



CHERRY 
KEYBOARDS

CHERRY . . . over 25 years

CHERRY IS: Products available world-wide from Cherry manufacturing facilities, sales offices, distributors and licensees in major world markets.

CHERRY IS: Field Sales Representatives conveniently located to provide fast, efficient, personal service. **See listing on pages 32-33.**

CHERRY IS: Five manufacturing locations around the world to service you better.

Cherry Electrical Products Corp. (Headquarters) U.S.A.
3600 Sunset Avenue., Waukegan, Illinois
2205 Krueger Drive., Waukegan, Illinois

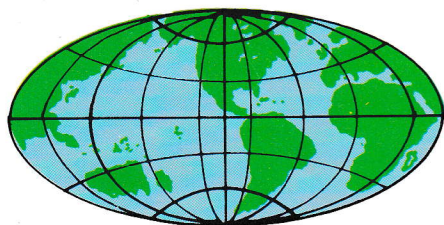
Cherry Semiconductor Corp. U.S.A.
99 Bald Hill Road, Cranston, Rhode Island
60 Walnut Grove Avenue, Cranston, Rhode Island

Cherry Electrical Products Ltd. United Kingdom
St. Albans Road, Sandridge, Hertfordshire, England

Cherry Mikroschalter GmbH Germany
8580 Bayreuth, Bavaria, Weiherstrasse 26
8572 Auerbach, Bavaria, Industriestrasse 19

Hirose Cherry Precision Co., Ltd. Japan
2139 Shukugawara, Kawasaki

G. W. Engineering
A Division of Actrol Industries, Pty. Ltd. Australasia
(Licensee)
70-76 Captain Cook Drive, Caringbah, N.S.W. 2229, Australia



CHERRY IS: **Keyboards and Keyboard Switches . . . plus the following, growing product line:**

Digital and Linear Integrated Circuits
Lighted Pushbutton Switches
PLASMALUX Gas Discharge Displays
LEVERWHEEL and Thumbwheel Switches
ROTCODE Rotary Switches With Coded Output
Matrix Selector Switches
Low Energy Gold Crosspoint Contact Switches
Precision Snap Action Switches

See pages 34-35.

CHERRY IS: **Precision Engineered Quality Electrical and Electronic Components**

All Cherry's products are designed and manufactured under the technical guidance of an experienced staff of mechanical, electrical, tool, industrial and manufacturing engineers. Personnel trained in many skills operate advanced assembly and fabrication machinery to provide Cherry customers with the highest quality at prices that are truly competitive.

serving the needs of a growing industry.

KEYBOARDS AND KEYBOARD SWITCHES

| | Page |
|---------------------------------|------|
| Custom Designed Keyboards | 4 |
| Solid State Keyboards | 9 |
| Standard Keyboards | 13 |
| Stock Keyboards | 16 |
| Keyboard Switches | 24 |
| Keycaps | 27 |
| Keyboard Applications | 32 |
| Sales Representatives | 32 |
| Other Cherry Products | 34 |



CHERRY IS:

The solid, responsible source for all your Keyboard needs.

When it comes to keyboards, Cherry can be your cost-effective headquarters. Cherry, long the leader in hard contact technology and innovation through 25 years of specialization, has become a major source of keyboards since the original success of our low energy switching units in 1967.

The creative engineering that first introduced gold crosspoint contacts to keyboard switches is working to bring new product developments to you. The latest is a new low profile Solid State Keyboard which utilizes capacitive switching technology.

At Cherry we manufacture virtually all the components used in our products. We do our own printed circuit board fabrication . . . metal stamping . . . plating and molding, including 2 and 3 shot keycaps. This vertical integration enables Cherry to control quality at every step in the manufacturing process.

The result is a quality product . . . at lowest possible cost . . . delivered on schedule.

Specially designed machines and state-of-the-art equipment provide efficient, high speed, volume production so important to achievement of cost savings. In our modern world headquarters plant — which is even now undergoing massive expansion — we have made effective use of the latest manufacturing technology, including computer scheduling, tape and digital controlled stamping, micro processor controlled drilling, and automated precision plating.

The best way for you to evaluate our total capability is to schedule a visit to our plant. For those who can't do this at present, we invite you to check through this Keyboard Catalog. Then, contact the nearest Cherry Field Sales Representative (see listing on page 32) or call our special Keyboard Sales Group.

CUSTOM



Whatever your keyboard problem . . . Cherry will provide a solid state or hard contact solution. Our Keyboard Sales Group is ready and waiting to provide application and engineering assistance.

Cherry specializes in custom designed units and we make all our keycaps, standard or sculptured, in matte or smooth top finish. We also manufacture the switches, printed circuit boards and hardware. Our keyboard electronics utilize a scanning technique which readily adapts to any keyboard configuration or format.

Because of this in-house capability, we can provide a custom designed keyboard to meet your application requirements, often at less than the cost of a standard unit.

HOW TO GET CUSTOM DESIGNED ASSISTANCE

Just provide Cherry with your specs and we'll be glad to quote. To help you get started, we have included a handy, tear-out **Keyboard Designers' Work Sheet** on pages 7 and 8. It's specifically designed to make it easy for you to organize your specifications and to tell us what you want your keyboard to do and how you want it to do it. But first, take a look at pages 13 thru 23 where the standard keyboards available are described. If you don't see the keyboard you want among these standard units, a Cherry custom design may be appropriate.

WHEN SHOULD YOU CONSIDER A CUSTOM DESIGN?

As you probably know, custom designed keyboards are economically practical when purchased in production quantities. But, even if your quantity need is small we'll work with you and assist in evaluation.

After all, we have solved so many keyboard problems over the years that the "custom" you need just might be an "almost standard" for us!

A straightforward way out of the standard versus custom dilemma is to consider your keyboard requirements early in your design program, aiming toward the most cost-effective use of a Cherry standard keyboard in your application. We carry many keyboards as off-the-shelf items and, of course, there are no design or tooling charges involved.

Assuming, however, that you've decided on a custom designed keyboard, you may then expect to participate in a down-to-earth series of steps leading to production of your specific keyboard.

DESIGNED KEYBOARDS

FIVE STEPS TO A CUSTOM KEYBOARD

1. **Contact Cherry** . . . either our Cherry Keyboard Sales Group or your local Cherry Sales Representative.
2. **Get down to specifics** with a technical discussion between you and Cherry engineers aimed at establishing a complete understanding of your application requirements.
3. **Cherry submits a formal quotation** including unit prices at various quantities, tool and design charges, if any, and a statement as to contract duration.
4. **Cherry builds a prototype** proving out two things: Your spec and your design. Prototypes are rigorously evaluated by you before we at Cherry start actual production.
5. **Production and delivery of keyboards begins.**

HARD CONTACT OR SOLID STATE?

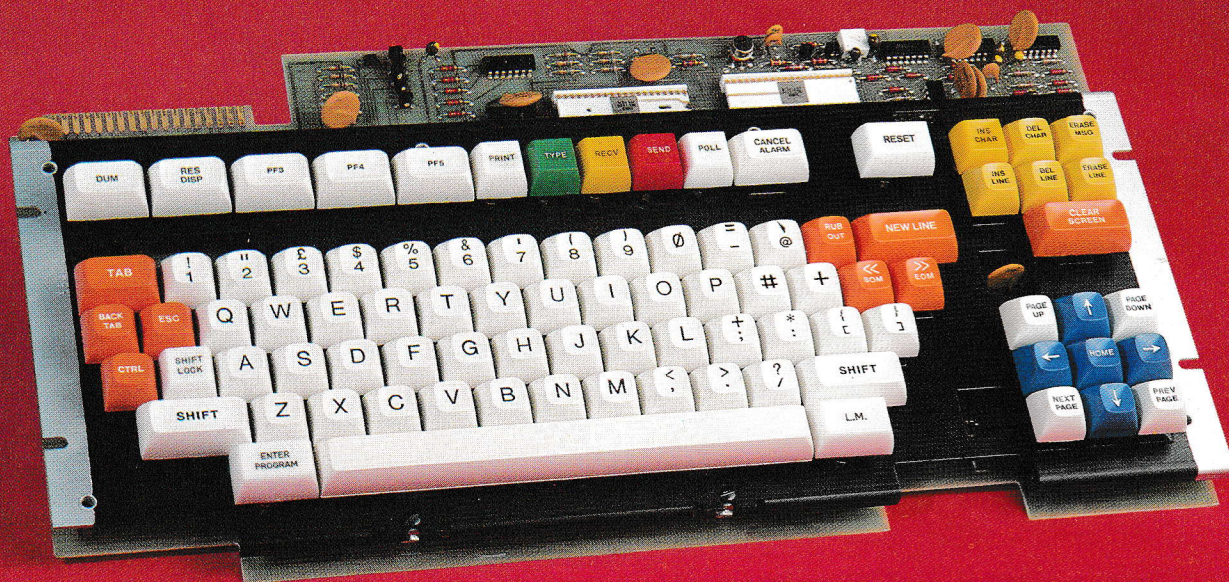
A question we are often asked is: "Should I use a hard contact gold crosspoint keyboard . . . or a solid state keyboard?"

Our answer is always the same: Use the keyboard that is best for your particular application . . . the keyboard that will do the job best . . . the one that is most cost-effective for you and your product.

How do you make the **specific** decision? Ask your Cherry Representative or the Cherry Keyboard Sales Group. Since Cherry makes **both** hard contact and solid state keyboards, we are in the ideal position to help you make the decision intelligently, efficiently, quickly.

This is in sharp contrast to most other keyboard manufacturers who make **only** solid state . . . or **only** hard contact units. Naturally, they know their products well. But, they may not know the capabilities, features and specific advantages that just might make "the other type" your best selection for your particular application.





HOW TO WORK WITH YOUR LOCAL CHERRY REPRESENTATIVE

(See pages 32-33 for listing.)

This, too, is simple. Just give him the story from the beginning. Describe in as much detail as possible what your keyboard objectives are. He will then work closely with you and the Cherry factory in coordinating samples, technical information and pricing.

ABOUT THE CHERRY KEYBOARD SALES GROUP

Our Keyboard Sales Group consists of inhouse keyboard specialists who are able and ready to (1) advise you what type of keyboard will prove to be the most efficient for your specific application, (2) offer design assistance, (3) provide price quotes and (4) provide every possible customer service. They guarantee fast response to your inquiries and requests.

HOW TO REACH THE KEYBOARD SALES GROUP

It's as easy as filling out and mailing the **Keyboard Designers' Work Sheet** on the following pages.

Or, better yet, call the Keyboard Sales Group at this special, direct telephone number:

312/689-7612

Either way — by writing or telephoning — you'll get informative, helpful response . . . and you'll get it **fast**.



keyboard designers' work sheet

Company _____ Date _____

Company Contact _____

Title _____

Company Address _____

Phone _____ Ext. _____

City-State _____ Zip _____

Switching Technology

☐ Mechanical (Hard Contact)

☐ Solid State (Capacitive)

No. of Modes _____ No. of Bits _____

Specify 1-2-3-4, etc. Specify 6-7-8, etc.

No. of Encoded Keys (Include Spacebar)
(Show hexadecimal code on keycap dwg.) _____

No. of Non-Encoded Keys (Function)
(Show positions on keycap dwg.) _____

No. of Non-Encoded De-Bounced Keys
(Show positions on keycap dwg.) _____

Keyboard Termination:

☐ Header (3M or equiv.)

☐ P.C. Board Edge Fingers

Tin-Lead (re-flowed)

Gold

☐ Other (specify) _____

Keycap Top Finish:

☐ Smooth

☐ Matte

Key Arrangements:

☐ Slope

☐ Sculptured

☐ Stepped

Estimated Annual Volume: 1st year _____ 2nd year _____ 3rd year _____

Prototype Required: Quantity _____ Date _____

1st Production Delivery Required: Quantity _____ Date _____

Mechanical Layout: ☐ Attached ☐ Not Available ☐ Sketch Attached

Keycap Drawing: ☐ Attached ☐ Not Available ☐ Sketch Attached

Output Code Chart: ☐ Attached ☐ Not Available

Electrical Spec: ☐ Attached ☐ Not Available

Power Available to Keyboard:

+5.0 VDC ± _____ % @ _____ milliamps

-12 VDC ± _____ % @ _____ milliamps

Other (specify) _____

Output:

Parallel (Standard) _____ Serial _____

Logic Output:

☐ Negative (Ground True) Resting High

☐ Positive Logic Resting Low

☐ Negative Logic Resting Low

☐ Positive Logic Resting High

☐ Output data may toggle, as long as they are stable when strobe occurs

☐ Latched data output to last key depression.

work sheet continued

Data Output:

- ☐ Active Pull-Up
- ☐ Open Collector
- ☐ Tri-State
- ☐ CMOS Compatible
- ☐ Other (specify) _____

Logic Loading

- ☐ 1 Load TTL 7400 Series
- ☐ 10 Load
- ☐ 30 Load
- ☐ Other (specify) _____

Parity:

Odd_____ Even_____ None_____

Rollover/Lockout:

2 Key Lockout_____ N-Key Rollover_____

Strobe:

- ☐ Pulsed (Width _____ μ Sec)
- ☐ Level (2 Key Lockout Only)
- ☐ Positive Active
- ☐ Negative Active
- ☐ Handshake (specify) _____
- ☐ Other (specify) _____

Shiftlock:

- ☐ Mechanical
 - ☐ Alternate Action
 - ☐ Alternate Action Lighted
 - ☐ Left-Hand "Shift" Release
- ☐ Electronic (specify) _____

Output Pin Assignment:

- ☐ By Cherry
- ☐ By Customer

Spring Pressure:

- ☐ 2½ oz.
- ☐ 3 oz.
- ☐ 6 oz.
- ☐ Other (specify) _____
(show on keycap dwg.)

No. of Lighted Keys (show location on keycap dwg.)

Lamp Driver:

- ☐ Provided by Customer
- ☐ Provided by Cherry

Keycap Lighting:

- ☐ Lens
- ☐ 5 VDC Incandescent
- ☐ LED

Top (Incandescent Only)

Repeat:

- ☐ None
- ☐ Key
- ☐ Auto. With Time Delay

Repeat Freq. Oscillator:

- ☐ On Keyboard
- ☐ External-Supplied to Keyboard

No. of Automatic Repeating Keys (show location on keycap dwg.)

Repeat Operation (specify)

Other Comments:

DETACH HERE

CHERRY SOLID STATE CAPACITIVE KEYBOARDS



Solid state keyboards from a good solid source – CHERRY

BROADEST APPLICATION

This, the latest addition to the Cherry line of keyboards, is a solid state unit featuring capacitive keyswitches that provide a keyboard with unique capabilities. It gives you a keyboard ideal for any and all high speed data entry such as key-to-disc, key-to-tape, key-to-card, word processing and photo typesetting. The result? Cherry solid state keyboards are the ideal cost-effective answer to a broad range of applications.

STANDARD FEATURES

1. Low, low profile . . . measures .360" from bottom of face plate to bottom of PC board.
2. High reliability . . . long life.
3. Contactless design.
4. Custom designed NMOS encoder chip.
5. Up to 110 keys, 4 key modes, 10 output codes per mode.
6. Unique static discharge protection circuitry.
7. Readily expandable beyond 110 keys via additional circuitry.
8. Unique noise immunity circuit discriminates between a valid key depression and noise.
9. Scan time externally adjustable to as low as 10 micro seconds per key.

10. Electronic hysteresis circuit eliminates keyswitch "teasing".
11. Burst rate speed capability of 1000 key depressions per second.
12. Only one power supply requirement (+5 VDC).
13. Low stand-by current.
14. TTL compatible.
15. Encoder has capability of working with either solid state (capacitive) or mechanical (hard contact) switches.

PLUS options like these at little or no additional cost.

1. N key rollover or lockout.
2. Selection of rollover or lockout by use of remote signal is available.
3. Repeat may be furnished on all keys . . . no keys . . . selected keys with a repeat rate of up to 900 Hz.
4. Shift and Control available as either output or input.
5. External complement control.
6. Output flag or level whenever any key is depressed (AKO).
7. Pulse or level strobes available.

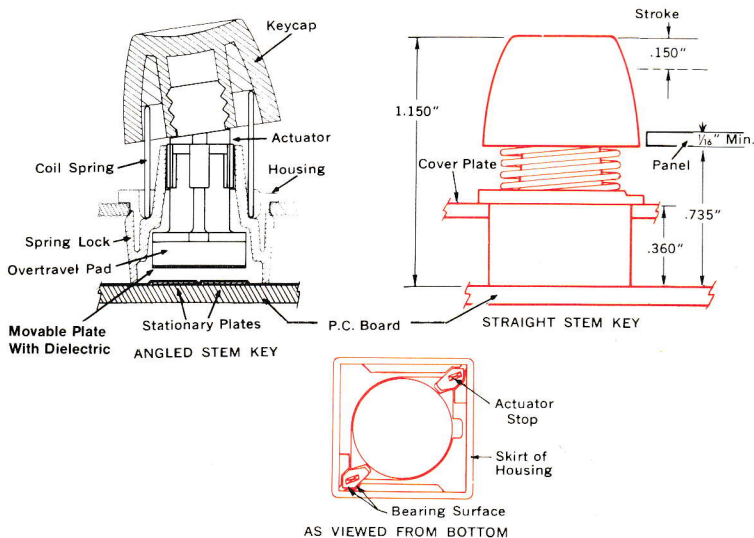
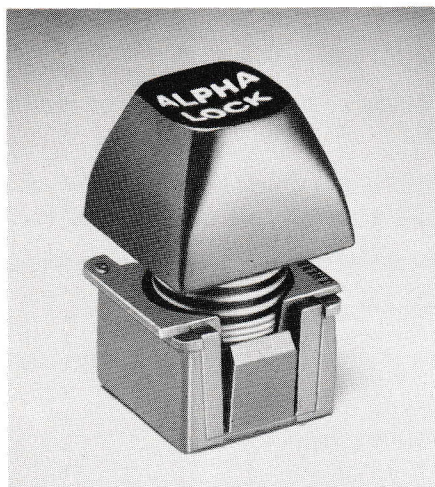
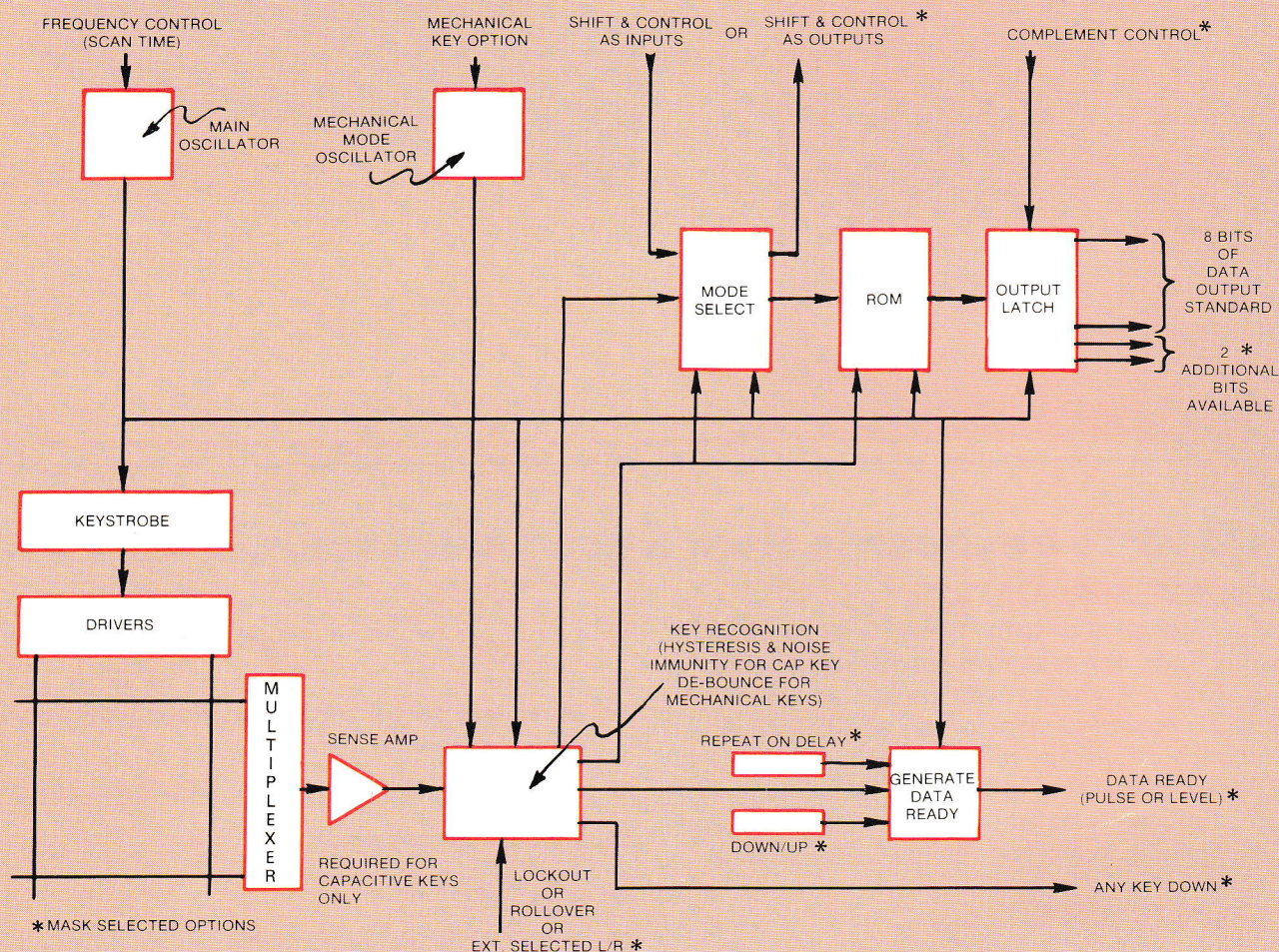
As indicated on the block diagram, the Cherry encoder is designed to be used with either Cherry gold crosspoint contact switches or with Cherry solid state capacitive key-switchers.

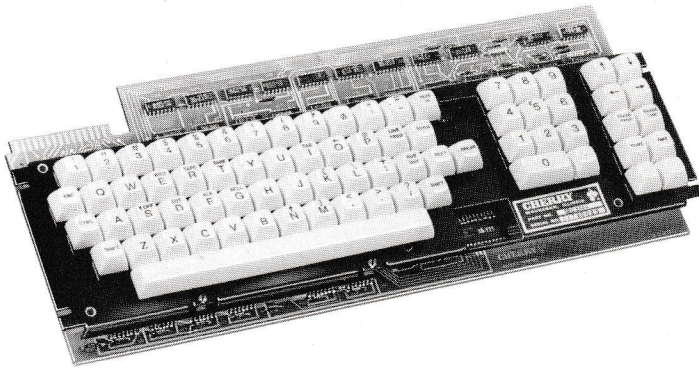
The keyswitches (either type) are connected in a 10×11 matrix. Each key switch couples a signal from one of the drivers thru the multiplexer and the sense amplifier (required for capacitive keys only) and into the key recognition circuit.

Data corresponding to that particular key is stored in the ROM. As the main oscillator has stepped pulses thru the

keyswitch matrix, this oscillator has also stepped thru the address in the ROM. Now when the key recognition circuit has found a valid key, the data at that address in the ROM is transferred to the output latches and immediately after, a data ready (strobe) signal is also generated.

For each address in the ROM corresponding to a key-switch there are actually four possible data addresses, or modes. These modes are controlled by either external input signals or by the first two keys in the matrix (usually referred to as shift and control).





CHERRY GOLD CROSSPOINT CONTACT KEYBOARD

A UNIQUELY SIMPLE DESIGN, OFFERING:

- Low Cost
- Long Life
- Wire-"OR"-ability
- Low power consumption

Why are Cherry keyboards so reliable? One reason is our uniquely simple design that combines the most advanced technology with a minimum of component parts. This yields a product whose susceptibility to field failure is inherently low. This is substantiated by the remarkable record Cherry Gold Crosspoint Contact Keyboards have achieved in all kinds of environments and demanding applications.

Another reason is the Cherry Gold Crosspoint Contacts. Still another reason for excellent field performance is that we build our keyboards from scratch. And, Cherry keyboards draw low power — both quiescent and in use — and generate clean IC logic signals. They are not temperature or humidity sensitive and can be designed to meet your specific requirements at surprisingly low cost.

STANDARD KEYBOARD UNITS INCLUDE:

- 66 Key Tri Mode ASCII, negative logic (with provision to add 4 extra keys).
- 53 Key Quad Mode ASCII (ASR33), positive logic.
- 12 Key Numeric, straight output.
- 16 Key Numeric, straight output.

SPECIAL FEATURES AVAILABLE

Positive or negative logic resting low or high outputs.

Open collector buffer outputs for hard wire-"OR"-ing available at no extra cost.

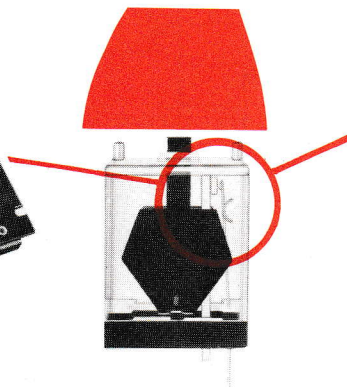
Buffer output capable of driving terminated twisted pair or 90 ohm coaxial is optional.

Pulse or level strobe available.

Key locations may be geographically mixed.

Special mono mode encoded keys may be added to configuration.

Any parity and/or data outputs may be later changed for modest revision charges.



THE KEYBOARD SWITCH WITH A "HEART OF GOLD"

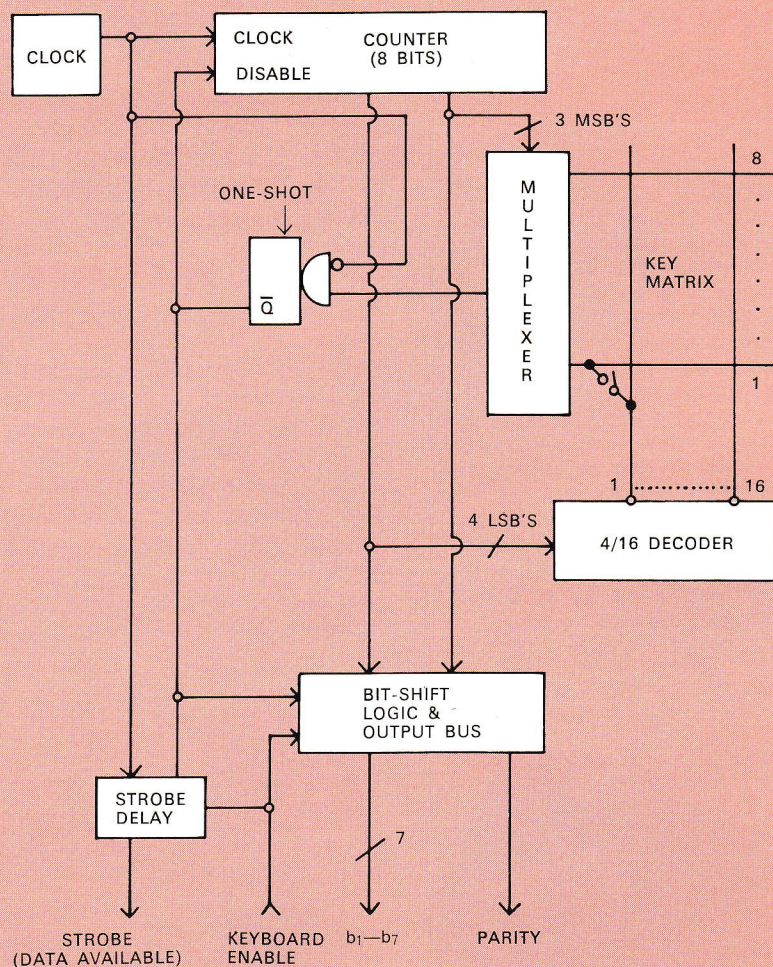
Cherry's unique Gold Crosspoint Contact Switch. For details, see page 24.

Keyboard Electronics Utilizes Scanning Technique

The keyboard encoding is based on a scanning technique employing an 8 bit counter, a multiplexer and a 4 to 16 line decoder. Encoded keys form a crosspoint matrix with each key connected to the decoder output and the multiplexer input. The decoder is addressed by the 4 least significant bits and the multiplexer by the 3 most significant bits of the counter.

When a key is depressed a matrix connection between

the decoder and multiplexer is accomplished. When the counter reaches the appropriate key code, the multiplexer output goes high and a retriggerable one-shot is fired on the trailing edge of the counter clock stopping the counter. The one-shot is continually refreshed until the key is released. The bit-shift logic translates the counter address into an upper case data word if the shift and/or control key is depressed.

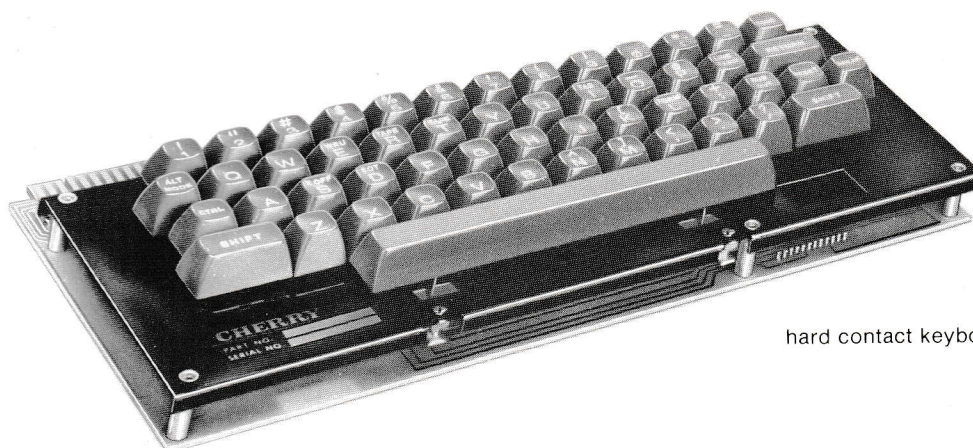


CHERRY STANDARD KEYBOARDS

**5 Basic Types of Keyboards in 24 Variations
to Fill Most — or ALL — of Your Keyboard needs**



solid state keyboard



hard contact keyboard

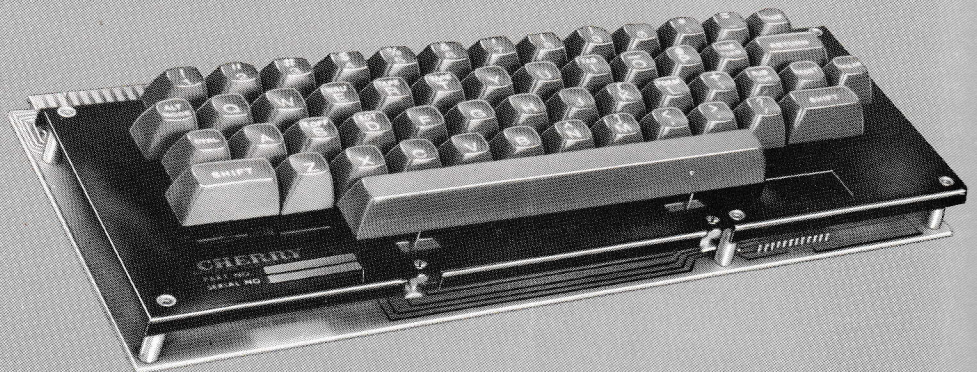
CHOICE OF SOLID STATE . . . OR HARD CONTACT

All available with many optional features at little or no additional cost. All available without tooling, artwork or set-up charges. Many available with or without housings, encoded or non-encoded, a wide variety of modes, etc.

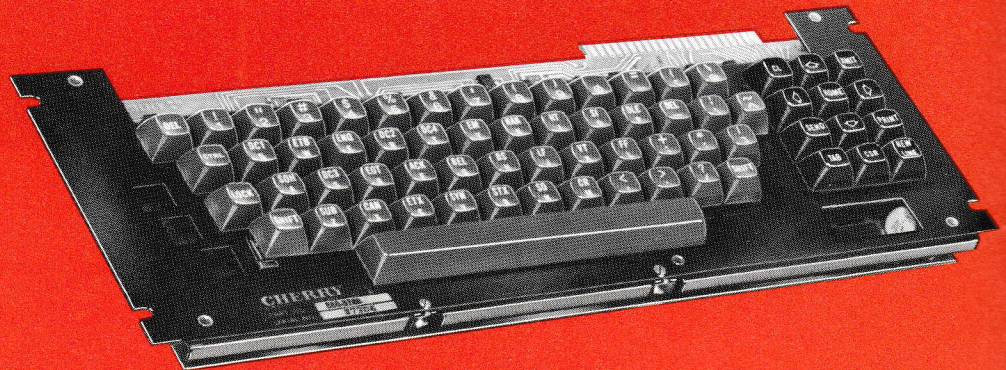
Many also available off-the-shelf.

From **CHERRY** : Industry's most

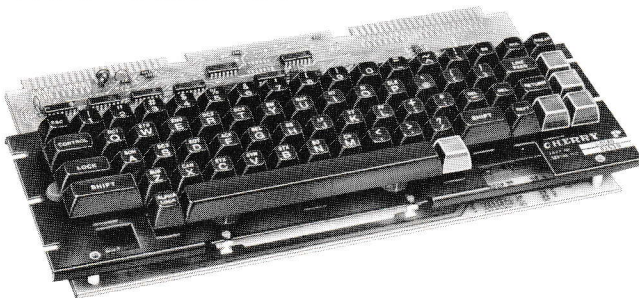
B70 ASR 33 Series



B80 ASCII Series



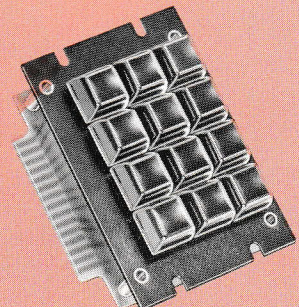
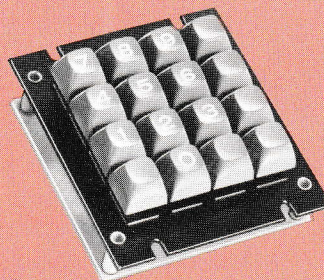
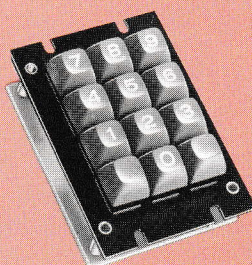
B70 "PRO" Series



CB80 SOLID STATE Series



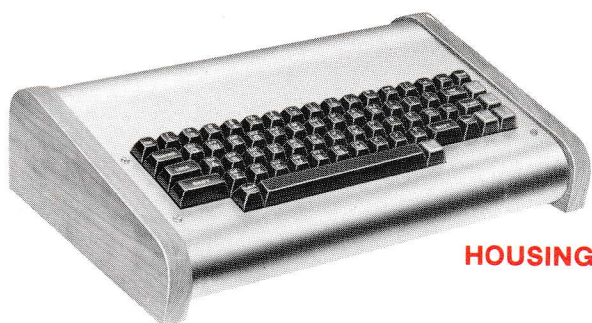
B65 NON-ENCODED Series



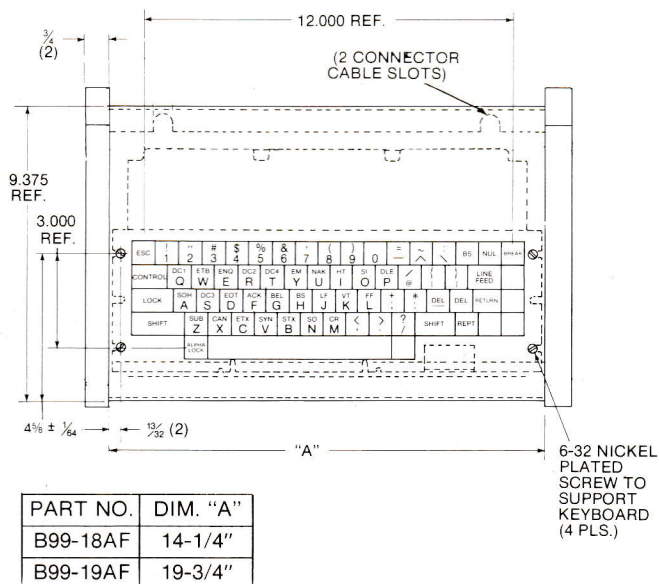
complete line of standard keyboards

KEYBOARD HOUSINGS

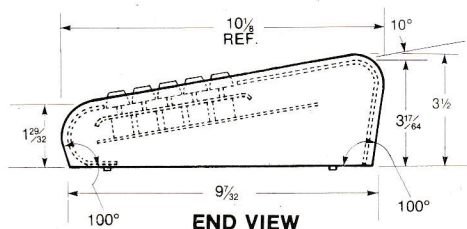
As shown in the Standard Keyboard Specifications Chart on the following page, most Cherry keyboards are available with an associated housing. This housing converts your keyboard to an attractive, stand-alone desk instrument, suitable for office or lab use. Color is clear anodized aluminum with unfinished walnut end-caps. The operating surface is sloped approximately 10° to the desk top.



HOUSING

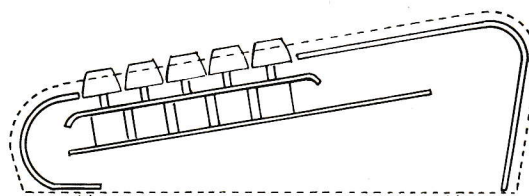


All dimensions shown above, except for Dim. "A," are the same for both housing sizes.

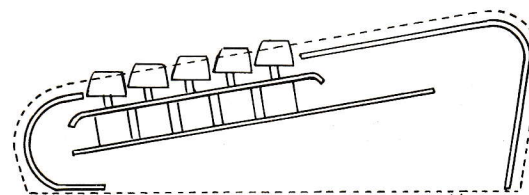


HOUSING DIMENSIONS

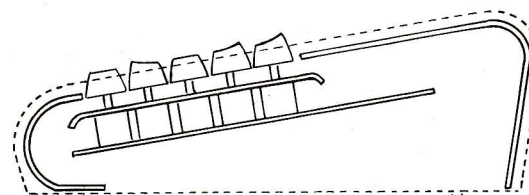
Your choice of four KEY ARRANGEMENTS



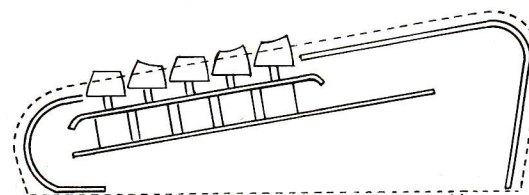
SLOPED
with straight plunger stem



STEPPED
with 10° angle plunger stem



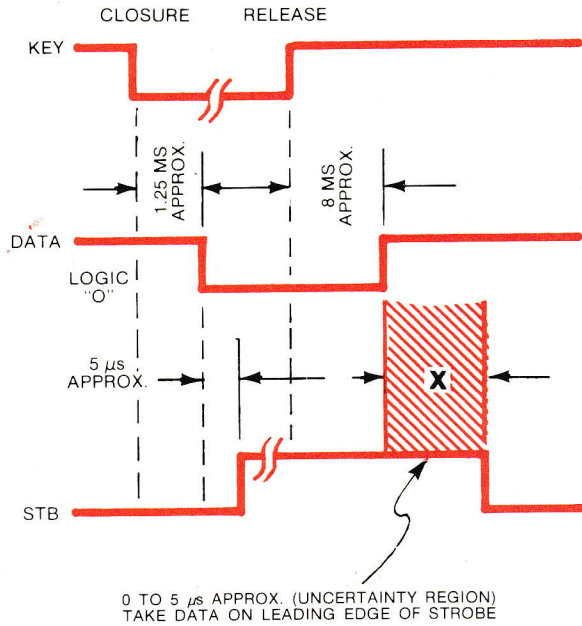
SCULPTURED
with straight plunger stem



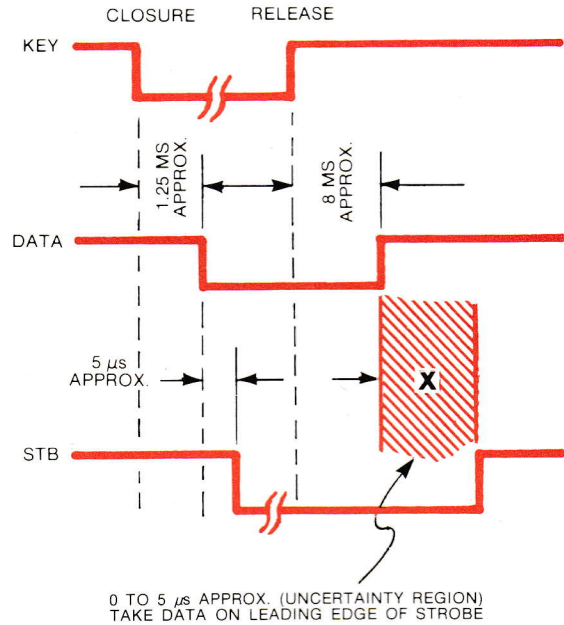
SCULPTURED
with 10° angle plunger stem

KEYBOARD TIMING CHARTS

TIMING DIAGRAM NO. 1



TIMING DIAGRAM NO. 2



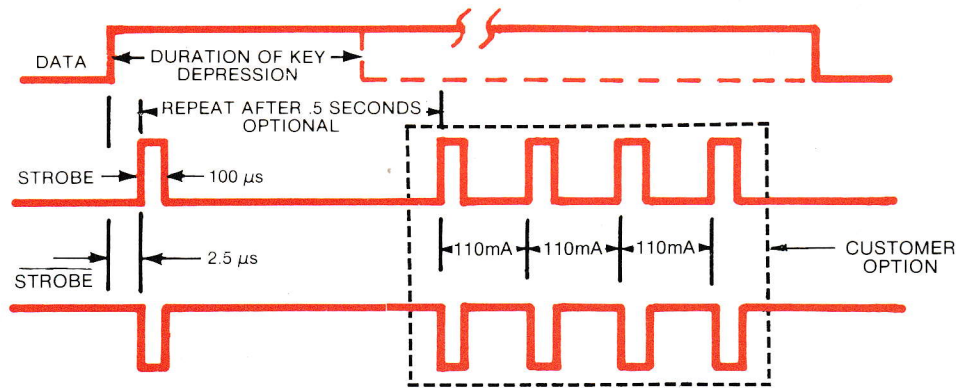
STANDARD KEYBOARDS

| Keyboard No. | Timing Diag. No. | No. of Keys | Sloped (SL) Stepped (ST) | Associated Housing | Type of Code | No. of Modes | Data Bits | Strobe Goes | Logic Output |
|------------------|------------------|-------------|--------------------------|--------------------|----------------|--------------|-----------|-----------------|-----------------------------------|
| B70-4753 | 1 | 53 | SL | B99-64AF | Teletypewriter | 4 | 7 | High | Positive Resting High |
| B70-60AA | 1 | 53 | ST | B99-64AF | Teletypewriter | 4 | 7 | High | Positive Resting High |
| B70-4754 | 1 | 53 | SL | B99-64AF | Teletypewriter | 4 | 7 | High | Positive Resting High |
| B80-3766 | 2 | 66 | SL | B99-66AF | ASCII | 3 | 7 | Low | Negative Resting High |
| B80-3767 | 2 | 66 | SL | B99-66AF | ASCII | 3 | 7 | Low | Negative Resting High |
| B80-48AA | 2 | 66 | ST | B99-67AF | ASCII | 3 | 7 | Low | Negative Resting High |
| B80-65AA | 2 | 67(R) | SL | B99-66AF | ASCII | 3 | 7 | Low | Negative Resting High |
| B65-1712 | — | 12 | SL | — | None | — | — | — | — |
| B65-1716 | — | 16 | SL | — | None | — | — | — | — |
| B65-64AB | — | 12 | SL | — * | None | — | — | — | — |
| B70-05AB | 3 | 67 | SL | B99-18AF* | ASCII | 4 | 7 | 1 High 1 Low | Positive Resting Low |
| CB80-12AA | 4 | 96 | SL | B99-69AF | ASCII# | 4 | 8 | 1 High 1 Low | Positive Logic Latched Outputs |
| CB80-07AA | 4 | 95 | SL | B99-69AF | ASCII## | 4 | 8 | 1 High 1 Low | Positive Logic Latched Outputs |

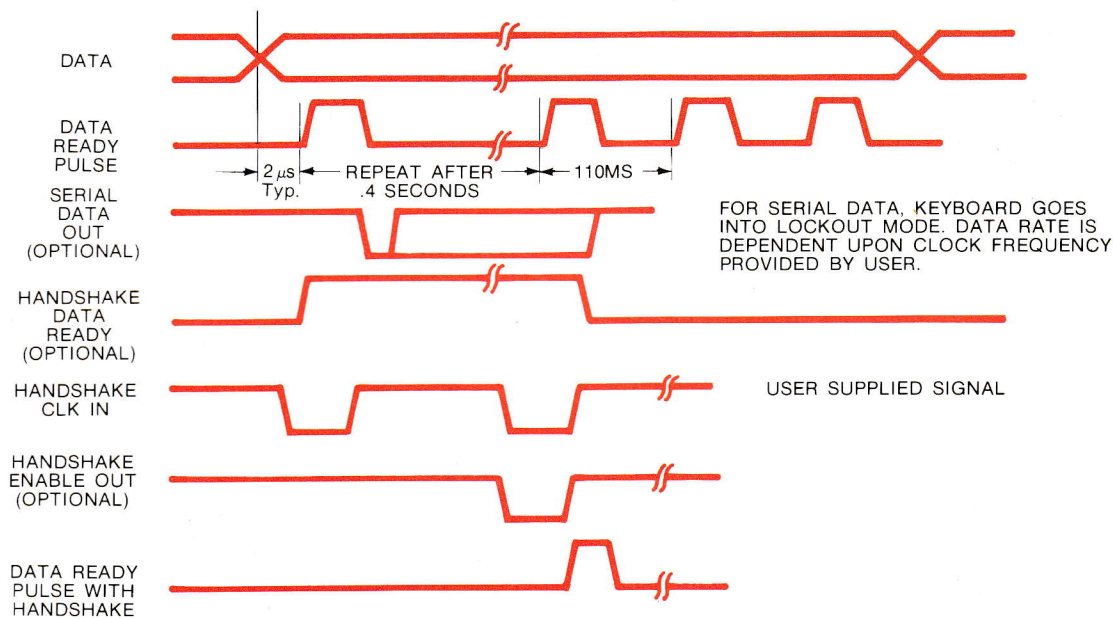
R = Repeat Key (Repeat Frequency 12 Hz.) #Communications standard ##Typewriter standard

*When B70-05AB and B65-64AB are combined the housing number is B99-19AF.

TIMING DIAGRAM NO. 3



TIMING DIAGRAM NO. 4



SPECIFICATIONS CHART

| | Power Req. | Drive Capability | Rollover (RO) Lockout (LO) | Connection Mates With | Switching Technology | Keycap Finish | Schematic No. |
|--|------------|------------------|-------------------------------|-----------------------|----------------------|---------------|---------------|
| | 5V 350mA | 10 STD TTL Loads | 2 Key (LO) | Cinch 250-15-30-170 | GC | S | 120-0032 |
| | 5V 350mA | 10 STD TTL Loads | 2 Key (LO) | Cinch 250-15-30-170 | GC | S | 120-0032 |
| | 5V 350mA | 10 STD TTL Loads | 2 Key (LO) | Cinch 250-15-30-170 | GC | M | 120-0032 |
| | 5V 350mA | 10 STD TTL Loads | 2 Key (LO) | Cinch 250-22-30-211 | GC | S | 120-0044 |
| | 5V 350mA | 10 STD TTL Loads | 2 Key (LO) | Cinch 250-22-30-211 | GC | M | 120-0044 |
| | 5V 350mA | 10 STD TTL Loads | 2 Key (LO) | Cinch 250-22-30-211 | GC | S | 120-0044 |
| | 5V 350mA | 10 STD TTL Loads | 2 Key (LO) | Cinch 250-22-30-211 | GC | S | 120-0044 |
| | — | — | — | Cinch 250-15-30-170 | GC | S | 120-0153 |
| | — | — | — | Cinch 250-18-30-170 | GC | S | |
| | — | — | — | Cinch 50-44C-10 | GC | S | |
| | 5V 350mA | 10 STD TTL Load | 2 Key (LO) | Cinch 50-44S-20 | GC | M | 120-0186 |
| | 5VDC 200mA | 10 STD TTL Loads | 2 Key (LO) or N Key (RO) | Cinch 50-44S-20 | C | M | 120-0233 |
| | 5VDC 200mA | 10 STD TTL Loads | 2 Key (LO) or N Key (RO) | Cinch 50-44S-20 | C | M | 120-0233 |

GC = Gold Crosspoint

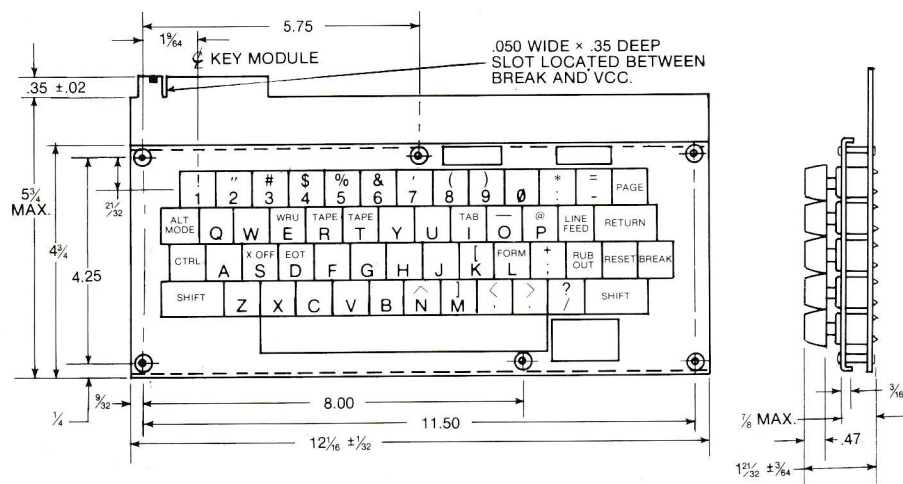
C = Capacitive

S = Smooth Finish Keycaps

M = Matte Finish Keycaps

B70 Teletypewriter Series

Cherry 53-Key Special Quad Mode Keyboards



LEGEND FORMAT

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----|-------|----|------|----|-----|----|------|----|------|----|-----|----|---|----|------|----|------|----|--------|----|---|----|---|------|
| 21 | ! | 22 | " | 23 | # | 24 | \$ | 25 | % | 26 | & | 27 | ' | 28 | (| 29 |) | 30 | 0 | 2A | = | 2D | - | PAGE |
| 31 | 1 | 32 | 2 | 33 | 3 | 34 | 4 | 35 | 5 | 36 | 6 | 37 | 7 | 38 | 8 | 39 | 9 | 30 | 1 | 3A | + | 3D | = | |
| 1 | Q | 2 | W | 3 | E | 4 | R | 5 | T | 6 | Y | 7 | U | 8 | I | 9 | O | 0 | P | 1 | + | 2 | + | |
| 1 | ALT | 2 | MODE | 3 | WRU | 4 | TAPE | 5 | TAPE | 6 | TAB | 7 | 0 | 8 | LINE | 9 | FEED | 0 | RETURN | 1 | + | 2 | + | |
| 1 | CTRL | 2 | A | 3 | S | 4 | D | 5 | F | 6 | G | 7 | H | 8 | J | 9 | K | 0 | L | 1 | + | 2 | + | |
| 1 | SHIFT | 2 | Z | 3 | X | 4 | C | 5 | V | 6 | B | 7 | N | 8 | M | 9 | < | 0 | > | 1 | + | 2 | + | |
| 1 | SHIFT | 2 | Z | 3 | X | 4 | C | 5 | V | 6 | B | 7 | N | 8 | M | 9 | < | 0 | > | 1 | + | 2 | + | |

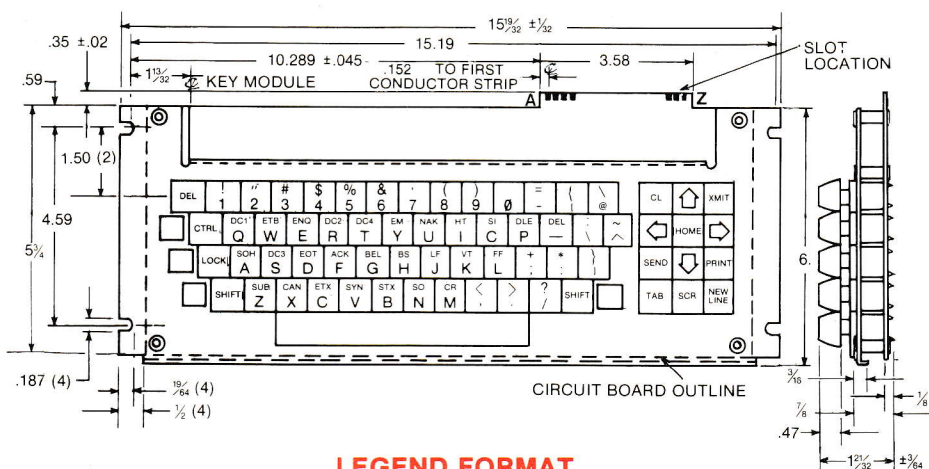
CONNECTOR PIN ASSIGNMENT

CONDUCTOR STRIP PIN IDENTIFICATION

| PIN | OUTPUT |
|-----|---------|
| 1 | A PAGE |
| 2 | B RESET |
| 3 | C BREAK |
| 4 | D VCC |
| 5 | E VCC |
| 6 | F STB |
| 7 | H SHIFT |
| 8 | J GND |
| 9 | K bit 7 |
| 10 | L bit 6 |
| 11 | M bit 5 |
| 12 | N bit 4 |
| 13 | P bit 3 |
| 14 | R bit 2 |
| 15 | S bit 1 |

OUTPUT CODE

B80 ASCII Series



LEGEND FORMAT

[illegible]

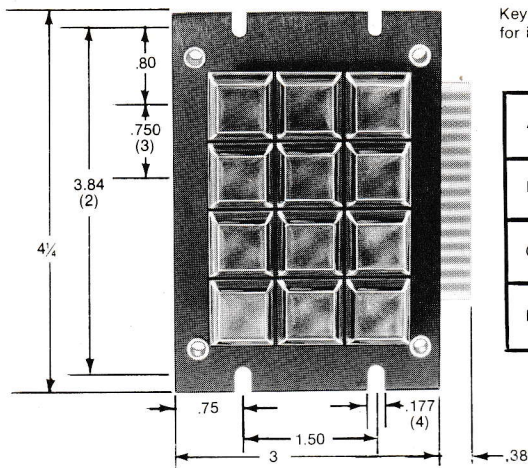
OUTPUT CODE

CONNECTOR PIN ASSIGNMENT

CONDUCTOR STRIP PIN IDENTIFICATION

| PIN | OUTPUT | PIN | OUTPUT |
|-----|-------------|-----|-------------|
| 1 | bit 6 | A | bit 6 |
| 2 | bit 7 | B | bit 7 |
| 3 | bit 5 | C | bit 5 |
| 4 | b8 PARITY | D | b8 PARITY |
| 5 | K.B. ENABLE | E | K.B. ENABLE |
| 6 | STB | F | STB |
| 7 | | H | |
| 8 | +5V | J | +5V |
| 9 | bit 1 | K | bit 1 |
| 10 | bit 4 | L | bit 4 |
| 11 | bit 2 | M | bit 2 |
| 12 | bit 3 | N | bit 3 |
| 13 | GND | P | GND |
| 14 | | R | CL |
| 15 | | S | ← |
| 16 | | T | SEND |
| 17 | | U | TAB |
| 18 | | V | ↑ |
| 19 | | W | HOME |
| 20 | NEW LINE | X | ↓ |
| 21 | PRINT | Y | CSR |
| 22 | → | Z | XMIT |

B65 NON-ENCODED Series



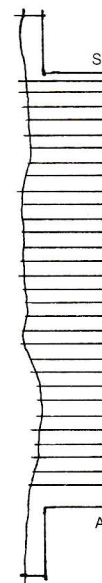
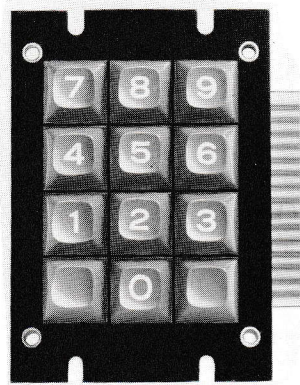
Key positions are shown for identification only.

| | | |
|----|----|----|
| A1 | A2 | A3 |
| B1 | B2 | B3 |
| C1 | C2 | C3 |
| D1 | D2 | D3 |

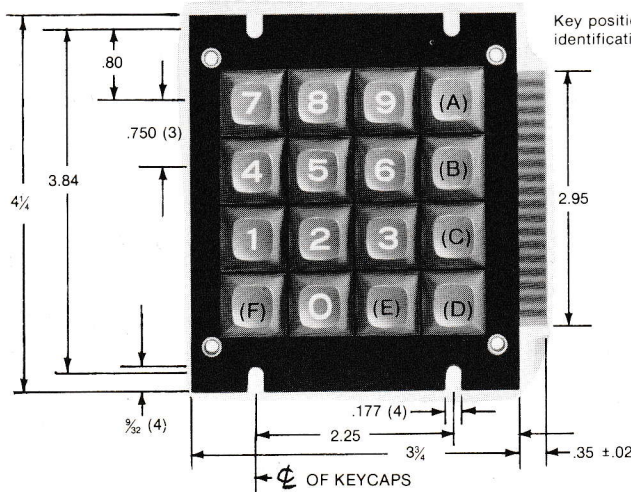


| EDGE CONNECTOR IDENTIFICATION | | | |
|-------------------------------|----------|----------------------|----------|
| COMPONENT (TOP) SIDE | | SOLDER (BOTTOM) SIDE | |
| PAD # | SIGNAL | PAD # | SIGNAL |
| A | SPARE | 1 | SPARE |
| B | NOT USED | 2 | NOT USED |
| C | NOT USED | 3 | NOT USED |
| D | NOT USED | 4 | (A1) |
| E | NOT USED | 5 | (A1) |
| F | NOT USED | 6 | (A2) |
| H | NOT USED | 7 | (A3) |
| J | (A3) | 8 | (A2) |
| K | NOT USED | 9 | NOT USED |
| L | (C1) | 10 | (B1) |
| M | (C1) | 11 | (B1) |
| N | (C2) | 12 | (B2) |
| P | (C2) | 13 | (B3) |
| R | NOT USED | 14 | NOT USED |
| S | NOT USED | 15 | (B2) |
| T | (D1) | 16 | (B3) |
| U | (D1) | 17 | (C3) |
| V | (D2) | 18 | (C3) |
| W | (D2) | 19 | (D3) |
| X | NOT USED | 20 | (D3) |
| Y | NOT USED | 21 | NOT USED |
| Z | SPARE | 22 | SPARE |

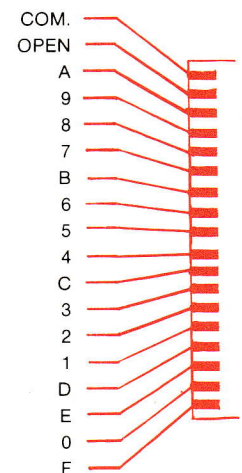
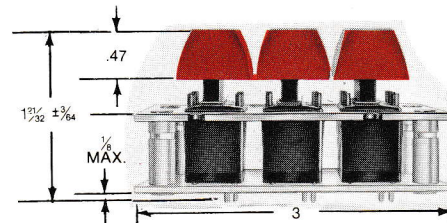
PC BOARD WILL ACCEPT 3M 44 PIN HEADER



| EDGE CONNECTOR IDENTIFICATION | |
|-------------------------------|-----------------|
| PAD # | SIGNAL |
| 15 | 9 |
| 14 | — |
| 13 | COM |
| 12 | — |
| 11 | 8 |
| 10 | 7 |
| 9 | 6 |
| 8 | 5 |
| 7 | 4 |
| 6 | 3 |
| 5 | 2 |
| 4 | 1 |
| 3 | BLANK RIGHT KEY |
| 2 | 0 |
| 1 | BLANK LEFT KEY |



Key positions A-F are shown for identification only. Keycaps are blank.



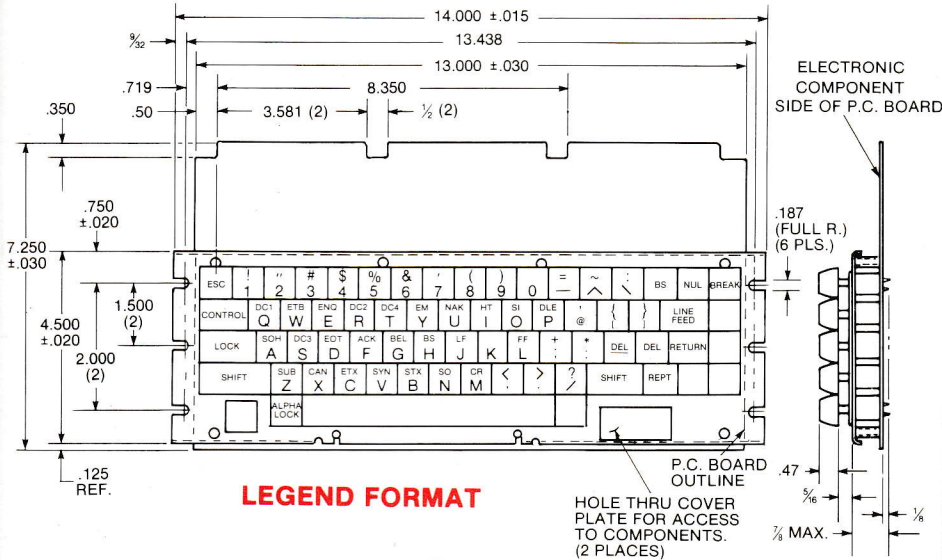
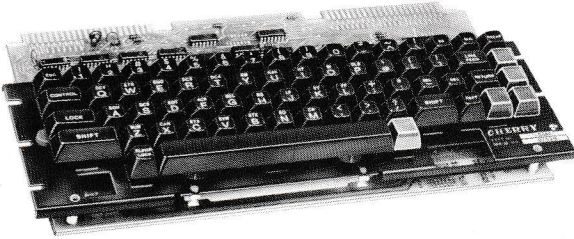
B70 "PRO" Series

A versatile, reliable PROfessional style keyboard. Ideal for personal computer and hobbyist applications. Modifiable to add total obsolescence protection. Versatile enough to grow as your system grows.

NOTE: Request brochure PRO-977-2 for detailed information and specs.

UNIQUE STANDARD FEATURES

- **Full 67 key array**
- **Five user-definable spare keys** with keycaps that have “quick change” clear plastic tops. These keyswitches are not connected electrically, but can be conveniently hard-wired so as to output any code.
- **Only one power supply voltage required:** +5 volts at 325 ma. max.
- **TTL and DTL compatible output circuitry.**
- **Positive logic with outputs resting low.**
- **Four mode keyboard** offers (1) lower case mode, (2) upper case mode, (3) control case mode and (4) teletypewriter alpha lock configuration (alpha lock depressed).



| | | | | | | | | | | | | | | | | |
|------------|----|----|-----------|----|----|----|----|----|------------------------------------|----|----|-------|--------|-------|-------|-------|
| 1B | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 30 | 2D | 1E | 1C | 08 | 00 | BREAK |
| 1B | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 3D | 2E | 2C | 7C | 06 | 00 | |
| 1B | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 3D | 2E | 5E | 5C | 08 | 00 | |
| 1B | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 30 | 2D | 5E | 5C | 08 | 00 | |
| CONTROL | | 11 | 17 | 05 | 12 | 14 | 19 | 15 | 09 | 9F | 10 | 00 | 1B | 1D | 0A | SPARE |
| | 51 | 57 | 45 | 52 | 54 | 59 | 55 | 49 | 4F | 50 | 60 | 7B | 7D | 0A | | |
| | 51 | 57 | 45 | 52 | 54 | 59 | 55 | 49 | 4F | 50 | 60 | 5B | 5D | 0A | | |
| | 71 | 77 | 65 | 72 | 74 | 79 | 75 | 69 | 6F | 70 | 40 | 5B | 5D | 0A | | |
| SHIFT LOCK | | 01 | 13 | 04 | 06 | 07 | 08 | 0A | 0B | 0C | 3B | 3A | 1F | 7F | 0D | SPARE |
| | 41 | 53 | 44 | 46 | 47 | 48 | 4A | 4B | 4C | 2B | 2A | 7F | 7F | 0D | | |
| | 41 | 53 | 44 | 46 | 47 | 48 | 4A | 4B | 4C | 3B | 3A | 5F | 7F | 0D | | |
| | 61 | 73 | 64 | 66 | 67 | 68 | 6A | 6B | 6C | 2B | 3A | 5F | 7F | 0D | | |
| SHIFT | | 1A | 0B | 03 | 16 | 02 | 0E | 2C | 2E | 2E | 3F | SHIFT | REPEAT | SPARE | SPARE | |
| | 5A | 58 | 43 | 56 | 42 | 4E | 0D | 3C | 3E | 2F | | | | | | |
| | 5A | 58 | 43 | 56 | 42 | 4E | 0D | 2C | 2E | 2F | | | | | | |
| | 7A | 78 | 63 | 76 | 62 | 6E | 6D | 2C | 2E | 2F | | | | | | |
| ALPHA LOCK | | 20 | SPACE BAR | | | | | | CONTROL SHIFT ALPHA LOCK UNSHIFTED | | | SPARE | | | | |

OUTPUT CODE

UNIQUE SPECIAL FEATURES

that are easily accomplished at your location.

1. **Negative Logic** in which the output code will be the complement of the code shown.
2. **Tri State - Positive Logic** to let you use two or more PRO keyboards in parallel.
3. **High voltage output — CMOS compatible.**
4. **Non Encoded Outputs.**
5. **Encoded Outputs.**
6. **Flexible key assignments** lets you change the code of a key which came factory wired.
7. **Provisions for an auxiliary keyboard.**
8. **Auxiliary keyboards available** from Cherry.
9. **Automatic repeat.**
10. **Strobe pulse width** can be varied.
11. **Optional parity bit.**
12. **Output latch** can be provided by an auxiliary circuit.
13. **Optional Shift-Control mode** can be added external to the keyboard.

CONNECTOR PIN ASSIGNMENT

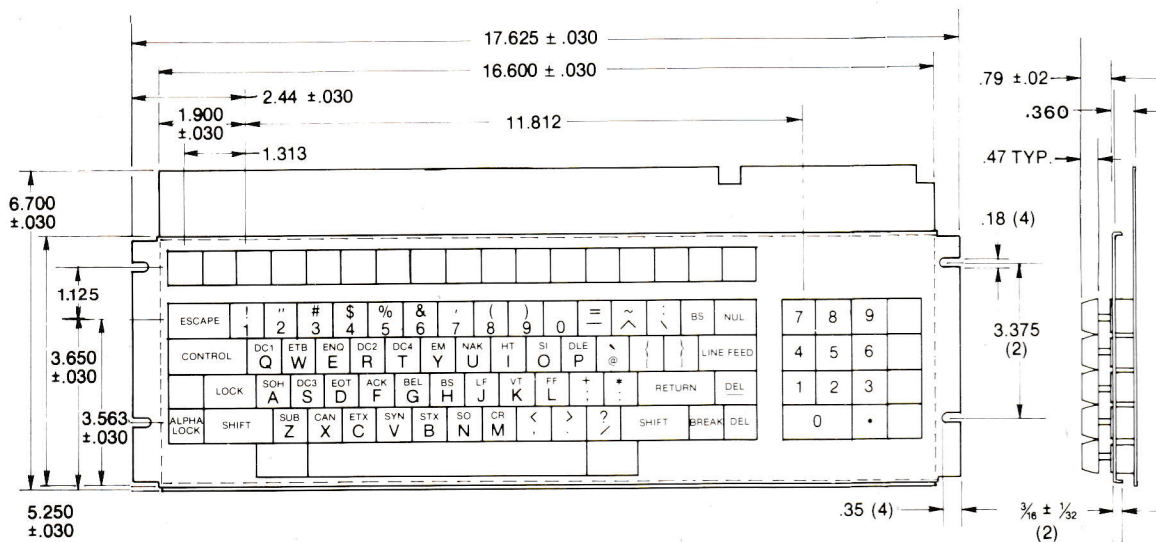
| PIN NO. | MAIN CONNECTOR J1 | MATRIX EXPANSION CONNECTOR J2 |
|---------|-------------------|-------------------------------|
| 1 | BIT 1 (OUT) | SPARE |
| 2 | BIT 2 | E6 |
| 3 | BIT 3 | E4 |
| 4 | BIT 4 | E2 |
| 5 | BIT 5 | E9 (1) |
| 6 | BIT 6 | E11 (3) |
| 7 | BIT 7 | E13 (5) |
| 8 | BIT 8 | SPARE |
| 9 | STROBE (OUT) | SPARE |
| 10 | REPEAT (IN/OUT) | +5 VDC |
| 11 | +5 VDC (IN) | E14 (6) |
| 12 | NOT USED | E1 |
| 13 | GROUND (IN) | D0 |
| 14 | SPARE | D2 |
| 15 | SPARE | GROUND |
| 16 | STROBE (OUT) | D15 (F) |
| 17 | CONTROL (IN/OUT) | D13 (D) |
| 18 | K.B. LOCKOUT (IN) | D11 (B) |
| 19 | SPARE | D4 |
| 20 | SPARE | D6 |
| 21 | SHIFT (IN/OUT) | D8 |
| 22 | BREAK (OUT) | D10 (A) |
| A | SPARE | SPARE |
| B | | E7 |
| C | | E5 |
| D | | E3 |
| E | | E8 (0) |
| F | | E10 (2) |
| H | | E12 (4) |
| J | | SPARE |
| K | | SPARE |
| L | SPARE | +5 VDC |
| M | +5 VDC (IN) | SPARE |
| N | NOT USED | E15 (7) |
| P | GROUND (IN) | E0 |
| R | SPARE | D1 |
| S | | GROUND |
| T | | SPARE |
| U | | D14 (E) |
| V | | D12 (C) |
| W | | D3 |
| X | | D5 |
| Y | | D7 |
| Z | SPARE | D9 |

G, I, O and Q PIN DESIGNATIONS ARE NOT USED.

CB80 SOLID STATE Series



CB80-12AA COMMUNICATIONS



| CONNECTOR PIN ASSIGNMENT | |
|--------------------------|----------------------|
| CB80-12AA and CB80-07AA | |
| PIN | OUTPUT |
| *1 | UART CLK IN |
| 2 | bit 7 |
| 3 | bit 6 |
| 4 | bit 5 |
| 5 | bit 4 |
| 6 | bit 3 |
| 7 | bit 2 |
| 8 | bit 1 |
| 9 | bit 0 |
| 10 | |
| *11 | HANDSHAKE DATA READY |
| *12 | HANDSHAKE DATA READY |
| *13 | UART SERIAL DATA OUT |
| 14 | ROLLOVER/ LOCKOUT |
| *15 | HANDSHAKE ENABLE OUT |
| 16 | |
| *17 | HANDSHAKE CLK IN |
| 18 | ALPHA LOCK LEVEL |
| 19 | ANY KEY DOWN LEVEL |
| 20 | |
| 21 | GROUND |
| 22 | +5 VDC |

| | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 89 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 8A | 8B | 8C | 8D | 8E | 8F | A6 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

| | | | | | | | | | | | | | | | | |
|------------|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1B | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 3A | 3B | 3C | 3D | 3E | 3F | 40 |
| | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 2A | 2B | 2C | 2D | 2E | 2F | 30 |
| | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 3A | 3B | 3C | 3D | 3E | 3F | 40 |
| CONTROL | 11 | 17 | 05 | 12 | 14 | 19 | 15 | 09 | 0F | 10 | 00 | 1B | 1D | 0A | | |
| | 51 | 57 | 45 | 52 | 54 | 59 | 55 | 49 | 4F | 50 | 56 | 7B | 7D | 5B | | |
| | 71 | 77 | 65 | 72 | 74 | 79 | 75 | 69 | 6F | 60 | 66 | 5B | 5D | 50 | | |
| 99 | SHIFT | 01 | 13 | 04 | 06 | 07 | 48 | 0A | 0B | 0C | 0D | 0E | 0F | 0A | 1F | |
| | 41 | 53 | 44 | 46 | 47 | 48 | 4A | 4B | 4C | 4D | 4E | 4F | 4A | 4B | 4C | |
| | 61 | 73 | 64 | 66 | 67 | 68 | 6A | 6B | 6C | 6D | 6E | 6F | 6A | 6B | 6C | |
| ALPHA LOCK | 1A | 18 | 03 | 16 | 02 | 0E | 0D | 2C | 2E | 2F | 3F | 3E | 3D | 3C | 3B | |
| | 5A | 58 | 43 | 56 | 42 | 4E | 4D | 2C | 2E | 2F | 3F | 3E | 3D | 3C | 3B | |
| | 7A | 78 | 63 | 76 | 62 | 6E | 6D | 2C | 2E | 2F | 3F | 3E | 3D | 3C | 3B | |
| | | | | | | | | | | | | | | | | |
| | 91 | 29 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

OUTPUT CODE

OPTIONAL FEATURE PROVISION:
In place of single key, two separate
outputs may be obtained with proper
connections. Consult factory.

* = OPTION

Cherry Fully Encoded Solid State Capacitive Keyboards



CB80-07AA SECRETARIAL

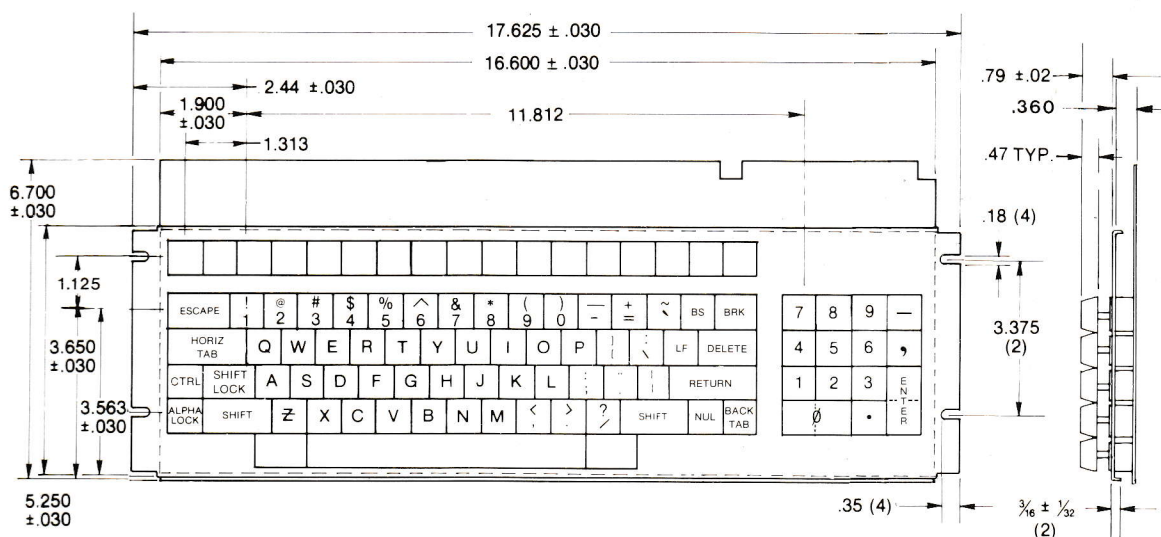
CONNECTOR PIN ASSIGNMENT

CB80-12AA and
CB80-07AA

PIN OUTPUT

| | |
|----|----------------------------|
| A | |
| B | |
| C | |
| D | |
| E | |
| F | |
| H | |
| J | |
| K | |
| L | |
| M | |
| N | |
| *P | PULSE DATA READ INHIBIT |
| R | |
| S | ALPHA LOCK LEVEL |
| T | ANY KEY DOWN LEVEL |
| U | PULSE DATA READY |
| V | PULSE DATA READY |
| *W | BREAK |
| X | DATA BUS CONTROL |
| Y | GROUND |
| Z | +5 VDC |

* = OPTION



LEGEND FORMAT

| | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 8A | 8B | 8C | 8D | 8E | 8F | 8G | 8H |
| 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 8A | 8B | 8C | 8D | 8E | 8F | 8G | 8H |
| 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 8A | 8B | 8C | 8D | 8E | 8F | 8G | 8H |

| | | | | | | | | | | | | | | | | | |
|-------|-------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1B | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 3A | 3B | 3C | 3D | 3E | 3F | 3G | 3H |
| 1B | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 3A | 3B | 3C | 3D | 3E | 3F | 3G | 3H |
| 1B | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 3A | 3B | 3C | 3D | 3E | 3F | 3G | 3H |
| 00 | 11 | 17 | 05 | 12 | 14 | 19 | 15 | 09 | 0F | 10 | 1B | 1C | 1D | 1E | 1F | 1G | 1H |
| 00 | 51 | 57 | 45 | 52 | 54 | 59 | 55 | 49 | 4F | 50 | 5D | 7C | 7A | 7F | 7E | 7G | 7H |
| 00 | 51 | 57 | 45 | 52 | 54 | 59 | 55 | 49 | 4F | 50 | 5D | 7C | 7A | 7F | 7E | 7G | 7H |
| 00 | 71 | 77 | 65 | 72 | 74 | 79 | 75 | 69 | 6F | 70 | 7B | 7D | 7E | 7F | 7G | 7H | 7I |
| CNTL | SHIFT | LOCK | 01 | 13 | 04 | 06 | 07 | 08 | 0A | 0B | 0C | 0D | 0E | 0F | 0G | 0H | 0I |
| | | | 41 | 53 | 44 | 46 | 47 | 48 | 4A | 4B | 4C | 4D | 4E | 4F | 4G | 4H | 4I |
| | | | 61 | 73 | 64 | 66 | 67 | 68 | 6A | 6B | 6C | 6D | 6E | 6F | 6G | 6H | 6I |
| ALPHA | SHIFT | LOCK | 1A | 18 | 03 | 16 | 02 | 0E | 0D | 2C | 2E | 2F | 2G | 2H | 2I | 2J | 2K |
| | | | 5A | 58 | 43 | 56 | 42 | 4E | 4D | 2C | 2E | 2F | 2G | 2H | 2I | 2J | 2K |
| | | | 7A | 78 | 63 | 76 | 62 | 6E | 6D | 2C | 2E | 2F | 2G | 2H | 2I | 2J | 2K |
| | | | 91 | 20 | | | | | | | | | | | | | |
| | | | 91 | 20 | | | | | | | | | | | | | |
| | | | 91 | 20 | | | | | | | | | | | | | |
| | | | 91 | 20 | | | | | | | | | | | | | |

| | | | |
|----|----|----|----|
| B7 | B8 | B9 | AD |
| B7 | B8 | B9 | AD |
| B7 | B8 | B9 | AD |
| B7 | B8 | B9 | AD |
| B4 | B5 | B6 | AC |
| B4 | B5 | B6 | AC |
| B4 | B5 | B6 | AC |
| B4 | B5 | B6 | AC |
| B1 | B2 | B3 | A7 |
| B1 | B2 | B3 | A7 |
| B1 | B2 | B3 | A7 |
| B1 | B2 | B3 | A7 |
| A8 | A9 | AE | 8D |
| A8 | A9 | AE | 8D |
| A8 | A9 | AE | 8D |
| A8 | A9 | AE | 8D |

OUTPUT CODE

CHERRY

GOLD CROSSPOINT KEYBOARD SWITCHES

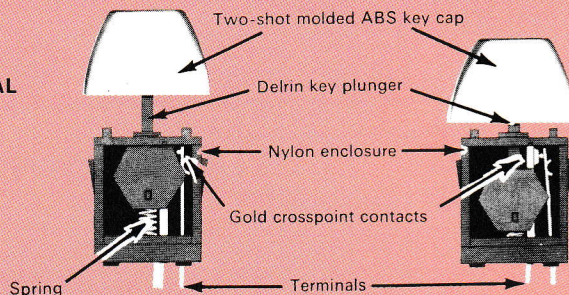
ABOUT THE KEY MODULE:

This is another Cherry design first: A Gold "Crosspoint" Contact Switch — two gold prisms at right angles to each other. This design has provided highly reliable keyboard switching for nearly 10 years in tens of thousands of the most sophisticated, most demanding applications.

The proven design concept — crossed knife edge contact configuration — provides high force per unit of contact area and virtually eliminates contact closure interference by contaminants. Precious metal contact material (W/E Alloy #1) consists of 69% gold, 25% silver and 6% platinum. Contact interfaces are inert to chemical action with resultant low contact resistance (typically 25 milliohms). The key module measures only 3/4" and reduces overall keyboard height to 1-1/2" from key top to printed circuit board.

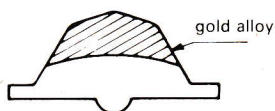
CHERRY LOW PROFILE KEY SWITCHES WITH GOLD "CROSSPOINT" CONTACTS

ACTUAL
SIZE



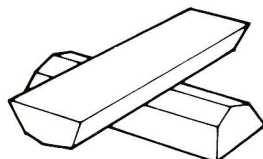
CONTACT INNOVATION

Cross Section of Contact



W/E #1 (69% Gold, 25% Silver, 6% Platinum)

Crosspoint Configuration



A proven design concept—the new gold "crosspoint" contact innovation provides positive switching of low energy solid state circuits.

Contacts are normally held apart for greatest shock resistance. No microphonics or bounce during turn-off or at rest.

CHERRY GOLD CROSSPOINT ELECTRICAL AND MECHANICAL SPECIFICATIONS

MECHANICAL

Operating Force ... 2½ oz. ± ½ oz. Std. (Also available in forces from 2 oz. and higher)

Pretravel085 ± .030 Std. (Alternate action version pretravel .030" to .065")

Total Travel160 ± .020 Std.

Key Module Case Material Thermoplastic (Nylon)

External Terminal Tin Plated Brass Alloy

Temperature

Operating 0°/60° C

Storage -35° C/75° C

ELECTRICAL

Contact Rating (Form A contacts)

DC Resistive 3W max.

AC Resistive 3VA max.

Current 0.125 amp. max. switching

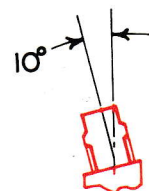
0.5 amp. max. carry

Voltage 28V max.

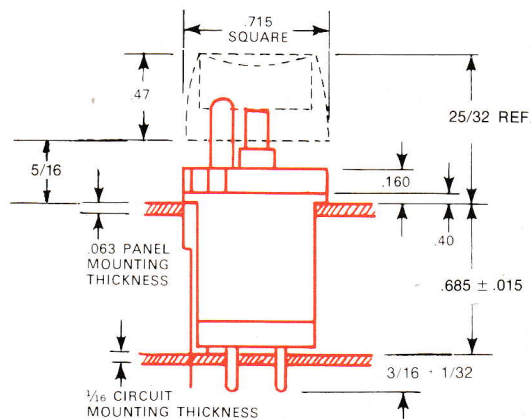
Initial Contact Resistance 200 milliohms max.
(typically 24 milliohms)

10° OFFSET KEY STEM

for Stepped Keyboards
(OPTIONAL)



LIGHTED MODULES





ORDERING INFORMATION FOR GOLD CROSSPOINT KEYBOARD SWITCHES

| Style | Part No. | Stem Design | Operating Force | Stem Angle | Contact Style | Operating Style | Comment | Figure† |
|----------------|----------|-------------|-----------------|------------|---------------|-----------------|---------------------|---------|
| | M61-0120 | T | 2½ oz. nom. | 0° | 1A | momentary | non-lighted | A |
| | M51-0182 | T | 2½ oz. nom. | 10° | 1A | momentary | non-lighted | A |
| | M51-0143 | T | 6 oz. nom. | 0° | 1A | momentary | non-lighted | A |
| | M51-0226 | T | 6 oz. nom. | 10° | 1A | momentary | non-lighted | A |
| | M62-0900 | straight | 2-4½ oz. | 0° | 1A-1B | momentary | non-lighted | A |
| | M62-0100 | straight | 2-4½ oz. | 0° | 2A | momentary | non-lighted | A |
| Spacebar | M51-0106 | straight | 2½-4½ oz. | 0° | 1A | momentary | (paddle type)* | A |
| Spacebar | M51-0107 | straight | 2½-4½ oz. | 10° | 1A | momentary | (paddle type)* | A |
| Spacebar mech. | B99-0003 | straight | 1×6 thru 1×10 | | | | (paddle type)* | ‡ |
| Spacebar mech. | B99-0004 | 10° stems | 1×6 thru 1×10 | | | | (paddle type)* | ‡ |
| Spacebar mech. | B99-0005 | straight | 1×3 only | | | | (paddle type)* | ‡ |
| Spacebar mech. | B99-0006 | 10° stems | 1×3 only | | | | (paddle type)* | ‡ |
| Spacebar | M51-0227 | T | 2½-4½ oz. | 0° | 1A | momentary | (wire form type) | A |
| Spacebar | M51-0228 | T | 2½-4½ oz. | 10° | 1A | momentary | (wire form type) | A |
| Spacebar mech. | B99-29AF | 1×3 0° | | | | | (wire form type) | ‡ |
| Spacebar mech. | B99-40AF | 1×3 10° | | | | | (wire form type) | ‡ |
| Spacebar mech. | B99-32AF | 1×6 0° | | | | | (wire form type) | ‡ |
| Spacebar mech. | B99-43AF | 1×6 10° | | | | | (wire form type) | ‡ |
| Spacebar mech. | B99-35AF | 1×8 0° | | | | | (wire form type) | ‡ |
| Spacebar mech. | B99-46AF | 1×8 10° | | | | | (wire form type) | ‡ |
| | M61-0800 | straight | 2-4½ oz. | 0° | 1A | alt. action | non-lighted | A |
| | M61-0810 | straight | 2-4½ oz. | 10° | 1A | alt. action | non-lighted | A |
| | M61-0805 | straight | 6 oz. nom. | 0° | 1A | alt. action | non-lighted | A |
| | M61-0806 | straight | 6 oz. nom. | 10° | 1A | alt. action | non-lighted | A |
| Tactile | M51-0229 | T | 3 oz. nom. | 0° | 1A | momentary | non-lighted | A |
| Shift | M61-0025 | straight | 2½ oz. nom. | 0° | 1A | momentary | non-lighted | A |
| Shift | M61-0026 | straight | 2½ oz. nom. | 10° | 1A | momentary | non-lighted | A |
| Shift lock | M61-0027 | straight | 2½ oz. nom. | 0° | 1A | momentary | non-lighted | A |
| Shift lock | M61-0028 | straight | 2½ oz. nom. | 10° | 1A | momentary | non-lighted | A |
| Shift lock kit | B99-51AF | 3/16 offset | | | | | | ‡ |
| Shift lock kit | B99-52AF | 3/8 offset | | | | | | ‡ |
| Lighted | M41-0103 | round | 2½ oz. nom. | 0° | 1A | momentary | full top lighted *† | B* |
| Lighted | M41-0802 | round | 2-4½ oz. | 0° | 1A | alt. action | full top lighted *† | B* |
| Lighted | M71-0037 | dual | 2-4 oz. | 0° | 1A | momentary | top & sides lighted | E |
| Lighted | M41-0064 | straight | 2½ oz. nom. | 0° | 1A | momentary | lens lighted** | B |
| Lighted | M41-0104 | straight | 2½ oz. nom. | 10° | 1A | momentary | lens lighted** | B |
| Lighted | M41-0822 | straight | 2-4½ oz. | 0° | 1A | alt. action | lens lighted** | B |
| Lighted | M41-0803 | straight | 2-4½ oz. | 10° | 1A | alt. action | lens lighted** | B |
| Lighted | M41-0125 | straight | 2½ oz. nom. | 0° | 1A | momentary | lens or top lighted | C |
| Lighted | M41-0126 | straight | 2½ oz. nom. | 0° | 1A | momentary | lens or top lighted | D |
| Lighted | M41-0127 | straight | 2½ oz. nom. | 10° | 1A | momentary | lens or top lighted | C |
| Lighted | M41-0128 | straight | 2½ oz. nom. | 10° | 1A | momentary | lens or top lighted | D |

*Discontinued — listed for replacement purposes only.

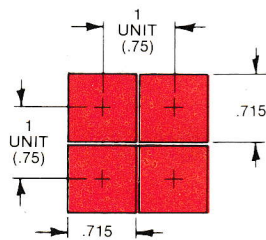
**Light Source not included.

‡ Hardware only. No module included.

† See preceding page.

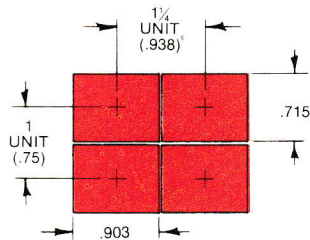
CHERRY

KEYCAP ASSEMBLY DRAWINGS



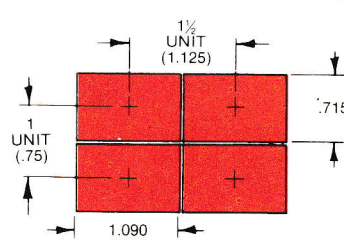
1x1 KEYCAP

AVAILABLE IN 1ST, 2ND, 3RD OR 4TH ROW SCULPTURE. (RELEGENDABLE IN 3RD ROW SCULPTURE ONLY). CAPACITIVE OR GOLD CROSS POINT. STRAIGHT OR 10° STEM. MATTE OR GLOSS FINISH.



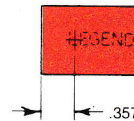
1x1 1/4 KEYCAP
BLANK ONLY NO
LEGEND AVAILABLE

AVAILABLE IN 1ST, 2ND, 3RD AND 4TH ROW SCULPTURE. CAPACITIVE OR GOLD CROSS POINT. STRAIGHT OR 10° STEM. MATTE OR GLOSS FINISH.



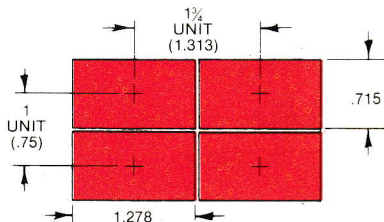
1x1 1/2 KEYCAP

RELEGENDABLE APPLICATION IN 3RD ROW GLOSS, OR MATTE AVAILABLE IN 1ST, 2ND, 3RD, OR 4TH ROW SCULPTURE, GLASS CAPACITIVE OR GOLD CROSS POINT. STRAIGHT OR 10° STEM. MATTE OR GLOSS FINISH.



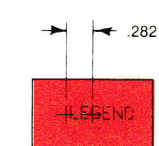
1x1 1/4 ALTERNATE
DESIGN

AVAILABLE IN 1ST, 2ND, 3RD, OR 4TH ROW SCULPTURE. GOLD CROSS POINT ONLY. STRAIGHT OR 10° STEM. MATTE OR GLOSS FINISH. REPLACEMENT ONLY!



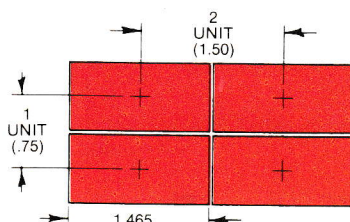
1x1 1/2 KEYCAP

AVAILABLE IN 1ST, 2ND, 3RD, OR 4TH ROW SCULPTURE. CAPACITIVE OR GOLD CROSS POINT. STRAIGHT OR 10° STEM. MATTE OR GLOSS FINISH.



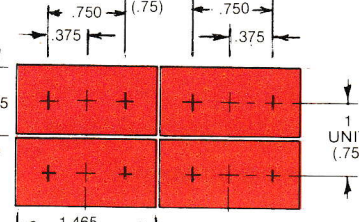
ADDITIONAL SOCKET
LOCATIONS

AVAILABLE IN 1ST, 2ND, 3RD OR 4TH ROW SCULPTURE. GOLD CROSS POINT ONLY. STRAIGHT OR 10° STEM. MATTE OR GLOSS FINISH. REPLACEMENT ONLY!

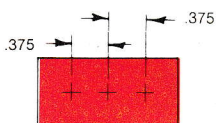


1x2 KEYCAP

RELEGENDABLE APPLICATION—3RD ROW GLOSS AVAILABLE IN 3RD ROW SCULPTURE ONLY. CAPACITIVE OR GOLD CROSS POINT. STRAIGHT OR 10° STEM. MATTE OR GLOSS FINISH.

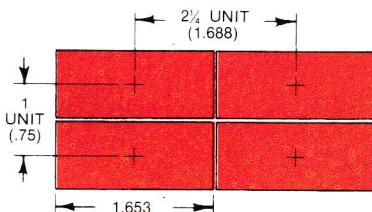


1x2 KEYCAP



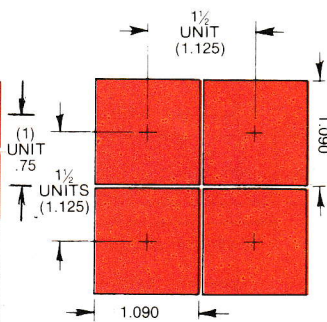
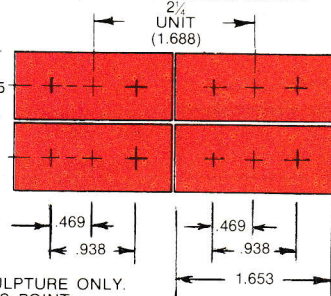
ADDITIONAL SOCKET
LOCATIONS

AVAILABLE IN 3RD ROW SCULPTURE ONLY. GOLD CROSS POINT ONLY. STRAIGHT OR 10° STEM. MATTE OR GLOSS FINISH. REPLACEMENT ONLY!



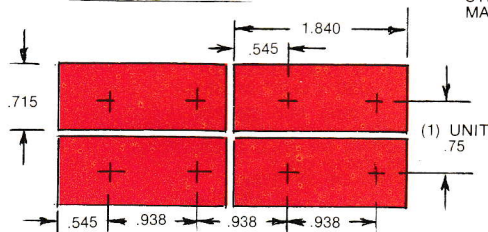
1x2 1/4 KEYCAP

AVAILABLE IN 3RD ROW SCULPTURE ONLY. CAPACITIVE OR GOLD CROSS POINT. STRAIGHT OR 10° STEM. MATTE FINISH.



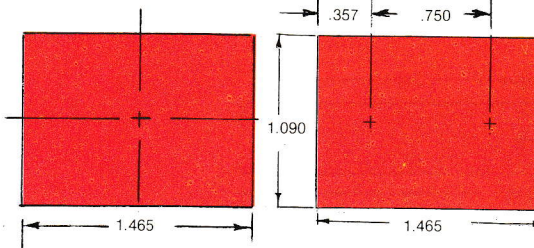
1 1/2 x 1 KEYCAP

BLANK ONLY NO LEGEND AVAILABLE AVAILABLE IN 3RD ROW SCULPTURE ONLY. GOLD CROSS POINT ONLY. STRAIGHT OR 10° STEM. GLOSS FINISH ONLY. (PROTOTYPE QUANTITIES ONLY).



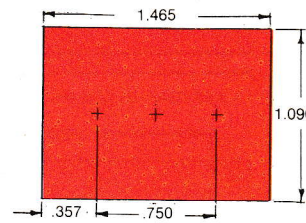
1x2 1/2 KEYCAP

AVAILABLE IN 3RD ROW SCULPTURE ONLY. CAPACITIVE OR GOLD CROSS POINT. STRAIGHT OR 10° STEM. MATTE OR GLOSS FINISH.



1 1/2 x 2 KEYCAP

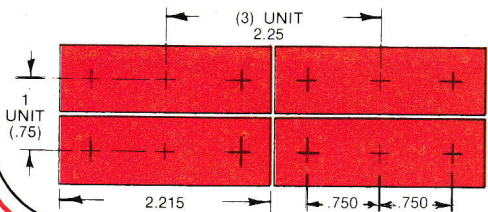
2 SHOT AVAILABLE IN 3RD ROW SCULPTURE ONLY. CAPACITIVE OR GOLD CROSS POINT. STRAIGHT OR 10° STEM. MATTE FINISH ONLY.



1 1/2 x 2

(ENG. REF. 028-9000)

2 SHOT AVAILABLE IN 3RD ROW SCULPTURE ONLY. GOLD CROSS POINT ONLY. STRAIGHT OR 10° STEM. MATTE FINISH ONLY. REPLACEMENT ONLY!

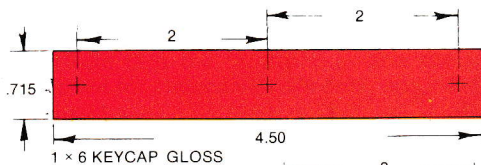


1 OR 2 SWITCHES ONLY,
SPACE BAR MECHANISM

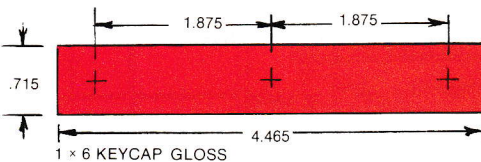
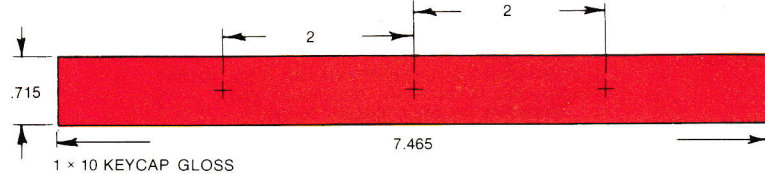
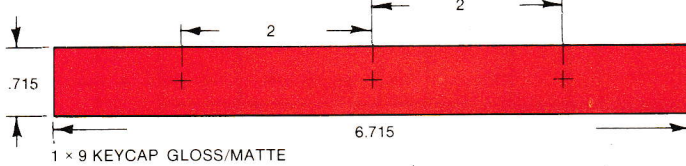
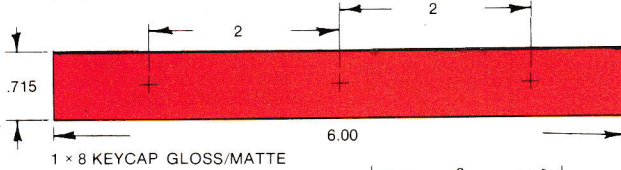
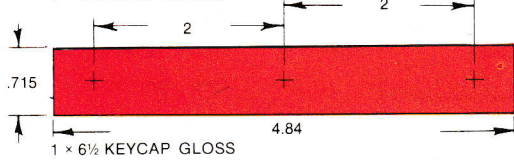
1x3 KEYCAP

AVAILABLE IN 3RD ROW SCULPTURE ONLY. CAPACITIVE OR GOLD CROSS POINT. STRAIGHT OR 10° STEM. MATTE OR GLOSS FINISH.

KEYCAP ASSEMBLY DRAWINGS

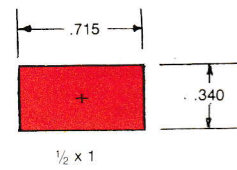
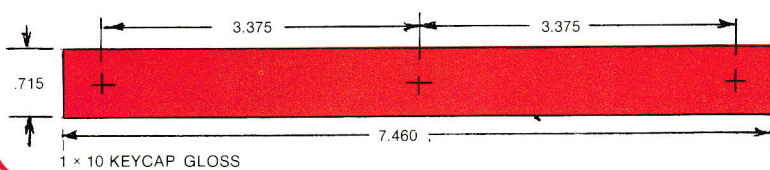
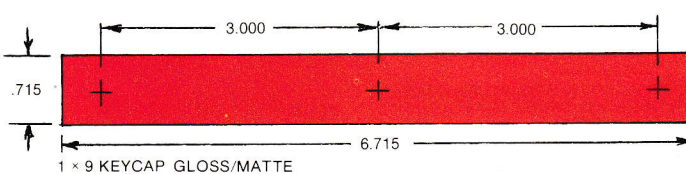
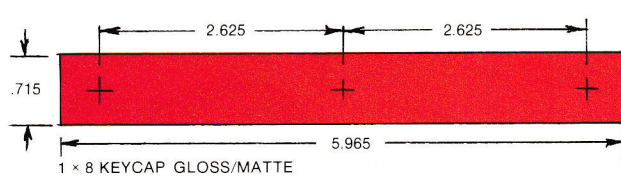
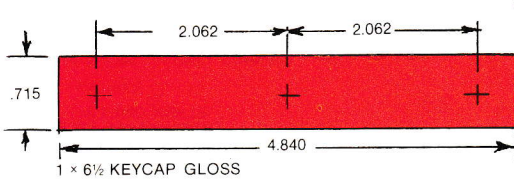


3RD ROW SCULPT. ONLY.
GOLD CROSS PT. ONLY.
STRAIGHT OR 10° STEM.
REPLACEMENT ONLY!

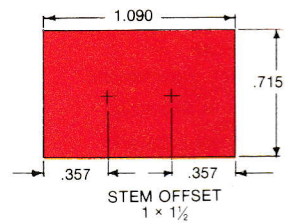


1x6, 1x6 1/2, 1x8, 1x9 & 1x10 KEYCAP
(SHT. 10 & 11)

AVAILABLE IN 3RD ROW
SCULPTURE ONLY.
CAPACITIVE OR GOLD CROSS
POINT.
STRAIGHT OR 10° STEM.

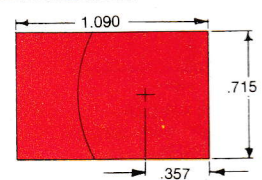


AVAILABLE IN 3RD ROW SCULPTURE ONLY.
GOLD CROSS POINT ONLY.
STRAIGHT OR 10°
MATTE FINISH ONLY.



(ENG. REF. 028-851)

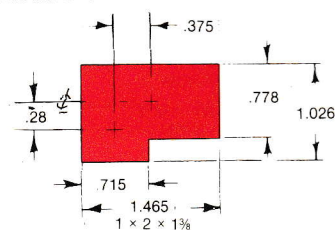
AVAILABLE IN 1ST ROW SCULPTURE ONLY.
GOLD CROSS POINT ONLY.
STRAIGHT OR 10° STEM.
MATTE FINISH ONLY.
REPLACEMENT ONLY!



END STEPPED
SHIFT KEY

ALSO 1 x 2 KEY (1.465)
STEM SAME POSITION
(ENG. REF. 028-1251)

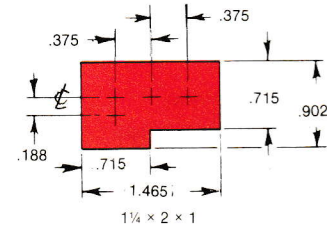
AVAILABLE IN 3RD ROW SCULPTURE ONLY.
GOLD CROSS POINT ONLY.
MATTE OR GLOSS FINISH.
STRAIGHT OR 10° STEM.



"L" SHAPED KEYCAP
(.250 "1/4 UNIT" OFFSET)

(ENG. REF. 028-2860)

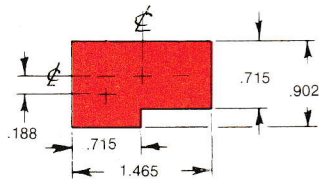
AVAILABLE IN 3RD ROW SCULPTURE ONLY.
CAPACITIVE OR GOLD CROSS POINT.
GLOSS FINISH ONLY.
STRAIGHT OR 10° STEM.



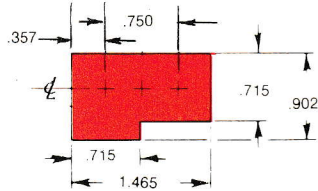
"L" SHAPED KEYCAP

AVAILABLE IN 3RD ROW SCULPTURE ONLY.
GOLD CROSS POINT ONLY.
STRAIGHT STEM ONLY.
MATTE OR GLOSS FINISH.
REPLACEMENT ONLY!

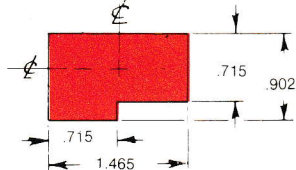
KEYCAP ASSEMBLY DRAWINGS



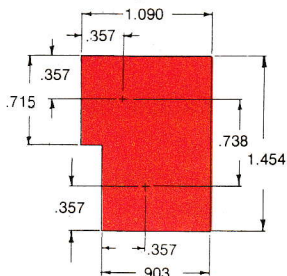
1 1/4 x 2 x 1 "L" SHAPED KEYCAP
AVAILABLE IN 3RD ROW SCULPTURE ONLY.
CAPACITIVE OR GOLD CROSS POINT.
STRAIGHT STEM ONLY.
MATTE OR GLOSS FINISH.



1 1/4 x 2 x 1 "L" SHAPED KEYCAP
AVAILABLE IN 3RD ROW SCULPTURE ONLY.
CAPACITIVE OR GOLD CROSS POINT.
STRAIGHT STEM ONLY.
MATTE OR GLOSS FINISH.



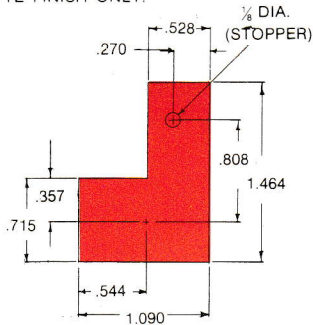
1 1/4 x 2 x 1 "L" SHAPED KEYCAP
AVAILABLE IN 2ND & 3RD ROW SCULPTURE.
CAPACITIVE OR GOLD CROSS POINT.
STRAIGHT STEM ONLY.
MATTE OR GLOSS FINISH.



"L" SHAPED SCULPTURED 2ND & 3RD ROW
1 1/4 x 2 x 1 1/2

(ENG. REF. 023-5452)

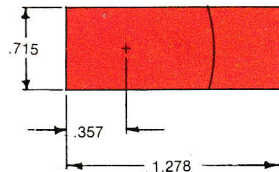
AVAILABLE IN 2ND & 3RD ROW SCULPTURE ONLY.
CAPACITIVE OR GOLD CROSS POINT.
10° STEM ONLY.
MATTE FINISH ONLY.



"L" SHAPED SCULPTURED 2ND & 3RD ROW
1 1/2 x 2 x 3/4

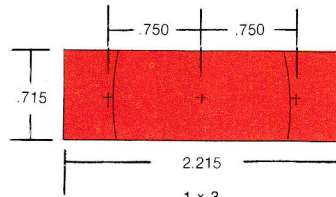
(ENG. REF. 023-5001)

AVAILABLE IN 2ND & 3RD ROW SCULPTURE ONLY.
CAPACITIVE OR GOLD CROSS POINT.
10° STEM.
MATTE FINISH ONLY.



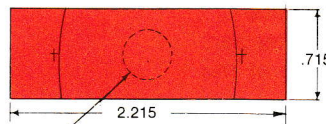
1 x 1 1/2 SCULPTURED END STEPPED
(ROW 3)

AVAILABLE IN 3RD ROW SCULPTURE ONLY.
CAPACITIVE OR GOLD CROSS POINT.
STRAIGHT OR 10° STEM.
MATTE OR GLOSS FINISH.



1 x 3
RELEGENDBLE
STYLE I

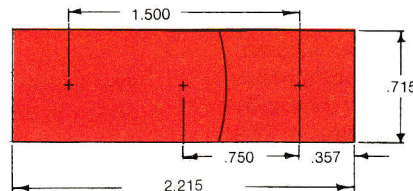
AVAILABLE IN 3RD ROW SCULPTURE ONLY.
CAPACITIVE OR GOLD CROSS POINT.
STRAIGHT OR 10° STEM.
GLOSS FINISH ONLY.



STYLE II
1 x 3 CENTER
STEPPED

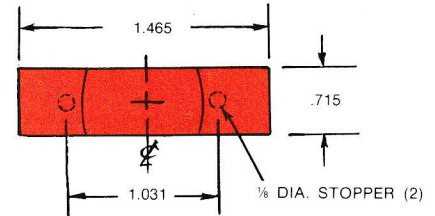
NO STEM
DETAIL IN
POSITIONS
SHOWN
400 DIA. MIN.
200 DEEP MIN.

3RD ROW SCULPTURE ONLY.
GOLD CROSS POINT ONLY.
STRAIGHT OR 10° STEM.
GLOSS FINISH ONLY.
REPLACEMENT ONLY!



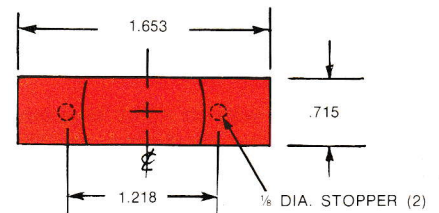
1 x 3 END STEPPED

3RD ROW SCULPTURE ONLY.
CAPACITIVE OR GOLD CROSS POINT.
MATTE FINISH ONLY.
STRAIGHT OR 10° STEM.



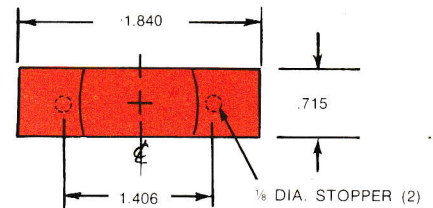
1 x 2 CENTER
STEPPED

AVAILABLE IN 2ND OR 4TH ROW SCULPTURE.
CAPACITIVE OR GOLD CROSS POINT.
STRAIGHT OR 10° STEM.
MATTE OR GLOSS FINISH.



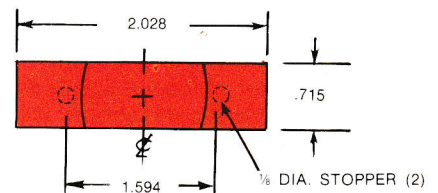
1 x 2 1/4 CENTER
STEPPED

AVAILABLE IN 2ND OR 4TH ROW SCULPTURE.
CAPACITIVE OR GOLD CROSS POINT.
STRAIGHT OR 10° STEM.
MATTE OR GLOSS FINISH.



1 x 2 1/2 CENTER
STEPPED

AVAILABLE IN 3RD ROW SCULPTURE ONLY.
CAPACITIVE OR GOLD CROSS POINT.
STRAIGHT OR 10° STEM.
MATTE & GLOSS FINISH.



1 x 2 3/4 CENTER STEPPED

AVAILABLE IN 3RD ROW SCULPTURE ONLY.
CAPACITIVE OR GOLD CROSS POINT.
STRAIGHT OR 10° STEM.
MATTE & GLOSS FINISH.

CHERRY..

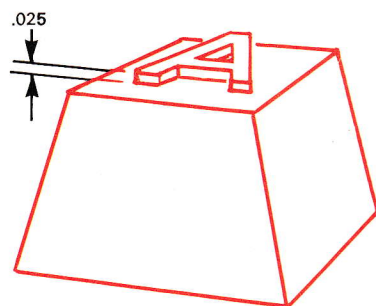
Cherry has two-shot and three-shot molded keycaps in a variety of sizes, shapes, colors and legends to fill any need you can name. If your application calls for a "special", we have in-house design plus fabrication facilities to fill your most demanding needs.

There are scores of standard — plus custom — characters, sizes and shapes in the Cherry "library" of keycaps. Available in a broad selection of colors for both buttons and legends.

ABOUT TWO AND THREE COLOR MOLDING

The best way to make keycaps in two or three colors is to automatically mold them. This technique is called two-shot or three-shot molding, which provides a permanent smooth legend. At Cherry, several different keycaps are molded simultaneously in a multi-cavity mold and the machine attendant devotes full time to inspecting and sorting the output. The process is 100% automatic through the ejection step.

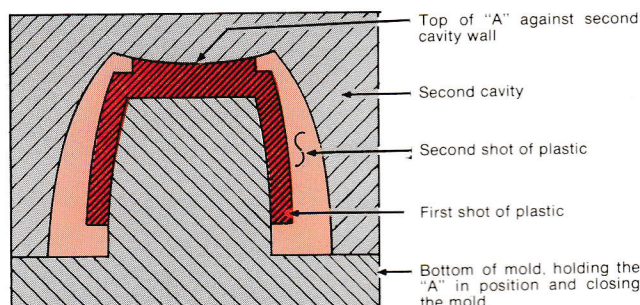
A two color keycap consists of two molded parts . . . the inner part — the character itself — and the outer part — which envelopes all but the very top surface of the character.



This is a simplified view of an inner or first shot. The "A" is raised about .025" from the surface around it. The pyramid-like portion is completely hollow, with walls about .020" thick.

After molding the "A", the two-shot machine automatically inserts it into a second cavity. The upper surface of the letter is pushed tightly against the top of the cavity to keep the second shot of plastic from covering it. The second shot enters the cavity, enveloping all of the part except the top of the "A".

SIMPLIFIED VIEW OF SECOND SHOT BEING MOLDED



HOW CHERRY TOOLS A NEW LEGEND

New legends for two-shot keycaps require new legend artwork and insert tooling which is quickly accomplished in the following steps:

1. An artist prepares an art master at four-to-one scale.
2. A technician photographically converts the art to a template, still at four-to-one scale.
3. A machinist, using a 3-dimensional pantagraph mill, transfers the legend from the template to a small steel block, reducing the legend in the process by a factor of four. The small steel block is called an insert.
4. The insert is hardened and ground.
5. The insert is mounted in a universal first shot mold which is designed to accept replaceable legends.

.. MOLDED KEYCAPS

...in a "library" of sizes, shapes, legends and colors



Your Cherry representative or the Cherry Keyboard Sales Group can quickly determine if we have tooling available for a particular legend. In many cases, an appropriate legend can be found among the 5,000 we have tooled in the Cherry "library". If it is necessary to tool a new one, your Cherry representative can quickly supply you with a cost quotation.

CHERRY KEYBOARDS are already

Applied Digital Data Systems Inc.'s Regent 200 CRT Terminal.

R. C. Allen 900 Series Cash Register.



Tektronix 4051 Graphic System.

Anderson Jacobson AJ 832 Keyboard Printer Terminal.

Control Data Terminal.

YOUR NEARBY CHERRY SALES REPRESENTATIVE is ready to

ALABAMA

Powertronics, Inc.
P.O. Box 3270
Huntsville, 35810
(205) 852-6347

ARIZONA

O'Donnell Assoc. S.W.
14845 N51 Drive
Glendale, 85306
(602) 938-3120

ARKANSAS

See Tulsa, Oklahoma

CALIFORNIA

Abbott Engineering
3921 E. Bayshore Rd.
Palo Alto, 94303
(415) 968-2265

O'Donnell Associates, Inc.
10511 Caminito Glenellen
San Diego, 92126
(714) 578-1645
(213) 328-9710

O'Donnell Associates, Inc.
2808 Oregon Court, Suite L-6
Torrance, 90503
(213) 328-9710

COLORADO

Front Range Marketing
1531 Broadway
Boulder, 80302
(303) 443-4780

CONNECTICUT

Electro-Product Sales
P.O. Box 92
Meriden, 06450
(203) 235-4040

DELAWARE

See Pitman, New Jersey

FLORIDA

CBC Electronics Inc.
8154-N. University Dr.
Fort Lauderdale, 33321
(305) 722-3850

CBC Electronics Inc.
302 Earl St., Longwood, 32750
(305) 831-5380

GEORGIA

See Huntsville, Alabama

IDAHO

See Seattle, Washington

ILLINOIS

Rockford Controls Co.
21 W. 181 Hill Ave.
Glen Ellyn, 60137
(312) 469-6016

(for Southern half of state)
See Bridgeton, Missouri

INDIANA

Menze Sales, Inc.
P.O. Box 9178 — 6616 Bluffton Rd.
Fort Wayne, 46809
(219) 747-5616

IOWA

Dy-Tronix, Inc.
23 Twixt Town Rd., NE — Suite 201
Cedar Rapids, 52402
(319) 377-8275

KANSAS

See Independence, Missouri

KENTUCKY

See Fort Wayne, Indiana

LOUISIANA

See Dallas, Texas

MAINE

See Weston, Massachusetts

MARYLAND

See Pitman, New Jersey

MASSACHUSETTS

Electro-Product Sales Co.
Riverside Office Park #103
Riverside Road, Weston, 02193
(617) 899-8800

MICHIGAN

(western Michigan)
Miltimore Sales Inc.
2986 Chapshire Dr., S.E.
Grand Rapids, 49506
(616) 942-9721

(eastern Michigan)
Miltimore Sales, Inc.
(except automotive)
22765 Heslip Drive
Novi, 48050
(313) 349-0260

McPhail Corporation
(automotive only)
1820 Stephenson Hwy.
Troy, 48084
(313) 689-6444

(for Berrien County only)
See Ft. Wayne, Indiana

MINNESOTA

Cahill Associates
315 N. Pierce, St. Paul, 55104
(612) 646-7217

MISSISSIPPI

See Huntsville, Alabama

MISSOURI

Dy-Tronix, Inc.
11190 Natural Bridge
Bridgeton, 63044
(314) 731-5799

Dy-Tronix, Inc.
Suite 202
13700 E. 42nd Terrace
Independence, 64055
(816) 373-6600

MONTANA

See Seattle, Washington

NEBRASKA

See Independence, Missouri

NEVADA

See Palo Alto, California
(for Southern part only)
See Torrance, California

hard at work in applications like these...



Hazeltine Modular One Terminal.



MKD Bantam II Electronic Cash Register.

assist you with any and all of your keyboard design problems.

NEW HAMPSHIRE

See Weston, Massachusetts

NEW JERSEY

Sydney Justin Assoc.
1580 Lemoine Ave., P.O. Box 1068
Fort Lee, 07024
(201) 947-4371

Colrud Corporation
216 North Broadway
Pitman, 08071
(609) 589-5866

NEW MEXICO

IMEC
4613 Comanche, N.E.
Albuquerque, 87110
(505) 883-9010

NEW YORK

(for Metro New York City)
See Fort Lee, New Jersey

Elcom Sales Inc.
P.O. Box 9112
Rochester, 14625
(716) 385-1400

Elcom Sales Inc.
P.O. Box 183
Syracuse, 13201
(315) 463-4638

NORTH CAROLINA

Powertronics, Inc.
6332 Cephis Dr.
Clemmons, 27102
(919) 766-6208

NORTH DAKOTA

See St. Paul, Minnesota

OHIO

See Fort Wayne, Indiana

OKLAHOMA

ION Associates, Inc.
9726 East 42nd Street — Suite 125
Tulsa, 74145
(918) 664-0186

OREGON

Jas. J. Backer Co.
Sylvan Building, Rm. 207
2035 S.W. 58th St.
Portland, 97221
(503) 297-3776

Jas. J. Backer Co.
353 Reese Hill Rd., S.E.
Salem, 97302
(503) 362-0717

PENNSYLVANIA

(for Western 1/3 only)
See Fort Wayne, Indiana

(for Eastern 2/3 & Central)
See Pitman, New Jersey

(Susquehanna County only)
See Rochester, New York

RHODE ISLAND

See Weston, Massachusetts

SOUTH CAROLINA

Powertronics
P.O. Box 84,
1500 Executive Center Dr.
Anderson Bldg., Suite 12
Greenville, 29607
(803) 288-0270

SOUTH DAKOTA

See St. Paul, Minnesota

TENNESSEE

(for Eastern 1/4 only)
See Winston Salem, N. Carolina
See Huntsville, Alabama

TEXAS

ION Associates, Inc.
8705 Shoal Creek Blvd.
Suite 213
Austin, 78758
(512) 458-2108

ION Associates, Inc.
2619 Electronic Lane — Suite 303
Dallas, 75220
(214) 357-9441

ION Associates, Inc.
9219 Katy Freeway — Suite 103
Houston, 77024
(713) 461-5311

UTAH

Front Range Marketing
1811 E. 98 80 S.
Sandy, 84070
(801) 943-0402

VERMONT

See Weston, Massachusetts

VIRGINIA

See Winston Salem, N. Carolina

WASHINGTON

Jas. J. Backer Co.
P.O. Box 9327 — 221 W. Galer St.
Seattle, 98119
(206) 285-1300

WEST VIRGINIA

See Pitman, New Jersey

WISCONSIN

(for Northwest part only)
See St. Paul, Minnesota

Larsen Associates, Inc.
10855 W. Potter Rd.
Wauwatosa, 53226
(414) 258-0529

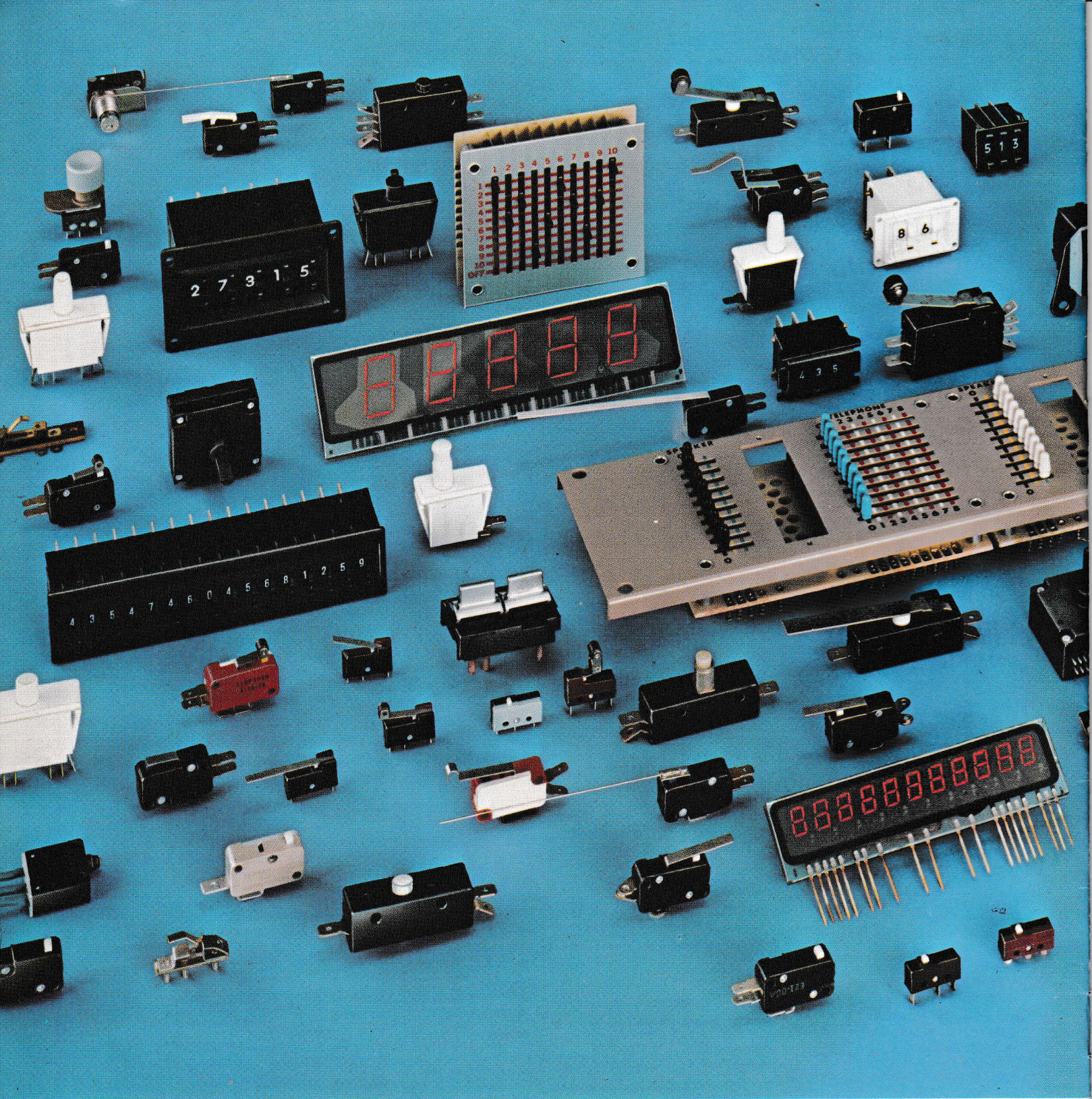
WYOMING

See Boulder, Colorado

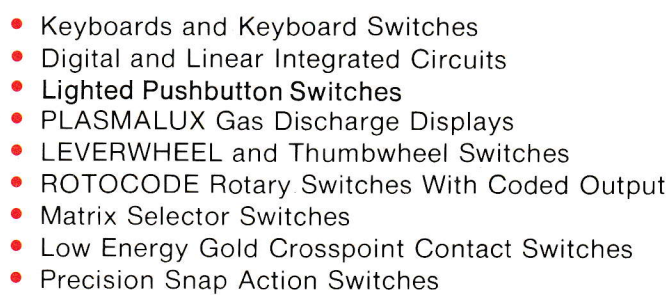
CANADA

(for Vancouver, British Columbia)
See Seattle, Washington

Henry Daymond Sales Ltd.
262 Kerr St.
Oakville, Ontario
(416) 844-6721



CHERRY is:



35



PRINTED IN USA