable "var*3"
Gui4Cli will understand the end of a variable name if it is
followed by a space, or a bracket or a '\', so

x = $($var *3)     ; is correct
x = $(3*$var)      ; is correct
x = $($var\*3)     ; is correct

The available operators are :

+ - * /    as you know..
^          means to the power of = 4^2 = 16

Note that to get a square root you can do :

x = $(25^(1/2))   ; 25 to the half = 5

Inside the brackets, you can also use the following math
functions :

abs(x)     absolute value of x
sin(x)     sin of x
cos(x)     cosine of x
tan(x)     tagent of x
log(x)     logarithm of x
ln(x)      natural log of x
exp(x)     exp of x
pi         = 3.141592654

example :

x = $($MyVariable * pi + tan(0.85)-(4*sin(45)))

I used to know all this stuff, now I can't remember a thing..
The parser which does the actual calculation was written by
Kittiphan Techakittiroj, who put it in the public domain where
from I appropriated it with his blessings and put it to good use.

Here's a calculator :  Run Gui   Source
```

1.121 movescreen

```
MOVESCREEN GuiName/#ScreenName X Y

Will move the screen that GuiName is (or will be) open on
to position X, Y.

You can also give the ScreenName directly, by putting # in
front.

example: (move the Workbench screen down in a dramatic way..)

   c = 10
   while $c < 150
      movescreen #Workbench 0 $c
      c == $c + 10
   endwhile
```

1.122 newfile

```
   NEWFILE   NewFileName

This is a "parser" command, i.e. it is executed while G4C is reading
your file. It enables you to have many GUIs in one file.

When G4C encounters this command in a file, it marks the beginning
of a new GUI. No new "G4C" marker is needed !!

example :

----------------- File named test1.gc
G4C

WinBig -1 -1 400 100 "test 1"

NEWFILE test2.gc

WinBig 10 10 300 150 "test 2"

----------------- end of file

This file, when loaded, will result in 2 GUIs, one named test1.gc and
another named test2.gc.

Example :  Run Gui   Source

IMPORTANT :
```

Such multiple GUI files have the following limitations :

- Only the xOnload commands of the 1st file will be executed.
  xOnLoad events of other files, if present, will be ignored.

- On Ctrl-R (reload), all GUIs contained in the file will be reloaded
  but only the GUI you asked to reload, will have quit first, so
  you will get reports that the other files exist - This is normal.

- On Ctrl-E (edit), the "mother" file will be loaded for editing.

- RESIZE_BIG & RESIZE_SMALL commands now have filename. But the
  old versions will also work.

1.123 operation

```
            *  P r o g r a m   O p e r a t i o n  *

  Starting up :

  There are 2 main binaries - c:GUI and GUI4CLI (which can be
  in c: or in Guis:, depending on the installation).

  You should *always* start Gui4Cli by runing c:GUI.
  It will look for Gui4Cli in both places and load it.
  It will also make sure that Gui4Cli inherits your cli paths.

  > run gui   -or-   > run gui SomeGuiName.gc

  One of the best ways to start-up Gui4Cli is to have "GUI" as
  the default tool of the icon of a gui. Double clicking the
  icon will automatically start-up Gui4Cli and run the gui.

  Where it lives :

  When Gui4Cli starts up, it may or may not be given a gui
  (script file) or guis to execute. In any case, it will load
  itself and install an  APPMENU Item, by the name of
  "Gui4Cli...".  This will appear in the Tools menu of the
  Workbench.

  This is your anchor to the world. When you choose this menu
  item, an easy-requester will appear, allowing you to Quit, Load,
  Open, Unload Guis, or run the Prefs gui (Gui4Cli.gc)

  The requester :

  If you choose Quit, all windows will be closed, all GUIs
  unloaded and the program will quit.

  Load will take you to the default directory where your GUIs are,
  so you can choose one and load it. - If no directory has as yet
  been given, you will be asked for Volume GUIs: (you *should*
```

make this assign - believe me..)

Open and Unload will take you to a directory called ENV:Gui4Cli, where the names of the loaded GUIs are listed, and you can choose one.

If you choose "Prefs" Gui4Cli will run the gui Guis:Gui4Cli.gc (if it exists). This is a normal gui which provides an easy way to set various things (tabs/grid sizes etc). You can, if you want, change this gui. The settings can be saved.

The preferences file :

There is a special file called GUIs:Gui4Cli.prefs which is a normal gui file, generated by the Gui4Cli.gc gui (when you save the preferences) - or you can also create it yourself, manually.

When Gui4Cli starts up, it will look for this file and if found, it will run it. It is a good place to keep all the startup settings you want, such as TAB/Grid sizes, sound effects etc..

Method of Operation :

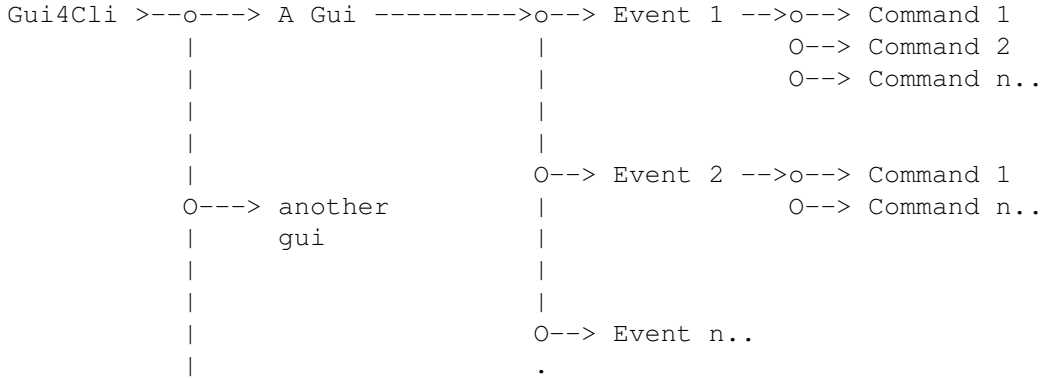
A GUI can be loaded into memory and be or not be open. You can have as many GUIs as you want loaded into memory, and as many of these as you want, open at the same time.

Thereafter, every time you run GUI (or even Gui4Cli itself), it will look for a running instance of Gui4Cli and if it finds one, it will send it a message to load the program you have specified, or clicked on.

This means that you will only have one running Gui4Cli, with many GUIs loaded and some or all of them open.

If you need another instance of Gui4Cli, you have to specify another PORT name in the tool types, or as a CLI option. In this case, another APPMENU item will be created with the name of the PORT you have specified and through this other GUIs can be run separately.

In effect, you can have unlimited, easily constructed GUIs running on your Workbench or on other Public screens.



```
            |                    .
            O---> unlimited
            .     guis..
            .
```

This is what it looks like in concept.

1.124 operator

The following are the operators you can use with the IF, WHILE and DOCASE commands (all comparison are case-sensitive unless stated otherwise) :

EQUAL (Insensitive)	==	(Comparison is CASE-INSENSITIVE)
EQUAL (Sensitive)	=	(Comparison is CASE-SENSITIVE)
NOT EQUAL (Insensitive)	!!	(Comparison is CASE-INSENSITIVE)
NOT EQUAL (Sensitive)	!=	(Comparison is CASE-SENSITIVE)
MORE	>	(Left side more than right side)
MORE than or EQUAL to	>=	
LESS	<	(Left side less than right side)
LESS than or EQUAL to	<=	

FILE HEADER COMPARE H= This operator MUST have a file name on the left of it and a comparison string on the right :

```
IF df0:MyFile  H=  "FORM????ILBM"
```

the comparison string contains the starting bytes of the file type you are looking for. - Question marks are wild (-see below-)

STRING COMPARISON S= This MUST have a string on either side of it and will compare them. it is case-insensitive and wild characters can be used (see below).

```
ex : IF "This" S= "THIS"
```

This is meant to be used along with the ReadVar command and provides a faster method of checking file headers than the above H= operator.

DEVICE COMPARISON D=
FILE/DIR COMPARISON F= Both of these need a file, dir or device on either side. D= will yield TRUE if the files/dirs are on the same device, and

```
                                F= will be TRUE if they are the same
                                file or directory.


Wild Characters that can be used with H= and S=

   ?    Means any character
   #    Means any Printable character
   %    Means any UnPrintable character

Operators MUST have a space to each side of them :

if  This= That        <- is not correct
if  This=That         <- is not correct
if  This = That       <- is correct
```

1.125 options

```
                                        TOOLTYPES & OPTIONS


The CLI or TOOLTYPE options are identical. The only difference is that
the TOOLTYPES are in the icons.

PORT=PortName   Usually the Public message port name is Gui4Cli.
                This way all GUIs are run from the same one program.

                You can, if you want, though, launch as many Gui4Cli's
                as you want, by specifying different PORT names for them.
                This keyword is the way to do it.

DEBUG           If this word appears in the commandline, then Gui4Cli
                is started in the "debug" mode, which means that it will
                print out in the default shell all commands that it
                executes, in the order it executes them. Use this command
    to see what the program is doing, if it behaves illogically.
                The STACK statements that are printed out, you can forget.

                DEBUG (in a simplified form) can also be started/stopped
                at any time, with the SET DEBUG ON|OFF command, or by
                just pressing CONTROL-D while a G4C window is active.

BUFFERS=Bytes   When Gui4Cli starts up it grabs 12 buffers (pieces of
                memory), in which it does all the translating and other
                command processing. These are 1024 bytes long, by default.

                This means, for example, that your translated command
                line in a CLI or SENDREXX command, can not be longer
                than 1024 characters. It also means that your variables
                can not be bigger than this size.

                You may, if you want, change this with this option.
    You can also change it whith the
```

```
                SET BUFFERS
                command.

OUTPUT=Console  By default, the console specification for any output
                from CLI commands, or Gui4Cli error reports etc, is :

                - If started from a shell -> the shell itself
                - If started from WB -> "con:0/12/450/80/Gui4Cli Output/AUTO/CLOSE ↩
                   /WAIT"

                This is the console that is passed to all CLI commands.
                You may want to change this (to KCon:, or NIL: for example)
                so this is the way to do it. (Also with SET)

                Note also that you may specify a different console for
                each GUI (with the WinOut command), but this is wasteful,
                as each new console you specify uses memory.

EDITOR=Editor   When you press CONTROL-E, the default editor will be
(NOT CLI)       started up, in order to edit the current GUI.
                The default editor is c:ed.
                With this option you can change the name of the editor
                to whatever you want (ex : EDITOR=C:CygnusEd)

NOREQUEST       If you specify NOREQUEST as an option, you will disable
                the file requester which appears at startup. If no
                filename is given - allows you to put a GUI with an icon
                into the WBStartup drawer without getting a requester at
                startup time.

The OUTPUT and EDITOR can also be changed with the SET command.
```

1.126 parsevar

```
  PARSEVAR VariableName

  This command will take a variable and split it up into arguments
  (words or quoted strings), returning them as internal variables.

  The internal variables are :

  $$PARSE.0, $$PARSE.1, $$PARSE.2 etc - up to PARSE.29
       which will hold the various arguments (30 maximum)
       or words resulting from the splitting of the variable
       The 1st word will be in $$PARSE.0

  $$PARSE.TOTAL will contain the number of arguments that have been
       parsed.

  Note - the ; character ends the line being parsed (like in G4C)

  The values of the PARSE internal variables will remain unchanged
  until another ParseVar command is issued.
```

```
  Example :  Run Gui   Source
```

1.127 partredraw

```
                 PARTREDRAW GuiName L T W H

  This command was added to make redrawing of windows easier to the eye.
  It will redraw only part of the window, thereby reducing the flashing.

  Use this if you're just changing some gadgets in one area of the
  window and do not want a full redraw.

  L T W H denote the area which you want redrawn.

  It's exactly the same as the
                Redraw
                command, only that
  a part of the window is erased instead of all the window as is done
  in the Redraw command. Otherwise, the gadgets, graphics etc are drawn
  from scratch, same as with Redraw.
```

1.128 passing_args

```
  PASSING ARGUMENTS :
=====================================================================

Arguments can be passed by the following commands :

  GUILOAD   to xONLOAD or xONRELOAD
  GUIOPEN   to xONOPEN
  GUICLOSE  to xONCLOSE
  GUIQUIT   to xONQUIT

  GOSUB   to xROUTINE

The way this is done is by declaring the arguments in the command's
command line, like so

  GUILOAD guis:MyGui Arg0 Arg1... Arg5
  or
  GOSUB   MyGui   MyRoutine   My_Arg   My_Other_Arg

Up to 6 arguments may be passed.

Inside the event they call, these arguments can be accessed in either of
two ways :
```

1. As Arguments in the Event's definition.

   If declared in the event's definition, they'll be automatically converted to variables. For example :

   ```
   >  xONLOAD  Var1 Var2
   ```

   If you were to call this event with :

   ```
   >  GUILOAD  MyGui.gc SomeText "Some more text"
   ```

   then when MyGui.gc loads, there would be 2 variables created :
   - "Var1" which would contain the word "SomeText" and
   - "Var2" which would contain "Some more text"

   You can also pass variables:
   ```
   >  gui/myvar = "Some text"
   >  GOSUB MyGui.gc RoutineName $gui/myvar
   ```

   If you pass variables you should use the variable's *full* path (as is done above) to avoid confusion.

2. As internal variables $$ARG.0 to $$ARG.5

   Note that even if you define variables in the event's definition as above, they'll still be available as $$ARG.xx also.

$$ARG.TOT will (always) contain the actual number of arguments passed.

Furthermore, the above events (xONLOAD, xROUTINE etc) can now RETURN arguments via the RETURN command.

```
  RETURN  Arg0 Arg1... Arg5
```

The arguments can be accessed (when they return to the routine that called the event) as internal variables $$RET.0 to $$RET.5.
$$RET.TOT will contain the actual number of arguments returned.

Example :

```
xBUTTON 10 10 60 12 Test
   var = "This is a test"
   GoSub MyGui routine1 $var
   ; We only pass "var" as an argument here. We could have had up to 6 args.
   ; the routine will return one argument to us (also could have been 6)
   ; which we just print..
   say 'Return returned $$RET.0\n'

xROUTINE routine1 MyVar
   ; here variable "MyVar" will contain $var (i.e. "This is a test")
   ; Note that $$ARG.0 will also contain the same thing.
   say '$MyVar is the same as $$ARG.0\n"
   ; now we return something...
```

```
   Return "Thank you.."


  ** WARNING :

- If you want to pass a variable you should give the variable's full
  path (i.e. RETURN MyGui/MyVariable), since it may be in another
  gui which may not have you in it's varpath.

  ** WARNING 2:

- You can not pass an $$ARG.0 type of internal variable you receive
  as an argument to an other routine/xonload etc. :

  > GOSUB mygui myroutine $$ARG.0         <-* is WRONG

  That's because when Gui4Cli attempts to translate the variable when
  it gets to the routine, it will find variable $$ARG.0 containing
  $$ARG.0 and it will go into a wild loop trying to translate it..

  This loop will time out after 100 rounds (i.e. the default depth of
  variables within variables that you can have) and the error will
  be reported.

  There are no such problems if you use the definition in the event's
  command line, so use that instead.
```

1.129 paths

```
                  FINDING other Guis and their paths:

Whenever you make a GUI which other people might also use, you will
need to know various paths where you can load any helper GUIs or
icons that your GUI needs, since you don't know how other people's
systems are set up.

There are 2 ways of doing this :

1st is to use the
                 Extract
                 command, as follows :

Extract MyGui.gc GuiPath MyPath

Now variable MyPath will contain the full path of MyGui.gc GUI.
You can now assign this path, or use it to AppVar various other GUI
names and load them.

There is a much easier way though, and that's by putting a ":" character
in front of the filename or icon name, like so :

GuiLoad :MyGui.gc
```

Gui4Cli will automatically convert the ":" character to the full path
of the GUI in which this command exists. This method also works with
icons, so you can do :

xIcon 10 10 :MyIcon

and the icon will be loaded from the current file's path.

1.130 programming

HOW TO MAKE A Gui4Cli PROGRAM

The structure of a Gui4Cli program may, in the beginning, be a little
confusing to understand since it is not like other languages.
Once you understand it though, it is very easy.

Start with G4C

First of all, every Gui4Cli program MUST start with the letters G4C
These must be the first letters of the first line of every GUI, so
that Gui4Cli knows it is a loadable file.

GLOBAL
&
GRAPHICS
COMMANDS

Then come the GLOBAL COMMANDS and the GRAPHICS COMMANDS (if any).

These can appear in any place in the file, but it is best to put them
at the beginning of the program, for clarity's sake.

The Global Commands specify the window size and type as well as other
general characteristics of the GUI, such as the screen it should open
on etc.

The most important of the Global Commands is "WinBig", which
describes the size of the window. If this command is not declared,
no window will open.

The GRAPHICS COMMANDS are simple drawing routines, enabling you
to tart-up your GUI. They provide colored text, lines, boxes, circles..

The rest of the program consists of EVENTS and their EVENT COMMANDS

EVENTS :
EVENTS usually start with an "x" e.g. xBUTTON, xLISTVIEW, xONOPEN ↩
,
xONCLOSE etc.

Events can be gadgets, menus, routines, AppItems or User actions.

For example :

xBUTTON is a Gadget
xMENU   is a Menu
xONCLOSE is a user action (i.e. if the window is closed)
xROUTINE is a routine
xAPPMENU is an AppMenu Item (WB Tools menu)

All events, of whatever type are treated in the same way.
Whenever an event "happens", the commands attached to it will be
executed in the order they appear.

The Gadget and Menu type events, also specify the type and specifics
of the gadget or menu.

A button type gadget (EVENT), for example, can be declared as follows :

xBUTTON 10 20 100 15 "Click me!"

This declares a button positioned 10 pixels from the left side of
the window and 20 pixels from the top. The size of the button is
100 pixels wide and 15 pixels high, and it will bear the title
"Click me!".

Most gadgets, will have a variable where they will put their value.

EVENT MODIFIERS
Gadgets have standard settings - for example, the text in a text ↩
gadget
will, by default, be right justified.

Many of these default settings can be changed however, by attaching
Event Modifiers to them, such as GadText LEFT.

EVENT COMMANDS :

Event Commands are "attached" to Events.

You can attach any number of event commands to any event, making small
sub-programs (like routines or functions in other languages), which
will be executed every time the event they are attached to "happens".

These commands do different things.

Some, such as IF, WHILE etc, provide a means to control your program.

Others such as SETVAR, RUN, SENDREXX etc perform some action.

An event command can be ARexx capable or not. You can see if it is
from the main command list (there is a line separating them)

If it is, it means that it can be passed to Gui4Cli from other
programs as an ARexx command and will be executed as if it was
attached to an Event.

There is no special statement that ends an Event. Each event routine
ends when another Event is declared.

EXAMPLE PROGRAM :

For example, this is a little "Hello World" program.
We'll name it "Hello.gc"

```
------------------------Start of file
G4C                          ; You must put this at the beginning.

WINBIG 100 20 100 50 TEST    ; Specify a window

xONLOAD                      ; To be done on loading the GUI
GuiOpen Hello.gc             ; Open the GUI's window.

xBUTTON 10 12 80 15 HERE!    ; Specify a button
SAY "Hello World!"           ; Attach a command to it.

------------------------End of file.
```

When you run this program, a window will open with a button in it.
When the button is clicked on, a standard con: window will appear
(since you have not specified otherwise) and the words Hello World!
will be echoed.

If you click on the window's close gadget, the window will close but
the GUI will remain in memory, since we have not told it to quit.

If we wanted the GUI unloaded from memory as soon as the window closed,
we would add the following Event :

```
xONCLOSE
GuiQuit Hello.gc
```

Note that the commands can be in capitals or small letters.
But careful - variables are case-sensitive!

We did not use "translation" in this program, since we did not have to.
Let's make a simple program using translation. (call it Hello2.gc)

```
------------
G4C

WINBIG 0 0 100 50 "2nd Test"

xONLOAD                       ; upon loading of the gui
Var1  = "Hello World"         ; declare variable Var1
```

```
GUIOPEN Hello2.gc              ; and open the gui

xBUTTON 10 15 80 15 "Hit Me"
SAY "$Var1"                         ; print the variable
IF  $Var1 = "Goodbye World.."       ; see explanation..
   GUIQUIT Hello2.gc
ELSE
   Var1 = "Goodbye World.."
ENDIF
------------
```

Here, in the beginning, we put the words "Hello World" into Var1, and open our window.

When the button is clicked on, we print the value of the variable, and afterwards we set it to "Goodbye World..", so that the second time the user clicks on the button, after "Goodbye World.." is printed, the GUI will quit.

Ok.. enough talking - you can see how easy it is.

The best way to learn to write GUIs, is to look at the tutorials , so go look at them. You can change them in any way you want and see what happens.

You will be impressed at what can be achieved (I hope :)

1.131 quit

```
  QUIT
```

QUIT will quit Gui4Cli.

It will close all open windows, executing any xOnClose events (if any) and will unload all guis, executing any xOnQuit events.

QUIT can also be chosen from the STATUS requester.

1.132 readvar

```
   READVAR FileName  Start  Length  Variable

   Reads part of a file into a variable

   > ReadVar ram:myfile  0 100 myvar

   will read the first 100 bytes of file "ram:myfile" into
   variable "myvar".
```

```
   Remember that variable length is limited to 1024 bytes unless
   you enlarge it with the BUFFERS ToolType option. That means
   that you can not read more than that into the variable.
```

1.133 recsort

```
  RECSORT %FieldName

  This is for DataBase listviews.

  It will sort the CURRENT record into a DB listview according to
  the given field.

  If you have a listview sorted according to (say) the amount, then
  if you added a new record, or edited one and changed the amount
  then you'd have to sort the whole listview again..

  Using this command, you can sort only the record you changed
  so it's much faster..

  ex:

  ; use an lv and select the 1st record..
  lvuse mygui 1
  lvgo first
  ; change the %amount field of the 1st record..
  %amount = 5000
  ; resort it..
  RecSort %amount
```

1.134 redraw

```
                    REDRAW   GuiFile

This command will Re-Draw the GuiFile's window, taking into account
any changes you may have made to the GUI with the ChangeGad command
or with the SetGad command (with the SHOW|HIDE keywords).

Use it after using ChangeGad or SetGad on all the gadgets you want
to change.

example :

   setgad mygui.gc 1 HIDE
   setgad mygui.gc 2 SHOW
   redraw mygui.gc

A cooler redrawing can be achieved with the
                PartRedraw
```

command.

1.135 rename

```
   RENAME  OldName NewName
```

Will rename the given file or dir.

1.136 repvar

```
REPVAR  Variable OldString NewString CI|CS

Will replace all occurances of OldString in Variable with NewString.
CS means case sensitive, CI case insensitive.

example :

x = "This is a test string"
RepVar x  "is"  "XXX"  CI

; now x will contain "ThXXX XXX a test string"

If you want to make replacements on *all* the records of a listview
you can use the - LVREP OldString NewString CI|CS - command.
```

1.137 reqfile

```
  ReqFile  L T W H Title SAVE|LOAD|MULTI|DIR Variable DirName

This is an ASL file requester. You must have the asl.library in
your LIBS: directory.

(L)eft, (T)op, (W)idth and (H)eight are the starting position and
size of the requester. If you resize it thereafter, the new sizes
will be used.

TITLE is the title in the requester window title bar.

SAVE, LOAD, MULTI, DIR are the types or requesters you can use.

VARIABLE is the name of the variable, where the names of any file(s)
that were chosen will be placed. If its a multiple selection, the
files will be listed one after the other. If the file names contain
spaces, they will be quoted.
```

```
DIRNAME is the starting directory that the requester will open on.

The DirName will be remembered, and the next time the requester
opens it will open at the dir you were at last time, however..

You can put a # character in front of DirName, to force the
requester to open at the same dir every time: #mydir

You can also give "" as the DirName. This will use the last dir
used by other ReqFile commands, or sys: in case no other ReqFiles
have been executed yet.

ALSO - you can give a filename with the dirname :

   ReqFile -1 -1 300 200 "Choose" LOAD var #df0:mydir/myfile

In this case, the name of the file will be placed in the File
gadget of the requester. Gui4Cli will check if it's a file or
a dir and act correctly.

Also ReqFile will no longer be confused by quoted file names etc.

It's generally a little smarter than it used to be.
Unlike me..
```

1.138 resinfo

```
RESINFO FontHeight ScreenWidth ScreenHeight

This is a Global command with which you can give some info
to Gui4Cli to enable it to resize the gui correctly on other
people's systems.

Example : ResInfo 8 640 256

- this tells Gui4Cli that your gui was designed on a 640x256
  screen using an 8 point font.

NOTE :
- If the font size is the same, no resizing will take place.

This command probably needs improvement..
```

1.139 resize

```
                                  RESIZABLE GUIs :
                    ------------------------------------
```

```
   How to make them :

All you have to do in order to make a GUI resizable is declare the
border gadgets with the
                 WinType
                 command.

   Notes on resizing :

Gui4Cli is (or tries its best to be)
                 font-sensitive
                This means that it will automatically resize a GUI to fit the font ↩
                    you
use.

However, the best method of getting and keeping the GUI size you want
on your system, is to use the CONTROL-W short cut :

When you press CONTROL-W on a window, a requester will appear which
will tell you the current window size & position and have the following
choices :

BIG     :  Save this window size as the default size it opens with

Small   :  Save this window size as the minimum size

Adjust  :  Resets the current minimum window size and allows you
           to resize the window to any size.

CANCEL  :  You know...

Saving the window sizes, instructs Gui4Cli to append one of 2 commands :

RESIZE_SMALL  Left Top Width Height     - or
RESIZE_BIG    Left Top Width Height

to the specified GUI file.

This command will instruct Gui4Cli to resize the window to the
specified size, upon loading it. Note that when Gui4Cli loads the
file, it can encounter many such RESIZE_xx commands, since you may
have saved the window sizes many times. It will only use the last
ones it encounters, so you may as well delete any others..

NOTE :

When you resize a GUI, the gadgets are redrawn to their new sizes
positions etc. and with the values they currently have.

The xLISTVIEW's current value, is the line number of the last
line you clicked on it (if any, otherwise 0), and so when redrawn
it will show this line as the 1st one. This may cause some
confusion....

It's the fault of the GadTools library, so leave me out of it..
```

1.140 run

Two commands give you the means to run CLI commands :

```
   CLI   CommandLine
   RUN   CommandLine
```

Both are AREXX capable.

The CommandLine is anything that can be typed at a shell command prompt. Note that the command line is a single argument, so, if it has spaces in it (which it probably will), you MUST enclose it in quotes (single quotes preferably).

Example :
RUN 'Dpaint $Myfile'

The difference between the 2 commands is :

RUN - will run the command line asynchronously
CLI - will run the command synchronously.

BE CAREFUL with the CLI command, as it will stop all processing of Gui4Cli until the command you have given it has finished executing (unless you have given something like : CLI 'run >NIL: Dpaint').

Both commands will set the
$$RETCODE
internal variable which you can check to see if the command you issued worked or failed. 0 means OK. This, usually, is only useful when using the CLI command, and then, only if you don't "run" it.

Use
IFEXISTS
,
WAIT
and other methods if you want to make sure that you have run the program successfully.

IMPORTANT : Some programs require a large amount of stack to run. The default stack passed with the above CLI/RUN commands is 4000 bytes. You can change this with the
SetStack
command, to any number you want.

1.141 say

```
                    SAY   Text

This command writes the Text you give it to your window's default
output window (if any).

ex :

Roses   = "red"
Violets = "blue"
SAY "Roses are $Roses, violets are $Violets \n"

This should print out "Rose are red, violets are blue"

The \n is a
                 Special character
```

1.142 screen

```
Screen    PublicScreenName

Specifies the name of the Public screen that the window will open on.

If you do not declare this command, the gui will open on the FRONT
most screen. This is the most intuitive setting as the guis will
follow the user to whichever screen he is currently at.

In all cases, the front screen can be denoted with '*' (asterisk)

If the screen is not found, the window will open on WorkBench,
if available.

Example :
Screen CygnusEdScreen1

Note : ***** SCREEN NAMES ARE CASE-SENSITIVE ! *****
```

1.143 searchvar

```
                SEARCHVAR  Variable String CI|CS FIRST|NEXT


  This command will search a variable for a string.

  Variable  is the variable you want to search
  String  is the string you are looking for
  CI or CS  means Case-Sensitive (CI) or Case-Insensitive (CI)
  FIRST|NEXT  is used to let you find multiple occurances of
```

```
  the string you're looking (see below)

The result, if found, can be read from
               internal variables
              .

Example :

x = 'That is a test string'
SearchVar x "is" CI FIRST
   ; now $$Search.pos will = 5 which is the character that "is"
   ; starts at
pos = $$Search.pos
say "$x[$pos]\n"
   ; will print out : "is a test string"
SearchVar x is CI NEXT
   ; now $$Search.pos will = "" (nothing) because there are no more
   ; occurances of the word "is" in variable x.
```

1.144 sendrexx

```
                  SENDREXX  RexxPortName  CommandLine

This is the command used to send ARexx messages to other programs.

RexxPortName  is the name of the Rexx port to which you want to
              send the command.
              * Port names are always Case Sensitive !

CommandLine   is the Rexx command you want to send.

example :

SendRexx  rexx_ced  'open $Myfile'

- will send the command to load a specified file to the rexx
  port of the CygnusEd editor. "rexx_ced" is CygnusEd's rexx
  port name.

This command sets the following internal variables :


               $$RETCODE
               contains the value returned by ARexx - 0 means OK

               $$REXXRET
               contains the value returned in RESULT2, if any.

If you don't know anything about ARexx, you're not alone - neither
do I. You don't have to know anything though to use this command.
```

```
  Most programs provide ARexx commands. All you have to know, is
  what these are and use them as you would use CLI commands.

  You can do a lot with this command, as you will see.

  Example :  Run Gui
             Gui4Cli Source
             ARexx   Source
```

1.145 set

```
                  SET  [parameter]  [value]

  With this command you can set the following GLOBAL parameters :

BUFFERS BufferSize

  Gui4Cli uses about 14 internal buffers to do all translating,
  command line forming etc. Their size is, by default, 1024 bytes.
  This means that your command lines, variables, listview lines,
  rexx commands etc, can *not* be longer than this size.

  You can increase (or decrease) the buffer size with this seting.
     ex:  Set Buffers 2000
  Set buffer size to 2000 bytes - remember Gui4Cli will allocate
  14 of these buggers..

  Note: you can learn the current buffer size with $$G4C.BUFFERS

DEBUG  ON|OFF

  This will enable or disable the internal debugger of Gui4Cli.
  Use CONTROL-D to do the same thing..

  You can get debug information in two ways :
  One is by starting Gui4Cli in
                DEBUG
                mode. This will show you
  exactly which line is executed, as it is written in your file.

  Or you can use this new form of DEBUG which can be started/stopped
  at any time, without having to start up G4C in debug mode. The new
  one will show you cryptic statements instead of KeyWords and Opera-
  tors, but is otherwise same.

  Also, if you press any key while in any debug mode you'll get it's
  Code & Qualifier values.

DEBUGVARS ON|OFF

  After v3.5 the DEBUG mode will no longer print out the
  GET:/SET: variable value - statements any longer.
```

```
  You can SET DEBUGVARS ON|OFF, if you prefer the old method.

DEBUGSTEP ON|OFF

  If you set this ON, Gui4Cli will pop up a requester before every
  command line is executed, when in DEBUG mode. This allows you
  to control execution. You'll probably never need it - I used it
  in tracking down enforcer hits..

HELP ON|OFF

  Will start/stop the on-line help system. See also
                GadHelp
               GRID GridSize

  Will set the Grid size for
                Visual Editing
                 ex : Set grid 5

LOAD_DIR  DirName

  Will set the directory that the
                Status
                Requester LOAD button
  will open on.

TRANSLATION  ON|OFF

  Usually all arguments will be
                translated
                by Gui4Cli.
  In some cases though you may not want something translated.
  With this command, you can set the translation OFF.
  This will last for one round of command executions.
  Translate will automatically be set on again after all commands
  have executed.

DEEPTRANS ON|OFF

  Setting DEEPTRANS OFF will stop Gui4Cli from translating variables
  within variables. As with TRANSLATION, this will only last for one
  execution cycle.

  This comes useful in many situations such as the filetype checking
  routines in  guis:tools/getfiletyle  which are now much faster.

OUTPUT  ConsoleSpecification

  All output from CLI commands or Gui4Cli error reports, will
  go to the
                default console
               .

  If you want to change this console you can do it with this.
  You can specify KCon: for example, or NIL:

FILEPATTERN  FilePattern
```

```
  The default file pattern for all file requesters, is :
     ~(#?.(bak|info|auts))")
  You can change this with this command.

EDITOR  EditorName

  The default editor which will be called upon to edit the window
  when the user presses CONTROL-E, is "c:ed". Change it with this.

GUIPATTERN   NewPattern

  The default GUI file name extension for Gui4Cli is #?.gc
  (i.e. anything ending in ".gc" - subfiles end with ".g", ".g1"
   or any other scheme that you may want to make up..)

  You can change this (but it is not a good idea)

SPEAK Rate/Pitch/Sex/Mode/Volume/Freq

  Set parameters for speaking voice (see
                Speak
               )
```

1.146 setcolor

```
    SETCOLOR GuiFile ColorNumber R G B

This command allows you to change the color of a screen.

GuiFile         Is the Gui4Cli file who is, or will, open on the
                screen whose color you want to change.

ColorNumber     The number of the color you want to change.
                The first color (the background) is 0.

R G B           3 numbers, ranging from 0 to 15, specifying the
                values for Red, Green and Blue respectively.

Ex :
SetColor  MyGui 0 10 8 8

- will set the background of the screen that MyGui is (or will) open
  on, to a yukky brownish color.
```

1.147 setgad

```
                  SETGAD   GuiFile  GadID/range   ON|OFF|SHOW|HIDE

This command will set the specified gadget ON or OFF or make it
appear (SHOW) or disappear (HIDE)


                GuiFile
                - The name of the GUI file the gadgets reside in.

GadID   - The
                ID number
                you have given to
          the gadget, *or* a range of gadgets denoted as
          First/LastGadget

Example :

SetGad MyGui.gc   10 OFF   - will set Gad No.10 off
SetGad MyGui.gc 5/15 HIDE  - will hide gadgets Nos. 5 to 15 inclusive

The SHOW and HIDE keywords will have no immediate visible effect
unless and until the
                ReDraw
                command is used.

------->>>> A note about ListViews:

LVs get updated if OFF, but not updated if HIDEn (even if visible)

It is *much* faster to HIDE an lv and act on it (with commands
like lvadd, lvput etc) and then SHOW it again, than to have the LV
updated continuously while actions are going on. When you show it
again, you must "nudge" it into redrawing itself - with LVMULTI SHOW
or LVMOVE 0
```

1.148 setgadvalues

```
- SETGADVALUES GuiName

  Will store the values of all the gadgets of a gui into their respective
  variables.

  When you declare a gadget which has a value, say :

    xHSlider  L T W H Title Variable Min Max Current ShowStr
              (here the value is the Current level)
        or...

    xTextIn   L T W H Title Variable StartingText Bufflength
              (here the value is the StartingText)
```

Gui4Cli does *not* automatically place the starting value of the gadget
in it's Variable. You must do this manually - usually in the xONLOAD
event. This provides better control (but can also be a pain..)

With this command (which you would also issue, most probably, in the
xONLOAD event) you can set the starting values for all the gadgets in
a gui, in one go.

1.149 setscreen

SETSCREEN GuiFile ScreenName

This will reset the name of the screen the GUI should open on.

If the window is already open, you will have to close it and reopen it
in order for the new screen to take effect.

If the screen is not found, the GUI will open on the Workbench (if available)

To state the "Front most Screen" you can give an '*' (asterisk).

See also the
Screen
global command.

1.150 setscreentitle

SETSCREENTITLE GuiFile NewTitle

Will set the title shown in the Screen's TitleBar of the
Screen that GuiFile is open on, to "NewTitle".

This will be visible whenever the given window is the
active one. Otherwise the default screen title will be
shown.

Ex:
> SetScreenTitle MyGui.gc "My gui's window is active"

1.151 setstack

```
   SETSTACK  StackSize

You may need this command when using RUN or CLI commands.

Gui4Cli provides each program you run with 4000 bytes of stack.
Some programs need more than that though. This command is how you
do it.

example :

SetStack  10000
RUN       "ABigProgram"
SetStack  4000

Note that we change the stack size before we call the RUN or CLI command,
and we change it back to the default size after RUNning, so that the
next RUN/CLI does not inherit the big stack size.
```

1.152 setvar

```
   SetVar   Variable  String

With this command you can put a value (String) into a variable.
If the variable does not already exist, it will be created.

Variable    - The name of the variable

String      - Any character, sentence, text, number - whatever.

Example :

   SetVar  MyVariable  "This is my variable and nobody touch it!"


*** NEW with V2.2 is that you can do this :

MyVariable = "This is my variable and nobody touch it!"

instead of using SetVar. It is much more logical.
SetVar still works though.
```

1.153 setwintitle

```
   SETWINTITLE  GuiFile NewTitle

  Will set the title shown in the Window's TitleBar to "NewTitle".

  Ex:
```

```
> mydir = $$G4C.DIR
> SetWinTitle MyGui.gc "The current dir is $mydir"
```

1.154 sharemenu

```
SHAREMENU GuiName

This command will allow a gui (call it Gui1) to share the menus
of an other gui (call it Gui2).

> ShareMenu Gui2

When Gui1 is opened, it will have the same menus as Gui2.

When a menu is selected it will be as if the menus of Gui2 was
selected and all commands attached to it will be executed.

The gui whose menus are being shared by others will *not* be
allowed to quit unless all the sharers have been closed first,
since we need it's commands.

Gui4Cli will look for Gui2 when Gui1 tries to open - not when it
tries to load itself. So when Gui1 is closed, Gui2 is free to
quit (unless there are other open guis sharing it's menus).

If Gui2 is not found when Gui1 tries to open, Gui1 will open
without menus.

The best way of using this in a multi-gui application would be
to have a menu-only file that you would load and let all guis
share it.
```

1.155 sound

```
Sound Effects

  Standard mono IFF Samples, up to 64k in length, can now be loaded and
  used as sound effects or reminders. The commands that handle them,
  are similar to the image handling commands :

  - LOADSOUND FileName Alias  - will load the sample and name it "Alias"
  - FREESOUND Alias           - will free the above sample
  - PLAYSOUND Alias           - will play the sound once

  - SETSOUND  Alias VOLUME/SPEED value
    Will set the VOLUME (1-64) or the SPEED (124-1000) ie the pitch.
```

```
Sounds can be used as effects on all types of gadgets, and on other
events like window open/close, RMB and xOnKey. There are 2 ways you
can do this.

1.- You can define the sound effects globally, and these will be
    used in all guis:

    > SET SndOpen/SndClose/SndGad/SndRMB/SndKey Alias

    The easiest way to set these is from the Gui4Cli.gc gui (called
    from the main Gui4Cli requester in the WB tools menu)

2.- Or, you can define a different sound for every gadget, or key
    or window etc, using the Attribute system, with:

    > SETATTR mygui.gc/1 SOUND mysound <or> ATTR SOUND mysound

The sound will be played every time the event is triggered.
An attribute, if defined, will take precedence over a global sound.
Note that with ATTR, sounds can also be attached to xONOPEN, xONCLOSE,
xRMB and xONKEY events.

Example: (set the sound globally for all windows opening)

  FreeSound MySound               ; free the old alias (if any)
  LoadSound DH0:SomeSound MySound ; load new sample under same alias
  Set SndOpen MySound             ; set the sound

Example: (set a different sound for a specific window opening)

  xOnLoad    ; load the sound in the xOnLoad event
     LoadSound DH0:SomeSound MySound

  xOnOpen    ; Set the attribute for this window opening
     ATTR SOUND MySound

  xOnQuit    ; free sound on exit
     FreeSound MySound
```

1.156 speak

```
SPEAK TextString

Will use the "translator.library" (LIBS:) and the "narrator.device"
(DEVS:), both of which you must have, to speak the given text.

The speaking is done synchronously - i.e. Gui4Cli will stop and wait
for the speaking to finish before proceeding (I tried to make it
asynch, but couldn't get it to work..)

> Speak 'What a nice day!'

There are several speaking parameters which can be adjusted.
```

```
  This can be done with the SET command :

  - SET SPEAK Rate/Pitch/Sex/Mode/Volume/Freq

  Will change the voice used in speaking to the new values you give.
  These can be:

          Default   Min    Max
  Rate      150     40     400
  Pitch     110     65     320
  Sex         0      0       1 (0=Male, 1=Female)
  Mode        0      0       2 (0=Natural, 1=Robot, 2=Manual)
  Volume     64      0      64
  Freq    22200   5000   28000

  So, if you want to reset the defaults, you would say:

  > SET Speak 150/110/0/0/64/22200

  Example :  Run Gui   Source

  There is also an extended structure with more settings, things
  like "pertrubation" and "centralization" but I've no idea what
  they do or mean, so I'll leave them alone..

  If you know and can tell me which are important and how they
  can be easily implemented, tell me..
```

1.157 status

```
   STATUS

This is a command that opens the "Status" requester, from which you
can see how many GUIs are loaded/open as well as Load, Open, or Unload
GUI files.

From here you can also QUIT. Upon quitting, all xOnClose event commands
are executed for windows which were open, and all xOnQuit event commands
for all loaded files (if any are defined).

Note that the meaning of the GUI file name extensions, are :

  MyFile.gc      - This is GUI Command file (.gc)
  MyFile.g       - This is a GUI help file, i.e. a GUI which is supposed
                   to be loaded and in general operated from another GUI

There is no difference in the structure of the files. The difference is
in their operation only.

You need not use the above naming conventions if you don't want to.
```

1.158 stop

```
  STOP     - No arguments


STOP    will stop all execution of commands, DEAD!
        When a STOP command is found, the program will return to its normal
     state of waiting for something to happen.
        Use it for getting out of trouble, from wherever you may be.
```

1.159 system

```
   Things you can WAIT for or see if they EXIST (with the IFEXISTS command)

With the IFEXISTS and the WAIT commands, you can either wait, or see
if the following system items exist :

FILE     - Full path and filename

PORT     - Public Message Port Name

SCREEN   - Public Screen Name

GUI      - Gui4Cli file (True if file is loaded)

WINDOW   - Gui4Cli Window (True if the window of the given GUI is open)

VARIABLE - the name of an internal Gui4Cli variable - Env: variables
           can be checked by filename with the FILE keyword

DIRECTORY- name of the directory

DEVICE   - A Dos Device such as DF0   - WITHOUT the : - i.e. Ram NOT Ram:

VOLUME   - A Dos Volume               - WITHOUT the :

ASSIGN   - An assignment              - WITHOUT the :

DOS      - A Device OR a Volume OR an Assignment (i.e. any of the above 3)

Gui4Cli Files and Windows are referred to by their file names only
and not the full path of the file.

Note : If you want to use RX to launch ARexx programs, you may want
to check first that RexxMast has been started up.

RexxMast opens 2 ports REXX and AREXX, so you can do the following :

IfExists PORT REXX
   ; Ok - RexxMast is running
else
   cli 'RexxMast'
```

```
endif
```

1.160 text

```
 Text  L T W H Text Length BOX|NOBOX
```

This event is a simple text display with a BOX or with NOBOX drawn around it.

The L T W H are the same as for other gadgets.

The Text is the default text to be shown in the beginning. This can easily be changed with the update command.

Length, specifies the length of the buffer you want - i.e. the maximum number of characters likely to be shown in this text box. It is important that you set this number correctly, otherwise the text will be clipped.

BOX or NOBOX are keywords denoting whether you want a BOX drawn around the text or not.

IMPORTANT :
No commands other than Gadget modifiers (GadID, GadFont etc) can be attached to this event, as these will never be executed (since the gadget can not be selected and so never "happens")

1.161 textfile

```
  TEXTFILE  FileName   ----->  ###

  This is a PARSER command - i.e. it is executed while Gui4Cli
  is reading your file.

  It will create a file named whatever "FileName" you give and
  will start writing into the file all the lines following this
  command, untill the ending marker ### is reached.

  example :

TEXTFILE ram:MyFile
  This is some sample text etc..
  blah.. blah...
  My life story.. etc..
###

  NOTE that the "###" which marks the end of the file *MUST* be
  at the begining of a line otherwise it will not be recognised.

  This is a nice command for embedding small files into a gui,
  such as ARexx scripts, data for listviews etc.
```

```
  It can appear anywhere in a gui and does not change the flow
  in any way - i.e. it's like it doesn't exist.

  Example :  Run Gui   Source
```

1.162 translation

```
   TRANSLATION

Translation is the name I have given to the process whereby Gui4Cli
will substitute the contents of a variable for it's name, if the
$ (dollar sign character) is placed in front of the variable name.

Example :

MyVar = "This is my variable"
Say $MyVar

Here we put the string into the variable and then print the variable
contents. The output will be :

This is my variable

Translation is a *very* important concept in Gui4Cli, and one which
you *must* understand.

Translation is done automatically by Gui4Cli on ALL arguments of all
EVENT COMMANDS (be they numbers or strings), making it very flexible.

You can, for example, say :

Update   $MyGui  $MyGadgetID  $MyNewValue

and Gui4Cli will update the given gadget in the given GUI, to the
given NewValue, according to whatever these variables contain.


BTW : AmigaDOS also does this translation stuff, substituting the
      contents of an Environment (ENV:) variable, when ever a
      $ sign is found.
```

1.163 ttget

```
                    TTGET FullPath/IconName (Without the ".info" extension)

This command reads ALL the tooltypes in your GUI's icon and automatically
converts them into
                 variables
```

. This is useful for any situation where you
need to give your GUI a configuration.

Tooltypes for GUI icons MUST contain an equal "=" character. An example
tooltype would be:

EDITOR=Work:Text/Editors/Editor

TTGET would understand this as:

VariableName=VariableContents

Everything BEFORE the "=" character becomes the NAME of the variable.
VariableName must NOT contain spaces. Using the example tooltype, you would
get a variable called:

$EDITOR

Everything AFTER the "=" would become the variable's CONTENTS. So we have a
variable called $EDITOR which contains:

Work:Text/Editors/Editor

The Variable's Name will always be converted to Upper case to avoid
confusion, since Gui4Cli variables are case sensitive, and will be added
to the GLOBAL variable list.

To use TTGET in your GUI, you must first initialize (set the default value)
of the variable, preferably early on in the script. For example:

```
EDITOR = "default value"
TTGet Dh0:MyDir/MyGui.gc
```

When using TTGET you must supply the FULL path and filename of your GUI
icon, without the ".info" file extension.

1.164 update

UPDATE GuiFile GadID Value

This command will update the specified gadget to display the
new value you have specified.

GuiFile   - The name of the GUI file the gadget resides in.

GadID   - The
ID number
you have given to the gadget

Different gadgets have different update values you must give,
as follows :

xButton   - No update

```
  xCheckbox  - 1 = Checked, 0 = Unchecked
  xSlider(s) - New current level of slider
  xListview  - New line number           - 1st line is line 0
  xRadio     - Number of chosen button   - 1st choice is No 0
  xCycler    - Number of current choice  - 1st choice is No 0
  xTextIn    - New Text
  Text       - New Text
  xTimer     - New Time/Interval - will also re-start the timer
  xNotify    - Name of new file/dir
  xHotKey    - New HotKey combination

  Example :

  For a xTextIn type gadget in file MyGui.gc, having an ID of 3 :

  > Update  MyGui.gc  3  "New Text"

  For a Cycler type gadget.. make the 3rd choice the current one.

  > Update  MyGui.gc  5  2
```

1.165 usetopaz

```
USETOPAZ       (No arguments)

Forces the GUI to use Topaz.font, no matter what gadget fonts or
WinFonts are declared.

Use this to override fonts specified which you may not have.
```

1.166 variables

```
                                          Variables :

Variables are like small temporary files.

They provide a place where you can store some text, and refer to it
whenever you need it, by using the name of the variable.

Gui4Cli has 3 types of Variables :


                Normal Variables
                   - These are the standard Gui4Cli variables (Case Sensitive)


                ENV: variables
                   - ENV: Variables are actually small files in the ENV:  ↩
                     directory
```

```
      which is in your Ram disk.


                  Internal Variables
                     - Internal variables are there to provide you with information
      You can read them, but you can NOT set them.

When working with variables you use the following notation :

  MyVariable    - is the name of a Gui4Cli Variable called MyVariable
  $MyVariable   - is the contents of this Variable

  .MyVariable   - is the name of an ENV: Variable called .MyVariable
  $.MyVariable  - is its contents

ALL of the parameters of ALL EVENT COMMANDS are translated upon execution,
This means that if you give the command :

SetScreen $ScreenName
... and if the Variable ScreenName contains the words "MyScreen",
SetScreen MyScreen
... will be the command that will be executed.
```

1.167 variables_env

```
   ENV: Variables

   An ENV: Variable MUST start with a . (full stop character)

   SetVar .MyVar "This is my env variable"
     or
   .MyVar = "This is my env variable"

   will both create a small file in the env directory called ".MyVar"
   and containing the above string.

 You can also declare/set an env variable with a double full stop :

   ..MyVar = "This is my env variable"

   This will create a env: variable by the name of "MyVar"
   i.e. 2 fullstops will result in a variable without full stops.
   This comes in useful when you want access to env: variables
   set by other programs.

 Env variables can be used just as if they were normal vaiables.
 The [start][length] will also work on them.

 Env Variables are much slower than normal variables (although
 quite usable), but since they are actual files which AmigaDOS
 can refer to they are sometimes extremely useful.
```

1.168 variables_int

```
                                    INTERNAL VARIABLES :
============================================================

Internal variables do what functions would in other languages.
They are there, so you can get various information about the
system and the guis running. You can *not* set them - only read
them.

They can be accessed by placing a double dollar sign in front of
them :

  > curdir = $$G4C.DIR

  for example, will store the name of the current dir Gui4Cli is
  at, in variable "curdir".

  These are the currently defined
               Internal Variables
               It is very important to understand how internal variables work,
before using them extensively. Internal variables always try to
show the values of the last thing that happened. You can, if you
need these values later, store them into variables, as they are
going to change the next time something happens.

Gui4Cli works in "Command Execution Cycles"
(Sounds much more impressive than it is :)

This means that it sits around waiting for an event to happen, like
the clicking of the mouse, a keypress etc..

When such an event happens, if it is declared in the gui it happens
in, the commands attached to this event start executing. Gui4Cli
may, while executing, jump to subroutines in other files, come back
etc and it will finally stop. That's the end of the "command
execution cycle" - The DEBUG mode will show this clearly.

All the internal variables below, will (unless otherwise stated)
remain valid throughout the life of such a cycle. Thereafter the
user might have done anything and you can't be sure that the values
are correct.

For example, when a button is hit, the GAD.L etc values will be
correct for that button, throughout the life of a command execution
cycle (unless you issue an INFO command and thereby change the gadget
that Gui4Cli thinks of as "current")

When something else happens, the above values are history. The
values returned will be the ones of the new event.

example : (file name = test.gc)
; Slider (gadget No 1) has a width of 100
xHSlider 10 10 100 15 Title Var 0 100 50 %2ld
gadID  1
```

```
; button (gadget No 2) is 200 pixels wide
xButton 10 50 200 50 button2
gadID  2
; here $$GAD.W = 200 i.e. the width of the button which was just clicked
; now we tell Gui4Cli that we want information on the slider
Info GAD test.gc/1
; now $$GAD.W = 100 - i.e. the width of the slider

Only the User (through his actions) or the INFO command will
ever change the value of a variable.

--------------------------------------
HOW GUI4CLI SEES INTERNAL VARIABLES :
--------------------------------------

In order to make these functions as fast as possible, the
checking of the variable names is done only by checking the
first 1-2 letters.

So :
- $$SYS.Time - can also be written as $$SYS.T or $$SYS.TeriyakiSauce
  and Gui4Cli wouldn't know the difference.

The checking is done on as many letters as it takes to avoid
any possible conflict between variable names, so, for example
$$sys.date and $$sys.day have the 1st 3 letters checked.
```

1.169 variables_intlist

```
                                          INTERNAL VARIABLES
=============================================================================


                G4C
                  Gui4Cli's internal parameters (current dir etc..)

                RetCode
                  Return code from dos and arexx commands

                RexxRet
                  Result_2 from arexx
```

```
Call.Ret
  Return from a Call command


Win
  Current Gui4Cli window

Screen
  Screen of current window

Gad
  Current (most recently selected) gadget

Mouse
  Mouse coordinates etc

Palette
  Current Palette gadget

LV
  Current Listview

TextIn
  Current TextIn gadget

Image
  Image information


Parse
  Results of ParseVar command

Key
  RawKey & VanKey values

Search
  Results from the SearchVar and LVSearch commands


Sys
  Info on the system (active window title etc)

Rand
  Random number generator

Mem
  Memory information


Obsolete
  Forget them..
```

1.170 variables_normal

```
                        NORMAL VARIABLES :
=========================================================================

Normal variables are the most common in Gui4Cli. They are the ones
you can declare with a simple statement like :

myvar = 3                              - or
myvar = 'This is my variable'          - or
SetVar myvar 'This is my variable'

You can thereafter refer to their contents by putting a $ sign in front :
>  say '$myvar'
>  should print out : This is my variable

*** Important :  Normal variables are CASE SENSITIVE
    (i.e. myvar is not the same as MyVar)

Note that you can hit CONTROL-V to get a full listing of all variables
currently declared by all guis loaded. Furthermore, you can "Set Debug
On" to see when and how variables are set or read while the guis are
executing commands.


  NORMAL VARIABLE TYPES:
=========================================================================

      GUI Variables
      -------------------------------

Normal variables are kept in lists.
Each GUI has such a list, where it keeps all it's variables.

You can get/set the variables of your gui's list, by just declaring:
>   MyVar = "Something"

If you want to get/set another Gui's variables, you can do this:
>   OtherGui.gc/MyVar = "SomethingElse"
This will set variable "MyVar" of Gui "OtherGui.gc" to "SomethingElse"

Similarly, to get the results, you would do:

Say $MyVar               --> would print: "Something"
Say $OtherGui.gc/MyVar   --> would print: "SomethingElse"

     LOCAL (Event) Variables
     -------------------------------

Variables can also be attached to each and every EVENT.
To do this however, you must declare the variables you want to use
with the
                LOCAL
                command :

  xRoutine ExampleRoutine      ; an event such as a routine or whatever
```

```
  Local var1/var2/var3         ; declare 3 variables
  var1 = 'something'           ; use as normal variables..
  say '$va1[0][4]\n'           ; but only in this event
```

Local variables are only visible within the Event in which
they are declared. They can not be seen or set from anywhere
else. This is usefull for throw-away variables you want to
use for temporary storage places etc..

GLOBAL Variables :

There is also a "GLOBAL" variable list, which is always present and
which can be accessed from any gui, anytime, by putting a '*' character
in front of the name.

So, to set a Global variable, you would do :

```
>   *MyGlobalVar = "Something"
```

and to read it:

```
>   Say $*MyGlobalVar
```

Global variables are usefull since they are accessible from everywhere.
I.e. you do not have to rely on a certain gui being loaded to have them
available.

The VARPATH command :

If you are building a multi-gui application you can use the
VarPath
command, with which you can declare a "Variable Search Path" and in
effect "merge" the variables of many guis.

FULL VARIABLE NOTATION :

Although for normal use you just declare the variable name as above,
normal variables may have the following full template :

```
gui/name[+-start][+-length]
```

and Global variables

```
*name[+-start][+-length]
```

In all the above, only the name is required. All others are optional.

THE RULES OF THE GAME :

- As we said, the 'gui' part, is the name of the Gui that the variable
  belongs to. If no 'gui' name is given the variable is automatically
  assumed to belong to the gui it resides in.

```
- [start]  is the character of the variable you want to start at.
- [length] is how many characters to consider

- If you give a [start] which is more than the length of the variable
  you'll get "".

- If you give a length that will pass the end of the variable, then
  only the actual length of the variable will be considered. Variables
  will *not* be expanded to accommodate [start] or [length].

- If the [start] is omited it means '0' i.e. from the start of the var.

- If the [length] is omited it means the rest of the variable.

- If [start] is negative it means from the *end* of variable.

- If [length] is negative it means "count from right to left"


  EXAMPLES :
  ------------------------

     var = '0123456789'
     res = $var[3][3]

  res will now be = '345'
  If these variables were in an other file called "mygui" and you
  wanted to refer to them, you would do :

     mygui/var = '0123456789'
     res = $mygui/var[3][4]

        now res will equal '3456'
        or if 'var' was a global variable:

     *var = '0123456789'
     res  = $*var[3][4]

        ok, up to now ?..

     res = $var[3]

  res is now '3456789' since we did not give a length.

     res = $var[3][20000000]

  res is still '3456789' since res will not be expanded.
  And what's more, it works both ways:

     var[3][2] = 'xx'
     or
     var[3][2] = 'xxxxxxxxxxxxxxxx'

  will both set var to: '012xx56789'
        More stuff :

     var[-1][1]       ; is the last character of a variable
```

```
    var[-3][3]       ; are the last 3 characters of a variable
    var[3][-3]       ; are the first 3 characters of a variable
    var[0][3]        ; are, again, the first 3 chars

       and so on...

  REALLY ESOTERIC STUFF :
  -----------------------

- In the "Gui/Name[start][length]" notation, for internal, pain-in-the-ass
  related reasons, the "Gui" and "Name" parts can *not* themselves be
  variables. (There are ways of circumventing this if needed - see below).

  However, you can use variables for [start] and [length] :

      var = "01234556789"
      c   = 0
      while $c < 10
          say '$var[$c][$c]\n'
          c == $c + 1
      endwhile

  Important : the variables used for [start][length] *must* be simple
  direct variables - i.e. they can not contain other variables in them.

  If you need to have a variable name made up of other variables, you
  can use an intermediary variable to construct the full name, like this:

      ; Say you want to have the 'Gui' part of the name as a variable..
      gui  = MyGui.gc
      temp = "\$$gui\/MyVar"  ; will store "$MyGui.gc/MyVar" in temp
      say  "$temp"        ; will translate temp
                              ; (as variable within variable)
```

1.171 varpath

```
                  VARPATH VariableSearchPath

This is a very important command, since it allows you to "Merge" the
variables of many guis together. It is however, a litle complicated
and should not be used if you don't understand it.

First of all,  read the section on
                 Normal Variables
                 to understand it.

Now.. If you're making an application which will have many guis, you
may want to "Merge" their variables, so you don't have to state
the GUI part of the name each time, or remember in which of your guis
a certain variable was declared
```

```
>  VarPath "gui1/gui2"

will search your gui's variables (always done first) and if not found
will continue and search the vars of gui1 then gui2

So if you declare :

   MyVar = 5

- Gui4Cli will search your gui for variable MyVar.
- If not found, it will search gui1, then gui2.
- If it finds a variable by that name, it will set it to 5.
- If if doesn't find it, it will create a new variable for *your* gui
  and set it to 5

Similarly, in reading a variable:

   say $MyVar

- Will search your gui, then the varpath, and if not found will return
  with "" (nothing)


You can also have the GLOBAL variable list in your varpath. This is denoted
with the '*' character :

>  VarPath "gui1/*/gui2/gui3"

- will search your gui first (always), then gui1, then the global
  variable list, then gui2 then gui3.


The normal way to use Private vars in a multi-gui application, would
be to declare VARPATH with all the names of the guis the application
uses after it and access the global variables (if needed) using the
*MyVar system.

You don't have to declare the name of *your* gui in the varpath.
This will ALWAYS be checked first. If you do declare it, then it will be
searched twice.

If the variable is not found anywhere in the varpath and needs to be
created, then it will be added to *your* gui's variables.
(Unless specifically declared, as in - MyOtherGui.gc/MyVar = 5)
```

1.172 wait

```
   WAIT
SYSTEM
 Name|~Name  Timeout
```

```
WAIT will wait until the specified SYSTEM items (FILE, PORT etc) are
ready or until the timeout is reached. If the item is already
ready, the command will return immediately.

This command will set the
                $$RETCODE
                internal variable to show you if
the given item appeared within the TimeOut limit you specified. 0 = OK.

This command is useful when starting up programs, or when writing to
files. It does the same job as the
                IFEXISTS
                command, but in a different
way.

You can also have it's negative form by putting a ~ in front of the
Name of the item you want to wait for.

The Timeout is in ticks (1/50th of a second)

examples :

WAIT   PORT Gui4Cli 100

- wait for a public message port called "Gui4Cli". If it hasn't appeared
  in 100 ticks, return, setting $$RETCODE to an error status (i.e. over 0).

WAIT   SCREEN ~MyScreen 10

- wait for a public screen named "MyScreen" to close. If it hasn't
  disappered in 10 ticks return, setting $$RETCODE to over 0
```

1.173 while

```
                  WHILE    Argument
                OPERATOR
                 Argument
   ENDWHILE
   AND, OR

You use this command as follows :

   var = 1                ; set var equal to 1
   WHILE   $var < 10      ; while var is less than 10
      say '$var\n'        ; print the current value of var
      var == $var + 1     ; add 1 to var
   ENDWHILE               ; go back to WHILE and do it again,
                          ; until $var is 10
```

```
   - this will print out numbers 1-9

The arguments and operators have the same meaning as for IF,
so see it for explanation. OR and AND can be attached to WHILE, just
like to IF.

You can have While within While, up to 126 levels.

A while statement is often called a "LOOP" because it just keeps
looping and re-doing the code in between the while/endwhile until
the condition you set in the while statement has been satisfied.

This is *very* useful in many situations, so learn how to use it!
```

1.174 winbackground

```
                    WINBACKGROUND  SOLID|PATTERN|ICON|IMAGE  APen|IconName  BPen

This command allows you to have nice backgrounds for your window and
you can thank Michael Van Elst for giving me the needed backfill hook
code for it.

The background used can be :

SOLID   : A Solid color which will be of color APen.
          -  ex : WinBackground SOLID 3 0
          Here the last argument (0) is disregarded.

PATTERN : A Hash pattern made up of 2 colors.
          -  ex : WinBackground PATTERN 3 1
          Here, the background is a pattern made up of colors No 3 and 1

ICON    : An Icon which will be tiled to the background of your window.
            -  ex : WinBackground ICON  DF0:MyIcon  0
          Here, again, the last argument is disregarded.
          The 2nd argument is the full path & name of the icon, without
          the .info extension.


                IMAGE
                : An image, which *MUST* have already been loaded with the
          LOADIMAGE command, will be tiled to your windows background.
            -  ex : WinBackground IMAGE  ImageAlias(name)  0

NOTE :

The GadTools library was not designed to be used with colored
backgrounds, so some gadgets (such as listviews or text-in gadgets)
have parts of them which should (if this was a perfect world) have
been blanked out by GadTools, instead filled in with the BackGround
you give.
```

As I said.. it's not a perfect world..

1.175 winbig

```
                WINBIG L T W H Title

  Defines a window at Left(L), Top(T), Width(W), Height(H)
  Title is a string that will be shown in the TitleBar.

  ex:  WinBig 10 10 200 100 "My first window!"

  - If Left = -1  the window is centered on the width of the screen

  - If Top  = -1  the window is centered on the height of the screen.
  - If Top  = -10 the window top will be just under the screen
                  title bar.

  If Width is negative, then the width of the window will be the size
  of the screen it opens on, minus this negative number. Same for the
  Height.

  Example : WinBig -1 -1 -1 -10 "My Window"
  This is a window centered horizontally and vertically on the screen,
  of a size -> Width = ScreenWidth-1, and Height = ScreenHeight-10.

  If Width or Height are more than the screen size, they are reduced
  so that the window fits in the screen.

  Windows always have the following 4 gadgets, unless told otherwise
  (by the WinType command) :

  - The close button - Closes the window
  - The Drag Bar     - This consists of all parts of the window's Title
                       bar not taken up by other gadgets.
  - The zoom button  - Zips the window to the size defined by
                       the WinSmall command, or, if this command
                       is not defined to size 100, 11 at 0, 11.
  - The Depth arrangement gadget

  Window Types can be changed with the
                WinType
                command, with which
  you can define which of the above gadgets you want and make the
  window borderless and/or backdrop and/or resizable.

  All windows have a number of
                Default Shortcuts
```

1.176 winfont

```
   WINFONT   FontName  Size  UL|BD|IT
```

If you do not specify any gadget fonts (with the GADFONT command), then the default font (the Screen's font) will be used.

You may change this, by declaring a global default font (for this GUI) with this command.

FontName - The name of the font e.g. Topaz.font

Size - The size of the font. If the size is not found, the diskfont library will scale the font to the size requested, but this will not look good.

UL|BD|IT - A Mask (see WinType command) specifying whether the font will be UL (Underlined), BD (Bold) or IT (Italic) 010 for example is a Bold font.

1.177 winonmouse

```
WinOnMouse  LeftOffset TopOffset
```

This command instructs the window to disregard the Left and Top offsets given in the WinBig command and instead open relative to the current mouse position.

LeftOffset & TopOffset are the offset from the current mouse position that the window's Left & Top will be.

This is a useful command for making small borderless sub-windows.

1.178 winonwin

```
WinOnWin  GuiName LeftOffset TopOffset
```

This command instructs the window to disregard the Left and Top offsets given in the WinBig command and instead open relative to a "GuiName's" window.

```
GuiName    : The name of the Gui File whose window will be used
LeftOffset : Left Offset from the GuiName window position
TopOffset  : Top Offset from GuiName window position
```

1.179 winout

```
WinOut  "ConsoleSpecification"

Specifies a console window to be used to send any output of CLI
commands that are called by the program (if any).
It is best NOT to use this command, unless you must, since each new
console that you specify with WinOut, takes up extra memory.

If there is output, and no console window has been specified, the
default window will be used.

If Gui4Cli is started from a shell, the shell itself is the default
window. If you give the command Run >NIL: (or >NIL: <NIL:) Gui4Cli,
there is no default window!

If run from workbench, Gui4Cli will define a default window, and
output, if any, will go there. The default window is :

 "con:0/12/450/80/Gui4Cli Output/AUTO/CLOSE/WAIT"

You may change this with the TOOLTYPE/CLI options or the SET command.

Gui4Cli messages (error reports etc) will be output to the default
window.
```

1.180 winshortcuts

```
All windows have the following keyboard commands :

Use them when the window is active by pressing the CTRL key and the
letter, together.

Control J - Will cause the active GUI to jump to the next available
            Public Screen, if any. An event - xONJUMP NewScreenName -
            will be called every time this happens (if defined), placing
            the name of the new screen in the above variable so that
            you can SetScreen any other accompanying GUIs to this new
            screen also.

Control W - This shortcut will bring up a requester, asking you whether
            to save the current window size as the default SMALL or
            NORMAL (Big) window size. Thereafter, every time the GUI
            is loaded, it will be automatically resized to these sizes.
            (see also the info on Resizing)

Control V - Will print out a list of all the variables currently in
            use.

Control E - Edit current window : Starts the Editor specified in the
            Tool Types or C:Ed, passing it the File name of the Window
            Program as argument.

Control R - Reload current window : Quits current window and reloads
            it. Very useful for seeing where your gadgets are and
```

```
            moving them around till you get them right.
            xOnQuit, xOnOpen etc commands are not executed.

Control Q - Quits current window.

Control C - Closes current window.

Control N - Activates next open window and brings it to the front.

Control F - Brings current window to the Front

Control B - Pushes current window to the back

Control S - Opens the Status requester which lets you Quit Gui4Cli
            or Load, Reload, Unload, Open or Close any of the windows
            that you may have loaded.

ESCAPE    - This is the PANIC! button. It will stop whatever gui4cli is
            doing at the time (but not any programs that it may have
            launched via the cli, run, launch etc commands..)

            Visual editing shortcuts :
            --------------------------

Control G - Will save the gui just as it is at present, with the
            gadgets/graphics at their current positions. Be sure
            to read the Visual Editing section before trying this.

Control H - Will select/place a gadget or graphic under the current
            cursor position. Use this in cases where Control-MouseClick
            doesn't work.
```

1.181 winsmall

```
WinSmall L T W H

Specifies the position and size of the window, when the user clicks
on the window's zoom gadget - you don't have to declare it.

L T W H are the sizes - there are the following weird values you can
also use.

Left   => if -1 then the small window will be placed flush to the right
          side of the screen.

Top    => if -1 it will be placed under the screen bar
          if -2 it will be placed at the bottom of the screen

Width  => if -1 the window will be wide enough to fit the title.

Height => if < 0 the height will be the size of the Screen title bar.
          This size is also the minimum size it will ever be.
```

```
The default size, if you do not declare a winsmall command, is :

        0, -1, 150, -1
```

1.182 wintype

```
WinType  MASK

WinType lets you specify all the gadgets in the window.

The MASK argument is a series of 8 numbers which can be 1 or 0

Each number has the following meaning ( 1=Yes, 0=No )

1st : Close Gadget
2nd : DragBar
3rd : Zoom Gadget
4th : Depth arrangement Gadget
5th : Borderless
6th : Backdrop
7th : Right Resize bar  - makes window resizable
8th : Bottom Resize bar - makes window resizable

example :

WinType 11110001

- This is a standard window with Close,DragBar,Zoom and Depth gadgets
  since the first 4 numbers are "1".
- It is not Borderless or Backdrop, since the next 2 numbers are 0s.
- It is resizable, having the resize gadget on the bottom border, since
  the 7th number is 0 and the 8th is 1.


Note that if you want a borderless window, you should give "" as the
window title, otherwise the title (and part of the window bar) will
be shown.
```

1.183 workbench

```
  WORKBENCH  OPEN|CLOSE

  - will open or close the Workbench

  Currently I have a weird problem with this, in that the
  Wrokbench will close down again as soon as I open it.

  I don't know if it's Gui4Cli or some other program doing
  it.. Stay tuned..
```

1.184 xappicon

```
  xAPPICON  L T  IconName Title Variable ON|OFF
```

This command defines an AppIcon on the workbench.

L and T are the position that the appicon will appear at on the workbench.
Negative values, allow the Workbench to decide where to put them.

IconName : The name of the icon to be used (no .info extension)

Title   : The Title that will appear beneath the icon

Variable : The name of the variable where the names of any files whose
           icons were selected when the user clicked on the AppIcon,
           will be placed.

ON|OFF   : The starting state of the Gadget. If OFF, it will not appear
           if ON, it will.
           You can declare a GadID for this event and SetGad it ON or OFF
           at any time.

1.185 xappmenu

```
  xAPPMENU   AppMenuName Variable ON|OFF
```

This Event will place an AppMenuItem at the Tools Menu of the workbench.

The Variable is where the names of any files whose icons were
selected when the user chose the AppMenuItem, will be placed.

ON or OFF is the starting state of the menu item. If it is OFF, it will
not be shown.

You can give an ID number (see the GadID command) to this event and
SetGad it ON or OFF whenever you want.

1.186 xappwindow

```
    xAPPWINDOW   Variable
```

Variable   : The name of the variable where the names of any files whose
           icons were dropped into the AppWindow will be placed.

When you declare this event, you also make the window an AppWindow.
No other action is needed.

An AppWindow can not (currently) be switched ON or OFF.

```
Only one xAppWindow event can be declared per GUI.
If you declare 2, the 2nd one will be disregarded.
```

1.187 xarea

```
  xAREA L T W H COMP|BOX|NONE

  This is a area hit gadget, like an invisible Button.

  Nothing will be shown unless the gadget is hit, whereupon it will
  COMP  = complement the area, or
  BOX   = draw a box around it, or
  NONE  = leave it alone.

  This event is useful, if you want to make something like an
  image map, for example.
```

1.188 xbutton

```
 xBUTTON    L T W H Title

Specifies a Button Type gadget, at (L)eft, (T)op and of size
(W)idth, (H)eight with the "Title" text on it.

Example :

xButton  10 20 100 15 "My Button"

Buttons are buttons - you just press them and they do their commands
Icons (xICON) can be used in exactly the same way.

Example :  Run Gui   Source
```

1.189 xcheckbox

```
 xCheckBox  L T W H Title Variable OnText OffText ON|OFF

Specifies a checkbox type gadget at Left, Top, sized Width Height.
The Title will be placed next to the gadget.
Variable is the name of the variable that will hold the value.

Checkbox type gadgets have two states : Checked (ON) & Unchecked (OFF)
If the gadget is ON, OnText will be placed in Variable, otherwise,
OffText.
ON|OFF specify the starting state of the gadget, when the window first
opens.
```

```
Example :

xCheckBox  30 15 16 16 "CheckBox" ChkVar "Yes" "No" OFF

Here, if the user checks the gadget, then the variable ChkVar
will contain the word "Yes"

Example gui :  Run Gui   Source
```

1.190 xcycler

```
 xCYCLER  L T W H Title Variable

This is a cycler at L, T of Width, Height. It's value will be placed
in Variable. The Title (if any) will be placed to the left.

You MUST tell a cycler what fields you want it to have, i.e. what will
be written on it's face every time the user clicks it.

You do this by attaching to it CSTR (Cycler-String) commands, as follows :

 xCYCLER  L T W H Title Variable
 CSTR  Title Value
 CSTR  Title Value
 .. etc .., up to 12 CSTRs

The Title of the CSTR is what will be placed on the face of the button
and the value is what will go into the Variable.

The 1st field in cyclers & radio buttons is No 0.

Example :  Run Gui   Source
```

1.191 xhotkey

```
                 xHOTKEY  KeyCombination  ON|OFF

  Gui4Cli now installs a Commodities Exchange Broker through which
  you can define various HotKeys. These have the advantage that
  that they can be "heard" from anywhere - i.e. even if they are
  entered in a non - Gui4Cli window.

  The KeyCombination is a string specifying the combination of
  keys that the user must hit to make this event happen. They are
  defined as follows :

  [class]  {[-](qualifier|synonym)}  [[-]upstroke]  [highmap|ANSICode]
```

```
[class] can be one of the following words:

  rawkey rawmouse event pointerpos timer newprefs diskremoved
  diskinserted

[-][qualifier] can be :

  lshift rshift capslock control lalt ralt lcommand rcommand
  numericpad repeat midbutton rbutton leftbutton relativemouse

  - A "-" (negative sign) in front, means that they may or may
    not occur - i.e. we don't care either way.

[-][synonym] can be :

  shift caps alt

  - These mean that (eg) any shift (lshift or rshift) is ok.
  - A "-" in front means these may or may not appear.

[-]upstroke is the actual word "upstroke" :

  - It means that we want to hear the upstroke of the key, only.
  - if preceeded by a "-" it means we want both upstroke and
    downstroke. The default is to hear only downstrokes.

[highmap] can be one of these:

  space backspace tab enter return esc del up down right left
  f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 help

[ANSICode] - can be a normal letter, such as "a"

> example: "lshift a"

With these you can describe almost any key combination, ex:

> xHOTKEY "rawkey lshift alt f2" ON      -or-
> xHOTKEY "rawmouse rbutton" OFF

As with other events, you can give it a
               GADID
               and
               SETGAD
               it
ON|OFF.

You can also
               UPDATE
               it, giving a new KeyCombination.
```

1.192 xicon

```
                xICON  L T IconName (no .info)

Icons act like buttons. Although they take up more space than the
respective brush would take, they are very easy to implement.

The (L)eft and (T)op are where the icon will be placed and
IconName is the full path of the icon file you want to use, without
the ".info" extension

You can give "" as the icon name, if you want.
This means that you will give the icon name later.

  ------------------------------------------------------------------
  See also :

                 ChangeIcon
```

1.193 xlvhook

```
               Listview Hooks :

   xLVDirHook HookID/GadID
   xLVHook    HookID/GadID

These two events act according to what happens to the ListView which
has the same "HookID".

The HookID of a listview is the same as it's GadID number, unless you
want to be picky and change it with the
                 LVDirHook
                 gadget
modifier (You no longer need to use the LVDirHook modifier - just use
the GadID instead - it's better).

      xLVDirHook -  will "Happen" if the Dir ListView that has
the same HookID changes directories (by the user double clicking on it).
When this happens, you can, for example, refresh the place where you
display the path the dir-listview is currently at.

      xLVHook    -  will happen if the MULTI or DIR listview that has
the same HookID is clicked once (otherwise, the LV itself will only happen
if the user double-clicks on it)

The  $$LV_DIR,  $$LV_GUI, and $$LV_ID
                 Internal Variables
                  will
contain the appropriate values.

ex :

; This is a DIR listview with an ID of 1
```

```
xListview  0 10 200 100 '' Variable sys: 0 DIR
GadID 1

; This is it's dirhook - happens whenever a dir is double-clicked
xLVDirHook 1
SetWinTitle  MyGui '$$LV.DIR                                    '

; This is it's simple-hook - happens whenever the list is single-clicked
xLVHook 1
Say 'File chosen is $Variable\n'
```

1.194 xmenu

```
 xMENU  MenuName ItemName SubItemName Shortcut

 This is a menu.

 MenuName    : The Menu Titles shown in the screen bar.
 ItemName    : An Item in the above Menu (or BARLABEL)
 SubItemName : A SubItem in the above Item of the above Menu.
 ShortCut    : A letter to be used as a short cut (Amiga Key + Letter)

 Example :  Run Gui   Source

 You MUST define a MenuName and an ItemName in each xMENU
 command.

 If there is no SuItemName declared, i.e. if you write ""
 (empty string) then the Event is a MenuItem.

 If you give a SubItemName, then the Event is a SubItem. In
 this case, if there is no ItemName by that name, it will be
 created.

 You may give a "" for shortcut also.

 If you give the "BARLABEL" keyword instead of the item name, then
 the item will be a divider line.

 You can also have icons in your menus!
 All you have to do is declare the ItemName or SubItemName
 you want to be an icon by preceding it with a # character.

 example :

 xMENU  Project #MyIcon "" ""
 - will put the icon named MyIcon.info in the Project menu.

 Note that the MenuName can NOT be an icon.

 Menus may be a little confusing at first, till you get it.
 Try them out in all combinations and see what happens.
```

1.195 xnotify

```
                xNOTIFY  File|Directory  ON|OFF

  Will set up notification on a file or directory and will "happen"
  every time the given file/dir changes in some way (i.e. if it
  is written to or deleted or whatever).

  > xNOTIFY Ram:MyFile ON

  If the file/dir doesn't exist, you will get notified if and when
  it is created.

  As with other events, you can give it a
                GADID
                and

                SETGAD
                it ON|OFF at any time.

  You can also
                UPDATE
                it, giving a new file/dir name.

  > UPDATE MyGui.gc 1 "Ram:SomeOtherFile"
```

1.196 xonjump

```
   xOnJump  Variable

With V2.1 you can press CONTROL-J on a GUI and this will cause it
to jump to the next available Public Screen.

When this happens, this event will be executed, if defined.
The Variable will contain the name of the new screen.

This allows you to SetScreen any other accompanying GUIs to the
same screen.
```

1.197 xonkey

```
   xONKEY   #R or #V or Letter or #KeyValue

Commands attached to this event will be executed when the specified
key is pressed.

You may specify any of the following :

   xOnKey  L     do commands on pressing of the letter L
                 (or any letter)

   xOnKey  #13   do commands on hitting ENTER - or other values
                 (13 is the ASCII value of the ENTER key)

   xONKEY #R     do commands upon the pressing of any raw key
                 (raw keys are the function keys, the arrows, help etc)

   xONKEY #V     do commands upon the pressing of any "normal" or
                 as they say, "vanilla" key.

  Raw keys are the arrows, help & function keys - all others are
  called "Vanilla" keys (God knows why..)

  The internal vars $$RAWKEY.CODE, $$RAWKEY.QUAL, $$VANKEY.CODE
  $$VANKEY.QUAL, $$VANKEY.LETTER, will contain the relevant key codes
  and qualifiers (qualifiers are the shift, alt etc keys).

  This is useful for the #R and #V commands, which will "happen"
  whenever *any* key of their type is pressed. You can then see what
  the key pressed was (by looking at the internal vars) and
  react accordingly.

  To find out what code number each key has, use SET DEBUG ON, to
  enter the debug mode and while in it, the values of any keys pressed
  will printed out.

  Example :  Run Gui   Source

(see also the GadKey command)
```

1.198 xonload_etc

```
                    xONLOAD etc

These are very important events, which take place :

xOnLOAD     -> upon loading of the GUI
xOnOPEN     -> upon opening of the GUI's window
xOnCLOSE    -> upon Closing of the GUI's window (with GuiClose or Close gadget)
xOnQUIT     -> upon Quitting of the GUI

xONRELOAD   -> When you call GuiLoad, if the file you want loaded is
               already loaded, then nothing will happen.
               You can declare this event if you want something to happen.
```

```
For a simple gui you may have something like the following :

xOnLoad
  MyVar = something ; set any variables you need to set first..
  SetGad MyGui.gc 1 OFF ; set any gadgets on/off/show/hide etc
  GuiOpen MyGui.gc  ; to open the gui window upon loading

xOnClose
  GuiQuit MyGui.gc  ; to quit (unload) the gui upon the closing of
                         ; it's window.

The above is only an example. You may have many commands, actions etc
upon the happening of any of the above events.

These events (apart from xOnReload) can also take
                 ARGUMENTS
                These arguments can be defined in the event's command line:

  > xONLOAD  arg1 arg2... arg6

This is specially usefull in xOnLoad, as it allows you to make small
guis and use them as "functions". Examples of such fuctions can be
found in the GUIs:tools/rtn directory.
```

1.199 xonreturn

```
                    xONRETURN LaunchID

This event will be executed when a
                 LAUNCH
                 command with
the same LaunchID as this event, has finished executing.
```

1.200 xon_various

```
OTHER Events :
---------------

These are various events (things that the user may do), for which
commands may be declared.

The commands attached to these events are executed every time the given
event happens. No arguments are passed.
```

```
xOnRMB          -> upon clicking of the Right Mouse Button - Only works if
                   there are no menus declared.

xOnACTIVE       -> When the window is activated by the user
xOnINACTIVE     -> When the window is made inactive

xONDOUBLECLICK -> Upon the double-clicking of the window, on an area not
                   taken up by a gadget. - If this event is not declared,
                   the default is to bring the window to front.

There are also the following events :

xONFAIL      -> The commands of this event are executed if the return
                code of a program launched by a CLI command, is equal to
                or exceeds 10, or any other ErrorNumber you have set with
                the FAILAT command.

xBEFORE      -> Attach commands to be executed before every other execution
                starts. This will be called every time a gadget is
                clicked on, and be executed before the gadget's commands.
                It does not apply to the above events (xOnLOAD etc)

xAFTER       -> Same as xBEFORE, but these commands are executed after the
                Gadget commands.

xONDISKIN    -> Happens whenever a disk is inserted (currently there is no
                way to find out *which* disk was inserted, except by checking
                with the $$DISK.xxx internal variables)

xONDISKOUT   -> Whenever a disk is removed.

xONFART      -> not yet implemented...
```

1.201 xpalette

```
  xPALETTE L T W H

  This is a palette gadget from which you can choose colors.

  Every time a color is selected, the palette will "happen" and the
  internal variables COLOR.R, COLOR.G, COLOR.B, COLOR.NUM, COLOR.TOTAL
  will contain the R G B values, the color number and the total number
  of colors.

  Look at the Internal Variables for more info.

  The number of colors is taken from the screen that the
  window with the palette gadget will open on.

  You can update a palette by choosing another color :
  > update GuiName gadID NewColorNumber
```

```
Look at the guis:tools/palette.gc gui to see an example
```

1.202 xpipe

```
  xPIPE  PipeName  ON|OFF

This is the event that will enable you to use the output
that cli programs produce.

Example :  Run Gui   Source

A PIPE: is an amigados device which exists in all versions
of the OS from V2.0 and up (AFAIK). In order to be able to
use it you MUST have the file PIPE in your DEVS/DOSDRIVERS
directory and the Queue-handler in your L: dir. You probably
already have them set up as above, as this is the standard
Amiga OS set-up.

What a pipe: does, is provide a "holding place" for the
output of CLI programs, until Gui4Cli can get around to
reading it.

PipeName - should be the name of a pipe: file
ON|OFF   - is the starting state of the pipe (You can give
           the xPIPE a gadid and set it ON|OFF - or CLEAN it).

   xPIPE  PIPE:AnyName ON

Thereafter, you can launch/run/cli any command and redirect
it's output to this pipe: file, like so:

   RUN 'c:search >PIPE:AnyName dh0:MirrorOnWall FairestOfAll'

Now, if the c:search program produces any output, this will
go to the PIPE: file you stated and the above xPIPE event
will "happen".

Inside the xPIPE event, there is one internal variable which
will be valid : $$PIPE.TXT. Every time the xPIPE event happens
it will mean that an other line of text is ready for you and
stored into this variable.

------------------- example:

; a button to start the search
xButton 10 10 60 12 'Search'
  run 'c:Search >PIPE:SearchResults dh0:Universe TrueLove'

; the pipe event that the results will be sent to
xPIPE PIPE:SearchResults ON
  say '$$PIPE.TXT\n'


In the above example, every time a line of text is output
```

```
  from the c:search command, it will be printed.


  ------------------- Handling a pipe -----------------------

  You can start off a gui with the pipe ON or OFF.

  If you give the pipe event a GADID, you can then switch it
  ON or OFF or CLEAN it, at any time. These will have the
  following effect :

  SetGad gui id ON    :
     Will start (create) the pipe.

  SetGad gui id OFF   :
     Will continue sending text to the xPIPE event and when all
     the text has been sent, it will delete the pipe.

  SetGad gui id CLEAN :
     Will immediately stop sending text to the xPIPE event, clean
     up any text that was in the pipe and go back to waiting for some
     text to be sent to it. It will not quit the pipe.

  If you want to immediately stop and quit the pipe, you can declare
  "SetGad gui id CLEAN" and then again "SetGad gui id OFF".


  ------------------- ** IMPORTANT ** -----------------------

  In order to implement the PIPE:, Gui4Cli will start a new process
  which will sit quietly in the background and monitor the PIPE: file.
  If any text comes, it will read it and send it to Gui4Cli line by line.

  That means there is quite a lot of overhead involved in each xPIPE you
  declare (about 10k), so don't fill the place with them..

  YOU MAY WELL ask, "why should I use a pipe and not a simple file
  in ram: to redirect stuff to and then read it from there.."

  - Well, a pipe: is actually a file, but one which you can read
  while an other program may be writting to it (i.e. outputing text
  in to the pipe).

  - Moreover, a pipe will notify you when it has something to tell
  you, where as with a file you have to go check yourself.
  - (Unless I add an xOnNotify event - which I'm thiiiis much away
    from persuading myself to do...)
```

1.203 xradio

```
 xRADIO L T W H Variable Spacing

xRadios are similar to cyclers, in that they have up to 12 fields.
```

```
These are denoted with RSTR :

 xRADIO L T W H Variable Spacing
 RSTR  Title Value
 RSTR  Title Value
 .. etc .., up to 12 CSTRs

The spacing is the distance that the radio buttons will have from
each other (vertically), in pixels.

Example :  Run Gui   Source

- Width & Height :
People who know a lot more than me and you about this, suggest
that the size for HiRes non-interlace screens, should be :
Width = 17, Height = 9
```

1.204 xroutine

```
                xROUTINE  RoutineName

This is a "procedure" or "gosub" in other languages.
The commands attached to this event will never be executed, unless called
by another event.

Say you define an xROUTINE with the name of "Hello" :

xROUTINE Hello

Then from another event in the program you can call this routine with :

GoSub GuiName Hello

The commands attached to xROUTINE "Hello" will be executed and when finished,
control will be returned to the command after "Gosub GuiName Hello"

Starting with V3.2, Routines can take/return
                 Arguments
                Arguments may be accesses as internal variables $$ARG.0 to $$ARG ↩
                   .5, or
even better, defined in the routine's definition line :

>  XROUTINE MyRoutine  Arg1 Arg2 SomeArgName Arg6
```

1.205 xslider

```
 xVSlider  L T W H Title Variable Min Max Current ShowStr
 xHSlider  L T W H Title Variable Min Max Current ShowStr

These two gadgets are Sliders :

xVSlider is a vertical slider and xHSlider a horizontal one.
L T W H Title and Variable have the same meaning as other gadgets.

Min     : The minimum value of the slider
Max     : The maximum Value
Current : The starting Value of the slider
ShowStr : This is a printf style string specifying the format of
          the value to be shown next to the slider :
          You can specify "%3d" or "%5d Widgets" for example.
          The simplest is to specify "%5d" (the Number 5 means
          the maximum length of the number that the slider can show).

The Title will be placed to the left of the gadget unless told
otherwise by the GadTitle command

Example :  Run Gui   Source
```

1.206 xtextin

```
                  xTEXTIN  L T W H Title Variable StartingText Bufflength

  This is one of these little boxes where you can input
  text or numbers. L T W H is the size of the box & Title
  will be placed to the left.

  StartingText is the text the window will open with.

  Bufflength is the size of the buffer :

    A "buffer" is a place where the program can put the
    things you write into this gadget. Since the program does
    not know how long the text you write into this gadget
    will be, you have to tell it beforehand.

    A buffer of size 100 means that it is 100 characters
    long. The gadget will not allow you to enter more characters.

  xTextIn gadgets can be controlled through the use of Attributes
                Attributes
               .

  Also, you can get information on the current xTextIn gadget
  though
                Internal Variables
                 Example :  Run Gui   Source

  Used to be that this gadget would not realize that you
  had entered  anything, unless and until you pressed the
```

```
  ENTER key. Through excellent programming on my part, this
  is all ancient history  now.. :)
```

1.207 xtimer

```
                  xTIMER  TIME|SINGLE|REPEAT  TIME|INTERVAL  ON|OFF

 The xTIMER event uses the Amiga's timer.device to provide
 acurate, system friendly timming events. There is three ways
 you can ask to be notified :

   TIME   - trigger event at the given time
   SINGLE - trigger event after given interval
   REPEAT - trigger event *every* given interval

   example :
   xTimer time   7:30   ON   - event happens at 7:30
   xTimer single 5      ON   - event happens in 5 hours
   xTimer repeat 0:1:30 ON   - event happens every 1 min, 30 secs

===========>>> Time format

 The time must be given as 24HOURS:MINUTES:SECONDS, i.e.

   7     means 7 hours (use 24 hour notation)
   7:30    means 7 hours and 30 minutes
   0:0:30  means 30 seconds (could also be 00:00:30)
   - note : for separators you can use ':', '/', '-', or '.'

==========>>> SETGAD the xTimer ON|OFF :

 This Event can start as ON or OFF.

 When it starts as ON, the request to the timer.device is sent
 as the gui file is getting loaded - as soon as the parser reads
 the event.

 You can give it a
                GADID
                and thereafter
                SETGAD
                Gui ID ON|OFF
 whenever you want. If you set it OFF (or when you quit the gui)
 if there are any pending timer requests they are aborted.

 NOTE : *every* time you SETGAD a timer ON the time request is
 issued again - even if the xTimer is type 'SINGLE'.

 The HIDE and SHOW keywords have no effect on timers.

=========>>> Updating the xTimer :
```

```
 The
                 UPDATE
                 command can be used to change the time interval:

   Update gui id 10:30:25

 This will have the following effect, according to the timer
 type :

   TIME    - will set the time to be woken to 10:30:25

   SINGLE  - will wake you up in 10:30:25 hrs from the time
             you issue this setgad command - if there were any
             requests already issued they are cancelled.

   REPEAT  - will wake you up every 10:30:25 hrs
             Again, all pending requests (for *this* timer)
             will be cancelled.

==========>>> Behaviour

 The Timer is as accurate as possible. However, Gui4Cli is
 a multi-tasking program and there may be something else going
 on when the timer event is triggered - maybe you're using the
 menus or have a ez-requester open, or commands are executing..

 If this happens you will 'hear' the event *after* whatever
 you are doing finishes and Gui4Cli gets around to notifying
 you.

 If this happens in a REPEAT timer, and if while you are busy
 many such events happen (i.e. if you set the interval to 1 sec
 and many seconds pass while you are messing around with something)
 then you will hear only *one* of the events - i.e. the REPEAT
 events will *not* be stacked.

==========>>> Related stuff :

 See also the
                 $$SYS.TIME
                 related
                 Internal variables
                 Example (an alarm clock) : RUN gui  - See Source
```

1.208 index

```
                  Guide INDEX :
```

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