# GORTON PERFECTED SPECIMEN

## A SHIFT HAPPENS BOOKLET №2

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MARCIN WICHARY

NOW IS
THE TIME
FOR ALL
GOOD
PEOPLE
TO COME
TO THE
AID OF
THE
PARTY

If you're a person of a certain age, you have typed on a keyboard whose keycaps used the Gorton font, and you will recognize it immediately. BBC computers, Compaq portables, DEC and TeleVideo terminals, CDC supercomputers, many PC clones, and Apple II all relied on Gorton. IBM married Helvetica, but before that they had also borrowed a version of Gorton's typeface. Hell, keys with Gorton on them even made it to the Moon aboard Apollo 11 and its famous DSKY keyboard.

But Gorton is even older than the oldest of these computers. It started as a generic sans serif font used by the George Gorton Machine Company of Racine, Wisconsin, in their engraver machines. "They are used by leading brass and general engravers, engineers, and makers of hardware; in making stamps, dies, and original type-models for printing; moulds for glass, rubber, soap, etc.; and for engraving seals. They are employed in leading Railway and Ship Building Works, in the United States Navy Yards, in the Royal Arsenals, Dockyards, and observatories, and in Government Telegraph Factories, variously scattered throughout the world," boasted a brochure from 1902. That's right: this font is almost certainly a 19th century creation.

Since then you could spot it – or a version of it, as many existed over time – on various pieces of heavy machinery, on signs, and even on typewriter keycaps, and perhaps even more places where the durability of engraved letters felt more important than the quality of printed ones.

Gorton's quality is indeed… suspect. Technical constraints of engraving required a uniform stroke, which is sneered upon in both typography or calligraphy. Some of the shapes, like the 4, 6, 7, Q, &, or the very distinctive @ would be laughed out of a type design crit. In a way, Gorton became a victim of its medium – the same fate that met the monospace fonts of typewriters, and the bitmap fonts of early microcomputers.

All this, of course, made it a perfect font for *Shift Happens*. As there was never an official or authoritative digital version of Gorton, I recreated the font from drawings and keycaps, and used it in the book. I then hired Inga Plönnings, a talented type designer from Germany, to make it fully usable for typesetting. Inga redrew the shapes, making them more typographically accurate, consistent, and attractive. She also recreated lowercase letters, added glyphs for many languages, and created a variable weight allowing the font to be a lot more versatile and find a greater range of purposes.

We named the result Gorton Perfected, a nod to how a "version 2.0" of a thing would be called back when Gorton was new.

I hope you enjoy putting it to use. This booklet aims to walk you both through the capabilities (and easter eggs) of Gorton Perfected the font, but also tell you a little more of its history.

*Marcin Wichary*

A-TRONIX
OFF
VOLUME
32 16 8 4 2 1
MEMORY ADDRESS
TUNE
PROGRAM
REGIS
1 2 3 4 5 6
BT Q W E R T Y
BK A S D F G H
DBLE CHAR Z X C V B

CW KEYBOARD
STER FULL
1
2
3
4
MEMORY
SELECT
SPEED
7
8
9
0
BACK SPACE
REPEAT
U
I
O
P
AS
CQ
J
K
L
AR
KN
SK
N
M
,
.
/
?
2

# THE FEATURES OF GORTON PERFECTED

You can still buy Gorton keycaps today, but some of the shapes have been adjusted – rounded, softened – over the years. This has been a challenge in resurrecting this font: Which version of Gorton should be given new life? And what of its quirkiness deserved to be kept?

Inga Plönnings, the type designer, and I had many conversations about this. We eventually zeroed in on the 1970s/1980s Gorton as the ultimate edition – an example of that can be seen on the previous spread of a radio teletype keyboard – but recognizing that there is no one single Gorton, we allowed you to have options to choose among.

That means that, among its many stylistic sets, Gorton Perfected contains a "not ugly variants" toggle that softens some of its most egregious typographic transgressions. You can also pick among various shapes of QQQ and OΘØ□ that graced keyboards throughout the years, along with alternative shapes of a few other glyphs.

Hiding within Gorton Perfected are: a variable font weight allowing you to choose any of the hundreds of notches between Light and **Bold**; monospace digits (a.k.a. tabular numerals) that precisely align vertically across rows for things like receipts and spreadsheets; a generous assortment of diacritics and symbols allowing Gorton's use in over 80 languages; and a few symbols coming from keyboards. (These were designed by me, not Inga.)

But perhaps my favorite little feature is the "lowercase ampersand" I have never seen in use before, but which I spotted in one of the Gorton specimens.

The following pages take you on the tour of Gorton Perfected's nooks and crannies.

STYLISTIC SETS

SS01
NOT UGLY
VARIANTS

3 3

5 5

& &

g g

SS07
WIDE J

j j

SS06
ALTERNATE G

g g

SS05
WIDE A

a a

SS08
NARROW R

r r

SS02
Q WITH
A STRAIGHT
TAIL

QQ

SS03
Q WITH
A SWUNG
TAIL

QQ

SS04
I WITH SERIFS

II

SS12
LOWERCASE
AMPERSAND

&&

SLASHED
ZERO

0Ø

SS09
SQUARE
ZERO

0□

SS10
ZERO WITH
A DOT

0⊙

SS11
SIMPLE 1

1 |

## INCLUDED CHARACTERS

| | | | | |
|---|---|---|---|---|
| … | . | , | : | ; |
| ELLIPSIS | PERIOD | COMMA | COLON | SEMICO-LON |
| ⁝ | · | • | * | ° |
| TRICOLON | MID DOT (INTERPUNCT) | BULLET | ASTERISK | DEGREE SIGN |
| ! | ¡ | ? | ¿ | § |
| EXCLAMATION POINTS | | QUESTION MARKS | | SECTION SIGN |
| ‘ | “ | ’ | ” | & |
| OPENING QUOTES | | CLOSING QUOTES | | AMPERSAND |
| ' | " | ′ | ″ | @ |
| SINGLE QUOTE | DOUBLE QUOTE | MINUTE | SECOND | AT SIGN |

( ) PARENTHESES

[ ] BRACKETS

© COPYRIGHT SIGN

< > SINGLE GUILLEMETS

{ } BRACES

¶ PILCROW

« » GUILLEMETS

/ SLASH

\ BACK-SLASH

% PERCENT SIGN

< LESS THAN

> GREATER THAN

≤ LESS OR EQUAL

≥ GREATER OR EQUAL

¤ CURRENCY SIGN

$ DOLLAR SIGN

€ EURO SIGN

£ POUND SIGN

¥ YEN SIGN

¢ CENT SIGN

| | | | | |
|---|---|---|---|---|
| − | - | – | — | _ |
| MINUS | HYPHEN | EN DASH | EM DASH | UNDER-SCORE |
| + | ± | × | ÷ | µ |
| PLUS | PLUS/ MINUS | MULTIPLI-CATION | DIVISION | MICRO SIGN |
| = | ≠ | ≈ | # | № |
| EQUALS SIGN | NOT EQUALS | APPROXI-MATE | NUMBER SIGN | NUMERO |
| ½ | ¼ | ¾ | ª | º |
| VULGAR FRACTIONS | | | ORDINALS | |
| ¬ | ~ | ^ | \| | ¦ |
| LOGICAL NOT | TILDE | CIRCUM-FLEX | BAR | BROKEN BAR |

TABULAR NUMERALS

£1.237,10
£584,30
£270,50

£1.237,10
£584,30
£270,50

SUPPORTED LANGUAGES

LATIN/ENGLISH
qwertyuiopasdfghjklzxcvbnm
QWERTYUIOPASDFGHJKLZXCVBNM

POLISH
ąćęłńóśżź
ĄĆĘŁŃÓŚŻŹ

FAROESE
áæíðóøúý
ÁÆÍÐÓØÚÝ

HUNGARIAN
éóöőúüű
ÉÓÖŐÚÜŰ

SLOVAK
áäčďéíĺľňóôŕšťúýž
ÁÄČĎÉÍĹĽŇÓÔŔŠŤÚÝŽ

ICELANDIC
áðéíóúýþæö
ÁÐÉÍÓÚÝÞÆÖ

CZECH
áčďéěňóřšťúůýž
ÁČĎÉĚŇÓŘŠŤÚŮÝŽ

FRENCH
àâæçëèéêïîœôüùûÿ
ÀÂÆÇËÈÉÊÏÎŒÔÜÙÛŸ

LOWER SORBIAN
óćčěłńŕšśźž
ÓĆČĚŁŃŔŠŚŹŽ

UPPER SORBIAN
óćčěłńřšž
ÓĆČĚŁŃŘŠŽ

NORWEGIAN
æøå
ÆØÅ

DANISH
æøå
ÆØÅ

SWEDISH
åäö
ÅÄÖ

FINNISH
åäö
ÅÄÖ

CATALAN
àçèéíïòóúü·
ÀÇÈÉÍÏÒÓÚÜ·

SPANISH
áéíñóúü
ÁÉÍÑÓÚÜ

BASQUE
çñ
ÇÑ

GERMAN
äöüß
ÄÖÜẞ

SWISS GERMAN
äöü
ÄÖÜ

PORTUGUESE
àáâãçéêíòóôõú
ÀÁÂÃÇÉÊÍÒÓÔÕÚ

SLOVAK
áäčďéíĺľňóôŕšťúýž
ÁÄČĎÉÍĹĽŇÓÔŔŠŤÚÝŽ

AFRIKAANS
ááèéêëîïôöû
ÁÁÈÉÊËÎÏÔÖÛ

WESTERN FRISIAN

áäéëìïòöúüỳ

ÁÄÉËÌÏÒÖÚÜỲ

COLOGNIAN

äåæëöüėœů

ÄÅÆËÖÜĖŒŮ

DUTCH

ááéëíïóöúü

ÁÄÉËÍÏÓÖÚÜIJ

TURKISH

çğıiöşü

ÇĞIİÖŞÜ

SERBIAN

ččđšž

ČĆĐŠŽ

CROATIAN

ččđšž

ČĆĐŠŽ

BOSNIAN

ččđšž

ČĆĐŠŽ

LITHUANIAN

ąčęėįšųūž

ĄČĘĖĮŠŲŪŽ

LATVIAN

āčēģīķļņšūž

ĀČĒĢĪĶĻŅŠŪŽ

ESTONIAN

äõöüšž

ÄÕÖÜŠŽ

ITALIAN

àèéìòóù

ÀÈÉÌÒÓÙ

SCOTTISH GAELIC

àèìòù

ÀÈÌÒÙ

ROMANIAN

ăâîșț

ĂÂÎȘȚ

MALTESE

àèìòùċġħż

ÀÈÌÒÙĊĠĦŻ

ROMANSH

àèéìòù

ÀÈÉÌÒÙ

ALBANIAN

çë

ÇË

WELSH

àáâäèéêëìíîïòóôöùúûüŵẁẃẅỳýŷÿ

ÀÁÂÄÈÉÊËÌÍÎÏÒÓÔÖÙÚÛÜŴẀẂẄỲÝŶŸ

ALSO: ASU, BEMBA, BENA, BRETON, CHIGA, CORNISH, FILIPINO, FRIULIAN, GALICIAN, GUSII, INDONESIAN, KABUVERDIANU, KALENJIN, KINYARWANDA, LUO, LUXEMBOURGISH, LUYIA, MACHAME, MAKHUWA-MEETTO, MAKONDE, MALAGASY, MANX, MĀORI, MORISYEN, NORTH NDEBELE, NYANKOLE, OROMO, QUECHUA, ROMBO, RUNDI, RWA, SAMBURU, SANGO, SANGU, SENA, SHAMBALA, SHONA, SOGA, SOMALI, SWAHILI, TAITA, TESO, UZBEK, VOLAPÜK, VUNJO, AND ZULU

## Tricolon

This key appeared on the first Sholes & Glidden typewriter, and was never built into a keyboard after that.

## Tab

The symbol for the Tab key depicts going to the next tabulation stop.

## Backspace

The common symbol for this key today comes from erasing typewriters of the 1970s.

## Back Tab

The Back Tab was particularly important in form-based terminals of the 1970s, often being its own key, separate from Tab.

## Shift

It's hard to know the origin of the hollow arrow to denote shifting, because various versions of arrows were used for decades.

## Delete

This is basically a reverse of (modern) Backspace, and sometimes called Forward Delete.

## Return

The classic "carriage return" symbol denotes the movement of the paper position, or the cursor.

## Delete (alt.)

This alternate "editorial" symbol for Delete was used by IBM terminal keyboards in the 1970s.

## Control

The tradition to use a caret to indicate Control comes from DEC computers in the 1960s.

## Insert

This symbol for the Insert key was also used by IBM terminal and PC keyboards in the 1970s and 1980s.

## Command

Designed by Susan Kare for the original Macintosh in 1984, the symbol is inspired by a Swedish cartographic symbol for a "point of interest."

## Option

The symbol originally appeared on Apple Lisa in 1983, depicting an alternate electric flow.

A keyboard for Harris ViewWriter, one of the word processors from the late 1980s

NEXT
HARRIS
WP
1 SPACING
1½ SPACING
2 SPACING
½ SPACE
BACK SPACE
RETRN
SHIFT
CTRL
INS
DEL
STOP CONT
PRINT
GO TO
CNCL
MARK
HELP

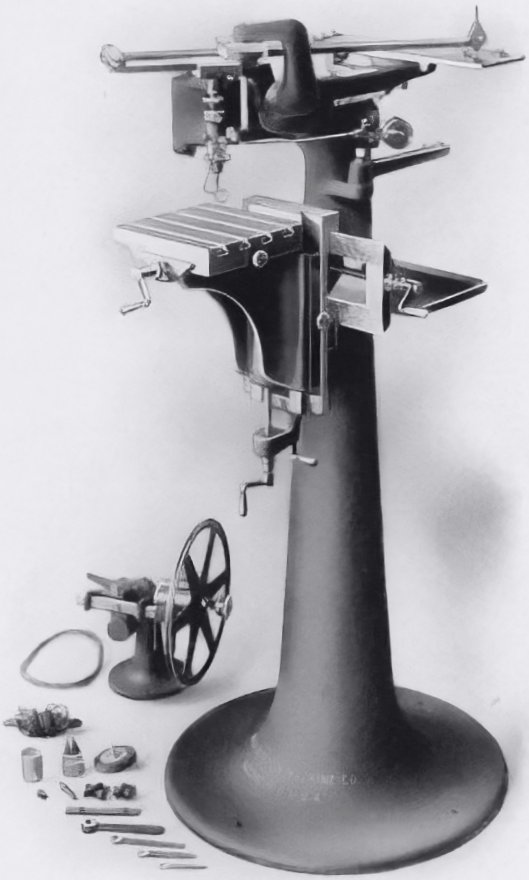
# GORTON
# BEFORE PIXELS

The main principle driving Gorton and other fonts like it was manually tracing the shapes of letters or digits from the original masters (see the cover of this booklet) using a pantograph, a motor-driven machine, which could be set up to reduce or enlarge the size as desired.

I don't personally know much about how engraving was carried out or the machinery that allowed machinists to do so, but on the following pages I wanted to give you some sense of what using Gorton was actually like – from the photos of the defunct George Gorton Machine Company machinery, throughs scans of various manuals and photos of a few accessories, to snapshots of the engraving process.

Gorton was advertised in 1952 as "our most popular type face – universally accepted as standard – perfect proportions and simplicity make this the most used of all type faces. A minimum of sharp corners for rapid tracing with a smooth stroke... most adaptable to many uses," highlighting how the simplicity of reproduction was among its chief selling points.

In a strange twist of fate, the Keuffel & Esser Co. from New Jersey also used Gorton pantographs to prepare their popular Leroy Lettering sets. The letterforms also travelled to drawing tools and machines like Stano-Script or Max Cadliner. So if you recognize the distinctive shapes of Gorton letters, that might come from technical drawings made using those sets or tools.

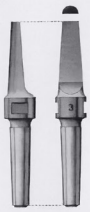


# NO. 1 ENGRAVING MACHINE.

## BELT DRIVEN.

Complete as Per Details Given on Page 7.

For **engraving in relief** and for **ornamental intaglio engraving,** suitable line engravings or enlarged models in sheet metal may be employed as copies.



**The Cutters** (see page 11) for engraving, are generally of the half-round section here shown, but their points may be shaped to produce cuts with curved, straight, or bevelled sides, flat bottomed or otherwise, as may be desired. The **V** shaped cut of the common hand graver is effected by the machine with a conical-pointed cutter which leaves a clean and brilliant cut without burr, and makes it possible to engrave polished or lacquered goods after they are finished.

**The Cutter-grinder,** which forms part of every machine, sharpens the cutters in a very perfect manner, but is quite simple in its action, so that a boy can use it.

**The Feed** advances the cutter and withdraws it from its work rapidly, and can be set to gauge the depth of cut in hundredths of an inch or less, as desired.

**Flat Plates of any length** may be engraved and, if under six inches wide, are held by the Dogs on the Slide-rest Table.

**The No. 1 Large Plate Holder** extends the Slide-rest Table, and takes plates up to twenty inches wide and of any length.

**The Table** can be lowered to admit objects up to six inches thick, or moved laterally to clear larger objects.

**The Circular Attachment** (see page 12) is for holding curved and circular objects, such as cylinders, cones, circular flat dials, and spherical surfaces, and for presenting successive portions to the action of the cutter.

**The great variety in size of work** done by this machine is explained by the fact that the work is held stationary while the cutter alone moves; and the cutters are all comparatively small.



## EXAMPLES OF MACHINE ENGRAVING

**IT IS IMPOSSIBLE TO REPRODUCE, ON PAPER, THESE SAMPLES WITH THEIR ORIGINAL PERFECTION.**

**No. 679.**
Full size reproduction, showing sunk letters .01 in. deep engraved on brass casting. 160 letters in nine minutes. Special copy used without circular attachment.

**No. 558.**
Impression from brass seal. The engraved seal is one-half the diameter of above and the lettering is in relief.

**No. 560.**
Impression from brass seal . . . . The engraved seal is one-half the length of above and the lettering is in relief.

**No. 559.**
Showing sunk characters .02 in. deep engraved close to a hub projecting $\frac{1}{8}$ in. Engraved on brass in five and on steel in six minutes by means of circular attachment and standard copy. Engraved with special copy in one minute.

**No. 561.**
Full size reproduction of brass label plate having sunk flat bottomed lettering, suitable for wax filling. Depth of cut .015 inch. 8 letters engraved in three minutes. This is very similar to label plates as produced on this machine by U. S. Navy Yards, European Yards, and many shipbuilding firms.





## STANDARD COPIES FOR PLAIN SUNK LETTERING AND FIGURES

These Copies are line engravings on hard brass, and are arranged in the grooves of the corresponding copy holders like printers' movable type. We keep these Standard Copies in stock. For suitable holders, see page 10.

**No. 2.** This copy is on strips **1.25** inches wide, fitting the No. 2 copy holder. Capitals are **.75** inches high. One set consists of about **185** capitals, figures, stops, and spacings.
**Code Word—MUSTINESS.** **Price Per Set,**

QUICK 5 QUICK 5

**No. 2L.** This copy is on strips **1.25** inches wide, fitting the No. 2 copy holder. One set consists of about **88** lower case letters only (no spacings), and is for use with No. 2 Standard Copy only.
**Code Word—MUTABILITY.** **Price Per Set,**

eat eat

**No. 2C.** This copy is on strips **1.25** inches wide, fitting the No. 2 copy holder. Capitals are **.75** inches high. One set consists of about **185** capitals, figures, stops and spacings.
**Code Word—MUTABLE.** **Price Per Set,**

QUICK 5 QUICK 5

**No. 3.** This copy is on strips **3.50** inches wide, fitting the No. 3 copy holder. Capitals are **3** inches high. One set consists of about **38** capitals, figures, etc. (no spacings).
**Code Word—MUSROL.** **Price Per Set,**

Q5 QUICK 5

**No. 3C.** This copy is on strips **3.50** inches wide, fitting the No 3 copy holder. Capitals are **3** inches high. One set consists of about **38** capitals, figures, etc. (no spacings).
**Code Word—MUSKWOOD.** **Price Per Set,**

Q5 QUICK 5

**No. 4.** This copy is on strips **4.50** inches wide, fitting the No. 4 copy holder. Capitals are **3** inches high. One set consists of about **64** capitals, figures, and lower case letters (no spacings).
**Code Word—MUSKETOON.** **Price Per Set,**

Nt 5 Nt 5

**No. 5** This copy is on strips **2.25** inches wide, fitting the No. 5 copy holder. Capitals are **1.50** inches high. One set consists of about **131** capitals, figures, stops and spacings.
**Code Word—IVY.** **Price Per Set,**

Q5 QUICK 5

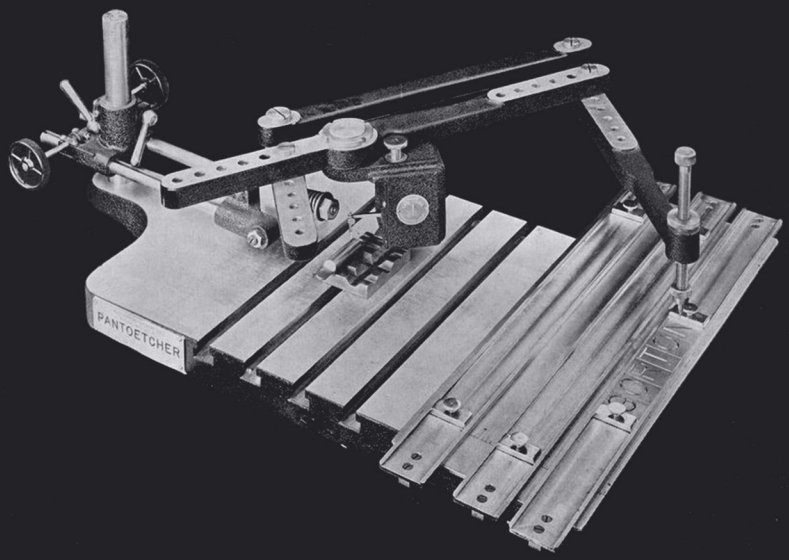
**No. 5L.** This copy is on strips **2.25** inches wide, fitting the No. 5 copy holder. One set consists of about **48** lower case letters only (no spacings), and is for use with No. 5 Standard Copy only.
**Code Word—IVORY.** **Price Per Set,**

eat eat

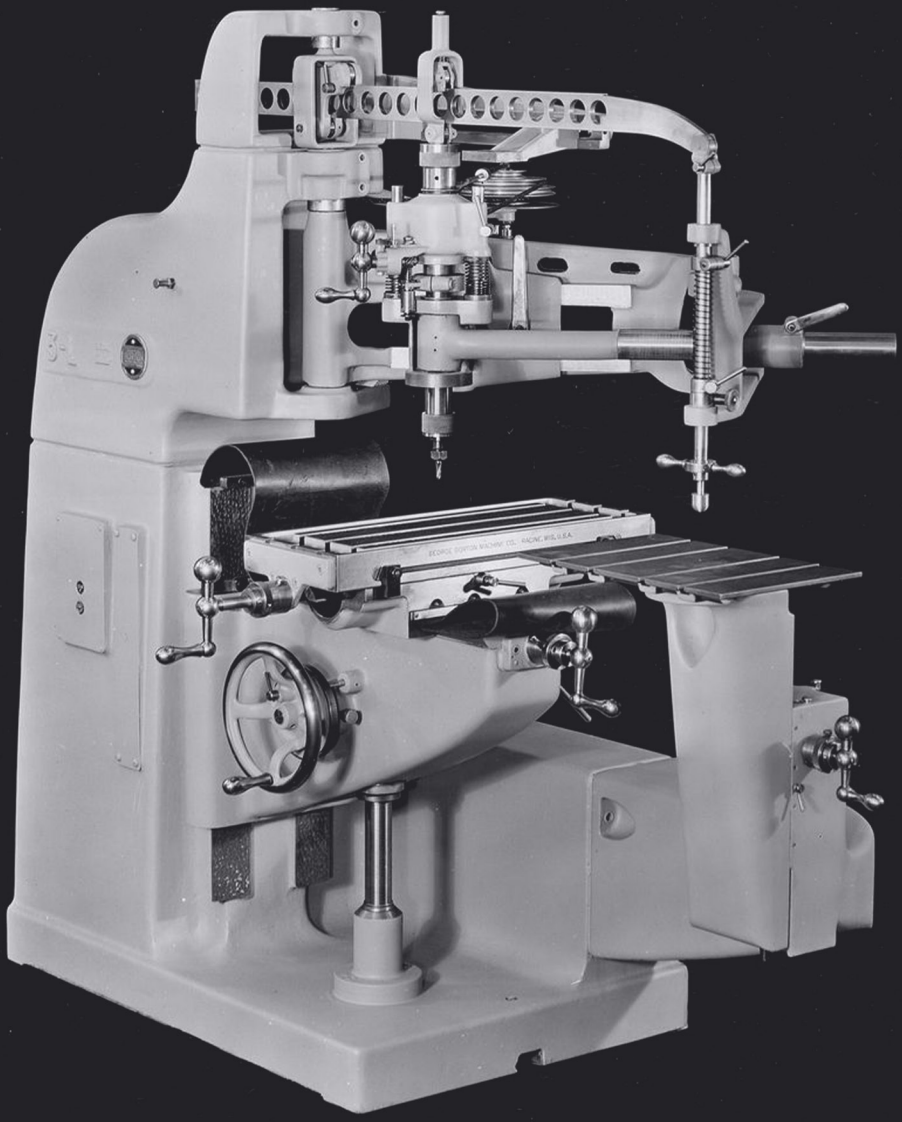
**No. 5C.** This copy is on strips **2.25** inches wide, fitting the No. 5 copy holder. Capitals are **1.50** inches high. One set consists of about **131** capitals, figures, stops and spacings.
**Code Word—ITERATE.** **Price Per Set,**

Q5 QUICK 5

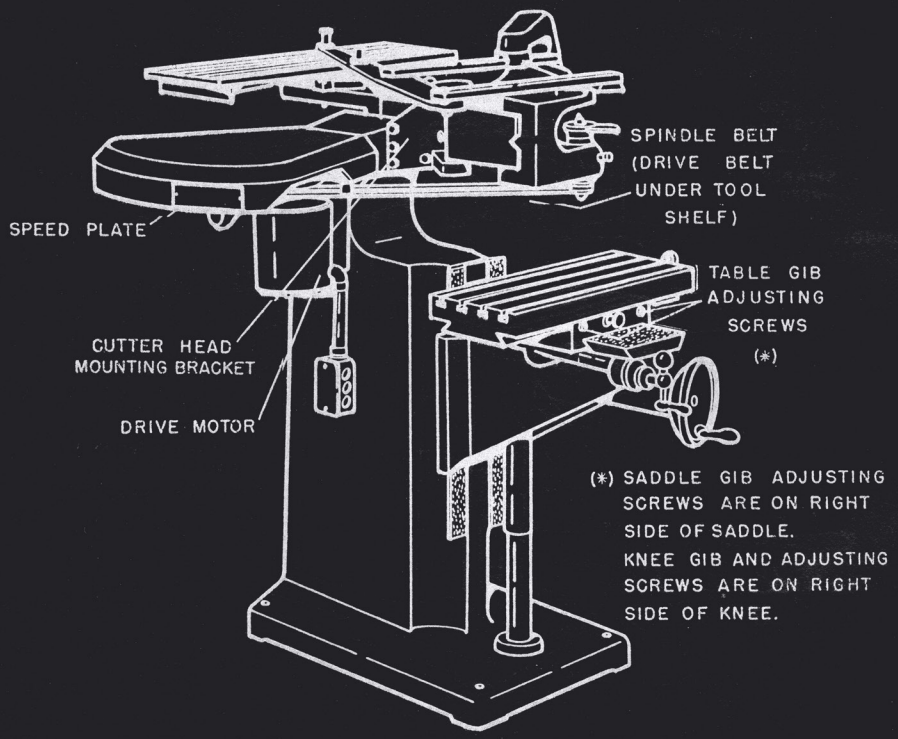
**NOTE.**—These prints show the largest and smallest work ordinarily cut from standard copy of various sizes. In each case intermediate sizes can be cut by setting pantograph on graduations provided. The width of letter faces may be as per these prints, or a mere hair line as desired. In each case, the larger print represents engraving produced with the pantograph set for $\frac{1}{5}$ reduction. The smaller print with tracing cloth set for $\frac{1}{4}$ reduction.


PANTOETCHER
GORTON

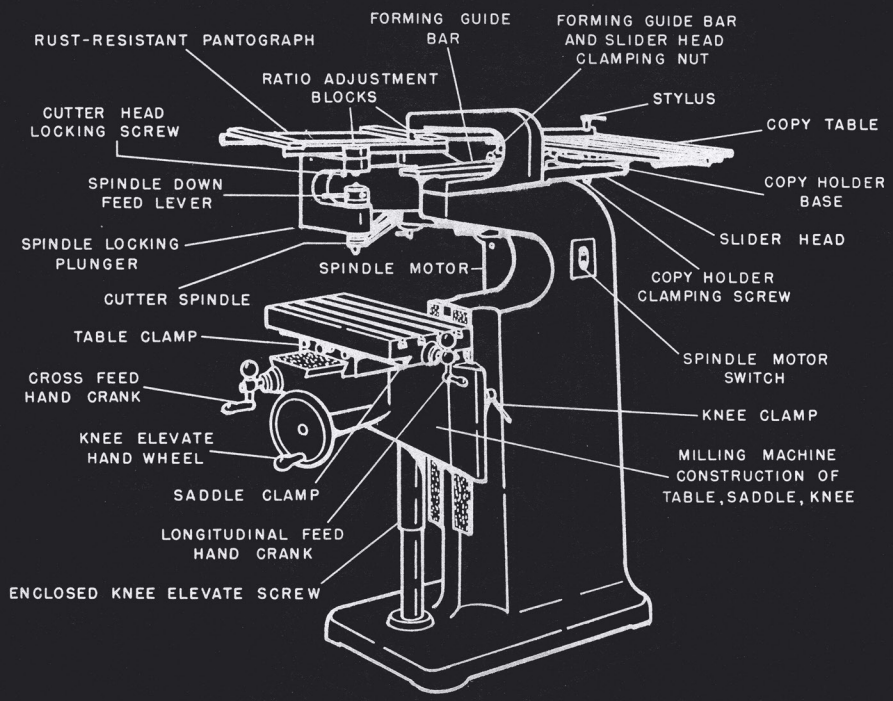
GORTON
PI-4



**P1-2 PANTOGRAPH (2-Dimensional)**
**from Left**




**P1-2 PANTOGRAPH (2-Dimensional)**
**from Right**



NO. 38-1.
0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ

FORM

**1463**

# FORMULA FOR OBTAINING SPECIAL REDUCTIONS ON No. 3-B ENGRAVING MACHINE.

## EXAMPLE

REDUCTION REQUIRED 2.4

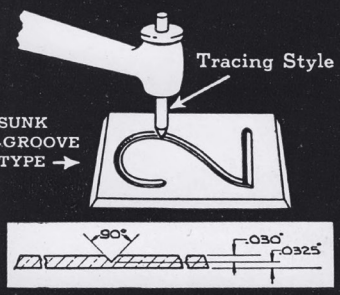
$$\frac{\text{CONSTANT} \longrightarrow 1.6}{\text{REDUCTION} \longrightarrow 2.4} = 6.667$$

$$\begin{array}{rl} \text{CONSTANT} \longrightarrow & 8.000 \\ & -\underline{6.667} \\ & 1.333'' \end{array}$$

DISTANCE IN INCHES TO SET ALL FOUR SLIDER BLOCKS FROM GRADUATION 2 FOR 2.4 REDUCTION.

# THE THREE BASIC FORMS—

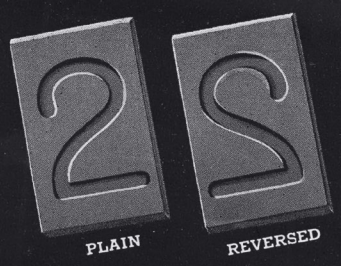
## SUNK V-GROOVE (90°)



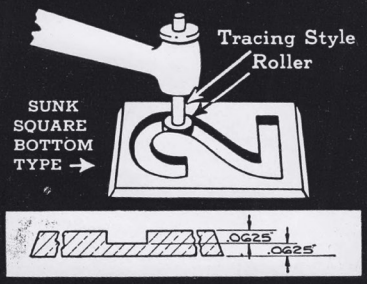

**SUNK V-GROOVE TYPE**—Principal uses: (1) to engrave reading matter on label plates, instruments, tools, etc.

(2) to cut sunken lettering in dies and molds, the most common use.

Different widths of face are made by varying width of cutter used, or by varying depth of cut taken with conical shaped cutter.




## SUNK SQUARE BOTTOM GROOVE

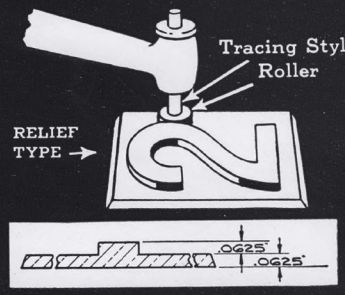



**SUNK SQUARE BOTTOM GROOVE TYPE**—Principal uses: (1) to produce sunken shaded lettering, as in Century, Roman, or Old English.

(2) to produce unshaded lettering wherever square corners are required, as in Chamfer Gothic.

Tracing styles used are cylindrical with square ends.

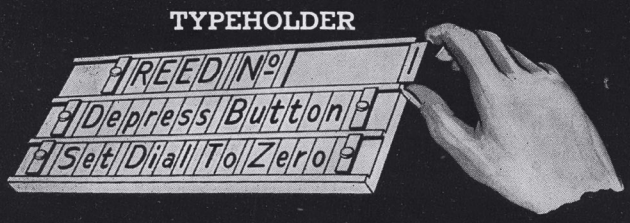
## RELIEF (Raised)



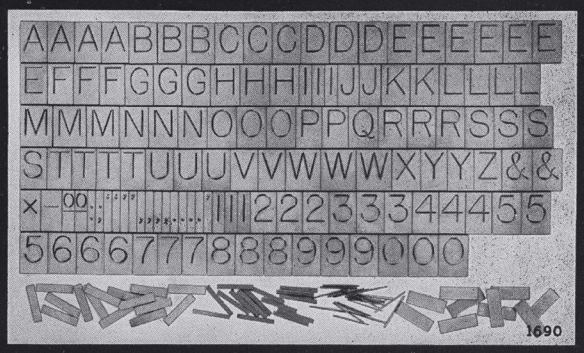

**RELIEF (Raised) TYPE**—Principal use:—to produce raised or relief characters on molds, dies, brass and steel stamps, etc. Tracing styles used are cylindrical with square ends.

**THREE-DIMENSIONAL RELIEF (Raised) TYPE**—Principal use—to produce raised steel letters on stamps and dies. Tracing styles used are conical shaped according to side wall angle required. See page 14 for complete description.

## TYPEHOLDER




## 4-A SET OF TYPE—Capitals




## REDUCTIONS—Full Size to 1/10th or 1/100th

**SIXTH REDUCTION HEAVY**
SIXTH REDUCTION MEDIUM
SIXTH REDUCTION LIGHT

**EIGHTH REDUCTION HEAVY**
EIGHTH REDUCTION MEDIUM
EIGHTH REDUCTION LIGHT

**TENTH REDUCTION HEAVY**
TENTH REDUCTION MEDIUM
TENTH REDUCTION LIGHT

**TWELFTH REDUCTION HEAVY**

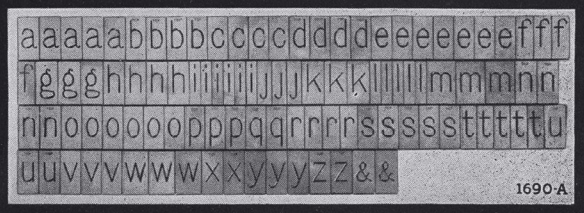
**FOURTEENTH REDUCTION HEAVY**

**SIXTEENTH REDUCTION HEAVY**

**A few reductions possible from one size of type—Note the variation obtainable in width of face by using various sizes of cutters.**

1663-K

## 5-a SET OF TYPE—Lower Case



LUCKY IS HE WHO CAN ACCEPT HIS BROKEN SWORD FROM FATE THE CONQUEROR, WITH A MANLY AND A HUMBLE HEART.
ABCDEFGHIJKLMNOPQRSTUVWXYZ& .,;:'' × - º 1234567890

Lucky Is He Who Can Accept His Broken Sword From Fate The Conqueror, With A Manly And A Humble Heart.
abcdefghijklmnopqrstuvwxyz&

## GORTON NORMAL — capitals with matching lower case sets

Our most popular type face — universally accepted as standard — perfect proportions and simplicity make this the most used of all type faces. A minimum of sharp corners for rapid tracing with a smooth stroke . . . most adaptable to many uses.

Gorton lower case is especially designed for use with Gorton Normal Capitals but can also be used with either Gorton Extended or Gorton Condensed. All characters have identical center lines when of the same size. Height is measured from center line to center line on face of character. Matching Sets of Capitals and lower case are paired together as shown in the table. However, any Set listed, either Capitals or lower case, may be purchased singly.

*Important* — All lower case copy on pages 21, 22 and 23 is interchangeable with Capitals as indicated by repetition of Cat. No. Sets bearing the same Cat. No. are identical.

Where master copy type is subject to constant use on production work, we recommend the purchase of the brass type Sets, hard chromium plated; or steel type Sets, case hardened. Steel type on bodies larger than 1-1/4" cannot be produced successfully due to warpage in heat treating.

Hard chromium plated Brass Master Copy Type Sets — Price: Two times catalog price. Steel, case hardened, Master Copy Type Sets — Price: Three times catalog price. For individual pieces and Special Masters, prices quoted on request.

**Plain** — **SUNK V-GROOVE** — **Reversed**

| Cat. No. | Case | Type Size | Body Size | Set Size | Ship. Wt. | Cat. No. | Case | Type Size | Body Size | Set Size | Ship. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **832-1** | Caps | 3/8" | 1-1/4" | 4-A | 3 lbs. | **835-1** | Caps | 3/8" | 1-1/4" | 4-A | 3 lbs. |
| **833-1** | Lower | 3/8" | 1-1/4" | 5-a | 2 lbs. | **836-1** | Lower | 3/8" | 1-1/4" | 5-a | 2 lbs. |
| **10-1** | Caps | 3/4" | 1-1/4" | 4-A | 3 lbs. | **70-1** | Caps | 3/4" | 1-1/4" | 4-A | 3 lbs. |
| **11-1** | Lower | 3/4" | 1-1/4" | 5-a | 2 lbs. | **77-1** | Lower | 3/4" | 1-1/4" | 5-a | 2 lbs. |
| **834-1** | Caps | 1" | 1-1/4" | 4-A | 3 lbs. | **837-1** | Caps | 1" | 1-1/4" | 4-A | 3 lbs. |
| **16-1** | Caps | 1-1/2" | 2-1/4" | 2-A | 6 lbs. | **71-1** | Caps | 1-1/2" | 2-1/4" | 2-A | 6 lbs. |
| **17-1** | Lower | 1-1/2" | 2-1/4" | 4-a | 5 lbs. | **74-1** | Lower | 1-1/2" | 2-1/4" | 4-a | 5 lbs. |
| **13-1** | Caps | 3" | 3-1/2" | 1-A | 9 lbs. | **73-1** | Caps | 3" | 3-1/2" | 1-A | 9 lbs. |
| **15-1** | Caps | 3" | 4-1/2" | 1-A | 10 lbs. | **72-1** | Caps | 3" | 4-1/2" | 1-A | 10 lbs. |
| **404-1** | Lower | 3" | 4-1/2" | 1-a | 6 lbs. | **403-1** | Lower | 3" | 4-1/2" | 1-a | 6 lbs. |

**Plain** — **SUNK SQUARE BOTTOM GROOVE** — **Reversed**

| Cat. No. | Case | Type Size | Body Size | Set Size | Ship. Wt. | Cat. No. | Case | Type Size | Body Size | Set Size | Ship. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **543-1** | Caps | 3/4" | 1-1/4" | 1-A | 2 lbs. | **544-1** | Caps | 3/4" | 1-1/4" | 1-A | 2 lbs. |

**Plain** — **RELIEF** — **Reversed**

| Cat. No. | Case | Type Size | Body Size | Set Size | Ship. Wt. | Cat. No. | Case | Type Size | Body Size | Set Size | Ship. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **262-1** | Caps | 3/4" | 1-1/4" | 1-A | 2 lbs. | **261-1** | Caps | 3/4" | 1-1/4" | 1-A | 2 lbs. |
| **868-1** | Caps | 3/4" | 1-1/4" | 4-A | 7 lbs. | **871-1** | Caps | 3/4" | 1-1/4" | 4-A | 7 lbs. |

1/16 1/8 3/16 1/4 5/16 3/8 7/16 1/2 9/16 5/8 11/16 3/4 13/16 7/8 15/16

## GORTON FRACTIONS — sixteenths

Specially designed for use with Gorton Normal but can be used with any of the Gorton faces. All characters have identical center lines when of the same size. Height is measured from the top center line on the face of the upper characters to the bottom center line on the face of the lower characters.

**Plain** — **SUNK V-GROOVE** — **Reversed**

| Cat. No. | Type Size | Body Size | Set Size | Ship. Wt. | Cat. No. | Type Size | Body Size | Set Size | Ship. Wt. |
|---|---|---|---|---|---|---|---|---|---|
| **860-1** | 3/8" | 1-1/4" | 1 ea. | 1 lb. | **862-1** | 3/8" | 1-1/4" | 1 ea. | 1 lb. |
| **458-1** | 3/4" | 1-1/4" | 1 ea. | 1 lb. | **497-1** | 3/4" | 1-1/4" | 1 ea. | 1 lb. |

1/32 3/32 5/32 7/32 9/32 11/32 13/32 15/32 17/32 19/32 21/32 23/32 25/32 27/32 29/32 31/32

## GORTON FRACTIONS — thirty-seconds

**Plain** — **SUNK V-GROOVE** — **Reversed**

| Cat. No. | Type Size | Body Size | Set Size | Ship. Wt. | Cat. No. | Type Size | Body Size | Set Size | Ship. Wt. |
|---|---|---|---|---|---|---|---|---|---|
| **864-1** | 3/8" | 1-1/4" | 1 ea. | 1 lb. | **866-1** | 3/8" | 1-1/4" | 1 ea. | 1 lb. |
| **457-1** | 3/4" | 1-1/4" | 1 ea. | 1 lb. | **496-1** | 3/4" | 1-1/4" | 1 ea. | 1 lb. |

| CHARACTER HEIGHT measured from center of engraved cut | Nominal | 1/16 | 3/32 | 1/8 | 3/16 | 1/4 | 3/8 | 1/2 |
|---|---|---|---|---|---|---|---|---|
| | Decimal | .062 | .093 | .125 | .188 | .250 | .375 | .500 |
| SUGGESTED SPACE BETWEEN LINES | Minimum | .03 | .04 | .05 | .07 | .09 | .14 | .18 |
| | Maximum | .058 | .086 | .116 | .174 | .232 | .349 | .465 |
| RECOMMENDED SPACE BETWEEN WORDS | | .045 | .068 | .090 | .136 | .180 | .272 | .360 |

Doubled between sentences.

GORTON

# 10-1 NORMAL TYPE FACE ENGRAVING CHART

| | |
|---|---|
| A | .273 |
| B, C, D, E | .283 |
| F | .260 |
| G | .283 |
| H | .293 |
| I | .127 |
| J | .226 |
| K | .283 |
| L | .247 |
| M | .333 |
| N, O | .293 |
| P | .260 |
| Q | .293 |
| R, S | .283 |
| T | .247 |
| U | .283 |

## WIDTH OF CHARACTERS

Including right and left-hand margin. Copy is self-spacing.

| | |
|---|---|
| V | .273 |
| W | .350 |
| X | .283 |
| Y | .260 |
| Z | .273 |
| 1 | .127 |
| 2 | .260 |
| 3 | .273 |
| 4 | .260 |
| 5, 6 | .283 |
| 7 | .247 |
| 8, 9 | .283 |
| — x + | .213 |
| ° ( ) | .127 |
| . , : ; ‘ ’ | .087 |
| & | .293 |

| | | |
|---|---|---|
| [illegible] | .102 | .068 |
| [illegible]75 | .131 | .087 |
| [illegible].141 | .106 | .070 |
| [illegible].130 | .097 | .065 |
| [illegible].136 | .102 | .068 |
| [illegible].063 | .047 | .031 |
| [illegible]130 | .097 | .065 |
| [illegible]6 | .102 | .068 |
| [illegible] | .097 | .065 |
| [illegible] | .106 | .070 |
| [illegible] | .092 | .061 |
| [illegible] | .106 | .070 |
| [illegible] | .080 | .053 |
| [illegible] | .047 | .031 |
| [illegible] | .032 | .021 |
| [illegible] | .110 | .073 |

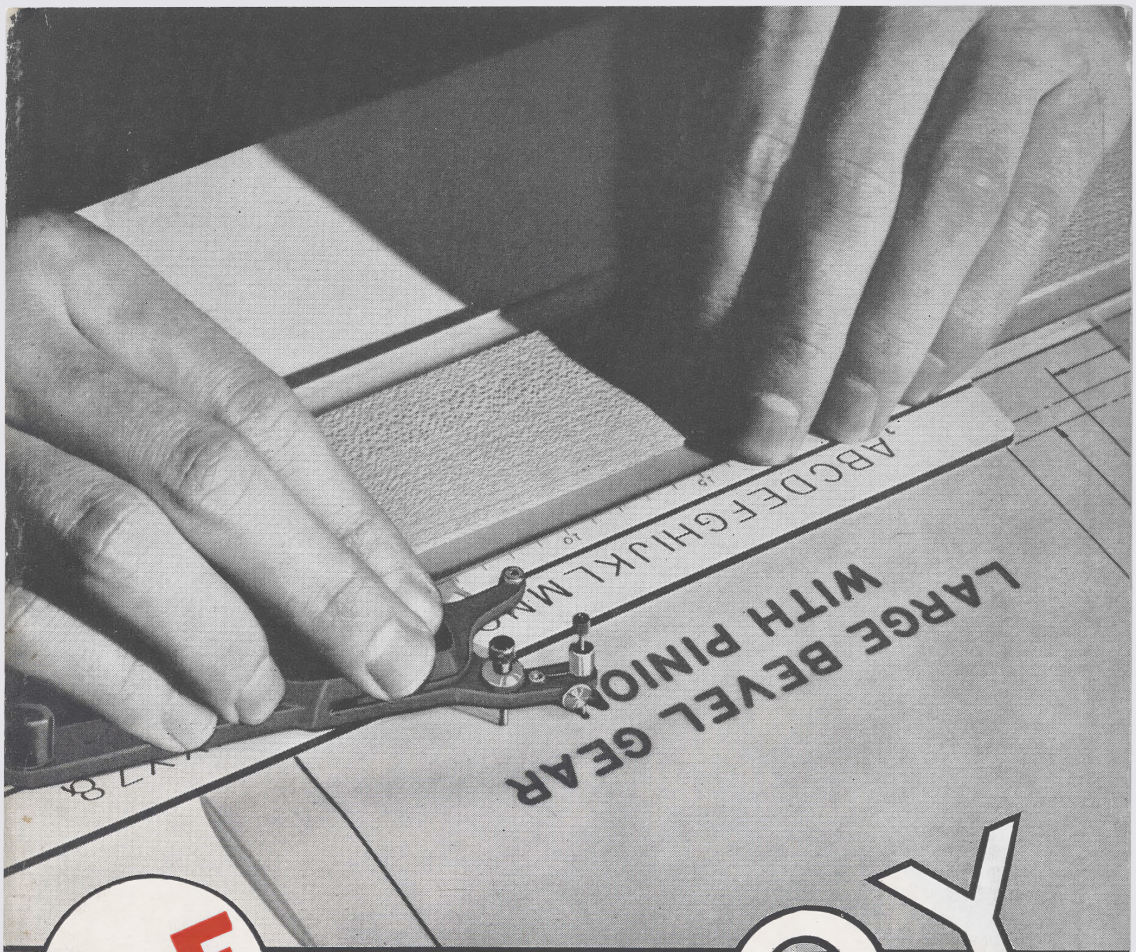
Slide Chart by PERRYGRAF Div. Nashua Corp., L.A., CA 91324 Printed in U.S.A.

Form 3178-A-2M-9/68

DADO

DADS

DADS
S




K&E
REG. U.S. PAT. OFF.

# LEROY

REG. U.S. PAT. OFF.

# LETTERING SETS

FOR SALE BY

GREGORY, MAYER & THOM CO.,
41-45 CADILLAC SQUARE,
DETROIT, MICHIGAN

# LEROY LETTERING

## ACTUAL SIZE

*Large Templates, Series C*: This series provides large capital letters and numbers for titles, patterns and signs. Templates in this group can be used only with fixed scriber 3237-3 and will form vertical letters only.

DESIGN

Template 700C Pen 9

CODE

Template 1000C Pen 10

REGIS

Template 1350C Pen 12

PAT.

Template 2000C Pen 14

Max Cadliner CD-750, a Japanese technical typing machine, a “lettering plotter,” and a drawing board accessory, from 1989

PENS
0123456789
4
5
6
7

HISHIFT_HAPPENS_
MAX CADLINER
SHIFT
LOCK
III
IV
M MR
INS
DEL
JUSTIFY
A/RTN
A/END
A/CTR
A/TABLE
L/SPC
LINE SPC
SLANT
SPEED
SIZE
C&E
SPACE
BS

1 2 3 4 5 6
Q W E R T
@ A S D F G
Z X C V

7
8
9
0
Y
U
I
O
P
H
J
K
L
B
N
M
#
<
,
>
.

# GORTON
# IN REAL LIFE

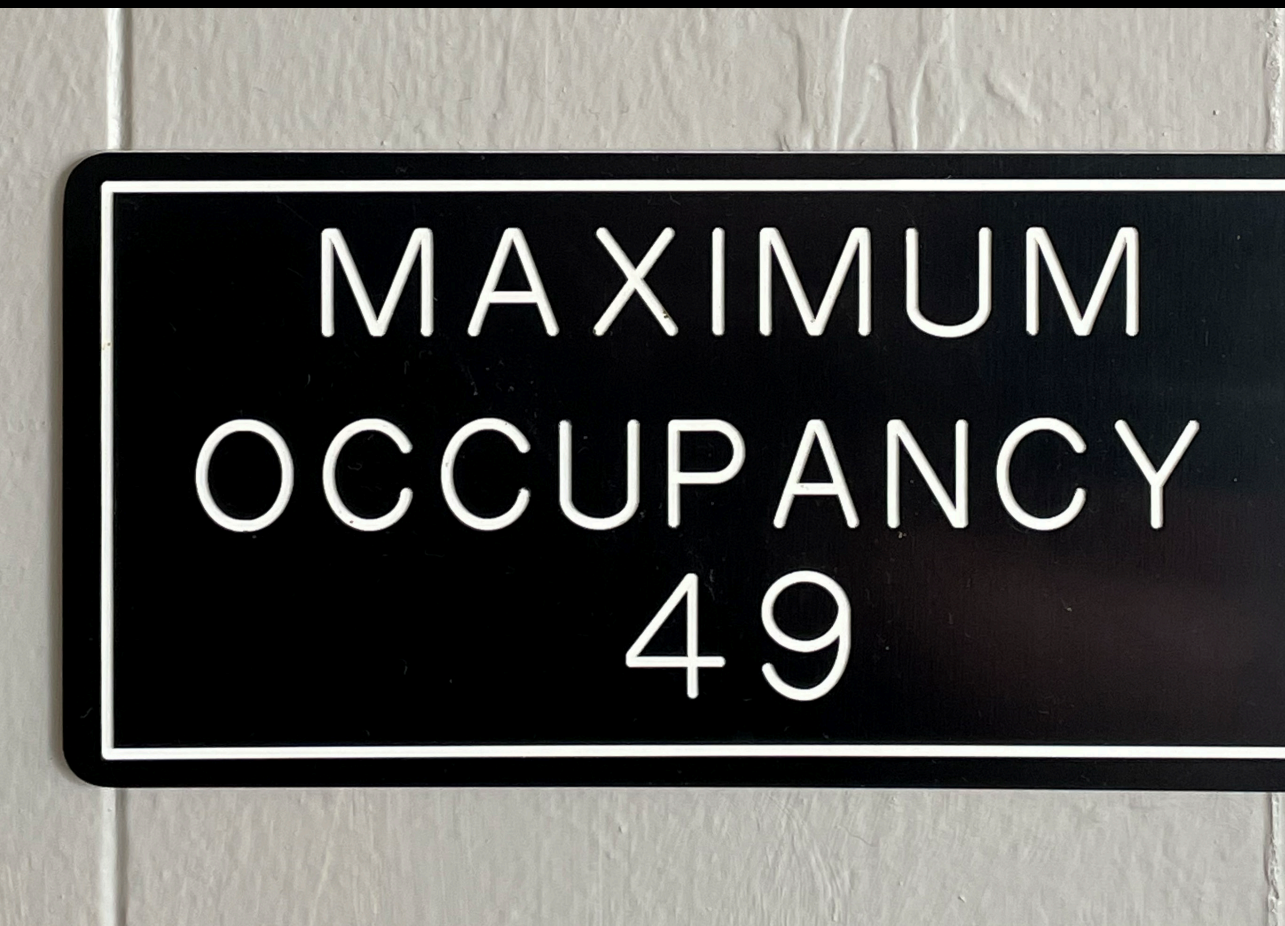
I bet you've seen Gorton already at least a few times in your life, even if you haven't looked closely at many keyboards. That's because Gorton letters can also be found on industrial machinery of a certain age, various plaques and signage, and intercoms. (This is how I found Gorton's numero – on an intercom sign in Madrid, in 2022.) In those instances, touching the letters immediately betrays their origins and the process that made them come to life, as the text is sunken – or, more rarely, raised.

But this might give you pause: outside of a rare and unpleasant keyboard like the one on the previous spread, keys don't have an indented or raised feel to them. What explains this is the fact that on most keyboards, Gorton isn't carved into a keycap's surface. Instead, in a process known as double-injection molding, the letter is first formed in one color of plastic (first mold), and then the key is built around it using a different color (second mold). The carving is used in the process of making molds, but the letter and the rest of the key surface present a unified front to your finger.

The next spreads show many examples I found of Gorton in actual use around the world. Note that Gorton also existed in condensed and extended forms that can be spotted here. (Those are more rare on keyboards.)

DO NOT THROW
REFUSE
OVERBOARD

PLEASE
REMOVE CLEATS


MAXIMUM
OCCUPANCY
49

GUS BERTHOLD ELECTRIC
1900 WEST CARROLL
DOCK HRS. 7AM-3PM
(312) 243-5767
LUNCH HR. 11:30AM-12PM

DO NOT LEAVE
PACKAGES UNATTENDED

# WARNING

THIS AUTOMATED EXTERNAL DEFIBRILLATOR IS AN ALARMED DEVICE RESULTING IN THE RESPONSE OF THE POLICE & FIRE DEPT. & SHOULD ONLY BE USED IN AN EMERGENCY SITUATION. FALSE ALARMS WILL BE PROSECUTED BY LAW, PURSUANT TO 720ILCS5/26-1A9

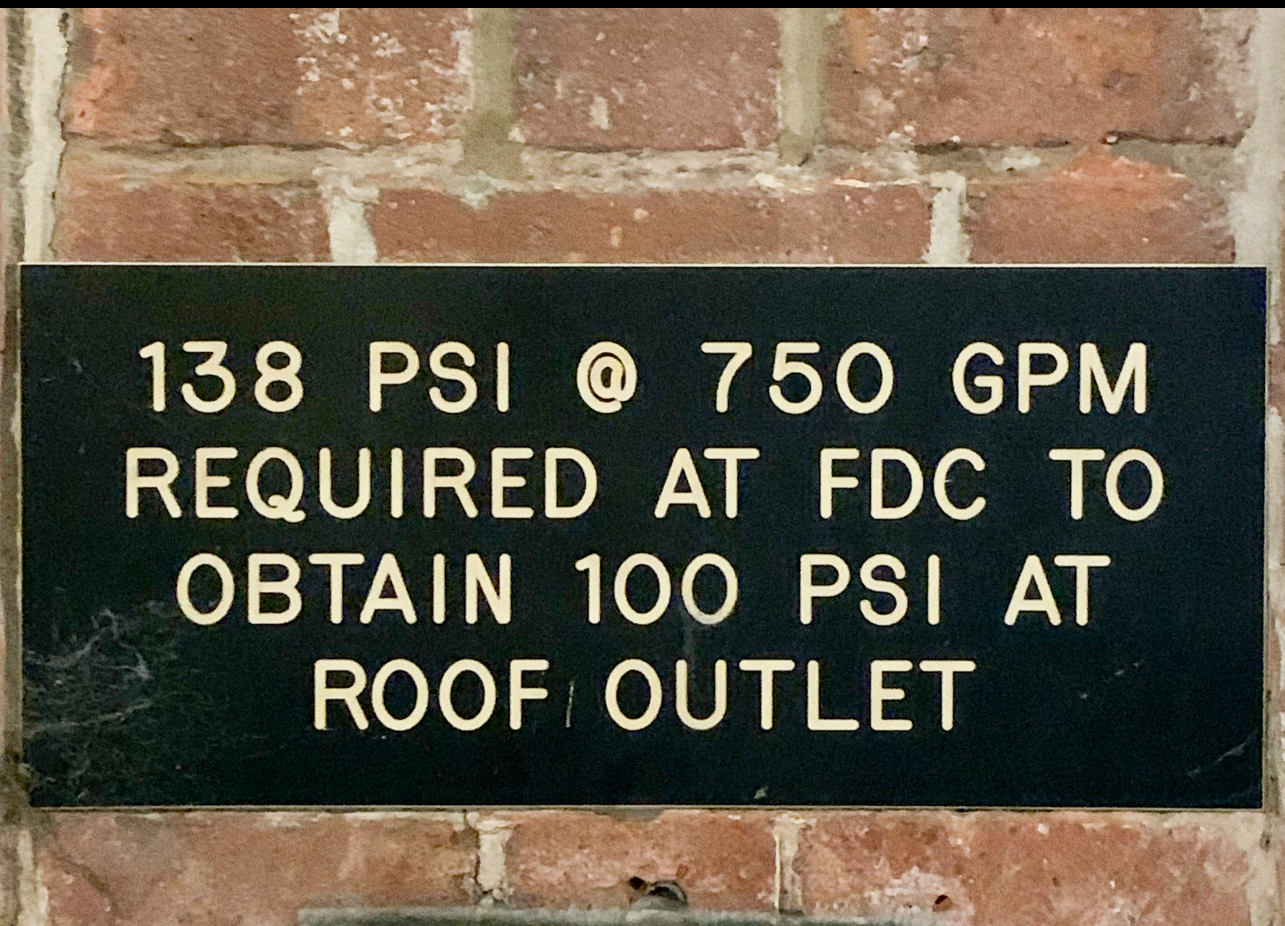
# U.S.S. SAN FRANCISCO

KEEL LAID SEPT. 9, 1931

FIRST RIVETS DRIVEN WITH THESE HAMMERS

| | | |
|---|---|---|
| E.L.IMBODEN | ASST.CHF.PLANNER & ESTIMATOR | RIVETER |
| F J.THOMPSON | PLANNER & ESTIMATOR | RIVETER |
| W.GEE | " " " | HOLDER-ON |
| W.SMITH | " " " | RIVET HEATER |
| C.A.GOSHEN | " " " | RIVET PASSER |
| E.E.REHN | " " " | RIVET TESTER |

CAUTION
415 VOLTS
CAUTION
WORK OR TEST ON THIS APPARATUS
MUST BE AUTHORISED BY THE
AUTHORISED PERSON


138 PSI @ 750 GPM
REQUIRED AT FDC TO
OBTAIN 100 PSI AT
ROOF OUTLET

CAUTION
VEHICLES
ENTERING/EXITING

BICYCLISTS
WALK
BICYCLES NEXT
300 FT.

LITTLE BEAR LAKE
ELEVATION 6500
PLUMAS National Forest

LAKE LAGUNITAS TROUT REGULATIONS
LIMIT-TWO IN POSSESSION.
SIZE LIMIT-NO TROUT LARGER THAN 14 INCHES TOTAL LENGTH MAY BE RETAINED AND MADE A PART OF THE DAILY BAG LIMIT.
METHODS OF TAKE-FOR ALL SPECIES, ONLY ARTIFICIAL LURES WITH A SINGLE BARBLESS HOOK MAY BE USED.
THESE LIMITATIONS WILL BE APPLIED TO LAKE LAGUNITAS ONLY.
MARIN MUNICIPAL WATER DISTRICT
CALIFORNIA DEPARTMENT OF FISH & GAME

BC 14A
LIBERTY ELECT
COUPLING
MIN.
MAX.
CENTURY
TYPE
CAC 168
PUSH FOR
BUZZER
EMERGENCY
TELEPHONE
CONNECTION
PRIMARY
SECONDARY

15 10 5 0 5 10 15 20 25
L
30 25 20 15 10 5 0 5 10 15 20 25 30
ONE MINUTE VERNIER

a-10-94

CDC 18 GCC

# STACK FAILURE

| SYSTEM TYPE | SYSTEM S/N |
|---|---|
| | |

| STACK TYPE | STACK S/N |
|---|---|
| 6000 | 76624 |

- [ ] DEAD ON ARRIVAL
- [ ] SOLID FAILURE
- [ ] INTERMITTENT FAILURE
- [ ] SHOCK SENSITIVE
- [ ] MARGINAL

| DATE INSTALLED | FAILURE DATE |
|---|---|
| | |

AA 4846

ELECTROL
60534
50
40
60
30
70
20
80
10
90
0
OFF
100
E
SE
MP
LINE VOLTAGE: 115 V.AC 50/60 HZ.
ELECTROL CO., INC., YORK, PA., 17404

9
10
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8
8
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6
6
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4
2
2
L
LOBBY

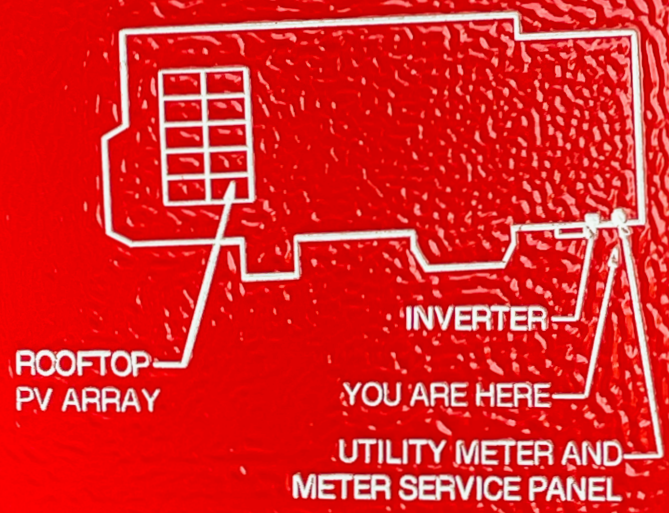
Priority Seating for Seniors
or Persons with Disabilities
Please Vacate Upon Request
(Federal Regulation 49 CFR 38)
WHEELCHAIR SECUREMENT AREA
PLEASE VACATE UPON REQUEST

OLUME
ESS
TTON
OUD
OUDER
OUDEST
5·10·25
U.S.
COINS
ONLY
COIN RELEASE

EMERGENCY GENERATOR
TAP BOX

# CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN:




SERVICED BY QUALIFIED PERSONNEL ONLY

AC DISCONNECT
AC PHOTOVOLTAIC POWER SOURCE
RATED AC OUTPUT CURRENT: 16 A MAX
NOMINAL AC OPERATING VOLTAGE: 240 VOC

PHOTOVOLTAIC SYSTEM
EQUIPPED WITH RAPID
SHUTDOWN

THIS PANEL FED BY
MULTIPLE SOURCES
(UTILITY & SOLAR)

# BUZONES

## EN PLAZUELA DE SAN JAVIER

RANGE CONTROL
DUTY OFFICER

# SUBMARINE

DESERT SUBMARINES WERE FIRST BUILT IN THE COACHELLA VALLEY IN THE EARLY 1920's. THE FIRST SUBS WERE DESIGNED AS SLEEPING ROOMS MEASURING ONLY ABOUT 8 X 10 FEET. OTHERS WERE BUILT AS COOLING ROOMS FOR PRODUCE AND MILK. A MUCH LATER MODEL SERVED AS A FOUR-BED WARD IN ONE OF INDIO'S FIRST HOSPITALS.

IN THE LATE 1950's A HUNDRED OR MORE WERE STILL IN USE IN THE SOUTHERN PACIFIC RAILROAD YARDS AS SLEEPING ROOMS FOR TRAIN CREWS. THE SUBMARINE HAS ALL BUT DISAPPEARED TODAY.

THE COOLING PROCESS USED WAS A VERY SIMPLE ONE. WATER FROM THE CENTER PIPE TRICKLED DOWN OVER THE BURLAP-COVERED METAL WALLS, AND THROUGH THE NATURAL PROCESS OF EVAPORATION, THE INTERIOR WAS COOLED. YEARS LATER THIS PROCESS LED TO THE DEVELOPMENT OF THE EVAPORATIVE COOLER STILL POPULAR TODAY.

DONATED BY: HENRY WITHROW
PLACED BY: PAUL CURTWRIGHT
JULY 1987

NEG. BLACK "A"
POS. WHITE "B"
DO NOT REVERSE
POLARITY DAMAGE
WILL RESULT

GAS SHUTOFF

901

NO
DUMPING

WORLD CENTRIC
100% Compostable
COMPOST ME!
76
CUL-CS-12
CAUTION CONTENTS HOT

NOVATO LOCK
892-9111

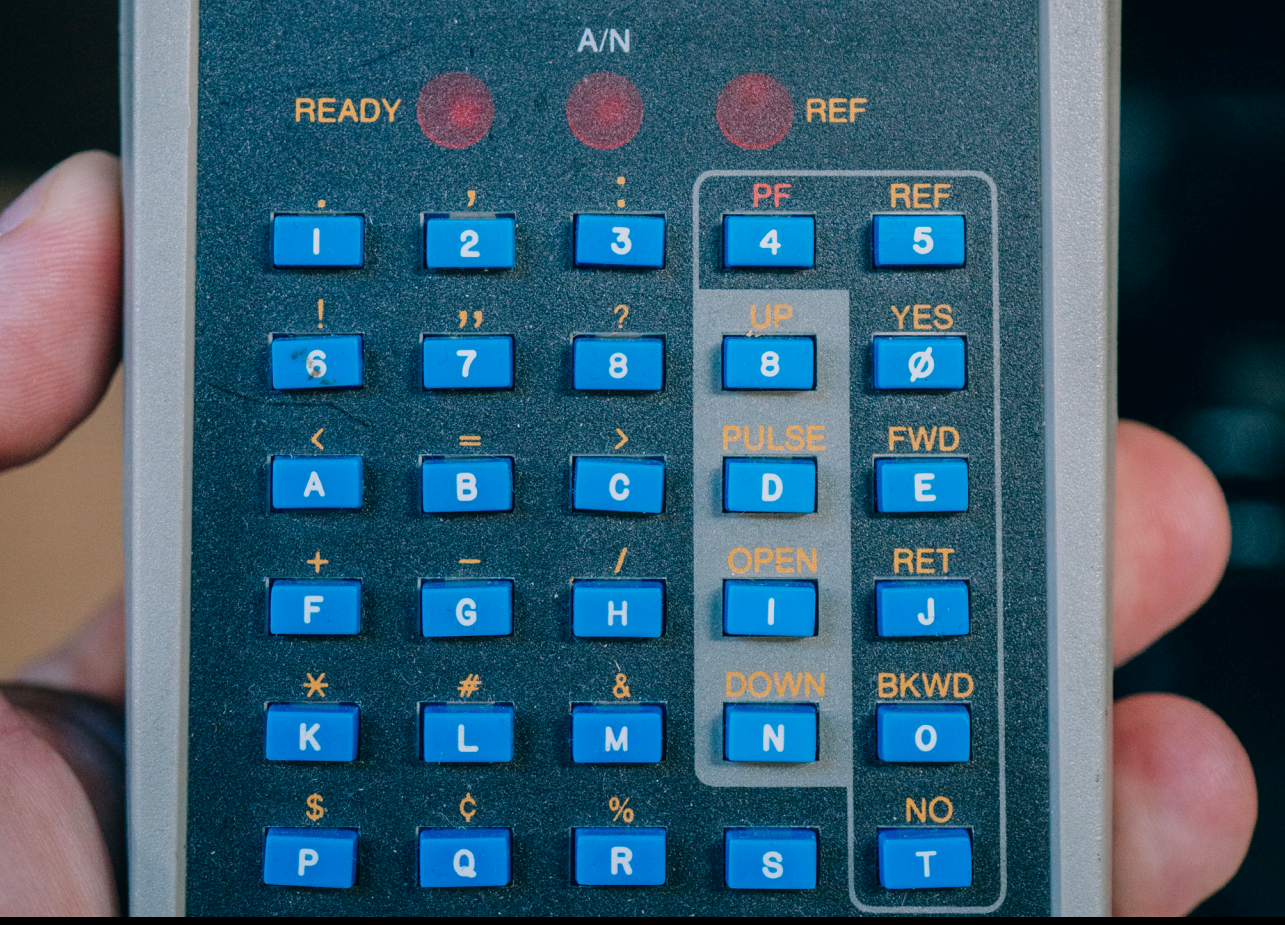
DANGER
DIATIO
DROP
&
RUN
Co 60
3540
CURIES
7-1-63
STREET LIGHTING
120/240V

REJ
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
0 1 2 3
0 1 2 3 4 5 6 7 8 9
1 2 3 4
CHECK
DEPART
ARRIVE
CANCEL
LIST
OTH AV
SELL
AVAIL
CLEAR

1
6
11
2
7
12
3
8
13
4
9
14
5
10
15
HID
Vertex Security 212-529-7159

Underwood
77
MADE IN U.S.A.
BACK SPACER
SHIFT LOCK
SHIFT KEY
TAB
SHIFT KEY
UNDERWOOD ELLIOTT FISHER COMPANY

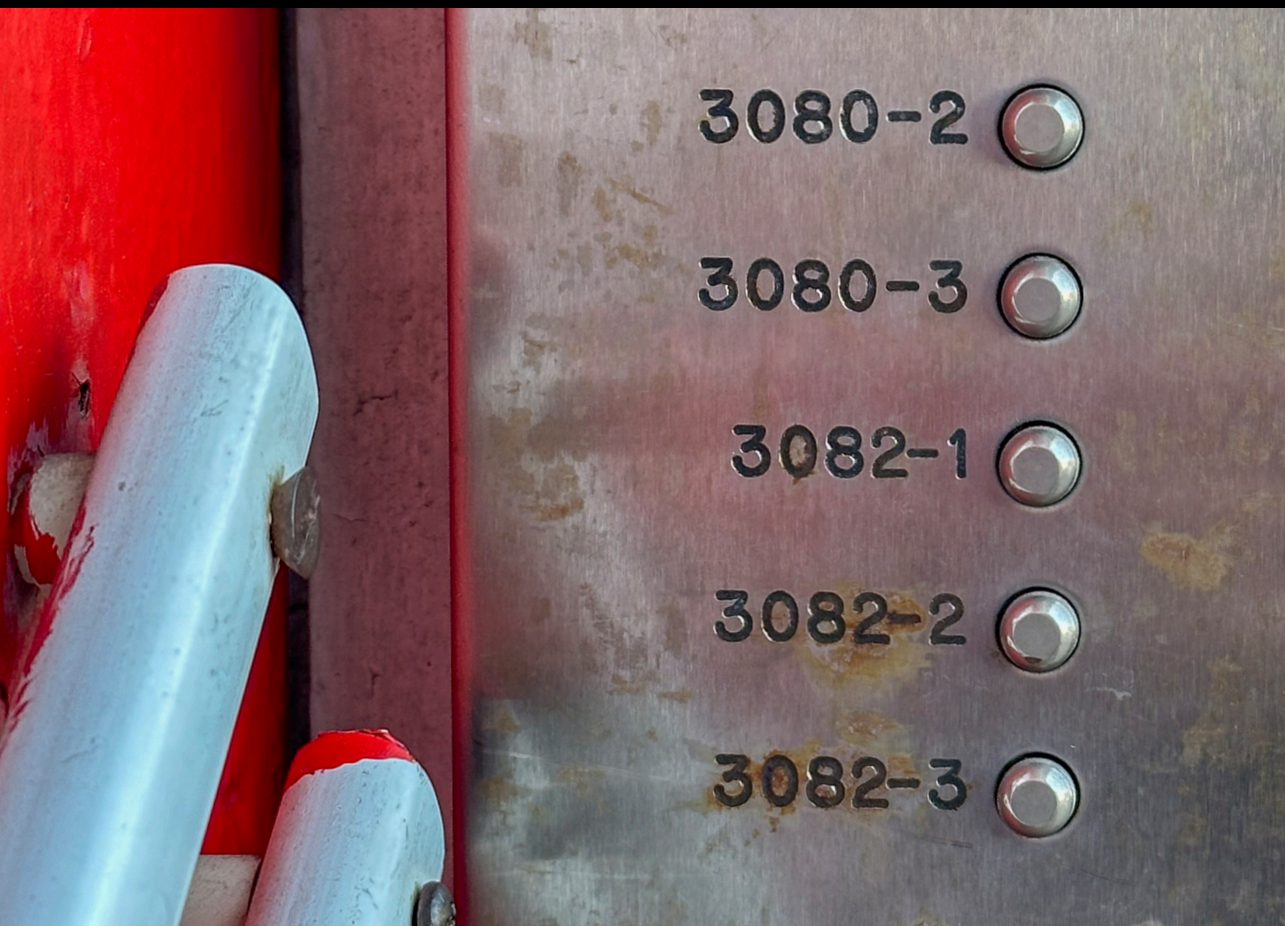
tronic KB5151
ofessional Series


A/N
READY
REF
PF
REF
UP
YES
PULSE
FWD
OPEN
RET
DOWN
BKWD
NO

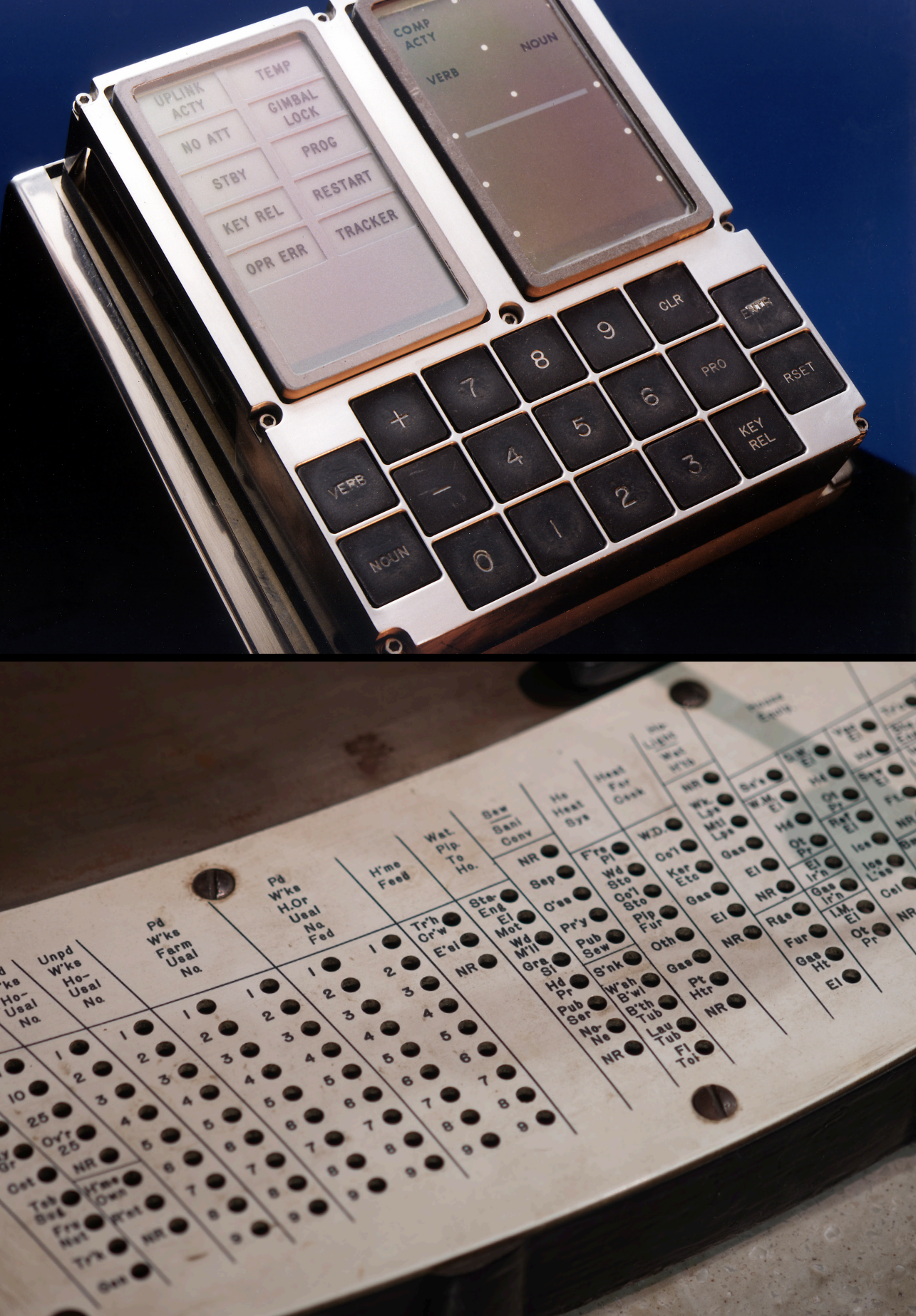
COMMD
Q
W
E
R
SHIFT LOCK
A
S
D
SHIFT
Z
X
C

61 62 112 113 114 121 122 123 124 131
33 34 35 41 42 43 44 51 52 53
15 16 21 22 23 24 25 26 31 32
1 2 3 4 5 6 7 12 13 14
RUB
BREAK
BACK TAB
TAB
NEW LINE
LF
RETURN
PAGE BACK
TAB SET
SOM EOM
PAGE FWD
CR
HOME
RESET
NEW LINE

1/θ
2/–
3/∧
4/∨
5/h
6/ㅈ
7/↖
8/::
9/π
+
0/□

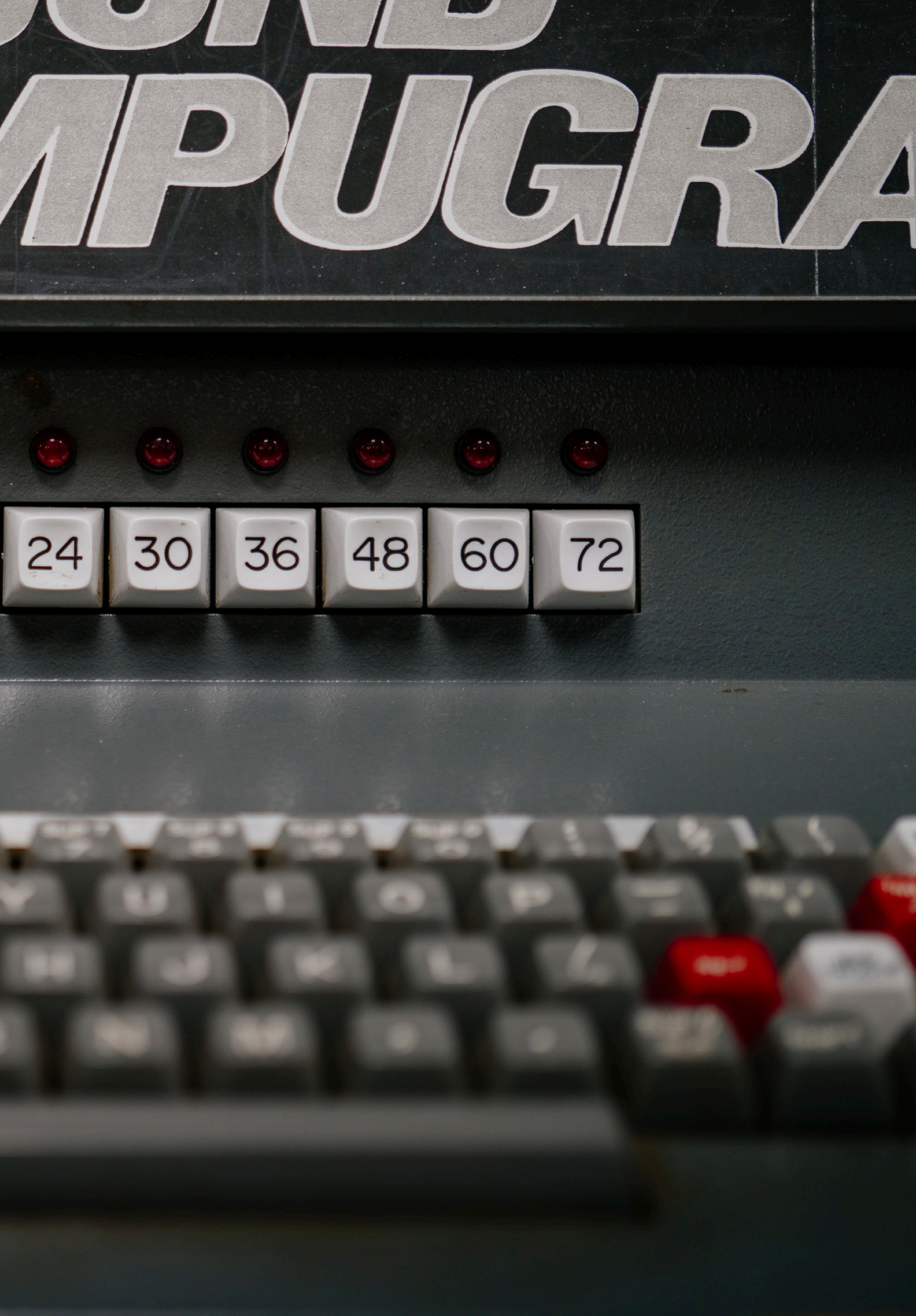

3080-2
3080-3
3082-1
3082-2
3082-3

1
2
3
SHIFT


UPLINK ACTY
TEMP
GIMBAL LOCK
NO ATT
PROG
STBY
RESTART
KEY REL
TRACKER
OPR ERR
COMP ACTY
NOUN
VERB
CLR
ENTR
PRO
RSET
KEY REL
VERB
NOUN
+
−
7
8
9
4
5
6
1
2
3
0

HELP
PAGE UP
PAGE DOWN
BACK TAB
TAB
LOCK

A Compugraphic Compuwriter IV TG phototypesetting keyboard, including keys for typical font sizes


24
30
36
48
60
72

1
PAN
RESET
FILE
READ
WRITE
SEC READ
DIREC-TORY
PAGE
1
TAB SKIP
CANCEL
6
LINE LEN'TH
SIZE
STYLE
STORE PL
STORE SL
ADV FEED
INDENT
RAG-GED
REV FEED
PLUS 1/2 UNIT
MINUS 1/2 UNIT
FIXED SPACE
INSERT SPACE
EN SPACE
EM SPACE
SUPER SHIFT
! 1
@ 2
# 3
$ 4
% 5
¢ 6
& 7
TAB
Q
W
E
R
T
Y
LOCK
A
S
D
F
G
H
SHIFT
Z
X
C
V
B

2 COARSE ZOOM
3 WINDOW RATIO
4 LEFT TOP MARGIN
5 RIGHT TOP MARGIN
2
3
4
5
END STORE
MODE
RE-COUNT
7
8
9
0
DATA
REPEAT
8
9
0
D
+ 1 PT
− 1 PT
USE LEAD'R
U
I
O
P
SEC LS
LEFT
RIGHT
J
K
L
RETURN
CENTER
M
SHIFT
COMMAND
INSERT
SEARCH
SCROL
WORD ERASE
SINGLE ERASE
DEFINE ERASE
HOME

TRANSISTORISED
AUTOMATIC
COMPUTER
REC
SEND
BREAK
TAPE
B.SP.
REPT
Q W E R T Y U I O P
A S D F G H J K L
CAR
RET
FIGS
Z X C V B N M
LTRS
LINE
FEED

)
9
SPACE
Ø
=
-
O
P

%
5
^
6
&
7

^
6

^
6
%
5
^
6
&
7

ESC (SEL)
TAB SKIP
GRAPHIC
SHIFT LOCK
CTRL
SHIFT

Power
Off
On
Speed
10
15
30
Error
Mode
Local
Half
Full
On Line
ESC
CTRL
SHIFT LOCK
SHIFT

RESET
RESET
LINE FEED
RETURN
RUB
CLEAR
SHIFT
REPEAT
RUN STOP
HOME

Miniterm
BACK SPACE
RETURN
LINE FEED
RUBOUT
SHIFT
REPT
BREAK

CLEAR
ERASE INPUT
ERASE EOF
TEST REQ
F1
PA 3
NUM LOCK
NUMERIC
RESET
FIELD MARK
DUP

ESC
CTRL
SHIFT
POWER
BELL
KLEERTEX® FOR A

MEMOREX 1377

PF1 PF2 PF3 ← F2 F3
3 O &P PF4 ← PA1 PA2
6 L SKIP PF5 ↵ INS MODE DEL
8 9 : ALPHA ↑ ↓
ENTER ← →

RESET
U I O @ P REPT RETURN
J K L + ; ← →
^ N M < , > . ? / SHIFT

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PPLE® II COMPUTER

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Specimen edition 1.2

Gorton Perfected release history:
0.95 Initial release
0.96 Line height changes
0.97 Tabular numerals
1.00 First public release
1.01 Variable font fix on macOS
1.02 Cropped diacritics fix on Windows

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Send font or specimen feedback to *mwichary@aresluna.org*

*shifthappens.site*
*ingaploennigs.com*

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