PROGS
Professional & Graphical Software

Tel/Fax (016) 48 89 52
Haachtstraat 92
3020 Veltem
Belgium

LINEdesign

PROGS vector graphics progam

written by :
Joachim & Nathan Van der Auwera

© 1994
2 February 1994

Contents

1. Introduction 1
  1.1 What is LINEdesign ? 1
  1.2 What is PROforma ? 2
  1.3 Disclaimer & Copyrights 2
  1.4 Present, Past and Future 3
  1.5 This manual 3
  1.6 Making a Backup ! 4
  1.7 Installation of LINEdesign 4
  1.8 Installation of PROforma 5
  1.9 Concepts 7
    1.9.1 Driver & Device 7
    1.9.2 Path 7
    1.9.3 Subpath 7
    1.9.4 Path segment 7
    1.9.5 Bezier curve 7
    1.9.6 Font 8
    1.9.7 Fontmap 8
    1.9.8 Fontlist 8
    1.9.9 Font Caching 8
    1.9.10 Extended Character Set 9
    1.9.11 Kerning 9
    1.9.12 Ligatures 9
    1.9.13 Object 9
    1.9.14 Combined Object 10
    1.9.15 Group 10
    1.9.16 Points 10
2. User Interface - Icons 11
  2.1 Edit 12
    2.1.1 Selecting one object 12
    2.1.2 Lasso Select 12
    2.1.3 Moving 12
    2.1.4 Scaling 13
    2.1.5 Rotating 13

LINEdesign manual and software, ©1994 by PROGS, PROfessional & Graphical Software

2.1.6 Slanting 14
2.2 Edit Nodes 15
2.2.1 Path - Combined path 15
2.2.2 Circle 16
2.2.3 Square - Rectangle 17
2.2.4 Headline Text 17
2.2.5 Paragraph Text 18
2.2.6 Bitmap 18
2.2.7 Group 18
2.3 Draw Lines 18
2.4 Draw Curves 19
2.5 Freehand 20
2.6 Draw Square 20
2.7 Draw Circle 21
2.8 Text 21
2.8.1 Headline Text 21
2.8.2 Paragraph Text 22
2.9 Zoom out 23
2.10 Zoom in 24
2.11 Scroll bars 24
3. Files Menu 25
3.1 Load Page 25
3.2 Merge Page 26
3.3 Clear Page 26
3.4 Save Page 26
3.5 Named Save 26
3.6 Save Selected Object 26
3.7 Load Bitmap 27
3.8 Load Font 27
3.9 Unload Font 27
3.10 Print Page 28
3.10.1 CRT screen 28
3.10.2 dot matrix printer 28
3.10.3 inkjet or bubblejet printer 29
3.10.4 laser printer 29
3.11 Preview Page 30
3.12 Quit Program 30
4. Edit Menu 31
4.1 Transform Object 31
4.1.1 Translate Object 32
4.1.2 Scale Object 32
4.1.3 Rotate Object 33
4.1.4 Slant Object 33
4.1.5 Envelope Object 33
4.2 Combine Object 34
4.3 Break Apart 35

TNE design manual and software ©1994 by PROGS, PROfessional & Graphical Software

4.4 Reverse Path 35
4.5 Remove Subpaths 35
4.6 Close Path 35
4.7 Group object 36
4.8 Ungroup Object 36
4.9 Delete Object. 36
4.10 Snap to Grid 36
4.10.1 path 36
4.10.2 circle 37
4.10.3 square 37
4.10.4 rectangle 37
4.10.5 headline text 37
4.10.6 paragraph text 37
4.10.7 bitmap 37
4.10.8 group 37
4.11 Front -move to 38
4.12 Back -move to 38
4.13 Reverse Order 39
4.14 Convert to curves 39
4.15 Quit Program 40
5. Attributes Menu 41
5.1 Current Attributes 41
5.2 Path - Combined path - Circle - Square 42
5.3 Headline Text 43
5.4 Paragraph Text 43
5.5 Bitmap 45
5.6 Group. 45
5.7 Several Objects 45
6. Display Menu 47
6.1 Grid 47
6.2 Preview Mode 48
6.3 Fit to Screen 48
6.3.1 Edit Mode 48
6.3.2 Not in Edit Mode 48
6.4 Fit Page to Screen 48
7. Others 49
7.1 Undo 49
7.2 Again 49
7.3 Keep 49

1. Introduction

1.1 What is LINEdesign ?

LINEdesign v2.00 still is and was conceived as a drawing program. It allows you to draw, you can even put text on the page. But text editing facilities are very limited, and you can only work on 1 page at a time.
LINEdesign is a vector drawing program, meaning that a drawing is stored as a list of operations on a page. This has some advantages. You can switch operations around, change operations. The only thing that changes is the list of operations. More information is stored about the drawing then the drawing itself, also how the drawing is made. This allows much more editing facilities then normally available.
E.g. in a drawing program, once an object is drawn on the page, the only way to remove it is to use some kind of eraser, destroying what is drawn underneath. We can just delete the object, but everything else on the page is kept as before.
It also has the advantage that the page can be rendered at different resolutions. So, a page will look (almost) the same on a 9-pins and a 24-pins printer.
The main disadvantage is that overall the program will render slower than a bitmapped equivalent, because everything has to be recalculated every time we draw it. And although we gain memory everywhere (e.g. one font description can be used at any size), it still takes a lot of memory. Especially for the normal drawing operators. If you store a single line, we remember start and endpoint, but also all the attributes,...
But of course, the advantages largely outweigh the disadvantages. The possibility to change everything about an already drawn object gives you so much security. Don't worry if it doesn't look good yet, make it look good !

1.2 What is PROforma ?

PROforma is short for 'PROGS Font & Raster Manager', and it does exactly what this name suggest. It is a library of routines to manage and display vector graphics and fonts on (raster) devices like screens and printers.
The availability of a separate program to manage graphics and fonts has several advantages. It allows application developers to create output of equal quality (resolution permitting) on several devices, and they can share resources. In short this means that the PROforma library only has to be loaded once, independent of the number of applications which use it. Also fonts only have to be loaded once, and can be shared between applications.

1.3 Disclaimer & Copyrights

LINEdesign software and manual are copyrighted material with all rights reserved. It is forbidden to copy or multiply any part of the LINEdesign software or manual without prior written permission from PROGS, PROfessional & Graphical Software, with the exception of making a backup.
PROforma software is copyrighted material with all rights reserved. It is forbidden to copy or multiply any part of the PROforma software without prior written permission from PROGS, PROfessional & Graphical Software, with the exception of making a backup.
Hotkey System II, Pointer Interface and Window Manager software is copyrighted material with all rights reserved. It is forbidden to copy or multiply any part of the Hotkey System II, Pointer Interface or Window Manager software without prior written permission from Qjump, Tony Tebby, with the exception of making a backup.
Menu Extensions software is copyrighted material with all rights reserved. It is forbidden to copy or multiply any part of the Menu Extensions software without prior written permission from Jochen Merz Software, with the exception of making a backup.

Although much care is taken in the development of the LINEdesign software and manual, in no circumstances will PROGS, Professional & Graphical Software, be liable for any direct, indirect or consequential damage or loss arising out of the use or inability to use the LINEdesign software or documentation.

This said, it speaks for itself that PROGS will continue to develop this manual and software. Therefore, we would appreciate any comments about our software and manual. As you may know, we are only human, we can do no more than our best to provide you with the best quality software. If we do notice some inconsistencies between the documentation and the software, there may be an additional file on the program disk (updates_doc and/or

updates_txt).

1.4 Present, Past and Future

Now we present you LINEdesign v2.00, a powerful, up to date, modern program for the QL market.
We started off with 'The PAINTER' which we still rate very high, but the user interface is old fashioned. Then we came with LINEdesign v1. A first try to see whether the market was interested in this kind of program. Unfortunately, LINEdesign v1 was slow, and very limited, too many things were just not possible with it.
So we have completely rewritten the program, using a better user interface, more powerful and faster drawing routines (PROforma),...
But this is in no way the limit. LINEdesign has now come at the stage were we can easily expand it further. Supply even more daring functions, that allow even more perilous operations, like fitting a text to a curve. Takes your breath away, doesn't it ?

1.5 This manual

This manual has been produced using a specialised in house program to print text using the PROforma software, which can include pictures. The text was printed on an Atari SLM804 laser printer using the Grand Old Style font family. The pages were rendered by an Atari TT under QDOS emulation (level E drivers). The pictures were all created in LINEdesign.

The LINEdesign manual actually consists of three distinct parts :

1. Reference Manual : This manual explains what is possible with LINEdesign, what every command does, and generally, how LINEdesign should be operated. We advise you to use this manual with your computer switched on and try what you read. If some things seem obscure at first, just skip it and read on. It will probably become more obvious later.
2. A small part explaining the Pointer Environment and the Menu Extensions. The actual manual presumes you are familiar with these environments. If you are not familiar with the Pointer Environment or the Menu Extensions, you have to read this appendix first!! This part can be found at the very end of this book.
3. A list of all the fonts and clipart supplied with the system. They are all printed out so you can easily search for what you want.

1.6 Making a Backup !

As LINEdesign is delivered on 11 disks, 1 program disk, 5 font disks and 5 clipart disks, it is elementary to make backups before you do anything else !!
The disks are all uncompressed, so they can easily be copied using 'wcopy' from TK2.
So for each of the disks you have, you should do the following : put the master in 'flp1_' and the (unformatted) backup disk in 'flp2_', then type

```
TK2_EXT
FORMAT flp2_
WCOPY flp1_,flp2_
a
```

1.7 Installation of LINEdesign

LINEdesign is an executable program (as most application programs). This means that LINEdesign can be loaded with a line like :

```
EX LINEdesign
```

However, LINEdesign does need some extensions to work :

- Hotkey System II, some of the other extensions need this.
- The Pointer Interface & Window Manager for the general environment, the use of the mouse, the standard windows and items etc.
- The Menu Extensions for (amongst others) the user friendly file select window.
- PROforma, the 'PROGS Font & Raster Manager', as this contains all the graphics routines which are used by LINEdesign.

So your boot file will probably look like this :

```
TK2_EXT
LRESPR flp1_hot_rext
LRESPR flp1_ptr_gen
LRESPR flp1_wman
LRESPR flp1_menu_rext
EX flp1_pf_PROforma;'flp1_pf'
EX flp1_LINEdesign
```

The boot file as shown here is the one that appears on your program disk. It assumes that all files should be found on 'flp1_', except PROforma, which should be found in the directory 'flp1_pf_' (including the PFfontmap file, which is the configuration file for PROforma).

1.8 Installation of PROforma

Unlike most extensions PROforma has the actual appearance of a normal job (as most application programs). This means that PROforma can be loaded with a line like :

```
EX PROforma
```

The fact that PROforma has the form of a job (and not a resident extension as most libraries like the Menu Extensions), has certain advantages. Jobs can always be loaded (if you have enough memory), and jobs can always be removed. So if you want to release the memory which is used by PROforma, you can just remove the job. Of course the disadvantage of this scheme is that you can accidentally remove the PROforma job, which is dangerous as all programs which use PROforma will also be removed, so you could loose data that way.

WARNING ! Removing the PROforma job may result in data lost by the applications which are at that moment using PROforma.

When PROforma is loaded, it will automatically search for the 'PFfontmap' file. This file contains configuration information about the fonts which can be used, the search path for fonts, and the memory usage of PROforma. Normally, the PFfontmap file is searched on the program default device (cfr. the Toolkit II command PROG_USE). However, if you want you can specify the device which should be used to search for the PFfontmap file. So the command :

```
EX flp1_PROforma;'flp2_pf_'
```

will load PROforma from 'flp1_' and load the PFfontmap file as 'flp2_pf_PFfontmap'. If you want, the ending underscore can be left out.

On the disk there is also a PFConfig program. This is used to configure PROforma (meaning, to change the 'PFfontmap' file). This program loads the PFfontmap file when loaded (just like PROforma does), and saves it back, containing the new information, when it finishes. The operation is quite straightforward. This program allows you to :

• set the search path for fonts. Fonts which have to be loaded by PROforma are searched for on the given devices. You can specify more than one device if you separate the devices by semi-colons (';'). Note that the devices have to include the ending underscore ! The listed devices are searched from left to right. This may be important if there is a file with the same name in more than one directory.

• You can set the (maximum) amount of memory which may be used by a buffer. For instance in LINEdesign v1 128k was allocated for the printer buffer. However, in PROforma, this is equivalent to a 64k buffer (because of more efficient memory usage). On an average 300dpi printer this will result in 17 passes. However, as another difference with LINEdesign v1, you can configure the amount of memory needed, and no more will be

used, usually even less, as only the actually used amount is allocated. If you want to use this option, you should make sure 'maximum' is also indicated.
However PROforma can also use as much free memory as it can get, while still keeping some free for fonts, other jobs, and some memory needed for rendering complex images (or fonts). If you want to make sure that a minimum amount of memory is left free, then you also have to specify the 'minimum' option.
For instance 'minimum' and 64 would always leave 64k free when allocating a buffer. If you would have specified 'maximum' and 128, then at most 128k would be used for the buffer. As can be seen from this example, all sizes are given in kilobytes. We do advise always to use figures above twenty.

• Cache size can also be configured. To speed up the display of fonts a special mechanism called a font cache is used. This means that (within certain restrictions) when a character is displayed, it is also kept in the font cache in a special form so that it can be reproduced quickly at the same size and rotation. However, this can take quite a lot of memory. For this reason the font cache can be shared between applications. You can give any size to the font cache. We advise the font cache to be at least 64k long, however if you can spare the memory you could make the font cache larger. If you can not spare any memory for the font cache you could specify a zero font cache size.

• Add font to fontmap. This command allows you to make sure a certain font can be used by PROforma. When you indicate this command, you get a directory in which you can indicate a PROforma font file. This font will then be added to the fontmap. Please note that the device where the font can be found should also be included in the search path or PROforma will still be unable to load the font. The program will not stop you to try to include the same file in the fontmap twice.
Fontfiles. All references inside PROforma to a font are done using the name of that font. However this is usually not the same as the name of the font file. Therefore, the fontmap makes sure PROforma knows which files to load when a font is requested (the fontmap) and where to search for that file (the search path).
When you add a font to the fontmap, the PFConfig program tries to distinguish between the font name and directory, as we did not want to assume that all users use directories. Thus we assume that the actual filename does not contain underscores ('_'). For instance 'win1_pf_dixon_pff' is broken into three pieces: the directory 'win1_pf_', the filename 'dixon', and the extension '_pff'.

• Add all fonts in directory to fontmap. You can add an entire directory with fonts to the fontmap with this one. Again this can create duplicates. This command is particularly useful when you have acquired a disk full of PROforma fonts from some source, and you want to be able to use them.

• Delete a font from fontmap. This command allows you to select a font you want removed from the fontlist. You get a sorted list of all fonts which are currently in the fontmap, and if you indicate a font from the list, it is removed. Because the fonts are sorted (by name, case dependant), you can easily throw out duplicates.

1.9 Concepts

1.9.1 Driver & Device

A driver is a set of characteristics and routines which describe the behaviour of a certain output device (like a printer, or the screen). This usually includes details as size, resolution, available colours... On the other hand you can probably attach your printer both to a serial port, or a parallel port, or maybe you just want your image to to output to a file. Therefore, you always have to specify the driver (how to draw), and a device (where to draw) when you want to print the page.

1.9.2 Path

There are actually two meanings for this term, a device interpretation and a graphical interpretation.

- device : a device name, possibly including directory, where file can be found.
- graphical : a collection of subpaths.

1.9.3 Subpath

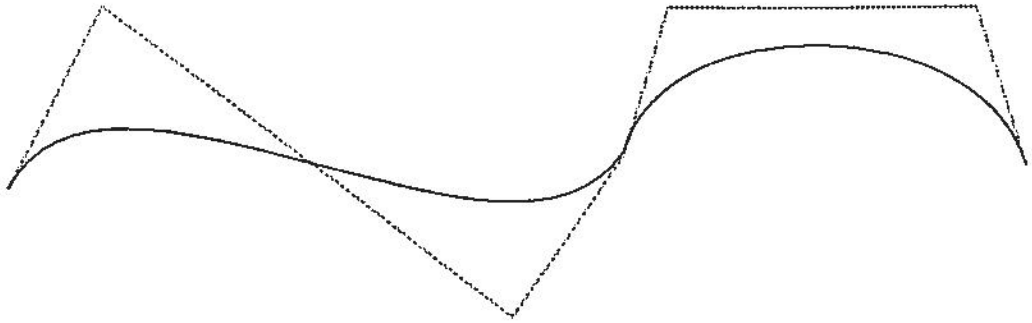
A move (to define the origin of the subpath) followed by a sequence of path segments. A subpath can be open, or closed.

1.9.4 Path segment

A path segment is either a line or a bezier curve. Circular arcs are converted to bezier path segments.

1.9.5 Bezier curve

Bézier is a French mathematician who works for Renault and who "invented" a description/display method for curves based on Bernstein polynomials.
In LINEdesign we only use cubic bezier curves. That is curves which consist of four points: the two endpoints (which are on the curve), and two controlpoints (which are off the curve).



1.9.6 Font

Collection of graphical shapes, which can usually be combined to give readable text. The font files currently have a lot of similarity with the Adobe Type 1 font format (slightly adopted for easier access, which also makes them a bit shorter). However this may change in future if we choose to add a different hinting scheme (as the hinting used in type 1 files is quite obscure, and our current implementation unsatisfactory).
Fonts are handled quite efficiently. Even when several copies of LINEdesign use the same font, it will only be loaded once.
PROforma automatically releases a font when there are no programs which have loaded it. Special routines are included to make sure this is always true (even when a job is force removed). When a font is loaded it is placed in the "fontlist" for that gstate.

1.9.7 Fontmap

This is a table of all known fonts. This table is used to map a fontname to a fontfile. You cannot use a font which is not in the fontmap !
The fontmap can not change after PROforma has been loaded (except by removing the PROforma job and loading it again, alas this also removes all clients of PROforma).

1.9.8 Fontlist

This is the list of the fonts which have already been loaded, and which can be used.

1.9.9 Font Caching

To increase the drawing speed of text, often used characters are also kept in an internal format which can be displayed much faster than the standard representation on the font. This is called the font cache. LINEdesign always tries to use the font cache, but some fonts can't be cached.
Because the font cache has a limited size, a replacement algorithm must be used. Only the least recently used characters are removed from the font cache. The capacity of the font cache is not reduced because of fragmentation.

1.9.10 Extended Character Set

Because typography uses many characters, LINEdesign uses a special extended character set, which contains much more characters then the standard character set which is supported by the operating system.
These characters can be accessed by their PostScript® name, which should be put between backslashes (e.g. \dagger\ for †).

1.9.11 Kerning

To increase the cohesion of a combination of characters, it is often not enough to position all characters side by side, put some character combinations have to be put closer together (or further apart) to make sure that they are visually equally spaced (same amount of whitespace between characters). This process is called kerning. A typical example is the word "AWAY."



1.9.12 Ligatures

Another typesetting feature is that some characters sequences like "ff", "fi", "fl", "ffi", "ffl" should be replaced by special characters which look better. Ligatures are supported in the Extended Character Set and can therefore be used : just put them between backslashes (e.g. \fi\ for fi). Please note that not all fonts have ligatures !



1.9.13 Object

An object is the basic entity on the page. An object can be a path, a circle or pie, a square or rectangle (possibly with rounded corners), a headline, a paragraph or a bitmap.



1.9.14 Combined Object

A combined object is a path object with more than one subpath. The paths which you can draw in LINEdesign only have one subpath. However, this may sometimes not be sufficient, therefore path objects can be combined. .

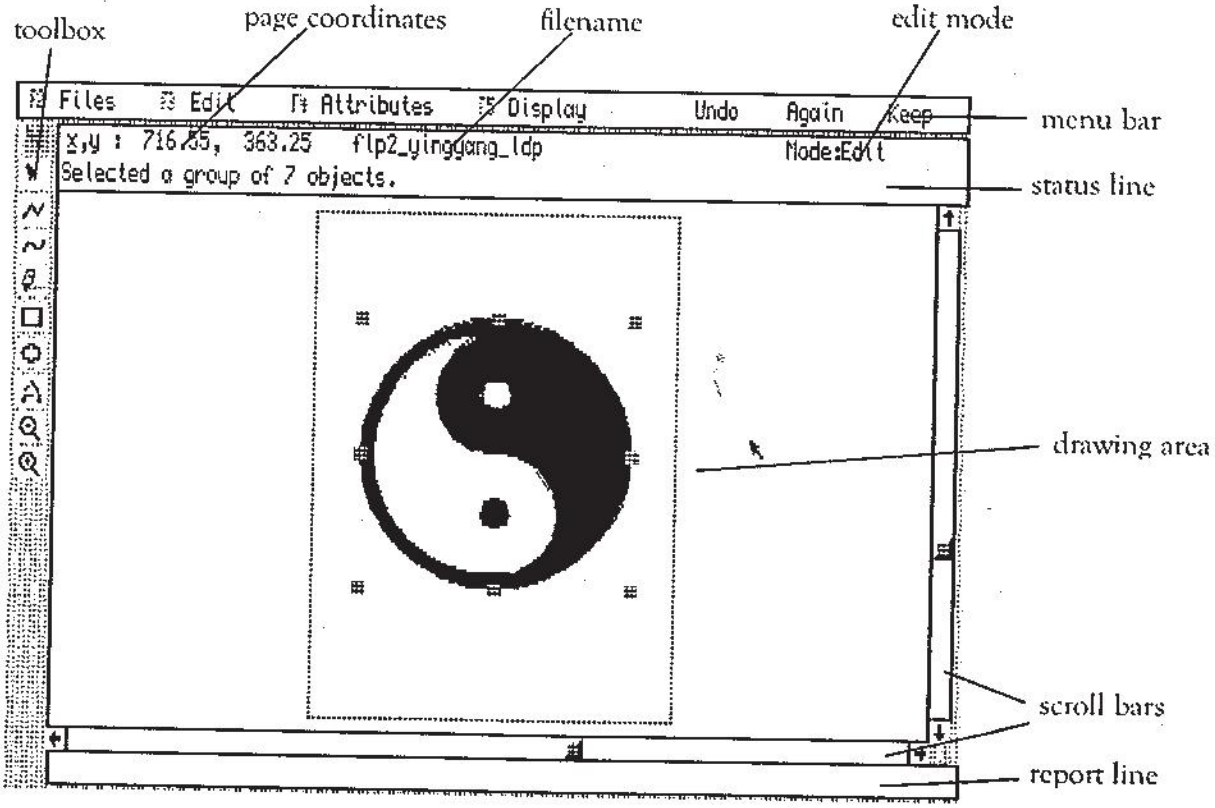
1.9.15 Group

A group is a collection of objects. There are two uses for the word group in LINEdesign.
• A collection of objects which have been grouped. Groups can not change characteristics (like colour or inter object relations). They can however be transformed (moved, rotated...) as an entity.
• A selection of multiple objects. In edit mode it is possible to select more than one object at a time. This is sometimes refered to as a group.

1.9.16 Points

LINEdesign uses points as the metric unit. This unit, which is commonly used in printing and desktop publishing, divides an inch in 72 equal parts. The abbreviation for point is pt. Please not that the size is not well defined, some source say there are 72.27 points in an inch (or 72.307).

2. User Interface - Icons



On the menus, there may be some items which you cannot indicate. This means that the command is not possible at that moment (or not implemented yet).

2.1 Edit



The Edit Mode can be entered by pressing <e> or <tab>.

2.1.1 Selecting one object

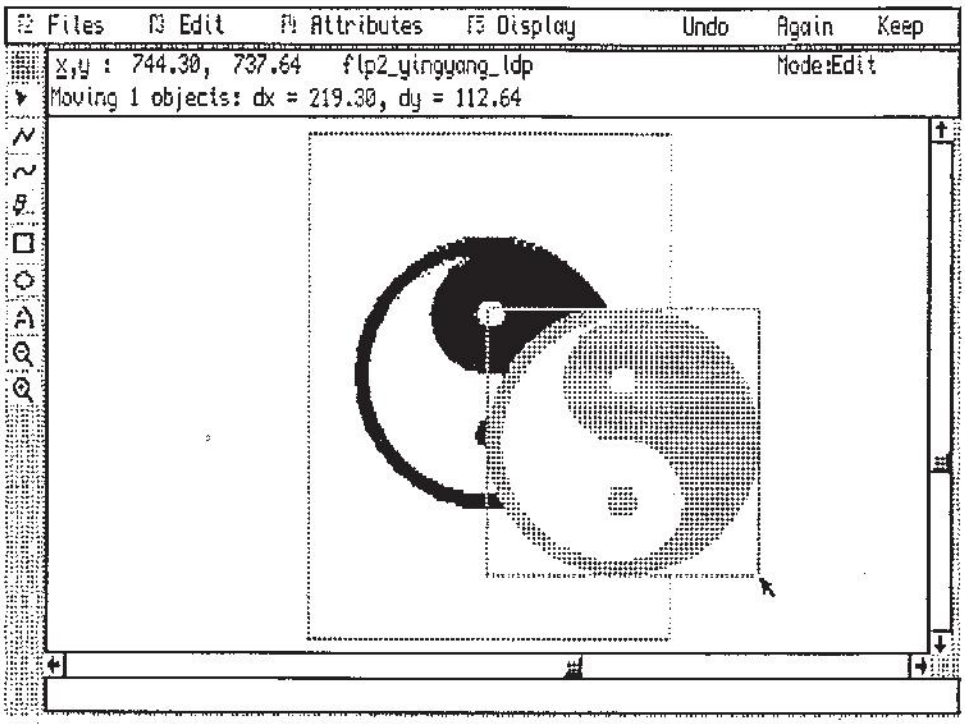
All objects can be selected by a hit or do inside the bounding box. This bounding box will then be visible as eight red blocks, one on each corner, and one at the centre of each side. If you hit at a spot which is inside multiple bounding boxes, then the topmost object will be selected. Hitting again on the same place will select buried objects.
You can also cycle through all objects by pressing <tab> (top to bottom), or <shift+tab> (bottom to top).
If 'Keep' is indicated during selecting, or if you press <control> simultaneously, then the selected object will be added to the group of selected objects. The last selected object can still be changed though.
If multiple objects are selected, but you only want to select one object, then you should press <esc> or indicate 'Undo'.

2.1.2 Lasso Select

You can also select several objects at once by dragging. Dragging is moving the pointer during a (long) hit or do. If you do this, a rectangle will be displayed. All objects with a bounding box that falls inside this rectangle will be selected.

2.1.3 Moving

To move the current object, hit one the red squares which indicate the bounding box of the current object. You can then move this object. If you don't move the pointer for a little while, a preview of the result will be drawn in green. While moving, the relative distance to the original position is printed on the status line. Hit or do to position the object, <esc> or indicate 'Undo' if you don't want to move the current object after all.



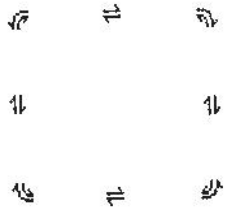
If you start moving by a hit on one of the red boxes on a corner, then you can position the object anywhere. If you start moving by hitting on of the boxes at a side, then the movement will be constrained horizontally or vertically.

2.1.4 Scaling

To scale the current object, do one of the red squares which indicate the bounding box of the current object. You can then scale this object. During movement you can see how the bounding box changes, and if you don't move the pointer for a little while, a preview of the result will be drawn in green. While scaling, the scale factor is printed on the status line. Hit or do to scale the object, press <esc> or indicate 'Undo' if you don't want to scale the object after all.
If you start scaling by a do on a corner block, than the scale is ratio preserving, meaning that the objects original ratio is kept. If you had indicated a block on the side, you scale either horizontally or vertically.
When you scale an untransformed paragraph text, you only change the size of the frame, not the object as such. This means that after a scale, the paragraph object will have to be reformatted (which can take some time).

2.1.5 Rotating

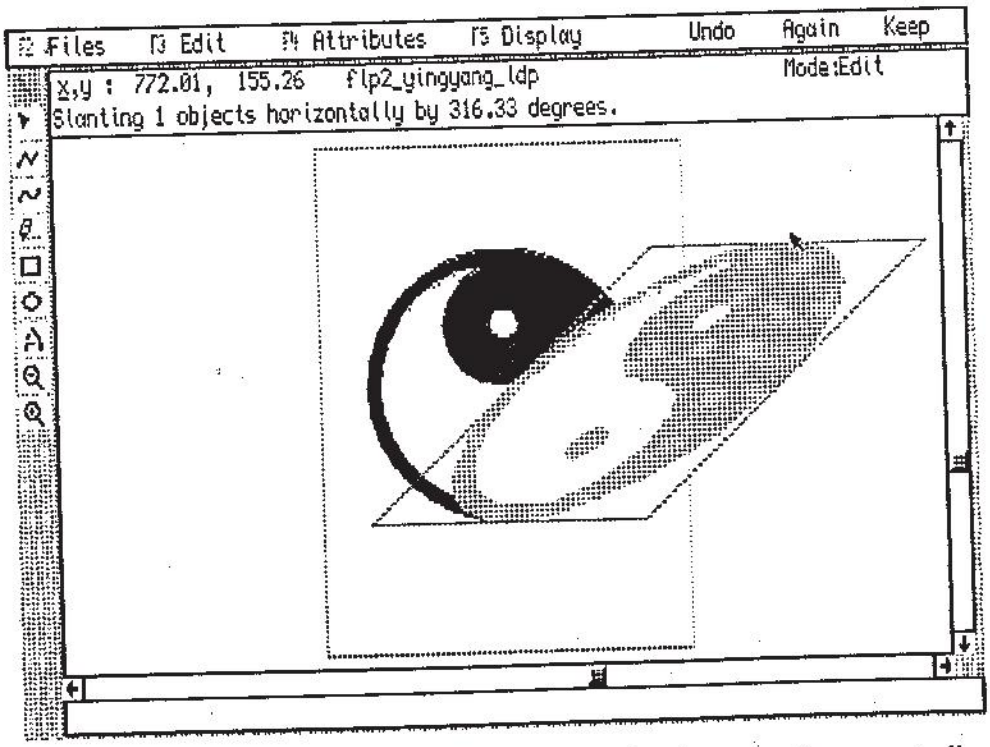
To rotate, first do to get a rotating bounding box. This bounding box is drawn with eight double sided arrows instead of red blocks.



Hit or do any of the arrows on the corner to start rotating. During movement the bounding box will be drawn rotated. If you don't move the pointer for a while, a preview of the rotated object is drawn in green. While rotating, the angle over which is rotated is printed on the status line. Hit or do to rotate the object. Press <esc> or indicate 'Undo' if you don't want to rotate the object.

2.1.6 Slanting

To slant, first do to get a rotating bounding box. This bounding box is drawn with eight double sided arrows instead of red blocks.
Hit or do any of the arrows on the side to start slanting. During movement the bounding box will be drawn slanted. If you don't move the pointer for a while, a preview of the slanted object is drawn in green. While slanting, the angle over which is slanted is printed on the status line. Hit or do to slant the object. Press <esc> or indicate 'Undo' if you don't want to rotate the object.



Depending on which arrow you indicated, you will either slant horizontally or vertically.

LINEdesign manual and software, ©1994 by PROGS, PROfessional & Graphical Software

2.2 Edit Nodes



You can only the nodes of one object at a time. You either select the object you want to edit in 'Edit' mode, and press <e> or indicate the 'Edit Nodes' icon.
Or you indicate the 'Edit Nodes' icon or press <e> directly after drawing, and then the last drawn object will be edited.
Then you are in 'Edit Nodes' mode. The nodes of the current object are drawn. The meaning of these nodes is different for each kind of object, so will handle them separately.

2.2.1 Path - Combined path

With a path you can do anything, even completely redraw it. The control you have over the object is enormous. As usual, we will use the term path for both a path or a combined path.
Each node is a startpoint or endpoint of a path segment. The startpoint of a subpath is drawn in black, all the other nodes are green.
When you select a node, the type of node is printed on the status line. Depending on the key used to select the node, another action is taken.
Hit such a node to move them. If the node has no controlpoints, you can move it immediately. This is the case for a line node followed by a line, or the startpoint followed by a line. Otherwise the controlpoints are drawn as green circles, connected to the selected node with a line (= tangents to the curve). All the other nodes are removed, to make it a bit clearer. Hit the node or controlpoint you want to move. During movement, the object will change along. Hit or do to confirm the movement. Press <esc> or indicate 'Undo' to leave it as before.
Do a node to get the commands possible on a node.

1. To Line : if you have selected a curve node, it will replace the curve that ends in that node, by one line. If you have selected a line node, this item will be unavailable.
2. To Curve : if you have selected a line node, the line ending in that node will be replaced by a curve. This will not immediately be visible, as curves can be used to model lines exactly. If you select the node again, you will see the controlpoints. If you have selected a curve node, this item will be unavailable.
3. Add : will add a node, before the selected node. The added will be of the same type as the selected node. This can be useful if you want more local control.
4. Delete : will delete the selected node.
5. Symmetric : if you have selected a node with controlpoints, it will make sure that the controlpoints lie symmetrically. If the node is a curve node, it is changed to a

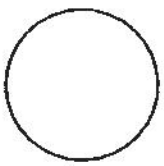
symmetric node, for the future.
A symmetric node has two controlpoints on one line, with the node in the middle. So the controlpoints lie at equal distance from the node. The curve will look smooth at this node. If you move one controlpoint, the other will automatically move along, because it must lie on the same line and distance.

6. Smooth : if you have selected a node with controlpoints, it will make sure that the controlpoints lie symmetrically. If the node is a curve node, it is changed to a symmetric node, for the future.
   A smooth node's two controlpoints lie on the same line. The curve will look smooth at this node.
7. Cusp : if you have selected a node with controlpoints, nothing will visibly change, but if the node is a curve node, the type is changed to being cusp, for the future.
   A cusp node puts no constraints on the position of the controlpoints. So you can put them anywhere you want to. This also means that you don't necessarily maintain the smooth appearance of the curve.
8. CANCEL : will leave the menu without doing anything.

The advantage of using third degree Bezier curves, and composing them to form a larger curve, becomes clear here. Any change to a node only has a local effect. The flow of the curve is only affected at this node, and it doesn't affect the whole curve. This is very good, because it makes the effects of changes predictable, so when you know what you want to change where, you will know how ! It is only because the change remains local that we can show it immediately.
Editing the nodes of a path could be slow in 'Preview Mode'.

2.2.2 Circle

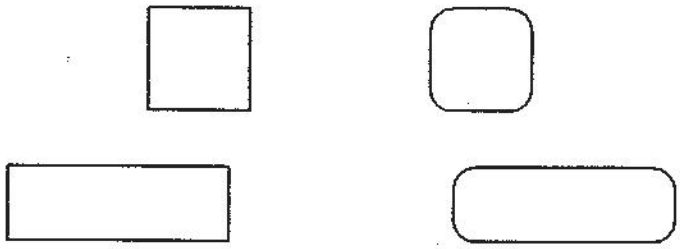
You can change a circle to a pie arc, meaning an arc with two lines connecting the two endpoints of the arc with the centre of the circle. Whether the circle is transformed or not, is of no importance. So, editing an ellipse is no problem.
Two nodes are drawn, one indicating the startdegree of the arc, one indicating the enddegree. If both are equal (the circle is closed), the two nodes will coincide, and only one will be visible.
Hit or do the node to move it. During movement the angle is shown, and whether you selected the end or startdegree on the status line. While moving the arc will move along. Hit or do to draw the arc. Press <esc> or indicate 'Undo' if you want to restore the previous state.





2.2.3 Square - Rectangle

You can round the corners of a rectangle or square. There is a difference between a rectangle and a transformed square (also being a rectangle). With a rectangle, one of the sides is shorter than the other (else it is a square). A rectangle with rounded corners with the largest possible radius, will look like 2 half circles connected by 2 lines. For a square this would be a circle. From now we only speak of squares, it is completely similar for rectangles.
If the square isn't rounded yet, only one node is shown on a corner (normally the upper left, but this not necessarily is the case when the square is transformed). Hit or do the node to round the squares. If you move towards the centre of the square, the corners will be rounded more; towards the outside of the square, less rounded. If you move the pointer outside the square, it won't be rounded at all.



2.2.4 Headline Text

Headline text can be manually kerned, or to be more precise : you can put each character where you like it.
For each character a node is shown. Hit the node to move the character. During movement the character will move along, allowing you to see how it will look. Hit or do to place the character where you want it. Press <esc> or indicate 'Undo' to return it where it was.
Do the node and you will get a menu offering the following choices :

1. Align Character : aligns the character to the previous character, so they will both come on the same baseline.
2. Delete Character : deletes the selected character from the text.
3. Align Text to Baseline : aligns the whole text to the same baseline. More specific, the one as originally defined. It will only undo the vertical movements, not the horizontally. This command is independent of the character you indicated. This command is very useful for kerning: first kern the letters, and then align them back to the same baseline.
4. Edit Text : this will allow you to edit the text itself. This command is independent of the character you indicated.
5. ESC : leave the menu without doing anything.

The other two items are unavailable, because they are not yet implemented.

2.2.5 Paragraph Text

You cannot edit the nodes of a paragraph !

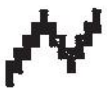
2.2.6 Bitmap

You cannot edit the nodes of a bitmap !

2.2.7 Group

You cannot change the nodes of a group !

2.3 Draw Lines



Indicate the 'PolyLine' icon or press <l> to enter the 'Draw Lines' mode. The pointer will change to a cross when in the drawing area.
Hit or do in the drawing area to start drawing. During moving, you can see how a line will move along as some kind of preview how the actual line will look. Also the length and angle of the line are shown on the status line. These are especially useful for 'Again'. The angle is measured to the previous line, or the horizontal (if it is the first line).
Indicate the endpoint of the line. Press <esc> or indicate 'Undo' if you don't want to draw this line. Depending on the key with which you indicate the endpoint, a different action is taken.
Do will end the object, calculate the bounding box, and prepare to start with anything else.
Hit will start a new line where the previous ended; this allows you to draw polygons easily.
If you have Hit, you can also indicate 'Again' or press <F9> to get a line of the same length and with the same angle to the previous line as the previous line itself. This allows the easy creation of regular polygons, like triangles. You only have to get the angle right (for a triangle, 60 degrees).
You can also enter the 'Draw Lines' while drawing anything else. If you have indicated the centre of a circle, or the upper left corner of a square, this point will become the first point of the line. If you were drawing a curve, and you already have indicated (or it was calculated) the first controlpoint (and nothing more), it will be kept, and you will already have drawn one line. In all the other cases only the first point of the curve will be kept as startpoint of the new line.
If you were drawing curves, the lines will be added to the same path object !

2.4 Draw Curves



Indicate the 'PolyCurve' icon or press <b> to enter the 'Draw Curves' mode. The pointer will change to a cross when in the drawing area.
We use third degree Bezier curves. Such a curve is defined by the start and endpoint and the two tangents in those points. The start and endpoints are commonly called nodes, because the curve runs through them. The other two are called control points, because they control the flow of the curve. The curve always lies inside the polygon formed by those points.
Hit or do in the drawing area to start drawing, and indicate the startpoint of the curve. Move and see how the tangent moves along. Indicate the place where the first controlpoint has to come. Now the only difficult part comes along, we have to indicate the second controlpoint, which will indicate the tangent to the endpoint, but we don't know where it will lie. So you need an idea of how the Bezier polygon looks to draw the curve. Then move to choose where you will position the endpoint, at this stage you can see how the curve will look. Indicate the endpoint. Depending on which key you used to indicate it, different action is taken. At any stage you can press <esc> or indicate the 'Undo' item, to interrupt the drawing.
Hit to indicate the endpoint, if you want to add another curve to this one. The program automatically calculates the first controlpoint of the next curve, assuming you want to draw smooth looking curve. This appearance can always be changed later on with 'Edit Nodes'. Then you only have to indicate the second controlpoint and the endpoint of the following curve.
Indicate the endpoint with a do to end the curve. You can then draw another one.
You can also enter 'Draw Curves' mode if you already were drawing something else. Then the last indicated point will be taken as the startpoint of your first curve. E.g. you indicated the centre of a circle, the upper left corner of a rectangle, the endpoint of a line (with hit), etc. If you were drawing lines, the curves will be added to the same path object !

2.5 Freehand



Freehand drawing is much easier than the previous methods. It also needs more processing power. Unfortunately, this means that it is very slow.
Indicate the 'Pencil' icon or press <p> to get in 'Freehand' mode. The pointer will change to a cross when in the drawing area.
Hit or do to start drawing. Move the pointer, and you will draw. Hit or do to end the drawing. The number of input nodes will be shown on the report line. This heavily influences the time needed to calculate the curve going through these nodes. This method is not optimal though, it needs a lot of processing power, it still keeps too much nodes, but it is a great start; use 'Edit Nodes' to finish the object.
All curve nodes defined this way are cusp, because it offers more modelling capabilities.

2.6 Draw Square



Indicate the 'Square' icon or press <s> to enter the 'Draw Square' mode. The pointer will change to a cross when in the drawing area.
Indicate the upper left corner and start drawing. Start with a hit to draw a rectangle, with a do to draw a square. A square is the constrained or special case of a rectangle. During movement, you will see how the rectangle or square will look. Also the length of the side(s) is printed on the status line. Indicate the lower right corner. Press <esc> or indicate 'Undo' if you don't want to draw the rectangle/square.
You can also indicate the lower right corner first, and the upper left corner next. This makes no difference.
You can also enter the 'Draw Square' mode when you were already drawing something else. The last entered point of the unfinished object will then be used as the upper left corner (or lower right). The previous object will be stored separate from this rectangle or square.

LINEdesign manual and software, ©1994 by PROGS, PROfessional & Graphical Software

2.7 Draw Circle



Indicate the 'Circle' icon or press <c> for circle to enter the 'Draw Circle' mode. The pointer will change to a cross when in the drawing area.
Indicate the centre of the circle and start drawing. During movement, you will see how the circle will look. Also the radius is printed on the status line. Indicate a point on the circle.
Press <esc> or indicate 'Undo' if you don't want to draw the circle.
You can also enter the 'Draw Circle' mode when you were already drawing something else. The last entered point of the unfinished object will then be used as the centre of the circle. The previous object will be stored separate from this circle.

2.8 Text



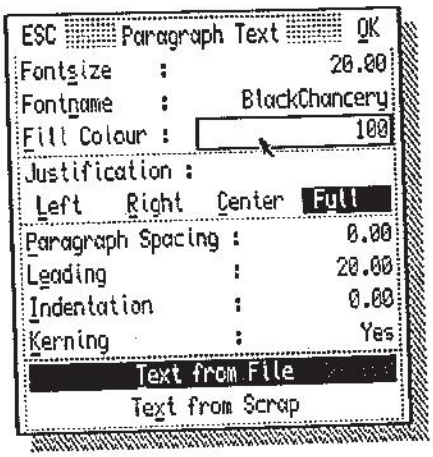
To get into 'Text' mode, indicate the 'Text' icon or press <t>. If there are no fonts loaded, an error message will be given, and nothing will change. Otherwise the pointer will change to a cross when in the drawing area.
Now you can put text on the page. There are two types: headline or paragraph text. Headline text is just one line of text, that can be kerned and edited manually. Paragraph text is a multi line formatted block of text, that has to be loaded or imported from scrap. Paragraph text can't be edited in the program, although it can be replaced by another text (from scrap or file).
As these types differ quite a lot, they are described separately in the following parts.

2.8.1 Headline Text

To put a headline on the page, hit at the position where you want the baseline of the first character. A window will appear where you can edit the text. As usual, you can enter special symbols by stating their name between backslashes. The text will appear in the current font

and current font size.
Headline text is by default not kerned.

2.8.2 Paragraph Text



To position a paragraph text, you should first draw the frame in which the paragraph should be put. So do at the position of one of the corners of the frame, and you will get a rectangle which indicates it. All text will fall inside this frame (with the exception of words which are too wide to fit. Then a window will appear with the following options :

1. Fontname : will display the font used for the text. When indicated the list of currently loaded fonts is displayed, to select one of them.
2. Fontsize : edit or type the fontsize, in points. The leading will be given the same value.
3. Fill Colour : edit or type the fill colour. As fonts are always drawn filled, and their outline is not drawn, you can only choose the fill colour.
4. Left : will deselect any other justification that was selected previously, and select left justification. This means that all the lines will touch the left margin, but not necessarily the right. Also called no justification or ragged right.
5. Right : will deselect any other justification that was selected previously, and select right justification. This means that the lines will almost all the right, and not necessarily the left margin. Also called ragged left.
6. Centre : will deselect any other justification mode previously selected, and select centre justification. So, all lines are positioned in the middle of the frame.
7. Full : will deselect any other justification that was selected previously, and select full justification. So, the lines will be spaced out to make them touch both the left and right margins (except the last line in each paragraph).
8. Paragraph Spacing : edit or type the paragraph spacing. In points. This is the extra space that is added when a new paragraph is entered. Normally it is zero, so no extra space is added.
9. Leading : edit or type the leading, also in points. The leading is the distance between baselines. Normally it is equal to the fontsize. But it could be good idea to make it bigger if you are using are 'black' font, like Aurora. Or make it smaller, with a light font, or a font with very small body (like GraphicLight). Please note that there are

LINEdesign manual and software © 1994 by PROGS, PROfessional & Graphical Software

also other definitions of leading in typography.

10. Indentation : edit or type the indentation, in points. This is the amount a new paragraph will be indented according to the left margin. This is an absolute figure, independent of the size of the frame, or the fontsize.
11. Kerning : select whether you want the text to be kerned or not. Not all fonts are kerned. Kerning will make the font legable as it should make the spacing more consistent.
12. Text from File : indicate this if you want to load the text from file.
13. Text from Scrap : indicate this if you want to get the text from scrap.
14. ESC : do not add the paragraph to the page.
15. OK : add the paragraph to the page. At this stage a File Select window will appear if you wanted to load the text, or the text will be copied from scrap. If the scrap contains no text or is empty, an appropriate error message is given.
    If you wanted to load the file, select the right file, and it will be loaded. At this stage you can still press <esc> and then no paragraph will appear.
    After the file is loaded, or copied from scrap, the paragraph will be formatted according to the requested parameters. This formatting could take a little while if so a lot of text is visible.

Normally the whole text is used to fill the frame. If there isn't enough, then the frame will not be filled completely. If there is too much, then only the text needed to fill the frame is processed, but the rest is retained. The whole text is kept in memory, because when the fontsize or the frame size is changed, the text is reformatted and more text could appear.

2.9 Zoom out



Press <o> or indicate the 'Zoom Out' icon, the pointer will then change to a magnifying glass with a minus in it. Hit anywhere to zoom out, so more page will become visible. The position where you have hit will become the centre of the new screen. If you do, you will return to the previous mode. You can also press <esc> or indicate the 'Undo' item to return to whatever you were doing before.
You can only zoom out a limited number of times consecutively. If you have reached the limit, you will return to the previous mode automatically.

2.10 Zoom in



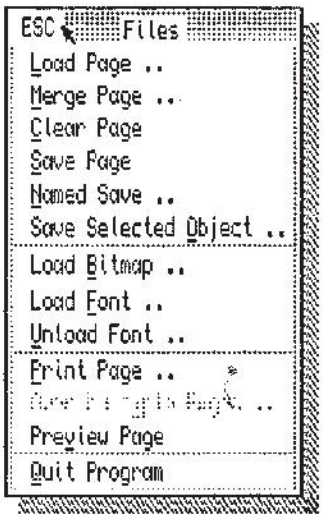
Press <i> or indicate the 'Zoom In' icon, the pointer will then change to a magnifying glass with a plus in it. Hit anywhere to zoom in, and you will be able to see the position where you have hit in more detail. If you do, you return to the previous mode. You can also press <esc> or indicate the 'Undo' item to return to whatever you were doing before.
You can only zoom in a limited number of times consecutively. If you have reached the limit, you will return to the previous mode automatically.

2.11 Scroll bars

There is a vertical and a horizontal scroll bar. The block inside the scroll bar indicates, by approximation, the position of the centre of the screen in the whole editable area, which is much larger than the page.
You can scroll half a page by pressing <alt + cursorkey> or hitting any of the arrows on the sides of the scroll bar. If you do the arrows, you will scroll a whole page.
You can also indicate the scroll bar itself, then you will scroll towards the spot you indicated, but over a smaller distance. This allows more accurate positioning. Hit the scroll bar to move one sixteenth of a screen, do the scroll bar to scroll one eigth.

LINEdesign manual and software, © 1994 by PROGS-PROfessional & Graphical Software

3. Files Menu



3.1 Load Page ..

Load a new page from disk. Just indicate the name of the file you want to load. Uses the File Select menu from the Menu Extensions. If the page you were working on has been changed since the last save, you have to confirm that the changes will be forgotten. The entire loaded page will be the current object. So you can immediately transform it.

3.2 Merge Page ..

Same as load page, but the old page is retained, and the new one added on top. The merged page will be selected as the current object.

3.3 Clear Page

Clear the page you are working on. If the page has been changed since the last save, you have to confirm that the changes will be forgotten.

3.4 Save Page

Save the current page. This command only works if the page has already been saved before with 'Named Save', or when it was loaded (so the filename is set).
This command will automatically overwrite the old file !

3.5 Named Save ..

Save the current page with a name given by you. Has to be used when the current page had no name yet, or when you want to save it with a different name (or to another device or directory). Just edit the filename.

3.6 Save Selected Object ..

Same as 'Named Save', but instead of saving the entire page, only the currently selected objects are saved. This can be useful and serve as a cut and paste option in combination with 'Merge Page' and a ramdisk.

3.7 Load Bitmap ..

Select the bitmap you want to load. As we are not sure which kind of bitmap you want to load, we don't know the affix. You can insert 'The PAINTER' screens, '_pic' screens (Pointer Environment's pictures), or standard QL 32k bitmaps. For the latter you will also have to choose which mode the bitmap is in (mode 4 or 8). The other file formats offer more intelligence, and can be of any size and mode.
The bitmap will be inserted in the top left corner of the current screen, at such a size that the normal ratio of the screen is retained (well it will be for standard resolution, not necessarily for owners of a QXL or QVME card), independent of the size. Now the bitmap is ready to be transformed, scaled to the right size, repositioned, etc.

3.8 Load Font ..

Before LINEdesign can actually use a font, it has to be loaded explicitly. When it font is needed for a loaded or merged drawing, this is done automatically. But if you want to use a different font, you have to do it yourself.
Just indicate the font you want to use.

3.9 Unload Font ..

To save some memory, you can also unload a font, that is, stop using it. Just select the font you want to remove.
If the font you have indicated is used in the current page, then LINEdesign will try to load it again.
Unloading a font doesn't always release memory. LINEdesign (actually PROforma) shares fonts. So if there is another program in memory which uses that font (i.e. another LINEdesign), then the memory which is occupied by that font can not be released. However, the font will only be loaded once !

3.10 Print Page ..

Probably the most important command in LINEdesign. This one allows you to create hardcopy of your precious pages. All you have to do is select the driver (which type of printer you have, and in which resolution you want to use it), the device (usually 'ser1hr' or 'par'), and the number of copies you want.

Some system can have translation on their serial or parallel port. Unfortunately, this can cause major print errors. In this case you should disable the translate option (add 'd' to the device name) !

On devices : we strongly recommend the use of the parallel printer port and not the serial port. Serial ports are extremely slow and the amount of data which has to be sent to a printer can be huge. Of course we try to send as little data as possible, but not too many printers can handle compressed data. You should also be aware that serial to parallel converters do NOT speed the transfer of data up. The serial port can handle a certain speed and not more. For instance try sending an A4 page of 300 dpi data on a 9600 baud serial port (standard). This A4 page would need about 966k of data and this would take at least 13 minutes without control bits or correction of control bits (and without handshaking). In short, it will take MORE than 13 minutes to send this data. Luckily, PROforma will normally send less than 966k.

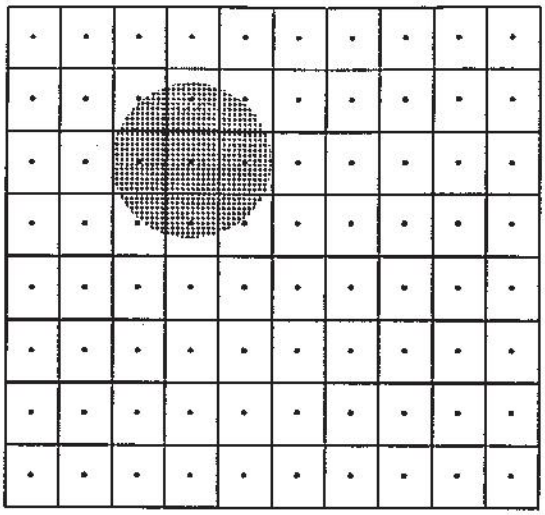
To explain the differences on output which can arise when using certain device we must admit that LINEdesign and PROforma have an idealistic view on pixels which does not conform with most output devices (actually, I think only LCD screens work like this).
Pixels are usually round, and they often overlap. To make matters even worse, some printers don't even have a consistent pixel size. We will just explain what the problems are with a few types of devices.

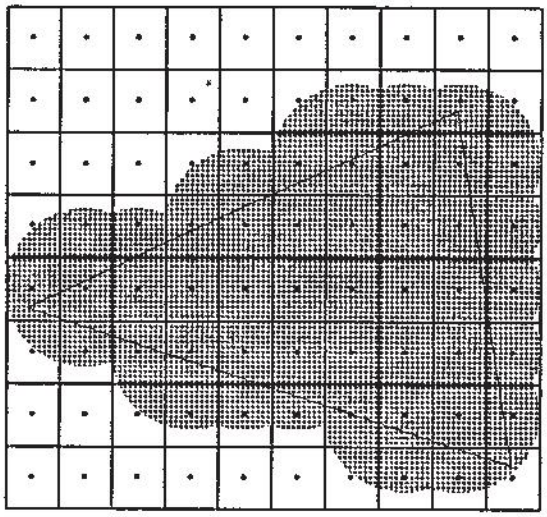
3.10.1 CRT screen

These are the common monitors, and we are lucky. Monitors draw in white, which has the effect that white pixels are larger than black pixels. However, the difference in size is not too large. The average size of the dots is slightly bigger than the addressable resolution. This is quite a good approximation of the PROforma model.

3.10.2 dot matrix printer

Dot matrix printer have round dots which are always equal in size. Dots are usually much larger than the resolution at which they are positioned. Although this produces smoother results, it also meant than output is usually more black than is intended. For instance the difference between a one or a two pixel wide line can be very small, even if this is a relatively big difference in user coordinates. See picture :





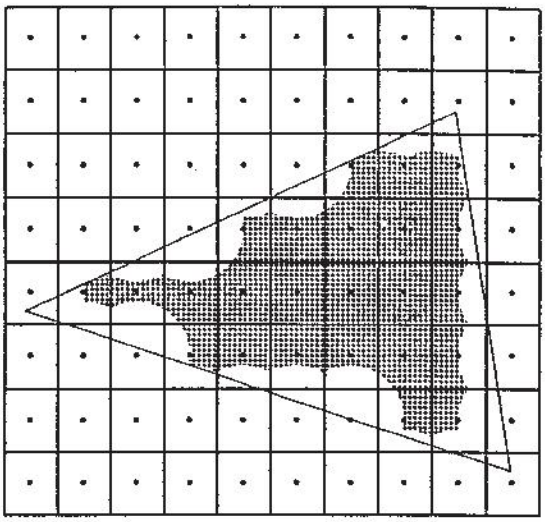
Another problem often encountered in dot matrix printers is banding. This means that there is a regular repetition of lighter and darker horizontal bands. This is mainly caused by the use of ink ribbons. They are also used for printing text and therefore the area in the middle of the ribbon is used more than the top or bottom. The less used area produces darker dots. On the other hand the ribbon also rotates horizontally, and this may also cause a difference in darkness (some parts were used more than others).

3.10.3 inkjet or bubblejet printer

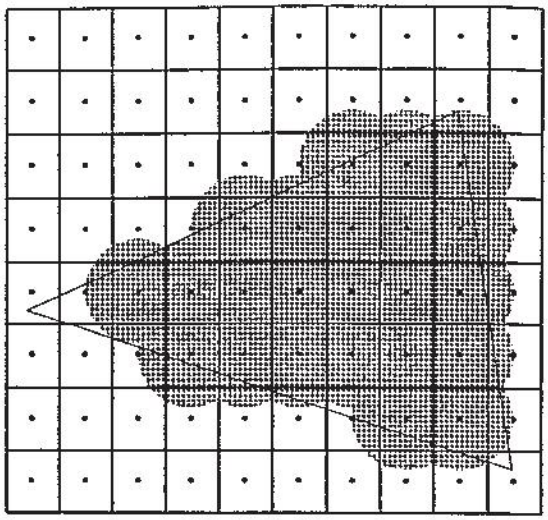
This is generally speaking the same as a dot matrix printer. However, the ink is fluid now, and it is usually absorbed by the paper. This causes an additional problem as the size of the dots now also depends on the type of paper. The shape of each dot can also change, and this also depends on the paper (very local). Inkjet or bubblejet printer usually suffer a lot less of banding. A major advantage of inkjet printers is that they are very good at filling black regions, although the paper may bend because of the wet ink.

3.10.4 laser printer

Laser printers either draw their page in black (most often) or in white (as copiers do). This has certain effects on the result (making it either darker or lighter), and pixels don't always have the same size (especially in corners, this is sometimes corrected or used by the printer (so called resolution enhancement). Because of the technology used (toner which sticks to charged particles) laser printers have got problems with small (or thin) areas (like hairline paths, which fade away), and with large black areas (which become lighter in the middle). On the other hand, laser printer have the highest real resolution (smallest dots), and gives the highest quality output. Actually, a 300 dpi laser printer giver better, crisper output than a 300 or 360 dpi dot matrix or inkjet printer.



white draw laser printer



black draw laser printer

3.11 Preview Page

To get a general idea of what the page will look like when it's printed, without wasting paper, trees, the environment,... you can preview it on screen. This will display the current page, spread on the left part of the screen, with an indication of the margins (in green).
There are some things which make a preview look worse than the actual printout :

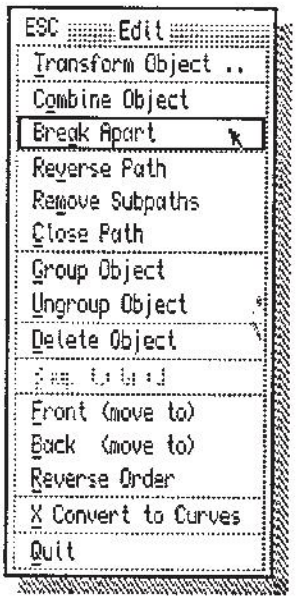
- The resolution is much lower, which makes sure that small objects or details are either exaggerated (thin lines appear much thicker), or disappear.
- The text will not be readable unless it is very big.
- The printer driver will probably support more gray shades than the screen.

3.12 Quit Program

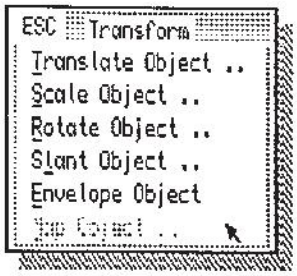
Terminate LINEdesign. If the page you are working on has been modified since the last save, then you can select whether you want to (i) save and quit, (ii) just quit, (iii) abort (don't quit).

4. Edit Menu

This menu offers command that all operate on the current object, so it only is useful if you have selected one.



4.1 Transform Object ..



This menu allows to do all the transformations that can be done interactively, and also some more. The advantage of these commands over the interactive method is that the transformation is exact, AND you can redo them with 'Again', even on another object (except Envelope Object, because that transformation can't be described by a matrix).

4.1.1 Translate Object ..

Move the current object over a certain distance or to a certain position.
Press <t> or indicate the item and a menu will appear with the following operations:

1. ESC : to leave the menu without any action taking place.
2. OK : to leave the menu, and do a move like the given parameters indicate.
3. X-movement : type or edit the x-movement.
4. Y-movement : type or edit the y-movement.
5. Relative : indicates that the movement will be relative to the current position.
6. Absolute : indicates that the movement is interpreted as an absolute position where the object will be moved to.
7. Keep Original : if this item is indicated, the original object will be kept, and an exact copy will be moved. This item isn't influenced by the 'Keep' item.

This move will always be stored as a relative move, so you can redo it with 'Again'.

4.1.2 Scale Object ..

Scale the object an exact factor.

1. ESC : to leave the menu without any action taking place.
2. OK : to leave the menu, and scale the object(s) like the given parameters indicate.
3. X-scale : type or edit the x-scale-factor.
4. Y-scale : type or edit the y-scale-factor.
5. Keep Original : if this item is indicated, the original object will be kept, and an exact copy will be moved. This item isn't influenced by the 'Keep' item.

A factor equal to one will keep the object as before. A smaller factor will make the object smaller, a larger factor will enlarge the object.
A negative scale factor will mirror the object. If the factor is negative and equal to 1, the object will only be mirrored, not scaled. If it is a large negative number, the will be enlarged and mirrored. If it is a small negative factor, the object will be made smaller and mirrored.
If both scale factors are equal you will retain the original ratio.
When scaling the object, the top left corner will remain at the same position.
The scale will be stored so you redo it with 'Again'.
When you scale an untransformed paragraph text, you only change the size of the

LINEdesign manual and software, ©1994 by PROGS, PROfessional & Graphical Software

frame, not the object as such. This means that after a scale, the paragraph object will have to be reformatted.

4.1.3 Rotate Object ..

Rotate the object(s) over an exact angle.

1. ESC : to leave the menu without any action taking place.
2. OK : to leave the menu, and rotate the object over the desired angle.
3. Angle : edit or type the angle over which is rotated. The angle is expressed in degrees.
4. Keep Original : if this item is indicated, the original object will be kept, and an exact copy will be moved. This item isn't influenced by the 'Keep' item.

The object will always be rotated round the centre of the bounding box.
The rotation is stored so you can redo it with 'Again'.

4.1.4 Slant Object ..

Slant the object over an exact angle.

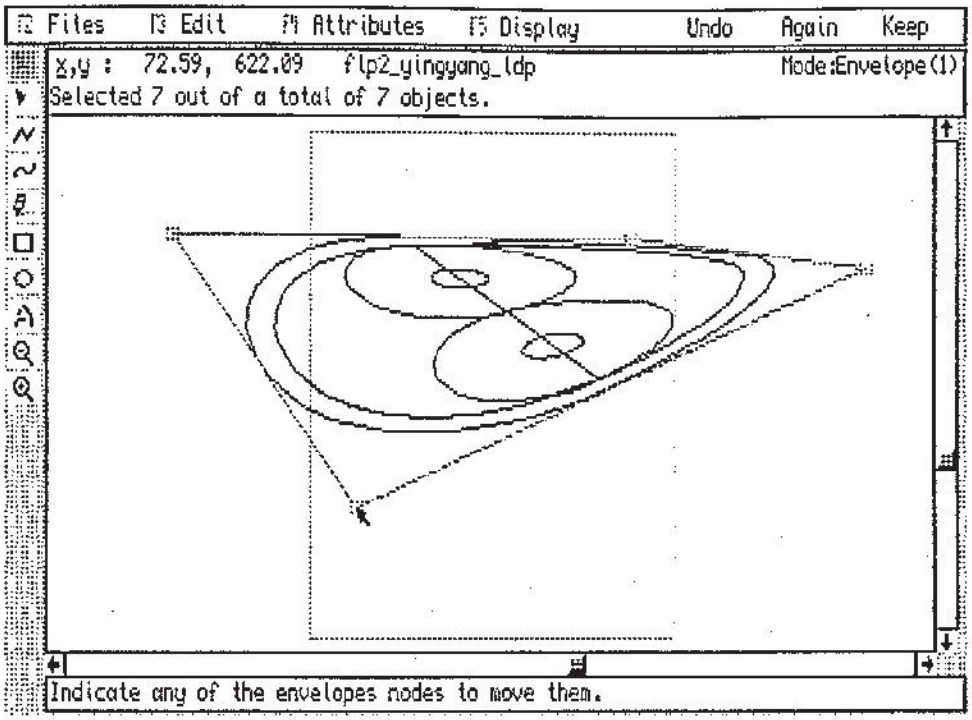
1. ESC : to leave the menu without any action taking place.
2. OK : to leave the menu, and slant the object(s) like the given parameters indicate.
3. X-slant : type or edit the degree by which to slant horizontally.
4. Y-slant : type or edit the degree by which to slant vertically.
5. Keep Original : if this item is indicated, the original object will be kept, and an exact copy will be moved. This item isn't influenced by the 'Keep' item.

It is advised to slant in only one direction at a time.

4.1.5 Envelope Object ..

Transform the object by changing the envelope (=bounding box) and pretend the object is tied to it, so it will change along. You only move the four corner points of the bounding box.
You can only envelope path objects !
This transformation cannot be expressed by a transformation matrix, so the object has to be recalculated. A circle will no longer look be round,... You can convert any object to curves though, because a path object can be used to represent anything. So, if you try to envelope any other kind of object, you will be asked whether you want to convert them to curves, or don't do the envelope.
An envelope can't be redone for the same reasons.
This command is also different from the other because changing is done interactively. It is the only possible way to do so. So after selection of this command you will enter the envelope mode, and the bounding box will be drawn with a node on each corner.
Select a node, and move. During movement you can see how the bounding box moves along, and if you don't move the pointer for a while, a preview will be shown of the object. Hit to confirm the new position of this corner, do to confirm the envelope and return to the editing mode. A do outside the envelope will calculate the object and return to the editing mode.

During envelope editing, you are always working on the same envelope, constantly changing it. If you press <esc> or indicate 'Undo' the whole envelope will be undone, not just the last change !



The preview of the enveloped object is always line drawn, even when editing in preview mode (cfr. Display).

4.2 Combine Object

Normally a path object consists of only one subpath. To make a path contain more than one subpath, you have to combine path objects. A combined object is a new path object, containing the previous ones, and only one set of attributes.
You need more than 1 path object to combine them. You can only combine path objects. To combine any other objects you will have to convert them to curves.
The advantage of combined objects is that you can create objects with a hole in them.

4.3 Break Apart

Will break a combined path apart in separate subpaths again. This command is the reverse of 'Combine Object'. However this is no longer true if you have removed the subpaths !

4.4 Reverse Path

This command will reverse the direction of a path object. This is useful in combination with the next command. You can reverse the direction of a transformed path, so you can make sure that all paths in a combined object (before removing the subpaths) are in the same direction, that they all follow each other.

4.5 Remove Subpaths

This will remove the subpaths in a combined path (because it must have more then one subpath, else it will be ignored). This command allows you to create an outline by copying path objects, and using 'Reverse Path'. Normally copying and combining will also create an outline, but each subpath is filled separately, not as one entity. That's why you have to remove subpaths, but then you will have to make sure that all paths that seem to follow each other really do. So use 'Reverse Path' for that.
E.g. you can draw one tooth of a cog-wheel, then use rotate and translate to create the whole cog-wheel. Combine the object, and fill it. Now only all the teeth are filled. Now remove the subpaths, and the cog-wheel will become one path. It will now be filled as a whole.

4.6 Close Path

Will close all the subpaths. Is done automatically if the object is filled.

4.7 Group object

A group is a group of objects, that belong together. E.g. like a car, which is drawn with a whole bunch of objects, that all have different attributes. The tires are black, the body is gray or white, etc. But it does belong together.
A group is an object that can be transformed, but that cannot be edited any more. Each object in the group keeps its own set of attributes, but they can't be changed any more.

4.8 Ungroup Object

The inverse command of the previous. Will ungroup a group, so the objects can be edited separately again.

4.9 Delete Object

Will remove an object from the page.

4.10 Snap to Grid

Snaps an object to grid. So, this command can only be selected if you are using a grid. Depending on the kind of object, different actions are taken.

4.10.1 path

All the nodes are snapped to grid. Normally also the bounding box will be snapped to grid, because all the nodes lie on the grid. Of course, if the thickness isn't hairline, the bounding box will be larger.

4.10.2 circle

The centre of the circle and the radius will be changed so that they will lie on the grid. Normally the centre will be snapped to grid. The radius will be snapped to the grid, but only in the horizontal direction. Otherwise it could turn into an ellipse.
An already transformed circle will only have its centre snapped to grid.
If the circle is smaller than one rectangle of the grid, the circle will be made to fit the rectangle in the x-direction.

4.10.3 square

The upper left corner and the side are snapped to grid.
If the square was already transformed, only the upper left corner will be snapped to grid.

4.10.4 rectangle

The rectangle will completely be snapped to grid.
If the rectangle was already transformed, only the upper left corner will be snapped to grid.

4.10.5 headline text

Of a headline, only the baseline and the first character's origin are snapped to the grid. When it already is manually kerned or transformed, this could seem to have little or no effect.

4.10.6 paragraph text

The frame of the paragraph is snapped to grid, if it isn't already transformed. Otherwise only the upper left corner.

4.10.7 bitmap

The position of the bitmap is snapped to grid. Not the size, because that could affect the ratio of the picture.

4.10.8 group

Only the position of the group is snapped to grid, not the size, because that could affect the original ratio of the group.

4.11 Front -move to

The selected object will be moved to the front of the page. It will be drawn on top of every other object.





move 1 to front

4.12 Back -move to

The selected object will be moved to the back in the list of objects that are drawn on the page. So it will be drawn first, and every other object that is drawn could cover this object.





move 3 to back

4.13 Reverse Order

This will reverse the order in which the current object is drawn, but they will maintain their position on the page. Their order when compared to other objects is NOT affected, only the order when compared to each other is reversed.
E.g. you select two objects. Reverse their order, then one that was on top, will be drawn beneath the order that was below it. But when they both were under and above some objects, that will NOT have changed.

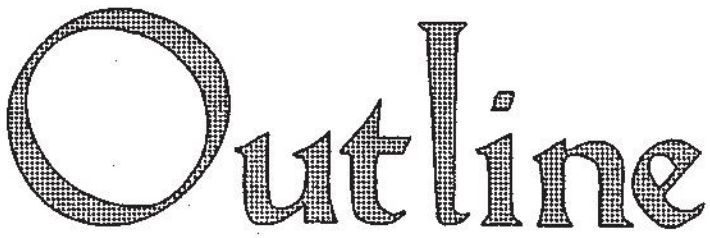




reversed order

4.14 Convert to curves

This command converts any object to a path object. this can be necessary if you want to envelope or combine it. It can also be useful for text objects which can then be modified with edit nodes, or drawn outline.
When you convert a text object to curves the object will be drawn more bold then before. That's because text is only filled internally and the outline is not drawn, which is not supported by LINEdesign. The outline will also be drawn which will make it more bold. This can also be used to create special effects, e.g. draw the outline in another colour and/or with a thickness (as shown below).



4.15 Quit Program

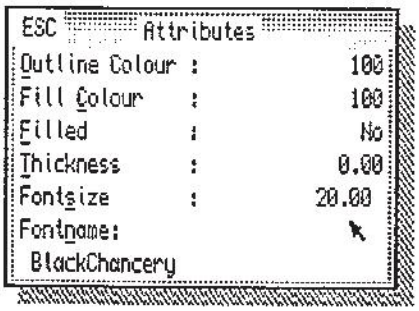
This command is only provided in the edit menu because many Pointer Environment programs can be terminated by pressing <f3-q>. It will do exactly the same as <f2-q>.

5. Attributes Menu

You can change the attributes of almost any object, except a group, or a bitmap.
Press <f4> or indicate the item to get the menu. This menu will be different depending on how many and which kind of objects you have selected.

5.1 Current Attributes

If you have selected no objects, you can set the current attributes. This will allow you to set attributes before you use them. E.g. you can set the fontname and fontsize before you put any text.



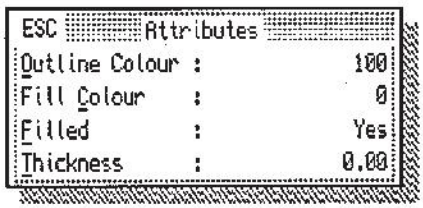
The menu will have the current values for the current attributes filled in.
The menu will look like this :

1. ESC : to leave the menu, and set the attributes.
2. Outline Colour : edit or type the outline colour. It is the colour in which the outline is drawn. Must be a number between zero and 100. White is 0, and 100 is black. All the rest is gray.
3. Fill Colour : edit or type the fill colour. The fill colour is the colour (or gray shade) in which the object is filled, if it is filled. Can be different from the outline colour. Is a number between 0 and 100, a percentage of black.
4. Filled : indicates whether the object will be filled (yes) or not (no).
5. Thickness : edit or type the thickness in which the outline will be drawn. Always

expressed in points. A line which is less than a pixel thick will be drawn hairline, which is a line with a uniform thickness of one pixel. If the object has been scaled horizontally or vertically (without preservation of the ratio), the linewidth can also differ horizontally and vertically.

6. Fontname : will display the font used for the text. When indicated the list of currently loaded fonts is displayed, to select one of them.
7. Fontsize : edit or type the fontsize. In points. The fontsize WILL be transformed along with the current transformation of the object.

5.2 Path - Combined path - Circle - Square



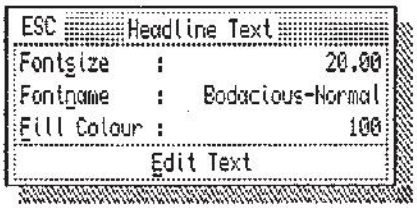
All these objects have the same set of attributes. If you have selected one object, you will get this menu, with the values currently set for that object filled in :

1. ESC : to leave the menu, and set the attributes.
2. Outline Colour : edit or type the outline colour. It is the colour in which the outline is drawn. Must be a number between zero and 100. White is 0, and 100 is black. All the rest is gray. The outline is ALWAYS drawn.
3. Fill Colour : edit or type the fill colour. The fill colour is the colour (or gray shade) in which the object is filled, if it is filled. Can be different from the outline colour. Also is a number between 0 and 100, a percentage of black.
4. Filled : indicate whether you want the object to be filled (yes) or not (no).
5. Thickness : edit or type the thickness in which the outline will be drawn. Always expressed in points. A line which is less than a pixel thick will be drawn hairline, which is a line with a uniform thickness of one pixel. If the object has been scaled horizontally or vertically (without preservation of the ratio), the linewidth can also differ horizontally and vertically.

The values of the current attributes will also be adjusted when you change the attributes of the current object.

5.3 Headline Text

The menu will look like this :

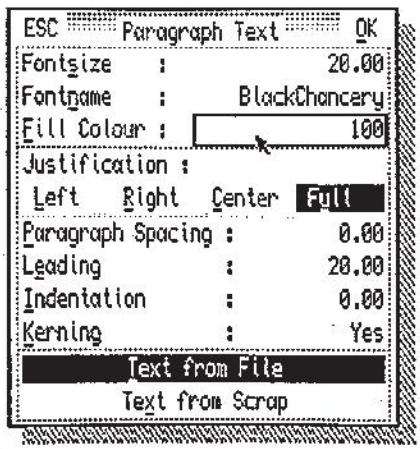


1. ESC : to leave the menu, and set the attributes that have changed.
2. Fontname : will display the font used for the text. When indicated the list of currently loaded fonts is displayed, to select one of them.
3. Fontsize : edit or type the fontsize. In points. The fontsize WILL be transformed along with the current transformation of the object.
4. Fill Colour : edit or type the fill colour. The fill colour is the colour (or gray shade) in which the object is filled, if it is filled. Can be different from the outline colour. It's a number between 0 and 100, a percentage of black.
5. Edit Text : edit the headline text itself.

The values of the current attributes will also be adjusted when you change the attributes of the current object.

5.4 Paragraph Text

The menu will look completely similar as when creating a paragraph :



To position a paragraph text, you should first draw the frame in which the paragraph should be put. So do at the position of one of the corners of the frame, and you will get a rectangle which indicates it. All text will fall inside this frame (with the exception of words which are too wide to fit. Then a window will appear with the following options :

1. Fontname : will display the font used for the text. When indicated the list of currently loaded fonts is displayed, to select one of them.
2. Fontsize : edit or type the fontsize, in points. The leading will be given the same value.
3. Fill Colour : edit or type the fill colour. As fonts are always drawn filled, and their outline is not drawn, you can only choose the fill colour.
4. Left : will deselect any other justification that was selected previously, and select left justification. This means that all the lines will touch the left margin, but not necessarily the right. Also called no justification or ragged right.
5. Right : will deselect any other justification that was selected previously, and select right justification. This means that the lines will almost all the right, and not necessarily the left margin. Also called ragged left.
6. Centre : will deselect any other justification mode previously selected, and select centre justification. So, all lines are positioned in the middle of the frame.
7. Full : will deselect any other justification that was selected previously, and select full justification. So, the lines will be spaced out to make them touch both the left and right margins (except the last line in each paragraph).
8. Paragraph Spacing : edit or type the paragraph spacing. In points. This is the extra space that is added when a new paragraph is entered. Normally it is zero, so no extra space is added.
9. Leading : edit or type the leading, also in points. The leading is the distance between baselines. Normally it is equal to the fontsize. But it could be good idea to make it bigger if you are using are 'black' font, like Aurora. Or make it smaller, with a light font, or a font with very small body (like GraphicLight). Please note that there are also other definitions of leading in typography.
10. Indentation : edit or type the indentation, in points. This is the amount a new paragraph will be indented according to the left margin. This is an absolute figure, independent of the size of the frame, or the fontsize.
11. Kerning : select whether you want the text to be kerned or not. Not all fonts are kerned. Kerning will make the font legable as it should make the spacing more consistent.
12. Text from File : indicate this if you want to replace the current text by another file. If this is not indicated, the text will not be replaced from file.
13. Text from Scrap : indicate this if you want to replace the current text by the text in the scrap. If this is not indicated, the text will not be replaced from scrap.
14. ESC : do not change the paragraph on the page.
15. OK : change the paragraph as required. At this stage a File Select window will appear if you wanted to replace the text from file, or the text will be copied from scrap. If the scrap contains no text or is empty, an appropriate error message is given.
    If you wanted to load the file, select the right file, and it will be loaded. At this stage you can still press <esc> and then no paragraph will appear.
    If you do not want to replace the text, you should not indicate any of the 'Text from

..' items.

The paragraph will be formatted according to the requested parameters. This formatting could take a little while if the text is large and the fontsize is small, so a lot of text is visible.

The values of the current attributes will also be adjusted when you change the attributes of the current object.

5.5 Bitmap

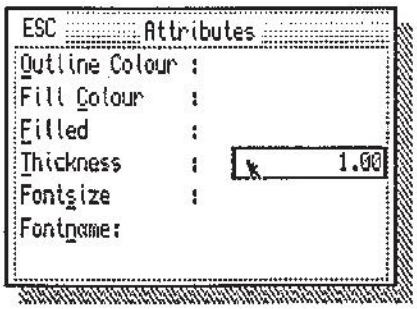
You cannot change the attributes of a bitmap !

5.6 Group

You cannot change the attributes of a group !

5.7 Several Objects

If you have selected more than one object, you will get the same menu as to edit the current attributes, but with no values filled in. When you leave the menu, only those attributes that have edited are changed.



Attributes that have got a value, but are of no use to a selected object are just ignored.
The menu will look like this :

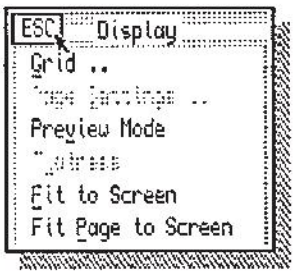
1. ESC : to leave the menu, and set the attributes that have changed.
2. Outline Colour : edit or type the outline colour. It is the colour in which the outline is drawn. Must be a number between zero and 100. White is 0, and 100 is black. All the rest is gray.

3. Fill Colour : edit or type the fill colour. The fill colour is the colour (or gray shade) in which the object is filled, if it is filled. Can be different from the outline colour. Also is a number between 0 and 100, a percentage of black.
4. Filled : indicate whether you want the object to be filled (yes) or not (no).
5. Thickness : edit or type the thickness in which the outline will be drawn. Always expressed in points. A line which is less than a pixel thick will be drawn hairline, which is a line with a uniform thickness of one pixel. If the object has been scaled horizontally or vertically (without preservation of the ratio), the linewidth can also differ horizontally and vertically.
6. Fontname : will display the font used for the text. When indicated the list of currently loaded fonts is displayed, to select one of them.
7. Fontsize : edit or type the fontsize. In points. The fontsize WILL be transformed along with the current transformation of the object.

The values of the current attributes will also be adjusted when you change the attributes of the current object.

6. Display Menu

Indicate the 'Display' item or press <f5>.



6.1 Grid ..

You can set a grid. This grid will help to position objects accurately, definitely through the use of 'Snap to Grid'.
When you select this item, a menu will appear :

1. ESC : to leave the menu, and remove the grid if there was any.
2. OK : draw the grid with the chosen parameters.
3. X-offset : type or edit the x-offset. If it is zero, the grid will start at the origin of the page.
4. Y-offset : edit or type the y-offset. If it is zero, the grid will start at the origin of the page.
5. X-spacing : edit or type the x-spacing. After editing the y-spacing will be given the same value. We assume most people want to use square spaced grids.
6. Y-spacing : edit or type the y-spacing. To make a rectangularly spaced grid, first set the x-spacing, then the y-spacing.

6.2 Preview Mode

When this item is selected, everything in the window will be fully rendered. This means that all objects will be drawn with their linewidth, in their gray shade and possibly filled. This can be useful as a preview. However, it does slow down the drawing. Bitmaps are still not displayed as this would be unbearably slow (so they are displayed as a filled rectangle). Some objects may become invisible if they are drawn in white and the background has (almost) the same colour. Especially as there are only a few distinct gray shades on screen.

6.3 Fit to Screen

6.3.1 Edit Mode

The page will be scaled and moved in such a way to make sure the current object is completely visible, as large as possible.

6.3.2 Not in Edit Mode

The page will be scaled and moved in such a way to make sure all objects are completely visible, as large as possible.

6.4 Fit Page to Screen

This command makes sure that the entire page is visible in the edit window. This returns the edit window to the same state as when LINEdesign is just started.

7. Others

7.1 Undo

This command (selectable by pressing <esc>) can only be used for a few things :
- to interrupt a drawing operation that is not yet finished
- to cancel a transformation which is not yet confirmed.
- to make sure that only one object is selected in 'Edit Mode'.

7.2 Again

Press <f9> or indicate the item will redo the last action, if it is redoable. Only some operations can be redone.
- The transformations that are entered from menu can be redone.
- If you just drew a line, and indicated the endpoint with hit, you can redo this operation : drawing a line with the same length and the same angle as the previous line to the previous line. This way you can easily draw regular polygons.

7.3 Keep

Hit the item or press <+> to select the item. This will mean that with the next operation the original object will be kept. After usage of this status, it is reset. If you don not want this automatic reset, indicate the item with a do. Only selecting it again will reset the status

again.
If it is indicated, the original object will be kept with any transformation. This means that a copy is created on which the transformation is done.
If you select an objects while 'Keep' is indicated, the selected will be added to the current object, instead of replacing the last added object. Except when you use the lasso select, because that will select only the objects that lie inside the lasso.

Introduction to Pointer Environment & Menu Extensions

Joachim & Nathan Van der Auwera
PROGS
PROfessional & Graphical Software
©1993

February 21, 1993

Contents

1 Introduction 3
- 1.1 Motivation . . . 3
- 1.2 Loading . . . 3
- 1.3 Concepts . . . 4

2 Pointer Environment 7
- 2.1 Pointer Interface . . . 7
- 2.2 Window MANager . . . 7
  - 2.2.1 General . . . 7
  - 2.2.2 Standard keys & items . . . 8
- 2.3 Hotkey System II . . . 9
- 2.4 Config . . . 9

3 Menu Extensions 11
- 3.1 File Select . . . 11
- 3.2 Item Select . . . 12
- 3.3 Read String . . . 12
- 3.4 List select . . . 12
- 3.5 Report Error . . . 12
- 3.6 View file . . . 13
- 3.7 Button . . . 13

This documentation is copyrighted with all rights reserved. No part of this documentation may be copied, reproduced or stored on any media except for personal use.

The *ptr_gen, wman, hot_rext, config* files are copyrighted by Qjump.
The *menu_rext* file is copyrighted by Jochen Merz.

Though much care was taken in the production of this manual, in no circumstances will PROGS, PROfessional & Graphical Software, be liable for any direct, indirect or consequential damage or loss arising out of the use or inability to use this software and its documentation.

Chapter 1

Introduction

1.1 Motivation

We have written this manual as a seperate part because there are people who have already used programs which run under the Pointer Environment and Menu Extensions. These people don't have to read this manual as they will probably know it already.

The Pointer Environment and Menu Extensions are the way ahead for the QL. Most of the better new software for the QL uses it, or at least is 100% compatible with it. The Pointer Environment has the advantage of offering true multitasking and gives you the possibility to write pointer driven software, so you can use a mouse if you want to, with easy menus which can be accessed by a key or with the pointer. Using the Pointer Environment in a program interface has the advantage of being user-friendly. You can easily get used to it, and once you know the Pointer Environment, you know how to operate any program which uses it even before you open the package.

The Menu Extensions are actually just an extension to the Pointer Environment, to give standard windows to some common menus. The most important one is definitely File Select, which makes sure that you can select a file to load or merge with a directory, so that you don't have to remember any filenames.

1.2 Loading

The Pointer Environment and Menu Extensions are a set of resident extensions. This means that these routines should be loaded at start-up (power on or after a reset), and that they should remain in memory until the power is switched off or until the next reset. This also means that these extensions should be loaded into RESPR area. You can load the Pointer Environment and Menu Extensions by including the next lines somewhere at the start of your boot file.

```
base=RESPR(14534) : LBYTES flp1_ptr_gen,base : CALL base
base=RESPR(10360) : LBYTES flp1_wman,base : CALL base
base=RESPR(11684) : LBYTES flp1_hot_rext,base : CALL base
base=RESPR(22432) : LBYTES flp1_menu_rext,base : CALL base
HOT_GO
```

Please note that the lengths of the files may be different, this depends on which version you use. If you have Toolkit II you can also use these lines.

```
LRESPR flp1_ptr_gen     : REMark load the Pointer Interface
LRESPR flp1_wman        : REMark load the Window MANager
LRESPR flp1_hot_rext    : REMark load Hotkey System II
LRESPR flp1_menu_rext   : REMark load Menu Extensions
HOT_GO
```

This is actually easier as you don't have to worry about file lengths.

The HOT_GO command should be included to make sure that you don't loose the last line restore provided by toolkit 2 (alt-enter).

Please note that some of the files have to be loaded in a distinct order. You have to load wman after ptr_gen, and you have to load menu_rext after hot_rext. It is also possible that some other resident extensions have to be loaded before all these, in particular extension which change the screen driver like Lightning or SpeedScreen.

1.3 Concepts

window A window is a part of the screen. It can usually be recognised because there is a border around it. A job (=a running program) can have many windows in it, but all these windows must lie inside the *outline*. In most Pointer Environment programs the outline can be recognised by the shadow around it.

pointer Most Pointer Environment programs have a pointer. The pointer is the thing which moves when you move your mouse. If you don't have a mouse, it usually is the thing which moves when you press the cursor keys, but not always. The pointer may have the same shape and behaviour as the cursor, but a cursor can't be moved with a mouse. the pointer has the general advantage that it can have any desired shape and size. It is also possible to change the chape over time, thus creating something that looks like a cursor, or a walking person or anything you want.

Most application programs don't allow the user to set the shape of the pointer, but they often change it themselves to show you what kind of operations the pointer can be used for at a given moment.

item An item is a part of the window. It usually contains some text or a small drawing. An item can be recognised because a border appears around it when the pointer is on it. This border is removed when the pointer is moved to another part of the screen.

Items can have three distinct statusses.

available An item is available when it can be indicated by a hit or do, but isn't yet. Such items can be recognised because they usually fit into the general look of the window.

selected An item can also be selected, which means that the accompanying action will be taken later or is going on. Selected items can be recognised because they are highlighted in some way.

unavailable The last possible status is that an item can't be selected. This can be because a certain action can't be executed when the program is in a certain state of operation, or because the action isn't included in the program yet or similar. Unavailable items can be recognised because they usually aren't 100% clear.

hit Two of the most important types of input to a Pointer Environment program are a hit and a do. They are both ways to indicate items in a window. A hit is cause by pressing <SPACE> or the left mousekey. A hit changes the status of an item from available to selected or vice versa. Some items are immediatly invoked when hit (e.g. a sub-menu), but this depends on the nature of the item.

do A do is quite similar to a hit, except that it always changes the status of the indicated item to selected. Usually[1] a do also invokes the item. This usually makes a do equivalent to a hit on the item and a hit on a "DO" item in the window[2].

You can also invoke a do when you press <ENTER> or the right mousekey when the pointer is not on any item.

underline Most items in a Pointer Environment program can also be selected by another keypress than a hit or do, and this has the advantage that the pointer doesn't have to be on the item. These keys can usually be recognised because they are visualised with a little line under the letter in the command. For some items this is impossible. Those items often have an indication of the key which has to be pressed just in front or above them. This is mainly the case for items which can be called by pressing the function keys. This method of selection is equal to a hit.

[1] Not all items support this, it depends on the programmer(s), in fact some items even treat a "do" exactly the same as a hit

[2] In some cases there is no "DO" item, but only an "ESC" or "OK" item. In these cases a do usually invokes the "ESC" reps. "OK" item.

Chapter 2

Pointer Environment

2.1 Pointer Interface

This is the part of the Pointer Environment that makes sure that multitasking works as it should, making sure that a window is completely visible when printing or drawing in it. This part also makes sure that the pointer actually exists.

The pointer interface in contained in the *ptr_gen* file.

It is the Pointer Interface that controls the proper handling of jobs (programs) and their windows. There are several ways to switch jobs. The first —and traditional— method is by pressing <CONTROL-C>, and thus running through all available jobs. The other method —which only works if the program which is currently using the screen doesn't cover the entire area— is by moving the pointer to a program which is partly visible. This program can then be selected by a hit or do. If you select with a do then a wake is also executed (if it exists, see later). If the program you want to switch to is not partly visible, then you will have to use <CONTROL-C> or a special program (e.g. Pick in QPAC II).

2.2 Window MANager

The Window Manager is the most visible part of the Pointer Environment. This is what allows programmers to make their programs to look and feel like any other Window Manager program. This common look and feel is even stronger because most Pointer Environment programs also use the same colours for the various parts of the menus and the Menu Extensions.

2.2.1 General

Most menus are built from items and information objects. Information objects are there just to give the user some extra guidelines on how to use the program or some extra information like the position on a page, the name of the file which is edited or similar.

There are also (a lot of) items. Some stand on their own (loose items) and some may be grouped (in an application window). When items are grouped, it is possible that there are too many items to fit in the part of the window which is reserved

for them. In that case the application window will become scrollable or pannable (or both). There will appear some arrows at the border of the application window. When you hit one of these arrow items, the window will be panned or scrolled by one item. If you "do" on such an item, the window will be panned or scrolled by as many items as fit in the window (minus one).

It is also possible that there is a pan or scroll bar apart from these arrows. Such a bar tries to indicate what part of all the items is visible in the application window. By hitting somewhere in the bar, you can indicate which part should be made visible.

2.2.2 Standard keys & items

One of the main reasons why programs look and feel the same is because so much is done in the same way. For this, many standard operations have a common item.

move This item is use to move the entire window to another place on the screen. The pointer will then get the same shape as the move item. You can now move the pointer and press <SPACE>, <ENTER> or any of the mousekeys. The window will then get the same relative movement as you gave the pointer. This command can be cancelled by pressing <ESC>.



Move can also be executed by pressing <CONTROL-F4>.

size This item can be used to change the size of the window. Depending on the program this item can be handled in two ways. The window can be resized immediatly. This usually happens when the program only has a couple of distinct size it can handle. In the other case the window usually has a variable size. Then the pointer will get the shape of the item and the relative movement of the pointer indicates the change of size for the window. Please note that the bottom-right corner of the window remains in place. So moving the pointer to the left or top will increase the size of the window. Moving the pointer to the right or to the bottom will decrease the size of the window.



Size can also be executed by pressing <CONTROL-F3>.

sleep This item can be use to make your job sleep. This means that your program will change appearance, becoming much smaller. This has two advantages: the job will use less memory, and there will be more space on your desktop (screen). The new appearance is called a *button*. It is a small menu which only contains the program name. If you hit on the item then nothing will happen (or if you don't have QPAC II, you will probably be able to move the button).



When you do on the item, then the program should return to the same status as before you put the program to sleep.

Sleep can also be executed by pressing <CONTROL-F1>.

wake This item, which is not available in many programs, give you the option to of giving the program the option to refresh the screen. For instance, the directory will be re-read when you are in a window which shows a directory.



Wake can also be executed by pressing <CONTROL-F2>.

2.3 Hotkey System II

This part of the Pointer Environment implements the THING system. It is not important to know much about this unless you are an expert user. All you have to know is that it allows you to load general extension routines so that they can be accessed by any program. This is used for (amongst others) the Menu Extensions, the DATAdesign engine, some device drivers in the SMS2 system, ...

Hotkey System II also replaces the <ALT-ENTER> and altkey commands in toolkit 2 and adds some new ones. We will not give more details about all these options, as they are mostly used by people who already know the Pointer Environment quite well.

2.4 Config

This is a utility program, which is often used in combination with Pointer Environment programs to allow you to set some defaults in the program. This program can be called with a line like
EXEC flp1_Config
The program is quite straightforward to use. It will first prompt for the name of the program you wish to configure. It will then ask you what you want to configure and the new values. These new values can usually be set by typing the new value, or by cycling through all the values with any key and confirming with <ENTER>. The program will clearly tell you what to do and you just have to follow the given guidelines.

Chapter 3

Menu Extensions

This part of this documentation is mainly written by Jochen Merz as a user guide to the Menu Extensions.

3.1 File Select

The FILE SELECT window is always shown when the user is required to enter or select a filename. Here you can enter the filename either directly or edit a suggested one by selecting the menu option directly beneath the request.

Beneath this are two menu options with which you can recall the contents of the HOTKEY buffer and all previous contents. Just select the menu option and the contents will be written to the "suggested" area. Confirm with OK and the input will be accepted by the system. You can also edit the name, of course. The rest of the window concerns the current drive. Depending on the size of the window, one or two sub-windows are shown . If you only see one sub-window, this will contain the filenames and sub-directories. If you see two windows, the right hand (larger) one will only show the filenames, the smaller one on the left only the subdirectories. In these windows all the files are sorted alphabetically. The files will be taken from the current drive and must all have the correct ending (if any). The endings for sub-directories are ignored, because subdirectories don't really have endings. Now you can edit the drive and/or the ending.

If you press <ENTER> at the directory menu option, a further window is overlaid, from which you can select pre-defined devices and sub-directories. If you just select a directory, the list of files will be updated. You can also "update" it with a wake.

If you press <ENTER> at the endings menu option, this will be deleted if it wasn't already empty. This is easier and faster than having to select it and then deleting the four characters. If it was already empty, then a window overlay will show some suggested endings.

Above the current directory is a list of available devices, e.g. MDV or FLP. There are also drive numbers from 1 to 4 listed. To select RAM1_, press <R> and 1, and the directory window displays RAM1_.

Behind the directory name you will see an arrow "←". By selecting this option you can retrace a step back along the subdirectory tree without having to edit

anything. So if you're in directory flp1_paul_texts and select this once, then you get to flp1_paul_. The next time you select it, you get flp1_. If the current drive has true subdirectories (e.g. Miracle's Harddisk or the QL Emulator drivers) then you'll find the subdirectories of the file names marked with a "→". As already mentioned, subdirectories are always listed, the endings don't have to correspond. If you select such a subdirectory, then you'll "get in it", i.e. the name will be taken over for the directory and the file list read in again.

But to get back to the list of files: you can select any file you like. <SPACE> accepts the name as "suggested". <ENTER> takes the name and carries out an OK automatically. If the window is too small to show all the suitable files, the normal scroll arrows will appear in order to scroll the next batch of names up the screen. You can also select files or directories by pressing the character which is in front of the name.

At the right you will see a scrolling bar. Move to this area, press <SPACE> and the area will be shown relative to the total area. Press <ENTER> and the window will split, enabling you to control the two parts indepently from each other. Move to the split and press <ENTER> to join the window together again.

You can also pre-select the eight different subdirectories suggestions in the Directory Select menu. Make the necessary changes to the menu_rext file with Config.

If the program which calls the File Select extension has a window which is not big enough to show the File Select window, then the filename will be prompted with the Read String extension (see below).

3.2 Item Select

When you see a window with one to three menu option, you can make your selection by pressing <SPACE> or <ENTER>. You can also press the first letter of the option.

3.3 Read String

You are asked to enter a string or filename. Under certain circumstances you may be offered a suggested name. You can either press <ENTER> to accept the suggestion, edit it as usual using the cursor keys or just enter a new string.

3.4 List select

This window is in fact very similar with Item Select. The only differences are that there can be more than three items in the window, and that the window can be scrollable if not all items fit in the window.

3.5 Report Error

The only thing you can do here is indicate the "OK" item to show that you've taken notice of the reported error.

3.6 View file

This window enables you to view a file. You can scroll one line with a "hit" in the view-window. You can scroll a page with a "do". Waking the window lets you start again by viewing the file from the beginning. Selecting WRAP causes any line, which exceeds the permitted width, to be continued on the next line, preceded by a →.

3.7 Button

If a program is in Button mode, then you can wake this up by moving to the button area and pressing <ENTER>. If the button is not positioned inside the button frame, you can move the button by using <SPACE>.

Atwork



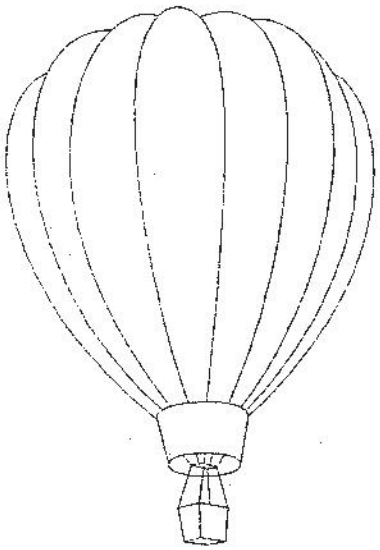
Atwork2

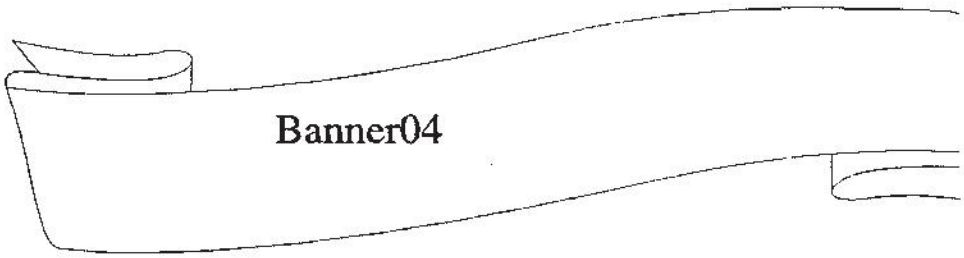


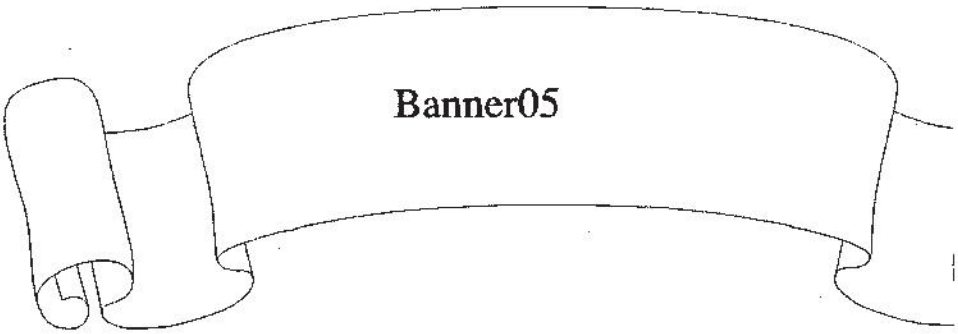
Atwork3

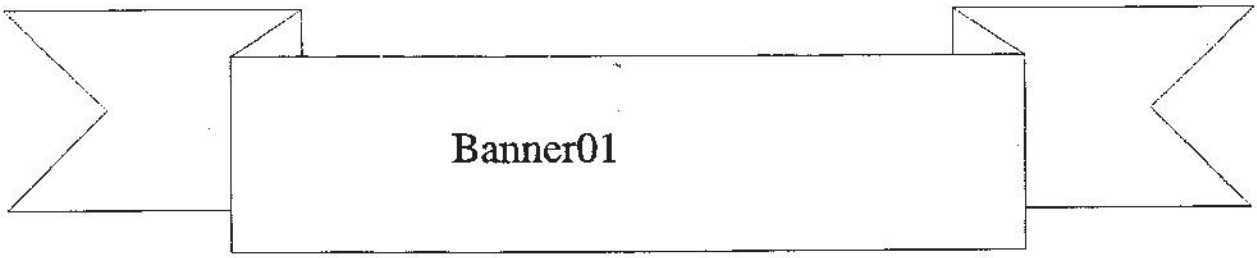


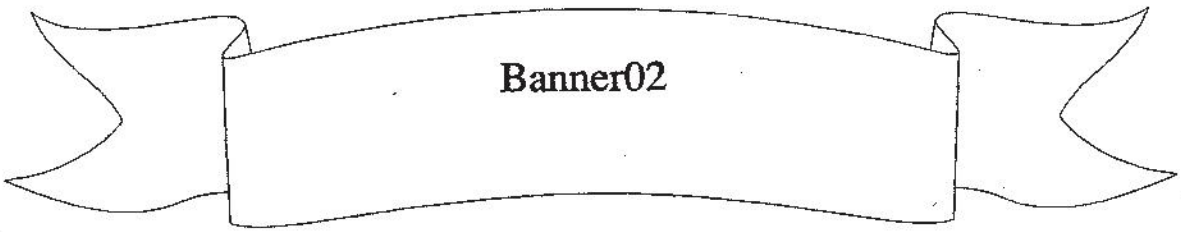
Balloon

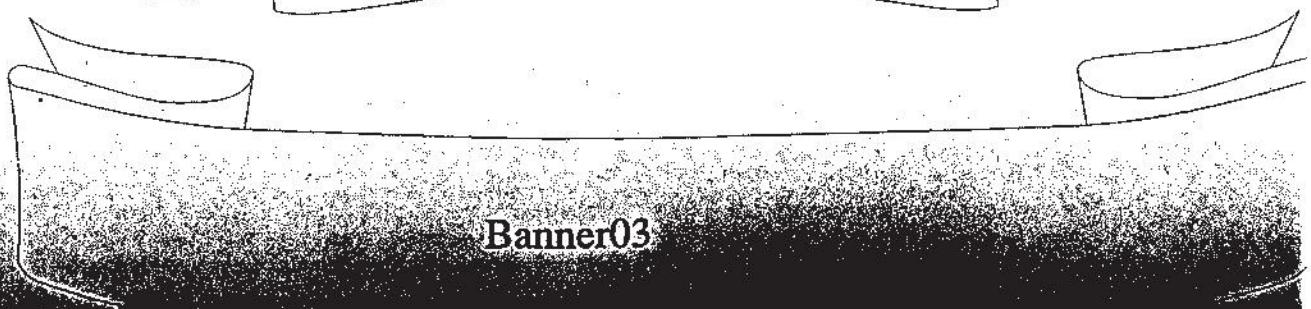


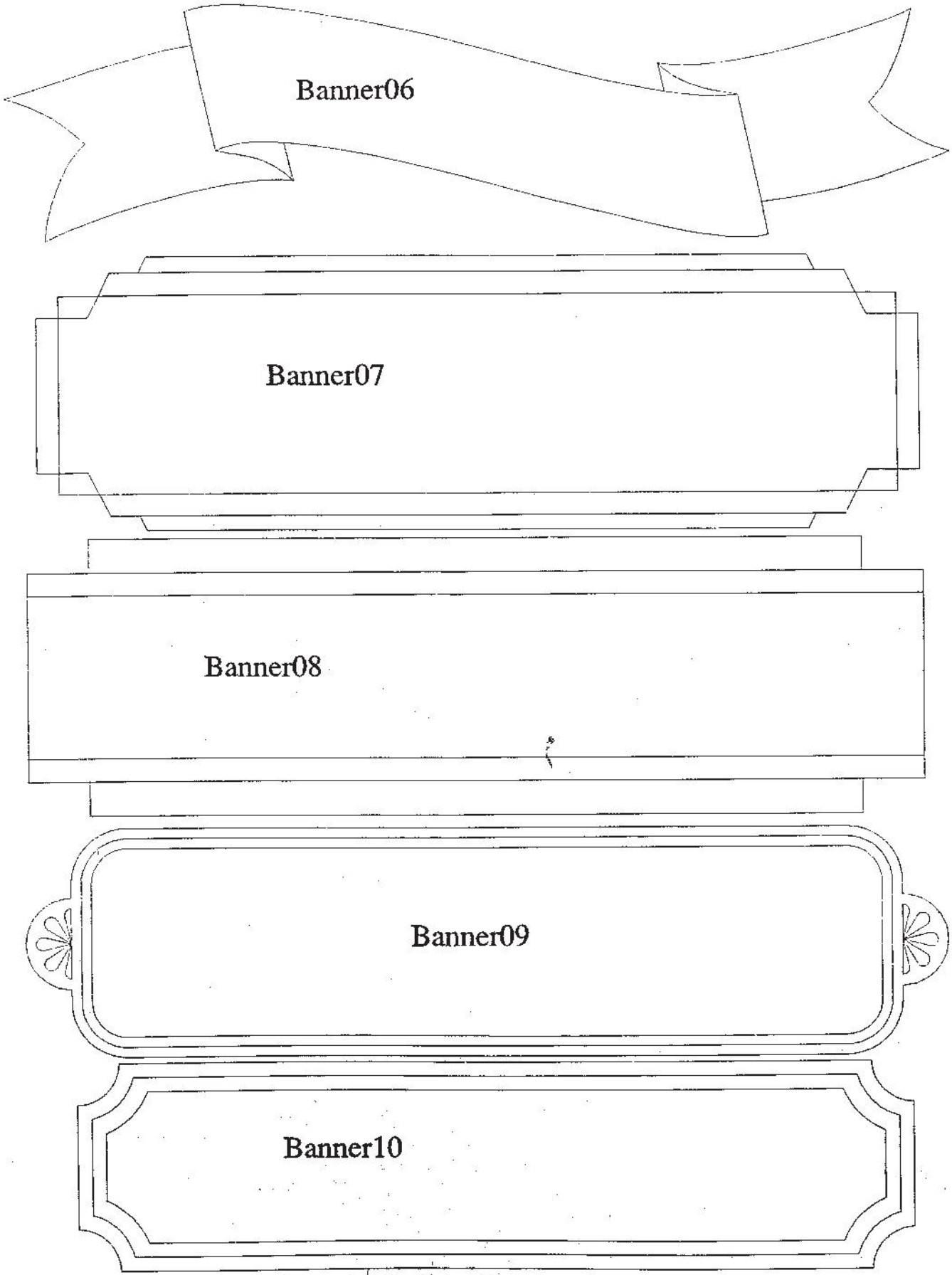








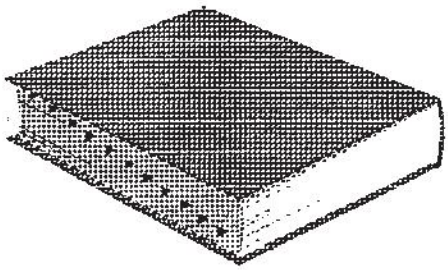



Banner06
Banner07
Banner08
Banner09
Banner10

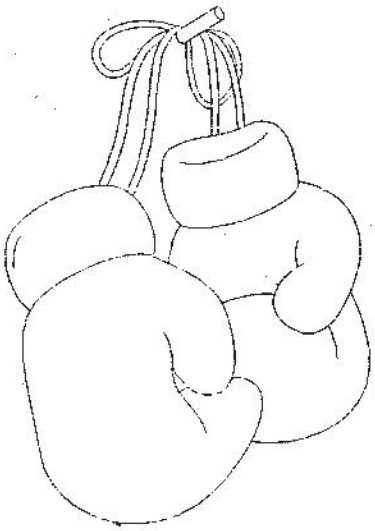
Banner11

Banner12

Book



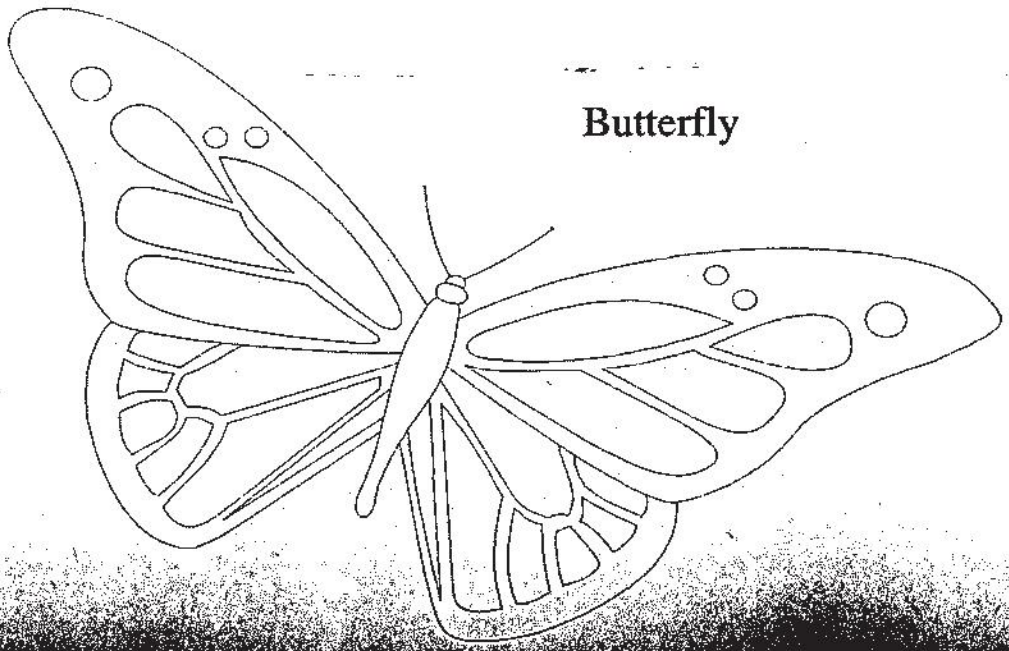
Boxgloves

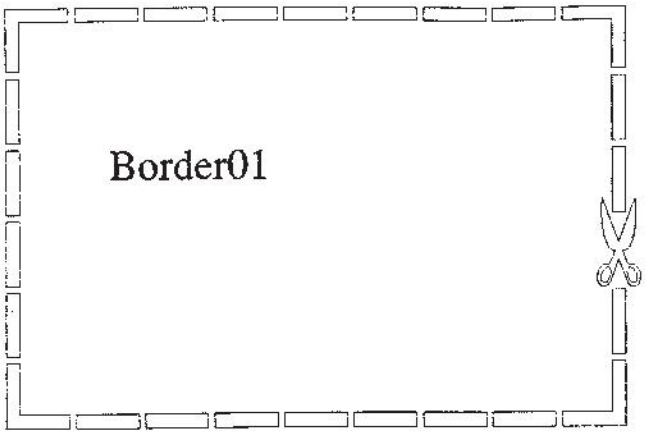


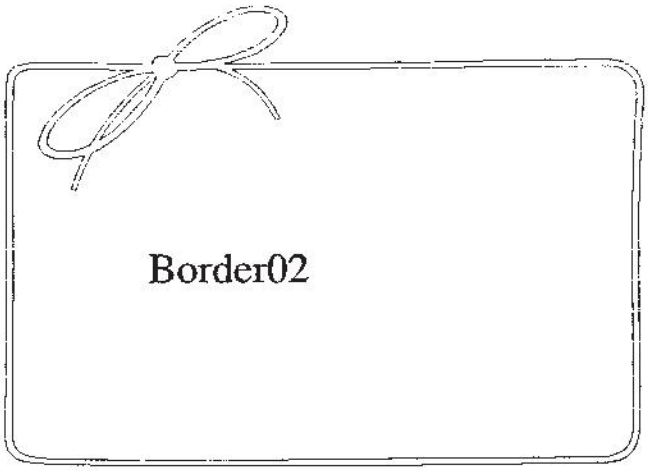
Bum

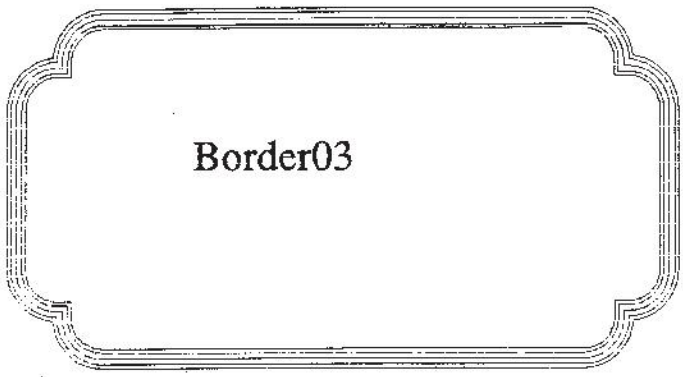


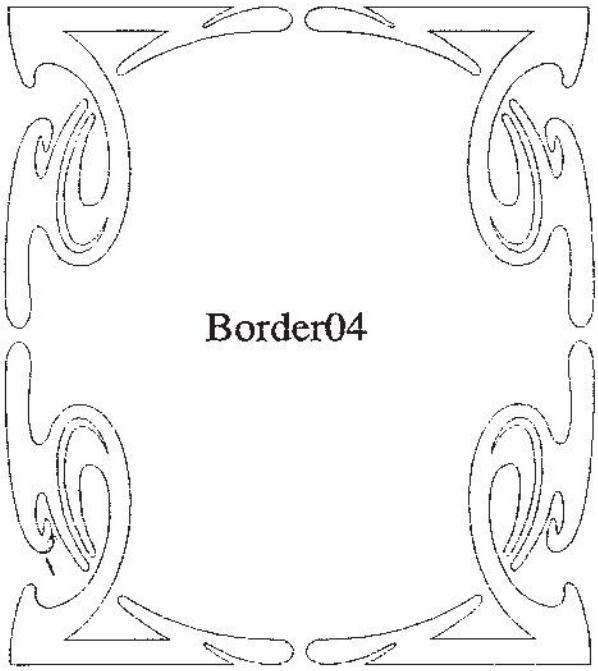
Butterfly

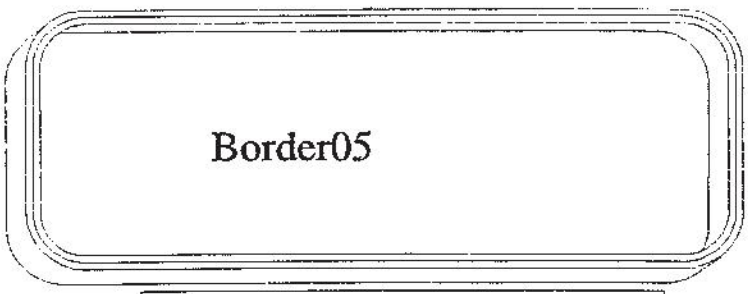


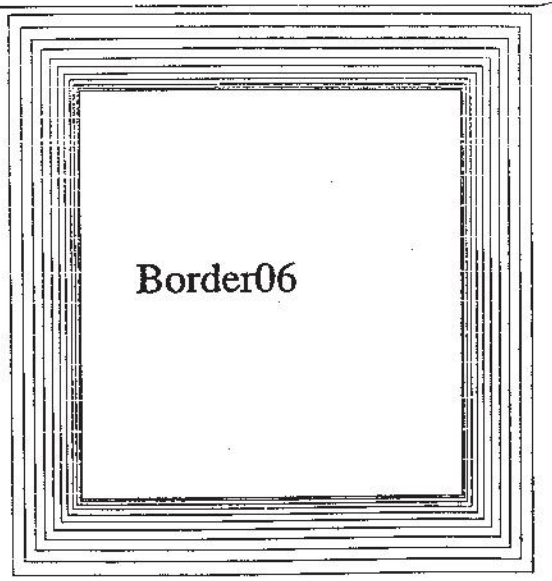

Border01

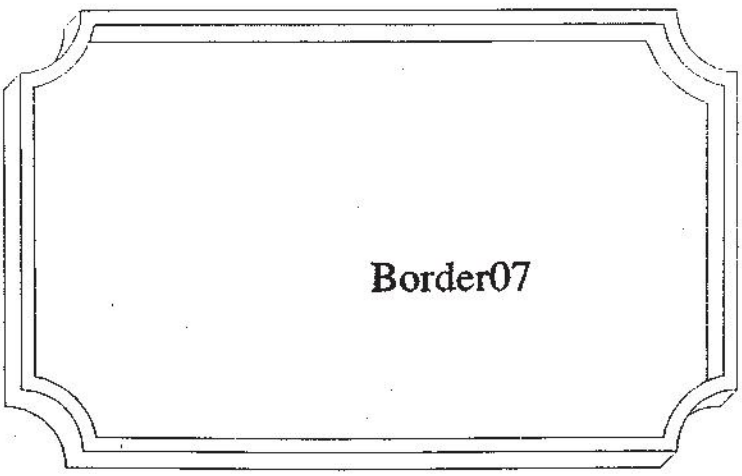

Border02

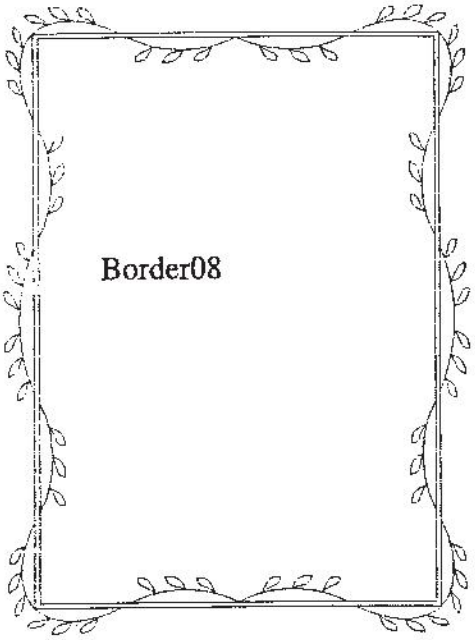

Border03

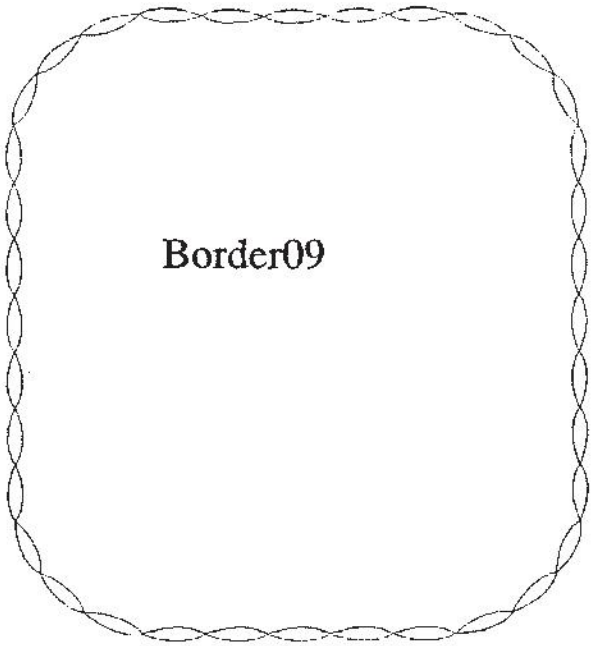

Border04

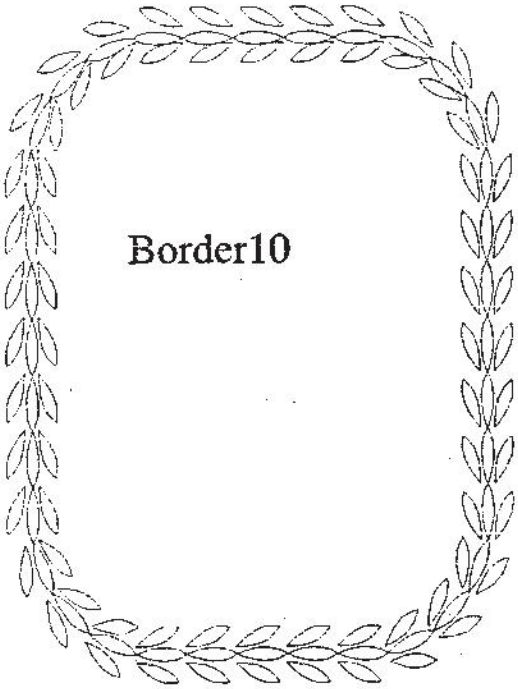

Border05

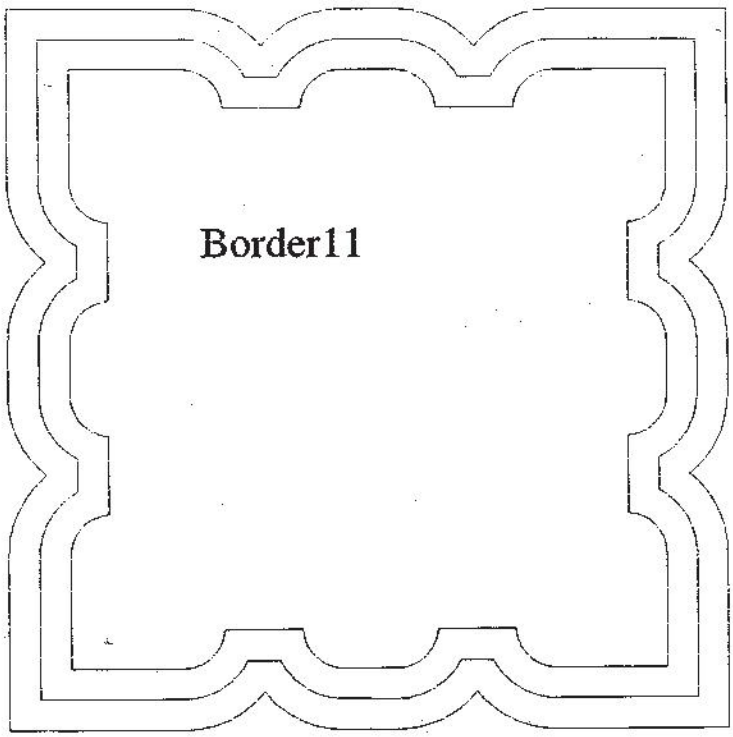

Border06

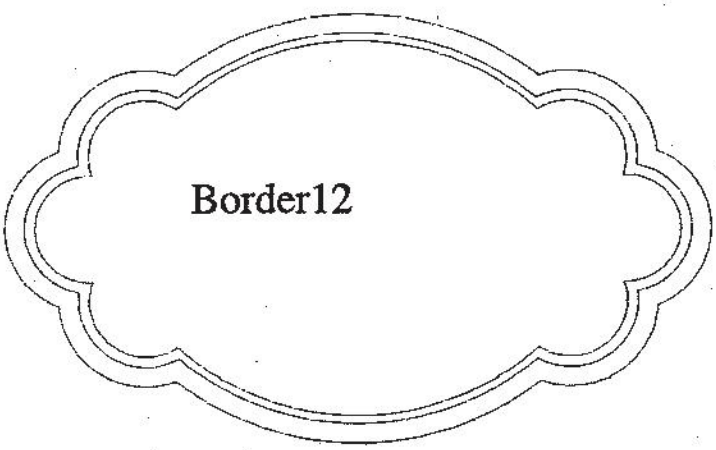

Border07

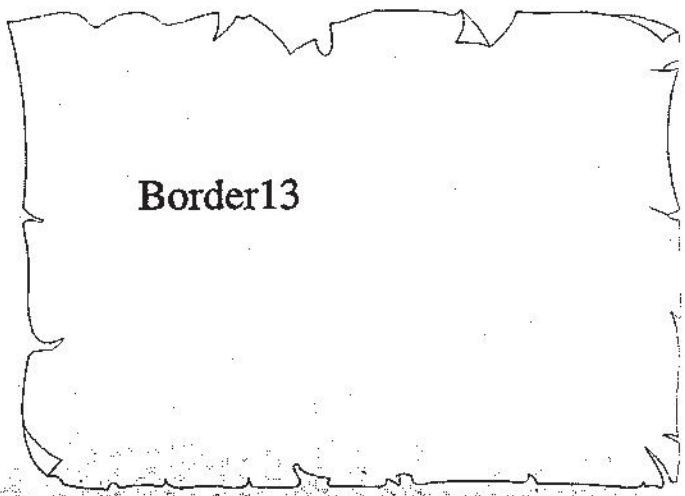

Border08

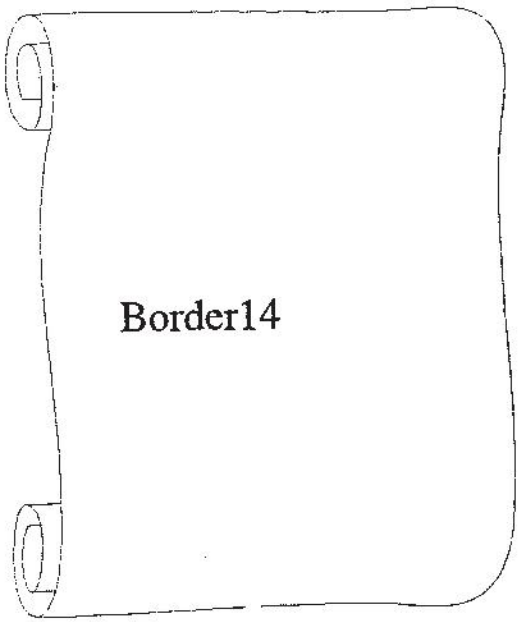

Border09

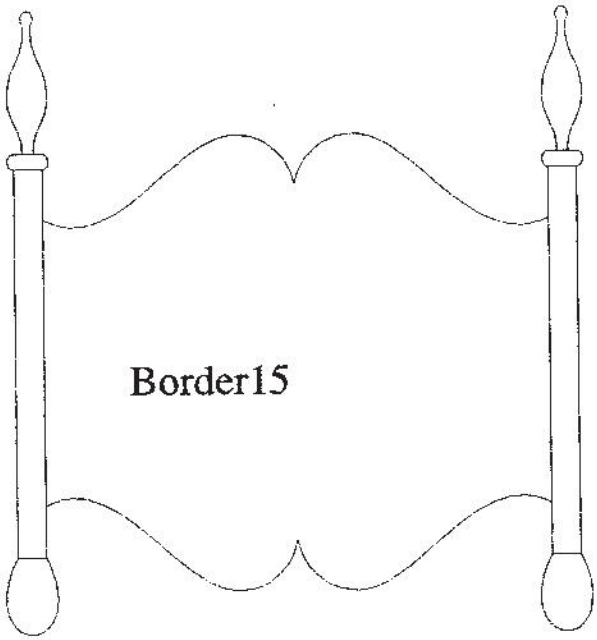

Border10

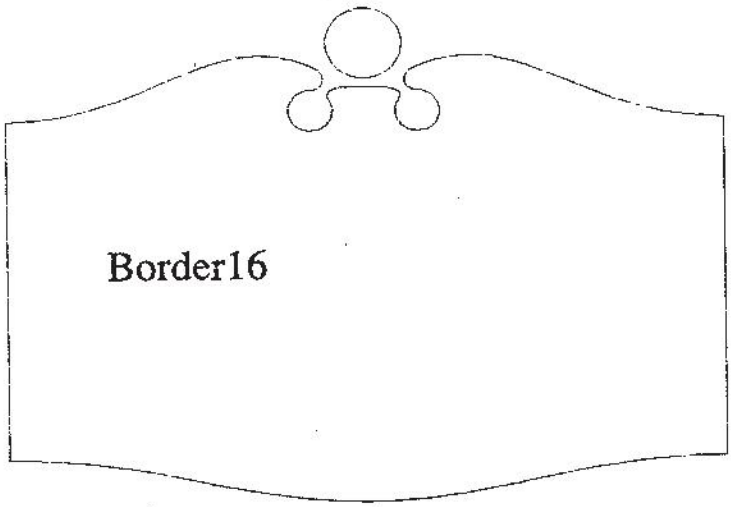

Border11

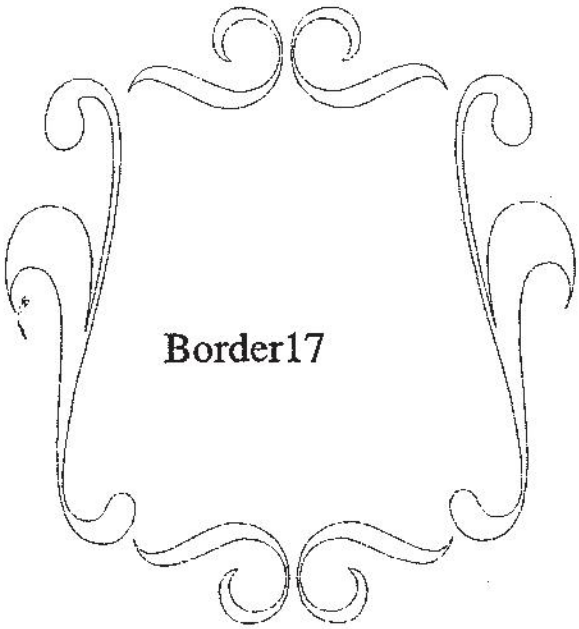

Border12

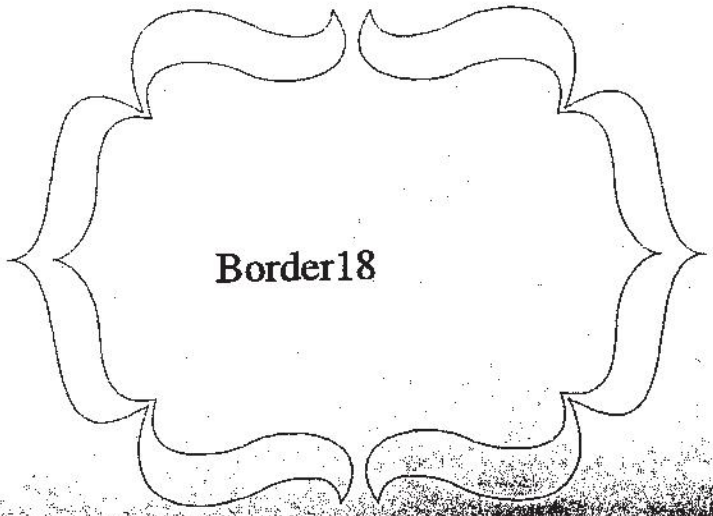

Border13

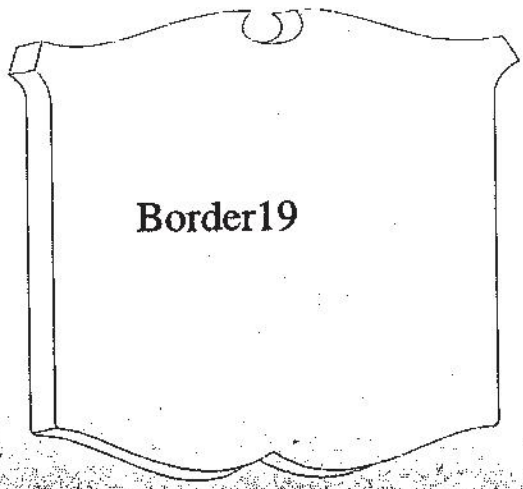

Border14

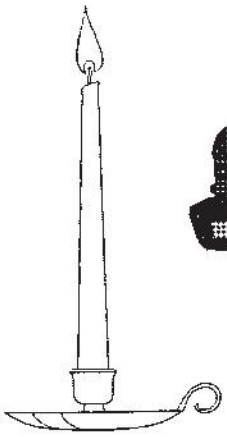

Border15

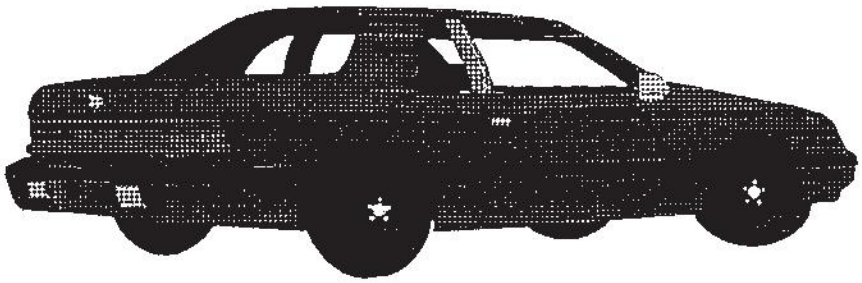

Border16


Border17


Border18

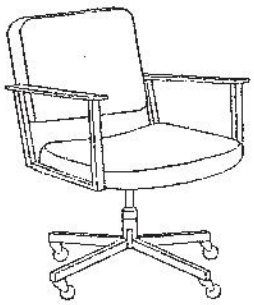

Border19



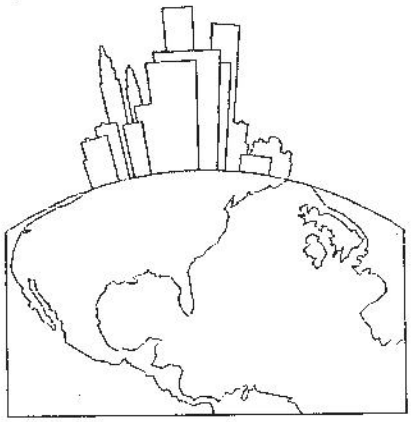


car

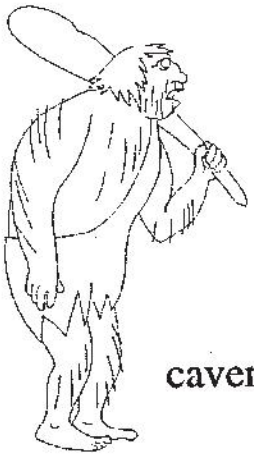
candle



chair

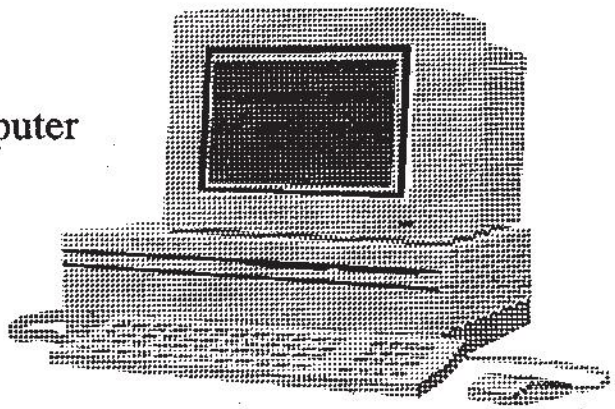


cityglobe

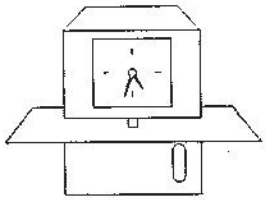


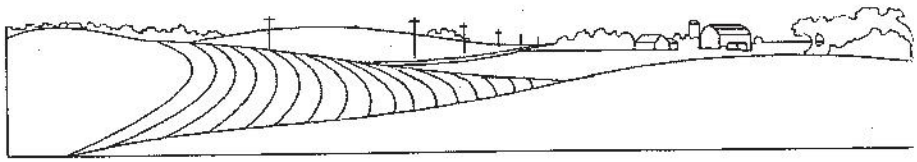
caveman

computer

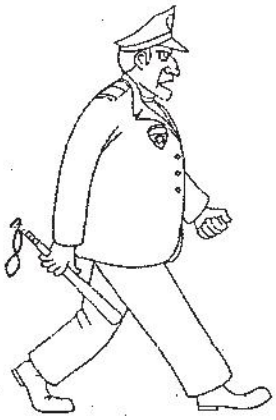


clock





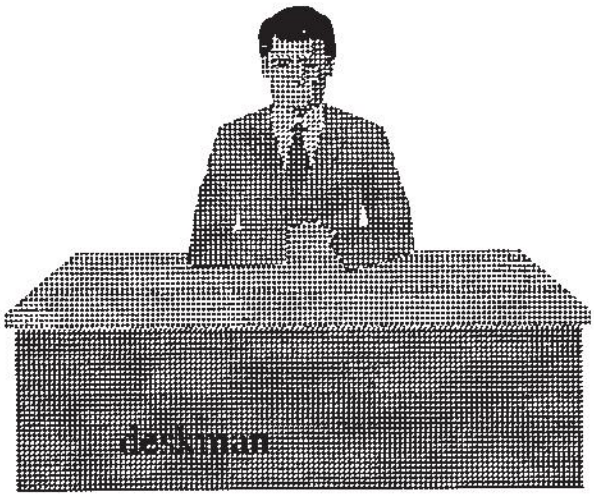
country



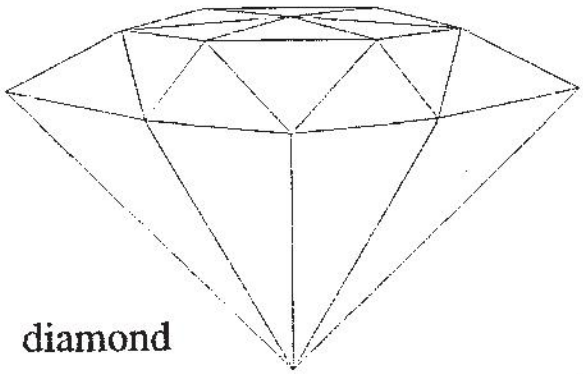
cop



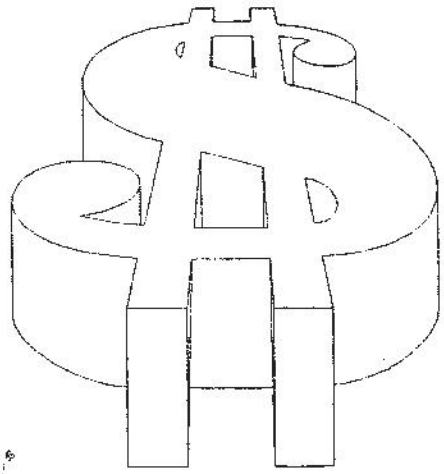
dancers



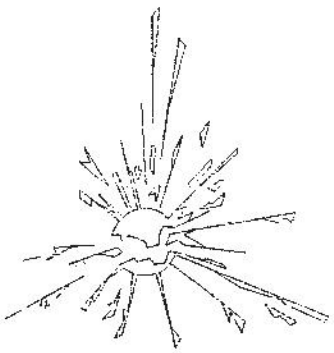
deskman



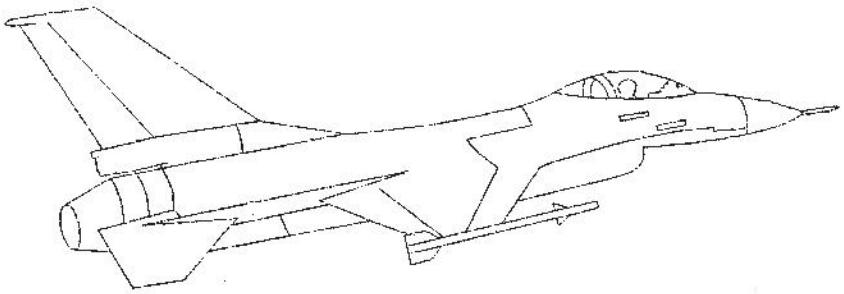
diamond



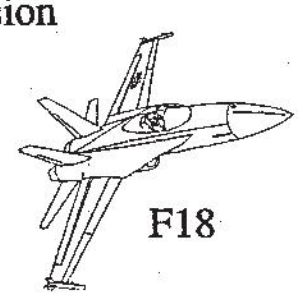
dollarsign



explosion

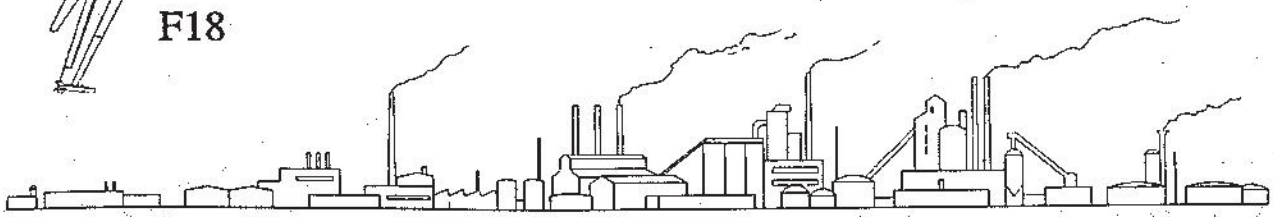


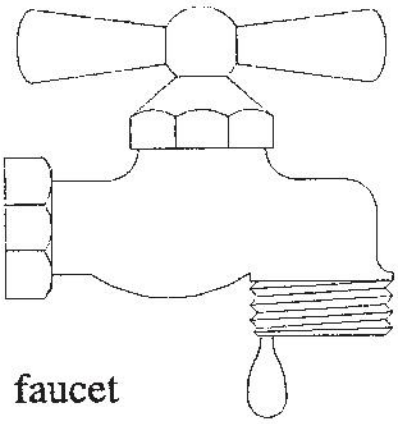
F16



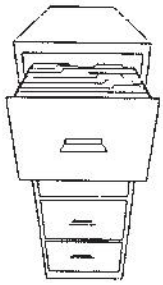
F18

factory

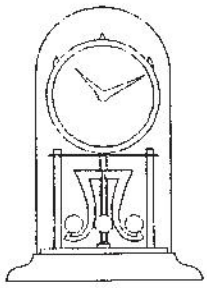




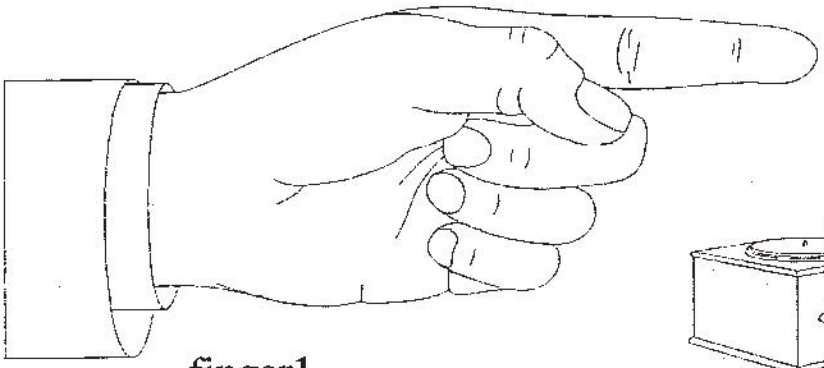
faucet



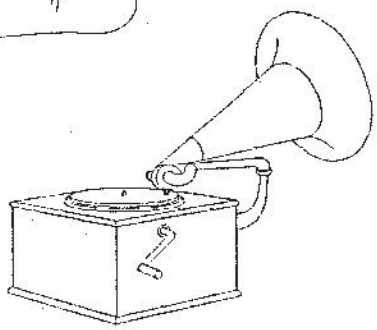
filecabinet



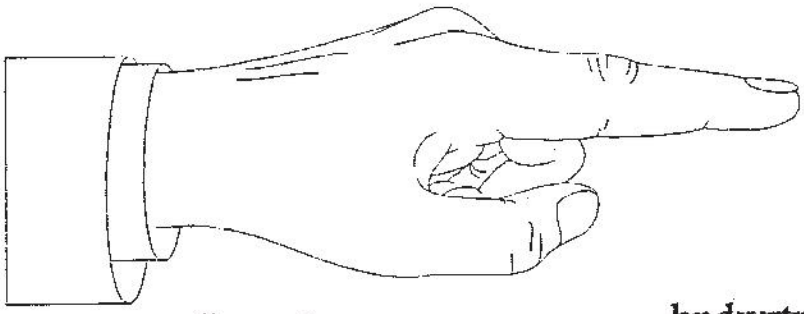
glassclock



finger1



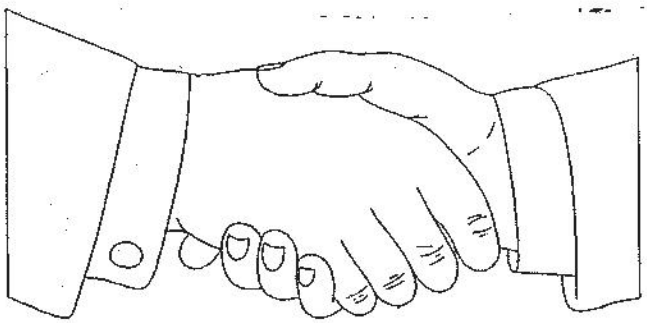
gramophone



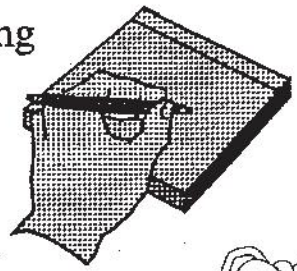
finger2

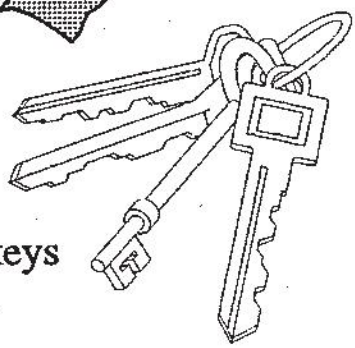


hndwrtng



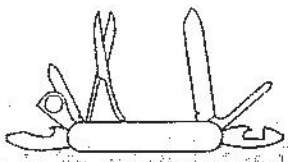
handshake



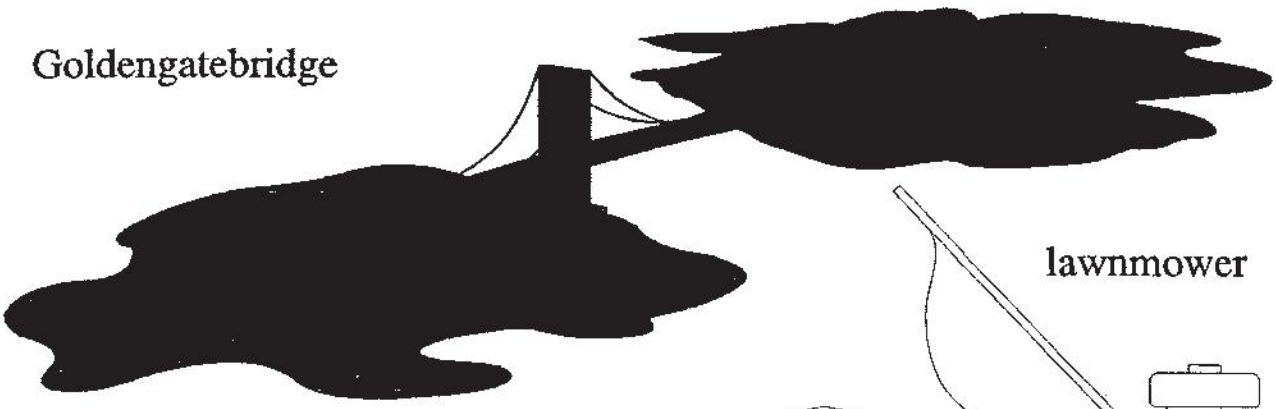


keys

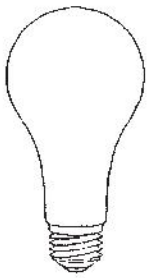
knife

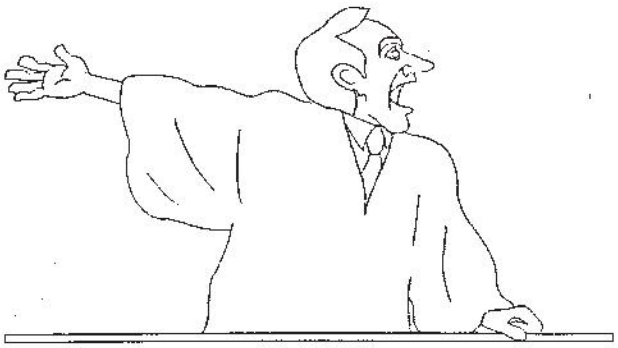


Goldengatebridge

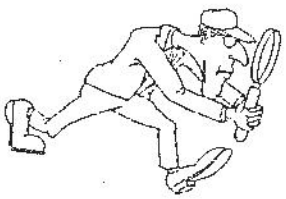


lawnmower



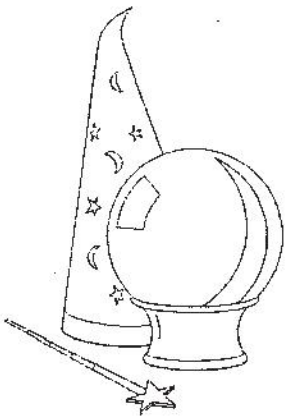


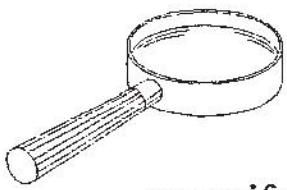
lightbulb



looking

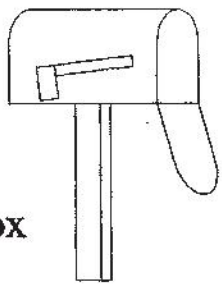
Lawyer





magnifyingglass

Magic



mailbox

man



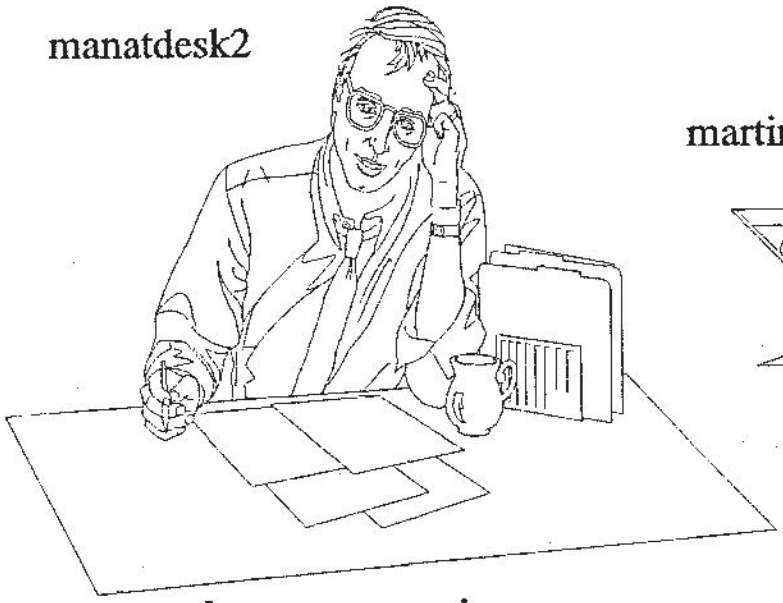
manatdesk1



maninchair



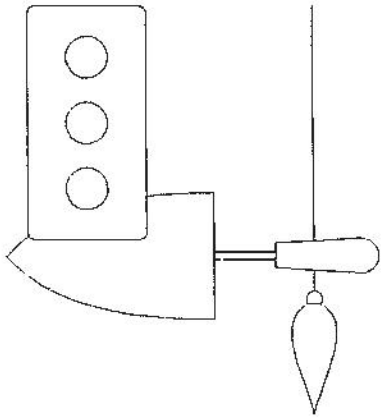
manatdesk2



martini



masonary



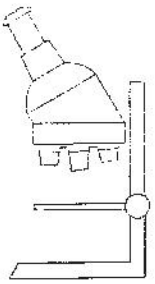


masses

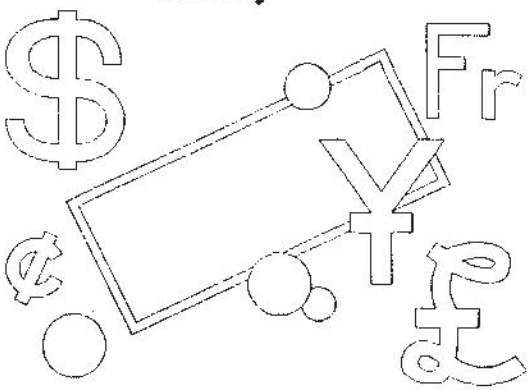
menatmap



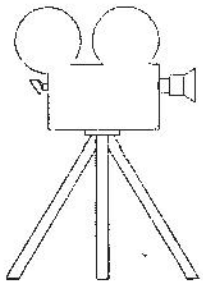
Microscope



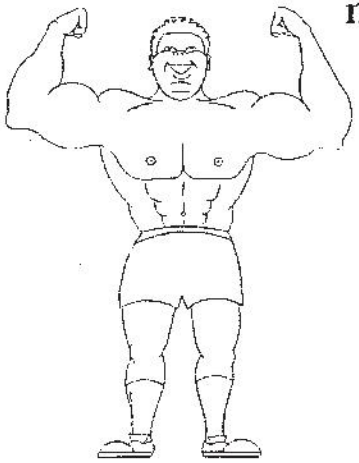
money



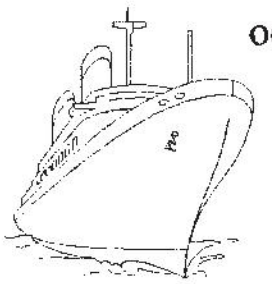
moviecam

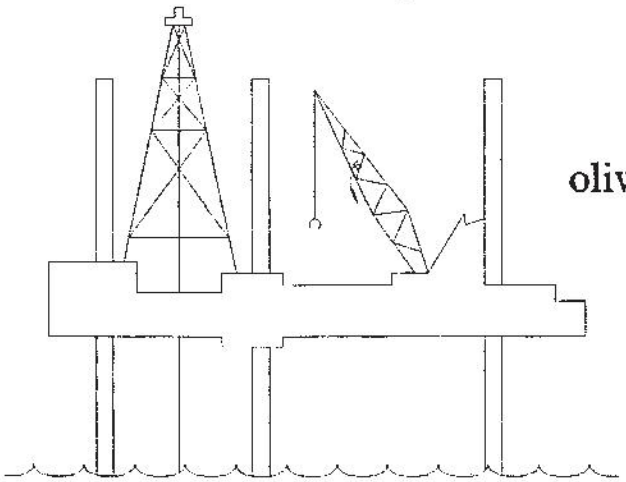


muscleman

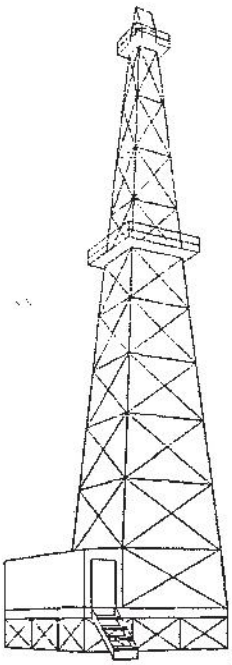


oceanliner



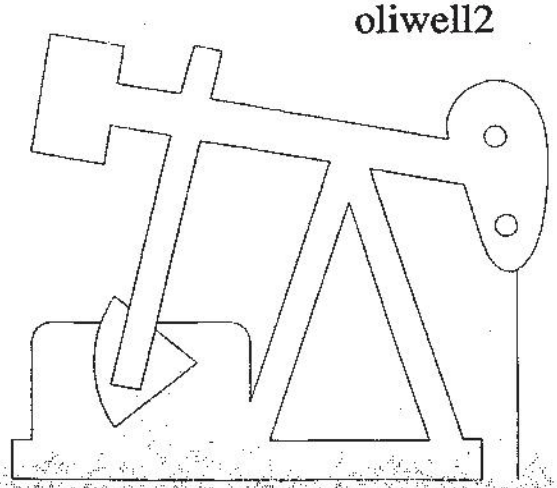


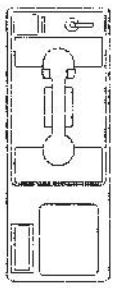
oliwell3



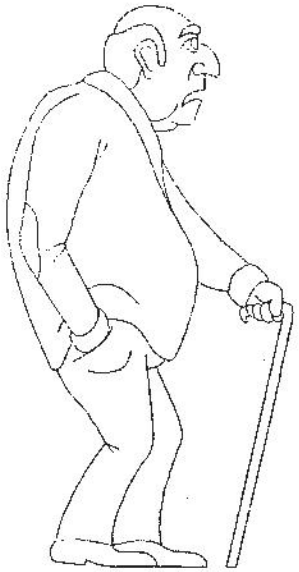
oliwell1

oliwell2

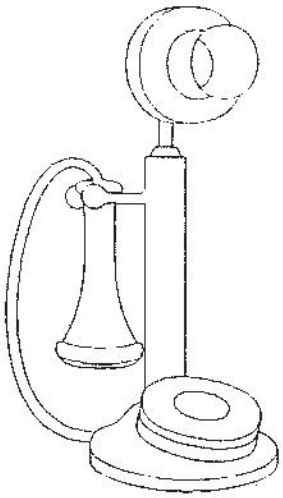




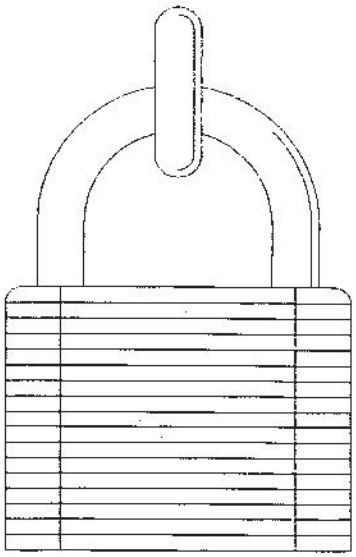
payphone



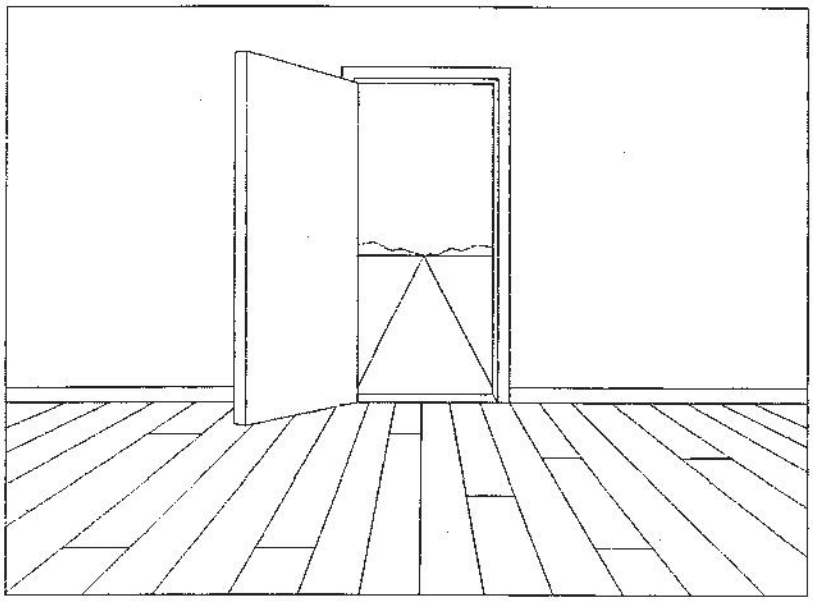
oldman



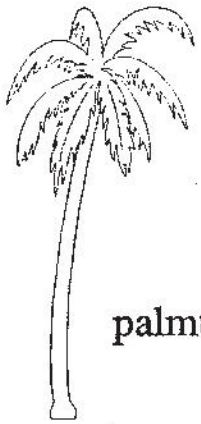
oldphone



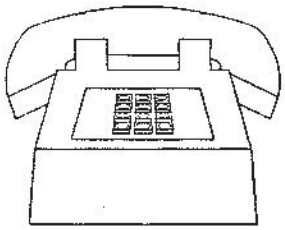
padlock



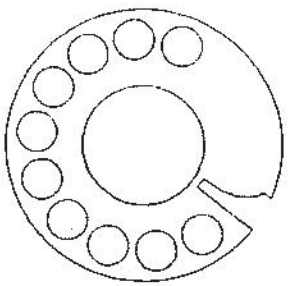
opendoor



palmtree



phone

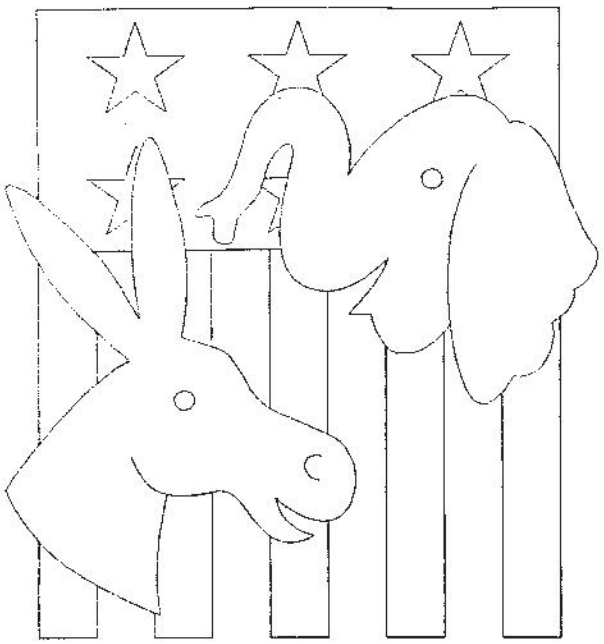


phonedial

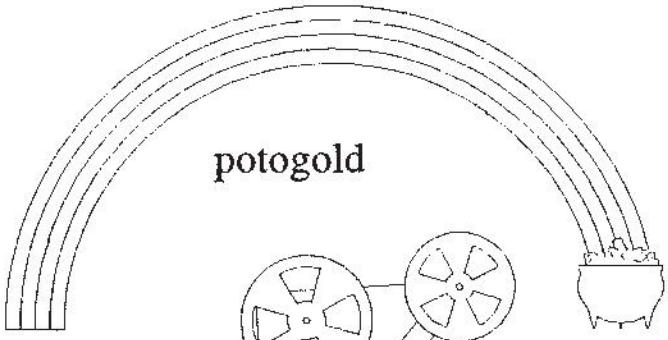


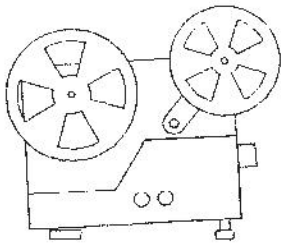
pirate

politics

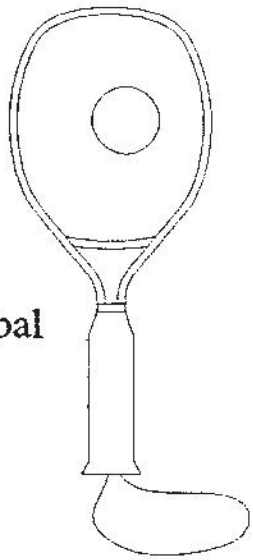


potogold



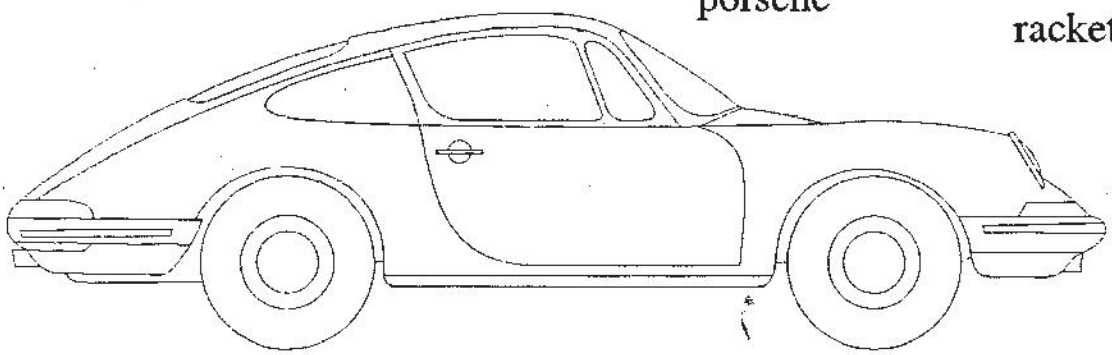


projector

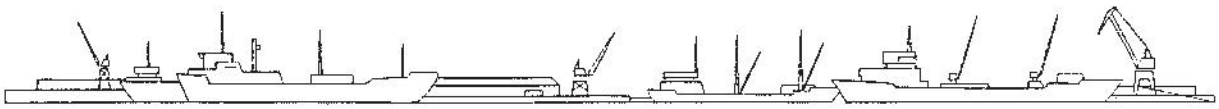


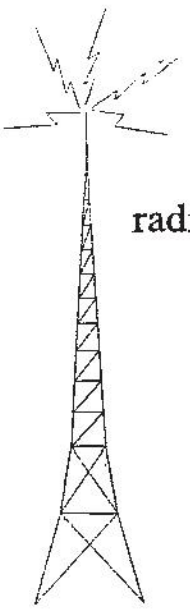
racketbal

porsche



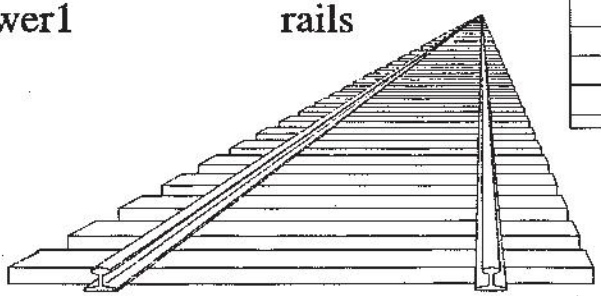
portdock

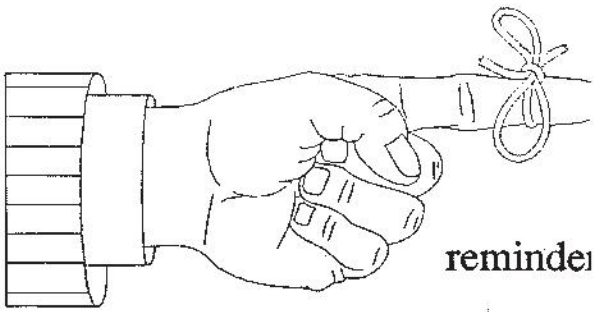




radiotower1

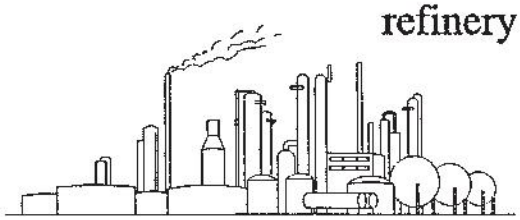
rails





reminder

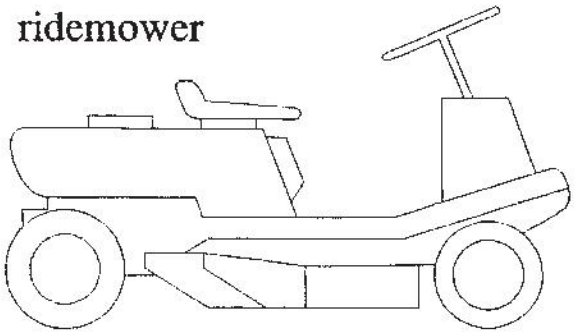
refinery



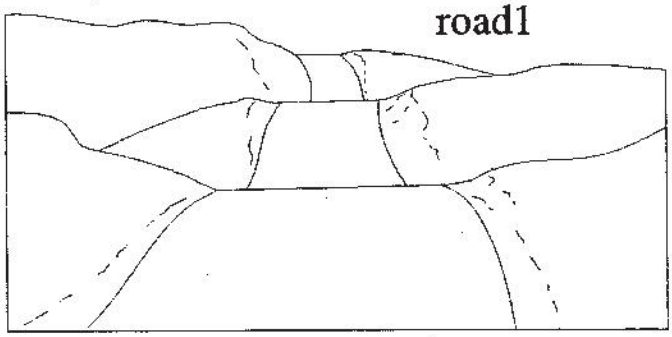


reporter

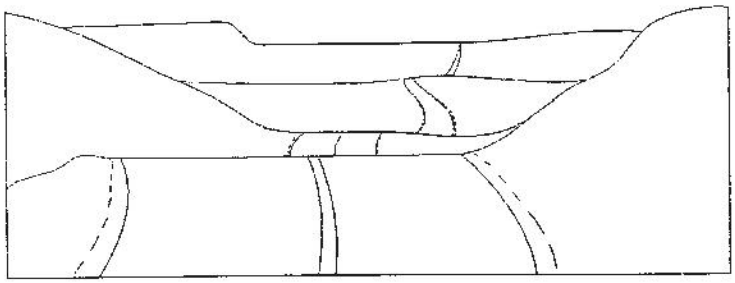
ridemower



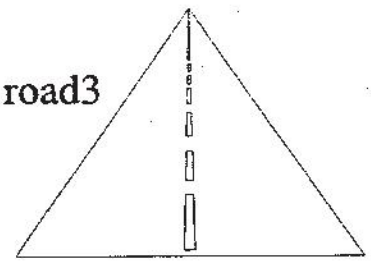
road1



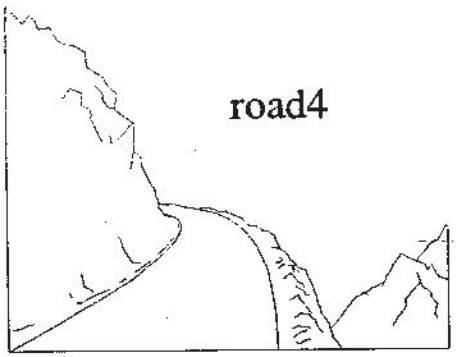
road2

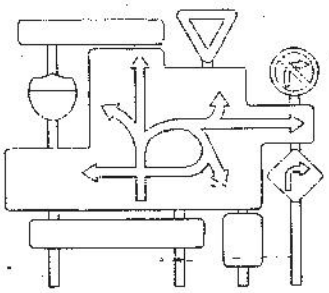


road3



road4

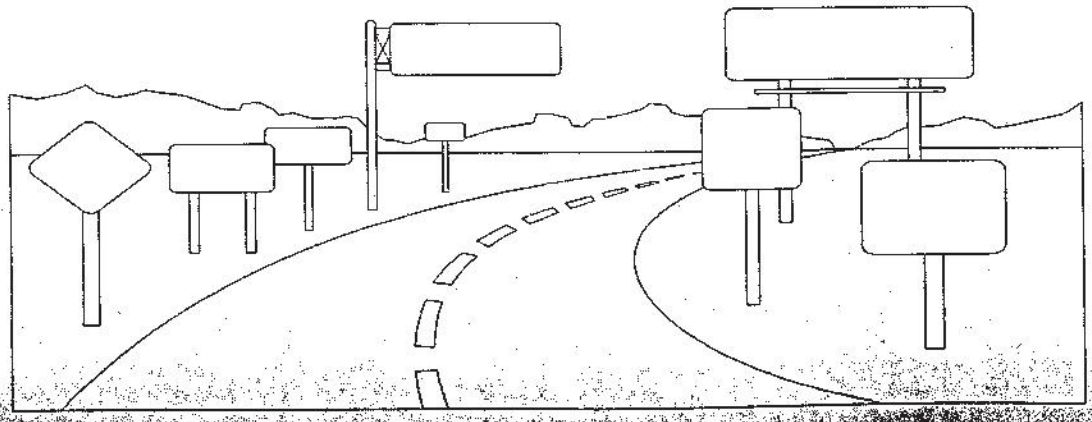




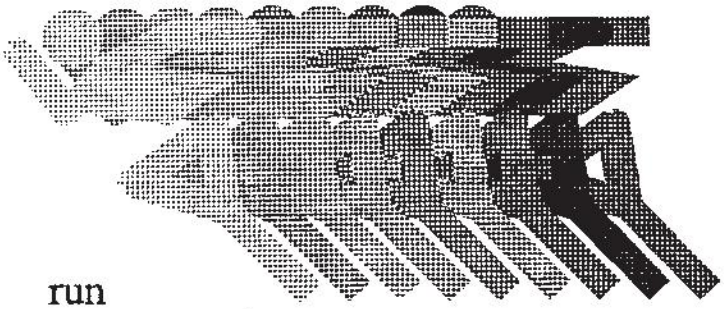
roadsigns



rock'nroller



roadsigns2

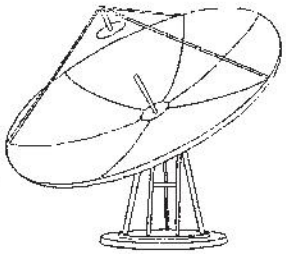


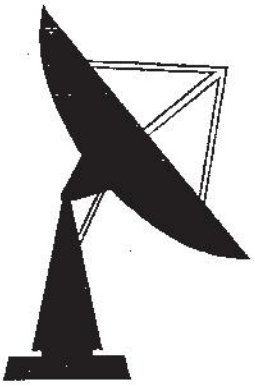
run

safe



satdish



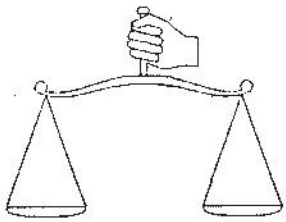


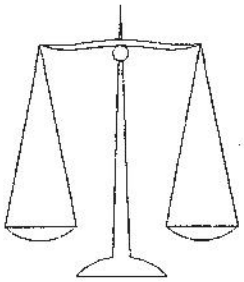
satdish2

satelite



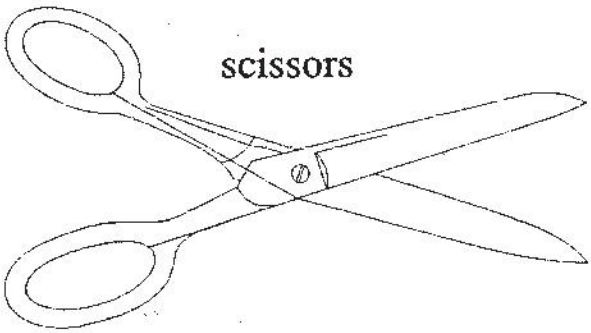
scales

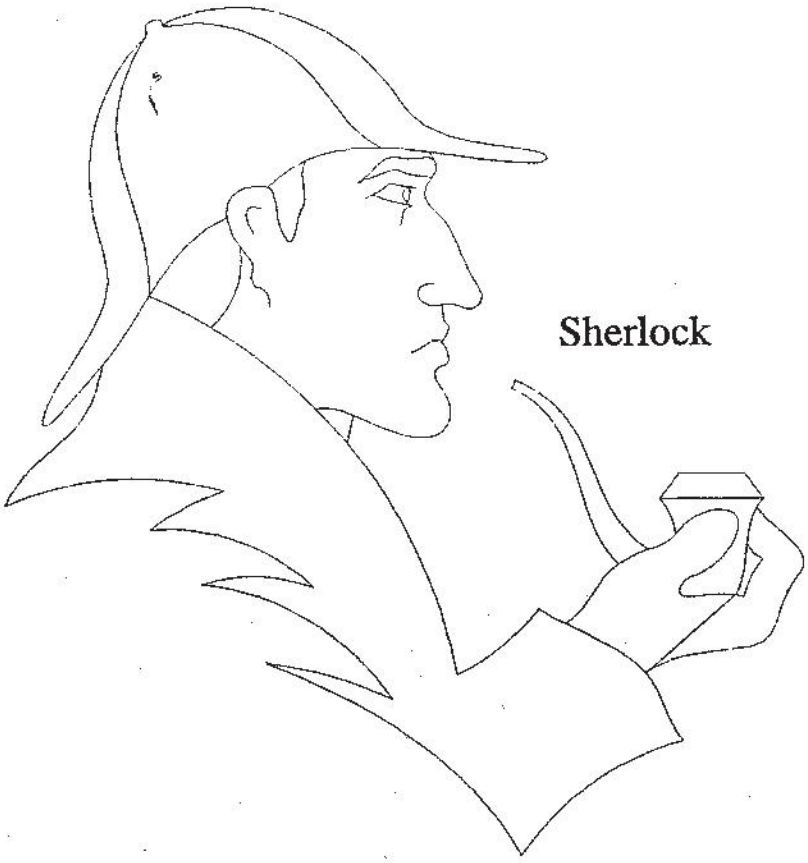




scales2

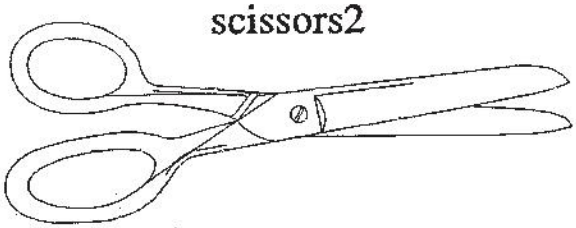
scissors



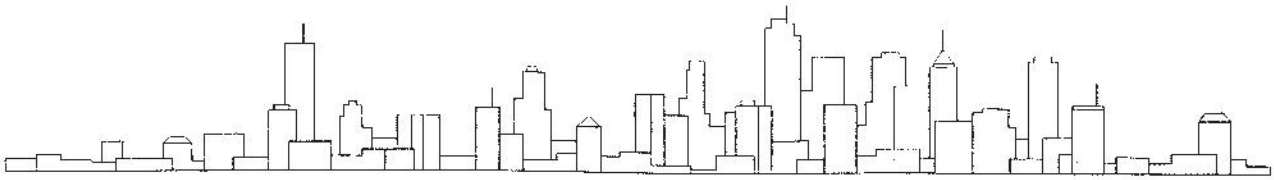


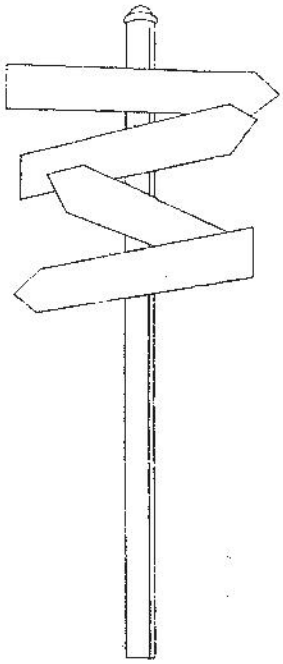
Sherlock

scissors2

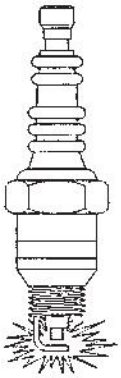


skyline



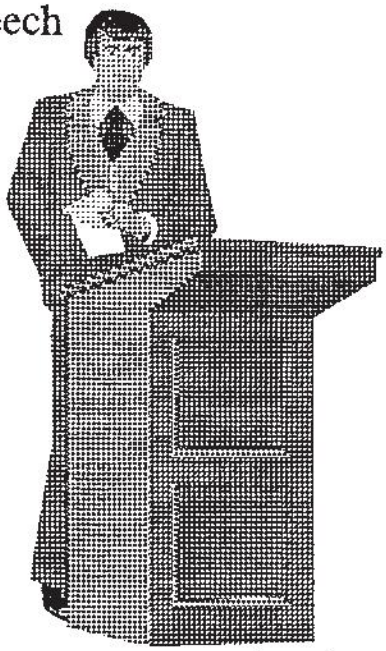


signpost



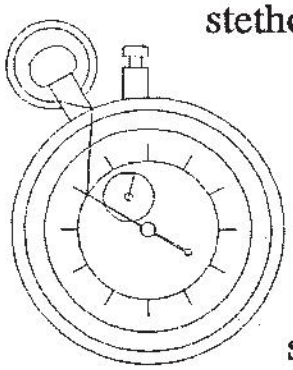
sparkplug

speech

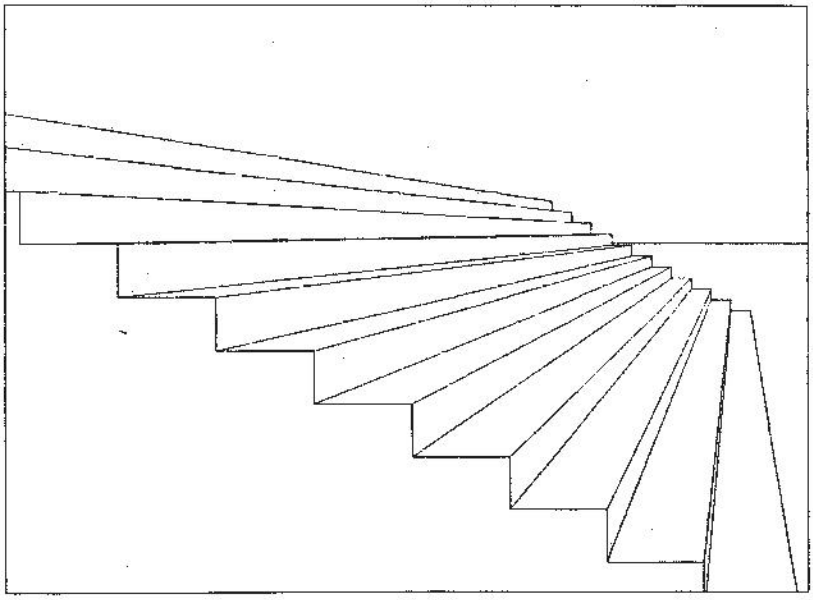




stethoscope

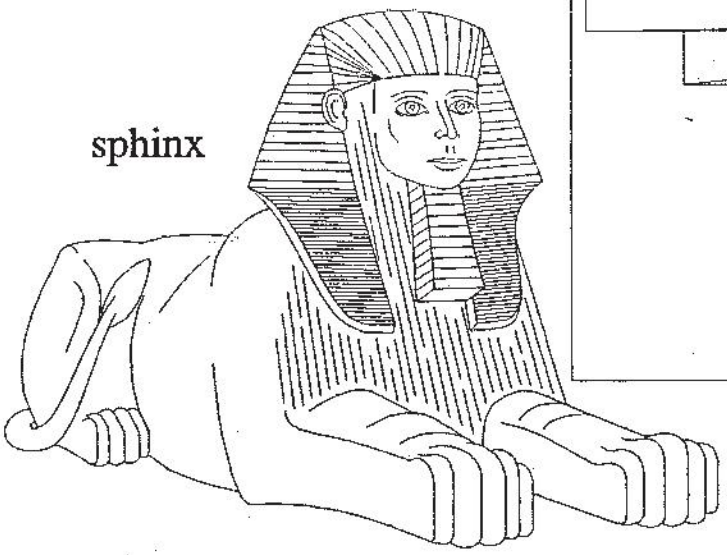


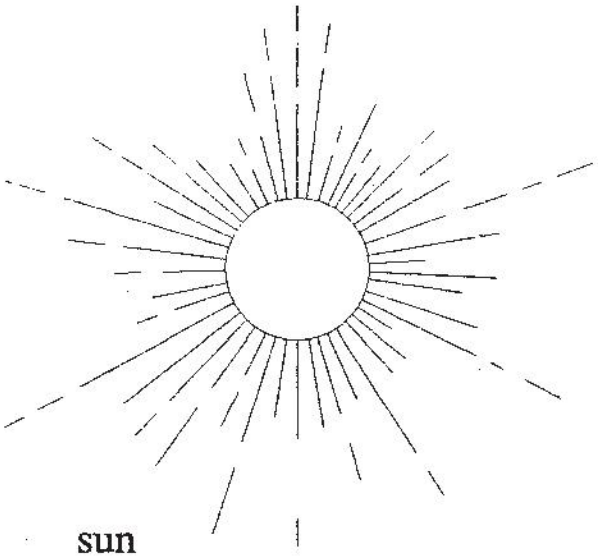
stopwatch



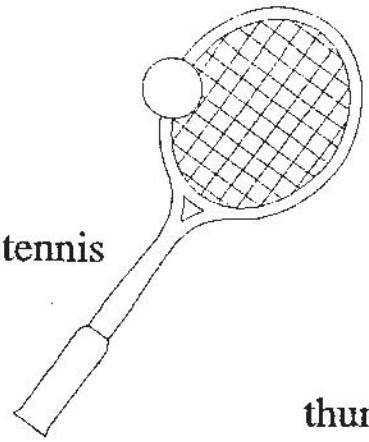
stairs

sphinx

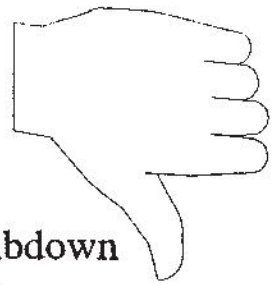




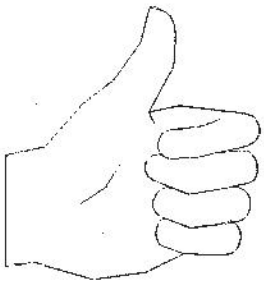
sun



tennis



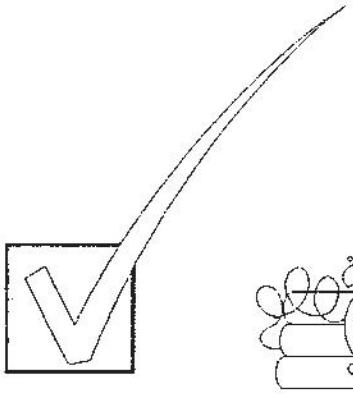
thumbdown



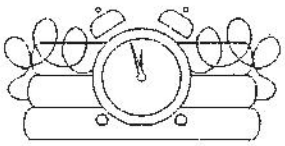
thumbup



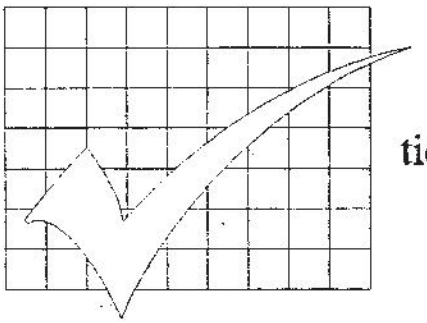
tick



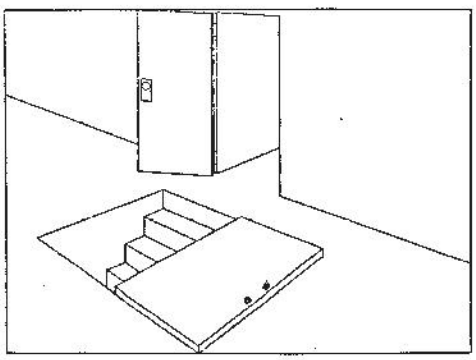
tick2



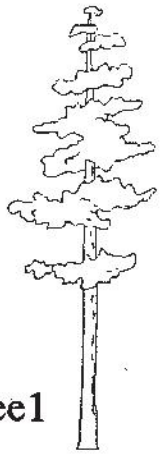
timebomb



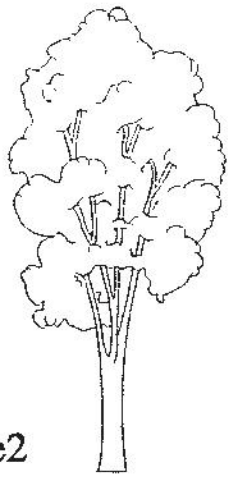
tick3



trapdoor

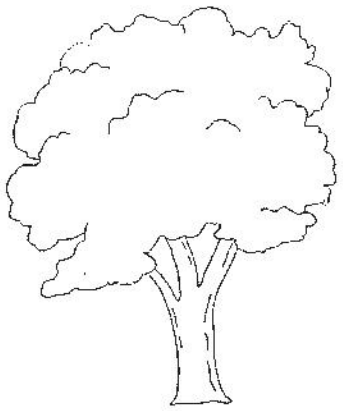


tree1

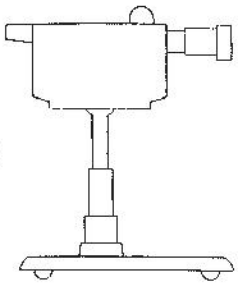


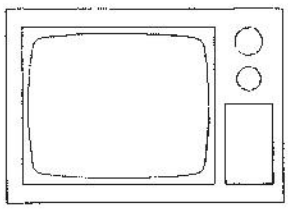
tree2

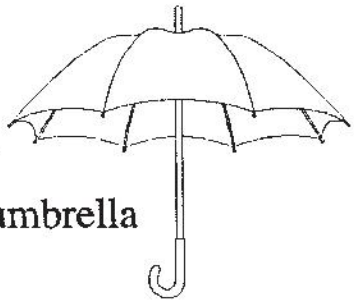
tree3



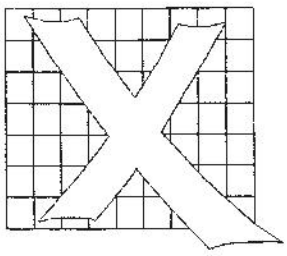
tv-s







umbrella

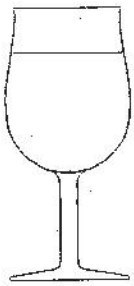


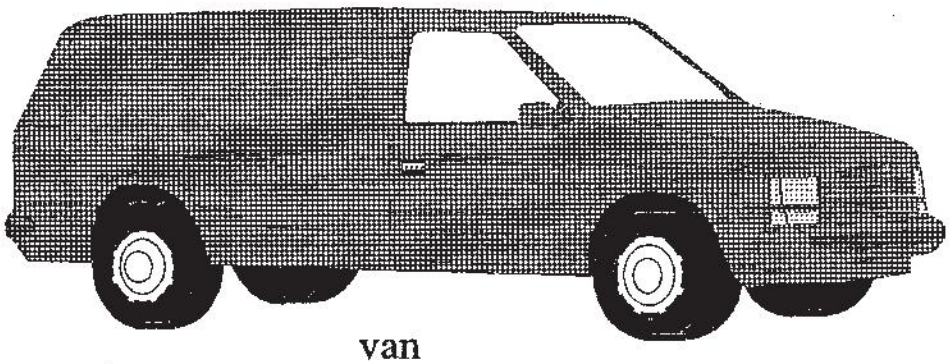
xmark



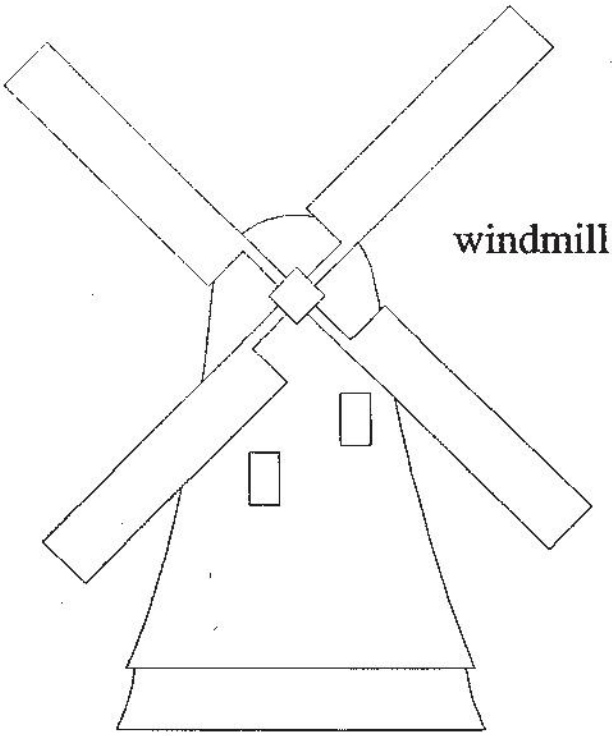
woman

wineglass





van

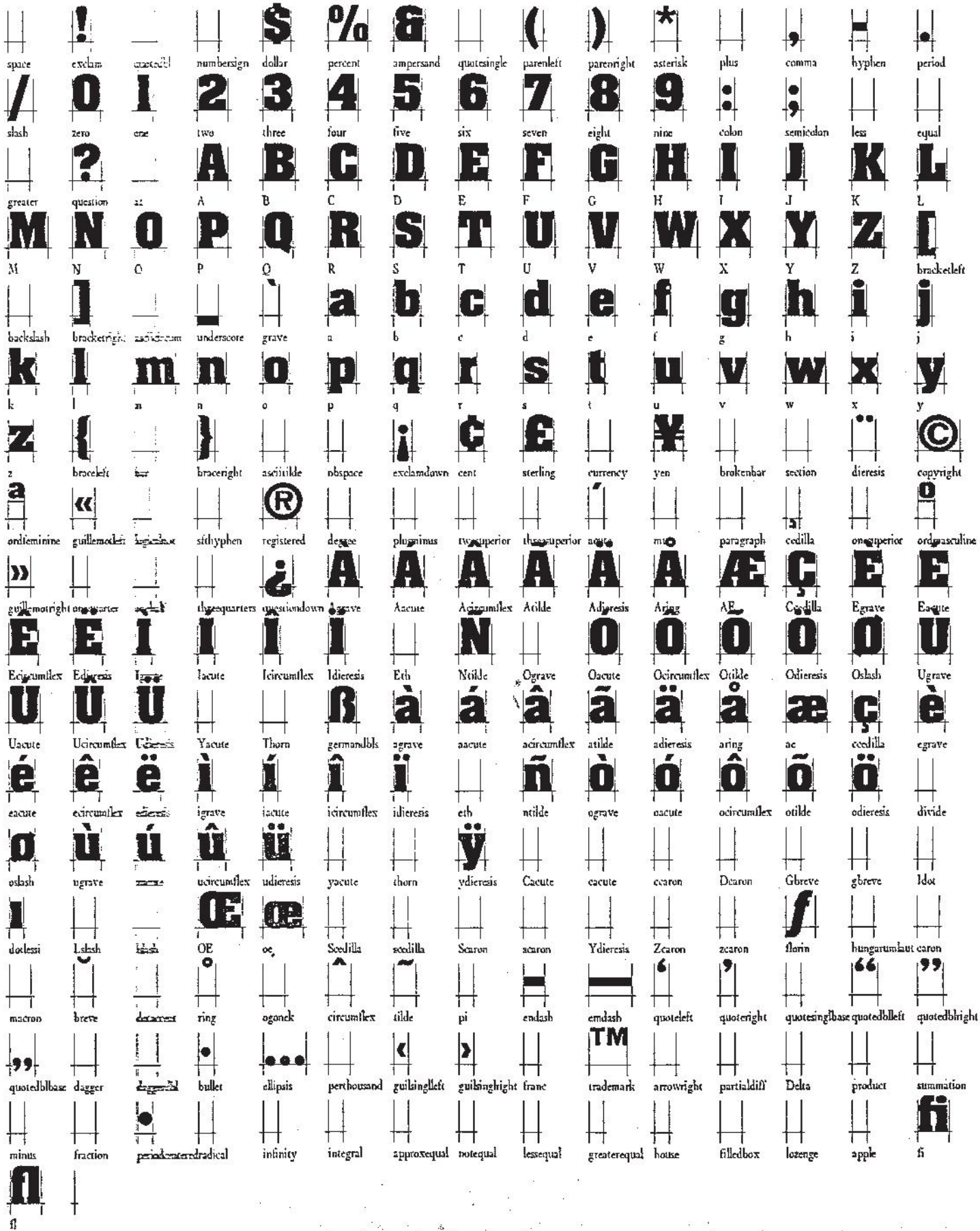


windmill

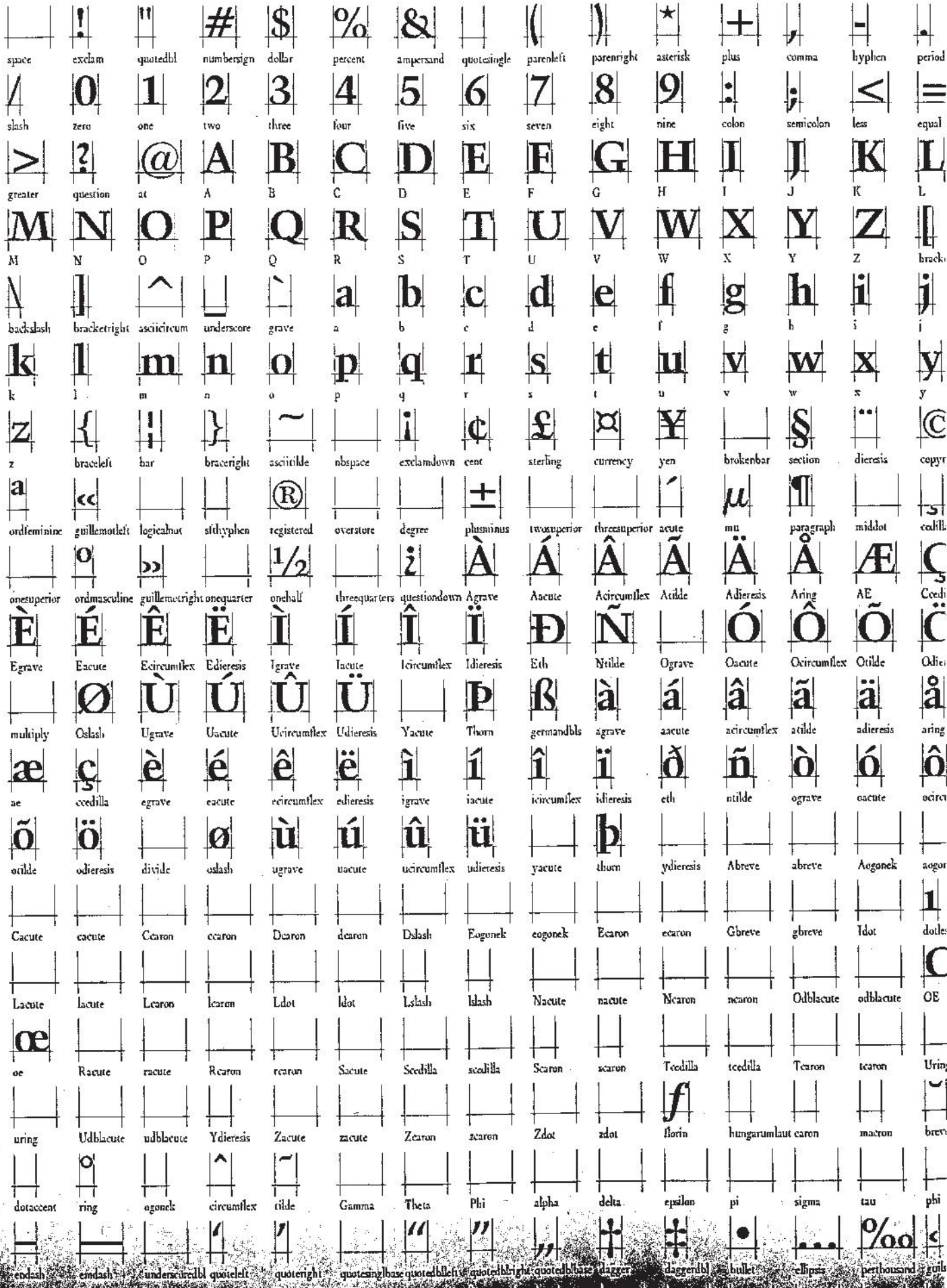
youngwoman



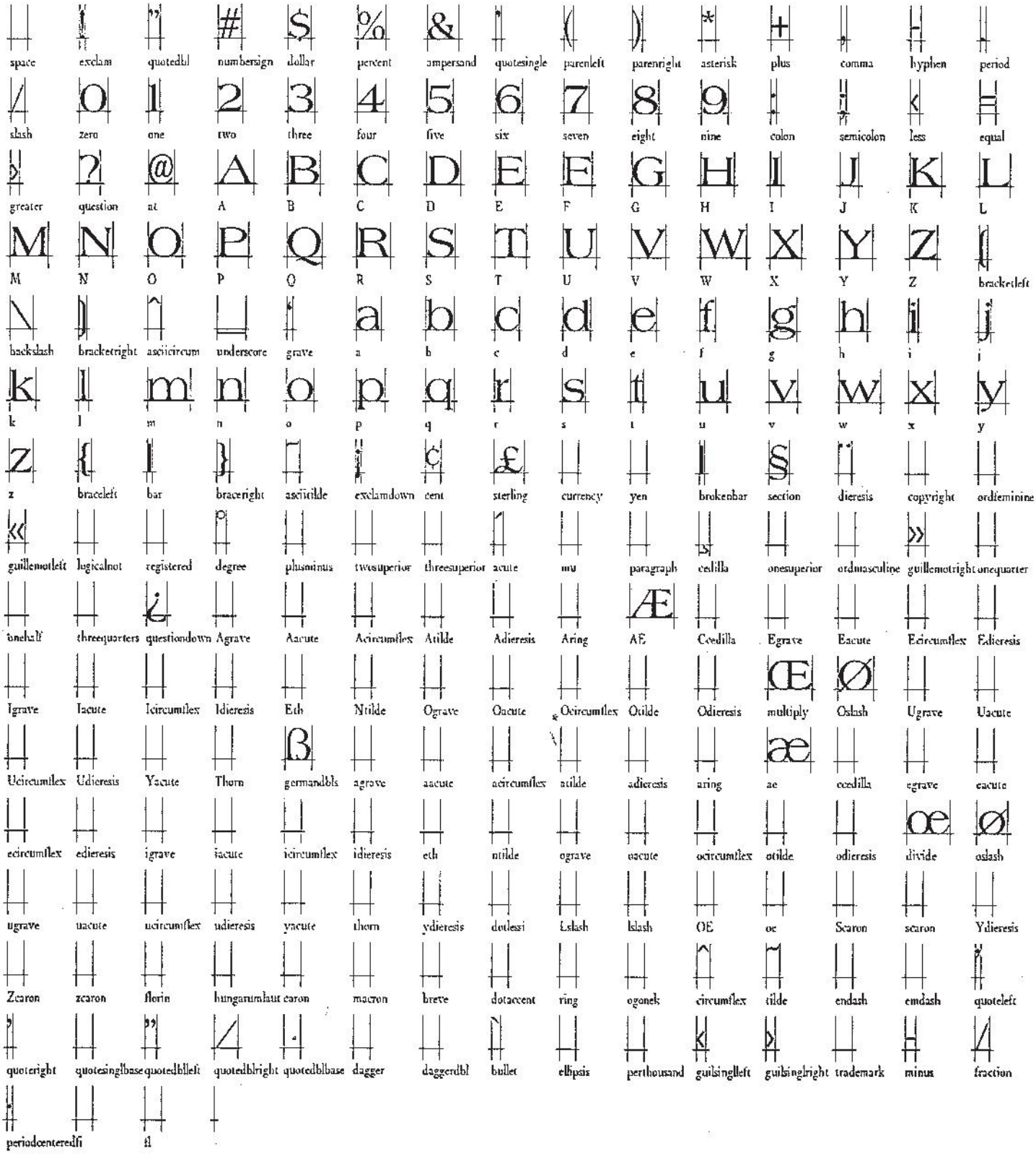
Aachen-Bold


space exclam numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft braceright nbspace exclamdown cent sterling currency yen brokenbar section dieresis copyright
ordfeminine guillemotleft registered degree plusminus twosuperior threesuperior acute paragraph cedilla onesuperior ordmasculine
guillemotright threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute
Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis Oslash Ugrave
Uacute Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave
eacute ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide
oslash ugrave uacute ucircumflex udieresis yacute thorn ydieresis Cacute cacute ccaron Dcaron Gbreve gbreve Idot
dotlessi Lslash lslash OE oe Scedilla scedilla Scaron scaron Ydieresis Zcaron zcaron florin hungarumlaut caron
macron breve dotaccent ring ogonek circumflex tilde pi endash emdash quoteleft quoteright quotesinglbase quotedblleft quotedblright
quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright franc trademark arrowright partialdiff Delta product summation
minus fraction periodcenter radical infinity integral approxequal notequal lessequal greaterequal house filledbox lozenge apple fi
fl

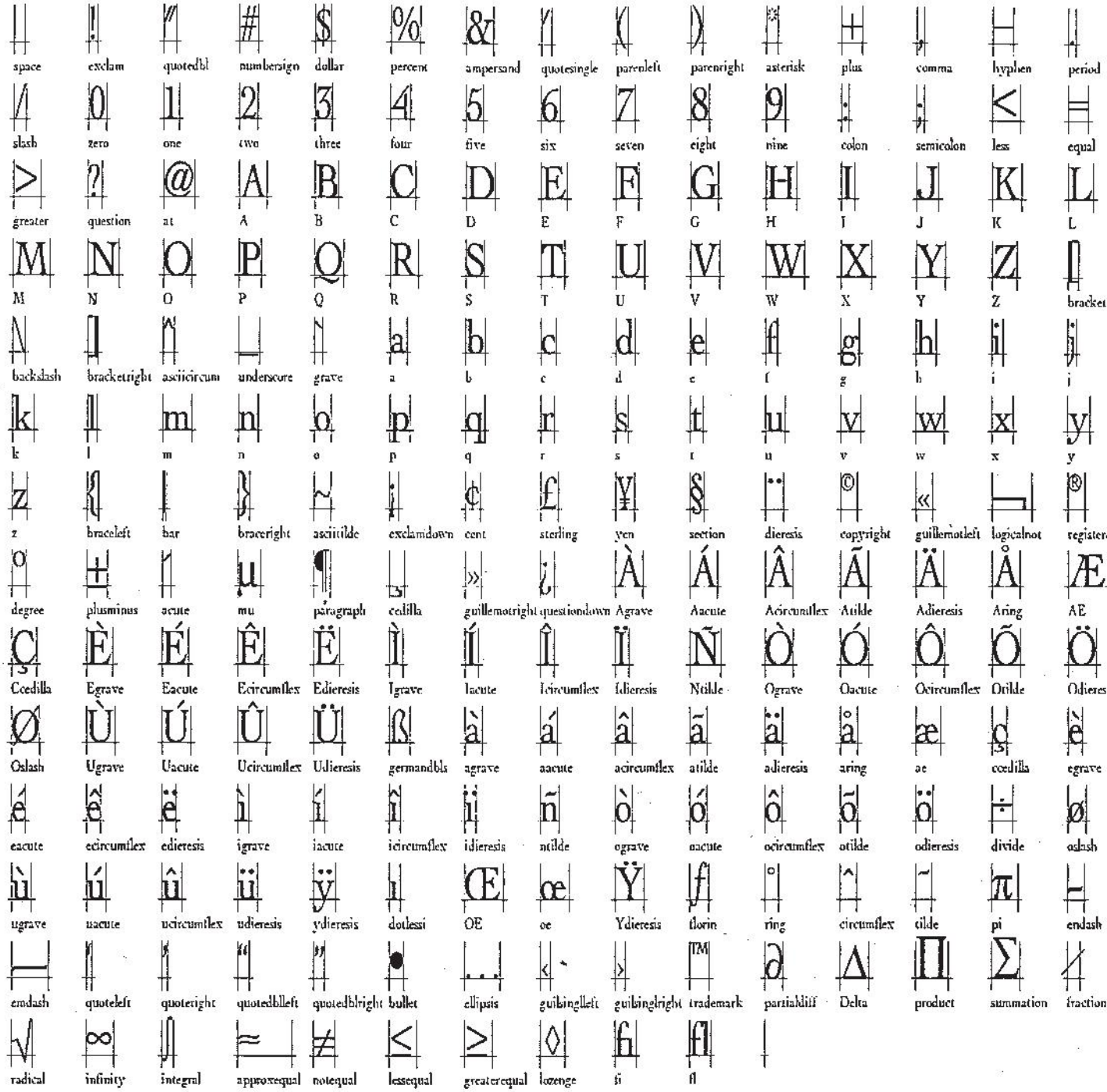
Activa Bold


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde nbspace exclamdown cent sterling currency yen brokenbar section dieresis
ordfeminine guillemotleft logicalnot sfthyphen registered overstore degree plusminus twosuperior threesuperior acute mu paragraph middot
onesuperior ordmasculine guillemotright onequarter onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE
Egrave Eacute Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde
multiply Oslash Ugrave Uacute Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring
ae ccedilla egrave eacute ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute
otilde odieresis divide oslash ugrave uacute ucircumflex udieresis yacute thorn ydieresis Abreve abreve Aogonek
Cacute cacute Ccaron ccaron Dcaron dcaron Dslash Eogonek eogonek Ecaron ecaron Gbreve gbreve Idot
Lacute lacute Lcaron lcaron Ldot ldot Lslash lslash Nacute nacute Ncaron ncaron Odblacute odblacute OE
oe Racute racute Rcaron rcaron Sacute Scedilla scedilla Scaron scaron Tcedilla tcedilla Tcaron tcaron
uring Udblacute udblacute Ydieresis Zacute zacute Zcaron zcaron Zdot zdot florin hungarumlaut caron macron
dotaccent ring ogonek circumflex tilde Gamma Theta Phi alpha delta epsilon pi sigma tau phi
endash emdash underscoredbl quoteleft quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand
TM

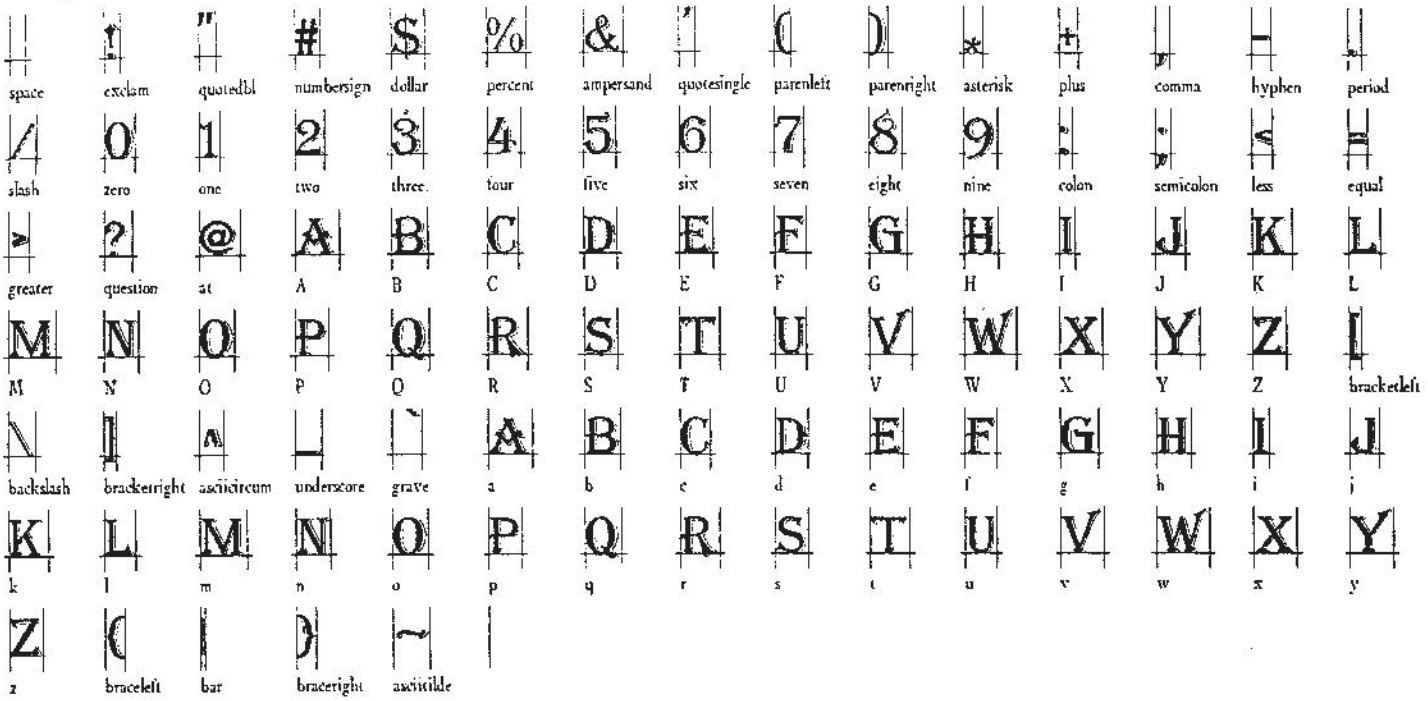
Agate


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright ordfeminine
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave Uacute
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron Ydieresis
Zcaron zcaron florin hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash quoteleft
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus fraction
periodcenteredfi fl

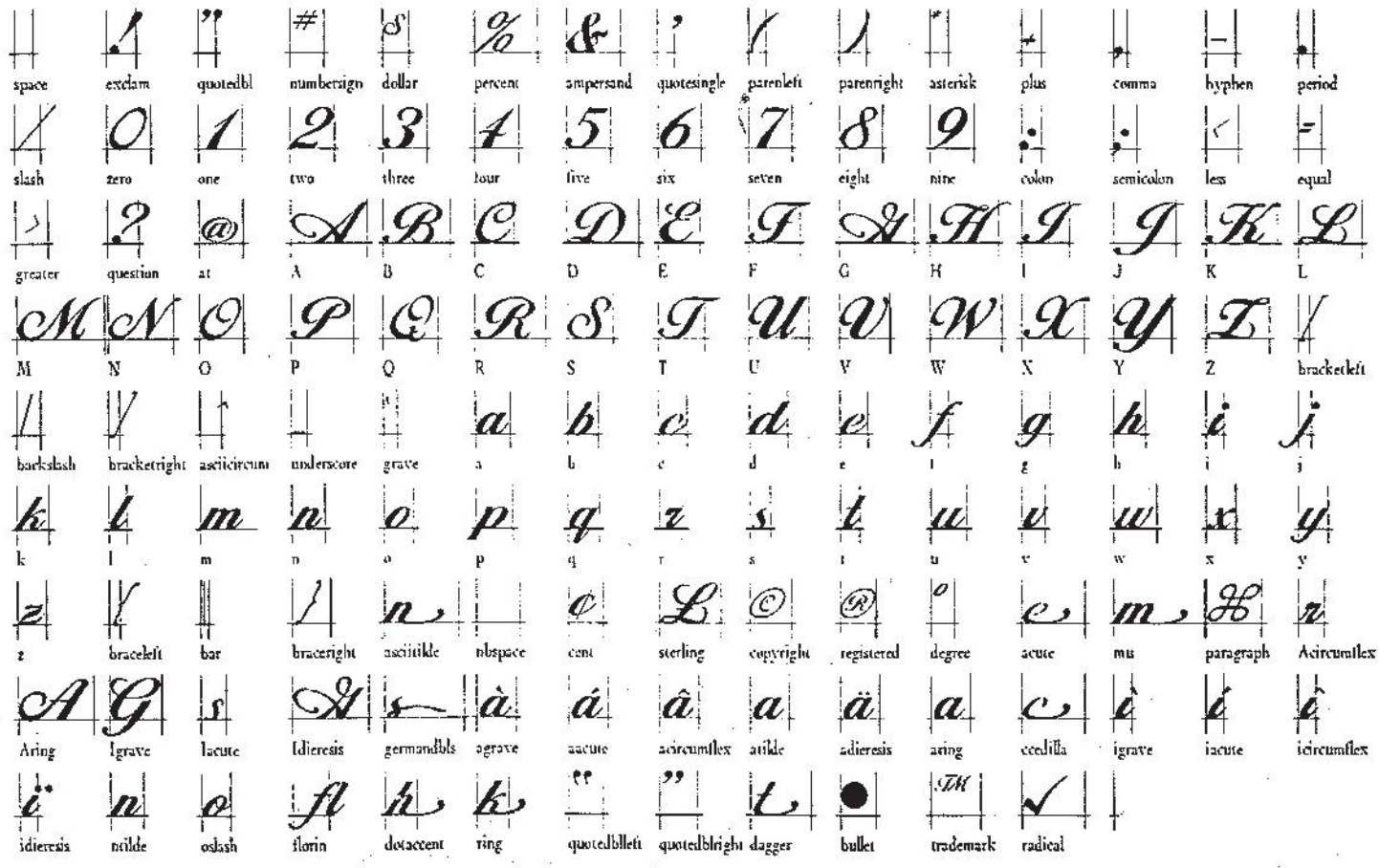
Albatross


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracket
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling yen section dieresis copyright guillemotleft logicalnot register
degree plusminus acute mu paragraph cedilla guillemotright questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE
Ccedilla Egrave Eacute Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Ntilde Ograve Oacute Ocircumflex Otilde Odieresis
Oslash Ugrave Uacute Ucircumflex Udieresis germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave
eacute ecircumflex edieresis igrave iacute icircumflex idieresis ntilde ograve oacute ocircumflex otilde odieresis divide oslash
ugrave uacute ucircumflex udieresis ydieresis dotlessi OE oe Ydieresis florin ring circumflex tilde pi endash
emdash quoteleft quoteright quotedblleft quotedblright bullet ellipsis guilsinglleft guilsinglright trademark partialdiff Delta product summation fraction
radical infinity integral approxequal notequal lessequal greaterequal lozenge fi fl

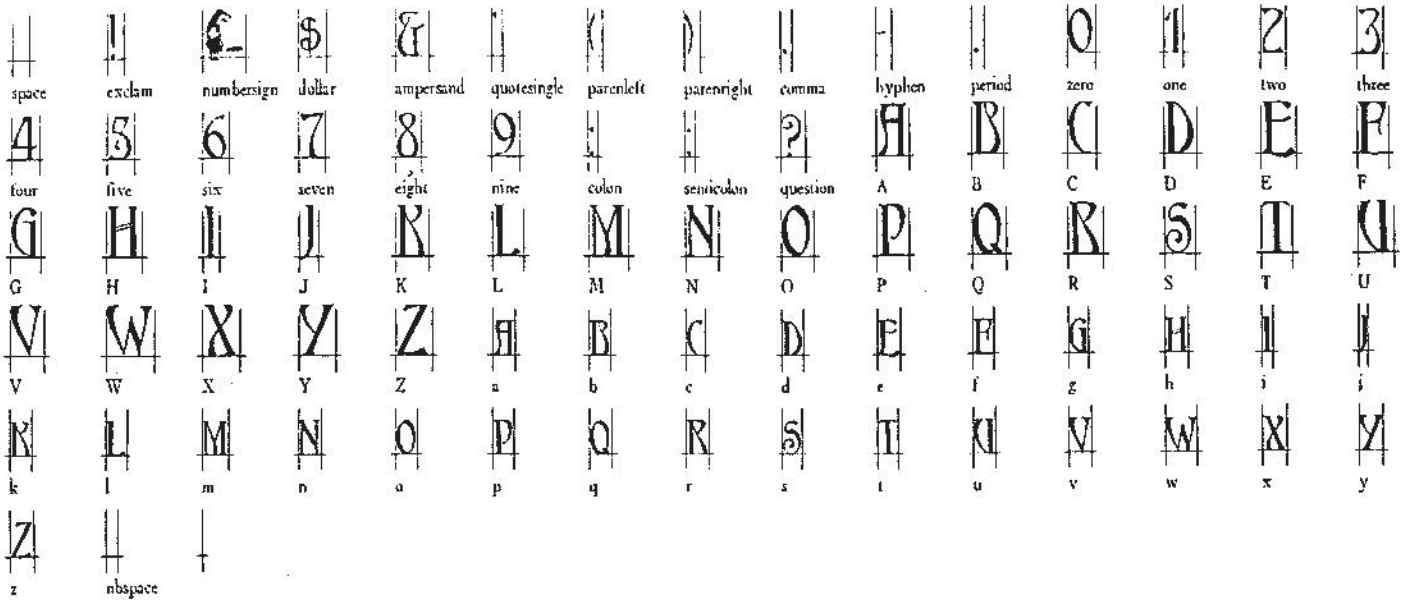
Algeria



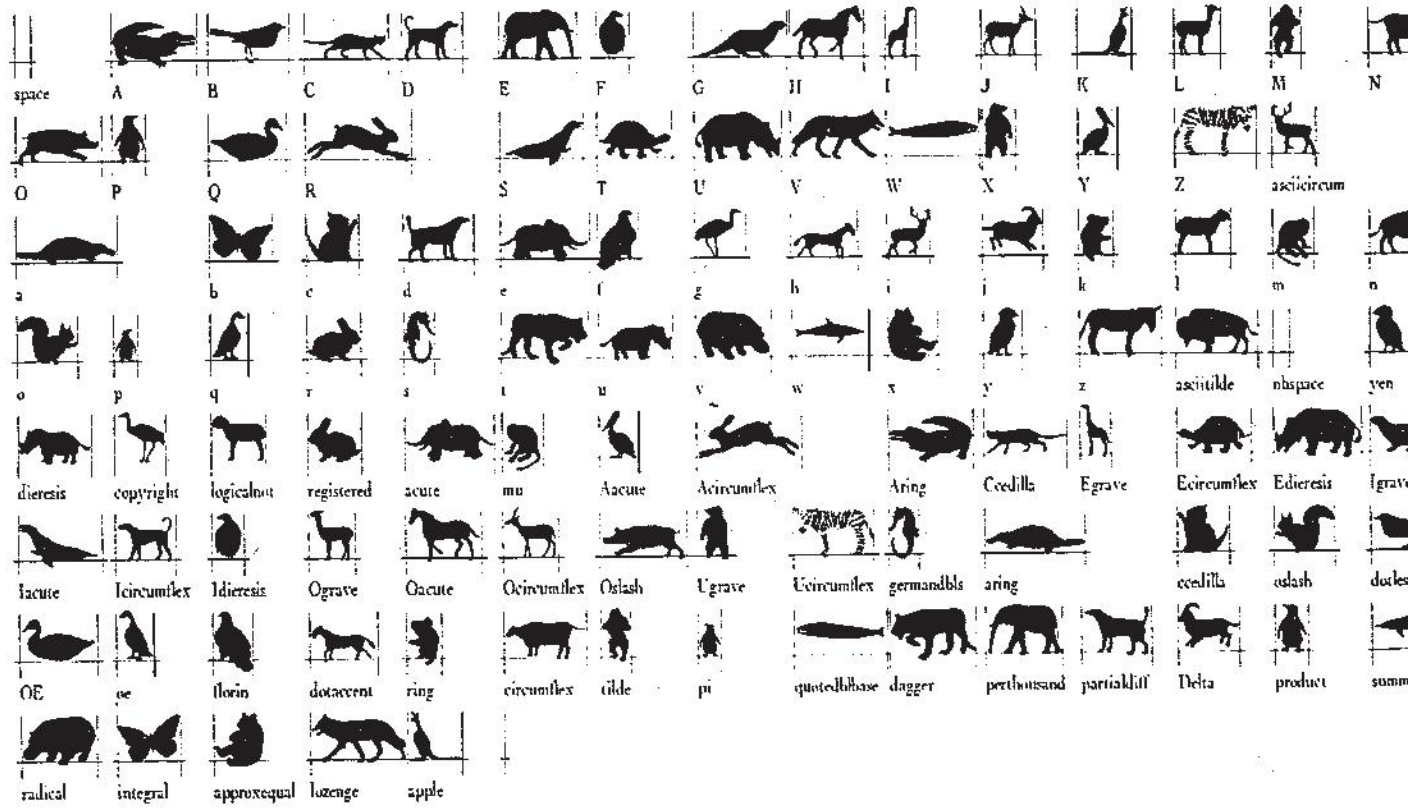
Alison



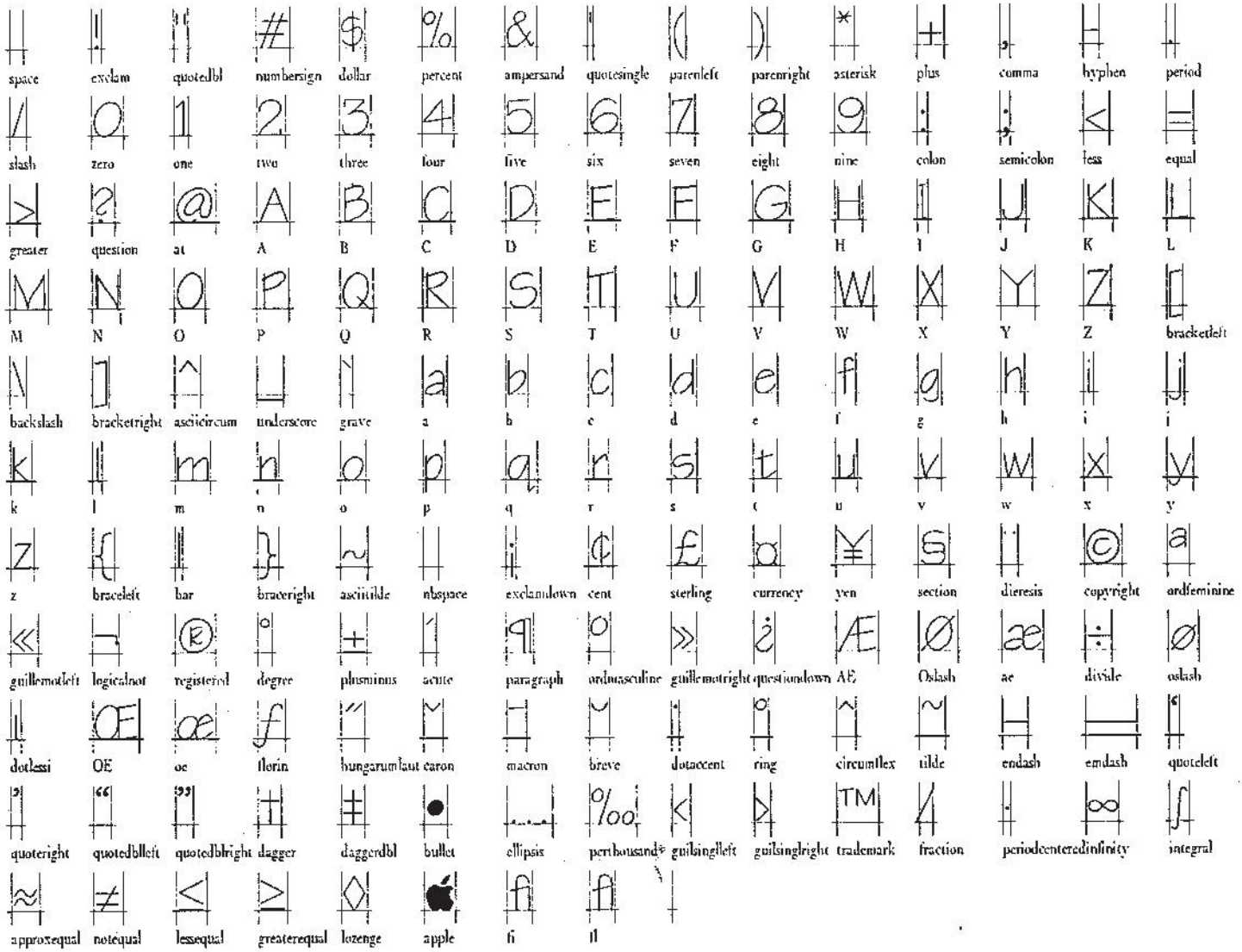
Ambrosia



Animals



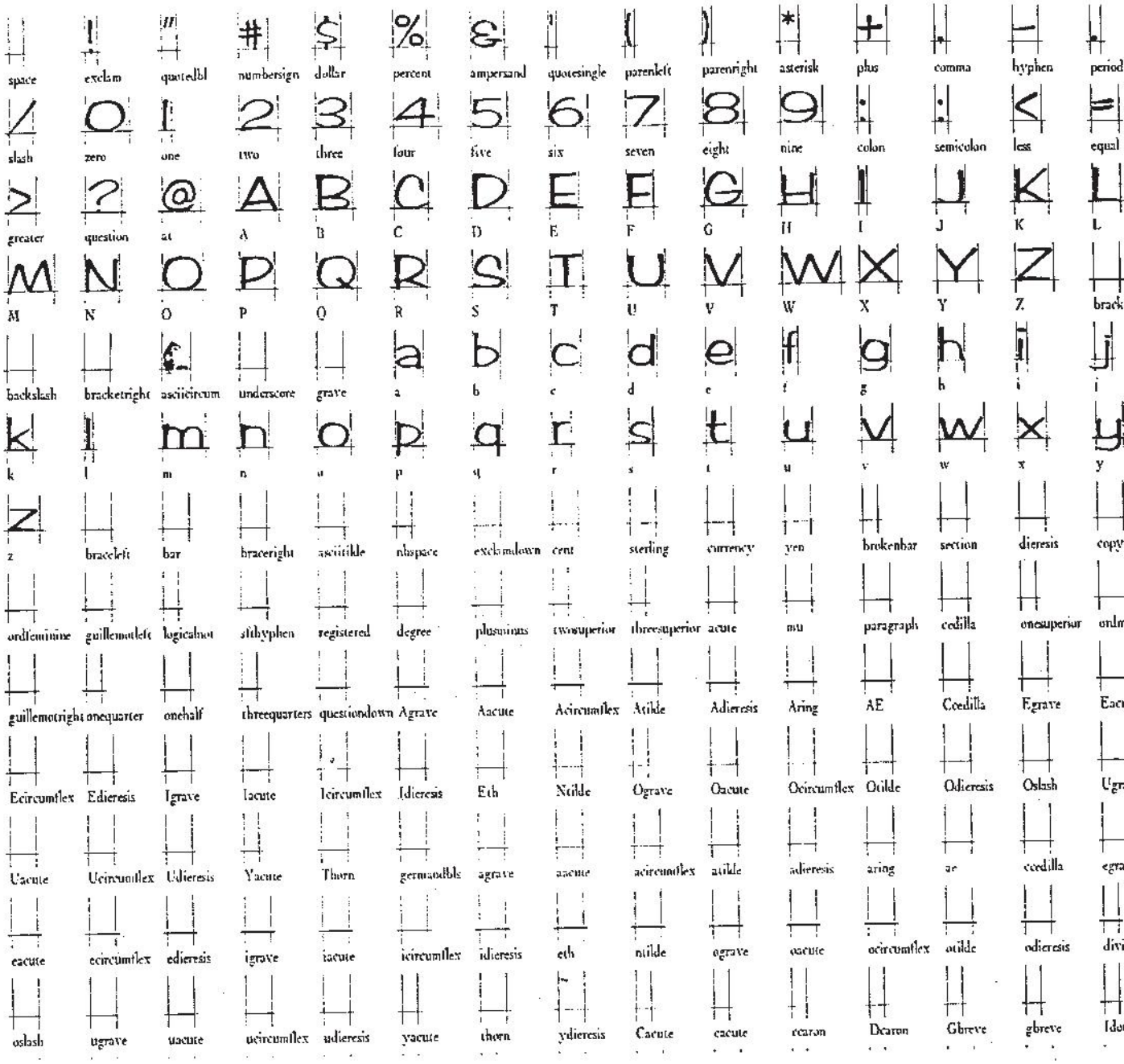
Architect


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde nbspace exclamdown cent sterling currency yen section dieresis copyright ordfeminine
guillemotleft logicalnot registered degree plusminus acute paragraph ordmasculine guillemotright questiondown AE Oslash ae divide oslash
dotlessi OE oe florin hungarumlaut caron macron breve dotaccent ring circumflex tilde endash emdash quoteleft
quoteright quotedblleft quotedblright dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark fraction periodcenteredinfinity integral
approxequal notequal lessequal greaterequal lozenge apple fi fl

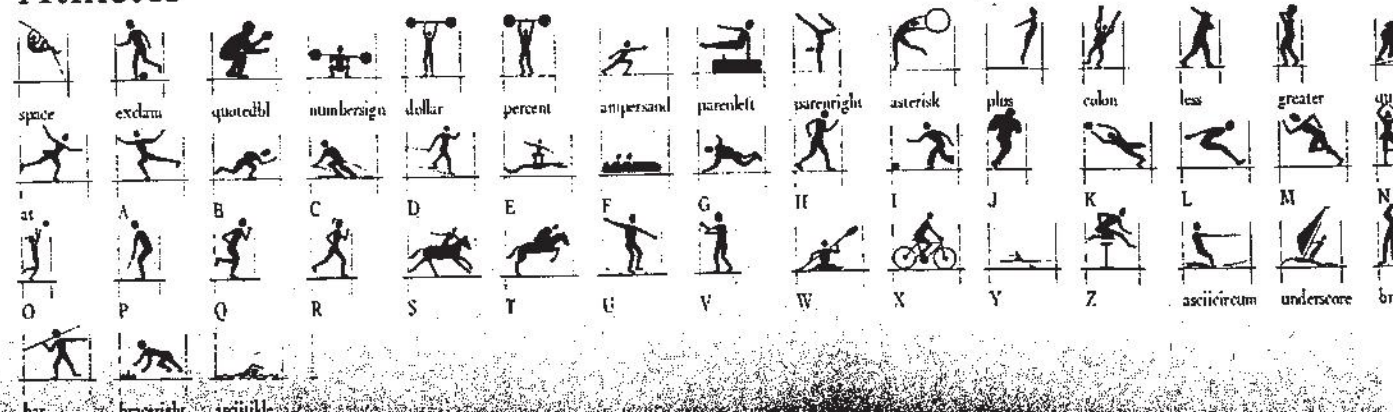
Ariston ExtraBold Italic



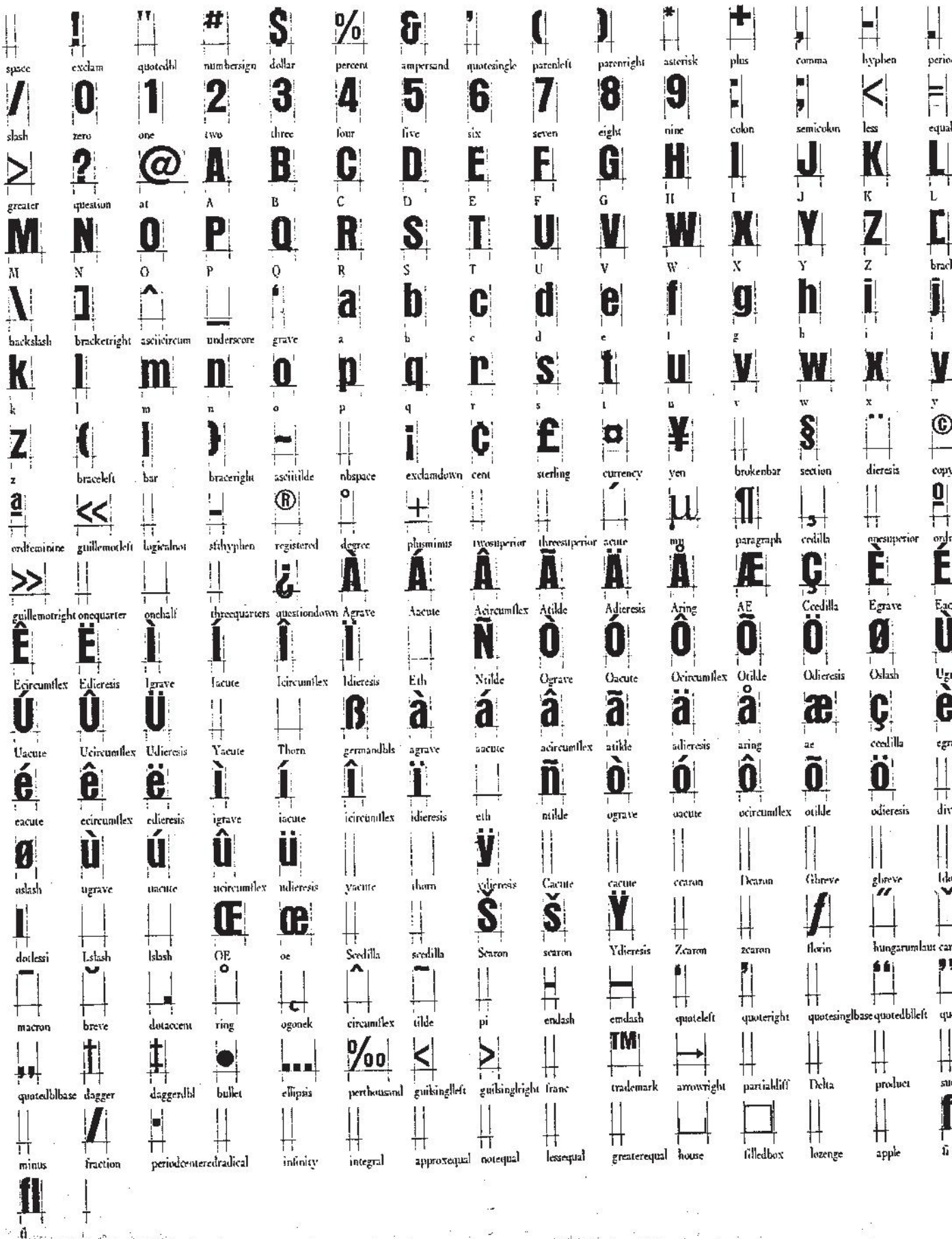
Arctic



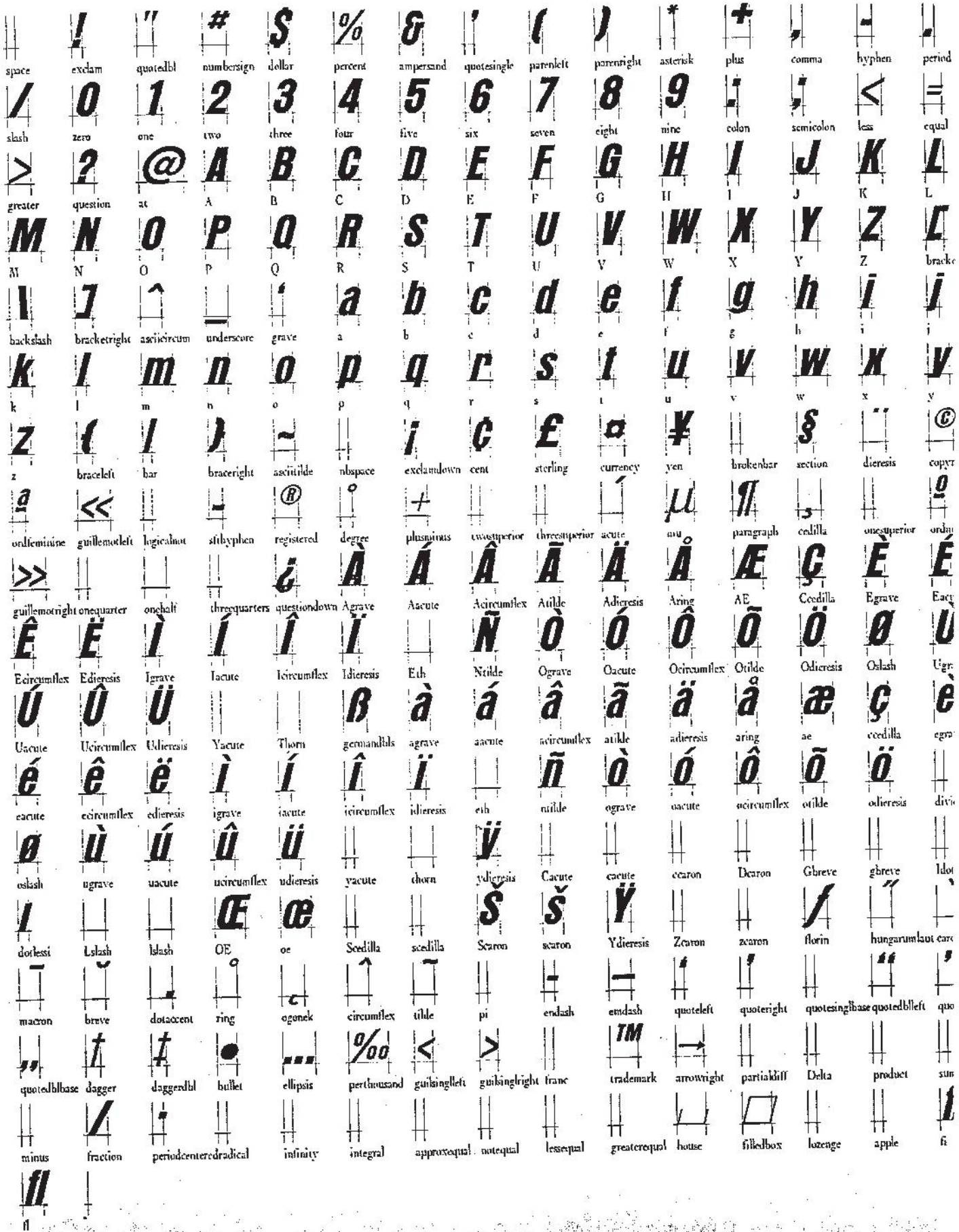
Athletes



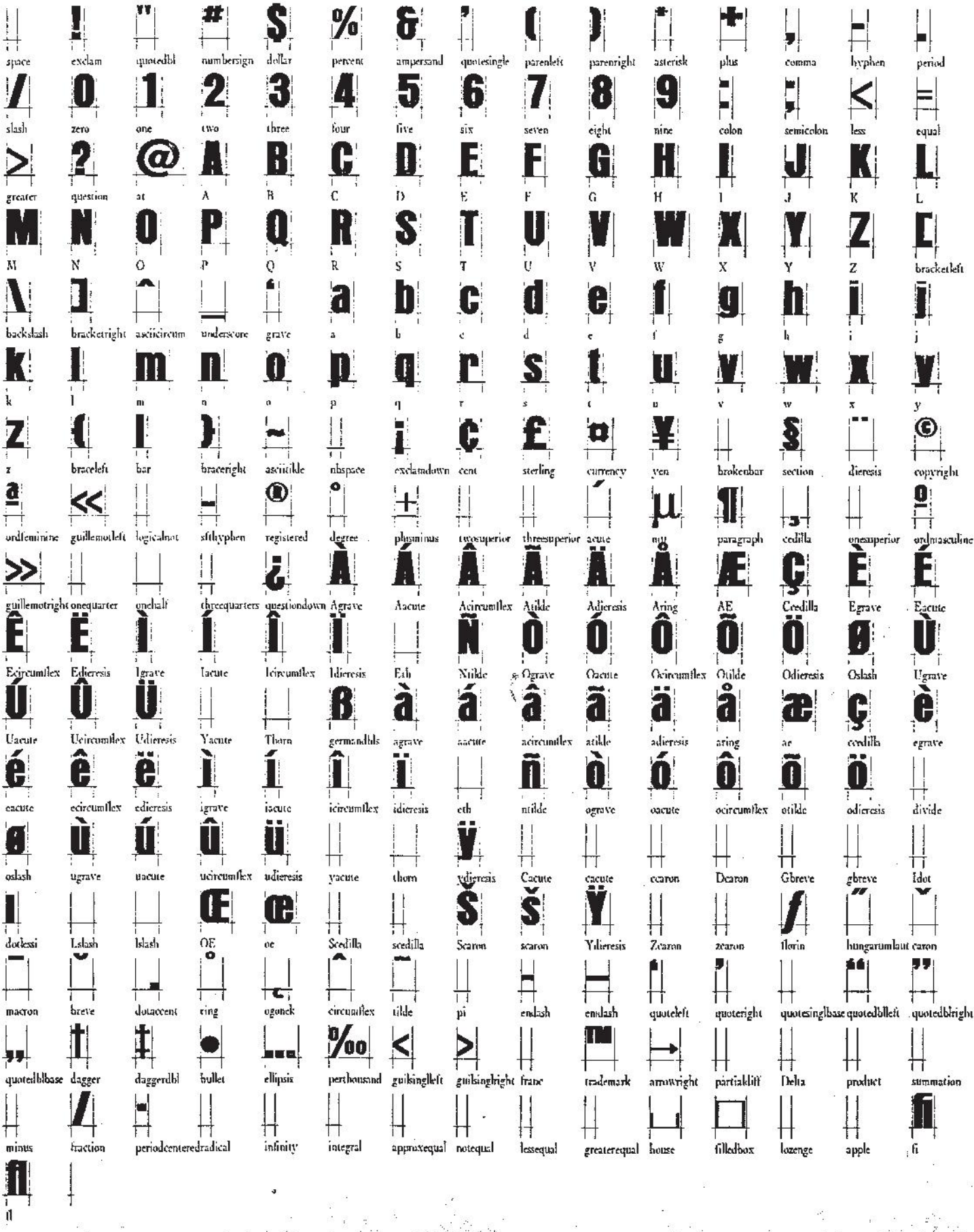
Aurora


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i
k l m n o p q r s t u v w x
z braceleft bar braceright asciitilde nbspace exclamdown cent sterling currency yen brokenbar section dieresis
ordfeminine guillemotleft logicalnot sfthyphen registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior
guillemotright onequarter onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave
Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis Oslash
Uacute Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla
eacute ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis
oslash ugrave uacute ucircumflex udieresis yacute thorn ydieresis Cacute cacute ccaron Dcaron Gbreve gbreve
dotlessi Lslash lslash OE oe Scedilla scedilla Scaron scaron Ydieresis Zcaron zcaron florin hungarumlaut
macron breve dotaccent ring ogonek circumflex tilde pi endash emdash quoteleft quoteright quotesinglbase quotedblleft
quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright franc trademark arrowright partialdiff Delta product
minus fraction periodcenteredradical infinity integral approxequal notequal lessequal greaterequal house filledbox lozenge apple
fl

Aurora Italic



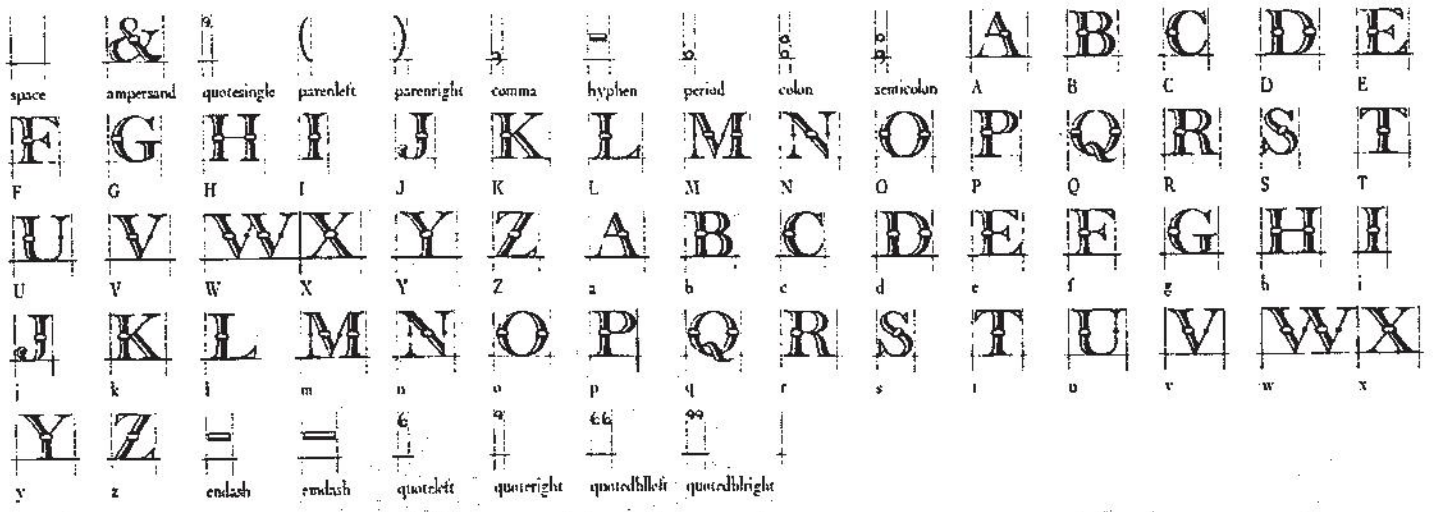
Aurora Bold


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde nbspace exclamdown cent sterling currency yen brokenbar section dieresis copyright
ordfeminine guillemotleft logicalnot sfthyphen registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine
guillemotright onequarter onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute
Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis Oslash Ugrave
Uacute Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave
eacute ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide
oslash ugrave uacute ucircumflex udieresis yacute thorn ydieresis Cacute cacute ccaron Dcaron Gbreve gbreve Idot
dotlessi Lslash lslash OE oe Scedilla scedilla Scaron scaron Ydieresis Zcaron zcaron florin hungarumlaut caron
macron breve dotaccent ring ogonek circumflex tilde pi endash emdash quoteleft quoteright quotesinglbase quotedblleft quotedblright
quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright franc trademark arrowright partialdiff Delta product summation
minus fraction periodcenteredradical infinity integral approxequal notequal lessequal greaterequal house filledbox lozenge apple fi
fl

BalletEngraved



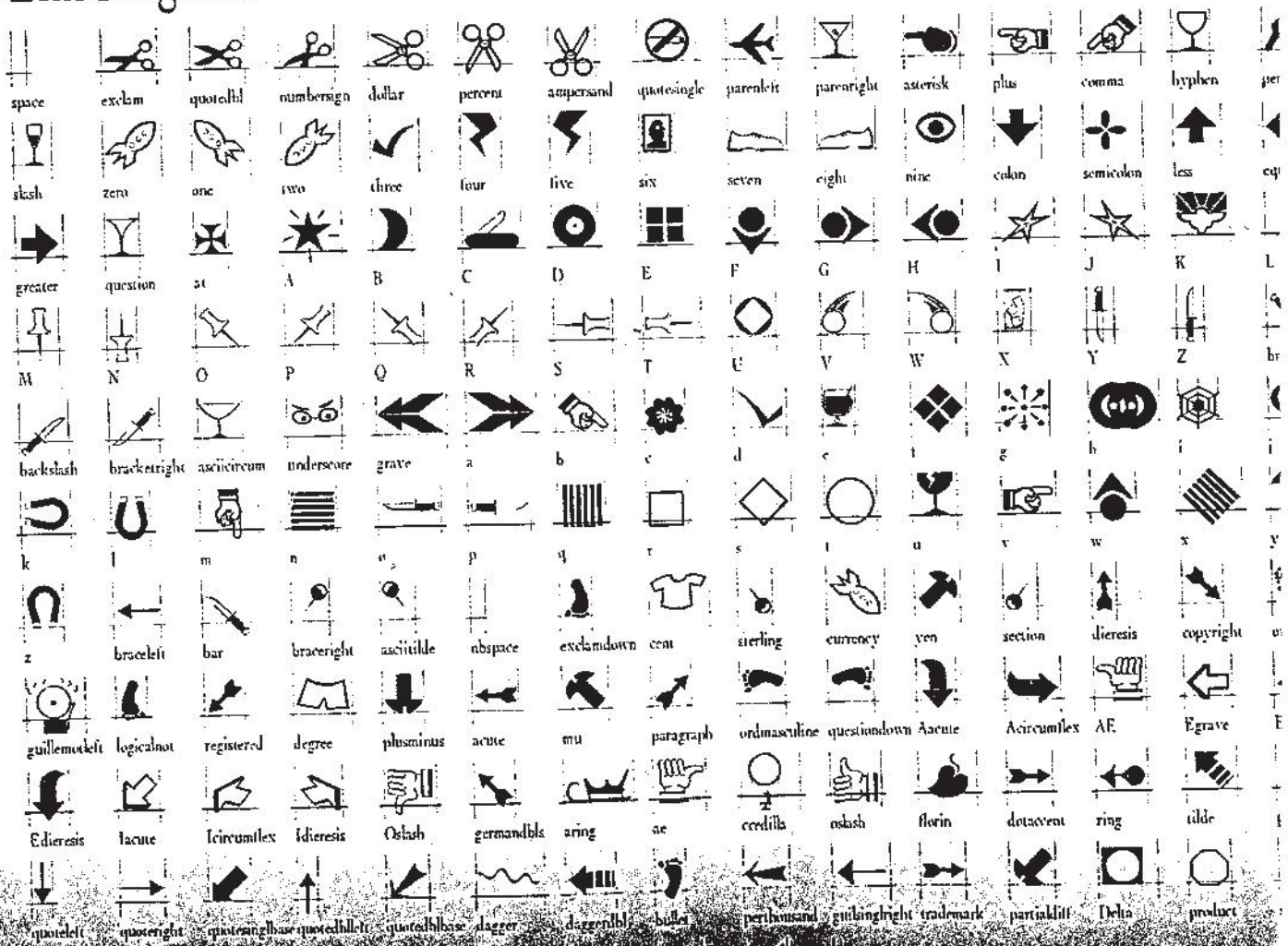
Beffle



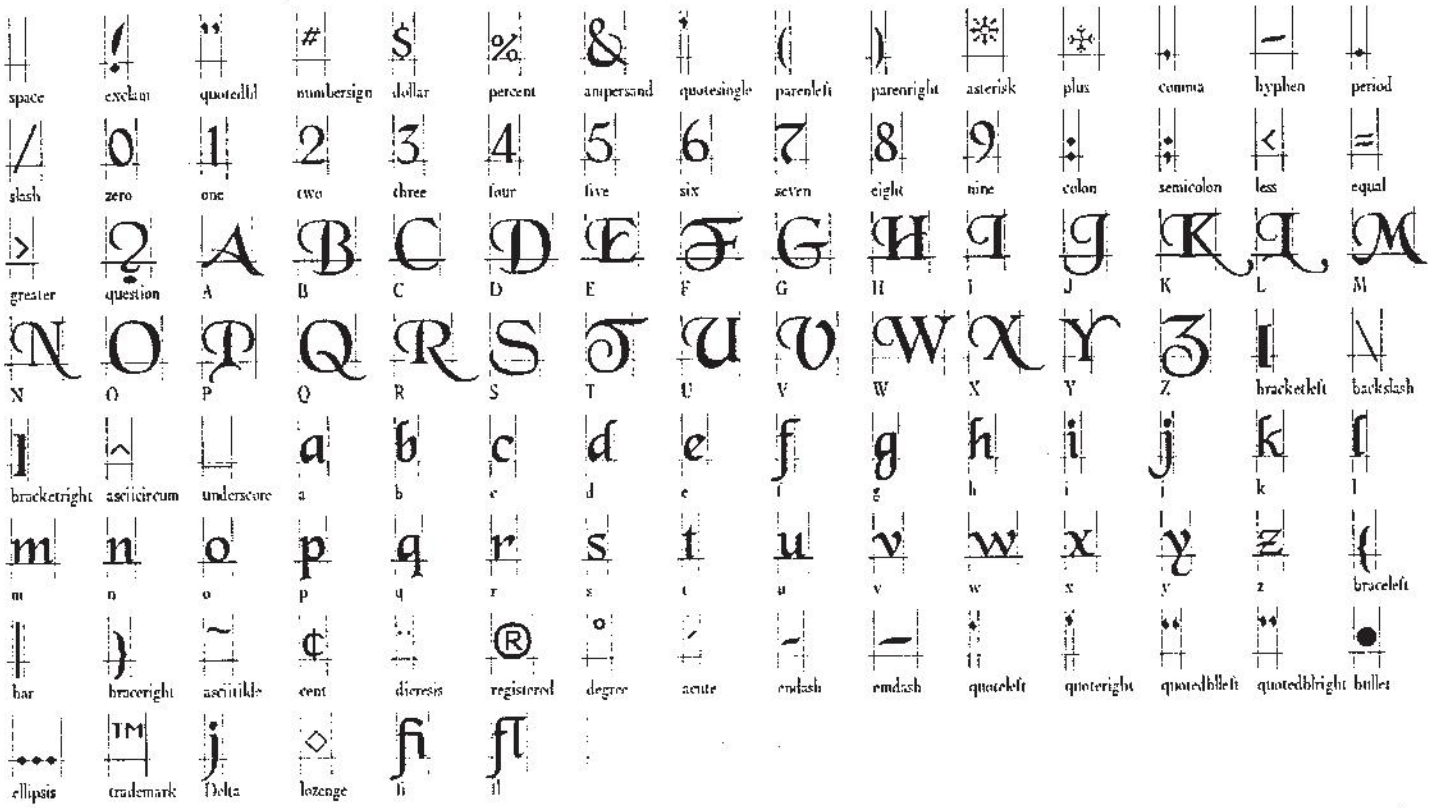
Berns



BillsDingbats



BlackChancery



Bodacious


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron
Zcaron zcaron florin hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus
periodcentered fi fl

Broadway


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright ordfeminine
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave Uacute
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron Ydieresis
Zcaron zcaron florin hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash quoteleft
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus fraction
periodcenteredfi fi fl fl

CableDingbats



space dollar zero four five six seven nine A C

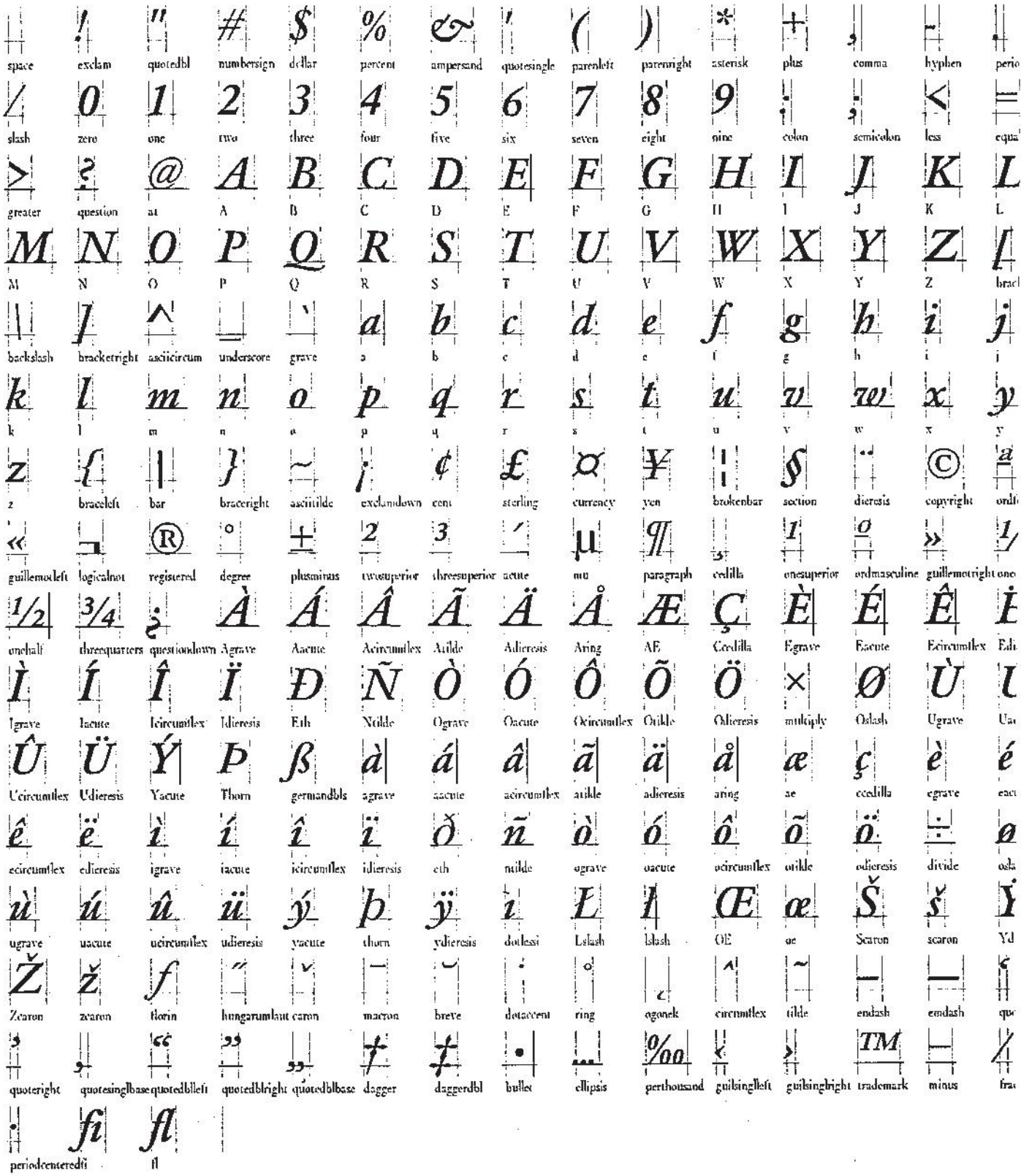
F H M X Q T U V a b

c e h m c cedilla

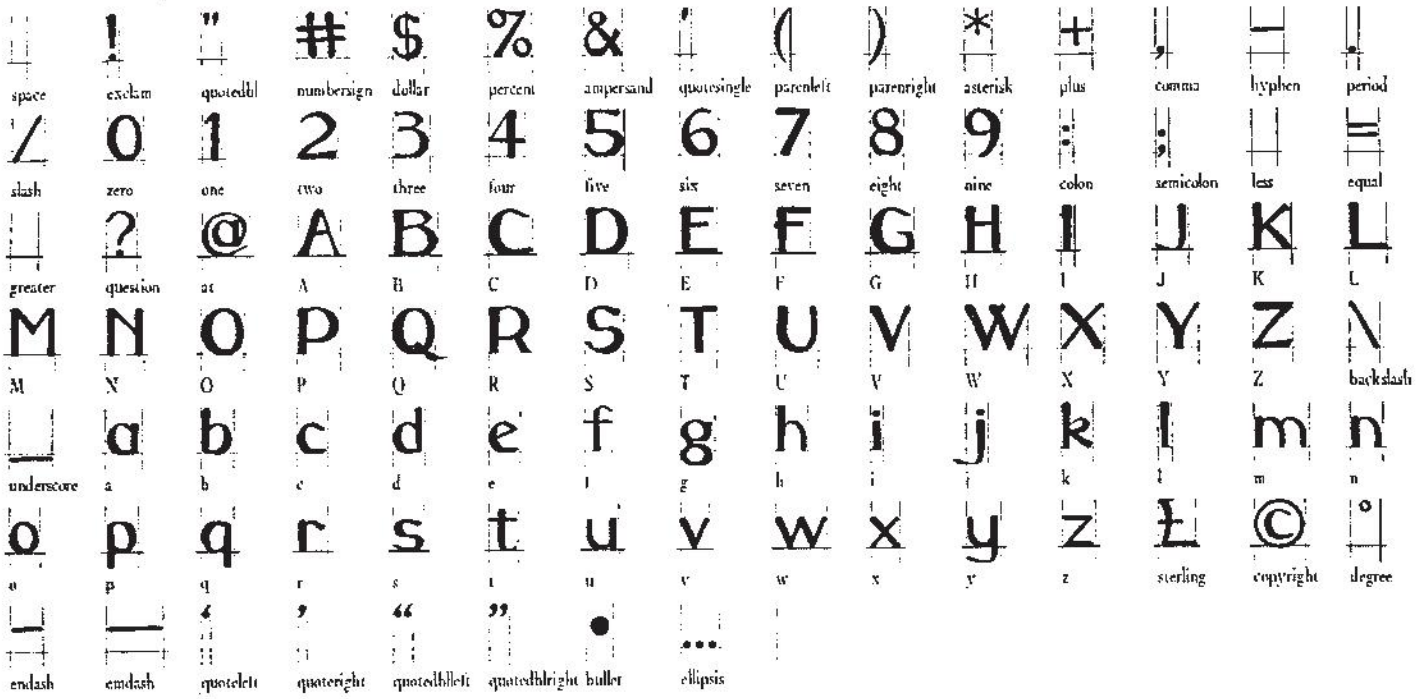
Calumet


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright ordfeminine
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave Uacute
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron Ydieresis
Zcaron zcaron florin hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash quoteleft
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus fraction
periodcenteredfi fi fl

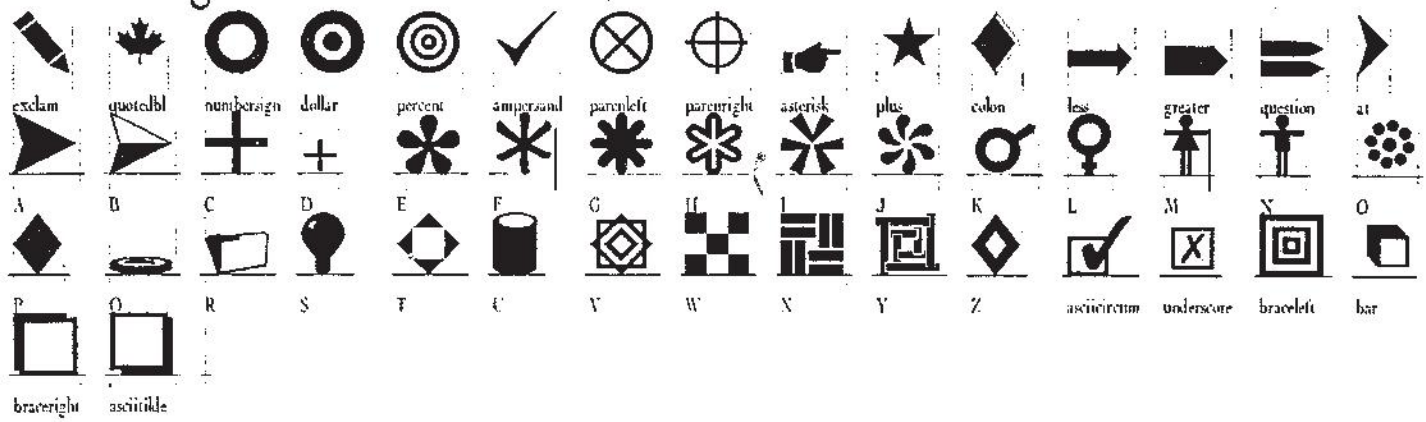
Calumet Italic



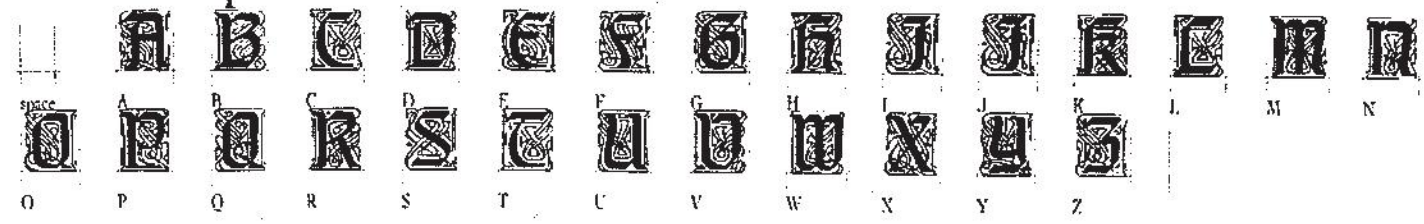
Caraway Bold



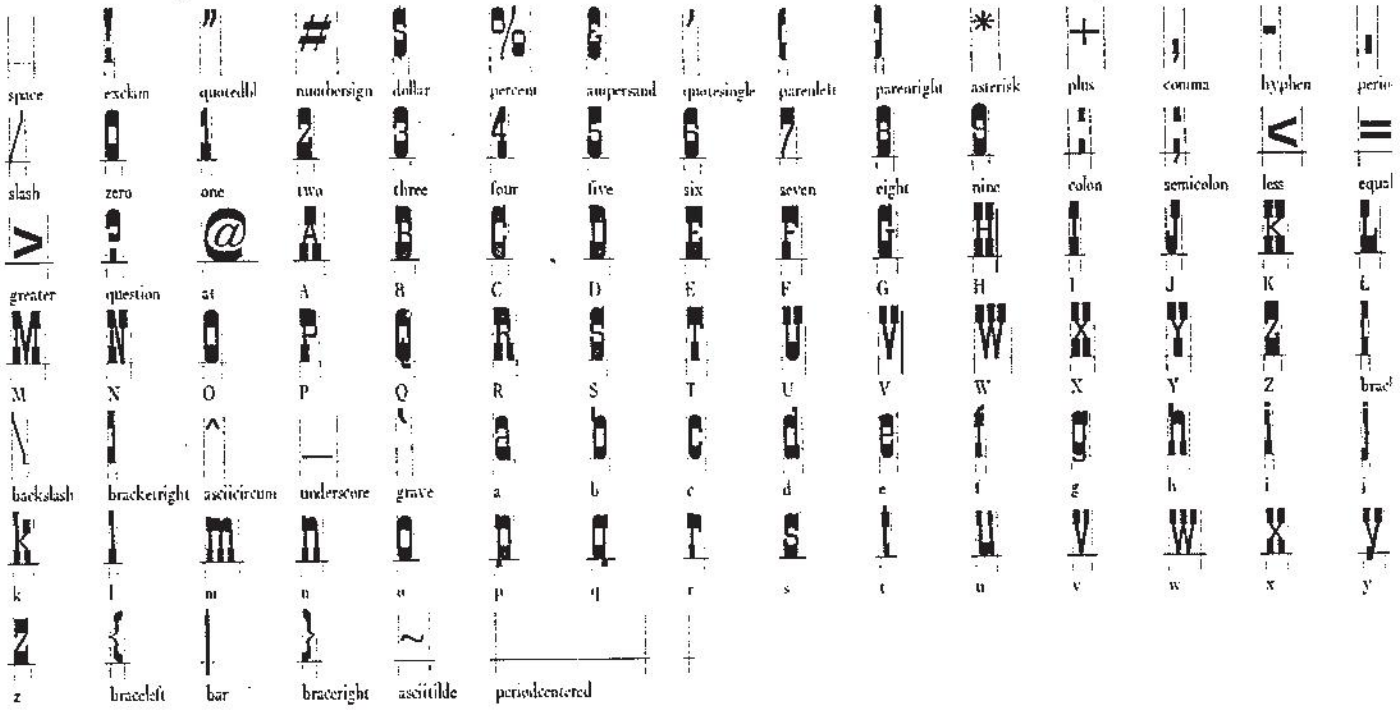
Carr Dingbats



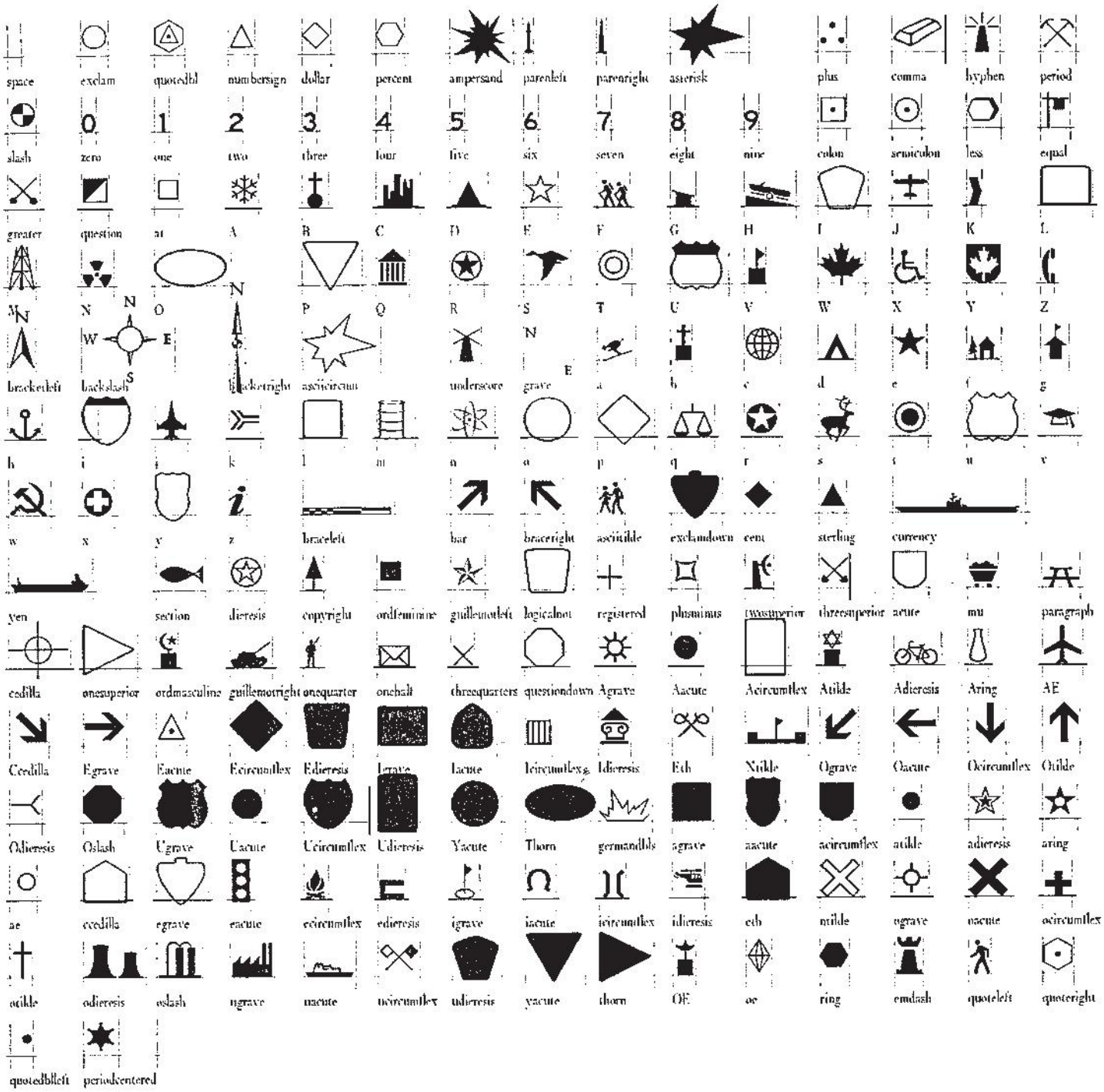
CarrickCaps



CartWright


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z brac
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde periodcentered

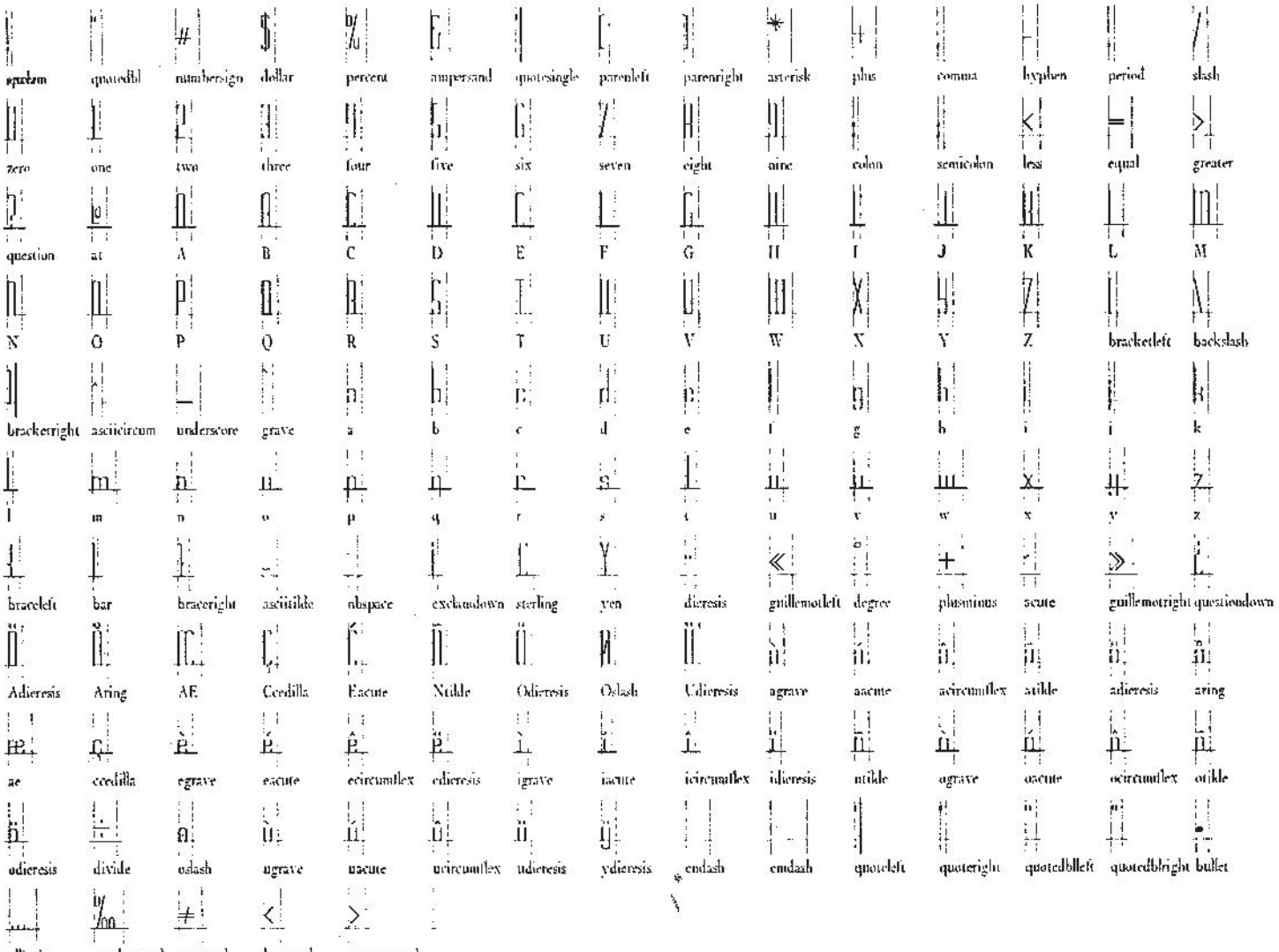
Carto


space exclam quotedbl numbersign dollar percent ampersand parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z
bracketleft backslash bracketright asciicircum underscore grave a b c d e f g
h i j k l m n o p q r s t u v
w x y z braceleft bar braceright asciitilde exclamdown cent sterling currency
yen section dieresis copyright ordfeminine guillemotleft logicalnot registered macron twosuperior threesuperior acute mu paragraph
cedilla onesuperior ordmasculine guillemotright onequarter onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE
Ccedilla Egrave Eacute Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde
Odieresis Oslash Ugrave Uacute Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring
ae ccedilla egrave eacute ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex
otilde odieresis oslash ugrave uacute ucircumflex udieresis yacute thorn OE oe ring emdash quoteleft quoteright
quotedblleft periodcentered

CharlsOpenFace



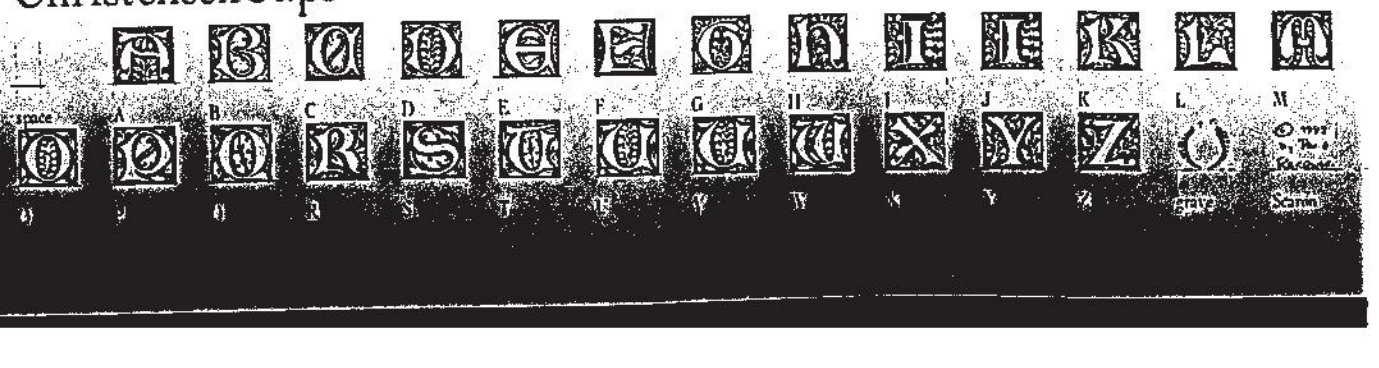
Chasline


space
quotedbl
numbersign
dollar
percent
ampersand
quotesingle
parenleft
parenright
asterisk
plus
comma
hyphen
period
slash
zero
one
two
three
four
five
six
seven
eight
nine
colon
semicolon
less
equal
greater
question
at
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
Z
bracketleft
backslash
bracketright
asciicircum
underscore
grave
a
b
c
d
e
f
g
h
i
j
k
l
m
n
o
p
q
r
s
t
u
v
w
x
y
z
braceleft
bar
braceright
asciitilde
nbspace
exclamdown
sterling
yen
dieresis
guillemotleft
degree
plusminus
acute
guillemotright
questiondown
Adieresis
Aring
AE
Ccedilla
Eacute
Ntilde
Odieresis
Oslash
Udieresis
agrave
aacute
acircumflex
atilde
adieresis
aring
ae
ccedilla
egrave
eacute
ecircumflex
edieresis
igrave
iacute
icircumflex
idieresis
ntilde
ograve
oacute
ocircumflex
otilde
odieresis
divide
oslash
ugrave
uacute
ucircumflex
udieresis
ydieresis
endash
emdash
quoteleft
quoteright
quotedblleft
quotedblright
bullet
ellipsis
perthousand
notequal
lessequal
greaterequal

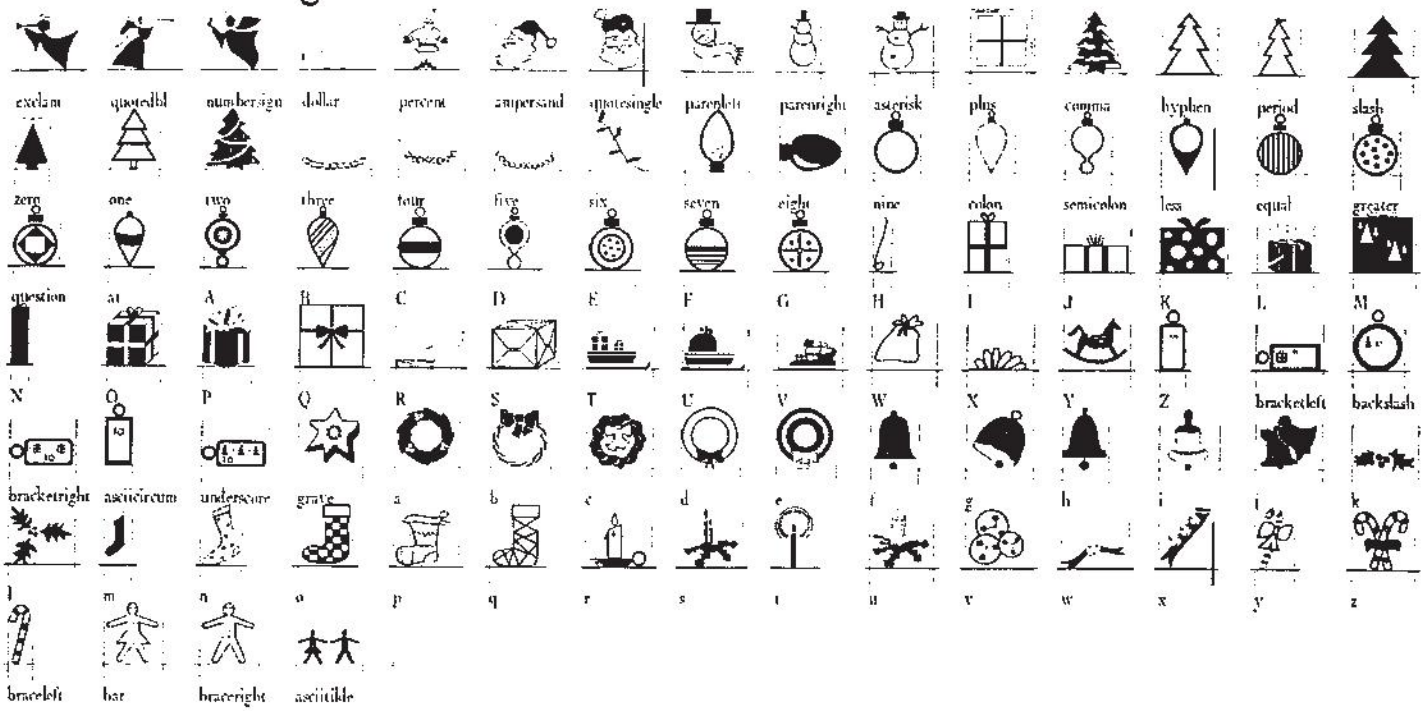
ChiliPepper-ExtraBold



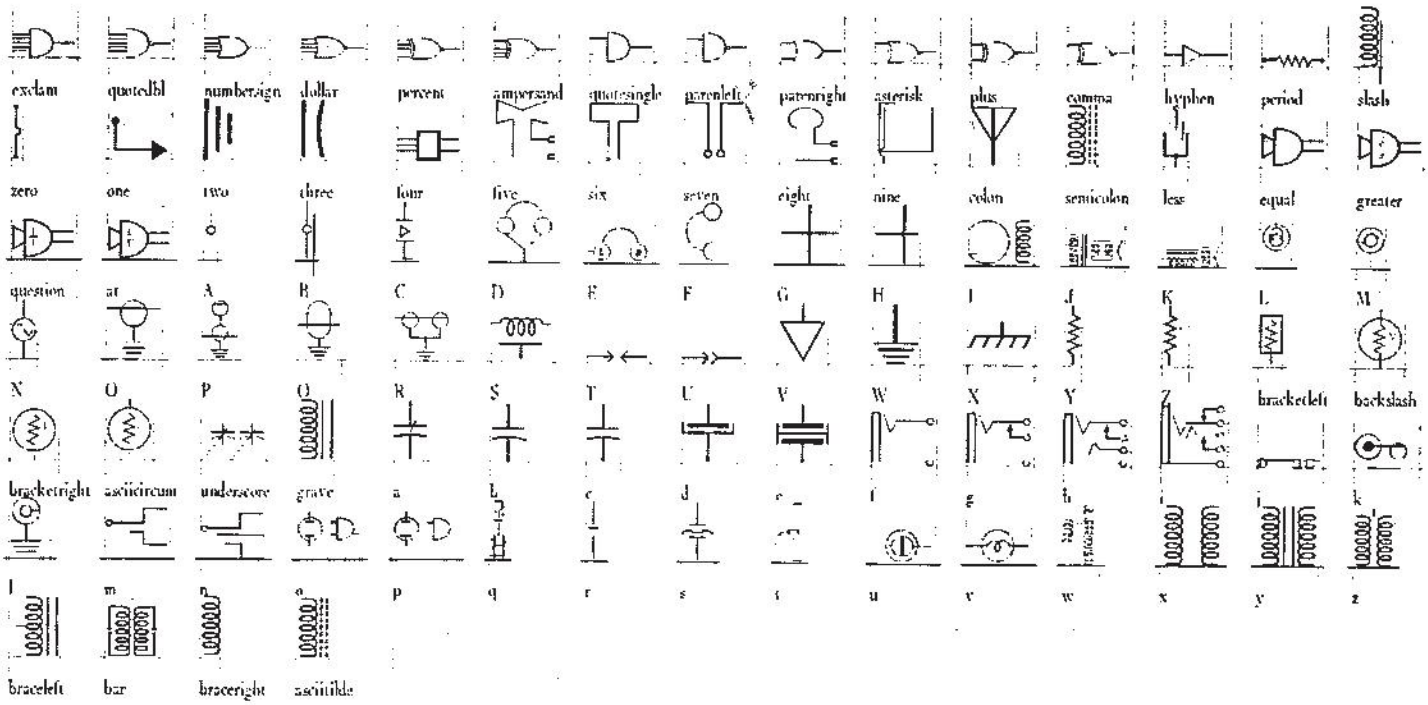
ChristensenCaps



Christmas Dingbats



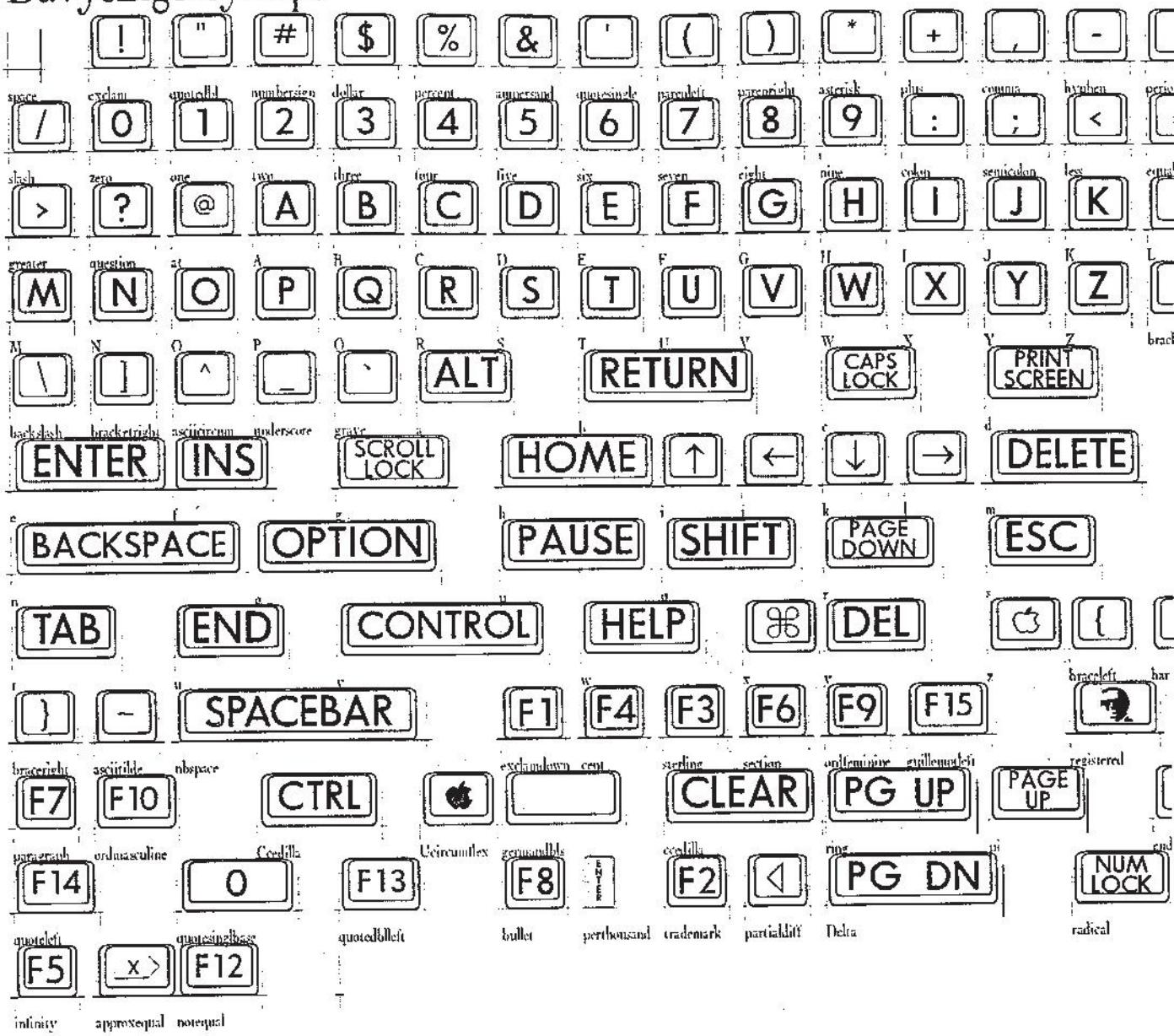
Circuit Board



Daytona


exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period slash
zero one two three four five six seven eight nine colon semicolon less equal greater
question at A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z bracketleft backslash
bracketright asciicircum underscore grave a b c d e f g h i j k
l m n o p q r s t u v w x y z
braceleft bar braceright asciitilde exclamdown cent sterling yen section dieresis copyright ordfeminine guillemotleft logicalnot registered
degree plusminus acute paragraph ordmasculine guillemotright questiondown Agrave Atilde Adieresis Aring AE Ccedilla Eacute Ntilde
Otilde Odieresis Oslash Udieresis germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute
ecircumflex edieresis igrave iacute icircumflex idieresis ntilde ograve oacute ocircumflex otilde odieresis divide oslash ugrave
uacute ucircumflex udieresis ydieresis OE oe endash emdash quoteleft quoteright quotedblleft quotedblright dagger bullet ellipsis
trademark Delta infinity approxequal notequal lessequal greaterequal lozenge

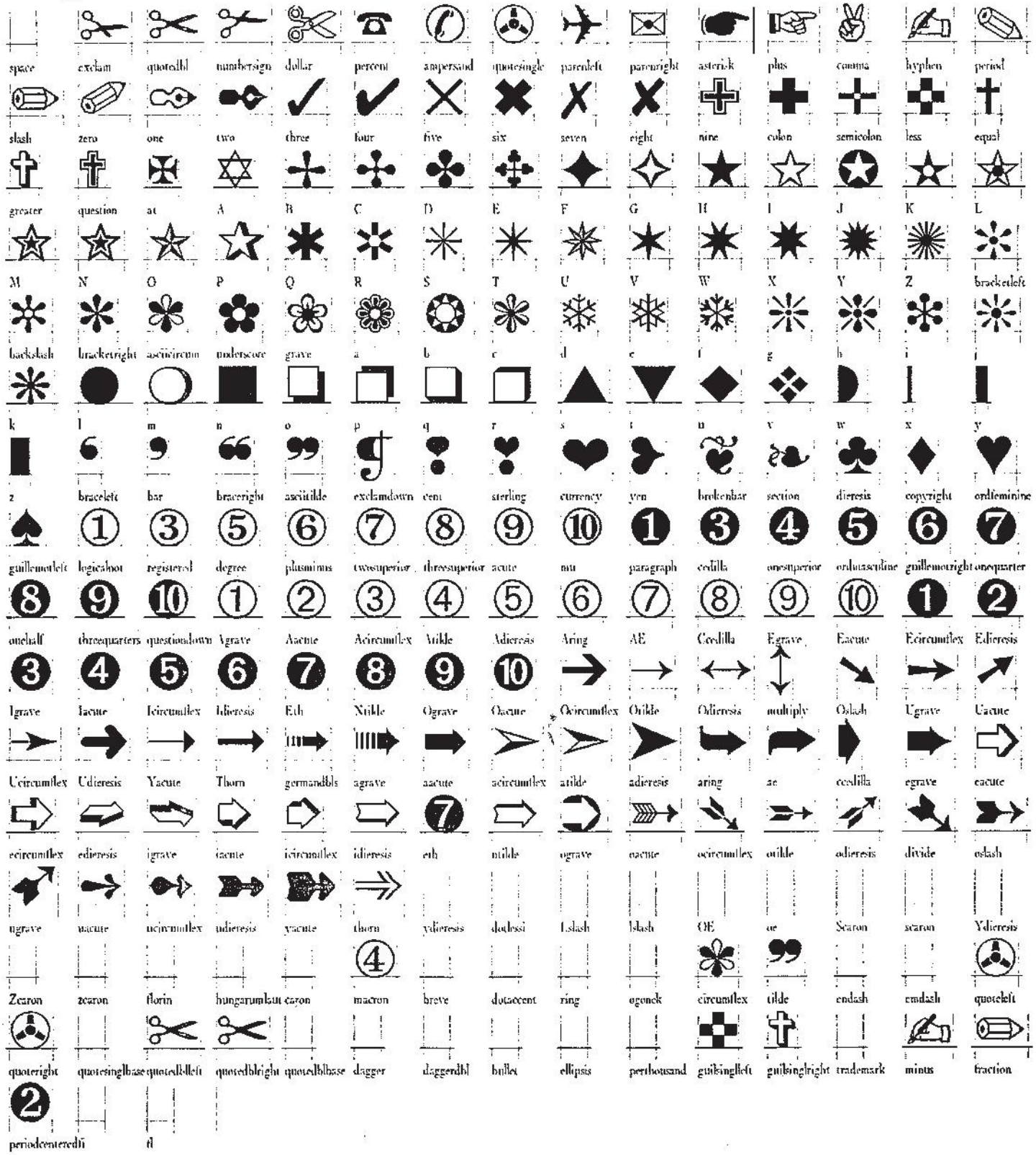
DavysBigKeyCaps



Diego


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron
Zcaron zcaron florin hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus
periodcenteredfi fl

Dingbats


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright ordfeminine
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave Uacute
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron Ydieresis
Zcaron zcaron florin hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash quoteleft
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus fraction
periodcenteredfi fl

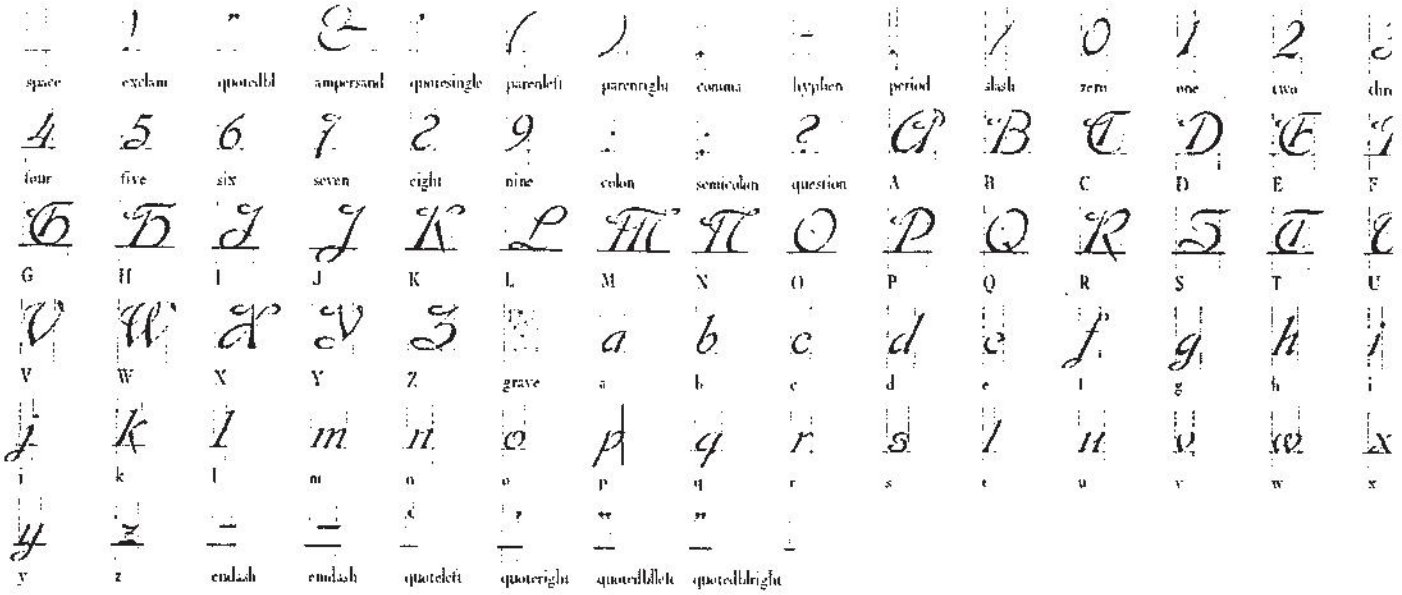
Dixon


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde nbspace exclamdown cent sterling currency yen brokenbar section
guillemotleft logicalnot sfthyphen registered degree twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright
questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis
Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis Oslash Ugrave Uacute Ucircumflex
Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute ecircumflex
igrave iacute icircumflex idieresis eth otilde ograve oacute ocircumflex otilde odieresis divide oslash ugrave
ucircumflex udieresis yacute thorn ydieresis Cacute cacute ccaron Dcaron Gbreve gbreve Idot dotlessi Lslash lslash
OE oe Scedilla scedilla Scaron scaron Ydieresis Zcaron zcaron florin hungarumlaut caron macron breve
ring ogonek circumflex tilde pi endash emdash quoteleft quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger
bullet ellipsis perthousand guilsinglleft guilsinglright franc trademark arrowright partialdiff Delta product summation minus fraction
radical infinity integral approxequal notequal lessequal greaterequal house fillbullbox lozenge apple fi fl

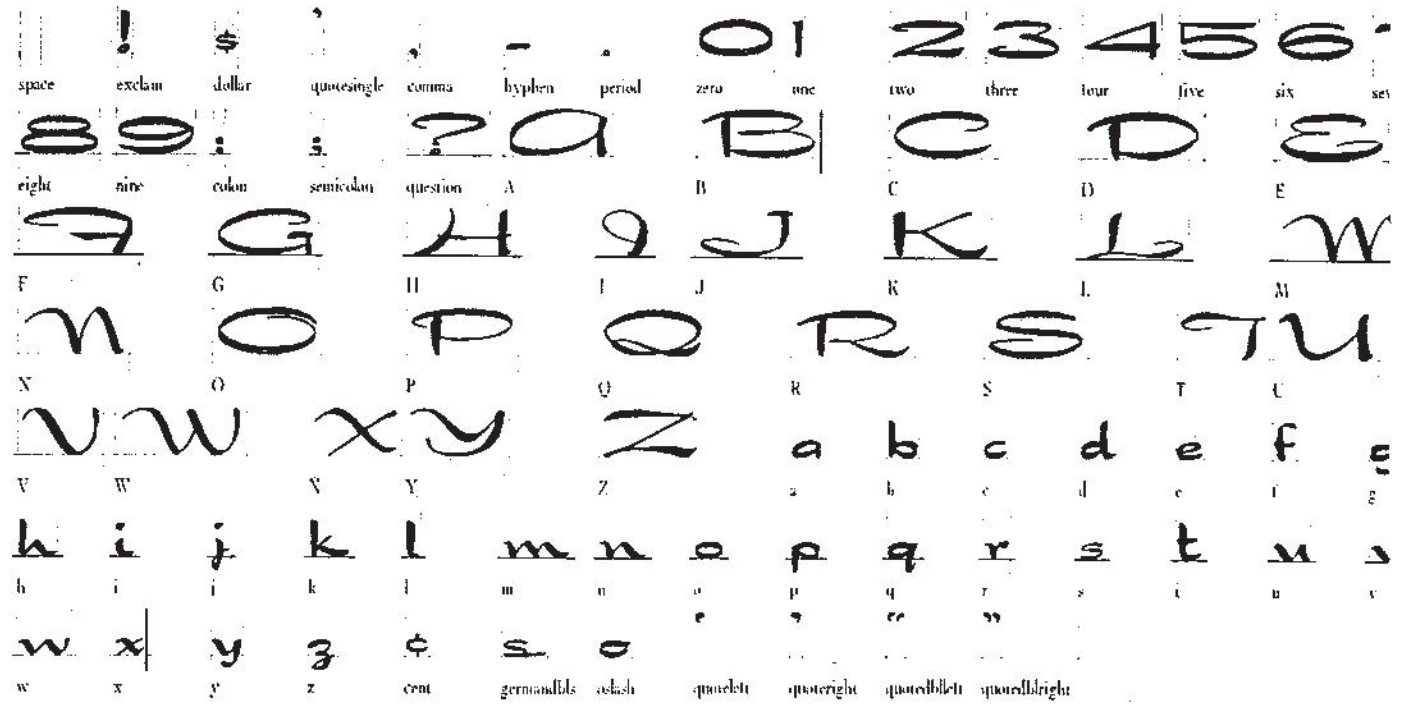
Dixon Italic



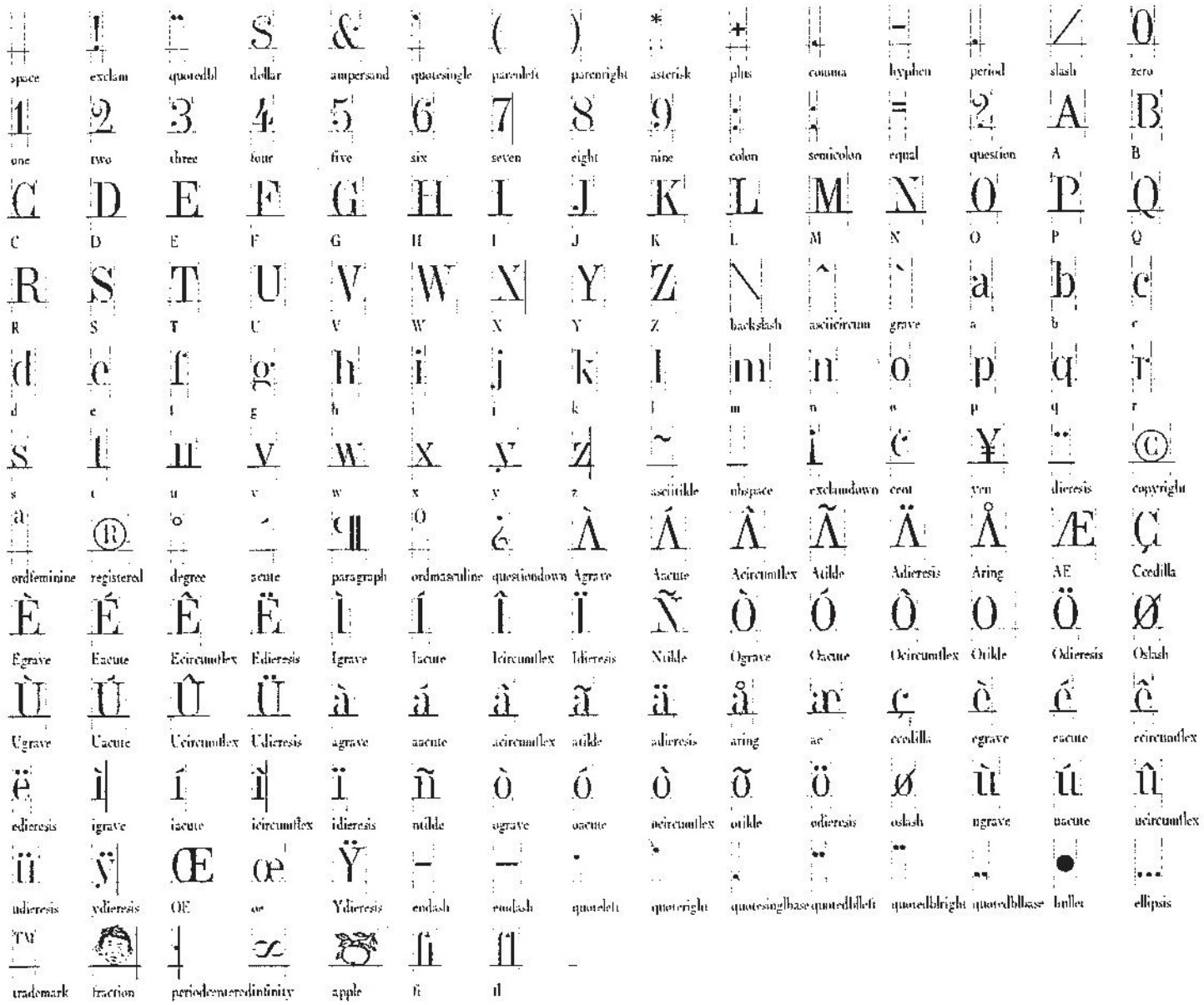
Dobkin Script



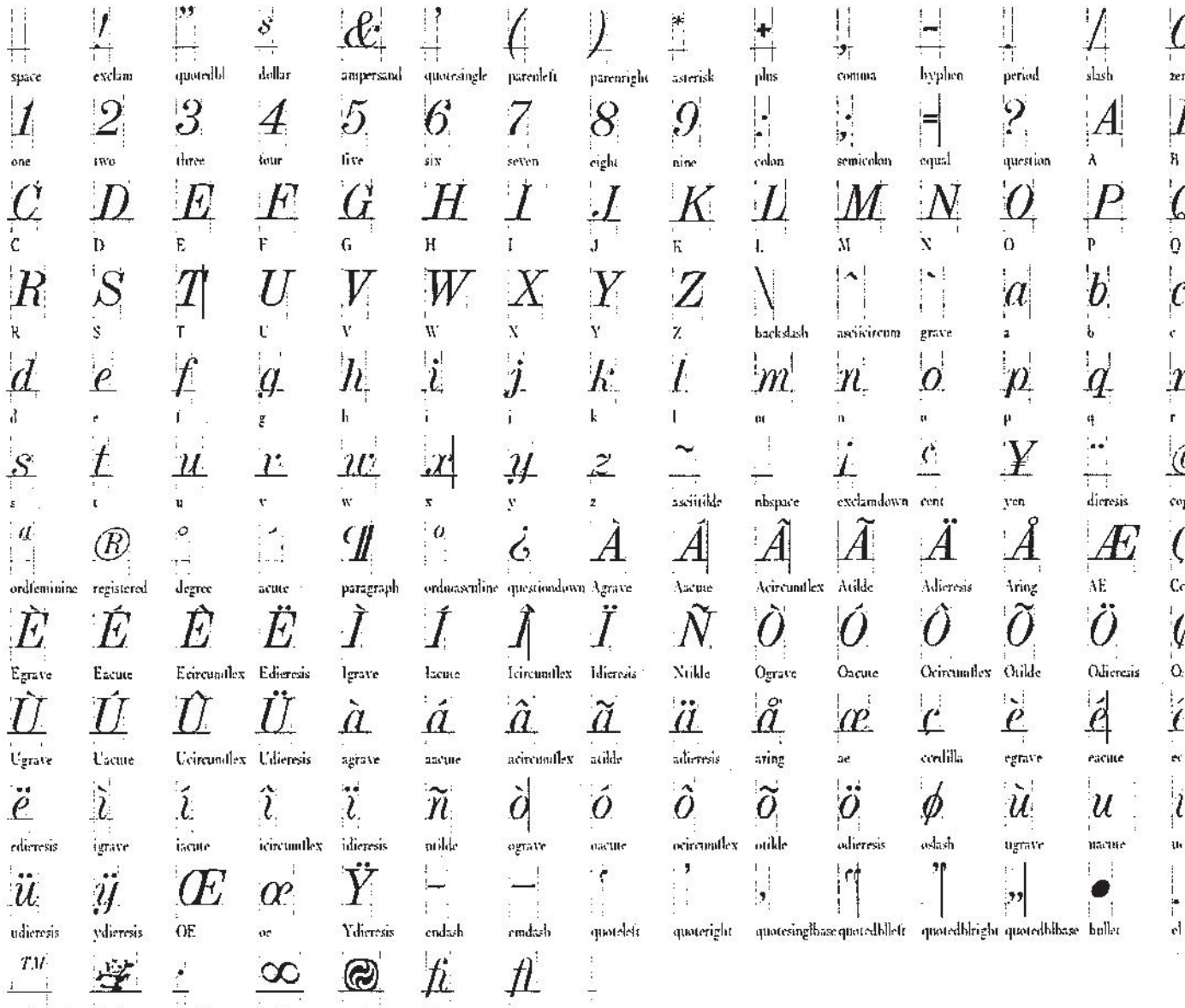
Dragonwick



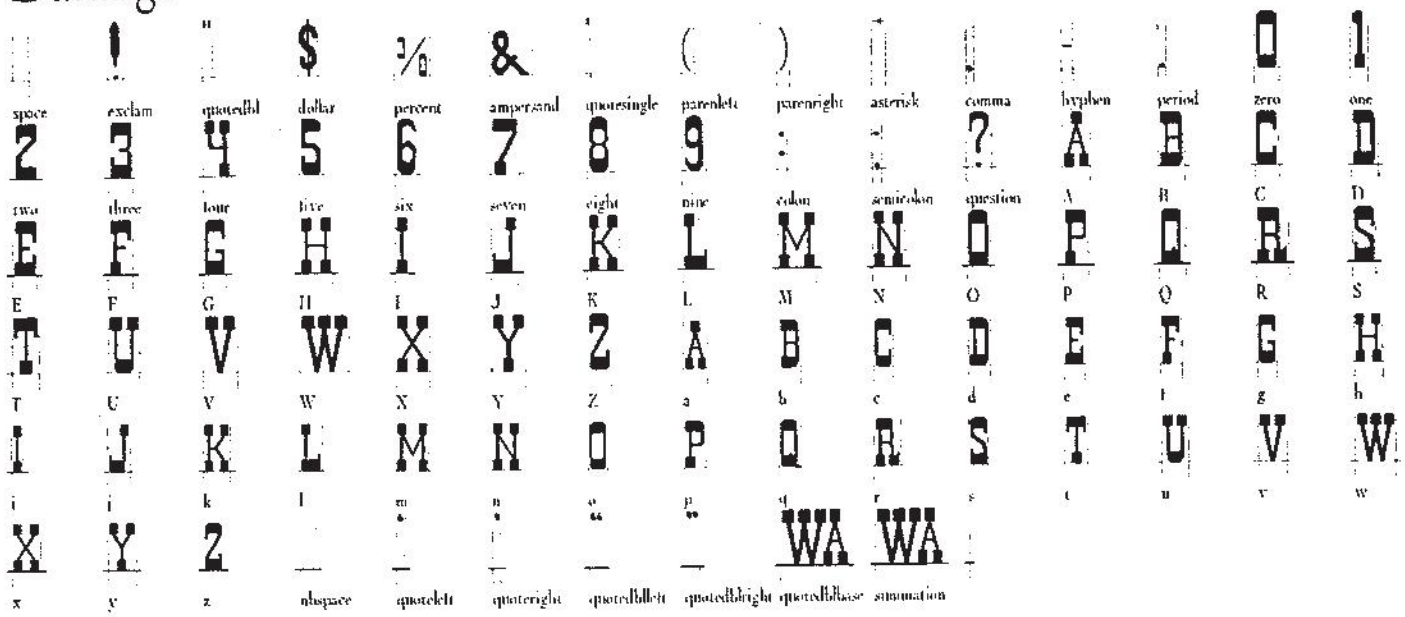
Dubiel


space exclam quotedbl dollar ampersand quotesingle parenleft parenright asterisk plus comma hyphen period slash zero
one two three four five six seven eight nine colon semicolon equal question A B
C D E F G H I J K L M N O P Q
R S T U V W X Y Z backslash asciicircum grave a b c
d e f g h i j k l m n o p q r
s t u v w x y z asciitilde nbspace exclamdown cent yen dieresis copyright
ordfeminine registered degree acute paragraph ordmasculine questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla
Egrave Eacute Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Ntilde Ograve Oacute Ocircumflex Otilde Odieresis Oslash
Ugrave Uacute Ucircumflex Udieresis agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute ecircumflex
edieresis igrave iacute icircumflex idieresis ntilde ograve oacute ocircumflex otilde odieresis oslash ugrave uacute ucircumflex
udieresis ydieresis OE oe Ydieresis endash emdash quoteleft quoteright quotesinglbase quotedblleft quotedblright quotedblbase bullet ellipsis
trademark fraction periodcentered infinity apple fi fl

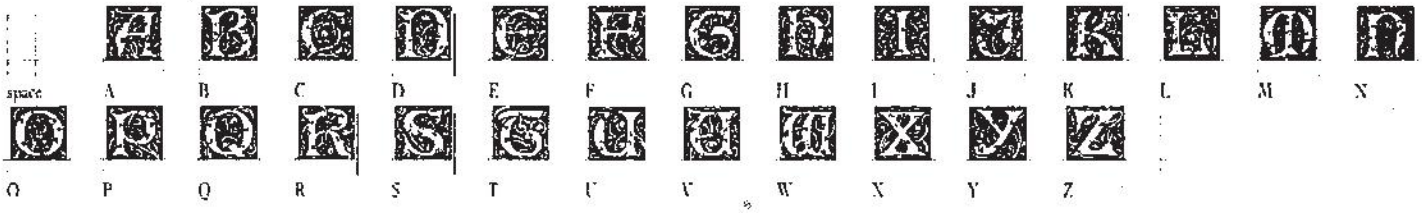
Dubiel Italic



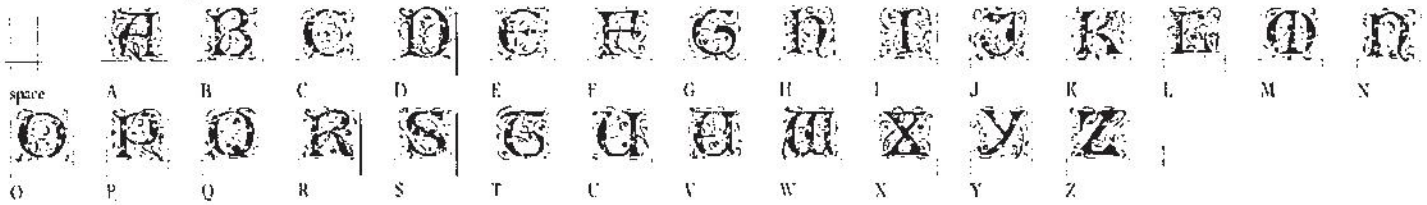
Durango



EileenCaps



EileenCaps-Black



EileensLittleZodiac



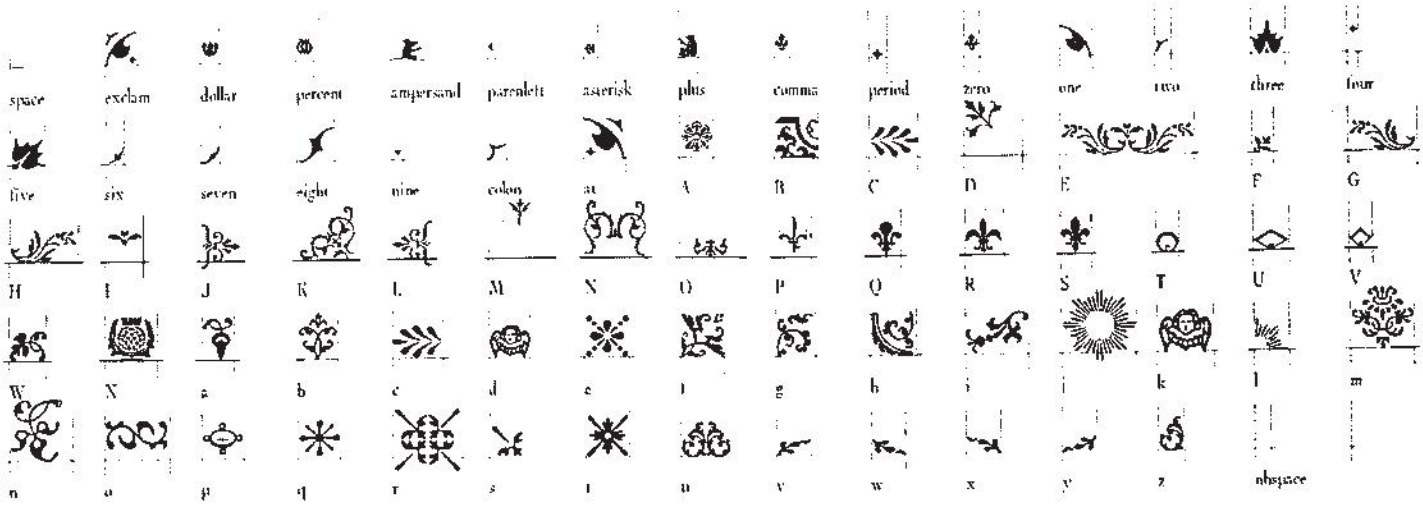
ElGarrett



Elizabeth-ANN



Fleurons



GoudyMedieval



Grand Old Style



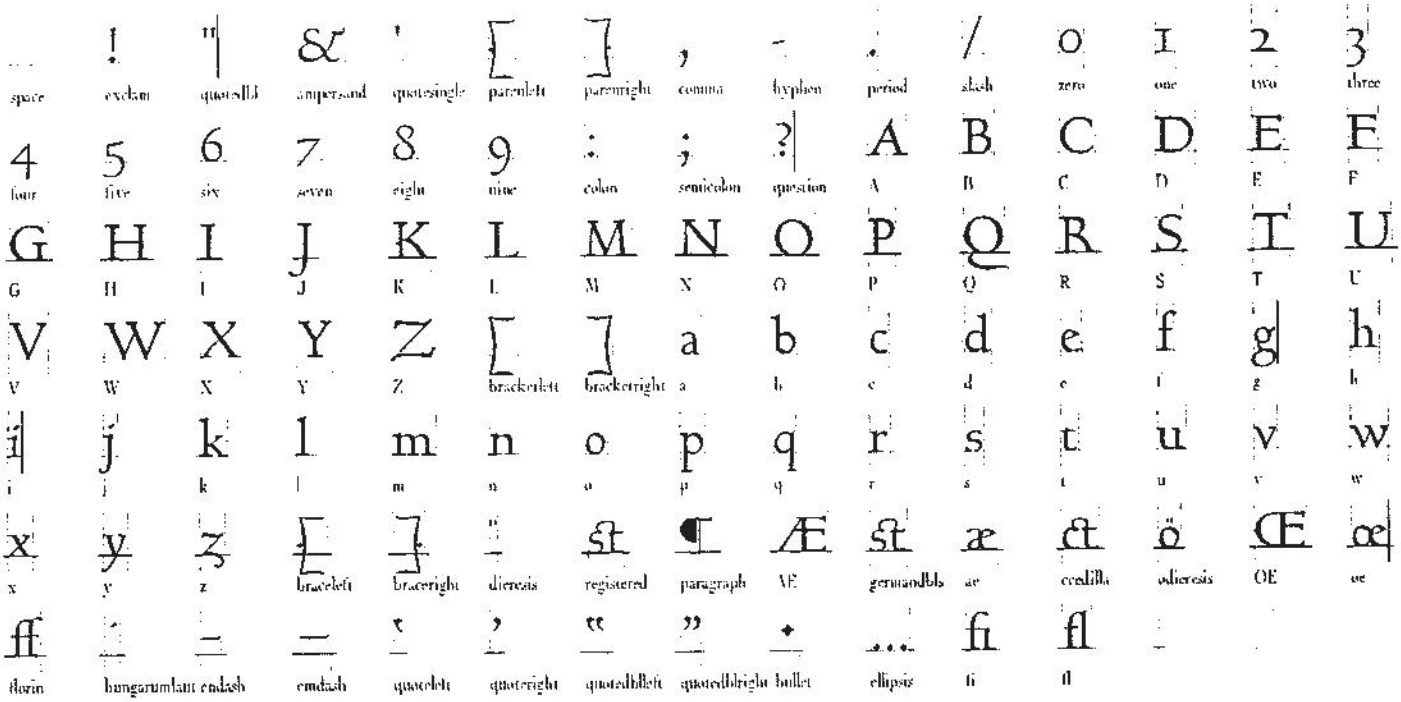
Grand Old Style Italic



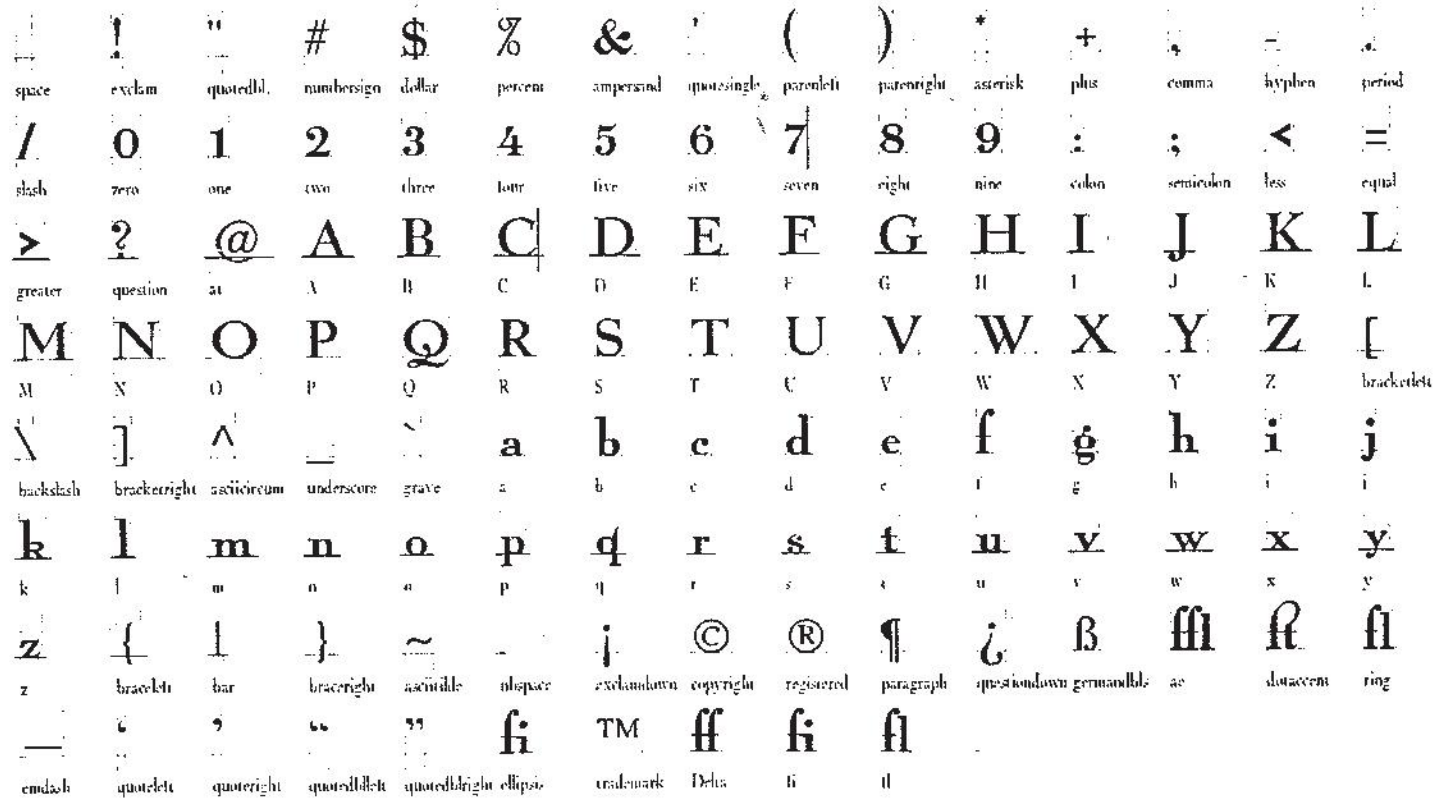
Grand Old Style Bold



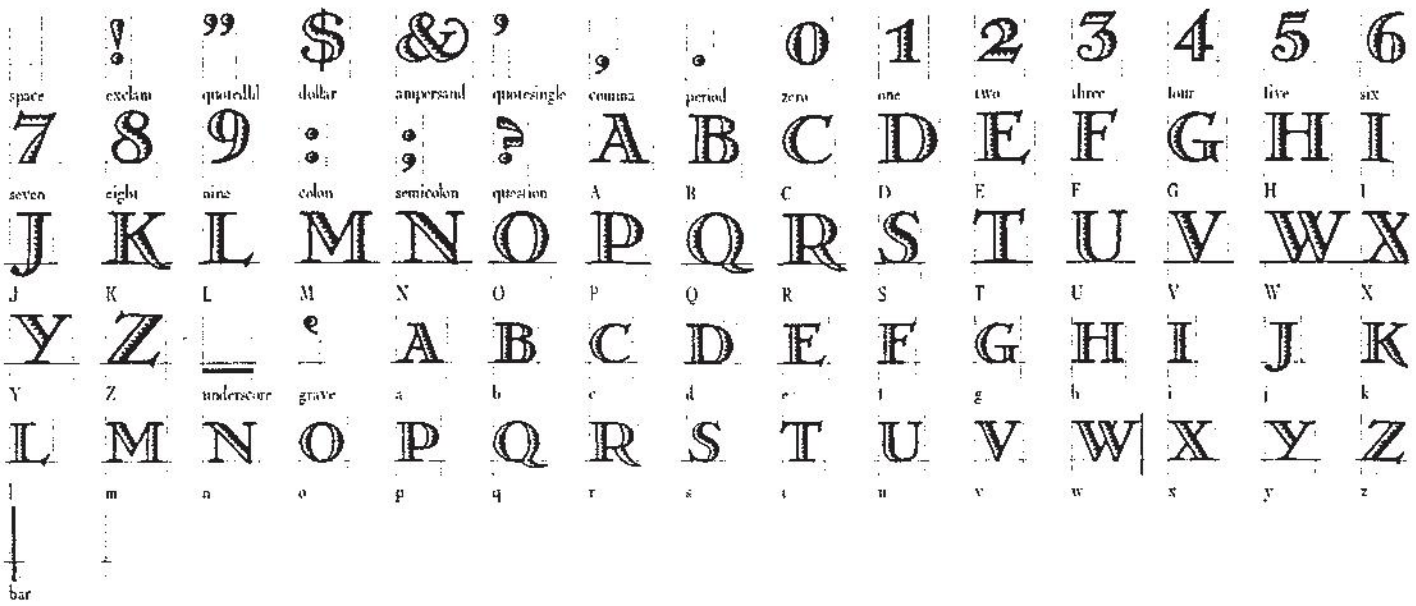
GrandHundred



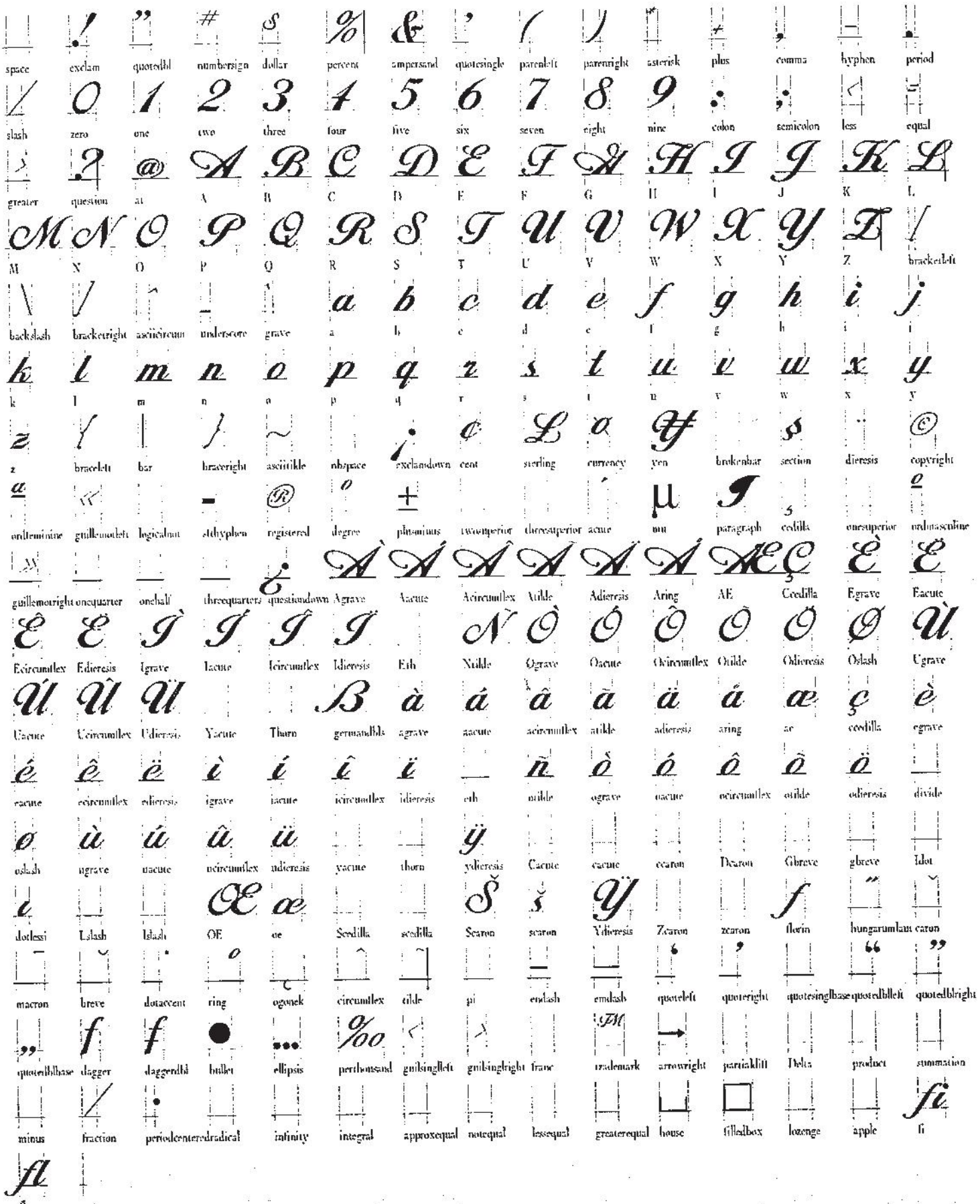
GraphicLight



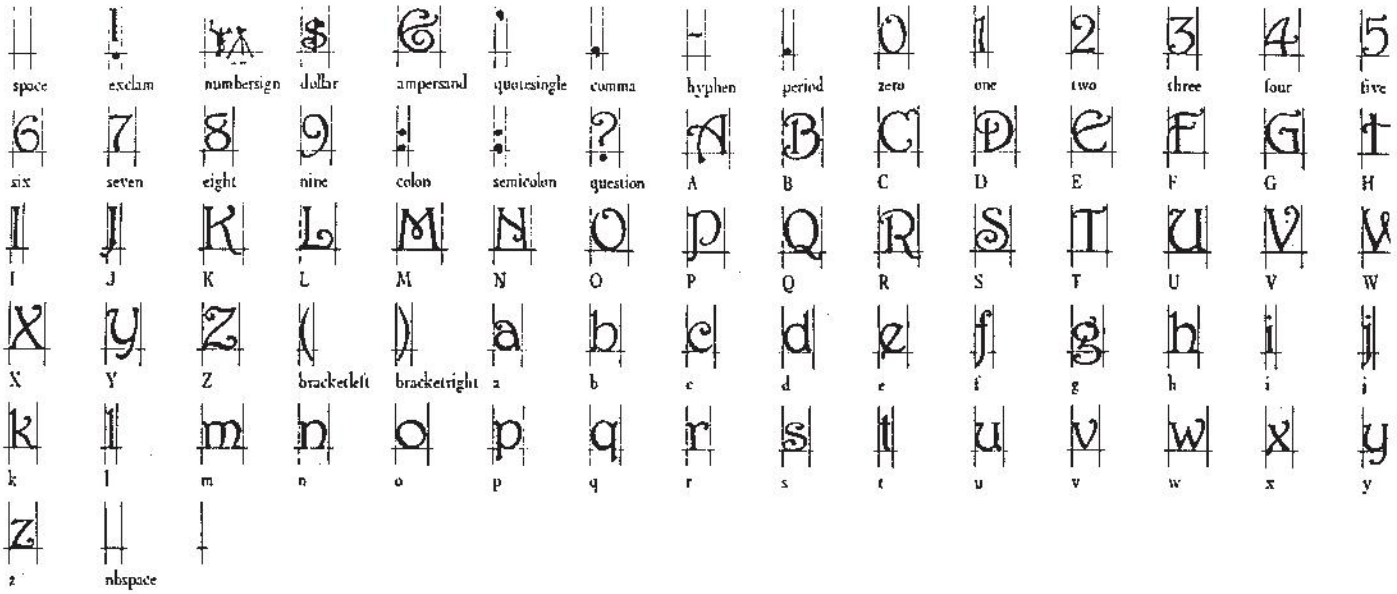
GrekoDeco


space exclam quotedbl dollar ampersand quotesingle comma period zero one two three four five six
seven eight nine colon semicolon question A B C D E F G H I
J K L M N O P Q R S T U V W X
Y Z underscore grave a b c d e f g h i j k
l m n o p q r s t u v w x y z
bar

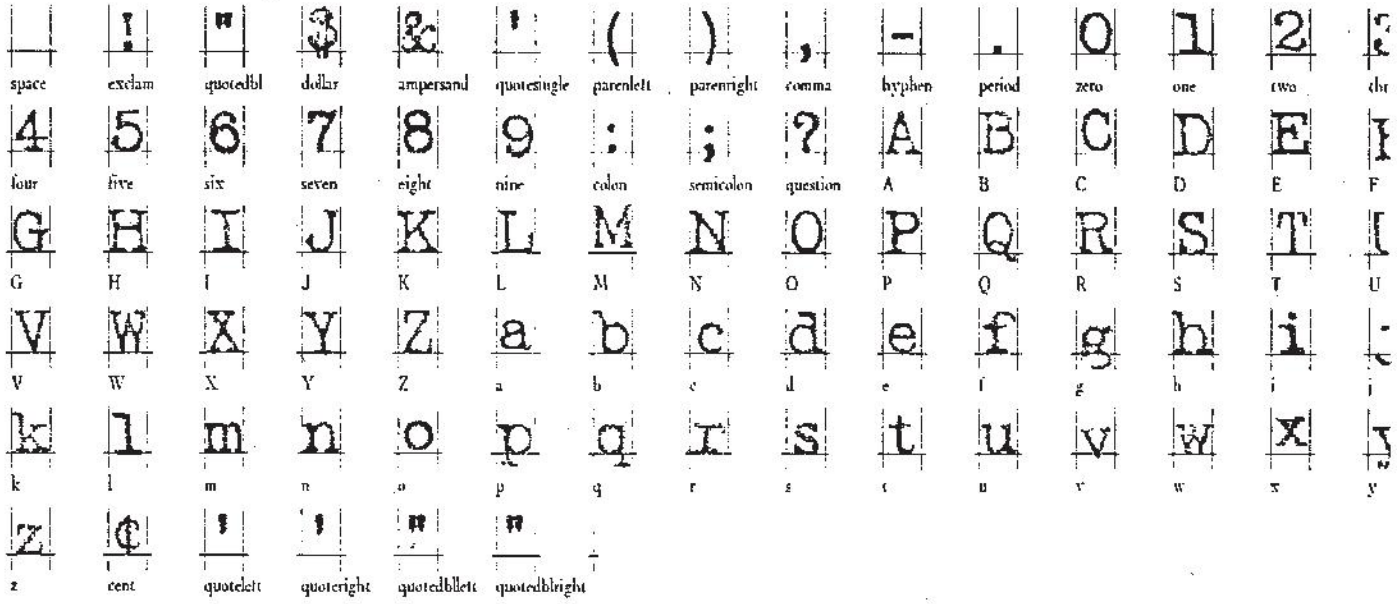
Hancock


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde nbspace exclamdown cent sterling currency yen brokenbar section dieresis copyright
ordfeminine guillemotleft logicalnot sfthyphen registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine
guillemotright onequarter onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute
Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis Oslash Ugrave
Uacute Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave
eacute ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide
oslash ugrave uacute ucircumflex udieresis yacute thorn ydieresis Cacute cacute ccaron Dcaron Gbreve gbreve Idot
dotlessi Lslash lslash OE oe Scedilla scedilla Scaron scaron Ydieresis Zcaron zcaron florin hungarumlaut caron
macron breve dotaccent ring ogonek circumflex tilde pi endash emdash quoteleft quoteright quotesinglbase quotedblleft quotedblright
quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright franc trademark arrowright partialdiff Delta product summation
minus fraction periodcenteredradical infinity integral approxequal notequal lessequal greaterequal house filledbox lozenge apple fi
fl

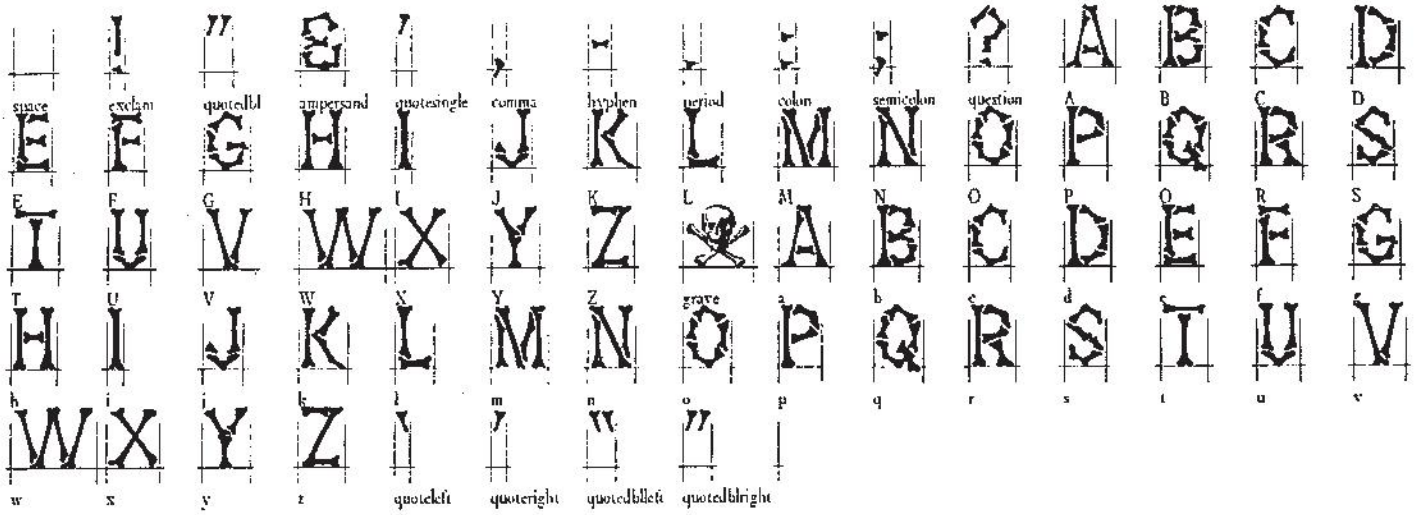
Harrington



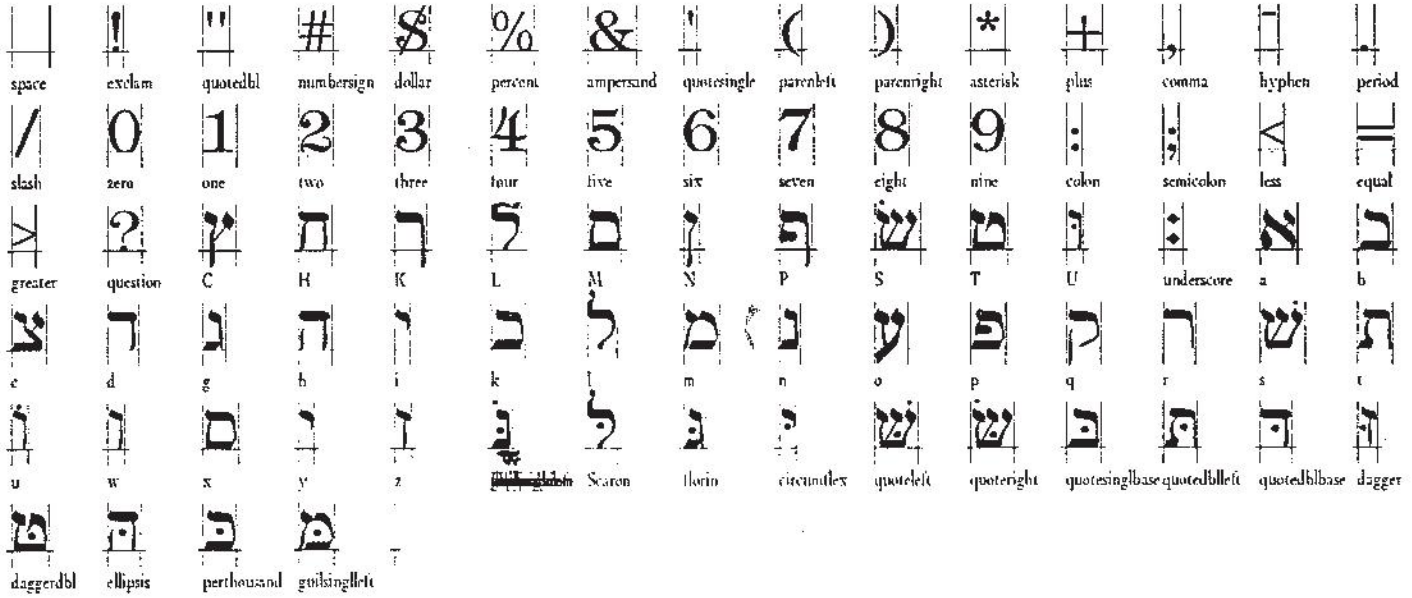
Harting



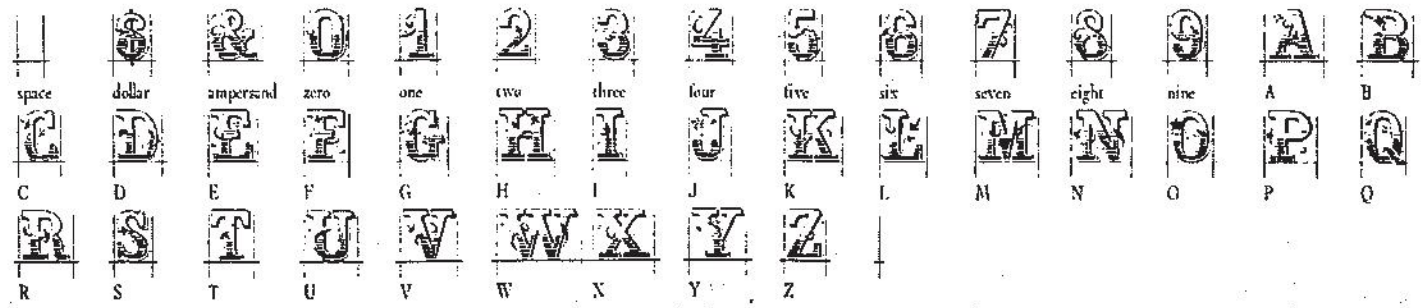
Headhunter



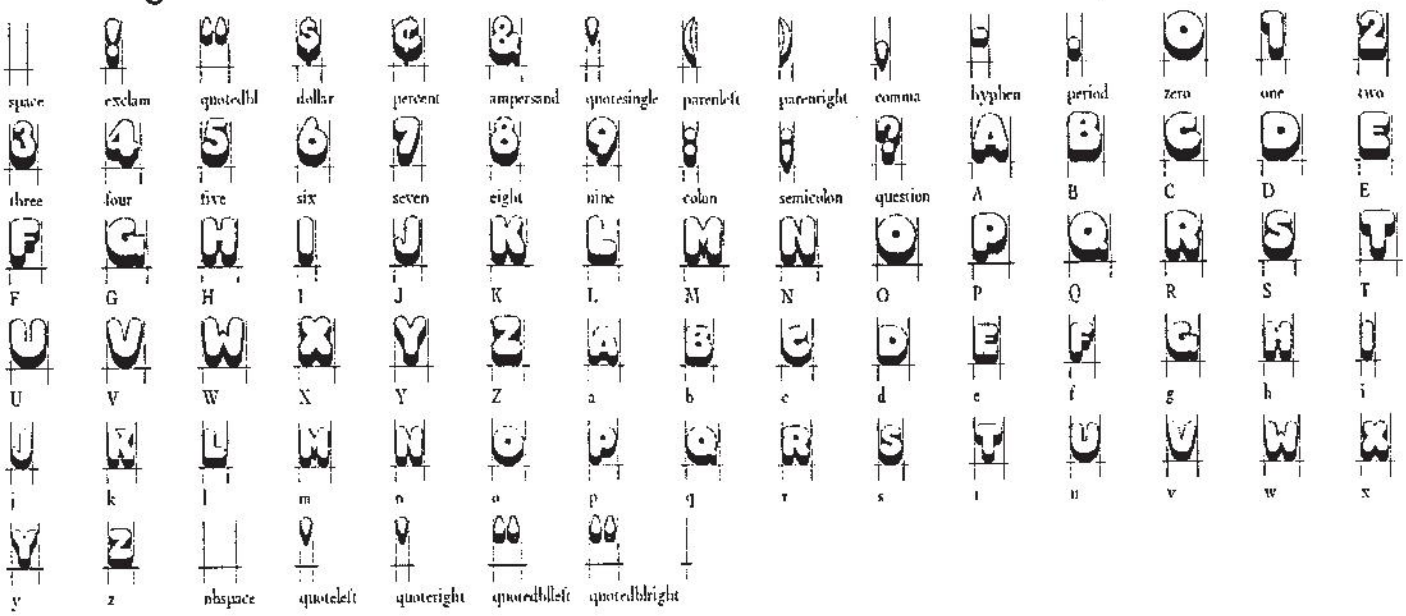
Hebrew



Holtzschue



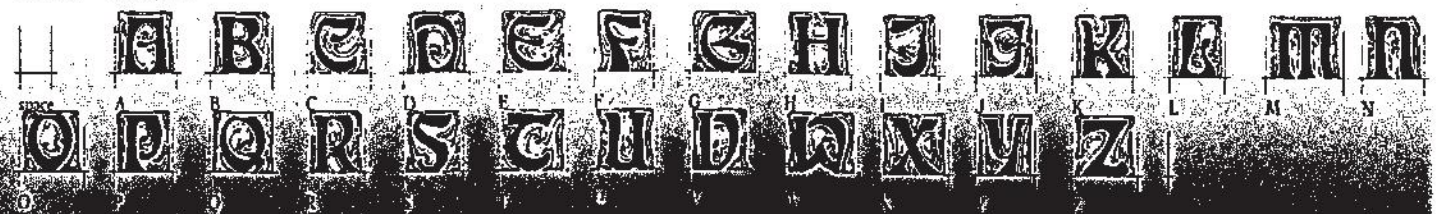
HotDog


space
exclam
quotedbl
dollar
percent
ampersand
quotesingle
parenleft
parenright
comma
hyphen
period
zero
one
two
three
four
five
six
seven
eight
nine
colon
semicolon
question
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
Z
a
b
c
d
e
f
g
h
i
j
k
l
m
n
o
p
q
r
s
t
u
v
w
x
y
z
nbspace
quoteleft
quoteright
quotedblleft
quotedblright

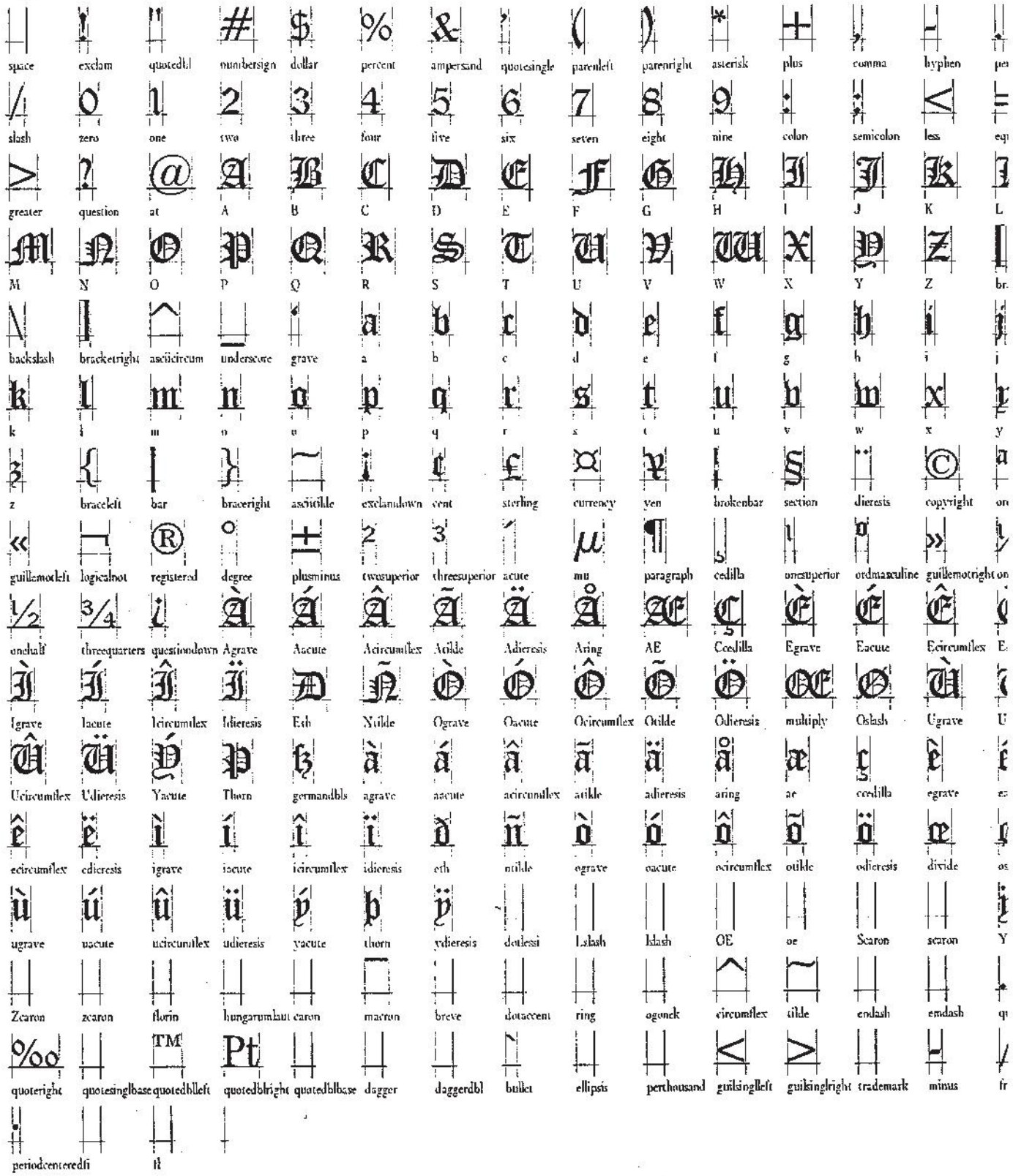
Hounds



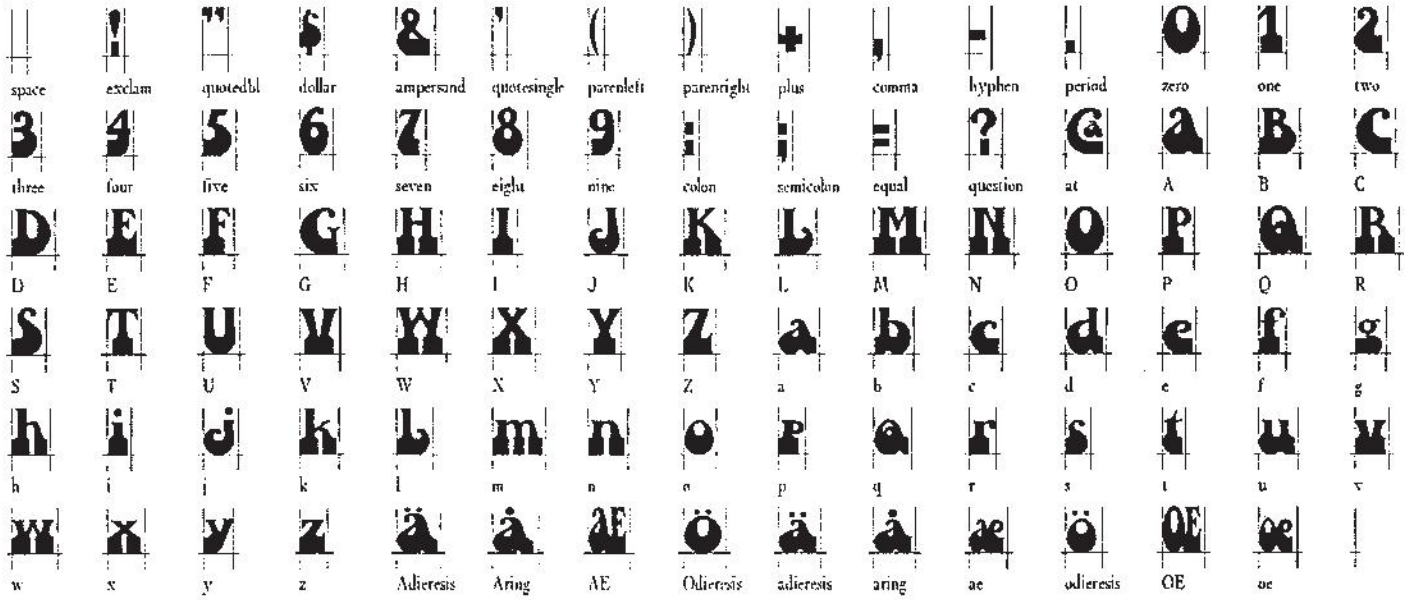
Ian-Bent



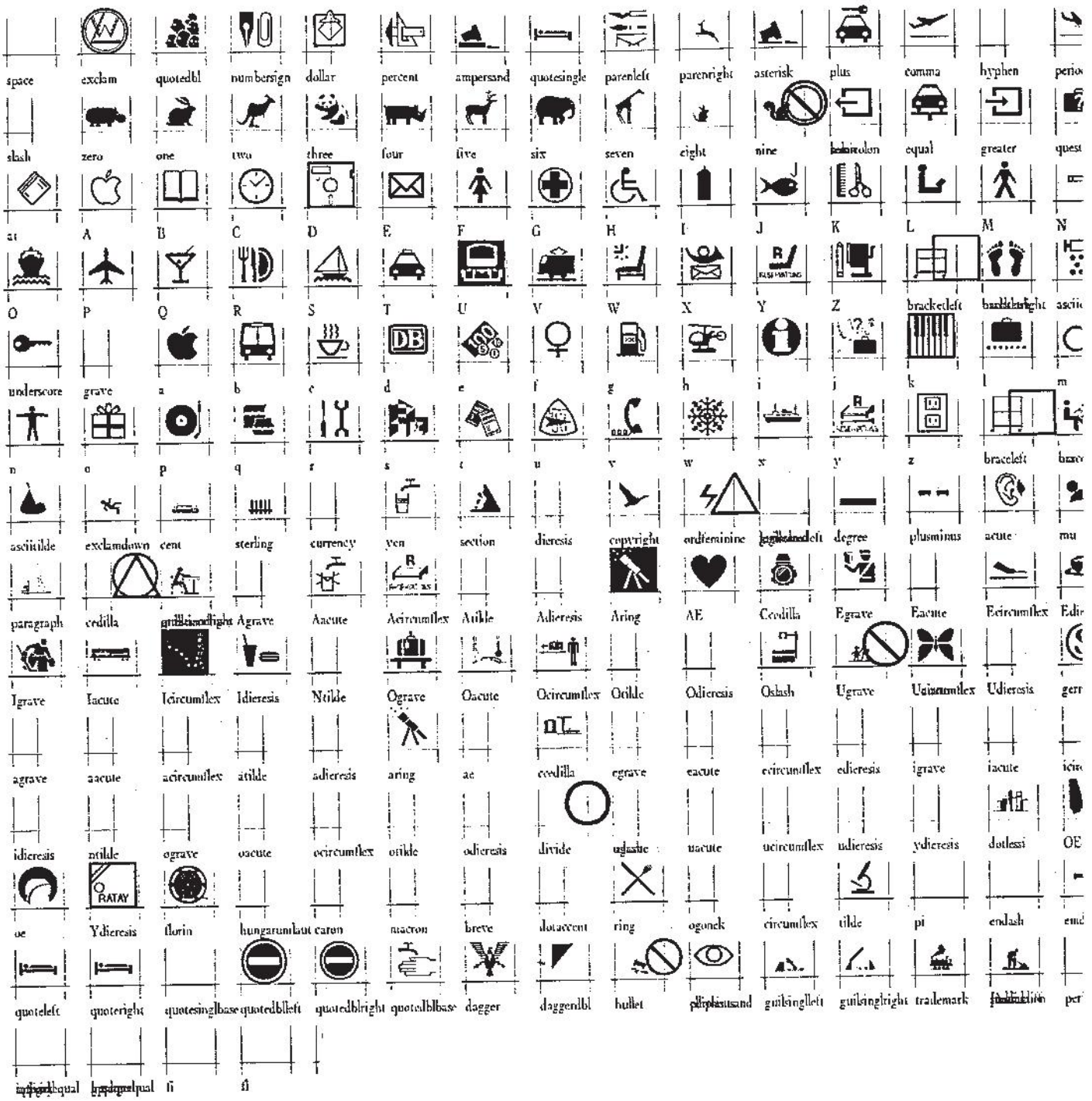
Iglesia


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i
k l m n o p q r s t u v w x
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron
Zcaron zcaron florin hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus
periodcenteredfi fl

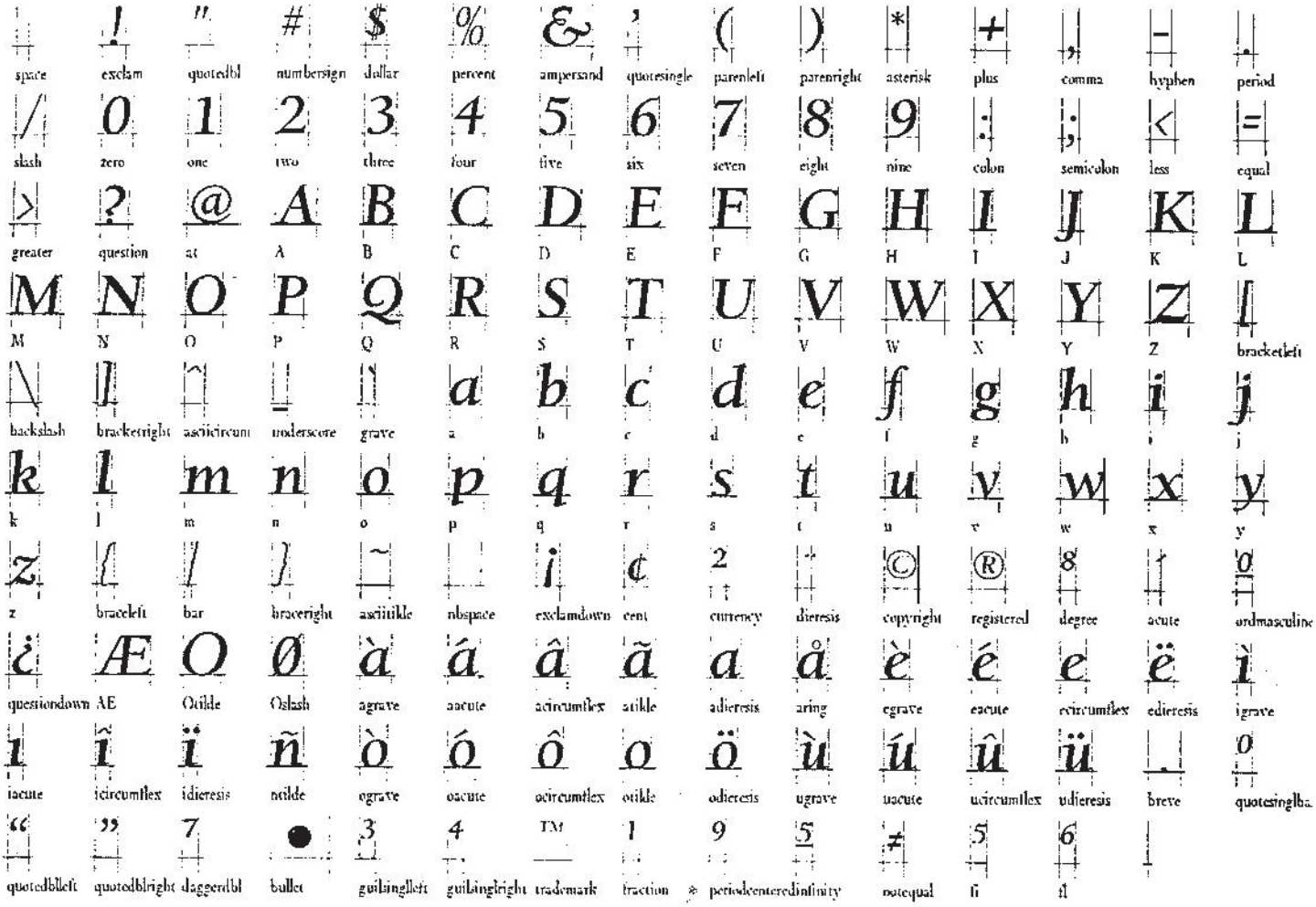
Inkwell


space
exclam
quotedbl
dollar
ampersand
quotesingle
parenleft
parenright
plus
comma
hyphen
period
zero
one
two
three
four
five
six
seven
eight
nine
colon
semicolon
equal
question
at
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
Z
a
b
c
d
e
f
g
h
i
j
k
l
m
n
o
p
q
r
s
t
u
v
w
x
y
z
Adieresis
Aring
AE
Odieresis
adieresis
aring
ae
odieresis
OE
oe

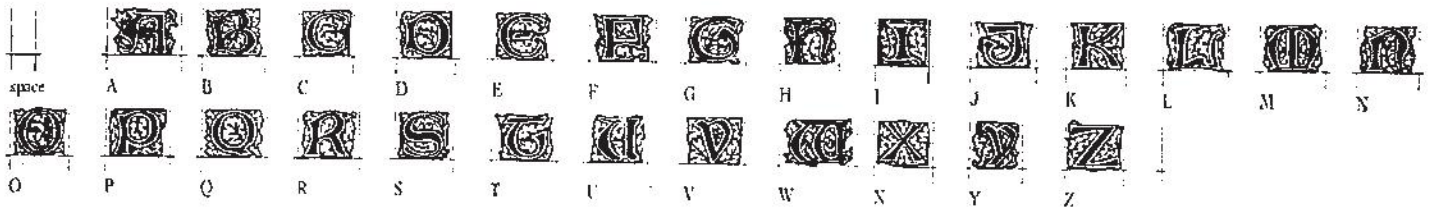
International



Jacksonville



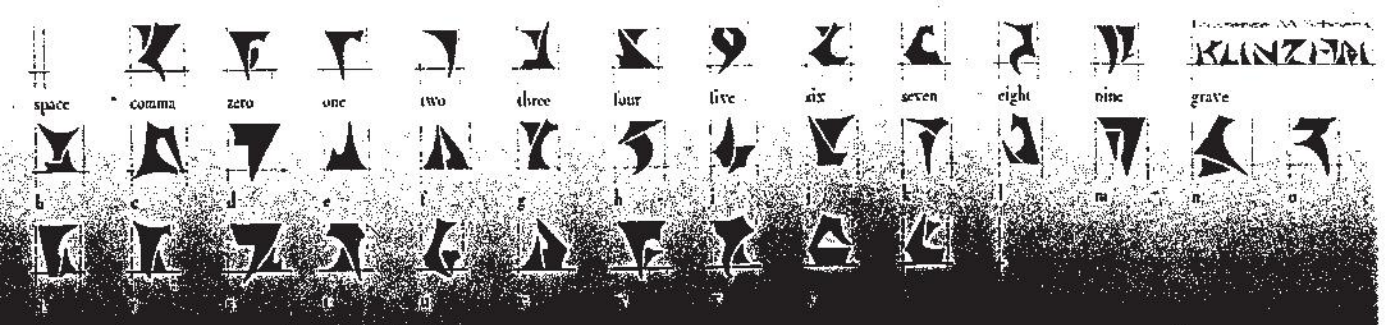
Jeff-Nichols



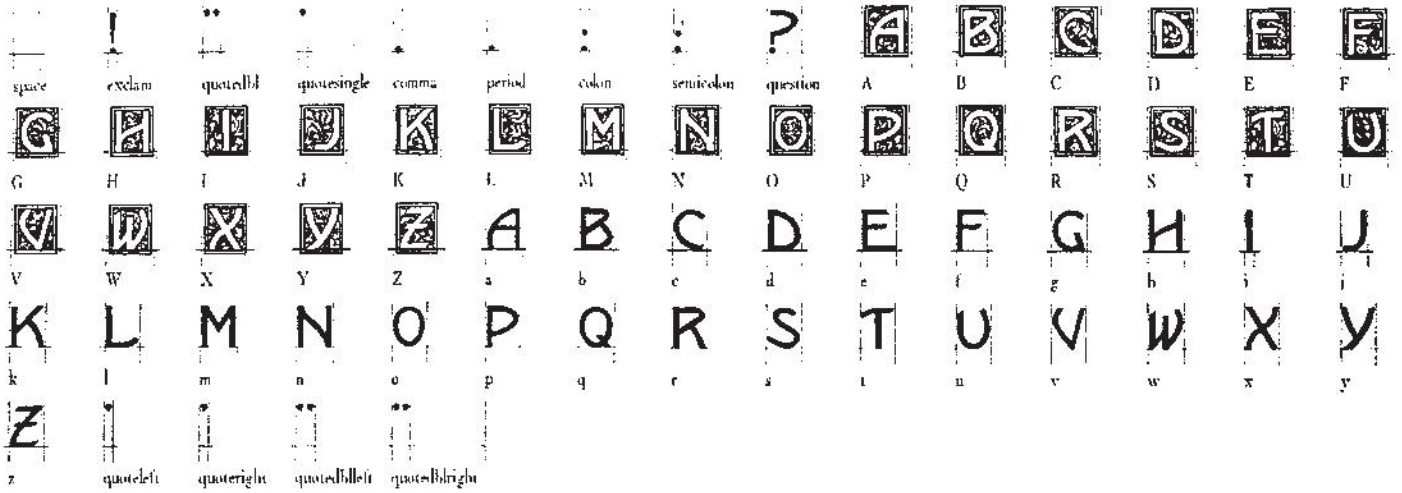
Kathlita



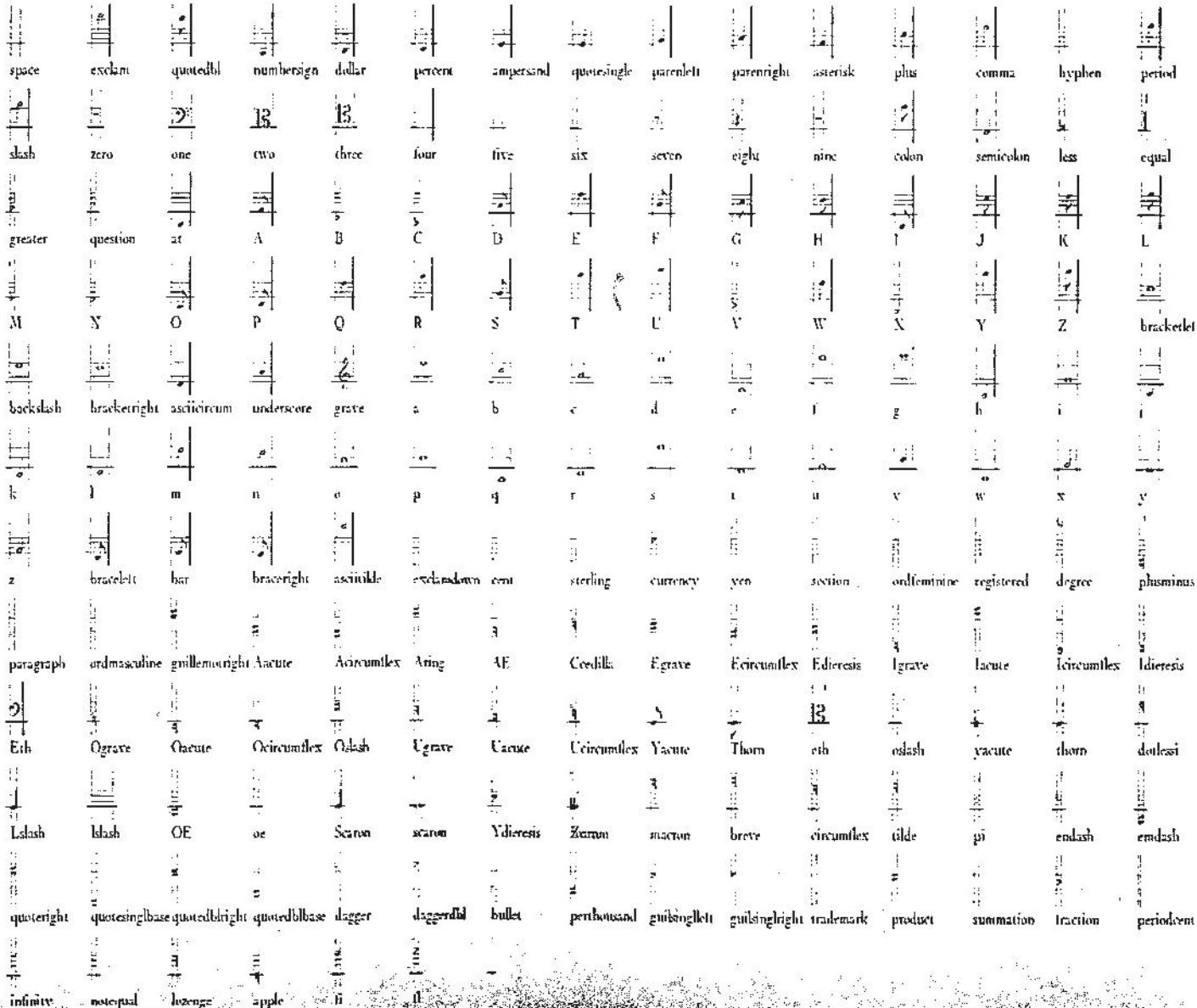
Klinzhai



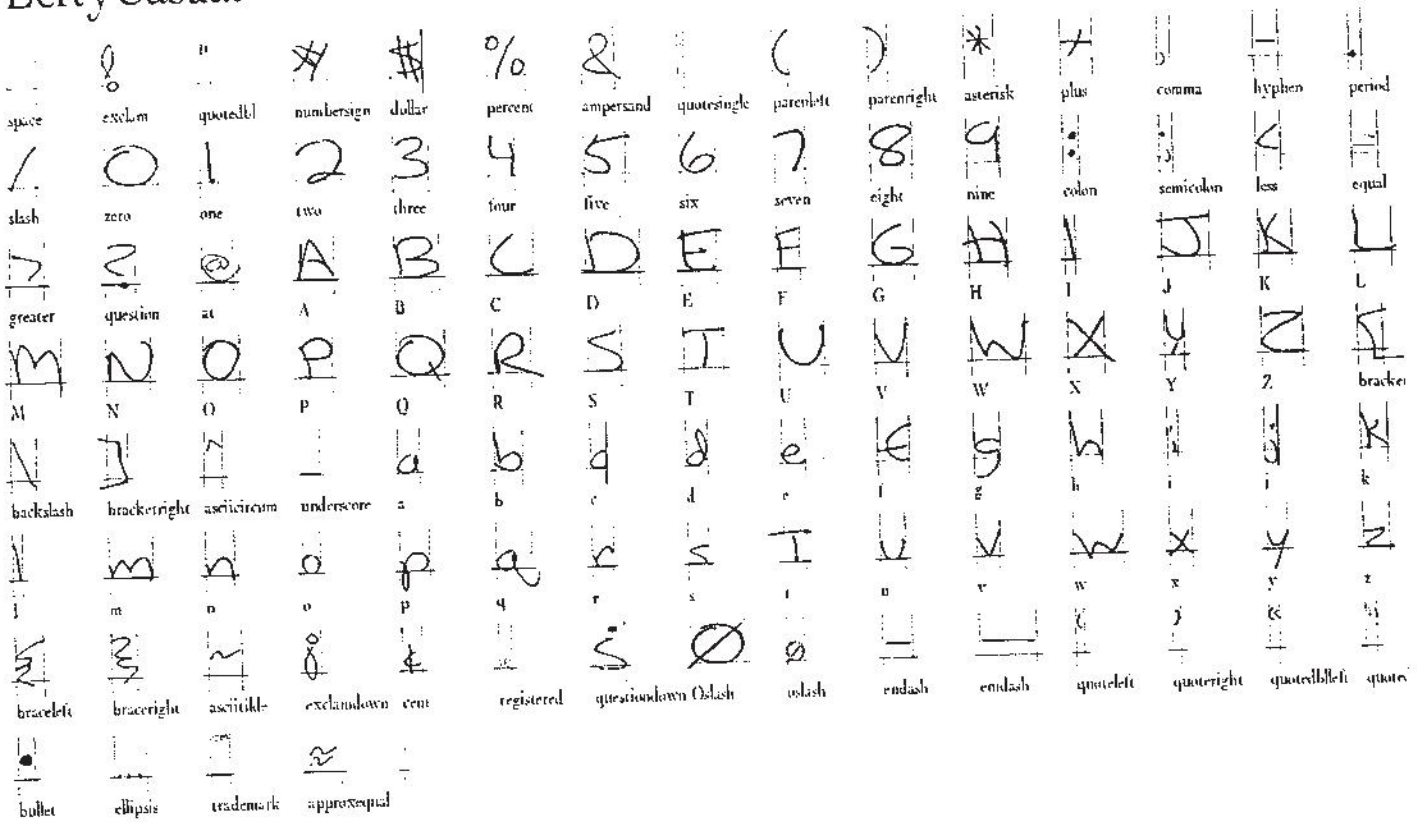
Kramer



Lassus



LeftyCasual



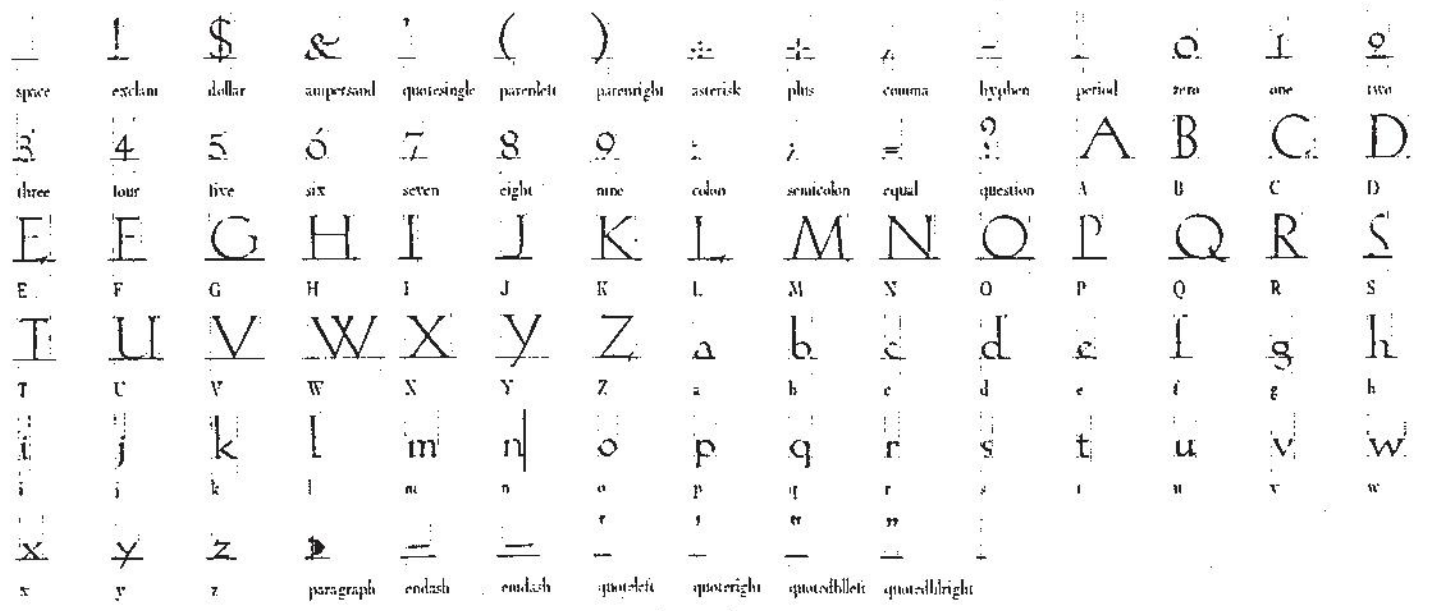
LibbyScript



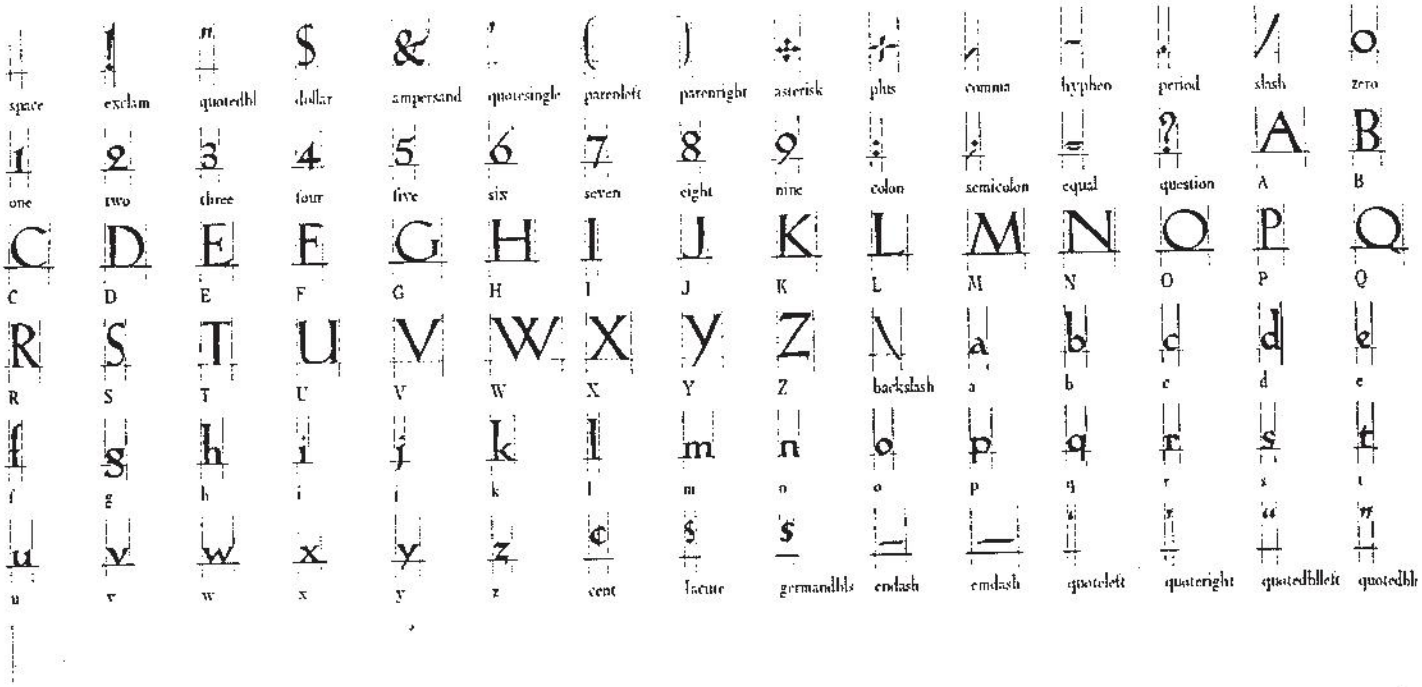
LightsOut



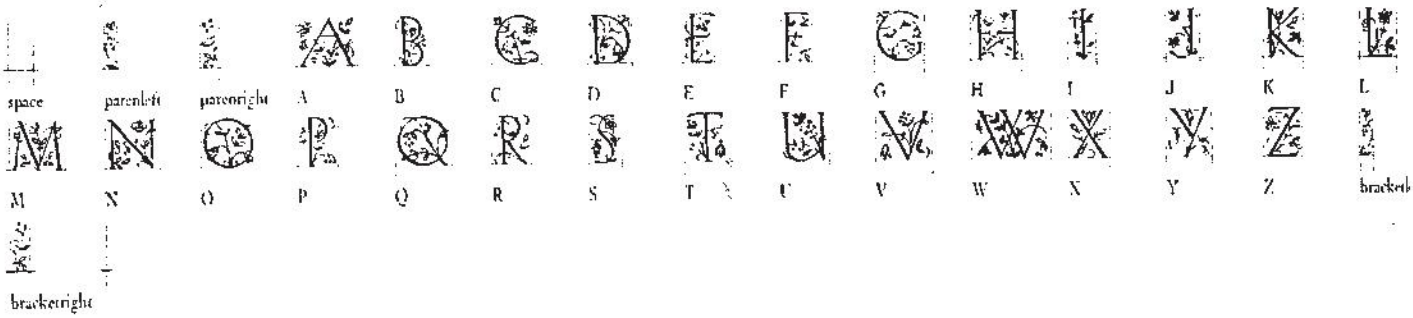
Lilith



Lilith Bold



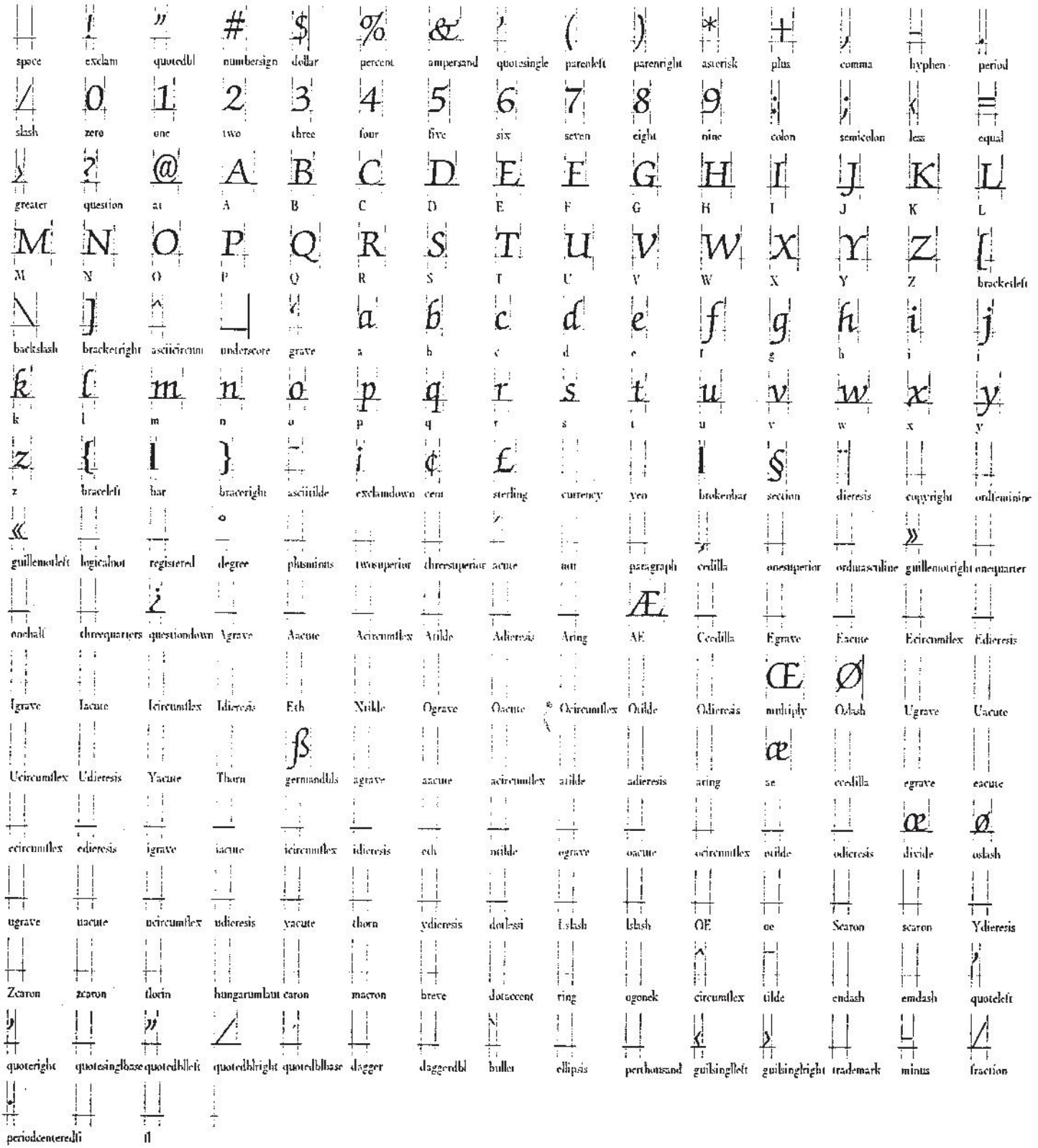
Lilith Initials



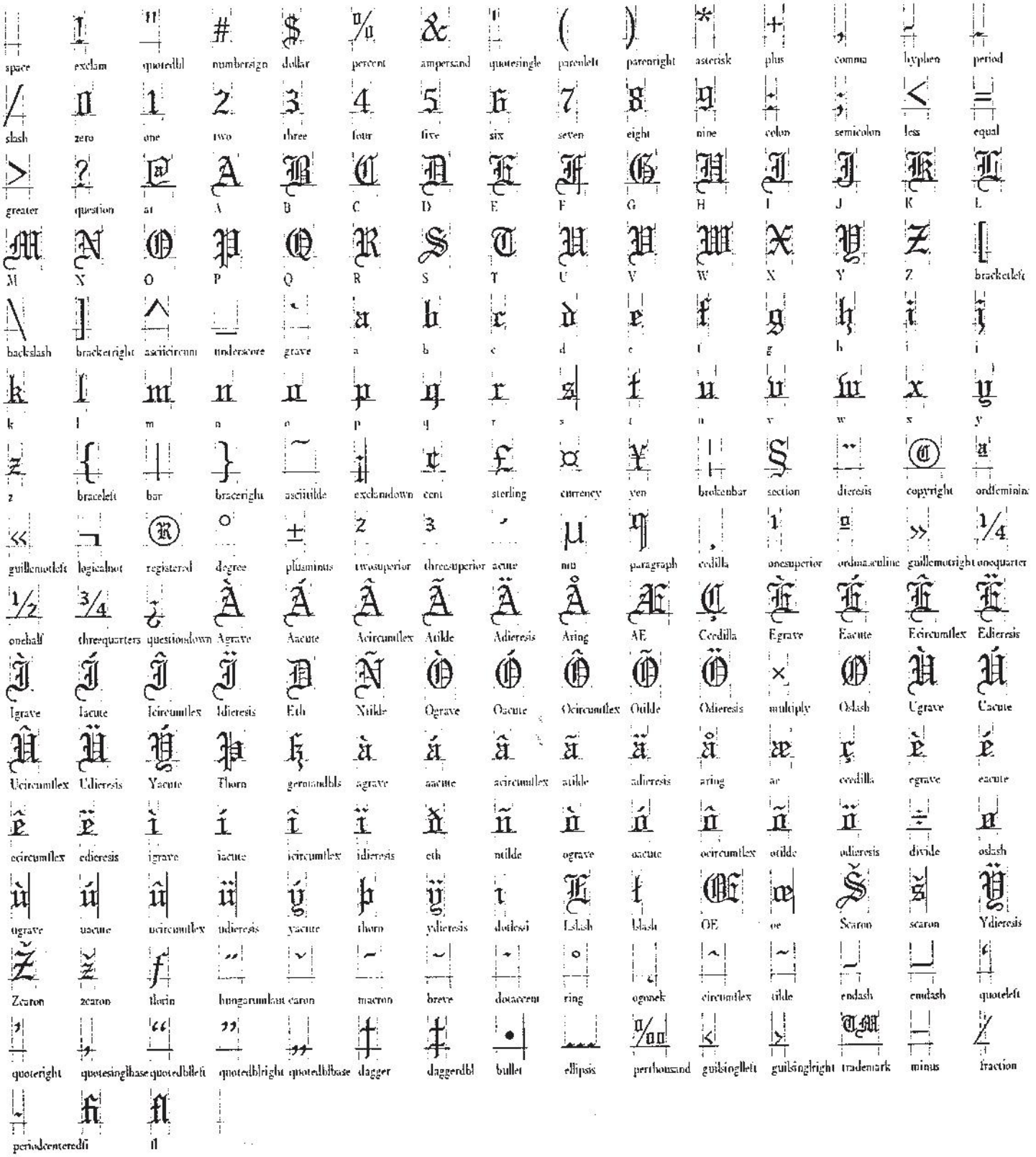
Lumparsky



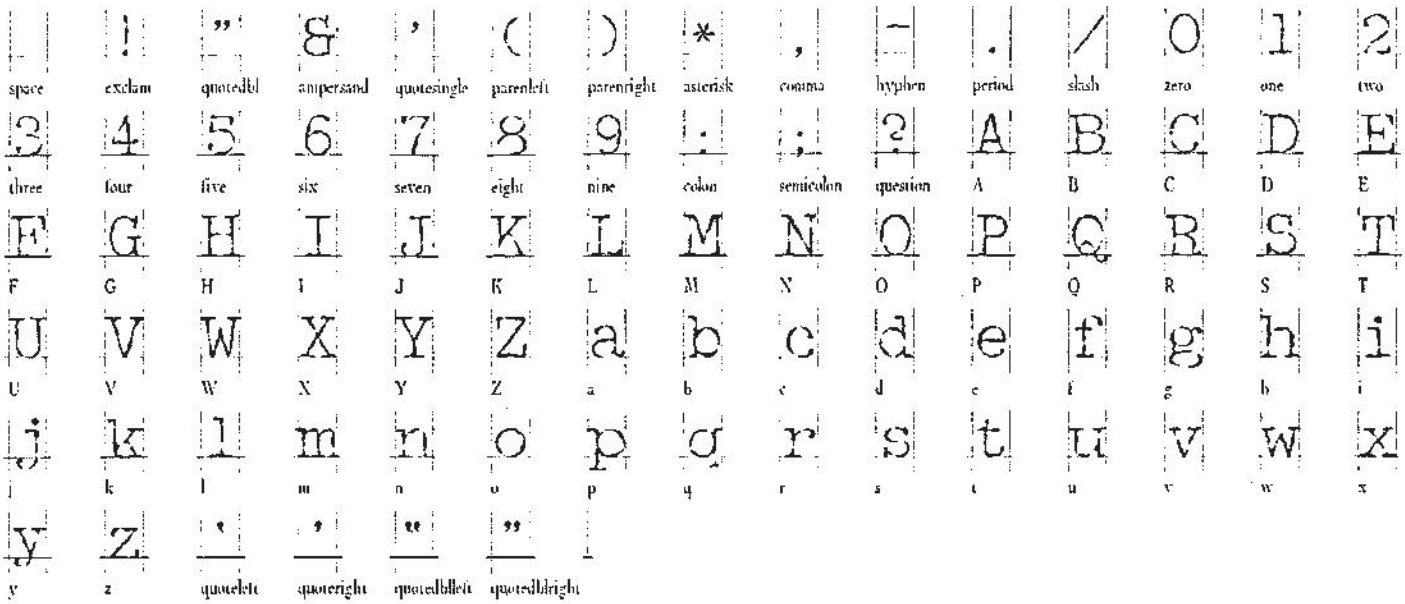
Luna


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright ordfeminine
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave Uacute
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron Ydieresis
Zcaron zcaron florin hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash quoteleft
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus fraction
periodcenteredfi fl

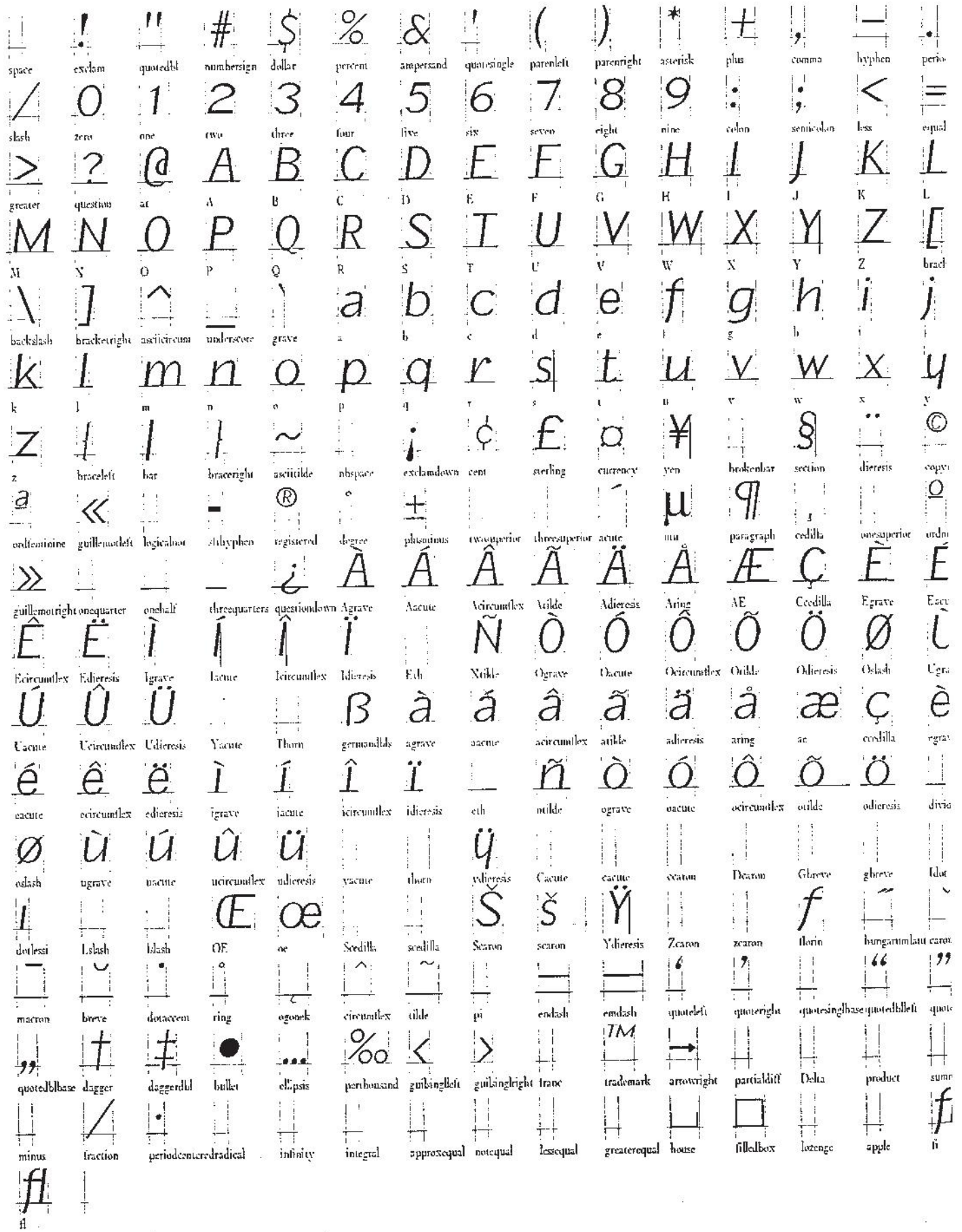
Mariage


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright ordfeminine
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave Uacute
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron Ydieresis
Zcaron zcaron florin hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash quoteleft
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus fraction
periodcenteredfi fl

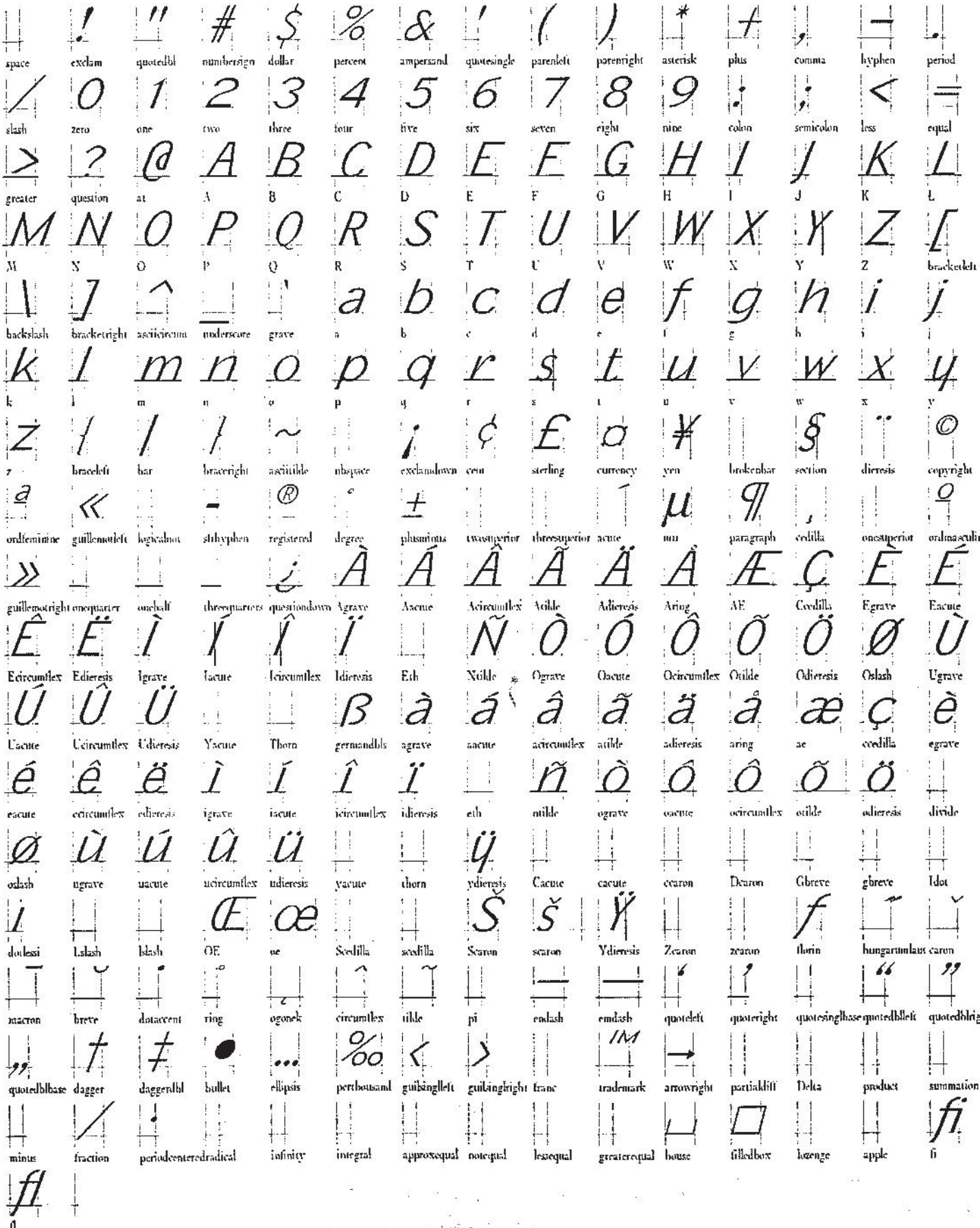
McGarey-Fractured



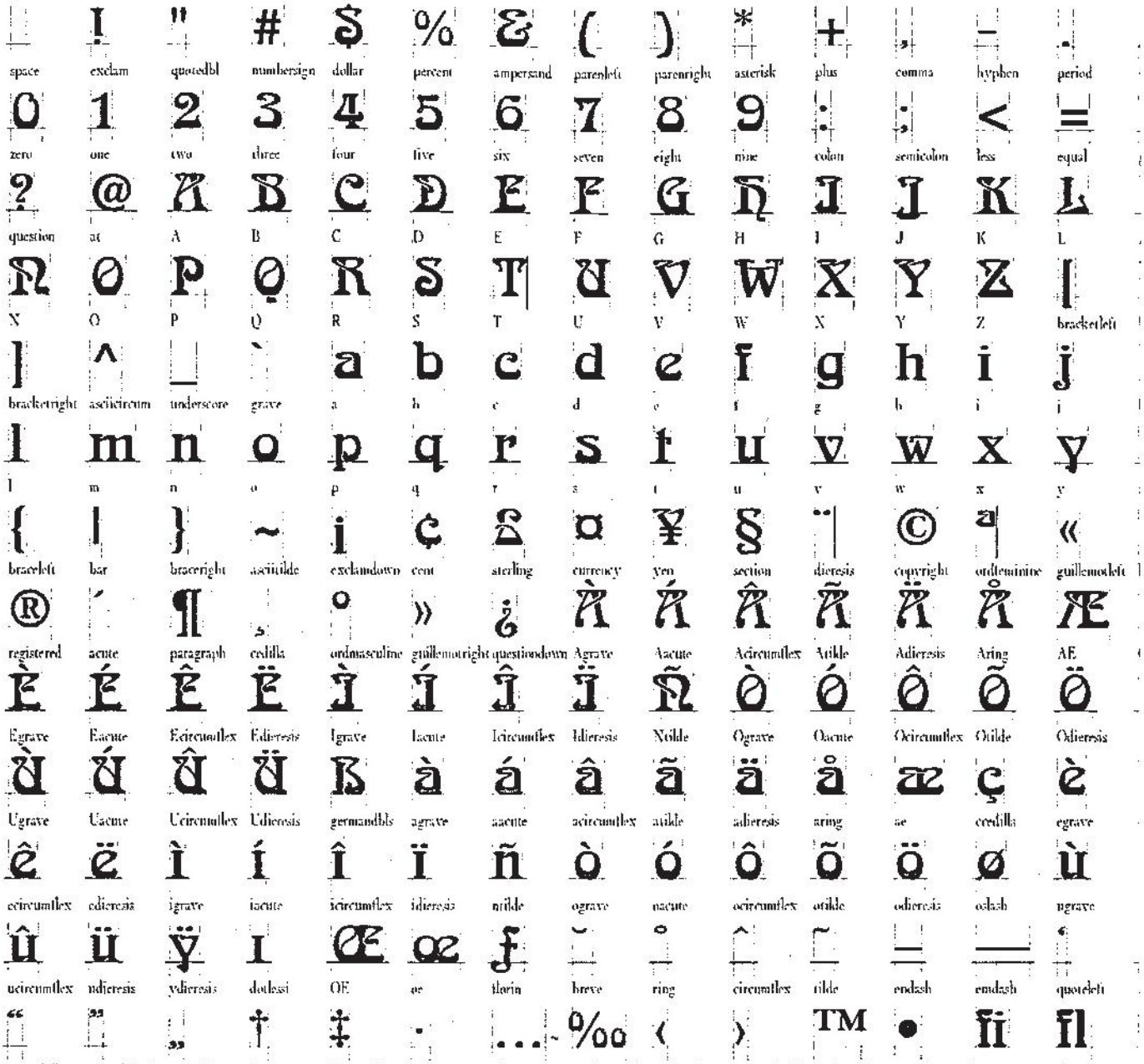
Memo


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde nbspace exclamdown cent sterling currency yen brokenbar section dieresis
ordfeminine guillemotleft logicalnot uni00AD registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior
guillemotright onequarter onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave
Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis Oslash
Uacute Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla
eacute ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis
oslash ugrave uacute ucircumflex udieresis yacute thorn ydieresis Cacute cacute ccaron Dcaron Gbreve gbreve Idot
dotlessi Lslash lslash OE oe Scedilla scedilla Scaron scaron Ydieresis Zcaron zcaron florin
macron breve dotaccent ring ogonek circumflex tilde pi endash emdash quoteleft quoteright quotesinglbase quotedblleft
quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright franc trademark arrowright partialdiff Delta product
minus fraction periodcentered radical infinity integral approxequal notequal lessequal greaterequal house fillelbox lozenge apple
fl

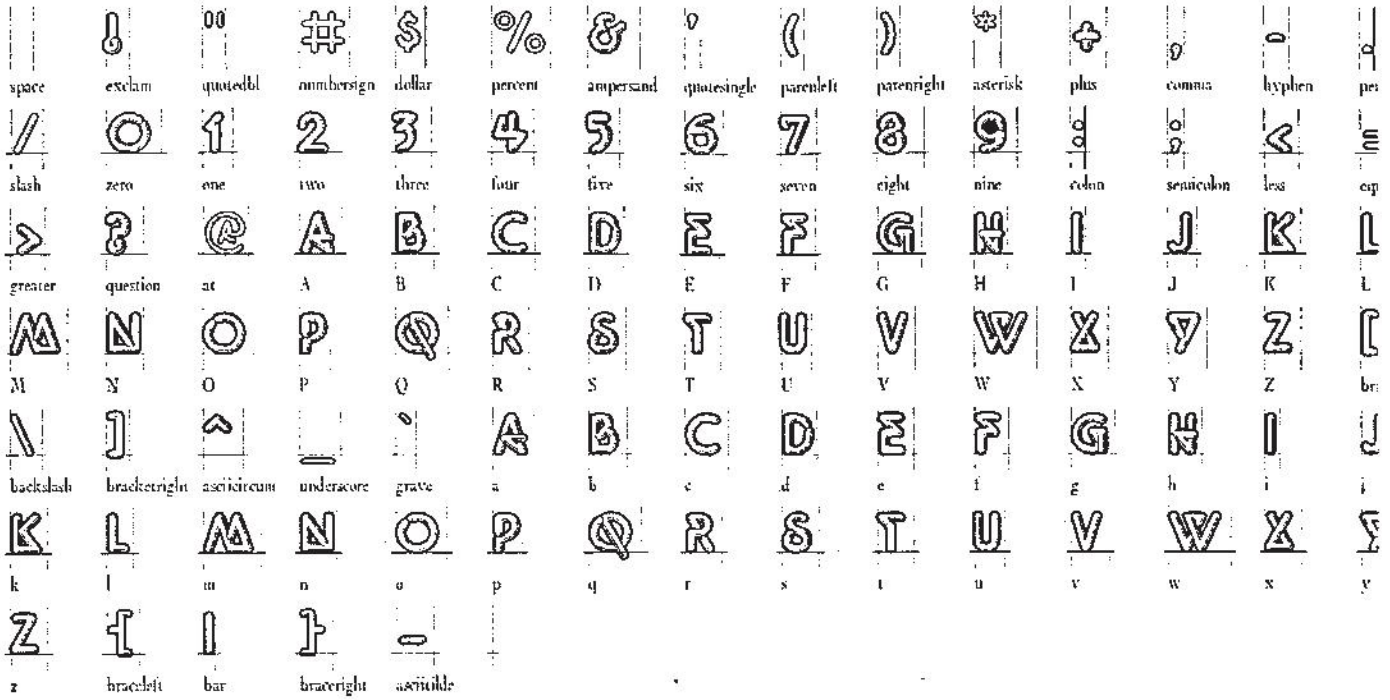
Memo Italic


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde nbspace exclamdown cent sterling currency yen brokenbar section dieresis copyright
ordfeminine guillemotleft logicalnot sfthyphen registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculi
guillemotright onequarter onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute
Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis Oslash Ugrave
Uacute Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave
eacute ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide
oslash ugrave uacute ucircumflex udieresis yacute thorn ydieresis Cacute cacute ccaron Dcaron Gbreve gbreve Idot
dotlessi Lslash lslash OE oe Scedilla scedilla Scaron scaron Ydieresis Zcaron zcaron florin hungarumlaut caron
macron breve dotaccent ring ogonek circumflex tilde pi endash emdash quoteleft quoteright quotesinglbase quotedblleft quotedblrig
quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright franc trademark arrowright partialdiff Delta product summation
minus fraction periodcenteredradical infinity integral approxequal notequal lessequal greaterequal house filledbox lozenge apple fi
fl

Murray


space exclam quotedbl numbersign dollar percent ampersand parenleft parenright asterisk plus comma hyphen period
zero one two three four five six seven eight nine colon semicolon less equal
question at A B C D E F G H I J K L
N O P Q R S T U V W X Y Z bracketleft
bracketright asciicircum underscore grave a b c d e f g h i j
l m n o p q r s t u v w x y
braceleft bar braceright asciitilde exclamdown cent sterling currency yen section dieresis copyright ordfeminine guillemotleft
registered acute paragraph cedilla ordmasculine guillemotright questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE
Egrave Eacute Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Ntilde Ograve Oacute Ocircumflex Otilde Odieresis
Ugrave Uacute Ucircumflex Udieresis germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave
ecircumflex edieresis igrave iacute icircumflex idieresis ntilde ograve oacute ocircumflex otilde odieresis oslash ugrave
ucircumflex udieresis ydieresis dotlessi OE oe florin breve ring circumflex tilde endash emdash quoteleft
quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark periodcentered fi fl

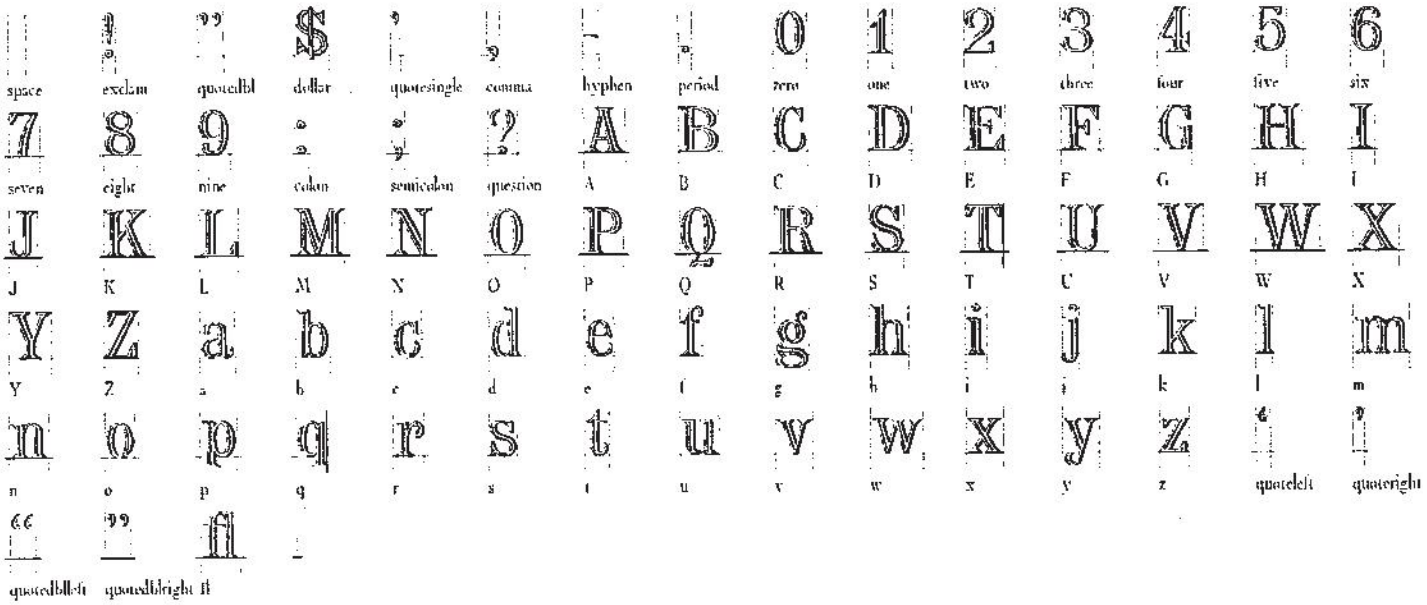
Messenger


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z
backslash bracketrigh asciicircum underscore grave a b c d e f g h i
k l m n o p q r s t u v w x
z braceleft bar braceright asciitilde

Monotony


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde nbspace exclamdown cent sterling currency yen section dieresis copyright ordfeminine
guillemotleft logicalnot registered degree plusminus acute mu paragraph cedilla ordmasculine guillemotright questiondown Agrave Aacute Acircumflex
Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Ntilde Ograve
Oacute Ocircumflex Otilde Odieresis Oslash Ugrave Uacute Ucircumflex Udieresis germandbls agrave aacute acircumflex atilde adieresis
aring ae ccedilla egrave eacute ecircumflex edieresis igrave iacute icircumflex idieresis ntilde ograve oacute ocircumflex
otilde odieresis divide oslash ugrave uacute ucircumflex udieresis ydieresis dotlessi OE oe Ydieresis florin hungarumlaut
caron macron breve dotaccent ring ogonek circumflex tilde pi endash emdash quoteleft quoteright quotesinglbase quotedblleft
quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark partialdiff Delta product summation fraction
periodcentered radical infinity integral approxequal notequal lessequal greaterequal lozenge apple fi fl

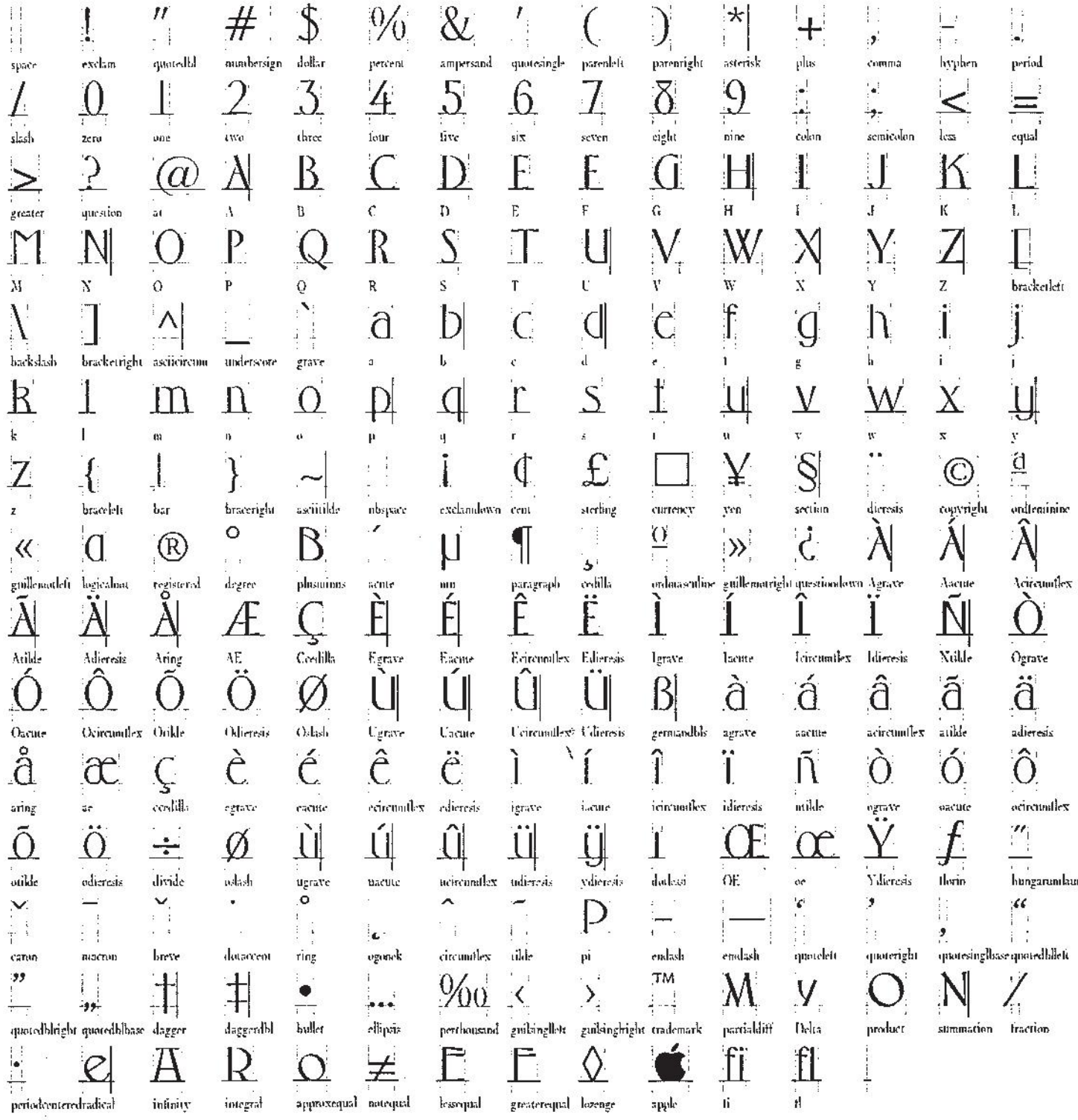
Nauert


space
exclam
quotedbl
dollar
quotesingle
comma
hyphen
period
zero
one
two
three
four
five
six
seven
eight
nine
colon
semicolon
question
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
Z
a
b
c
d
e
f
g
h
i
j
k
l
m
n
o
p
q
r
s
t
u
v
w
x
y
z
quoteleft
quoteright
quotedblleft
quotedblright
fl

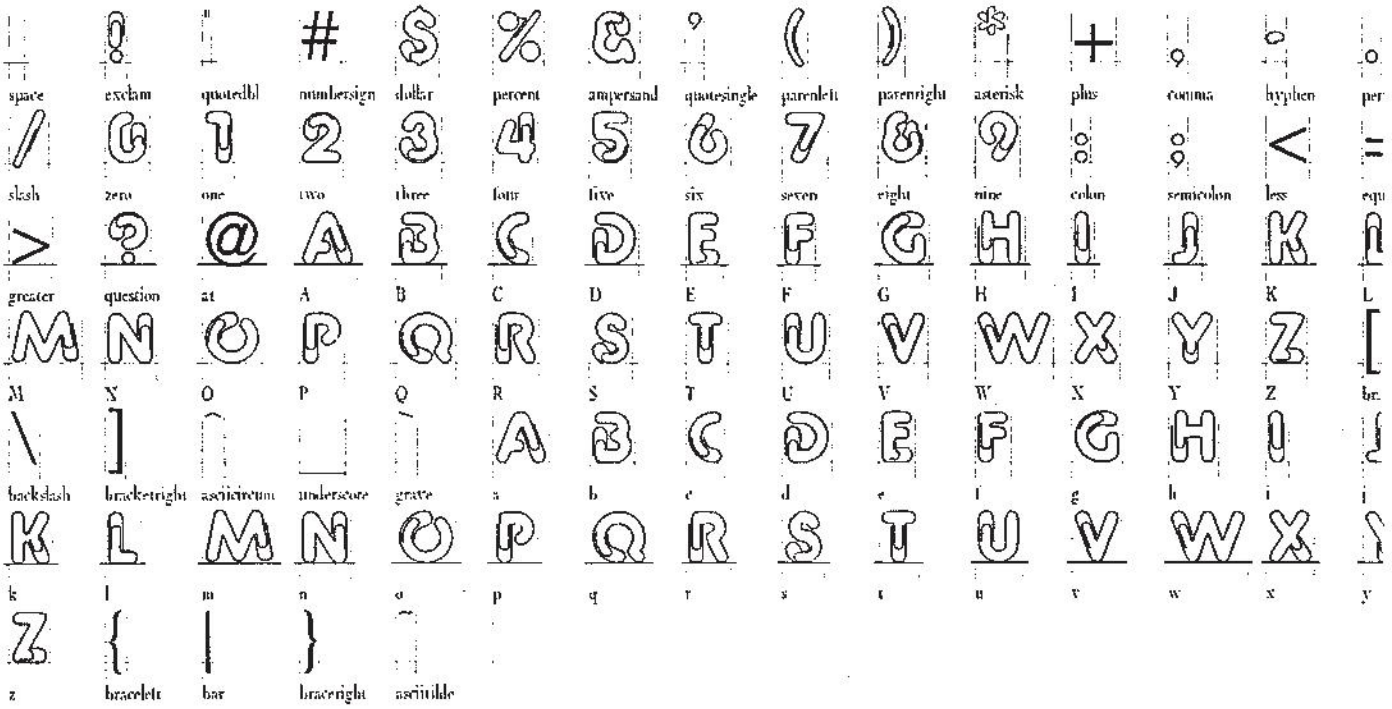
Neuvarese Bold Italic



NewRixFancy



Office


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less
greater question at A B C D E F G H I J K
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde

Oswald Black



Paradox


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen section dieresis copyright ordfeminine
logicalnot registered plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter onehalf
questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis Igrave
Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave Uacute Ucircumflex
Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute ecircumflex
igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash ugrave
ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron Ydieresis Zcaron
florin hungarumlaut caron macron breve dotaccent ring ogonek endash emdash quoteleft quoteright quotesinglbase quotedblleft
quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark fraction periodcenteredli fl

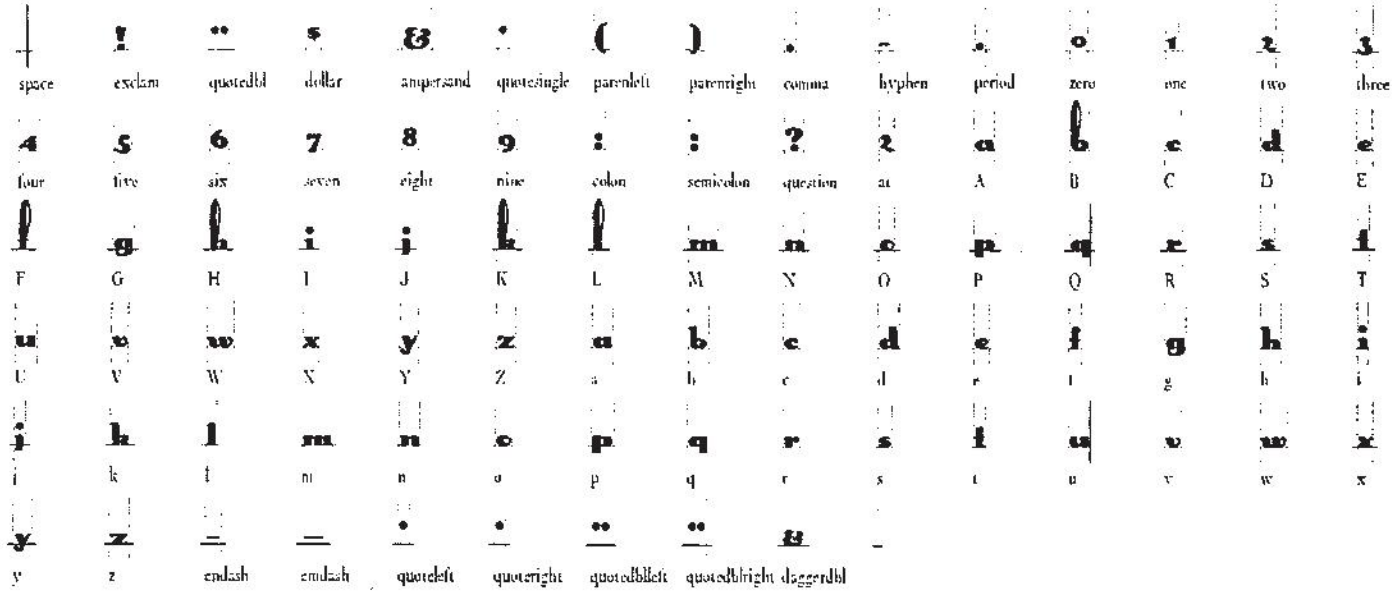
PigNoseTyp


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde nbspace exclamdown cent sterling currency yen section dieresis copyright ordfeminine
guillemotleft logicalnot registered degree plusminus acute mu paragraph cedilla ordmasculine guillemotright questiondown Agrave Aacute Acircumflex
Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Ntilde Ograve
Oacute Ocircumflex Otilde Odieresis Oslash Ugrave Uacute Ucircumflex Udieresis germandbls agrave aacute acircumflex atilde adieresis
aring ae ccedilla egrave eacute ecircumflex edieresis igrave iacute icircumflex idieresis ntilde ograve oacute ocircumflex
otilde odieresis divide oslash ugrave uacute ucircumflex udieresis ydieresis dotlessi OE oe Ydieresis florin hungarumlaut
caron macron breve dotaccent ring ogonek circumflex tilde pi endash emdash quoteleft quoteright quotesinglbase quotedblleft
quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark partialdiff Delta product summation fraction
periodcentered radical infinity integral approxequal notequal lessequal greaterequal lozenge fi fl

Quartera


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less
greater question at A B C D E F G H I J K
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i
k l m n o p q r s t u v w x
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron
Zcaron zcaron florin hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus
periodcenteredfi fl

RabbitEars



Rechtman-Script



Rodchenko


space exclam quotedbl numbersign dollar percent ampersand parenleft parenright asterisk plus comma hyphen period slas
zero one two three four five six seven eight nine colon semicolon less equal gre
question at A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z bracketleft ba
bracketright asciicircum underscore grave a b c d e f g h i j k
l m n o p q r s t u v w x y z
braceleft bar braceright asciitilde exclamdown cent sterling currency yen section dieresis copyright ordfeminine guillemotleft
plusminus acute mu paragraph ordmasculine guillemotright questiondown Agrave Aacute Acircumflex Adieresis Aring AE Ccedilla
Eacute Ecircumflex Edieresis Igrave Iacute Icircumflex Idieresis Ntilde Ograve Oacute Ocircumflex Odieresis Oslash Ugrave
Ucircumflex Udieresis germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute ecircumflex
igrave iacute icircumflex idieresis ntilde ograve oacute ocircumflex otilde odieresis divide oslash ugrave uacute
udieresis ydieresis dotlessi OE oe florin breve ring circumflex tilde endash emdash quoteleft quoteright
quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark periodcenteredfi fl

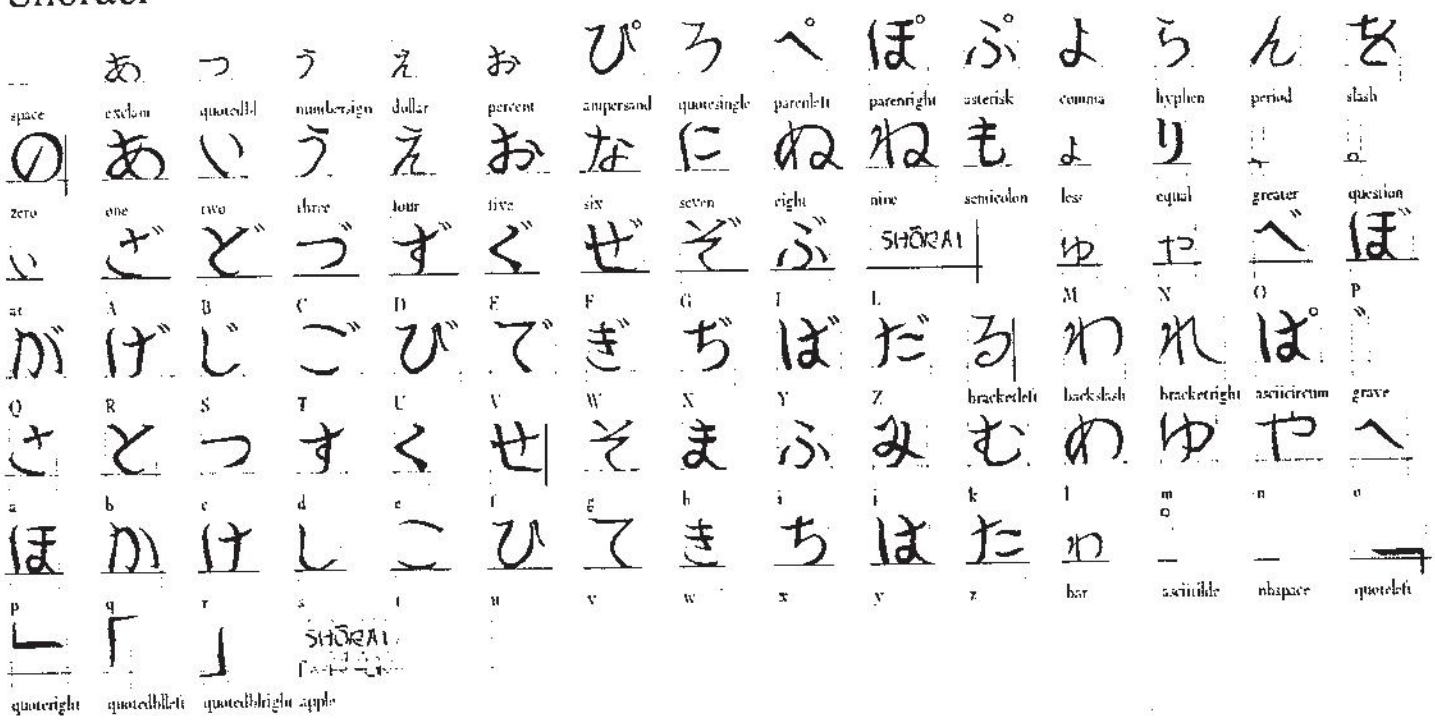
Russian


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright ordfeminine
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave Uacute
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron Ydieresis
Zcaron zcaron florin breve ring ogonek circumflex tilde endash emdash quoteleft
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus fraction
periodcentered fl

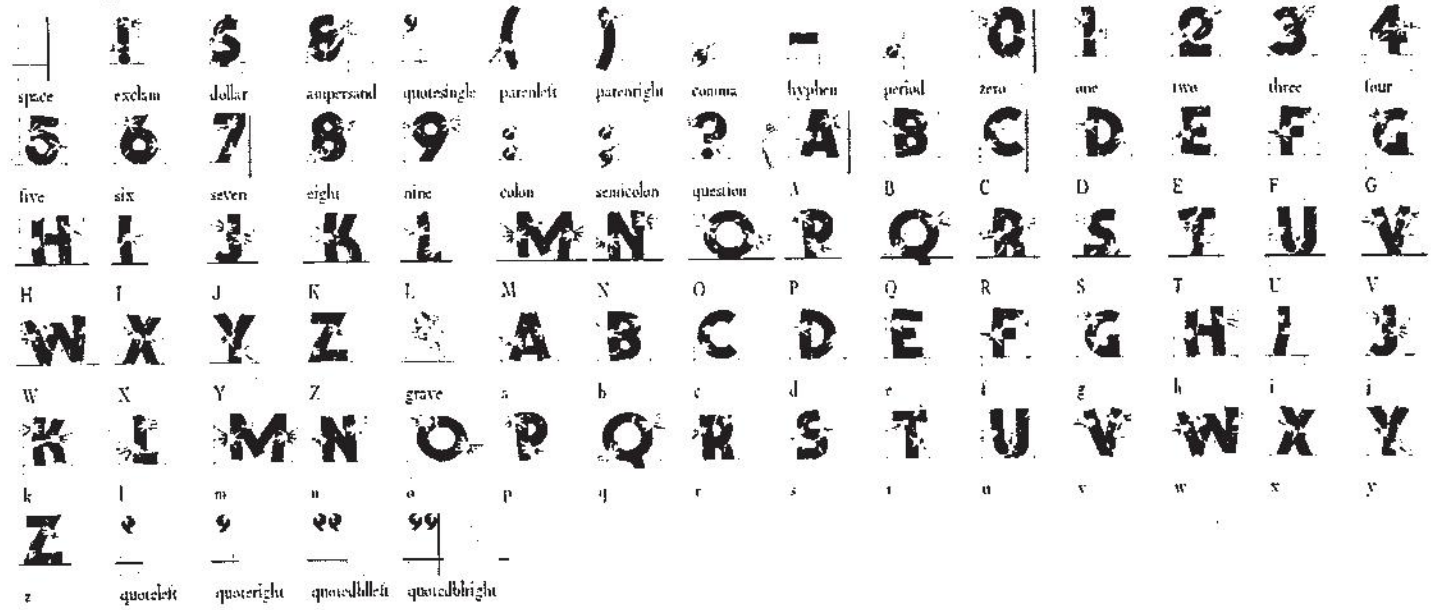
Serpentine Bold



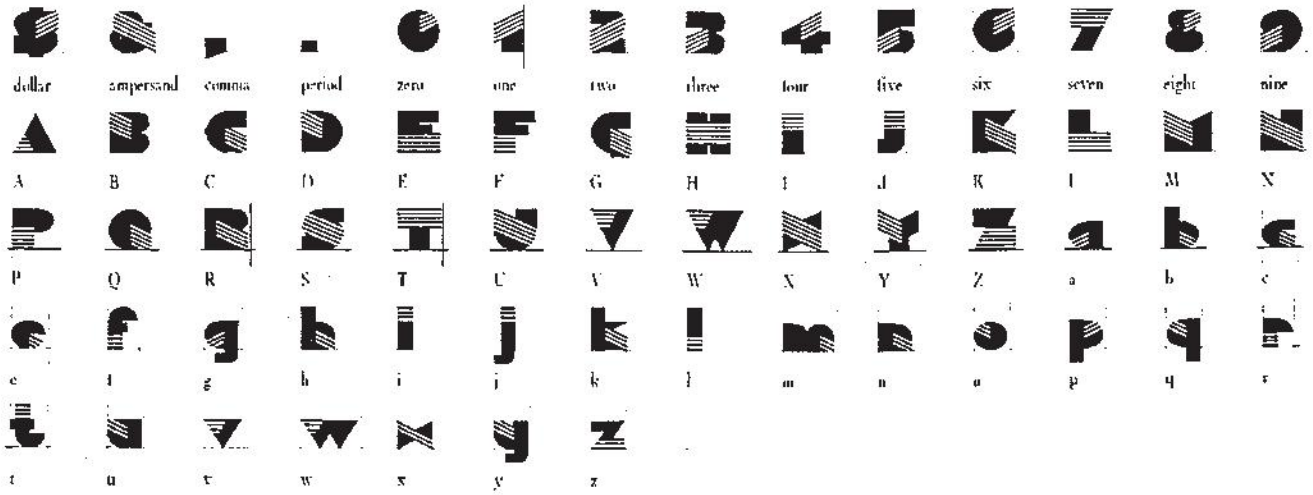
Shoraei



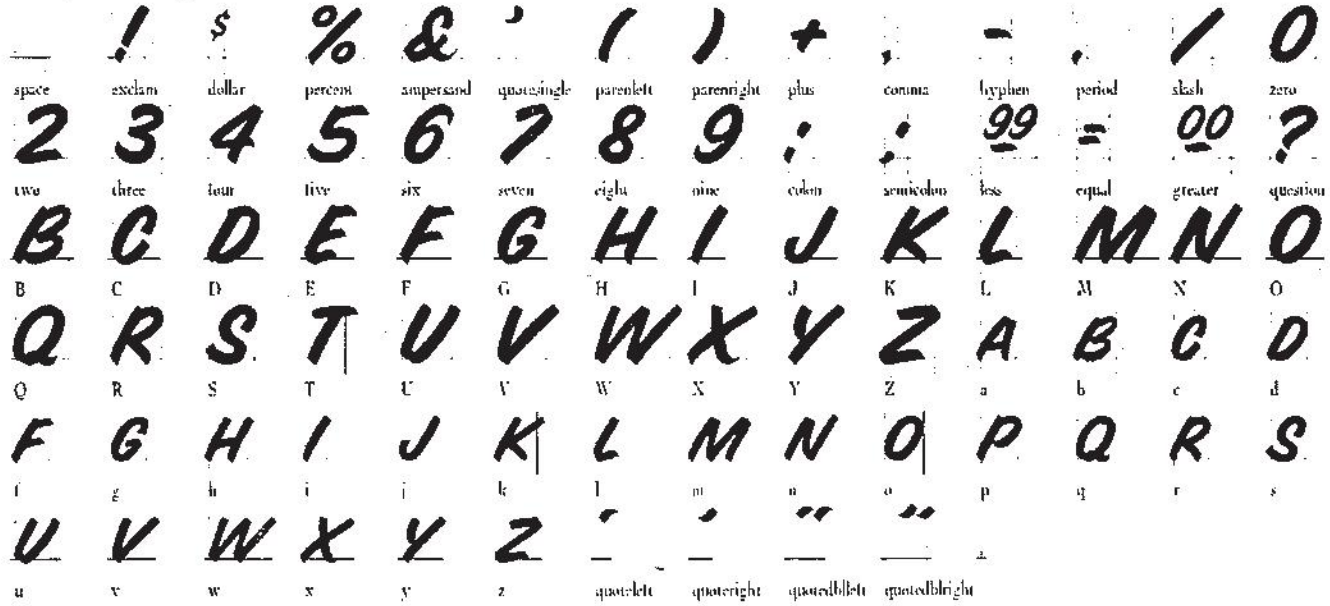
Shrapnel



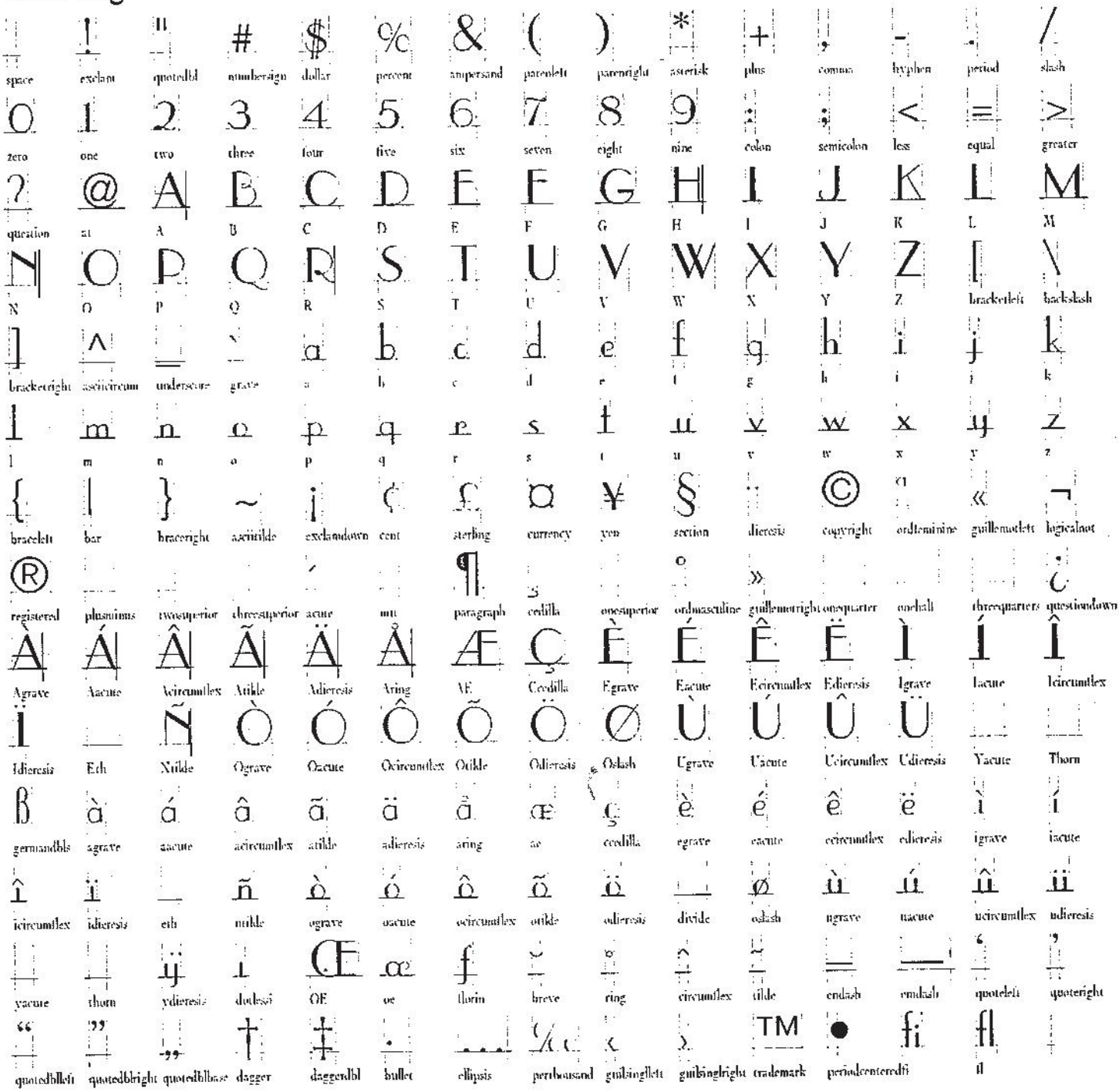
Sinaloa



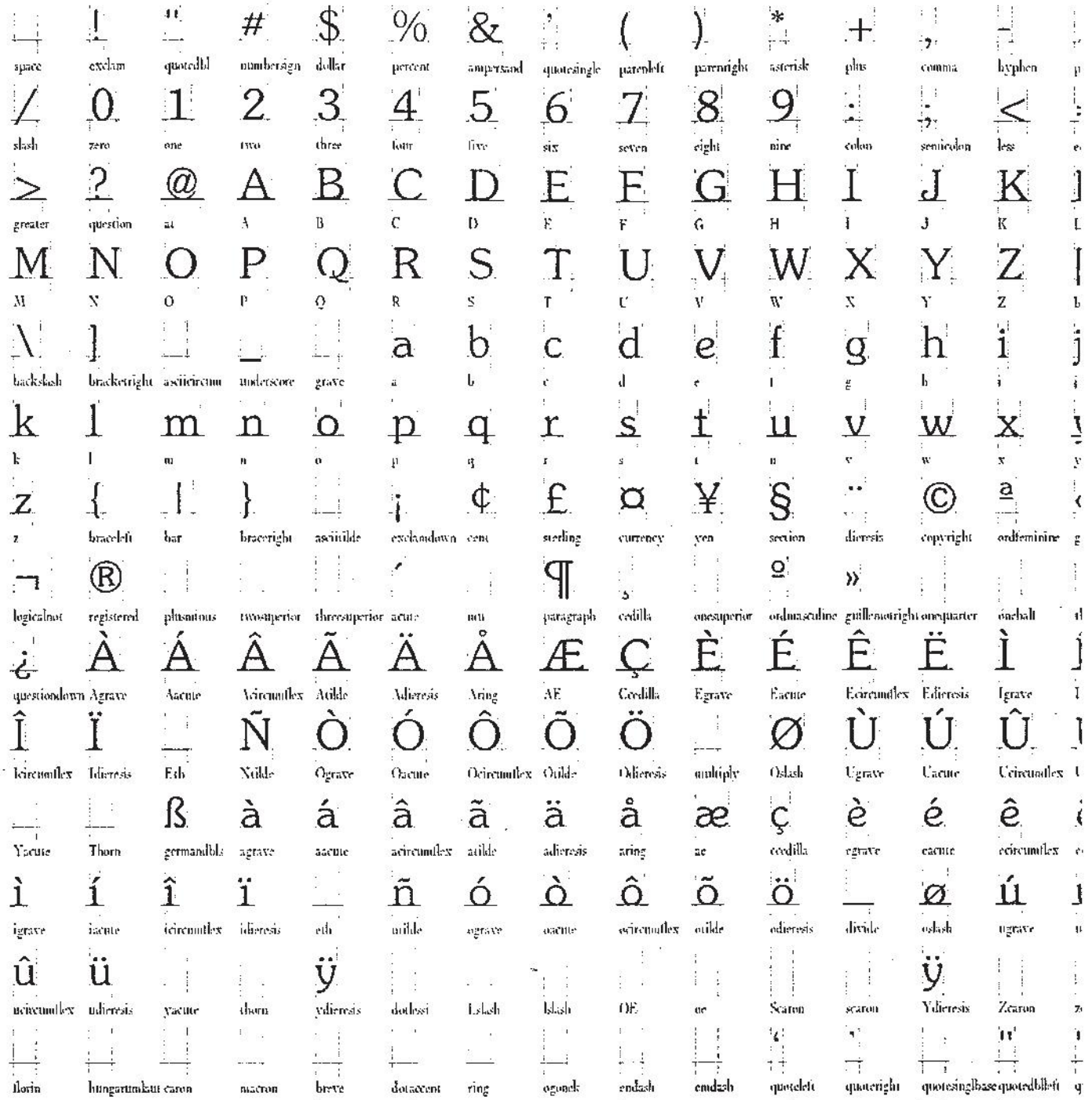
SnyderSpeed



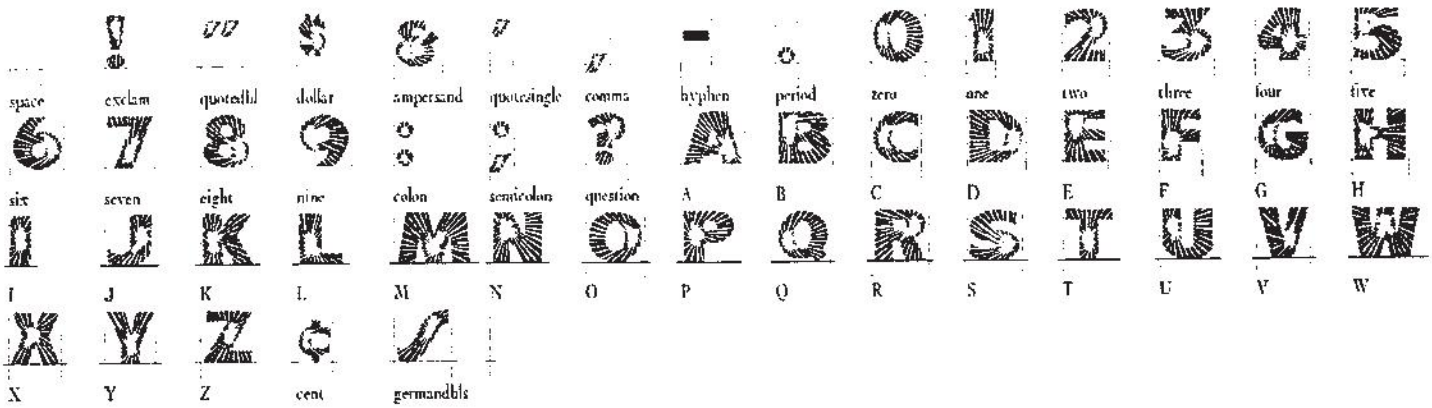
Sourdogh


space exclam quotedbl numbersign dollar percent ampersand parenleft parenright asterisk plus comma hyphen period slash
zero one two three four five six seven eight nine colon semicolon less equal greater
question at A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z bracketleft backslash
bracketright asciicircum underscore grave a b c d e f g h i j k
l m n o p q r s t u v w x y z
braceleft bar braceright asciitilde exclamdown cent sterling currency yen section dieresis copyright ordfeminine guillemotleft logicalnot
registered plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter onehalf threequarters questiondown
Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis Igrave Iacute Icircumflex
Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis Oslash Ugrave Uacute Ucircumflex Udieresis Yacute Thorn
germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute ecircumflex edieresis igrave iacute
icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash ugrave uacute ucircumflex udieresis
yacute thorn ydieresis dotlessi OE oe florin breve ring circumflex tilde endash emdash quoteleft quoteright
quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark periodcenteredfi fi fl
TM

Souvenir


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less
greater question at A B C D E F G H I J K
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i
k l m n o p q r s t u v w x
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen section dieresis copyright ordfeminine
logicalnot registered plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter onehalf
questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis Igrave
Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave Uacute Ucircumflex
Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute ecircumflex
igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash ugrave
ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron Ydieresis Zcaron
florin hungarumlaut caron macron breve dotaccent ring ogonek endash emdash quoteleft quoteright quotesinglbase quotedblleft
quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark fraction periodcenteredfi fl

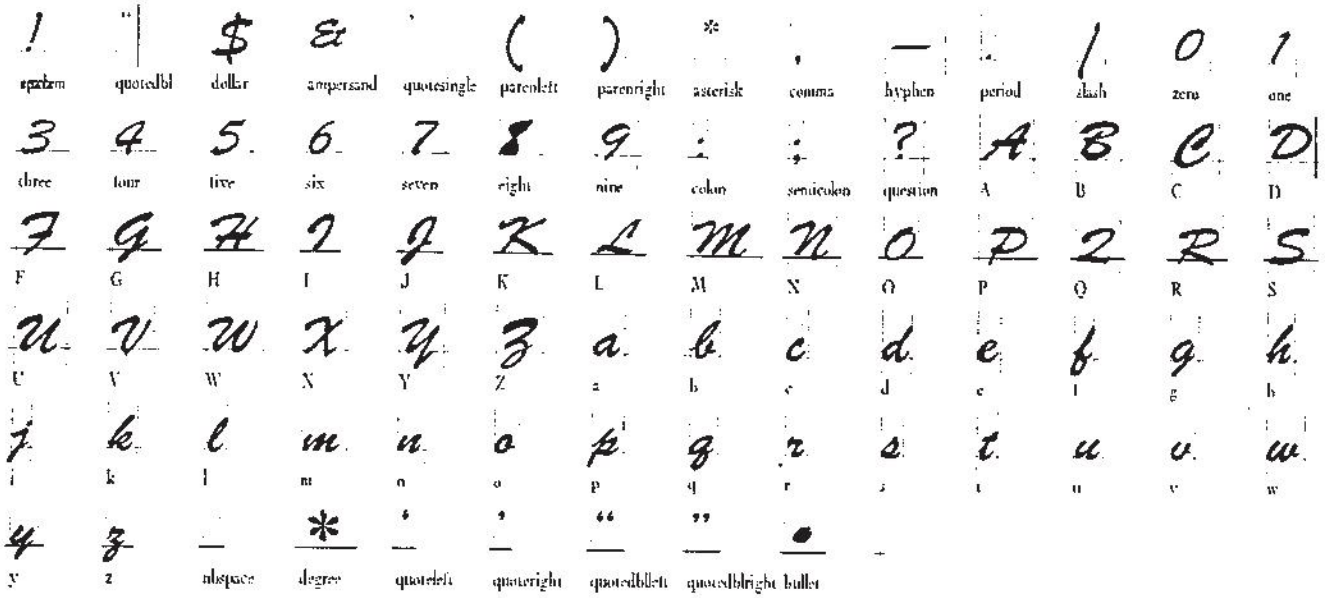
Starburst



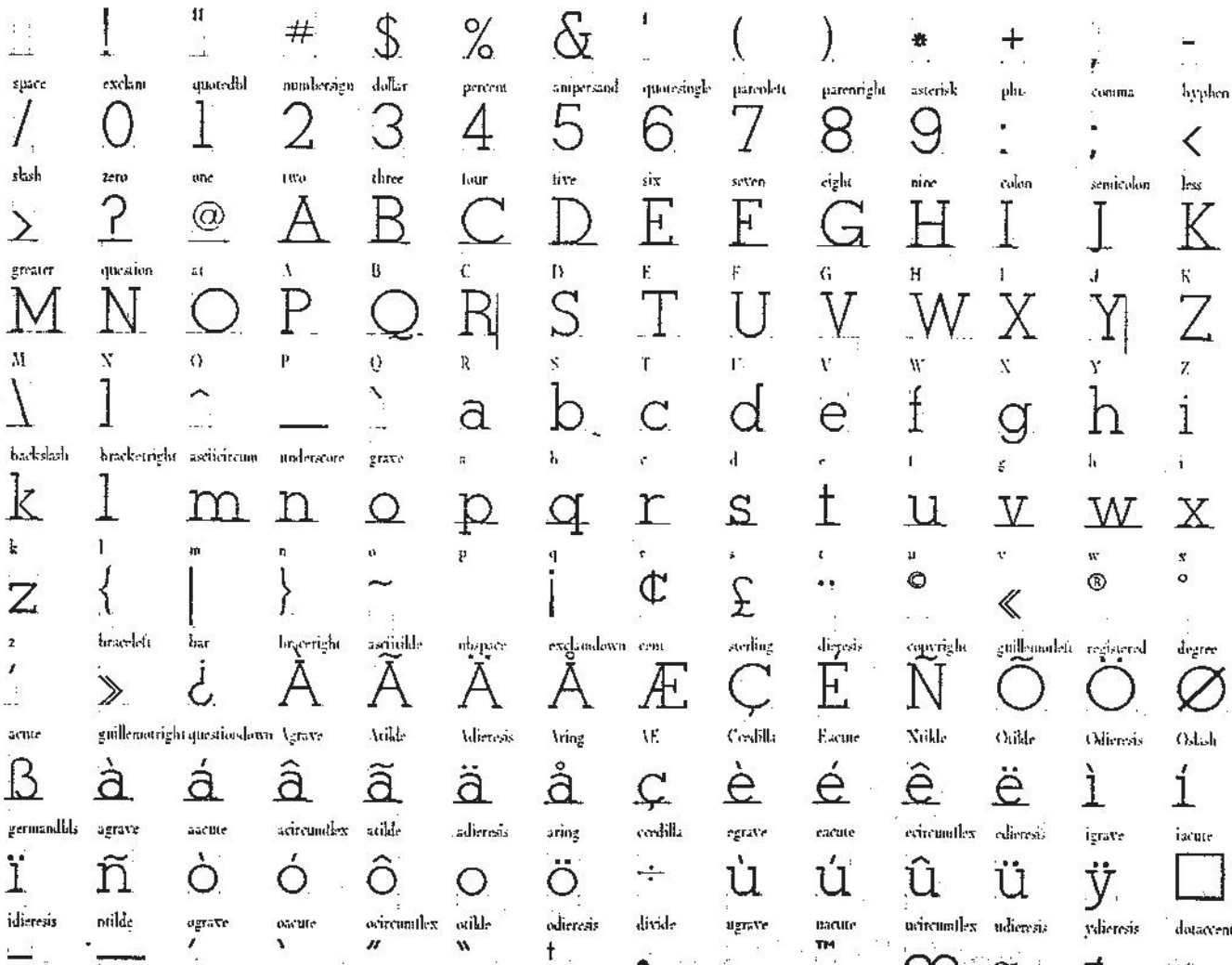
Steelplate Bold



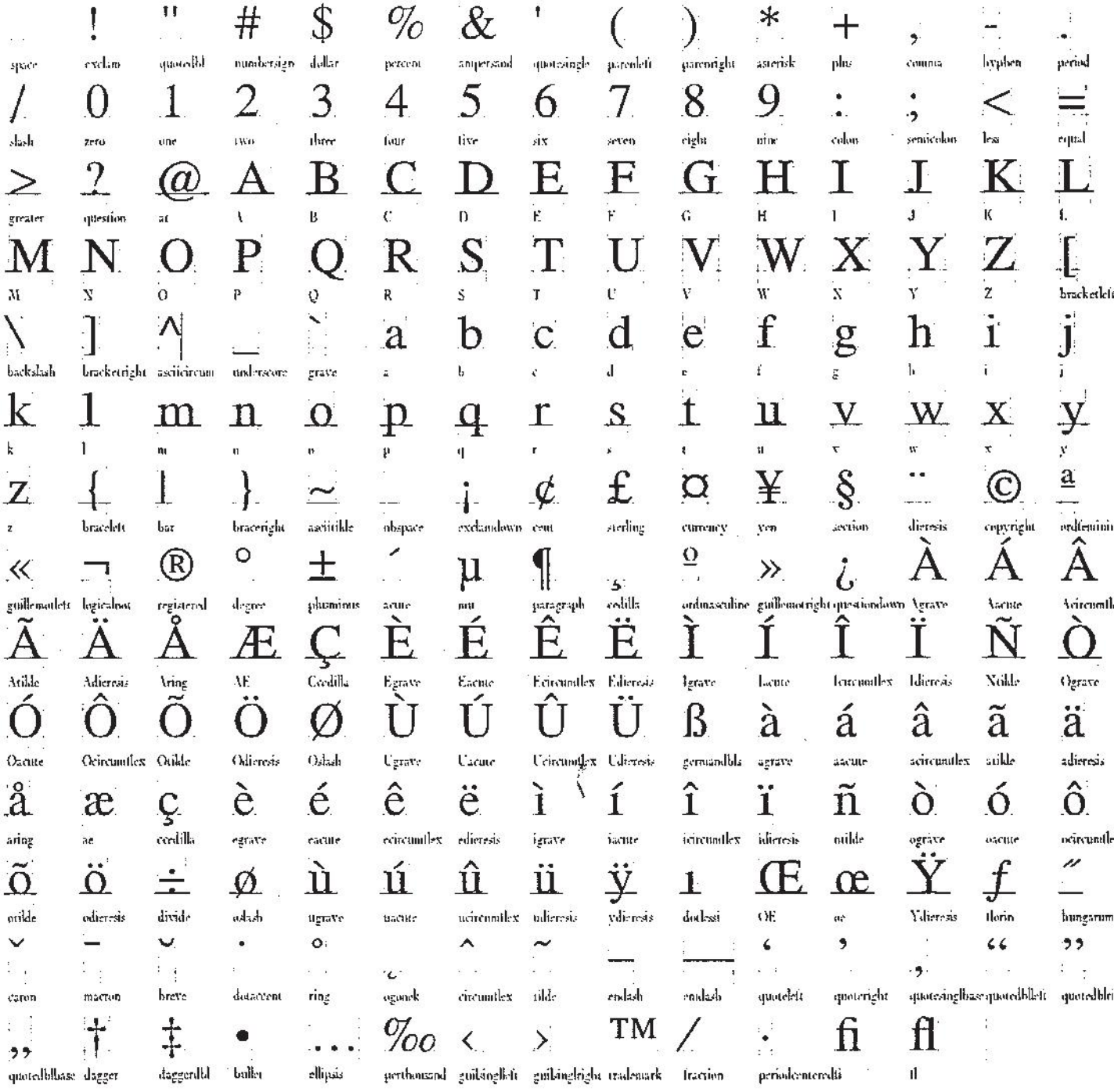
Style



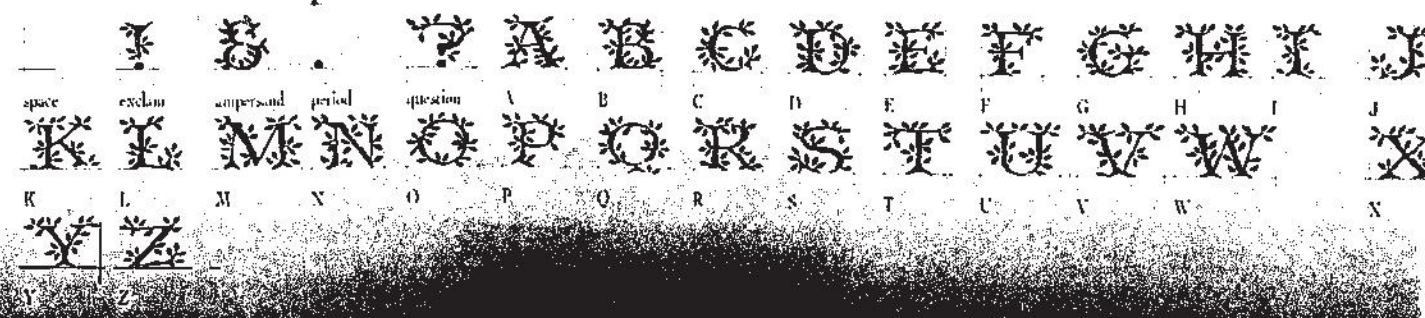
Stymie



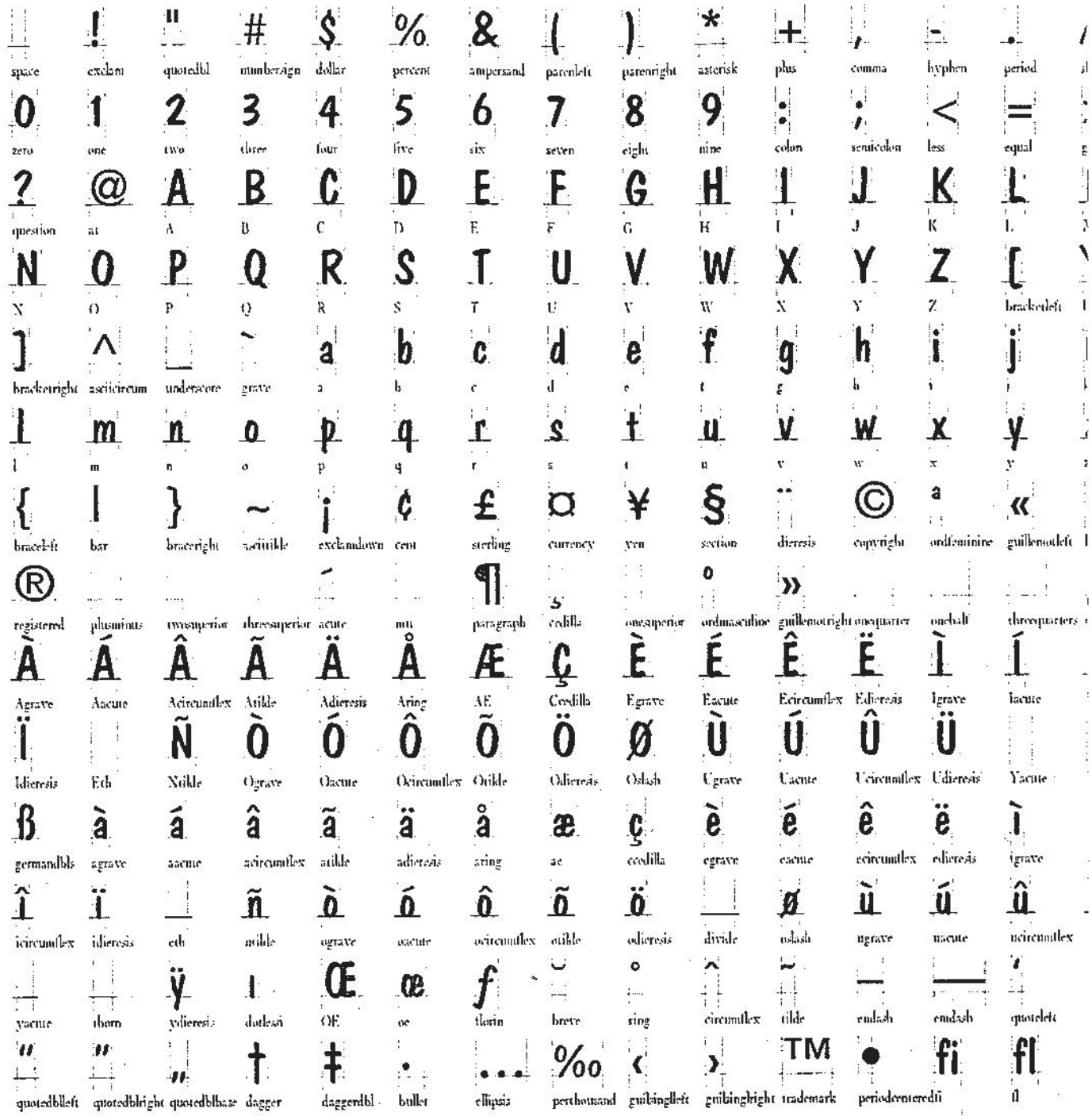
Tempus



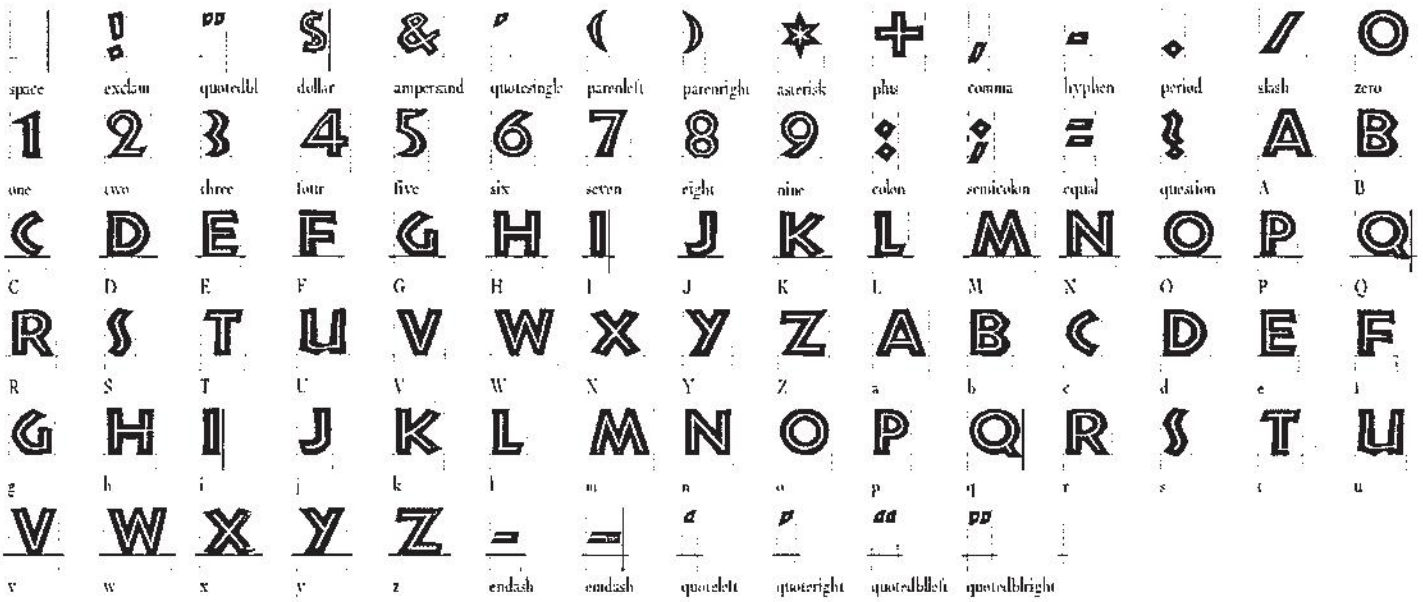
Tenderleaf-Caps



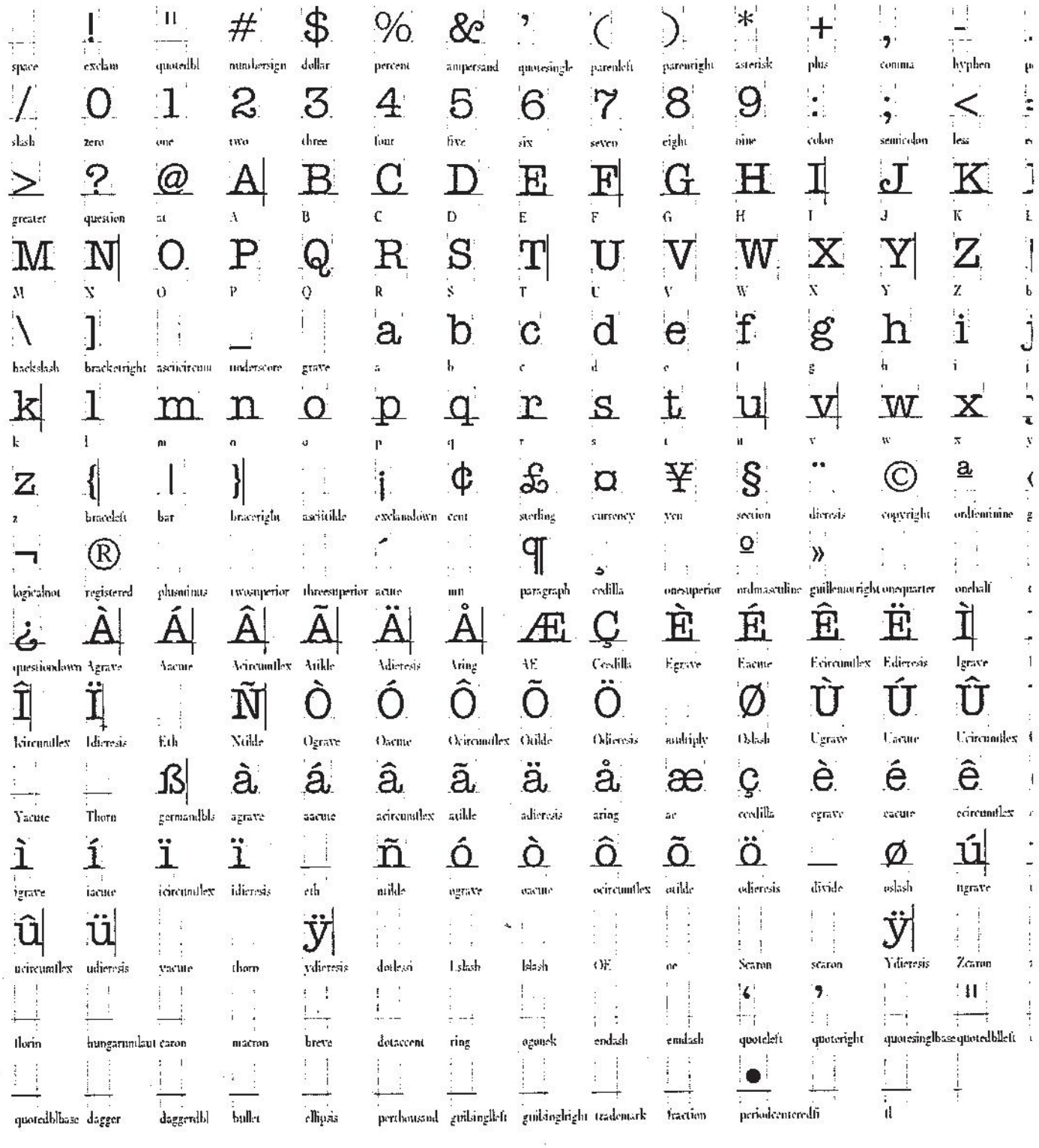
Tom


space exclam quotedbl numbersign dollar percent ampersand parenleft parenright asterisk plus comma hyphen period
zero one two three four five six seven eight nine colon semicolon less equal
question at A B C D E F G H I J K L
N O P Q R S T U V W X Y Z bracketleft
bracketright asciicircum underscore grave a b c d e f g h i j
l m n o p q r s t u v w x y
braceleft bar braceright asciitilde exclamdown cent sterling currency yen section dieresis copyright ordfeminine guillemotleft
registered plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter onehalf threequarters
Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis Igrave Iacute
Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis Oslash Ugrave Uacute Ucircumflex Udieresis Yacute
germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute ecircumflex edieresis igrave
icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash ugrave uacute ucircumflex
yacute thorn ydieresis dotlessi OE oe florin breve ring circumflex tilde endash emdash quoteleft
quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark periodcenteredl fi fl

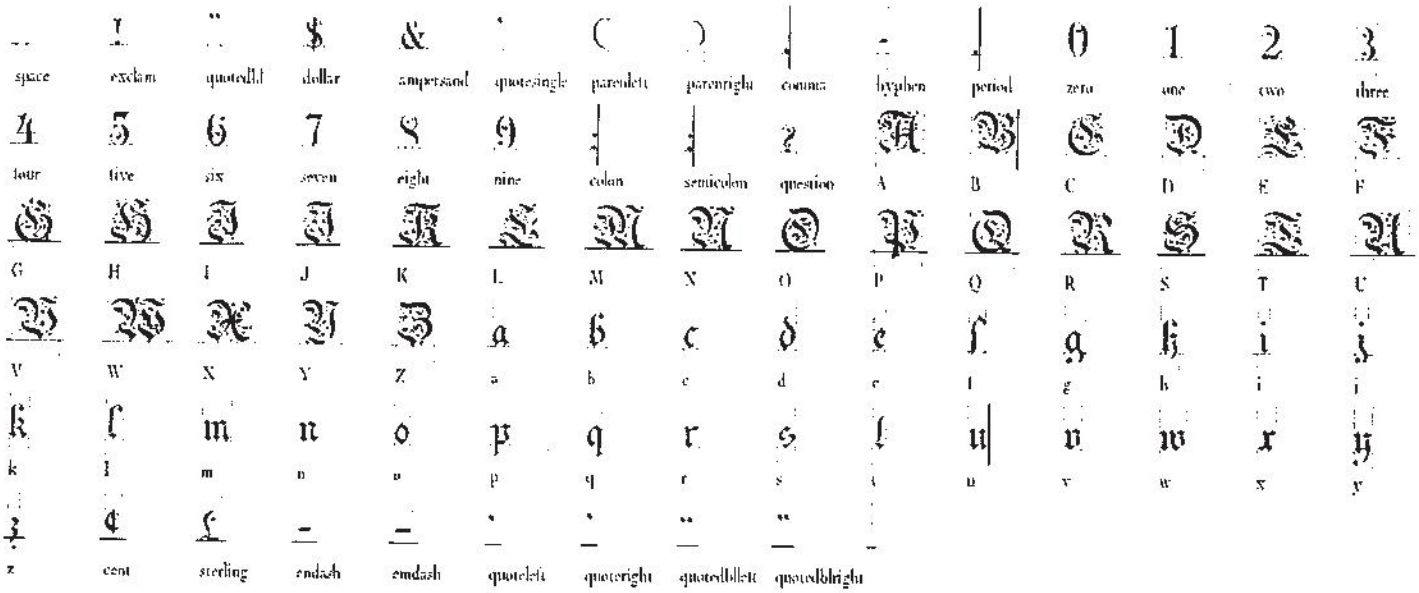
Tribeca


space exclam quotedbl dollar ampersand quotesingle parenleft parenright asterisk plus comma hyphen period slash zero
one two three four five six seven eight nine colon semicolon equal question A B
C D E F G H I J K L M N O P Q
R S T U V W X Y Z a b c d e f
g h i j k l m n o p q r s t u
v w x y z endash emdash quotedblleft quoteright quotedblbl quotedblright

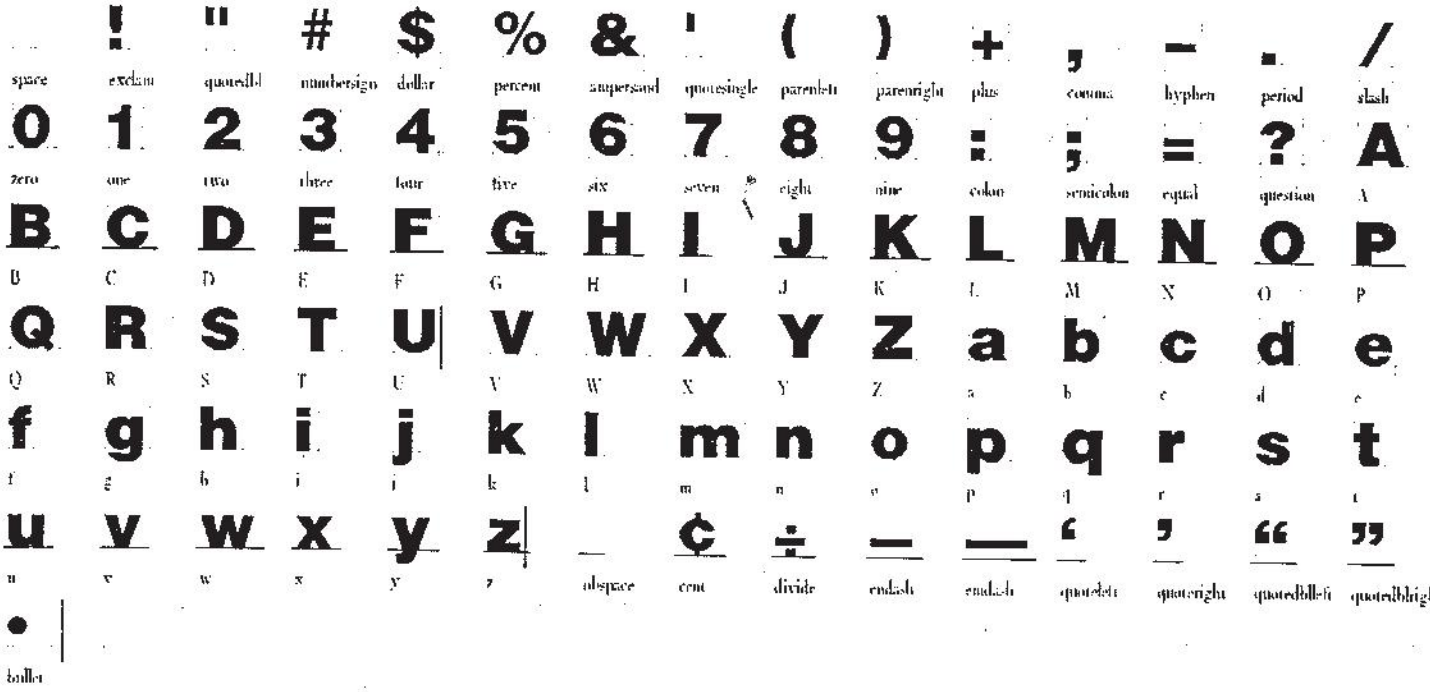
Typewriter


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen
slash zero one two three four five six seven eight nine colon semicolon less
greater question at A B C D E F G H I J K
M N O P Q R S T U V W X Y Z
backslash bracketright asciicircum underscore grave a b c d e f g h i
k l m n o p q r s t u v w x
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen section dieresis copyright ordfeminine
logicalnot registered plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter onehalf
questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis Igrave
Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave Uacute Ucircumflex
Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute ecircumflex
igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash ugrave
ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron Ydieresis Zcaron
florin hungarumlaut caron macron breve dotaccent ring ogonek endash emdash quotedblleft quoteright quotesinglbase quotedblleft
quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark fraction periodcenteredfi fl

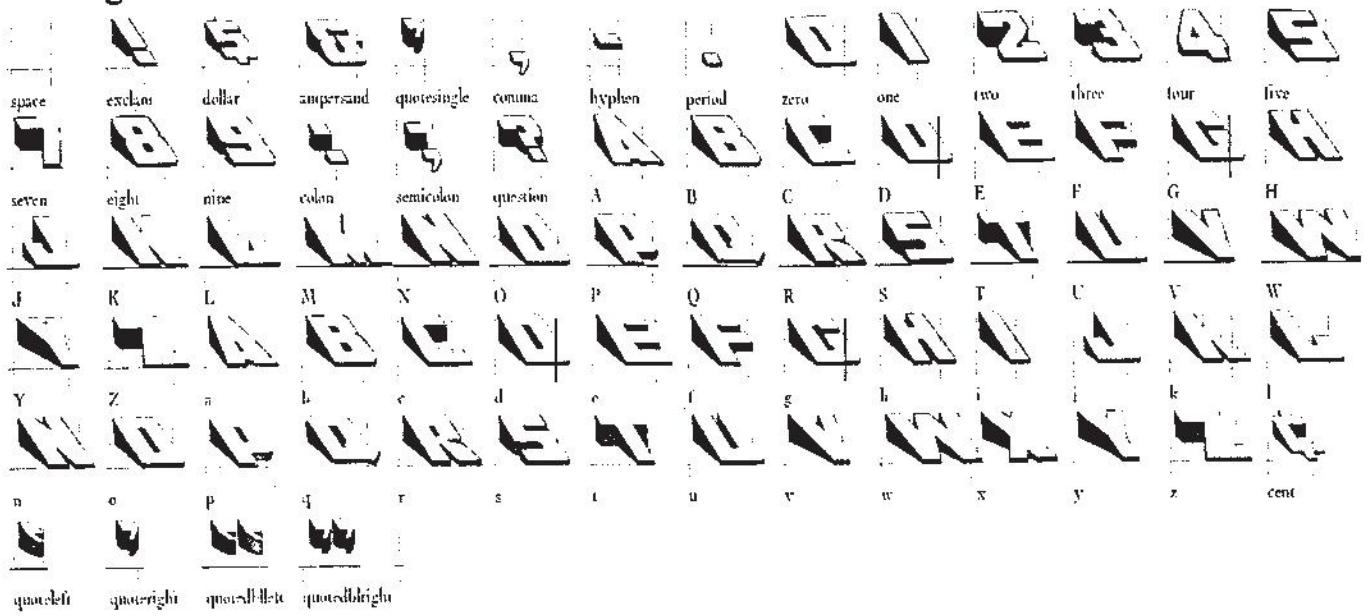
Uechi Gothic



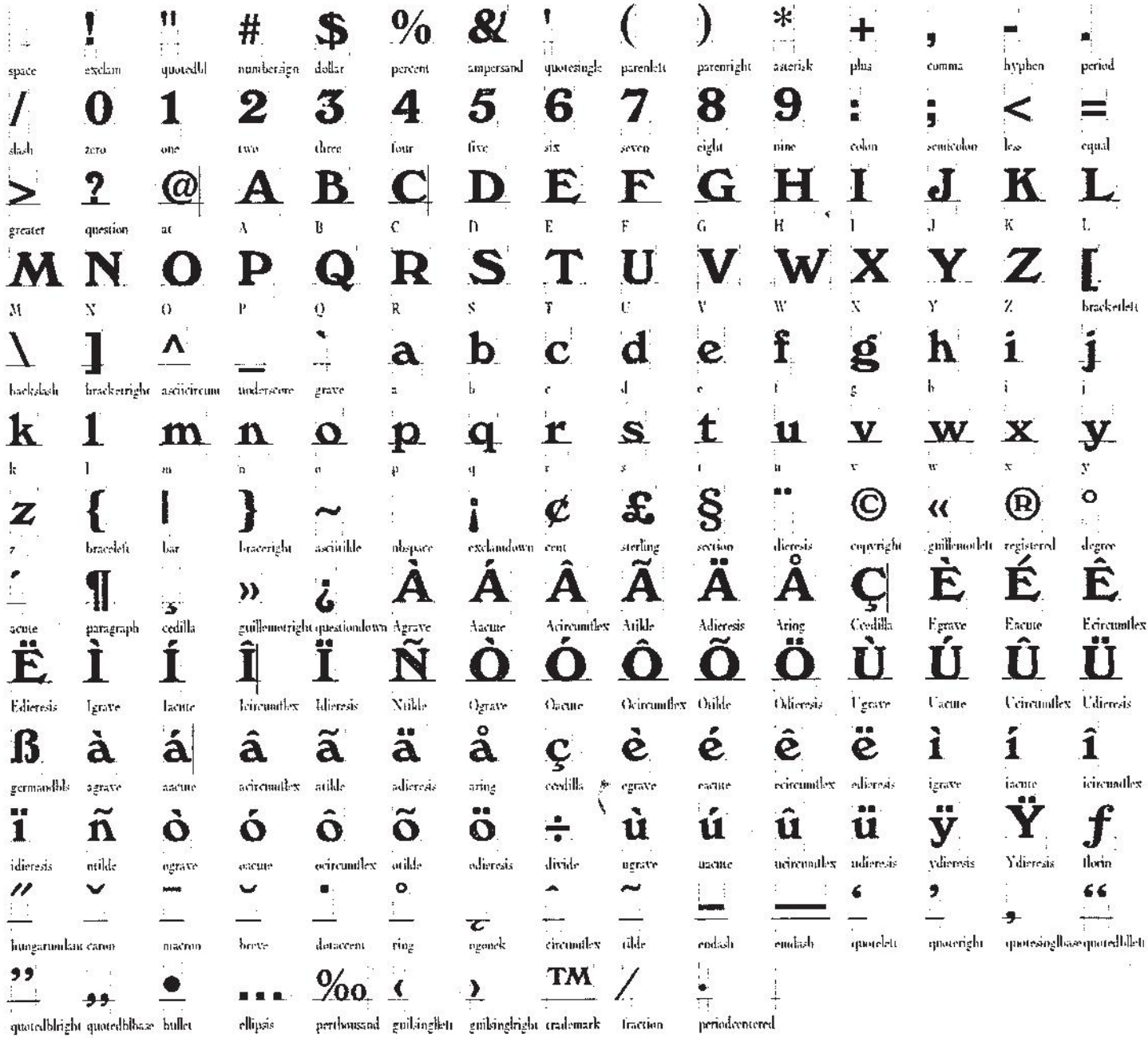
UltraBlack



Wedgie


space
exclam
dollar
ampersand
quotesingle
comma
hyphen
period
zero
one
two
three
four
five
seven
eight
nine
colon
semicolon
question
A
B
C
D
E
F
G
H
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
Y
Z
a
b
c
d
e
f
g
h
i
j
k
l
n
o
p
q
r
s
t
u
v
w
x
y
z
cent
quotedbl
quotesingle
quotedblright

Windsor


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde nbspace exclamdown cent sterling section dieresis copyright guillemotleft registered degree
acute paragraph cedilla guillemotright questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring Ccedilla Egrave Eacute Ecircumflex
Edieresis Igrave Iacute Icircumflex Idieresis Ntilde Ograve Oacute Ocircumflex Otilde Odieresis Ugrave Uacute Ucircumflex Udieresis
germandbls agrave aacute acircumflex atilde adieresis aring ccedilla egrave eacute ecircumflex edieresis igrave iacute icircumflex
idieresis ntilde ograve oacute ocircumflex otilde odieresis divide ugrave uacute ucircumflex udieresis ydieresis Ydieresis florin
hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash quoteleft quoteright quotesinglbase quotedblleft
quotedblright quotedblbase bullet ellipsis perthousand guilsinglleft guilsinglright trademark fraction periodcentered

Yearbook


space exclam quotedbl numbersign dollar percent ampersand quotesingle parenleft parenright asterisk plus comma hyphen period
slash zero one two three four five six seven eight nine colon semicolon less equal
greater question at A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z bracketleft
backslash bracketright asciicircum underscore grave a b c d e f g h i j
k l m n o p q r s t u v w x y
z braceleft bar braceright asciitilde exclamdown cent sterling currency yen brokenbar section dieresis copyright ordfeminine
guillemotleft logicalnot registered degree plusminus twosuperior threesuperior acute mu paragraph cedilla onesuperior ordmasculine guillemotright onequarter
onehalf threequarters questiondown Agrave Aacute Acircumflex Atilde Adieresis Aring AE Ccedilla Egrave Eacute Ecircumflex Edieresis
Igrave Iacute Icircumflex Idieresis Eth Ntilde Ograve Oacute Ocircumflex Otilde Odieresis multiply Oslash Ugrave Uacute
Ucircumflex Udieresis Yacute Thorn germandbls agrave aacute acircumflex atilde adieresis aring ae ccedilla egrave eacute
ecircumflex edieresis igrave iacute icircumflex idieresis eth ntilde ograve oacute ocircumflex otilde odieresis divide oslash
ugrave uacute ucircumflex udieresis yacute thorn ydieresis dotlessi Lslash lslash OE oe Scaron scaron Ydieresis
Zcaron zcaron florin hungarumlaut caron macron breve dotaccent ring ogonek circumflex tilde endash emdash quoteleft
quoteright quotesinglbase quotedblleft quotedblright quotedblbase dagger daggerdbl bullet ellipsis perthousand guilsinglleft guilsinglright trademark minus fraction
periodcenteredfi fi fl

Yearbook Bold



Yearbook Bold Italic



Yearbook Italic

