2021-12-20

Universal Multiple-Octet Coded Character Set International Organization for Standardization Organisation Internationale de Normalisation Международная организация по стандартизации

Doc Type: Working Group Document

Title: Proposal to add further characters from legacy computers and teletext to the

UCS

Source: Terminals Working Group

Authors: Rebecca Bettencourt, Doug Ewell, Ricardo Bánffy, Michael Everson, Jarkko

Hietaniemi, Eduardo Marín Silva, Elias Mårtenson, Mark Shoulson, Shawn

Steele, and Rebecca Turner

Status: Individual Contribution

Action: For consideration by JTC1/SC2/WG2 and UTC

Date: 2021-12-20

1. Introduction. This document proposes the addition to the UCS of 731 new graphic characters to provide compatibility with a wide range of home computers, or "microcomputers," manufactured approximately from the mid-1970s to the mid-1980s, and with the teletext broadcasting standard originally developed in the early 1970s.

NOTE: Mapping tables between legacy character sets and the allocations in this proposal are attached to the PDF version of this document.

2. History. Box-drawing characters, solid and shaded blocks, and similar graphic characters were encoded in the UCS in 1991 (Unicode 1.0) for compatibility with established character sets, both in popular microcomputers—particularly the IBM PC—and in terminal-emulation software. The set of block characters was augmented in 1999 (Unicode 3.0) and in 2002 (Unicode 3.2) to cover additional platforms, due largely to proposals by Frank da Cruz (L2/98-353 through -355, L2/98-413, and L2/00-159), which also included C1 and EBCDIC control pictures, hex byte pictures, and some other graphic characters that were not accepted.

A list discussion in April 2017 concerning the "PETSCII" character set, used in various forms by Commodore home computers ranging from the PET (1977) to the C128 (1985), led to the formation of an ad-hoc Terminals Working Group. The group proposed additional characters from legacy computers and teletext (L2/17-435, L2/18-235, L2/18-275, and L2/19-025) which were accepted into Unicode 13.0.

Feedback from the Script Ad Hoc, as well as from the user community, revealed a desire to encode additional characters from lesser-known legacy computer platforms—particularly the Mattel Aquarius and the Sharp MZ series—that the group did not propose in L2/19-025. This

feedback led to an investigation by the group into additional character sets for a second proposal, which resulted in this document.

Computers of this era enjoyed a great deal of popularity and spawned a large number of computer clubs and user groups devoted to these machines. Some of the original user groups are still in existence, and new ones, often online-only, have emerged more recently. Even less popular platforms such as the Mattel Aquarius still have hobbyists producing new software to this day. The characters proposed here are intended to benefit these users and hobbyists, by providing round-trip convertibility of character data between legacy platforms and the UCS. They may also facilitate the creation of software for these platforms, such as emulators and cross-assemblers, and have been requested by developers of present-day text-mode applications as well, to enhance pseudo-graphical displays.

- **3. Microcomputer platforms.** The group considered the following microcomputer platforms and character sets for this proposal:
 - Amstrad CPC (464, 664, 6128, etc.)
 - Apple 8-bit computers (II, II Plus, IIe, IIc, III, and the 16-bit IIGS)
 - HP terminals (300, 250, 2640 series, 2620 series, etc.)
 - Kaypro CP/M-based computers (II, IV, 10)
 - Mattel Aquarius
 - Ohio Scientific computers (Model 500, Challenger III, Superboard II, etc.)
 - Robotron KC series computers (Z9001, KC 87, KC 85/1)
 - Sharp MZ series computers (MZ-80K, MZ-700, etc.)
 - Sharp X1 computers (X1, X1turbo, X1turbo Z)
 - Tandy TRS-80 computers (TRS-80 Model I, Model III, Model 4, Color Computer)

Some of these platforms were also considered in L2/19-025. However, the combination of low-resolution images and lack of supporting information meant that some characters were difficult or impossible to identify at the time, and consequently had not been proposed. These characters have since been identified and have been proposed in this document.

We have collected search result and sales figures for the platforms being considered to assist in evaluating their viability for encoding. Screenshots of search result figures are included at the end of the Figures section, and sources for units sold are linked in the PDF version of this document. Sales and search result figures are summarized at the top of the next page. We further discuss the viability of encoding characters from these platforms in section 9.

Platform	Google Search	Bing Search	Google Video	Units Sold
Amstrad CPC	2,320,000	991,000	119,000	3,000,000
Apple II	5,410,000	1,280,000	329,000	6,000,000
HP 2620	15,400	16,600	18	no source found
HP 2640	7,550	10,000	33	60,000
Kaypro II/IV/10	1,370,000	63,200	33,000	<u>120,000</u>
Mattel Aquarius	176,000	73,300	3,380	<u>8,000</u>
Ohio Scientific	49,000	12,900	789	<u>10,000</u>
Robotron KC	6,430	2,530	82	<u>30,000</u>
Sharp MZ	236,000	114,000	4,660	100,000
Sharp X1	329,000	240,000	12,200	no source found
Tandy TRS-80	1,860,000	822,000	46,400	200,000

4. Teletext. *Teletext* was a service invented in the United Kingdom in the early 1970s for broadcasting pages of information, generally text and simple block graphics, to analog television receivers via the vertical blanking interval. Teletext found its greatest popularity in Europe, where it was commonplace until the adoption of digital television; almost all analog television sets sold in Europe since the early 1980s had built-in teletext decoders.

Several different 7-bit character sets were defined for teletext, including a complete set of 2×3 block graphics (64 in all), analogous to the block quadrants found in other platforms. These block graphics were proposed in L2/19-025 and accepted into Unicode 13.0. However, teletext also supported a "separated graphics" mode in which block characters could be displayed with a narrow space between cells. These separated block graphics were not proposed as distinct characters at the time. Since then, teletext users have expressed a need for encoding separated block graphics as distinct characters to enable teletext emulation and to maintain compatibility with existing software which uses an already-established Private Use Area encoding for 2×3 block graphics in both contiguous and separated form.

5. Graphic characters. Most of the characters proposed in this document are *semigraphics*: block-style symbols which could be combined to simulate an all-points-addressable graphic display. Many platforms used these text characters to support a so-called "graphics mode": small blocks could be "plotted" at various coordinates, and the appropriate full-sized block character consisting of the necessary "on" and "off" blocks would be displayed in text mode (Figure 17). The set also includes numerous box-drawing and shading characters, and some miscellaneous characters such as arrows, schematic symbols, and video game sprites, which were present in the target platforms.

The word "octant" is used in this document, by analogy with "quadrant"—a term used for certain UCS characters since 1999—and "sextant"—a term used for characters proposed by the group in its previous proposal—to refer to a semigraphics block consisting of eight smaller blocks or "cells" arranged in two columns and four rows. On Kaypro CP/M-based microcomputers, these block graphics were accessible in the code space above ASCII (Figure 4) and could even be included in text files (Figure 18).

Twenty-six of the 256 octant block characters were unified with existing characters or other characters being proposed: seventeen were unified with visually identical half-blocks, quarter-blocks, and quadrants already encoded in the Block Elements block; two were unified with quarter-blocks already encoded in the Symbols for Legacy Computing block; six were unified with other block characters being proposed; and the empty block can be mapped to an existing space character with suitable properties, such as U+00A0 NO-BREAK SPACE.

Some of the graphic characters are intended to be used together, to represent images that would not fit within a single character block. Examples include UPPER LEFT, UPPER RIGHT, LOWER LEFT, and LOWER RIGHT QUADRANT CHESS KING from the Sharp MZ series and TOP and BOTTOM HALF STANDING PERSON from the Mattel Aquarius. These are analogous to U+2320 TOP HALF INTEGRAL and U+2321 BOTTOM HALF INTEGRAL, which, like the present characters, were encoded for compatibility.

In a more extreme example, the HP 2640 and HP 2620 series of terminals supported a "large type" character ROM with graphic characters representing pieces of alphanumeric characters. This was intended for rendering large headlines in terminal applications, as shown in Figure 20 and explained in an HP terminal manual in Figure 21.

- **6. Outlined digits and uppercase Latin letters.** The European character set for Sharp MZ series machines defined clones of the ASCII digits 0 through 9 and uppercase Latin letters A through Z, drawn as outlines, in the upper half of its code space (Figure 9). These outlined digits and letters were used in logos and artwork, separate from regular ASCII digits and letters (Figure 13). They are proposed here at code points U+1CCD6 through U+1CCF9.
- **7. Characters not proposed.** Not all characters identified in the target platforms were deemed suitable for encoding. For example, the European character set for Sharp MZ machines included four characters with an obvious resemblance to the ghosts from *Pac-Man*. These symbols were determined to be IP-encumbered and thus are not proposed here.

"Reverse video" or "inverse video" characters, which were present on nearly all microcomputers of the 1970s and 1980s and often served the same purpose that bold or italic characters serve today, have been determined to be out of scope for the UCS and are not proposed here. The ISO 6429 display sequences **SGR 7** ("negative image") and **SGR 27** ("positive image") are suggested as a higher-level protocol to achieve this effect.

Control characters from microcomputer platforms and teletext were also determined to be out of scope for the UCS. These characters were located in what would today be considered the C0 control range (0x00–0x1F) or the C1 control range (0x7F–0x9F). Processes that need to interchange these codes should simply interchange the binary C0 or C1 value, extended to the UCS code space but without further mapping. Emulators should treat these control codes as appropriate for the targeted environment.

- **8. Finiteness.** We have received concerns that there may be no end to the number of unencoded characters found in old microcomputers and terminals, leading to no end of future proposals should these characters be accepted. We believe this is not the case, for the following reasons.
 - 1. We are focusing exclusively on computers and terminals—devices designed to interchange data with other devices—and not on arcade machines, game consoles, calculators, or any other kind of closed system.
 - 2. We have conducted an exhaustive search of MAME (formerly Multiple Arcade Machine Emulator; a long-running project dedicated to documenting and emulating every arcade machine, game console, computer, terminal, calculator, or similar device), looking for characters from legacy computer platforms that have not yet been encoded, and have scraped the bottom of the barrel. The chances of finding a novel character are now significantly lower having found these, and the chances of finding one on a platform of any significance practically zero. This will certainly be the last proposal of such a large number of characters.
 - 3. We are looking backward in time, not forward, and there are only so many years to go back before digital computers cease to exist, let alone be able to render text. We have found other interesting symbols on devices such as radar displays, but are not proposing them as they are out of scope for this proposal.
 - 4. As the IBM PC came to dominate the market in the 80s, interoperability with PCs became an important consideration, leading to a mass extinction of other platforms and character sets along with them: more and more machines abandoned their novel character sets in favor of IBM's. While examining computers released after the IBM PC, even platforms targeted at Eastern markets, we found very few new symbols.
 - 5. Character sets used to be a clever solution to overcome the lack of pixel addressability and graphics modes, a need that disappeared completely in the 80s as computers became powerful enough to draw symbols using individual pixels. Taken with the previous considerations, this leaves only a small window of less than two decades in which novel characters appear.
 - 6. Even if we were looking forward, modern-day 8-bit machines such as the Commander X16 usually stick to existing character sets such as CP437, ISO-8859-1, or PETSCII and are unlikely to invent anything novel except as user-defined characters, which are outside the scope of both Unicode and this proposal.
- **9.** Alternate proposals. All that being said, we are open to encoding a subset of the characters being proposed in this document, should the evidence for more obscure platforms be considered insufficient.

At a minimum, we are requesting the addition of missing characters from the microcomputer platforms already considered in L2/19-025 (Amstrad CPC, Apple II, and TRS-80).

We also strongly recommend the addition of characters from the Sharp MZ and Sharp X1 platforms, as these have been the most requested and have the second-highest sales and search result figures of the platforms not considered in L2/19-025. If the video game sprites from the European model of the Sharp MZ are determined to be unacceptable for encoding, we are willing

to reduce the set to only characters from the Japanese model, since the Sharp platforms were better known in Japan than internationally.

The separated block sextant graphics from Teletext, block octant graphics from the Kaypro, and characters from the Mattel Aquarius are of medium importance. The teletext characters are part of a de jure standard issued by the ITU and are already in widespread use using an existing Private Use Area encoding, and their inclusion would provide complete compatibility with that encoding. The Kaypro is the best-selling and most widely known of the platforms not previously considered, and ran the CP/M operating system, which enjoyed a high degree of interoperability with other platforms. The Mattel Aquarius is the only other platform yet to be mentioned in this section with 100,000 or more Google Search results, is still seeing development of new software even to this day, and was previously considered, albeit only partially, in L2/19-025.

The remaining platforms (HP 2620/2640, Ohio Scientific, and Robotron KC) are of low importance. (We have found documentation for other HP terminals claiming support for a line drawing character set as in the case of the HP 2620 and HP 2640, but have not found proof that they support the same characters.) We understand that the low numbers, both of search results and of units sold, make it difficult to justify inclusion of these platforms.

Importance	Priority	Platform
High	1	Amstrad CPC, Apple II, TRS-80
High	2	Sharp MZ (Japanese Set), Sharp X1
High	3	Sharp MZ (European Set)
Medium	4	Teletext
Medium	5	Kaypro
Medium	6	Mattel Aquarius
Low	7	HP 2620/2640, Ohio Scientific, Robotron KC

Should the Script Ad Hoc or UTC determine that only a subset of the proposed characters are worth encoding, we will produce a revised proposal limited to that subset.

- **10.** Character names. At least since the 1970s, international SDOs such as ECMA and national bodies such as ANSI and BSI have assigned names to the elements of coded character sets. By contrast, vendors of microcomputers, and even the developers of the teletext standard, tended to provide at best a code chart or image of a screen showing the character set, usually without names. We have attempted to invent names for these characters that are meaningful, unique, and conformant to WG2 and UTC guidelines.
- 11. Ordering and code point assignment. The proposed characters are presented roughly in groups: characters present on multiple platforms, Sharp MZ characters, Mattel Aquarius characters, and so on. Although the exact order of these characters within their groups is not an overriding concern, it seems reasonable that the groups should be kept together.

The suggested code point assignments cover several blocks:

- Additional symbols representing control functions are shown with suggested code points within the existing Control Pictures block.
- Additional arrows which seemed to fit logically alongside other arrows are shown with suggested code points within the existing Supplemental Arrows-C block.
- Legacy characters present across multiple target platforms are shown with suggested code points within the existing Symbols for Legacy Computing block.
- Characters from the Sharp MZ series are shown with suggested code points at the start of a new block (1CC00..1CEAF, as suggested by the Roadmap Committee) that is as of yet unassigned and is near existing symbol blocks, with a placeholder block name, "Symbols for Legacy Computing Supplement."
- Block octant characters and characters from the Mattel Aquarius are shown with suggested code points in the middle of the above-mentioned new block, starting at 1CD00.
- Characters from other platforms and separated block sextants are shown with suggested code points at the end of the above-mentioned new block, starting at 1CE00.

However, it is understood that final assignment of blocks, code points, and block and character names is completely at the discretion of UTC and/or WG2.

12. Implementation. To assist implementers of emulators and conversion tools with the variety of mechanisms discussed in these proposals—existing and new block graphics characters, control codes, ISO 6429 sequences for reverse video, and so forth—the group has developed an extensive set of mapping tables, providing suggested mappings from the legacy character sets to the UCS. These mapping tables are attached to the PDF version of this document. The group is also drafting a Unicode Technical Note to explain the mechanisms and recommended techniques for working with them.

13. Unicode character properties.

```
2427; SYMBOL FOR DELETE SQUARE CHECKER BOARD FORM; So; 0; ON;;;;; N;;;;
2428; SYMBOL FOR DELETE RECTANGULAR CHECKER BOARD FORM; So; 0; ON; ;; ;; ;N; ;; ;;
2429; SYMBOL FOR DELETE MEDIUM SHADE FORM; So; 0; ON; ;; ;; ; ;; ;;
1CC00; UP-POINTING GO-KART; So; 0; ON;;;;; N;;;;;
1CC01; RIGHT-POINTING GO-KART; So; 0; ON; ;; ;; N; ;; ;;
1CC02; LEFT-POINTING STICK FIGURE; So; 0; ON;;;;; N;;;;;
1CC03; RIGHT-POINTING STICK FIGURE; So; 0; ON; ;; ;; N; ;; ;;
1CC04; DOWN-POINTING STICK FIGURE; So; 0; ON; ; ; ; ; ; ; ;
1CC05; LOWER HORIZONTAL RULER SEGMENT; So; 0; ON; ;; ;; ;N; ;; ;;
1CC06; RIGHT VERTICAL RULER SEGMENT; So; 0; ON; ;; ;; N; ;; ;;
1CC07; LOWER RIGHT RULER SEGMENT; So; 0; ON;;;;; N;;;;;
1CC08; ANTENNA; So; 0; ON; ;; ;; N; ;; ;
1CC09; HORIZONTAL RESISTOR SEGMENT; So; 0; ON; ;; ;; ;N; ;; ;;
1CCOA; VERTICAL RESISTOR SEGMENT; So; 0; ON; ;; ;; N; ;; ;;
1CC0B; LEFT THIRD INDUCTOR; So; 0; ON;;;;; N;;;;;
1CC0C; MIDDLE THIRD INDUCTOR; So; 0; ON; ;; ;; N; ;; ;;
1CC0D; RIGHT THIRD INDUCTOR; So; 0; ON; ;; ;; ;N; ;; ;;
1CCOE; LEFT-POINTING DIODE; So; O; ON;;;;; N;;;;;
1CCOF; RIGHT-POINTING DIODE; So; 0; ON; ;; ;; ;N; ;; ;;
1CC10; NPN TRANSISTOR; So; 0; ON;;;;; N;;;;;
1CC11; PNP TRANSISTOR; So; 0; ON; ; ; ; ; N; ; ; ;
```

```
1CC12; RECEPTACLE; So; 0; ON; ;; ;; N; ;; ;;
1CC13; HORIZONTAL CAPACITOR; So; 0; ON; ;; ;; N; ;; ;;
1CC14; VERTICAL CAPACITOR; So; 0; ON;;;;; N;;;;;
1CC15; LOGIC GATE OR; So; 0; ON;;;;; N;;;;;
1CC16; LOGIC GATE AND; So; 0; ON; ; ; ; ; N; ; ; ;
1CC17; LOGIC GATE INVERTED INPUTS; So; 0; ON;;;;; N;;;;;
1CC18; LOGIC GATE INVERTED OUTPUT; So; 0; ON;;;;; N;;;;;
1CC19; LOGIC GATE BUFFER; So; 0; ON; ;; ;; N; ;; ;;
1CC1A; LOGIC GATE BUFFER WITH INVERTED INPUT; So; 0; ON; ;;;; N;;;;;
1CC1B; BOX DRAWINGS LIGHT HORIZONTAL AND UPPER RIGHT; So; 0; ON; ;; ;; ;N; ;; ;;
1CC1C; BOX DRAWINGS LIGHT HORIZONTAL AND LOWER RIGHT; So; 0; ON; ;; ;; N; ;; ;;
1CC1D; BOX DRAWINGS LIGHT TOP AND UPPER LEFT; So; 0; ON; ;; ;; ;; ;;
1CC1E; BOX DRAWINGS LIGHT BOTTOM AND LOWER LEFT; So; 0; ON;;;;; N;;;;
1CC1F; BOX DRAWINGS DOUBLE DIAGONAL UPPER RIGHT TO LOWER LEFT; So; 0; ON; ;; ;; N; ;; ;;
1CC20; BOX DRAWINGS DOUBLE DIAGONAL UPPER LEFT TO LOWER RIGHT; So; 0; ON; ;; ;; N; ;; ;;
1CC21; SEPARATED BLOCK OUADRANT-1; So; 0; ON; ;; ;; N; ;; ;
1CC22; SEPARATED BLOCK QUADRANT-2; So; 0; ON;;;;; N;;;;;
1CC23; SEPARATED BLOCK QUADRANT-12; So; 0; ON;;;;; N;;;;
1CC24; SEPARATED BLOCK QUADRANT-3; So; 0; ON;;;;; N;;;;;
1CC25; SEPARATED BLOCK OUADRANT-13; So; 0; ON; ; ; ; ; N; ; ; ;
1CC26; SEPARATED BLOCK QUADRANT-23; So; 0; ON; ;; ;; N; ;; ;;
1CC27; SEPARATED BLOCK QUADRANT-123; So; 0; ON; ;; ;; N; ;; ;;
1CC28; SEPARATED BLOCK QUADRANT-4; So; 0; ON;;;;; N;;;;;
1CC29; SEPARATED BLOCK QUADRANT-14; So; 0; ON; ; ; ; ; N; ; ; ;
1CC2A; SEPARATED BLOCK QUADRANT-24; So; 0; ON; ;; ;; N; ;; ;;
1CC2B; SEPARATED BLOCK QUADRANT-124; So; 0; ON; ;; ;; ;N; ;; ;;
1CC2C; SEPARATED BLOCK QUADRANT-34; So; 0; ON;;;;; N;;;;
1CC2D; SEPARATED BLOCK QUADRANT-134; So; 0; ON;;;;; N;;;;;
1CC2E; SEPARATED BLOCK QUADRANT-234; So; O; ON; ;; ;; N; ;; ;;
1CC2F; SEPARATED BLOCK QUADRANT-1234; So; 0; ON; ;; ;; N; ;; ;;
1CC30; UPPER LEFT TWELFTH CIRCLE; So; O; ON; ;; ;; N; ;; ;;
1CC31; UPPER CENTRE LEFT TWELFTH CIRCLE; So; 0; ON;;;;; N;;;;;
1CC32; UPPER CENTRE RIGHT TWELFTH CIRCLE; So; 0; ON; ;; ;; N; ;; ;;
1CC33; UPPER RIGHT TWELFTH CIRCLE; So; 0; ON;;;;; N;;;;
1CC34; UPPER MIDDLE LEFT TWELFTH CIRCLE; So; 0; ON; ; ; ; ; N; ; ; ;
1CC35; UPPER LEFT QUARTER CIRCLE; So; O; ON; ;; ;; ;N; ;; ;;
1CC36; UPPER RIGHT QUARTER CIRCLE; So; 0; ON;;;;;; N;;;;;
1CC37; UPPER MIDDLE RIGHT TWELFTH CIRCLE; So; 0; ON; ;; ;; N; ;; ;;
1CC38; LOWER MIDDLE LEFT TWELFTH CIRCLE; So; 0; ON; ;; ;; N; ;; ;;
1CC39; LOWER LEFT QUARTER CIRCLE; So; 0; ON;;;;;; N;;;;;
1CC3A; LOWER RIGHT QUARTER CIRCLE; So; 0; ON;;;;;; N;;;;;
1CC3B; LOWER MIDDLE RIGHT TWELFTH CIRCLE; So; 0; ON;;;;; N;;;;;
1CC3C; LOWER LEFT TWELFTH CIRCLE; So; 0; ON;;;;; N;;;;;
1CC3D; LOWER CENTRE LEFT TWELFTH CIRCLE; So; O; ON;;;;;; N;;;;;
1CC3E; LOWER CENTRE RIGHT TWELFTH CIRCLE; So; 0; ON;;;;; N;;;;
1CC3F; LOWER RIGHT TWELFTH CIRCLE; So; 0; ON;;;;; N;;;;;
1CC40; SPARSE HORIZONTAL FILL; So; 0; ON;;;;; N;;;;
1CC41; SPARSE VERTICAL FILL; So; 0; ON;;;;; N;;;;;
1CC42; ORTHOGONAL CROSSHATCH FILL; So; 0; ON;;;;; N;;;;
1CC43; DIAGONAL CROSSHATCH FILL; So; 0; ON; ;; ;; N; ;; ;;
1CC44; DENSE VERTICAL FILL; So; 0; ON;;;;; N;;;;;
1CC45; DENSE HORIZONTAL FILL; So; 0; ON;;;;; N;;;;;
1CC46; SPECKLE FILL FRAME-1; So; 0; ON;;;;; N;;;;;
1CC47; SPECKLE FILL FRAME-2; So; 0; ON; ;; ;; N; ;; ;;
1CC48; LEFT-FACING BASSINET; So; 0; ON;;;;; N;;;;
1CC49; RIGHT-FACING BASSINET; So; 0; ON;;;;; N;;;;
1CC4A; FLYING SAUCER WITH BEAMS; So; 0; ON;;;;; N;;;;
1CC4B; FLYING SAUCER WITHOUT BEAMS; So; 0; ON; ;; ;; N; ;; ;;
1CC4C; ALIEN MONSTER OPEN JAWS; So; 0; ON; ;; ;; N; ;; ;;
1CC4D; ALIEN MONSTER CLOSED JAWS; So; 0; ON; ;; ;; ;N; ;; ;;
1CC4E; ALIEN SQUID OPEN TENTACLES; So; 0; ON; ;; ;; N; ;; ;;
1CC4F; ALIEN SQUID CLOSED TENTACLES; So; 0; ON; ;; ;; N; ;; ;;
1CC50; ALIEN CRAB STEPPING RIGHT; So; 0; ON; ;; ;; N; ;; ;;
1CC51; ALIEN CRAB STEPPING LEFT; So; 0; ON;;;;; N;;;;;
1CC52; ALIEN SPIDER CROUCHING; So; 0; ON;;;;; N;;;;
1CC53; ALIEN SPIDER SPREAD; So; 0; ON; ; ; ; ; N; ; ; ;
```

```
1CC54; ALIEN MONSTER STEP-1; So; 0; ON; ;; ;; N; ;; ;;
1CC55; ALIEN MONSTER STEP-2; So; 0; ON; ;; ;; N; ;; ;;
1CC56; LEFT-POINTING ROCKET SHIP; So; 0; ON; ;; ;; ;N; ;; ;;
1CC57; UP-POINTING ROCKET SHIP; So; 0; ON; ;; ;; ;N; ;; ;;
1CC58; RIGHT-POINTING ROCKET SHIP; So; O; ON;;;;; N;;;;;
1CC59; DOWN-POINTING ROCKET SHIP; So; 0; ON;;;;; N;;;;
1CC5A; TOP HALF LEFT-FACING ROBOT; So; 0; ON;;;;; N;;;;;
1CC5B; TOP HALF FORWARD-FACING ROBOT; So; 0; ON;;;;; N;;;;
1CC5C; TOP HALF RIGHT-FACING ROBOT; So; 0; ON; ;; ;; N; ;; ;;
1CC5D; BOTTOM HALF LEFT-FACING ROBOT; So; 0; ON; ;; ;; N; ;; ;;
1CC5E; BOTTOM HALF FORWARD-FACING ROBOT; So; 0; ON; ;; ;; ;; ;;
1CC5F; BOTTOM HALF RIGHT-FACING ROBOT; So; 0; ON; ;; ;; N; ;; ;;
1CC60; LEFT-POINTING ATOMIC BOMB; So; 0; ON; ;; ;; N; ;; ;;
1CC61; UP-POINTING ATOMIC BOMB; So; 0; ON; ;; ;; N; ;; ;;
1CC62; RIGHT-POINTING ATOMIC BOMB; So; 0; ON;;;;; N;;;;
1CC63; DOWN-POINTING ATOMIC BOMB; So; 0; ON;;;;; N;;;;
1CC64; MUSHROOM CLOUD; So; 0; ON;;;;; N;;;;
1CC65; LEFT-POINTING RIFLE; So; 0; ON;;;;; N;;;;
1CC66; UP-POINTING RIFLE; So; 0; ON; ;; ;; N; ;; ;;
1CC67; RIGHT-POINTING RIFLE; So; 0; ON; ;; ;; ;N; ;; ;;
1CC68; DOWN-POINTING RIFLE; So; 0; ON;;;;; N;;;;;
1CC69; EIGHT RAYS INWARD; So; 0; ON; ;; ;; N; ;; ;;
1CC6A; EIGHT RAYS OUTWARD; So; 0; ON;;;;; N;;;;
1CC6B; BLACK LARGE CIRCLE MINUS LEFT QUARTER SECTION; So; 0; ON; ;; ;; ;; ;;
1CC6C; BLACK LARGE CIRCLE MINUS UPPER QUARTER SECTION; So; 0; ON;;;;; N;;;;
1CC6D; BLACK LARGE CIRCLE MINUS RIGHT QUARTER SECTION; So; 0; ON; ;; ;; N; ;; ;;
1CC6E; BLACK LARGE CIRCLE MINUS LOWER QUARTER SECTION; So; 0; ON; ;; ;; ;N; ;; ;;
1CC6F; BLACK NEUTRAL FACE; So; 0; ON; ; ; ; ; ; ; ;
1CC70; LEFT-FACING SNAKE HEAD WITH OPEN MOUTH; So; 0; ON;;;;; N;;;;;
1CC71; UP-FACING SNAKE HEAD WITH OPEN MOUTH; So; 0; ON; ;; ;; ;; ;;
1CC72; RIGHT-FACING SNAKE HEAD WITH OPEN MOUTH; So; 0; ON;;;;; N;;;;
1CC73; DOWN-FACING SNAKE HEAD WITH OPEN MOUTH; So; 0; ON;;;;; N;;;;;
1CC74; LEFT-FACING SNAKE HEAD WITH CLOSED MOUTH; So; 0; ON; ; ; ; ; N; ; ; ;
1CC75; UP-FACING SNAKE HEAD WITH CLOSED MOUTH; So; 0; ON; ;; ;; N; ;; ;;
1CC76; RIGHT-FACING SNAKE HEAD WITH CLOSED MOUTH; So; 0; ON; ; ; ; ; N; ; ; ;
1CC77; DOWN-FACING SNAKE HEAD WITH CLOSED MOUTH; So; 0; ON; ; ; ; ; N; ; ; ;
1CC78; LEFT-POINTING ENERGY WAVE; So; 0; ON; ;; ;; ;N; ;; ;;
1CC79; UP-POINTING ENERGY WAVE; So; 0; ON; ;; ;; ;N; ;; ;;
1CC7A; RIGHT-POINTING ENERGY WAVE; So; 0; ON;;;;; N;;;;
1CC7B; DOWN-POINTING ENERGY WAVE; So; 0; ON; ;; ;; ;N; ;; ;;
1CC7C; SQUARE SPIRAL FROM TOP LEFT; So; 0; ON; ;; ;; N; ;; ;;
1CC7D; SQUARE SPIRAL FROM TOP RIGHT; So; 0; ON; ;; ;; N; ;; ;;
1CC7E; SQUARE SPIRAL FROM BOTTOM RIGHT; So; 0; ON;;;;; N;;;;;
1CC7F; SQUARE SPIRAL FROM BOTTOM LEFT; So; 0; ON; ;; ;; N; ;; ;;
1CC80; STRIPED LEFT-POINTING TRIANGLE; So; 0; ON; ;; ;; N; ;; ;;
1CC81; STRIPED UP-POINTING TRIANGLE; So; 0; ON; ;; ;; N; ;; ;;
1CC82; STRIPED RIGHT-POINTING TRIANGLE; So; 0; ON;;;;;; N;;;;;
1CC83; STRIPED DOWN-POINTING TRIANGLE; So; 0; ON; ;; ;; ;N; ;; ;;
1CC84; VERTICAL LADDER; So; 0; ON; ;; ;; N; ;; ;;
1CC85; HORIZONTAL LADDER; So; 0; ON; ;; ;; N; ;; ;;
1CC86; WHITE LOWER LEFT POINTER; So; 0; ON;;;;; N;;;;
1CC87; WHITE LOWER RIGHT POINTER; So; 0; ON; ;; ;; ;N; ;; ;;
1CC88; TWO RINGS ALIGNED HORIZONTALLY; So; 0; ON; ;; ;; N; ;; ;;
1CC89; SQUARE FOUR CORNER SALTIRES; So; 0; ON; ;; ;; N; ;; ;;
1CC8A; SQUARE FOUR CORNER DIAGONALS; So; 0; ON; ;; ;; N; ;; ;;
1CC8B; SQUARE FOUR CORNER BLACK TRIANGLES; So; 0; ON; ;; ;; N; ;; ;;
1CC8C; SQUARE APERTURE; So; 0; ON; ;; ;; N; ;; ;;
1CC8D; INVERSE BLACK DIAMOND; So; 0; ON;;;;; N;;;;
1CC8E; LEFT AND UPPER ONE EIGHTH BLOCK CONTAINING BLACK SMALL SQUARE; So; 0; ON; ;; ;; N; ;; ;;
1CC8F; INVERSE BLACK SMALL SQUARE; So; 0; ON;;;;; N;;;;
1CC90; VERTICAL LINE WITH FOUR TICK MARKS; So; 0; ON; ;; ;; N; ;; ;;
1CC91; HORIZONTAL LINE WITH FOUR TICK MARKS; So; 0; ON; ;; ;; ;; ;;
1CC92; LEFT-FACING FISH; So; 0; ON;;;;; N;;;;;
1CC93; RIGHT-FACING FISH; So; 0; ON; ;; ;; N; ;; ;;
1CC94; LEFT-FACING FISH WITH OPEN MOUTH; So; 0; ON; ;; ;; N; ;; ;;
1CC95; RIGHT-FACING FISH WITH OPEN MOUTH; So; 0; ON; ;; ;; N; ;; ;;
```

```
1CC96; FLAPPING BIRD; So; 0; ON;;;;; N;;;;;
1CC97; LEFT-POINTING RACING CAR; So; 0; ON;;;;; N;;;;;
1CC98; UP-POINTING RACING CAR; So; 0; ON; ;; ;; N; ;; ;;
1CC99; RIGHT-POINTING RACING CAR; So; 0; ON; ;; ;; N; ;; ;;
1CC9A; DOWN-POINTING RACING CAR; So; 0; ON;;;;; N;;;;
1CC9B; HORIZONTAL RACING CAR; So; 0; ON;;;;; N;;;;
1CC9C; VERTICAL RACING CAR; So; 0; ON;;;;; N;;;;
1CC9D; VERTICAL GO-KART; So; 0; ON;;;;; N;;;;;
1CC9E; LEFT-POINTING TANK; So; 0; ON;;;;; N;;;;;
1CC9F; RIGHT-POINTING TANK; So; 0; ON;;;;; N;;;;
1CCA0; LEFT-POINTING ROCKET BOOSTER; So; 0; ON; ;; ;; N; ;; ;;
1CCA1; RIGHT-POINTING ROCKET BOOSTER; So; 0; ON; ; ; ; ; N; ; ; ;
1CCA2; LEFT-POINTING ROLLER COASTER CAR; So; 0; ON; ; ; ; ; N; ; ; ;
1CCA3; RIGHT-POINTING ROLLER COASTER CAR; So; 0; ON; ;; ;; N; ;; ;;
1CCA4; LEFT HALF FLYING SAUCER; So; 0; ON; ;; ;; N; ;; ;;
1CCA5; RIGHT HALF FLYING SAUCER; So; 0; ON; ;; ;; N; ;; ;;
1CCA6; UPPER LEFT QUADRANT FACE WITH OPEN EYES; So; 0; ON; ;; ;; N; ;; ;;
1CCA7; UPPER RIGHT QUADRANT FACE WITH OPEN EYES; So; 0; ON; ;;;; N;;;;;
1CCA8; UPPER LEFT QUADRANT FACE WITH CLOSED EYES; So; 0; ON; ;; ;; ;N; ;; ;;
1CCA9; UPPER RIGHT QUADRANT FACE WITH CLOSED EYES; So; 0; ON; ; ; ; ; N; ; ; ;
1CCAA; LOWER LEFT QUADRANT SMILING FACE; So; 0; ON; ; ; ; ; N; ; ; ;
1CCAB; LOWER RIGHT QUADRANT SMILING FACE; So; 0; ON;;;;; N;;;;;
1CCAC; LOWER LEFT QUADRANT NEUTRAL FACE; So; 0; ON; ;; ;; N; ;; ;;
1CCAD; LOWER RIGHT QUADRANT NEUTRAL FACE; So; 0; ON;;;;; N;;;;;
1CCAE; LOWER LEFT QUADRANT FACE WITH OPEN MOUTH; So; 0; ON; ;; ;; ;; ;;
1CCAF; LOWER RIGHT QUADRANT FACE WITH OPEN MOUTH; So; 0; ON;;;;; N;;;;;
1CCB0; LOWER LEFT QUADRANT FROWNING FACE; So; 0; ON; ;; ;; N; ;; ;;
1CCB1; LOWER RIGHT QUADRANT FROWNING FACE; So; 0; ON;;;;; N;;;;
1CCB2; UPPER LEFT QUADRANT TELEVISION; So; 0; ON; ;; ;; N; ;; ;;
1CCB3; UPPER RIGHT QUADRANT TELEVISION; So; 0; ON;;;;; N;;;;;
1CCB4; LOWER LEFT QUADRANT TELEVISION; So; 0; ON;;;;; N;;;;;
1CCB5; LOWER RIGHT QUADRANT TELEVISION; So; 0; ON;;;;; N;;;;;
1CCB6; UPPER LEFT QUADRANT MICROCOMPUTER; So; 0; ON; ;; ;; N; ;; ;;
1CCB7; UPPER RIGHT QUADRANT MICROCOMPUTER; So; 0; ON; ; ; ; ; N; ; ; ;
1CCB8; LOWER LEFT QUADRANT MICROCOMPUTER; So; 0; ON; ;; ;; N;;;;
1CCB9; LOWER RIGHT QUADRANT MICROCOMPUTER; So; 0; ON;;;;; N;;;;
1CCBA; UPPER LEFT QUADRANT CHESS KING; So; 0; ON; ;; ;; N; ;; ;;
1CCBB; UPPER RIGHT QUADRANT CHESS KING; So; 0; ON; ; ; ; ; N; ; ; ;
1CCBC; LOWER LEFT QUADRANT CHESS KING; So; 0; ON; ;; ;; N; ;; ;;
1CCBD; LOWER RIGHT QUADRANT CHESS KING; So; 0; ON;;;;;; N;;;;;
1CCBE; UPPER LEFT QUADRANT CHESS QUEEN; So; 0; ON;;;;; N;;;;;
1CCBF; UPPER RIGHT QUADRANT CHESS QUEEN; So; 0; ON; ;; ;; ;N; ;; ;;
1CCC0; LOWER LEFT QUADRANT CHESS QUEEN; So; 0; ON;;;;; N;;;;
1CCC1; LOWER RIGHT QUADRANT CHESS QUEEN; So; 0; ON; ;; ;; N; ;; ;;
1CCC2; UPPER LEFT QUADRANT CHESS ROOK; So; 0; ON; ;; ;; N; ;; ;;
1CCC3; UPPER RIGHT QUADRANT CHESS ROOK; So; 0; ON;;;;; N;;;;;
1CCC4; LOWER LEFT QUADRANT CHESS ROOK; So; 0; ON; ; ; ; ; N; ; ; ;
1CCC5; LOWER RIGHT QUADRANT CHESS ROOK; So; 0; ON; ;; ;; N; ;; ;;
1CCC6; UPPER LEFT QUADRANT CHESS BISHOP; So; 0; ON; ;; ;; N; ;; ;;
1CCC7; UPPER RIGHT QUADRANT CHESS BISHOP; So; 0; ON; ;; ;; ;; ;;
1CCC8; LOWER LEFT QUADRANT CHESS BISHOP; So; 0; ON; ; ; ; ; N; ; ; ;
1CCC9; LOWER RIGHT QUADRANT CHESS BISHOP; So; 0; ON; ;; ;; N; ;; ;;
1CCCA; UPPER LEFT QUADRANT CHESS KNIGHT; So; 0; ON; ; ; ; ; N; ; ; ;
1CCCB; UPPER RIGHT QUADRANT CHESS KNIGHT; So; 0; ON; ;; ;; ;N; ;; ;;
1CCCC; LOWER LEFT QUADRANT CHESS KNIGHT; So; 0; ON; ;; ;; N; ;; ;;
1CCCD; LOWER RIGHT QUADRANT CHESS KNIGHT; So; 0; ON; ;; ;; N; ;; ;;
1CCCE; UPPER LEFT QUADRANT CHESS PAWN; So; 0; ON;;;;; N;;;;;
1CCCF; UPPER RIGHT QUADRANT CHESS PAWN; So; 0; ON;;;;; N;;;;;
1CCD0; LOWER LEFT QUADRANT CHESS PAWN; So; 0; ON;;;;; N;;;;;
1CCD1; LOWER RIGHT QUADRANT CHESS PAWN; So; 0; ON; ;; ;; N; ;; ;;
1CCD2; UPPER LEFT QUADRANT STANDING KNIGHT; So; 0; ON; ; ; ; ; N; ; ; ;
1CCD3; UPPER RIGHT QUADRANT STANDING KNIGHT; So; 0; ON;;;;; N;;;;;
1CCD4; LOWER LEFT QUADRANT STANDING KNIGHT; So; 0; ON; ;; ;; N; ;; ;;
1CCD5; LOWER RIGHT QUADRANT STANDING KNIGHT; So; 0; ON;;;;; N;;;;;
1CCD6;OUTLINED LATIN CAPITAL LETTER A;Lu;0;L;<font> 0041;;;;N;;;;
1CCD7;OUTLINED LATIN CAPITAL LETTER B;Lu;0;L;<font> 0042;;;;N;;;;;
```

```
1CCD8;OUTLINED LATIN CAPITAL LETTER C;Lu;0;L;<font> 0043;;;;N;;;;;
1CCD9;OUTLINED LATIN CAPITAL LETTER D;Lu;0;L;<font> 0044;;;;N;;;;;
1CCDA; OUTLINED LATIN CAPITAL LETTER E; Lu; 0; L; <font> 0045;;;; N;;;;;
1CCDB;OUTLINED LATIN CAPITAL LETTER F;Lu;0;L;<font> 0046;;;;N;;;;;
1CCDC;OUTLINED LATIN CAPITAL LETTER G;Lu;0;L;<font> 0047;;;;N;;;;;
1CCDD; OUTLINED LATIN CAPITAL LETTER H; Lu; 0; L; <font> 0048;;;; N;;;;
1CCDE;OUTLINED LATIN CAPITAL LETTER I;Lu;0;L;<font> 0049;;;;N;;;;
1CCDF; OUTLINED LATIN CAPITAL LETTER J; Lu; 0; L; <font> 004A; ;;; N; ;;;
1CCE0; OUTLINED LATIN CAPITAL LETTER K; Lu; 0; L; <font> 004B;;;; N;;;;
1CCE1;OUTLINED LATIN CAPITAL LETTER L;Lu;0;L;<font> 004C;;;;N;;;;;
1CCE2;OUTLINED LATIN CAPITAL LETTER M;Lu;0;L;<font> 004D;;;;N;;;;;
1CCE3;OUTLINED LATIN CAPITAL LETTER N;Lu;0;L;<font> 004E;;;;N;;;;;
1CCE4;OUTLINED LATIN CAPITAL LETTER O;Lu;O;L;<font> 004F;;;;N;;;;;
1CCE5;OUTLINED LATIN CAPITAL LETTER P;Lu;0;L;<font> 0050;;;;N;;;;;
1CCE6; OUTLINED LATIN CAPITAL LETTER Q; Lu; 0; L; <font> 0051; ;; ; N; ;; ;;
1CCE7; OUTLINED LATIN CAPITAL LETTER R; Lu; 0; L; <font> 0052;;;; N;;;;;
1CCE8; OUTLINED LATIN CAPITAL LETTER S; Lu; 0; L; <font> 0053;;;; N;;;;;
1CCE9;OUTLINED LATIN CAPITAL LETTER T;Lu;0;L;<font> 0054;;;;N;;;;;
1CCEA;OUTLINED LATIN CAPITAL LETTER U;Lu;0;L;<font> 0055;;;;N;;;;;
1CCEB; OUTLINED LATIN CAPITAL LETTER V:Lu:0;L; <font> 0056;;;;N;;;;
1CCEC; OUTLINED LATIN CAPITAL LETTER W; Lu; 0; L; <font> 0057;;;; N;;;;
1CCED; OUTLINED LATIN CAPITAL LETTER X; Lu; 0; L; <font> 0058;;;; N;;;;
1CCEE; OUTLINED LATIN CAPITAL LETTER Y; Lu; 0; L; <font> 0059;;;; N;;;;
1CCEF; OUTLINED LATIN CAPITAL LETTER Z; Lu; 0; L; <font> 005A;;;; N;;;;;
1CCF0;OUTLINED DIGIT ZERO;Nd;0;EN;<font> 0030;0;0;0;N;;;;;
1CCF1;OUTLINED DIGIT ONE; Nd; 0; EN; <font> 0031; 1; 1; 1; N; ;; ;;
1CCF2;OUTLINED DIGIT TWO; Nd; 0; EN; <font> 0032; 2; 2; 2; N;;;;;
1CCF3;OUTLINED DIGIT THREE; Nd; 0; EN; <font> 0033; 3; 3; 3; N; ;; ;;
1CCF4;OUTLINED DIGIT FOUR;Nd;0;EN;<font> 0034;4;4;4;N;;;;
1CCF5; OUTLINED DIGIT FIVE; Nd; 0; EN; < font> 0035; 5; 5; 5; N;;;;;
1CCF6; OUTLINED DIGIT SIX; Nd; 0; EN; <font> 0036; 6; 6; 6; N;;;;;
1CCF7;OUTLINED DIGIT SEVEN; Nd; 0; EN; <font> 0037; 7; 7; 7; N; ;; ;;
1CCF8;OUTLINED DIGIT EIGHT;Nd;0;EN;<font> 0038;8;8;8;N;;;;
1CCF9;OUTLINED DIGIT NINE;Nd;0;EN;<font> 0039;9;9;9;N;;;;;
1CD00; BLOCK OCTANT-3; So; 0; ON; ; ; ; ; N; ; ; ;
1CD01; BLOCK OCTANT-23; So; 0; ON; ;; ;; N; ;; ;;
1CD02; BLOCK OCTANT-123; So; 0; ON;;;;; N;;;;;
1CD03; BLOCK OCTANT-4; So; 0; ON; ; ; ; ; N; ; ; ;
1CD04; BLOCK OCTANT-14; So; 0; ON; ; ; ; ; N; ; ; ;
1CD05; BLOCK OCTANT-124; So; 0; ON; ;; ;; N; ;; ;;
1CD06; BLOCK OCTANT-34; So; 0; ON; ;; ;; N; ;; ;;
1CD07; BLOCK OCTANT-134; So; 0; ON; ; ; ; ; N; ; ; ;
1CD08; BLOCK OCTANT-234; So; 0; ON; ; ; ; ; ; ; ;
1CD09; BLOCK OCTANT-5; So; 0; ON;;;;; N;;;;
1CD0A; BLOCK OCTANT-15; So; 0; ON; ;; ;; N; ;; ;;
1CD0B; BLOCK OCTANT-25; So; 0; ON; ;; ;; N; ;; ;;
1CD0C; BLOCK OCTANT-125; So; 0; ON; ; ; ; ; N; ; ; ;
1CD0D; BLOCK OCTANT-135; So; 0; ON; ; ; ; ; N; ; ; ;
1CD0E; BLOCK OCTANT-235; So; 0; ON;;;;; N;;;;;
1CD0F; BLOCK OCTANT-1235; So; 0; ON; ;; ;; N; ;; ;;
1CD10; BLOCK OCTANT-45; So; 0; ON; ;; ;; N; ;; ;;
1CD11; BLOCK OCTANT-145; So; 0; ON; ; ; ; ; N; ; ; ;
1CD12; BLOCK OCTANT-245; So; 0; ON; ;; ;; N; ;; ;;
1CD13; BLOCK OCTANT-1245; So; 0; ON; ;; ;; N; ;; ;;
1CD14; BLOCK OCTANT-345; So; 0; ON; ;; ;; N; ;; ;;
1CD15; BLOCK OCTANT-1345; So; 0; ON; ; ; ; ; N; ; ; ;
1CD16; BLOCK OCTANT-2345; So; 0; ON; ;; ;; N; ;; ;;
1CD17; BLOCK OCTANT-12345; So; 0; ON; ;; ;; N; ;; ;;
1CD18; BLOCK OCTANT-6; So; 0; ON; ; ; ; ; N; ; ; ;
1CD19; BLOCK OCTANT-16; So; 0; ON; ; ; ; ; N; ; ; ;
1CD1A; BLOCK OCTANT-26; So; 0; ON; ; ; ; ; N; ; ; ;
1CD1B; BLOCK OCTANT-126; So; 0; ON; ;; ;; N; ;; ;;
1CD1C; BLOCK OCTANT-36; So; 0; ON; ;; ;; N; ;; ;;
1CD1D; BLOCK OCTANT-136; So; 0; ON;;;;; N;;;;;
1CD1E; BLOCK OCTANT-236; So; 0; ON; ; ; ; ; N; ; ; ;
1CD1F; BLOCK OCTANT-1236; So; 0; ON; ;; ;; N; ;; ;;
```

```
1CD20; BLOCK OCTANT-146; So; 0; ON; ;; ;; N; ;; ;;
1CD21; BLOCK OCTANT-246; So; 0; ON; ;; ;; N; ;; ;;
1CD22; BLOCK OCTANT-1246; So; 0; ON; ; ; ; ; N; ; ; ;
1CD23; BLOCK OCTANT-346; So; 0; ON; ;; ;; N; ;; ;;
1CD24; BLOCK OCTANT-1346; So; 0; ON; ; ; ; ; N; ; ; ;
1CD25; BLOCK OCTANT-2346; So; 0; ON; ;; ;; N; ;; ;;
1CD26; BLOCK OCTANT-12346; So; 0; ON; ;; ;; N; ;; ;;
1CD27; BLOCK OCTANT-56; So; 0; ON; ;; ;; N; ;; ;;
1CD28; BLOCK OCTANT-156; So; 0; ON;;;;; N;;;;;
1CD29; BLOCK OCTANT-256; So; 0; ON; ;; ;; N; ;; ;;
1CD2A; BLOCK OCTANT-1256; So; 0; ON; ;; ;; N; ;; ;;
1CD2B; BLOCK OCTANT-356; So; 0; ON; ; ; ; ; N; ; ; ;
1CD2C; BLOCK OCTANT-1356; So; 0; ON; ;; ;; ;N; ;; ;;
1CD2D; BLOCK OCTANT-2356; So; 0; ON; ;; ;; N; ;; ;;
1CD2E; BLOCK OCTANT-12356; So; 0; ON;;;;; N;;;;;
1CD2F; BLOCK OCTANT-456; So; 0; ON; ; ; ; ; N; ; ; ;
1CD30; BLOCK OCTANT-1456; So; 0; ON; ;; ;; N; ;; ;;
1CD31;BLOCK OCTANT-2456;So;0;ON;;;;;N;;;;
1CD32; BLOCK OCTANT-12456; So; O; ON; ;; ;; ;N; ;; ;;
1CD33; BLOCK OCTANT-3456; So; 0; ON; ; ; ; ; N; ; ; ;
1CD34; BLOCK OCTANT-13456; So; 0; ON; ;; ;; N; ;; ;;
1CD35; BLOCK OCTANT-23456; So; O; ON; ;; ;; ;N; ;; ;;
1CD36; BLOCK OCTANT-17; So; 0; ON; ;; ;; N; ;; ;;
1CD37; BLOCK OCTANT-27; So; 0; ON; ;; ;; N; ;; ;;
1CD38; BLOCK OCTANT-127; So; 0; ON; ; ; ; ; N; ; ; ;
1CD39; BLOCK OCTANT-37; So; 0; ON; ;; ;; N; ;; ;;
1CD3A; BLOCK OCTANT-137; So; 0; ON; ;; ;; N; ;; ;;
1CD3B; BLOCK OCTANT-237; So; 0; ON; ;; ;; N; ;; ;;
1CD3C; BLOCK OCTANT-1237; So; 0; ON; ;; ;; N; ;; ;;
1CD3D; BLOCK OCTANT-47; So; 0; ON; ; ; ; ; ; ; ;
1CD3E; BLOCK OCTANT-147; So; 0; ON; ;; ;; N; ;; ;;
1CD3F; BLOCK OCTANT-247; So; 0; ON;;;;; N;;;;;
1CD40; BLOCK OCTANT-1247; So; 0; ON; ; ; ; ; N; ; ; ;
1CD41; BLOCK OCTANT-347; So; 0; ON; ; ; ; ; N; ; ; ;
1CD42; BLOCK OCTANT-1347; So; 0; ON; ;; ;; N; ;; ;;
1CD43; BLOCK OCTANT-2347; So; 0; ON; ;; ;; N; ;; ;;
1CD44; BLOCK OCTANT-12347; So; 0; ON; ;; ;; N; ;; ;;
1CD45; BLOCK OCTANT-157; So; 0; ON; ; ; ; ; N; ; ; ;
1CD46; BLOCK OCTANT-257; So; 0; ON;;;;; N;;;;;
1CD47; BLOCK OCTANT-1257; So; 0; ON; ;; ;; N; ;; ;;
1CD48; BLOCK OCTANT-357; So; 0; ON; ;; ;; N; ;; ;;
1CD49; BLOCK OCTANT-2357; So; 0; ON; ;; ;; N; ;; ;;
1CD4A; BLOCK OCTANT-12357; So; 0; ON; ; ; ; ; N; ; ; ;
1CD4B; BLOCK OCTANT-457; So; 0; ON; ;; ;; N; ;; ;;
1CD4C; BLOCK OCTANT-1457; So; 0; ON; ;; ;; N; ;; ;;
1CD4D; BLOCK OCTANT-12457; So; 0; ON; ;; ;; N; ;; ;;
1CD4E; BLOCK OCTANT-3457; So; 0; ON; ; ; ; ; N; ; ; ;
1CD4F; BLOCK OCTANT-13457; So; 0; ON; ;; ;; N; ;; ;;
1CD50; BLOCK OCTANT-23457; So; 0; ON; ;; ;; ;N; ;; ;;
1CD51; BLOCK OCTANT-67; So; 0; ON; ;; ;; N; ;; ;;
1CD52; BLOCK OCTANT-167; So; 0; ON;;;;; N;;;;;
1CD53; BLOCK OCTANT-267; So; 0; ON; ; ; ; ; N; ; ; ;
1CD54; BLOCK OCTANT-1267; So; 0; ON; ;; ;; N; ;; ;;
1CD55; BLOCK OCTANT-367; So; 0; ON; ;; ;; N; ;; ;;
1CD56; BLOCK OCTANT-1367; So; 0; ON; ;; ;; N; ;; ;;
1CD57; BLOCK OCTANT-2367; So; 0; ON; ;; ;; N; ;; ;;
1CD58; BLOCK OCTANT-12367; So; 0; ON; ;; ;; ;N; ;; ;;
1CD59; BLOCK OCTANT-467; So; 0; ON; ;; ;; N; ;; ;;
1CD5A; BLOCK OCTANT-1467; So; 0; ON; ; ; ; ; N; ; ; ;
1CD5B; BLOCK OCTANT-2467; So; 0; ON; ; ; ; ; N; ; ; ;
1CD5C; BLOCK OCTANT-12467; So; 0; ON; ;; ;; N; ;; ;;
1CD5D; BLOCK OCTANT-3467; So; 0; ON; ;; ;; N; ;; ;;
1CD5E; BLOCK OCTANT-13467; So; 0; ON; ;; ;; N; ;; ;;
1CD5F; BLOCK OCTANT-23467; So; 0; ON; ;; ;; N; ;; ;;
1CD60; BLOCK OCTANT-123467; So; 0; ON; ; ; ; ; N; ; ; ;
1CD61; BLOCK OCTANT-567; So; 0; ON; ;; ;; N; ;; ;;
```

```
1CD62; BLOCK OCTANT-1567; So; 0; ON; ;; ;; N; ;; ;;
1CD63; BLOCK OCTANT-2567; So; 0; ON; ;; ;; N; ;; ;;
1CD64; BLOCK OCTANT-12567; So; 0; ON; ; ; ; ; ; N; ; ; ; ;
1CD65; BLOCK OCTANT-3567; So; 0; ON; ;; ;; N; ;; ;;
1CD66; BLOCK OCTANT-13567; So; 0; ON; ;; ;; N; ;; ;;
1CD67; BLOCK OCTANT-23567; So; 0; ON; ;; ;; ;N; ;; ;;
1CD68; BLOCK OCTANT-123567; So; 0; ON; ;; ;; N; ;; ;;
1CD69; BLOCK OCTANT-4567; So; 0; ON; ; ; ; ; N; ; ; ;
1CD6A; BLOCK OCTANT-14567; So; 0; ON; ;; ;; ;N; ;; ;;
1CD6B; BLOCK OCTANT-24567; So; 0; ON; ;; ;; N; ;; ;;
1CD6C; BLOCK OCTANT-124567; So; 0; ON; ;; ;; N; ;; ;;
1CD6D; BLOCK OCTANT-34567; So; 0; ON; ;; ;; N; ;; ;;
1CD6E; BLOCK OCTANT-134567; So; 0; ON; ;; ;; N; ;; ;;
1CD6F; BLOCK OCTANT-234567; So; 0; ON; ;; ;; N; ;; ;;
1CD70; BLOCK OCTANT-1234567; So; 0; ON; ;; ;; N; ;; ;;
1CD71; BLOCK OCTANT-18; So; 0; ON; ;; ;; N; ;; ;;
1CD72; BLOCK OCTANT-28; So; 0; ON; ;; ;; ;N; ;; ;;
1CD73; BLOCK OCTANT-128; So; 0; ON; ;; ;; N; ;; ;;
1CD74; BLOCK OCTANT-38; So; 0; ON; ;; ;; N; ;; ;;
1CD75; BLOCK OCTANT-138; So; 0; ON; ; ; ; ; ; N; ; ; ;
1CD76; BLOCK OCTANT-238; So; 0; ON; ; ; ; ; N; ; ; ;
1CD77; BLOCK OCTANT-1238; So; 0; ON; ;; ;; N; ;; ;;
1CD78; BLOCK OCTANT-48; So; 0; ON; ;; ;; N; ;; ;;
1CD79; BLOCK OCTANT-148; So; 0; ON; ;; ;; N; ;; ;;
1CD7A; BLOCK OCTANT-248; So; 0; ON; ; ; ; ; N; ; ; ;
1CD7B; BLOCK OCTANT-1248; So; 0; ON; ; ; ; ; N; ; ; ;
1CD7C; BLOCK OCTANT-348; So; 0; ON; ;; ;; N; ;; ;;
1CD7D; BLOCK OCTANT-1348; So; 0; ON; ;; ;; N; ;; ;;
1CD7E; BLOCK OCTANT-2348; So; 0; ON; ;; ;; N; ;; ;;
1CD7F; BLOCK OCTANT-12348; So; 0; ON; ;; ;; N; ;; ;;
1CD80; BLOCK OCTANT-58; So; 0; ON; ;; ;; N; ;; ;;
1CD81; BLOCK OCTANT-158; So; 0; ON;;;;; N;;;;;
1CD82; BLOCK OCTANT-258; So; 0; ON;;;;; N;;;;;
1CD83; BLOCK OCTANT-1258; So; 0; ON; ;; ;; N; ;; ;;
1CD84; BLOCK OCTANT-358; So; 0; ON; ; ; ; ; N; ; ; ;
1CD85; BLOCK OCTANT-1358; So; 0; ON; ;; ;; N; ;; ;;
1CD86; BLOCK OCTANT-2358; So; 0; ON; ;; ;; N; ;; ;;
1CD87; BLOCK OCTANT-12358; So; 0; ON; ;; ;; N; ;; ;;
1CD88; BLOCK OCTANT-458; So; 0; ON; ; ; ; ; N; ; ; ;
1CD89; BLOCK OCTANT-1458; So; 0; ON; ;; ;; N; ;; ;;
1CD8A; BLOCK OCTANT-2458; So; 0; ON; ;; ;; N; ;; ;;
1CD8B; BLOCK OCTANT-12458; So; O; ON; ;; ;; ;N; ;; ;;
1CD8C; BLOCK OCTANT-3458; So; 0; ON; ; ; ; ; ; ; ;
1CD8D; BLOCK OCTANT-13458; So; 0; ON; ;; ;; ;N; ;; ;;
1CD8E; BLOCK OCTANT-23458; So; 0; ON; ;; ;; ;N; ;; ;;
1CD8F; BLOCK OCTANT-123458; So; 0; ON; ;; ;; N; ;; ;;
1CD90; BLOCK OCTANT-168; So; 0; ON; ; ; ; ; N; ; ; ;
1CD91; BLOCK OCTANT-268; So; 0; ON; ; ; ; ; N; ; ; ;
1CD92; BLOCK OCTANT-1268; So; 0; ON; ;; ;; N; ;; ;;
1CD93; BLOCK OCTANT-368; So; 0; ON; ;; ;; N; ;; ;;
1CD94; BLOCK OCTANT-2368; So; 0; ON; ; ; ; ; N; ; ; ;
1CD95; BLOCK OCTANT-12368; So; 0; ON; ;; ;; N; ;; ;;
1CD96; BLOCK OCTANT-468; So; 0; ON; ;; ;; N; ;; ;;
1CD97; BLOCK OCTANT-1468; So; 0; ON; ;; ;; N; ;; ;;
1CD98; BLOCK OCTANT-12468; So; O; ON; ;; ;; ;N; ;; ;;
1CD99; BLOCK OCTANT-3468; So; 0; ON; ; ; ; ; ; ; ;
1CD9A; BLOCK OCTANT-13468; So; O; ON; ;; ;; ;N; ;; ;;
1CD9B; BLOCK OCTANT-23468; So; O; ON; ;; ;; N; ;; ;;
1CD9C; BLOCK OCTANT-568; So; 0; ON; ;; ;; N; ;; ;;
1CD9D; BLOCK OCTANT-1568; So; 0; ON; ; ; ; ; N; ; ; ;
1CD9E; BLOCK OCTANT-2568; So; 0; ON; ;; ;; N; ;; ;;
1CD9F; BLOCK OCTANT-12568; So; O; ON; ;; ;; ;N; ;; ;;
1CDA0; BLOCK OCTANT-3568; So; 0; ON; ; ; ; ; N; ; ; ;
1CDA1; BLOCK OCTANT-13568; So; 0; ON; ;; ;; N; ;; ;;
1CDA2; BLOCK OCTANT-23568; So; 0; ON; ; ; ; ; N; ; ; ;
1CDA3; BLOCK OCTANT-123568; So; 0; ON;;;;; N;;;;
```

```
1CDA4; BLOCK OCTANT-4568; So; 0; ON; ;; ;; N; ;; ;;
1CDA5; BLOCK OCTANT-14568; So; 0; ON;;;;; N;;;;
1CDA6; BLOCK OCTANT-24568; So; 0; ON; ; ; ; ; ; N; ; ; ; ;
1CDA7; BLOCK OCTANT-124568; So; 0; ON; ;; ;; N; ;; ;;
1CDA8; BLOCK OCTANT-34568; So; 0; ON; ;; ;; N; ;; ;;
1CDA9; BLOCK OCTANT-134568; So; 0; ON; ;; ;; ;N; ;; ;;
1CDAA:BLOCK OCTANT-234568:So:0:ON:::::N:::::
1CDAB; BLOCK OCTANT-1234568; So; 0; ON; ;; ;; N; ;; ;;
1CDAC; BLOCK OCTANT-178; So; 0; ON;;;;; N;;;;;
1CDAD; BLOCK OCTANT-278; So; 0; ON; ;; ;; N; ;; ;;
1CDAE; BLOCK OCTANT-1278; So; 0; ON; ;; ;; N; ;; ;;
1CDAF; BLOCK OCTANT-378; So; 0; ON; ; ; ; ; N; ; ; ;
1CDB0; BLOCK OCTANT-1378; So; 0; ON; ;; ;; ;N; ;; ;;
1CDB1; BLOCK OCTANT-2378; So; 0; ON; ;; ;; N; ;; ;;
1CDB2; BLOCK OCTANT-12378; So; 0; ON; ;; ;; N; ;; ;;
1CDB3;BLOCK OCTANT-478;So;0;ON;;;;;N;;;;
1CDB4; BLOCK OCTANT-1478; So; 0; ON; ;; ;; N; ;; ;;
1CDB5; BLOCK OCTANT-2478; So; 0; ON; ;; ;; ;N; ;; ;;
1CDB6; BLOCK OCTANT-12478; So; 0; ON; ;; ;; ;N; ;; ;;
1CDB7; BLOCK OCTANT-3478; So; 0; ON; ;; ;; N; ;; ;;
1CDB8; BLOCK OCTANT-13478; So; 0; ON; ;; ;; N; ;; ;;
1CDB9; BLOCK OCTANT-23478; So; 0; ON; ;; ;; ;N; ;; ;;
1CDBA; BLOCK OCTANT-123478; So; 0; ON;;;;; N;;;;;
1CDBB; BLOCK OCTANT-578; So; 0; ON; ;; ;; N; ;; ;;
1CDBC; BLOCK OCTANT-1578; So; 0; ON; ;; ;; N; ;; ;;
1CDBD; BLOCK OCTANT-2578; So; 0; ON; ; ; ; ; N; ; ; ;
1CDBE; BLOCK OCTANT-12578; So; 0; ON;;;;; N;;;;;
1CDBF; BLOCK OCTANT-3578; So; 0; ON; ;; ;; N; ;; ;;
1CDC0; BLOCK OCTANT-13578; So; 0; ON; ; ; ; ; ; N; ; ; ; ;
1CDC1; BLOCK OCTANT-23578; So; 0; ON; ;; ;; N; ;; ;;
1CDC2; BLOCK OCTANT-123578; So; 0; ON; ;; ;; N; ;; ;;
1CDC3; BLOCK OCTANT-4578; So; 0; ON; ;; ;; N; ;; ;;
1CDC4; BLOCK OCTANT-14578; So; 0; ON; ;; ;; N; ;; ;;
1CDC5; BLOCK OCTANT-24578; So; 0; ON; ;; ;; N; ;; ;;
1CDC6; BLOCK OCTANT-124578; So; 0; ON; ;; ;; N; ;; ;;
1CDC7; BLOCK OCTANT-34578; So; 0; ON; ;; ;; N; ;; ;;
1CDC8; BLOCK OCTANT-134578; So; 0; ON; ;; ;; N; ;; ;;
1CDC9; BLOCK OCTANT-234578; So; 0; ON; ; ; ; ; N; ; ; ;
1CDCA; BLOCK OCTANT-1234578; So; 0; ON; ; ; ; ; N; ; ; ;
1CDCB; BLOCK OCTANT-678; So; 0; ON; ;; ;; N; ;; ;;
1CDCC; BLOCK OCTANT-1678; So; 0; ON; ;; ;; N; ;; ;;
1CDCD; BLOCK OCTANT-2678; So; 0; ON; ;; ;; N; ;; ;;
1CDCE; BLOCK OCTANT-12678; So; 0; ON; ; ; ; ; N; ; ; ;
1CDCF; BLOCK OCTANT-3678; So; 0; ON; ;; ;; N; ;; ;;
1CDD0; BLOCK OCTANT-13678; So; 0; ON; ;; ;; ;N; ;; ;;
1CDD1; BLOCK OCTANT-23678; So; 0; ON; ;; ;; N; ;; ;;
1CDD2; BLOCK OCTANT-123678; So; 0; ON; ; ; ; ; N; ; ; ;
1CDD3; BLOCK OCTANT-4678; So; 0; ON; ; ; ; ; N; ; ; ;
1CDD4; BLOCK OCTANT-14678; So; 0; ON; ;; ;; N; ;; ;;
1CDD5; BLOCK OCTANT-24678; So; 0; ON; ;; ;; N; ;; ;;
1CDD6; BLOCK OCTANT-124678; So; 0; ON; ; ; ; ; N; ; ; ;
1CDD7; BLOCK OCTANT-34678; So; 0; ON; ;; ;; N; ;; ;;
1CDD8; BLOCK OCTANT-134678; So; 0; ON; ;; ;; N; ;; ;;
1CDD9; BLOCK OCTANT-234678; So; 0; ON; ;; ;; N; ;; ;;
1CDDA; BLOCK OCTANT-1234678; So; 0; ON; ;; ;; ;N; ;; ;;
1CDDB; BLOCK OCTANT-15678; So; 0; ON; ; ; ; ; ; ; ;
1CDDC; BLOCK OCTANT-25678; So; 0; ON;;;;; N;;;;
1CDDD; BLOCK OCTANT-125678; So; 0; ON; ; ; ; ; N; ; ; ;
1CDDE; BLOCK OCTANT-35678; So; 0; ON; ;; ;; N; ;; ;;
1CDDF; BLOCK OCTANT-235678; So; 0; ON; ; ; ; ; N; ; ; ;
1CDE0; BLOCK OCTANT-1235678; So; 0; ON; ; ; ; ; N; ; ; ;
1CDE1; BLOCK OCTANT-45678; So; 0; ON; ;; ;; N; ;; ;;
1CDE2; BLOCK OCTANT-145678; So; 0; ON; ;; ;; N; ;; ;;
1CDE3; BLOCK OCTANT-1245678; So; 0; ON; ;; ;; N; ;; ;;
1CDE4; BLOCK OCTANT-1345678; So; 0; ON; ;; ;; N; ;; ;;
1CDE5; BLOCK OCTANT-2345678; So; 0; ON; ;; ;; N; ;; ;;
```

```
1CDE6; TOP HALF STANDING PERSON; So; 0; ON; ; ; ; ; N; ; ; ;
1CDE7; BOTTOM HALF STANDING PERSON; So; 0; ON; ;; ;; N; ;; ;;
1CDE8; TOP HALF RIGHT-FACING RUNNER FRAME-1; So; 0; ON; ;; ;; ;N; ;; ;;
1CDE9; BOTTOM HALF RIGHT-FACING RUNNER FRAME-1; So; 0; ON; ;; ;; N; ;; ;;
1CDEA; TOP HALF RIGHT-FACING RUNNER FRAME-2; So; 0; ON;;;;; N;;;;;
1CDEB; BOTTOM HALF RIGHT-FACING RUNNER FRAME-2; So; 0; ON;;;;; N;;;;
1CDEC; TOP HALF LEFT-FACING RUNNER FRAME-1; So; 0; ON; ;; ;; N; ;; ;;
1CDED; BOTTOM HALF LEFT-FACING RUNNER FRAME-1; So; 0; ON; ;; ;; ;; ;;
1CDEE; TOP HALF LEFT-FACING RUNNER FRAME-2; So; 0; ON; ;; ;; N; ;; ;;
1CDEF; BOTTOM HALF LEFT-FACING RUNNER FRAME-2; So; 0; ON; ;; ;; N; ;; ;;
1CDF0; TOP HALF FORWARD-FACING RUNNER; So; 0; ON; ;; ;; N; ;; ;;
1CDF1; BOTTOM HALF FORWARD-FACING RUNNER FRAME-1; So; 0; ON; ;; ;; ;; ;;
1CDF2; BOTTOM HALF FORWARD-FACING RUNNER FRAME-2; So; 0; ON; ;; ;; ;N; ;; ;;
1CDF3; BOTTOM HALF FORWARD-FACING RUNNER FRAME-3; So; 0; ON; ;; ;; ;N; ;; ;;
1CDF4; BOTTOM HALF FORWARD-FACING RUNNER FRAME-4; So; 0; ON; ; ; ; ; N; ; ; ; ;
1CDF5; MOON LANDER; So; 0; ON;;;;; N;;;;;
1CDF6; TOP HALF FLAILING ROBOT FRAME-1; So; 0; ON; ;; ;; N; ;; ;;
1CDF7; TOP HALF FLAILING ROBOT FRAME-2; So; 0; ON;;;;; N;;;;;
1CDF8; DOWN-POINTING AIRPLANE; So; 0; ON; ;; ;; N; ;; ;;
1CDF9; LEFT-POINTING AIRPLANE; So; 0; ON; ;; ;; N; ;; ;;
1CDFA; SMALL UP-POINTING AIRPLANE; So; 0; ON;;;;; N;;;;
1CDFB; UP-POINTING FROG; So; 0; ON;;;;; N;;;;;
1CDFC; DOWN-POINTING FROG; So; 0; ON;;;;; N;;;;;
1CDFD; EXPLOSION FRAME-1; So; 0; ON; ;; ;; N; ;; ;;
1CDFE; EXPLOSION FRAME-2; So; 0; ON; ;; ;; N; ;; ;;
1CDFF; EXPLOSION FRAME-3; So; 0; ON; ;; ;; N; ;; ;;
1CE00; RIGHT HALF AND LEFT HALF WHITE CIRCLE; So; 0; ON;;;;; N;;;;;
1CE01; LOWER HALF AND UPPER HALF WHITE CIRCLE; So; 0; ON; ;; ;; N; ;; ;;
1CE02; EXPLOSION AT HORIZON; So; 0; ON;;;;; N;;;;
1CE03; UPPER HALF HEAVY WHITE SQUARE; So; 0; ON;;;;; N;;;;
1CE04; LOWER HALF HEAVY WHITE SQUARE; So; 0; ON;;;;; N;;;;;
1CE05; HEAVY WHITE SQUARE CONTAINING BLACK VERY SMALL SQUARE; So; 0; ON; ;;;; N;;;;;
1CE06; WHITE VERTICAL RECTANGLE WITH HORIZONTAL BAR; So; 0; ON; ;; ;; ;; ;;
1CE07; TOP RIGHT BLACK LEFT-POINTING SMALL TRIANGLE; So; 0; ON; ;;;; N;;;;;
1CE08; FUNNEL; So; 0; ON;;;;; N;;;;;
1CE09; BOX DRAWINGS DOUBLE DIAGONAL LOWER LEFT TO MIDDLE CENTRE TO LOWER
        RIGHT; So; 0; ON; ;; ;; N; ;; ;;
1CE0A; BOX DRAWINGS DOUBLE DIAGONAL UPPER LEFT TO MIDDLE CENTRE TO UPPER
        RIGHT; So; 0; ON; ; ; ; ; N; ; ; ;
1CEOB; LEFT HALF WHITE ELLIPSE; So; O; ON; ;; ;; N; ;; ;;
1CEOC; RIGHT HALF WHITE ELLIPSE; So; O; ON;;;;; N;;;;;
1CEOD; LEFT HALF TRIPLE DASH HORIZONTAL; So; 0; ON; ;; ;; ;N; ;; ;;
1CE0E; RIGHT HALF TRIPLE DASH HORIZONTAL; So; 0; ON; ;; ;; N; ;; ;;
1CEOF; HORIZONTAL LINE WITH TICK MARK; So; O; ON; ;; ;; N; ;; ;;
1CE10; LEFT HALF HORIZONTAL LINE WITH THREE TICK MARKS; So; 0; ON; ;; ;; ;N; ;; ;;
1CE11; RIGHT HALF HORIZONTAL LINE WITH THREE TICK MARKS; So; 0; ON; ;; ;; N; ;; ;;
1CE12; HORIZONTAL LINE WITH THREE TICK MARKS; So; 0; ON; ;; ;; N; ;; ;;
1CE13; LOWER HALF VERTICAL LINE WITH THREE TICK MARKS; So; 0; ON;;;;; N;;;;
1CE14; UPPER HALF VERTICAL LINE WITH THREE TICK MARKS; So; 0; ON;;;;; N;;;;;
1CE15; VERTICAL LINE WITH THREE TICK MARKS; So; 0; ON; ;; ;; ;; ;;
1CE16; BOX DRAWINGS LIGHT VERTICAL AND TOP RIGHT; So; 0; ON; ;; ;; ;; ;;
1CE17; BOX DRAWINGS LIGHT VERTICAL AND BOTTOM RIGHT; So; 0; ON; ;; ;; ;N; ;; ;;
1CE18; BOX DRAWINGS LIGHT VERTICAL AND TOP LEFT; So; 0; ON; ;; ;; N; ;; ;;
1CE19; BOX DRAWINGS LIGHT VERTICAL AND BOTTOM LEFT; So; 0; ON;;;;;;;;;
1CE1A; LARGE TYPE PIECE UPPER LEFT ARC; So; 0; ON;;;;; N;;;;;
1CE1B; LARGE TYPE PIECE UPPER LEFT CORNER; So; 0; ON; ; ; ; ; N; ; ; ;
1CE1C; LARGE TYPE PIECE UPPER TERMINAL; So; 0; ON;;;;; N;;;;;
1CE1D; LARGE TYPE PIECE UPPER LEFT CROTCH; So; 0; ON;;;;;N;;;;;
1CE1E; LARGE TYPE PIECE LEFT ARM; So; 0; ON; ;; ;; ;N; ;; ;;
1CE1F; LARGE TYPE PIECE CROSSBAR; So; 0; ON; ;; ;; ;N; ;; ;;
1CE20; LARGE TYPE PIECE CROSSBAR WITH LOWER STEM; So; 0; ON;;;;; N;;;;;
1CE21; LARGE TYPE PIECE UPPER HALF VERTEX OF M; So; 0; ON; ;; ;; N; ;; ;;
1CE22; LARGE TYPE PIECE DIAGONAL LOWER LEFT; So; 0; ON;;;;;;N;;;;;
1CE23; LARGE TYPE PIECE SHORT UPPER TERMINAL; So; 0; ON;;;;; N;;;;;
1CE24; LARGE TYPE PIECE UPPER RIGHT ARC; So; 0; ON; ; ; ; ; N; ; ; ;
1CE25; LARGE TYPE PIECE RIGHT ARM; So; 0; ON;;;;; N;;;;
```

```
1CE26; LARGE TYPE PIECE UPPER RIGHT CROTCH; So; 0; ON; ;; ;; ;; ;;
1CE27; LARGE TYPE PIECE UPPER RIGHT CORNER; So; 0; ON; ;; ;; ;; ;;
1CE28; LARGE TYPE PIECE STEM WITH RIGHT CROSSBAR; So; 0; ON;;;;; N;;;;;
1CE29; LARGE TYPE PIECE STEM; So; 0; ON;;;;; N;;;;
1CE2A; LARGE TYPE PIECE DIAGONAL UPPER RIGHT AND LOWER RIGHT; So; 0; ON; ;; ;; ;; ;;
1CE2B; LARGE TYPE PIECE DIAGONAL UPPER RIGHT; So; 0; ON; ;;;; N;;;;;
1CE2C; LARGE TYPE PIECE DIAGONAL LOWER RIGHT; So; 0; ON;;;;; N;;;;;
1CE2D; LARGE TYPE PIECE SHORT LOWER TERMINAL; So; 0; ON; ; ; ; ; N; ; ; ;
1CE2E; LARGE TYPE PIECE LOWER LEFT AND UPPER LEFT ARC; So; 0; ON;;;;; N;;;;;
1CE2F; LARGE TYPE PIECE CENTRE OF K; So; O; ON;;;;; N;;;;;
1CE30; LARGE TYPE PIECE LOWER HALF VERTEX OF M; So; 0; ON;;;;; N;;;;;
1CE31; LARGE TYPE PIECE UPPER HALF VERTEX OF W; So; 0; ON; ;; ;; ;; ;;
1CE32; LARGE TYPE PIECE CENTRE OF X; So; O; ON; ;; ;; ;N; ;; ;;
1CE33; LARGE TYPE PIECE CENTRE OF Y; So; O; ON; ;; ;; N; ;; ;;
1CE34; LARGE TYPE PIECE CENTRE OF Z WITH CROSSBAR; So; 0; ON;;;;; N;;;;;
1CE35; LARGE TYPE PIECE RAISED UPPER RIGHT ARC; So; 0; ON; ;; ;; ;; ;;
1CE36; LARGE TYPE PIECE STEM WITH LEFT CROSSBAR; So; 0; ON; ;; ;; N; ;; ;;
1CE37; LARGE TYPE PIECE LOWER RIGHT AND UPPER RIGHT ARC; So; 0; ON; ;;;; N;;;;;
1CE38; LARGE TYPE PIECE DIAGONAL UPPER LEFT AND LOWER LEFT; So; 0; ON; ;; ;; ;; ;;
1CE39; LARGE TYPE PIECE STEM WITH LEFT JOINT; So; 0; ON; ;; ;; ;N; ;; ;;
1CE3A; LARGE TYPE PIECE STEM WITH CROSSBAR; So; 0; ON; ;; ;; N; ;; ;;
1CE3B; LARGE TYPE PIECE DIAGONAL UPPER LEFT; So; 0; ON;;;;; N;;;;;
1CE3C; LARGE TYPE PIECE LOWER TERMINAL; So; 0; ON;;;;; N;;;;;
1CE3D; LARGE TYPE PIECE LOWER LEFT CORNER; So; 0; ON; ;; ;; ; N; ;; ;;
1CE3E; LARGE TYPE PIECE LOWER LEFT ARC; So; 0; ON; ;; ;; N; ;; ;;
1CE3F; LARGE TYPE PIECE LOWER LEFT CROTCH; So; 0; ON; ;; ;; ; N; ;; ;;
1CE40; LARGE TYPE PIECE CROSSBAR WITH UPPER STEM; So; 0; ON;;;;; N;;;;
1CE41; LARGE TYPE PIECE VERTEX OF V; So; O; ON; ;; ;; N; ;; ;;
1CE42; LARGE TYPE PIECE LOWER HALF VERTEX OF W; So; 0; ON;;;;; N;;;;
1CE43; LARGE TYPE PIECE LOWER RIGHT ARC; So; 0; ON; ;; ;; ;; ;;
1CE44; LARGE TYPE PIECE LOWER RIGHT CORNER; So; 0; ON; ;; ;; ;; ;;
1CE45; LARGE TYPE PIECE LOWER RIGHT ARC WITH TAIL; So; 0; ON;;;;; N;;;;;
1CE46; LARGE TYPE PIECE LOWER RIGHT CROTCH; So; 0; ON; ;; ;; ;; ;;
1CE47; LARGE TYPE PIECE STEM-45; So; 0; ON;;;;; N;;;;
1CE48; LARGE TYPE PIECE STEM-2345; So; 0; ON;;;;;; N;;;;;
1CE49; LARGE TYPE PIECE STEM-4; So; 0; ON; ;; ;; ;N; ;; ;;
1CE4A; LARGE TYPE PIECE STEM-34; So; 0; ON;;;;; N;;;;
1CE4B; LARGE TYPE PIECE STEM-234; So; 0; ON; ;; ;; ;N; ;; ;;
1CE4C; LARGE TYPE PIECE STEM-1234; So; 0; ON;;;;; N;;;;
1CE4D; LARGE TYPE PIECE STEM-3; So; 0; ON; ;; ;; N; ;; ;;
1CE4E; LARGE TYPE PIECE STEM-23; So; 0; ON; ; ; ; ; N; ; ; ;
1CE4F; LARGE TYPE PIECE STEM-2; So; 0; ON; ;; ;; ;N; ;; ;;
1CE50; LARGE TYPE PIECE STEM-12; So; 0; ON; ; ; ; ; N; ; ; ;
1CE51; SEPARATED BLOCK SEXTANT-1; So; 0; ON; ;; ;; N; ;; ;;
1CE52; SEPARATED BLOCK SEXTANT-2; So; 0; ON; ;; ;; N; ;; ;;
1CE53; SEPARATED BLOCK SEXTANT-12; So; 0; ON;;;;;; N;;;;;
1CE54; SEPARATED BLOCK SEXTANT-3; So; 0; ON; ; ; ; ; N; ; ; ;
1CE55; SEPARATED BLOCK SEXTANT-13; So; 0; ON; ; ; ; ; N; ; ; ;
1CE56; SEPARATED BLOCK SEXTANT-23; So; 0; ON;;;;; N;;;;;
1CE57; SEPARATED BLOCK SEXTANT-123; So; 0; ON; ; ; ; ; N; ; ; ;
1CE58; SEPARATED BLOCK SEXTANT-4; So; 0; ON; ;; ;; ;N; ;; ;;
1CE59; SEPARATED BLOCK SEXTANT-14; So; 0; ON; ;; ;; N; ;; ;;
1CE5A; SEPARATED BLOCK SEXTANT-24; So; 0; ON;;;;; N;;;;
1CE5B; SEPARATED BLOCK SEXTANT-124; So; 0; ON; ; ; ; ; N; ; ; ;
1CE5C; SEPARATED BLOCK SEXTANT-34; So; 0; ON;;;;; N;;;;
1CE5D; SEPARATED BLOCK SEXTANT-134; So; 0; ON; ; ; ; ; ; ; ;
1CE5E; SEPARATED BLOCK SEXTANT-234; So; 0; ON; ;; ;; N; ;; ;;
1CE5F; SEPARATED BLOCK SEXTANT-1234; So; O; ON; ;; ;; N; ;; ;;
1CE60; SEPARATED BLOCK SEXTANT-5; So; 0; ON; ;; ;; N; ;; ;;
1CE61; SEPARATED BLOCK SEXTANT-15; So; 0; ON;;;;; N;;;;
1CE62; SEPARATED BLOCK SEXTANT-25; So; 0; ON;;;;; N;;;;
1CE63; SEPARATED BLOCK SEXTANT-125; So; 0; ON; ;; ;; N; ;; ;;
1CE64; SEPARATED BLOCK SEXTANT-35; So; 0; ON;;;;; N;;;;
1CE65; SEPARATED BLOCK SEXTANT-135; So; 0; ON; ;; ;; N; ;; ;;
1CE66; SEPARATED BLOCK SEXTANT-235; So; 0; ON; ;; ;; ;N; ;; ;;
1CE67; SEPARATED BLOCK SEXTANT-1235; So; 0; ON; ;; ;; ;N; ;; ;;
```

```
1CE68; SEPARATED BLOCK SEXTANT-45; So; 0; ON;;;;; N;;;;
1CE69; SEPARATED BLOCK SEXTANT-145; So; 0; ON; ;; ;; N; ;; ;;
1CE6A; SEPARATED BLOCK SEXTANT-245; So; 0; ON; ;; ;; N; ;; ;;
1CE6B; SEPARATED BLOCK SEXTANT-1245; So; 0; ON; ;; ;; N; ;; ;;
1CE6C; SEPARATED BLOCK SEXTANT-345; So; 0; ON; ;; ;; N; ;; ;;
1CE6D; SEPARATED BLOCK SEXTANT-1345; So; 0; ON; ;; ;; N; ;; ;;
1CE6E; SEPARATED BLOCK SEXTANT-2345; So; O; ON; ;; ;; N; ;; ;;
1CE6F; SEPARATED BLOCK SEXTANT-12345; So; 0; ON;;;;; N;;;;
1CE70; SEPARATED BLOCK SEXTANT-6; So; 0; ON;;;;; N;;;;
1CE71; SEPARATED BLOCK SEXTANT-16; So; 0; ON;;;;;; N;;;;;
1CE72; SEPARATED BLOCK SEXTANT-26; So; 0; ON; ;; ;; N; ;; ;;
1CE73; SEPARATED BLOCK SEXTANT-126; So; 0; ON; ;; ;; N; ;; ;;
1CE74; SEPARATED BLOCK SEXTANT-36; So; O; ON;;;;; N;;;;
1CE75; SEPARATED BLOCK SEXTANT-136; So; 0; ON; ;; ;; N; ;; ;;
1CE76; SEPARATED BLOCK SEXTANT-236; So; O; ON; ;; ;; N; ;; ;;
1CE77; SEPARATED BLOCK SEXTANT-1236; So; O; ON; ;; ;; N; ;; ;;
1CE78; SEPARATED BLOCK SEXTANT-46; So; 0; ON;;;;; N;;;;
1CE79; SEPARATED BLOCK SEXTANT-146; So; 0; ON; ;; ;; N; ;; ;;
1CE7A; SEPARATED BLOCK SEXTANT-246; So; 0; ON; ;; ;; N; ;; ;;
1CE7B; SEPARATED BLOCK SEXTANT-1246; So; 0; ON; ;; ;; N; ;; ;;
1CE7C; SEPARATED BLOCK SEXTANT-346; So; 0; ON; ;; ;; ;N; ;; ;;
1CE7D; SEPARATED BLOCK SEXTANT-1346; So; O; ON; ;; ;; N; ;; ;;
1CE7E; SEPARATED BLOCK SEXTANT-2346; So; O; ON; ;; ;; N; ;; ;;
1CE7F; SEPARATED BLOCK SEXTANT-12346; So; 0; ON; ;; ;; N; ;; ;;
1CE80; SEPARATED BLOCK SEXTANT-56; So; 0; ON;;;;; N;;;;
1CE81; SEPARATED BLOCK SEXTANT-156; So; 0; ON; ;; ;; N; ;; ;;
1CE82; SEPARATED BLOCK SEXTANT-256; So; O; ON; ;; ;; N; ;; ;;
1CE83; SEPARATED BLOCK SEXTANT-1256; So; O; ON; ;; ;; N; ;; ;;
1CE84; SEPARATED BLOCK SEXTANT-356; So; O; ON; ; ; ; ; N; ; ; ;
1CE85; SEPARATED BLOCK SEXTANT-1356; So; O; ON; ; ; ; ; ; ; ;
1CE86; SEPARATED BLOCK SEXTANT-2356; So; O; ON; ;; ;; N; ;; ;;
1CE87; SEPARATED BLOCK SEXTANT-12356; So; O; ON; ;; ;; N; ;; ;;
1CE88; SEPARATED BLOCK SEXTANT-456; So; O; ON; ;; ;; N; ;; ;;
1CE89; SEPARATED BLOCK SEXTANT-1456; So; O; ON; ;; ;; N; ;; ;;
1CE8A; SEPARATED BLOCK SEXTANT-2456; So; O; ON; ;; ;; N; ;; ;;
1CE8B; SEPARATED BLOCK SEXTANT-12456; So; O; ON; ;; ;; N; ;; ;;
1CE8C; SEPARATED BLOCK SEXTANT-3456; So; O; ON; ;; ;; N; ;; ;;
1CE8D; SEPARATED BLOCK SEXTANT-13456; So; O; ON;;;;; N;;;;
1CE8E; SEPARATED BLOCK SEXTANT-23456; So; O; ON;;;;; N;;;;
1CE8F; SEPARATED BLOCK SEXTANT-123456; So; O; ON; ;; ;; N; ;; ;;
1CE90; UPPER LEFT ONE SIXTEENTH BLOCK; So; 0; ON;;;;; N;;;;;
1CE91; UPPER CENTRE LEFT ONE SIXTEENTH BLOCK; So; 0; ON; ;;;; N;;;;;
1CE93; UPPER RIGHT ONE SIXTEENTH BLOCK; So; O; ON;;;;;;N;;;;;
1CE94; UPPER MIDDLE LEFT ONE SIXTEENTH BLOCK; So; 0; ON; ;;;; N;;;;;
1CE95; UPPER MIDDLE CENTRE LEFT ONE SIXTEENTH BLOCK; So; 0; ON; ;; ;; N; ;; ;;
1CE96; UPPER MIDDLE CENTRE RIGHT ONE SIXTEENTH BLOCK; So; 0; ON; ;;;; N;;;;
1CE97; UPPER MIDDLE RIGHT ONE SIXTEENTH BLOCK; So; 0; ON;;;;;; N;;;;;
1CE98; LOWER MIDDLE LEFT ONE SIXTEENTH BLOCK; So; 0; ON; ;;;; N;;;;;
1CE99; LOWER MIDDLE CENTRE LEFT ONE SIXTEENTH BLOCK; So; 0; ON; ;; ;; ;N; ;; ;;
1CE9A; LOWER MIDDLE CENTRE RIGHT ONE SIXTEENTH BLOCK; So; 0; ON; ;; ;; N; ;; ;;
1CE9B; LOWER MIDDLE RIGHT ONE SIXTEENTH BLOCK; So; 0; ON; ;; ;; ;; ;;
1CE9C; LOWER LEFT ONE SIXTEENTH BLOCK; So; 0; ON; ;; ;; N; ;; ;;
1CE9D; LOWER CENTRE LEFT ONE SIXTEENTH BLOCK; So; 0; ON;;;;; N;;;;
1CE9E; LOWER CENTRE RIGHT ONE SIXTEENTH BLOCK; So; 0; ON; ;; ;; ;; ;;
1CE9F; LOWER RIGHT ONE SIXTEENTH BLOCK; So; 0; ON; ; ; ; ; N; ; ; ;
1CEAO; RIGHT HALF LOWER ONE QUARTER BLOCK; So; O; ON;;;;;N;;;;
1CEA1; RIGHT THREE QUARTERS LOWER ONE QUARTER BLOCK; So; 0; ON; ;; ;; ;N; ;; ;;
1CEA2; LEFT THREE QUARTERS LOWER ONE QUARTER BLOCK; So; 0; ON; ;;;; N;;;;;
1CEA3; LEFT HALF LOWER ONE QUARTER BLOCK; So; 0; ON; ;; ;; N; ;; ;
1CEA4; LOWER HALF LEFT ONE QUARTER BLOCK; So; 0; ON; ;; ;; N; ;; ;
1CEA5; LOWER THREE QUARTERS LEFT ONE QUARTER BLOCK; So; 0; ON; ;;;; ;N;;;;;
1CEA6; UPPER THREE QUARTERS LEFT ONE QUARTER BLOCK; So; 0; ON; ;; ;; N; ;; ;;
1CEA7; UPPER HALF LEFT ONE QUARTER BLOCK; So; 0; ON;;;;; N;;;;
1CEA8; LEFT HALF UPPER ONE QUARTER BLOCK; So; 0; ON;;;;; N;;;;
1CEA9; LEFT THREE QUARTERS UPPER ONE QUARTER BLOCK; So; 0; ON; ;; ;; N; ;; ;;
```

```
1CEAA; RIGHT THREE QUARTERS UPPER ONE QUARTER BLOCK; So; 0; ON; ;; ;; N; ;; ;;
1CEAB; RIGHT HALF UPPER ONE QUARTER BLOCK; So; 0; ON;;;;; N;;;;
1CEAC; UPPER HALF RIGHT ONE QUARTER BLOCK; So; 0; ON; ; ; ; ; N; ; ; ;
1CEAD; UPPER THREE QUARTERS RIGHT ONE QUARTER BLOCK; So; 0; ON; ;;;; N;;;;
1CEAE; LOWER THREE QUARTERS RIGHT ONE QUARTER BLOCK; So; 0; ON; ;;;; N;;;;;
1CEAF; LOWER HALF RIGHT ONE QUARTER BLOCK; So; 0; ON;;;;; N;;;;
1F8B3; DOWNWARDS BLACK ARROW TO BAR; So; 0; ON; ;; ;; N; ;; ;;
1F8B4; NEGATIVE SQUARED LEFTWARDS ARROW; So; 0; ON; ; ; ; ; N; ; ; ;
1F8B5; NEGATIVE SQUARED UPWARDS ARROW; So; 0; ON; ;; ;; ;; ;;
1F8B6; NEGATIVE SQUARED RIGHTWARDS ARROW; So; 0; ON;;;;; N;;;;;
1F8B7; NEGATIVE SQUARED DOWNWARDS ARROW; So; 0; ON; ;; ;; ;; ;;
1F8B8; NORTH WEST ARROW FROM BAR; So; 0; ON; ;; ;; N; ;; ;;
1F8B9; NORTH EAST ARROW FROM BAR; So; 0; ON; ;; ;; N; ;; ;;
1F8BA; SOUTH EAST ARROW FROM BAR; So; 0; ON; ;; ;; N; ;; ;;
1F8BB; SOUTH WEST ARROW FROM BAR; So; 0; ON; ;; ;; N; ;; ;;
1FBCB; WHITE CROSS MARK; So; 0; ON;;;;; N;;;;
1FBCC; RAISED SMALL LEFT SQUARE BRACKET; So; 0; ON; ;; ;; ;; ;;
1FBCD; BLACK SMALL UP-POINTING CHEVRON; So; 0; ON;;;;;;N;;;;;
1FBCE; LEFT TWO THIRDS BLOCK; So; 0; ON;;;;; N;;;;;
1FBCF; LEFT ONE THIRD BLOCK; So; 0; ON;;;;; N;;;;;
1FBD0; BOX DRAWINGS LIGHT DIAGONAL MIDDLE RIGHT TO LOWER LEFT; So; 0; ON; ;; ;; N; ;; ;;
1FBD1;BOX DRAWINGS LIGHT DIAGONAL UPPER RIGHT TO MIDDLE LEFT;So;0;ON;;;;;N;;;;;
1FBD2;BOX DRAWINGS LIGHT DIAGONAL UPPER LEFT TO MIDDLE RIGHT;So;0;ON;;;;;N;;;;
1FBD3; BOX DRAWINGS LIGHT DIAGONAL MIDDLE LEFT TO LOWER RIGHT; So; 0; ON; ;; ;; N; ;; ;;
1FBD4; BOX DRAWINGS LIGHT DIAGONAL UPPER LEFT TO LOWER CENTRE; So; 0; ON; ;; ;; N; ;; ;;
1FBD5; BOX DRAWINGS LIGHT DIAGONAL UPPER CENTRE TO LOWER RIGHT; So; 0; ON; ;; ;; N; ;; ;;
1FBD6; BOX DRAWINGS LIGHT DIAGONAL UPPER RIGHT TO LOWER CENTRE; So; 0; ON; ;; ;; N; ;; ;;
1FBD7; BOX DRAWINGS LIGHT DIAGONAL UPPER CENTRE TO LOWER LEFT; So; 0; ON; ;; ;; N; ;; ;;
1FBD8; BOX DRAWINGS LIGHT DIAGONAL UPPER LEFT TO MIDDLE CENTRE TO UPPER
       RIGHT; So; 0; ON;;;;; N;;;;;
1FBD9; BOX DRAWINGS LIGHT DIAGONAL UPPER RIGHT TO MIDDLE CENTRE TO LOWER
       RIGHT; So; 0; ON;;;;; N;;;;
1FBDA; BOX DRAWINGS LIGHT DIAGONAL LOWER LEFT TO MIDDLE CENTRE TO LOWER
       RIGHT; So; 0; ON; ; ; ; ; N; ; ; ;
1FBDB; BOX DRAWINGS LIGHT DIAGONAL UPPER LEFT TO MIDDLE CENTRE TO LOWER LEFT; So; 0; ON;;;;; N;;;;;
1FBDC; BOX DRAWINGS LIGHT DIAGONAL UPPER LEFT TO LOWER CENTRE TO UPPER RIGHT; So; 0; ON; ; ; ; ; N; ; ; ;
1FBDD; BOX DRAWINGS LIGHT DIAGONAL UPPER RIGHT TO MIDDLE LEFT TO LOWER RIGHT; So; 0; ON; ; ; ; ; N; ; ; ;
1FBDE; BOX DRAWINGS LIGHT DIAGONAL LOWER LEFT TO UPPER CENTRE TO LOWER RIGHT; So; 0; ON; ;; ;; N; ;; ;;
1FBDF; BOX DRAWINGS LIGHT DIAGONAL UPPER LEFT TO MIDDLE RIGHT TO LOWER LEFT; So; 0; ON;;;;; N;;;;;
1FBE0; TOP JUSTIFIED LOWER HALF WHITE CIRCLE; So; 0; ON;;;;; N;;;;;
1FBE1; RIGHT JUSTIFIED LEFT HALF WHITE CIRCLE; So; 0; ON; ;; ;; N; ;; ;;
1FBE2; BOTTOM JUSTIFIED UPPER HALF WHITE CIRCLE; So; 0; ON;;;;; N;;;;;
1FBE3; LEFT JUSTIFIED RIGHT HALF WHITE CIRCLE; So; 0; ON;;;;; N;;;;;
1FBE4; UPPER CENTRE ONE QUARTER BLOCK; So; O; ON; ;; ;; N; ;; ;;
1FBE5; LOWER CENTRE ONE QUARTER BLOCK; So; 0; ON; ;; ;; ;; ;;
1FBE6; MIDDLE LEFT ONE QUARTER BLOCK; So; 0; ON;;;;; N;;;;
1FBE7; MIDDLE RIGHT ONE QUARTER BLOCK; So; 0; ON; ;; ;; N; ;; ;;
1FBE8; TOP JUSTIFIED LOWER HALF BLACK CIRCLE; So; 0; ON; ;; ;; ;; ;;
1FBE9; RIGHT JUSTIFIED LEFT HALF BLACK CIRCLE; So; 0; ON; ;; ;; N; ;; ;;
1FBEA; BOTTOM JUSTIFIED UPPER HALF BLACK CIRCLE; So; 0; ON; ; ; ; ; N; ; ; ; ;
1FBEB; LEFT JUSTIFIED RIGHT HALF BLACK CIRCLE; So; 0; ON;;;;;; N;;;;;
1FBEC; TOP RIGHT JUSTIFIED LOWER LEFT QUARTER BLACK CIRCLE; So; 0; ON; ;; ;; N; ;; ;;
1FBED; BOTTOM LEFT JUSTIFIED UPPER RIGHT QUARTER BLACK CIRCLE; So; 0; ON; ;; ;; N; ;; ;;
1FBEE; BOTTOM RIGHT JUSTIFIED UPPER LEFT QUARTER BLACK CIRCLE; So; 0; ON;;;;; N;;;;;
1FBEF; TOP LEFT JUSTIFIED LOWER RIGHT QUARTER BLACK CIRCLE; So; 0; ON; ;; ;; N; ;; ;;
```

14. References.

Centre for Computing History, The. 2021. "Sharp MZ-80K." http://www.computinghistory.org.uk/det/2867/sharp-mz-80k/

Chin, Kathy. InfoWorld volume 6 issue 52. December 24, 1984. "Kaypro Enters MS-DOS Market."

CPCWiki. 2012. "Keyboard Versions." http://www.cpcwiki.eu/index.php/Keyboard_Versions CPCWiki. 2017. "Sales figures."

https://www.cpcwiki.eu/forum/amstrad-cpc-hardware/sales-figures/

Ewell, Doug et al. 2019. "Proposal to add characters from legacy computers and teletext to the UCS." UTC document L2/19-025.

https://www.unicode.org/L2/L2019/19025-terminals-prop.pdf

Godden, Bruce. 1984. "CPC464 Firmware Manual." AMSOFT.

https://archive.org/details/CPC464 Firmware 1984 AMSOFT/page/n355

Godden, Bruce, et al. 1986. "CPC464/664/6128 Firmware Manual." AMSOFT.

https://archive.org/details/SOFT968TheAmstrad6128FirmwareManual/page/n439

Ha, Eric P.L. and Groff, James R. Hewlett-Packard Journal volume 30 number 6. June 1979. "The Integrated Display System and Terminal Access Method."

Heinz, Karl. 2002. "MZ-700 european code tables ('SharpSCII')."

https://original.sharpmz.org/mz-700/codetable.htm

Heinz, Karl. 2002. "MZ-700 japanese code tables ('SharpSCII')." https://original.sharpmz.org/mz-700/codetabjp.htm

Hewlett-Packard Company. 1980. "2624A Display Terminal Reference Manual."

https://archive.org/details/bitsavers_hpterminalDisplayTerminalReferenceManualSep198 0 21053954/page/n111/mode/2up

HP Computer Museum. 2021. "2650A." http://hpmuseum.net/display_item.php?hw=240

Kaypro Corporation. 1983. "The Kaypro 10 User's Guide."

http://www.bitsavers.org/pdf/kaypro/Kaypro 10 Users Guide 1983.pdf

Klein, Erik S. 2021. "OSI C4P." http://www.vintage-computer.com/machines.php?osic4p

Mahugh, Doug. 2013. "SCS-Draw: teaching the Kaypro to draw."

 $\frac{https://web.archive.org/web/20190906140606/http://mahugh.com/2013/11/07/scs-draw-teaching-the-kaypro-to-draw/}{}$

MAME. 2021. "MAMEdev.org | Home of The MAME Project." https://www.mamedev.org/

Meyers, Raquel and Goto80. 2012. "text-mode.org | Text graphics: ASCII, PETSCII and its distant relatives." http://text-mode.org/

Miller, Doug. 2020. "Virtual Kaypro Computer." http://sims.durgadas.com/kaypro/kaypro.html

Reddit. 2013. "How common were computers and computer-based devices (like video games) in the Soviet Union and eastern bloc?"

https://www.reddit.com/r/AskHistorians/comments/1oxylj/how_common_were_computer s and computerbased/

Ridley, G.P. 1984. "Starting Machine Code on the SHARP MZ-80K MZ-80A MZ-700." D.C. Brennan Eng.

Sharp Corporation. 1985. "Sharp X1turbo CZ-856C BASIC Reference Manual."

https://archive.org/details/CZ856CBasicReferenceManual/page/n427

Stengel, Steven. 2021. "Mattel Aquarius." http://oldcomputers.net/aquarius.html

v.d. Steenoven, M. 2014. "Mattel Aquarius Games: Phrogger."

https://www.vdsteenoven.com/aquarius/froggv.php

Verdiell, Marc. 2019. "HP 264x Terminals."

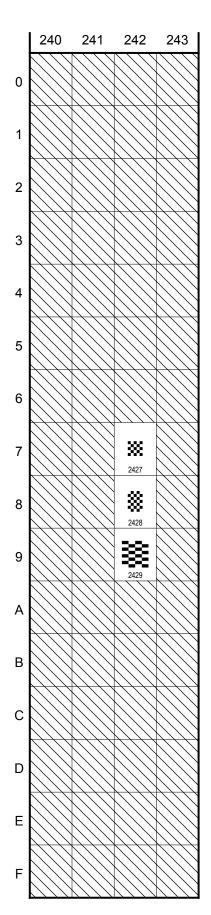
https://www.curiousmarc.com/computing/hp-264x-terminals

Wikipedia. 2021. "Apple II series." https://en.wikipedia.org/wiki/Apple II series

Wikipedia. 2021. "TRS-80." https://en.wikipedia.org/wiki/TRS-80

15. Disclaimer. All trademarks and registered trademarks mentioned herein are the property of their respective owners. The company and product names used in this document are for identification purposes only.

2428



Specific symbols for delete

2427 ** SYMBOL FOR DELETE SQUARE CHECKER BOARD FORM

• symbol for delete in the Apple II character set

• fills the bounding box of 002B +

SYMBOL FOR DELETE RECTANGULAR
CHECKER BOARD FORM

• symbol for delete in the TRS-80 character set

• fills the bounding box of 0048 H

2429 SYMBOL FOR DELETE MEDIUM SHADE FORM

• symbol for delete in the Amstrad CPC character set, which also encodes 2592 separately

• fills the character cell

→ 2592 medium shade

	1CC0	1CC1	1CC2	1CC3	1CC4	1CC5	1CC6	1CC7	1CC8	1CC9	1CCA	1CCB	1CCC	1CCD	1CCE
0	1CC00	1CC10	1CC20	1CC30	1CC40	2 1CC50	1CC60	1CC70	1CC80	1CC90	1CCA0	1CCB0	1000	1CCD0	ICCE0
1	I — I	K 1CC11	1CC21	1CC31	1CC41	1CC51	1CC61	1CC71	1CC81	1CC91	1CCA1	J 1CCB1	10001	1CCD1	1CCE1
2	K	1CC12	1CC22	1CC32	1CC42	1CC52	1CC62	1CC72	1CC82	1CC92	1CCA2	1CCB2	1CCC2	1CCD2	1CCE2
3	1003	1 CC13	1CC23	1CC33	1CC43	1CC53	1CC63	1CC73	10083	1CC93	1CCA3	1CCB3	1CCC3	1CCD3	1CCE3
4	¥	1CC14	1CC24	1CC34	1CC44	10054	1CC64	1CC74	1CC84	1CC94	1CCA4	1CCB4	1CCC4	1CCD4	1CCE4
5	1CC05	1CC15	1CC25	1CC35	1CC45	1CC55	1CC65	1CC75	1CC85	1CC95	1CCA5	1CCB5	10005	1CCD5	P 1CCE5
6	1CC06	1CC16	1CC26	1CC36	1CC46	1CC56	1CC66	1CC76	1CC86	1CC96	1CCA6	1CCB6	10006	1CCD6	1CCE6
7	1CC07	1CC17	1CC27	1CC37	1CC47	1CC57	1CC67	1CC77	1CC87	1CC97	1CCA7	1CCB7	10007	1CCD7	R 1CCE7
8	1CC08	1CC18	1CC28	1CC38	1CC48	1CC58	1CC68	1CC78	1CC88	1CC98	1CCA8	1CCB8	10008	C 1CCD8	S 1CCE8
9	1CC09	1CC19	1CC29	1CC39	1CC49	1CC59	1CC69	1CC79	X X X X 1CC89	1CC99	1CCA9	1CCB9	10009	1CCD9	1CCE9
Α	1CC0A	1CC1A	1CC2A	1CC3A	1 CC4A	1CC5A	1CC6A	1CC7A	1CC8A	1CC9A	1CCAA	1CCBA	1CCCA	1CCDA	1CCEA
В	1CC0B	1CC1B	1CC2B	1CC3B	1CC4B	1CC5B	1CC6B	1CC7B	1CC8B	1CC9B	1CCAB	1CCBB	1CCCB	1CCDB	1CCEB
С	1000C	1CC1C	1CC2C	1CC3C	1CC4C	1CC5C	1CC6C	1CC7C	1CC8C	1CC9C	1CCAC	1CCBC	1CCCC	1CCDC	1CCEC
D	1CC0D	1CC1D	1CC2D	1CC3D	1CC4D	1CC5D	1CC6D	1CC7D	1CC8D	1CC9D	1CCAD	1CCBD	1CCCD	1CCDD	1CCED
Е	1CCOE	1CC1E	1CC2E	1CC3E	1CC4E	1CC5E	1CC6E	1CC7E	1CC8E	1CC9E	1CCAE	1CCBE	1CCCE	1CCDE	1CCEE
F	1CC0F	1CC1F	1CC2F	1CC3F	1CC4F	1CC5F	1CC6F	1CC7F	1CC8F	1CC9F	J 1CCAF	1CCBF	1CCCF	J 1CCDF	Z 1CCEF

1CCF 1CD0 1CD1 1CD2 1CD3 1CD4 1CD5 1CD6 1CD7 1CD8 1CD9 1CDA 1CDB 1CDC 0 0 1CCF0 1CD20 1CD30 1CD00 1CD10 1CD40 1CD50 1CD60 1CD70 1CD80 1CD90 1CDA0 1CDB0 1CDC0 1 1 1CDC1 1CCF1 1CD21 1CD31 1CD01 1CD11 1CD41 1CD51 1CD61 1CD71 1CD81 1CD91 1CDA1 1CDB1 2 2 1CCF2 1CD02 1CD12 1CD22 1CD32 1CD82 1CD92 1CDB2 1CDC2 1CD42 1CD52 1CD62 1CD72 3 3 1CDC3 1CCF3 1CD13 1CD23 1CD33 1CD43 1CD03 1CD53 1CD83 1CD93 1CDA3 1CDB3 1CD73 4 4 1CD84 1CCF4 1CD04 1CD14 1CD24 1CD34 1CD54 1CD64 1CD74 1CD94 1CDA4 1CD44 5 5 1CDB5 1CCF5 1CD85 1CDC5 1CD05 1CD15 1CD25 1CD45 1CD65 1CD95 1CD35 1CD55 1CD75 1CDA5 6 6 1CCF6 1CD06 1CD16 1CD26 1CD36 1CD46 1CD56 1CD76 1CD86 1CD96 1CDA6 1CDB6 1CDC6 7 7 1CDA7 1CDB7 1CDC7 1CCF7 1CD07 1CD17 1CD27 1CD37 1CD47 1CD57 1CD77 1CD87 1CD97 8 8 1CCF8 1CD08 1CD18 1CD68 1CD28 1CD38 1CD48 1CD58 1CD88 1CD98 1CDA8 1CDC8 1CD78 9 9 1CD09 1CDA9 1CDC9 1CCF9 1CD19 1CD29 1CD39 1CD49 1CD59 1CD69 1CD79 1CD89 1CD99 1CDB9 Α 1CD0A 1CD1A 1CD2A 1CD4A 1CDAA 1CDBA 1CDCA 1CD3A 1CD7A 1CD9A В 1CD1B 1CD2B 1CDBB 1CDCB 1CD0B 1CD3B 1CD4B 1CD5B 1CD6B 1CD7B 1CD8B 1CD9B 1CDAB С 1CD2C 1CD0C 1CD1C 1CD3C 1CD4C 1CD5C 1CD6C 1CD7C 1CD8C 1CD9C 1CDAC 1CDBC 1CDCC D 1CD0D 1CD1D 1CD2D 1CD3D 1CD4D 1CD5D 1CD6D 1CD8D 1CD9D 1CDAD 1CDBD 1CDCD 1CD7D Ε 1CD8E 1CDAE 1CD0E 1CD1E 1CD2E 1CD4E 1CD7E 1CD9E F 1CD1F 1CD2F 1CD3F 1CD5F 1CD6F 1CDAF 1CD4F 1CD7F

	1CDD	1CDE	1CDF	1CE0	1CE1	1CE2	1CE3	1CE4	1CE5	1CE6	1CE7	1CE8	1CE9	1CEA
0	1CDD0	1CDE0	1CDF0)(1CE00	1CE10	1CE20	1CE30	1CE40	1CE50	1CE60	1CE70	1CE80	1CE90	1CEA0
1	ICDDU	ICDEU	T	<u> </u>	T	IGE20	10230	10240	10230	ICE00	IGE/0	- ICE60	IGE30	ICLAU
2	1CDD1	1CDE1	1CDF1	1CE01	1CE11	1CE21	1CE31	1CE41	1CE51	1CE61	1CE71	1CE81	1CE91	1CEA1
۷	1CDD2	1CDE2	1CDF2	1CE02	1CE12	1CE22	1CE32	1CE42	1CE52	1CE62	1CE72	1CE82	1CE92	1CEA2
3	1CDD3	1CDE3	1CDF3	1CE03	1CE13	1CE23	1CE33	1CE43	1CE53	1CE63	1CE73	1CE83	1CE93	1CEA3
4	1CDD4	1CDE4	1CDF4	1CE04	1CE14	1CE24	1CE34	1CE44	1CE54	1CE64	1CE74	1CE84	1CE94	1CEA4
5	1CDD5	1CDE5	1CDF5	1CE05	1CE15	1CE25	1CE35	1CE45	1CE55	1CE65	1CE75	1CE85	1CE95	1CEA5
6			<u>F</u> 0	+	Γ	1	-	7		-		-		
7	1CDD6	1CDE6	1CDF6	1CE06	1CE16	1CE26	1CE36	1CE46	1CE56	1CE66	1CE76	1CE86	1CE96	1CEA6
	1CDD7	1CDE7	1CDF7	1CE07	1CE17	1CE27	1CE37	1CE47	1CE57	1CE67	1CE77	1CE87	1CE97	1CEA7
8	1CDD8	1CDE8	1CDF8	1CE08	1CE18	1CE28	1CE38	1CE48	1CE58	1CE68	1CE78	1CE88	1CE98	1CEA8
9	1CDD9	1CDE9	1CDF9	1CE09	1CE19	1CE29	1CE39	1CE49	1CE59	1CE69	1CE79	1CE89	1CE99	1CEA9
Α		ċ		>>			+			_=	=	=======================================	•	_
В	1CDDA	1CDEA	1CDFA	1CEOA	1CE1A	1CE2A	1CE3A	1CE4A	1CE5A	1CE6A	1CE7A	1CE8A	1CE9A	1CEAA
	1CDDB	1CDEB	1CDFB	1CE0B	1CE1B	1CE2B	1CE3B	1CE4B	1CE5B	1CE6B	1CE7B	1CE8B	1CE9B	1CEAB
С	1CDDC	1CDEC	1CDFC	1CEOC	1CE1C	1CE2C	1CE3C	1CE4C	1CE5C	1CE6C	1CE7C	1CE8C	1CE9C	1CEAC
D	10000	10050	1CDFD	10500	10540	10E2D	1CE3D	1CE4D	10550	10ESD	10E7D	10590	10500	10540
E	1CDDD	1CDED	ICDFD	1CE0D	1CE1D	1CE2D	ICESD	1CE4D	1CE5D	1CE6D	1CE7D	1CE8D	1CE9D	1CEAD
F	1CDDE	1CDEE	1CDFE	1CE0E	1CE1E	1CE2E	1CE3E	1CE4E	1CE5E	1CE6E	1CE7E	1CE8E	1CE9E	1CEAE
Г	1CDDF	1CDEF	1CDFF	1CE0F	1CE1F	1CE2F	1CE3F	1CE4F	1CE5F	1CE6F	1CE7F	1CE8F	1CE9F	1CEAF

1CC27 ■ SEPARATED BLOCK QUADRANT-123 Game sprites → 259B □ quadrant upper left and upper 1CC00 **L** UP-POINTING GO-KART 1CC01 **H** RIGHT-POINTING GO-KART right and lower left 1CC28 ■ SEPARATED BLOCK QUADRANT-4 \rightarrow 2597 \square quadrant lower right → 1FBC5 **%** stick figure 1CC29 ■ SEPARATED BLOCK QUADRANT-14 1CC03 > RIGHT-POINTING STICK FIGURE \rightarrow 259A \square quadrant upper left and lower 1CC04 ¥ DOWN-POINTING STICK FIGURE 1CC2A SEPARATED BLOCK QUADRANT-24 Ruler segments \rightarrow 2590 right half block 1CC05 LOWER HORIZONTAL RULER SEGMENT 1CC06 RIGHT VERTICAL RULER SEGMENT 1CC2B SEPARATED BLOCK QUADRANT-124 1CC07 LOWER RIGHT RULER SEGMENT → 259C □ quadrant upper left and upper right and lower right Schematic symbols 1CC2C ■■ SEPARATED BLOCK QUADRANT-34 Designed to be used with light box drawing characters. \rightarrow 2584 **lower half block** 1CC2D ■ SEPARATED BLOCK QUADRANT-134 1CC08 ¥ ANTENNA 1CC09 HORIZONTAL RESISTOR SEGMENT → 2599 □ quadrant upper left and lower 1CC0A \$ VERTICAL RESISTOR SEGMENT 1CC0B \$\foatstyle \text{LEFT THIRD INDUCTOR}\$ left and lower right 1CC2E ■ SEPARATED BLOCK QUADRANT-234 1CC0C 77 MIDDLE THIRD INDUCTOR \rightarrow 259F \square quadrant upper right and lower 1CCOD > RIGHT THIRD INDUCTOR left and lower right 1CC0E LEFT-POINTING DIODE 1CC0F RIGHT-POINTING DIODE 1CC2F SEPARATED BLOCK QUADRANT-1234 \rightarrow 2588 full block 1CC10 K NPN TRANSISTOR 1CC11 K PNP TRANSISTOR 1CC12 RECEPTACLE 1CC13 H HORIZONTAL CAPACITOR Circle segments 1CC30 UPPER LEFT TWELFTH CIRCLE 1CC31 UPPER CENTRE LEFT TWELFTH CIRCLE 1CC14 ÷ VERTICAL CAPACITOR 1CC15 LOGIC GATE OR 1CC16 LOGIC GATE AND 1CC32 UPPER CENTRE RIGHT TWELFTH CIRCLE 1CC33 UPPER RIGHT TWELFTH CIRCLE 1CC34 / UPPER MIDDLE LEFT TWELFTH CIRCLE 1CC17 LOGIC GATE INVERTED INPUTS 1CC18 LOGIC GATE INVERTED INPUTS 1CC35 UPPER LEFT QUARTER CIRCLE 1CC36 UPPER RIGHT QUARTER CIRCLE 1CC19 → LOGIC GATE BUFFER 1CC1A ◆ LOGIC GATE BUFFER WITH INVERTED INPUT 1CC37 UPPER MIDDLE RIGHT TWELFTH CIRCLE 1CC38 \ LOWER MIDDLE LEFT TWELFTH CIRCLE Box drawing characters 1CC39 LOWER LEFT QUARTER CIRCLE 1CC3A ノ LOWER RIGHT QUARTER CIRCLE 1CC1B — BOX DRAWINGS LIGHT HORIZONTAL AND LOWER MIDDLE RIGHT TWELFTH CIRCLE 1CC3B UPPER RIGHT 1CC3C LOWER LEFT TWELFTH CIRCLE 1CC1C — BOX DRAWINGS LIGHT HORIZONTAL AND 1CC3D _ LOWER RIGHT LOWER CENTRE LEFT TWELFTH CIRCLE BOX DRAWINGS LIGHT TOP AND UPPER LEFT 1CC3E LOWER CENTRE RIGHT TWELFTH CIRCLE 1CC3F / LOWER CENTRE RIGHT TWELFTH CIRCLE 1CC1E __ BOX DRAWINGS LIGHT BOTTOM AND LOWER 1CC1F // BOX DRAWINGS DOUBLE DIAGONAL UPPER RIGHT TO LOWER LEFT Fill characters 1CC40 = SPARSE HORIZONTAL FILL BOX DRAWINGS DOUBLE DIAGONAL UPPER \rightarrow 25A4 \square square with horizontal fill LEFT TO LOWER RIGHT 1CC41 | SPARSE VERTICAL FILL Separated mosaic terminal graphic \rightarrow 25A5 m square with vertical fill characters \rightarrow 25A6 square with orthogonal The term "quadrant" refers to block mosaics divided into four parts. crosshatch fill 1CC43 ★ DIAGONAL CROSSHATCH FILL 1CC21 = SEPARATED BLOCK QUADRANT-1 → 25A9 square with diagonal crosshatch \rightarrow 2598 \square quadrant upper left 1CC22 ■ SEPARATED BLOCK QUADRANT-2 1CC44 |||| DENSE VERTICAL FILL

Game sprites

Printed: 24-Nov-2021

1CC48 ► LEFT-FACING BASSINET 1CC4A **R** FLYING SAUCER WITH BEAMS

1CC45 DENSE HORIZONTAL FII 1CC46 SPECKLE FILL FRAME-1 1CC47 SPECKLE FILL FRAME-2

DENSE HORIZONTAL FILL

frames of an animation.

• The term "frame" used here refers to

1CC24 _

→ 259D □ quadrant upper right

SEPARATED BLOCK QUADRANT-3

 \rightarrow 2596 \square quadrant lower left

 \rightarrow 259E \square quadrant upper right and lower

1CC23 ■■ SEPARATED BLOCK QUADRANT-12 \rightarrow 2580 upper half block

1CC25 ■ SEPARATED BLOCK QUADRANT-13 → 258C left half block

1CC26 SEPARATED BLOCK QUADRANT-23

Symbols for Legacy Computing Supplement

1CC4B ← FLYING SAUCER WITHOUT BEAMS	1CC77 DOWN-FACING SNAKE HEAD WITH CLOSED
• The Sharp MZ-700 character set includes	MOUTH
three flying saucer symbols, mapped to	1CC78 LEFT-POINTING ENERGY WAVE
$1CC4A$ R , $1CC4B extbf{ extit{a}}$, and $1F6F8 extbf{ extit{D}}$.	1CC79 UP-POINTING ENERGY WAVE 1CC7A RIGHT-POINTING ENERGY WAVE
\rightarrow 1F6F8 \Box flying saucer	1CC7A RIGHT-POINTING ENERGY WAVE 1CC7B DOWN-POINTING ENERGY WAVE
1CC4C 🕿 ALIEN MONSTER OPEN JAWS	1CC7C SQUARE SPIRAL FROM TOP LEFT
1CC4D 🛖 ALIEN MONSTER CLOSED JAWS	1CC7D SQUARE SPIRAL FROM TOP RIGHT
1CC4E ♠ ALIEN SQUID OPEN TENTACLES	1CC7E SQUARE SPIRAL FROM BOTTOM RIGHT
10C4F ALIEN SQUID CLOSED TENTACLES	1CC7F 🔳 SQUARE SPIRAL FROM BOTTOM LEFT
1CC50 A ALIEN CRAB STEPPING RIGHT 1CC51 A ALIEN CRAB STEPPING LEFT	1CC80 II STRIPED LEFT-POINTING TRIANGLE
1CC52 ALIEN SPIDER CROUCHING	→ 25C0 black left-pointing triangle
1CC53 X ALIEN SPIDER SPREAD	1CC81 ≜ STRIPED UP-POINTING TRIANGLE
1CC54 👲 ALIEN MONSTER STEP-1	→ 25B2 ▲ black up-pointing triangle
1CC55 ★ ALIEN MONSTER STEP-2	1CC82 STRIPED RIGHT-POINTING TRIANGLE
1CC56 LEFT-POINTING ROCKET SHIP	→ 25B6 ► black right-pointing triangle
→ 1F66C □ leftwards rocket 1CC57 ▲ UP-POINTING ROCKET SHIP	1CC83 ▼ STRIPED DOWN-POINTING TRIANGLE
→ 1F66D □ upwards rocket	→ 25BC ▼ black down-pointing triangle 1CC84 ■ VERTICAL LADDER
1CC58 ➤ RIGHT-POINTING ROCKET SHIP	→ 1FA9C □ ladder
→ 1F66E □ rightwards rocket	1CC85 III HORIZONTAL LADDER
1CC59 Y DOWN-POINTING ROCKET SHIP	
\rightarrow 1F66F \square downwards rocket	Terminal graphic characters
\rightarrow 1F680 \square rocket	1CC86 WHITE LOWER LEFT POINTER
	→ 25BB ▷ white right-pointing pointer
1CC5A TOP HALF LEFT-FACING ROBOT 1CC5B TOP HALF FORWARD-FACING ROBOT	\rightarrow 25FA \square lower left triangle
1CC5C TOP HALF RIGHT-FACING ROBOT	1CC87 WHITE LOWER RIGHT POINTER
1CC5D T BOTTOM HALF LEFT-FACING ROBOT	\rightarrow 25C5 \triangleleft white left-pointing pointer
1CC5E T BOTTOM HALF FORWARD-FACING ROBOT 1CC5F BOTTOM HALF RIGHT-FACING ROBOT	\rightarrow 25FF \square lower right triangle
1CC60 LEFT-POINTING ATOMIC BOMB	1CC88 •• TWO RINGS ALIGNED HORIZONTALLY 1CC89 ** SQUARE FOUR CORNER SALTIRES 1CC8A SQUARE FOUR CORNER DIAGONALS 1CC8B SQUARE FOUR CORNER BLACK TRIANGLES
1CC61	1CC89 XX SQUARE FOUR CORNER SALTIRES
1CC62 ► RIGHT-POINTING ATOMIC BOMB	1CC8A () SQUARE FOUR CORNER DIAGONALS
1CC63 DOWN-POINTING ATOMIC BOMB	1CC8B ☐ SQUARE FOUR CORNER BLACK TRIANGLES 1CC8C ☑ SQUARE APERTURE
1CC64 ↑ MUSHROOM CLOUD 1CC65 → LEFT-POINTING RIFLE	1CC8D INVERSE BLACK DIAMOND
$\rightarrow 1F946 \square \text{ rifle}$	→ 25C6 ♦ black diamond
1CC66 L UP-POINTING RIFLE	→ 1FBBF (negative diagonal diamond
1CC67 RIGHT-POINTING RIFLE	1CC8E LEFT AND UPPER ONE EIGHTH BLOCK
1CC68 \ DOWN-POINTING RIFLE	CONTAINING BLACK SMALL SQUARE
1CC69	\rightarrow 1FB7D \square left and upper one eighth
1CC6A EIGHT RAYS OUTWARD 1CC6B BLACK LARGE CIRCLE MINUS LEFT QUARTER	block
1CC6B BLACK LARGE CIRCLE MINUS LEFT QUARTER SECTION	1CC8F INVERSE BLACK SMALL SQUARE
1CC6C ▶ BLACK LARGE CIRCLE MINUS UPPER	→ 25AA • black small square
QUARTER SECTION 1CC6D BLACK LARGE CIRCLE MINUS RIGHT	Lines with tick marks
QUARTER SECTION	1CC90
1CC6E ➡ BLACK LARGE CIRCLE MINUS LOWER	1CC91 HORIZONTAL LINE WITH FOUR TICK MARKS
QUARTER SECTION	Gamo spritos
Emoticon	Game sprites
1CC6F ● BLACK NEUTRAL FACE	1CC92 ► LEFT-FACING FISH → 1F41F □ fish
\rightarrow 1F610 \square neutral face	→ 1F4 IF □ IISII 1CC93 ► RIGHT-FACING FISH
0	1CC94 ➡ LEFT-FACING FISH WITH OPEN MOUTH
Game sprites	1CC95 ★ RIGHT-FACING FISH WITH OPEN MOUTH
1CC70 LEFT-FACING SNAKE HEAD WITH OPEN MOUTH	1CC96 🗣 FLAPPING BIRD
1CC71	\rightarrow 1F426 \square bird
1CC72 RIGHT-FACING SNAKE HEAD WITH OPEN	1CC97 ☐ LEFT-POINTING RACING CAR 1CC98 ☐ UP-POINTING RACING CAR 1CC99 ☐ RIGHT-POINTING RACING CAR
MOUTH	1CC99 RIGHT-POINTING RACING CAR
1CC73 • DOWN-FACING SNAKE HEAD WITH OPEN MOUTH	1CC9A DOWN-POINTING RACING CAR
1CC74 LEFT-FACING SNAKE HEAD WITH CLOSED	1CC9B ₩ HORIZONTAL RACING CAR
MOUTH	1CC9C T VERTICAL RACING CAR
1CC75 UP-FACING SNAKE HEAD WITH CLOSED MOUTH	1CC9D T VERTICAL GO-KART
1CC76 RIGHT-FACING SNAKE HEAD WITH CLOSED	1CC9E TACK 1CC9F
MOUTH	d Right Folking Tank

1CCA0 ■ LEFT-POINTING ROCKET BOOSTER	1CCCA UPPER LEFT QUADRANT CHESS KNIGHT
1CCA1 RIGHT-POINTING ROCKET BOOSTER	\rightarrow 2658 \Leftrightarrow white chess knight
1CCA2 LEFT-POINTING ROLLER COASTER CAR	→ 265E a black chess knight
\rightarrow 1F3A2 \Box roller coaster	1CCCB UPPER RIGHT QUADRANT CHESS KNIGHT
1CCA3 RIGHT-POINTING ROLLER COASTER CAR 1CCA4 LEFT HALF FLYING SAUCER	1CCCC LOWER LEFT QUADRANT CHESS KNIGHT
→ 1F6F8 □ flying saucer	1CCCD LOWER RIGHT QUADRANT CHESS KNIGHT
1CCA5 → RIGHT HALF FLYING SAUCER	1CCCE UPPER LEFT QUADRANT CHESS PAWN
_	\rightarrow 2659 $\stackrel{\wedge}{\times}$ white chess pawn
Faces	\rightarrow 265F $\stackrel{*}{\bot}$ black chess pawn
1CCA6 6 UPPER LEFT QUADRANT FACE WITH OPEN EYES	1CCCF UPPER RIGHT QUADRANT CHESS PAWN 1CCD0 LOWER LEFT QUADRANT CHESS PAWN
1CCA7 UPPER RIGHT QUADRANT FACE WITH OPEN	1CCD1 LOWER RIGHT QUADRANT CHESS PAWN
EYES	
1CCA8 (-, UPPER LEFT QUADRANT FACE WITH CLOSED EYES	Icons
1CCA9 7 UPPER RIGHT QUADRANT FACE WITH CLOSED	1CCD2 UPPER LEFT QUADRANT STANDING KNIGHT 1CCD3 UPPER RIGHT QUADRANT STANDING KNIGHT
EYES 1CCAA LOWER LEFT QUADRANT SMILING FACE	1CCD3 UPPER RIGHT QUADRANT STANDING KNIGHT 1CCD4 LOWER LEFT QUADRANT STANDING KNIGHT
1CCAB 2 LOWER LEFT QUADRANT SMILING FACE	1CCD5 T LOWER RIGHT QUADRANT STANDING KNIGHT
1CCAC LOWER LEFT QUADRANT NEUTRAL FACE	Outlined uppercase Latin alphabet
1CCAD : LOWER RIGHT QUADRANT NEUTRAL FACE	• •
1CCAE LOWER LEFT QUADRANT FACE WITH OPEN MOUTH	1CCD6 A OUTLINED LATIN CAPITAL LETTER A 1CCD7 B OUTLINED LATIN CAPITAL LETTER B
1CCAF > LOWER RIGHT QUADRANT FACE WITH OPEN	1CCD8 © OUTLINED LATIN CAPITAL LETTER C
MOUTH	1CCD9 D OUTLINED LATIN CAPITAL LETTER D
1CCBO C LOWER LEFT QUADRANT FROWNING FACE 1CCB1 LOWER RIGHT QUADRANT FROWNING FACE	1CCDA © OUTLINED LATIN CAPITAL LETTER E
LOWER RIGHT QUADRANT FROWNING FACE	1CCDB F OUTLINED LATIN CAPITAL LETTER F 1CCDC G OUTLINED LATIN CAPITAL LETTER G
lcons	1CCDD H OUTLINED LATIN CAPITAL LETTER H
1CCB2 UPPER LEFT QUADRANT TELEVISION	1CCDE OUTLINED LATIN CAPITAL LETTER I
\rightarrow 1F4FA \square television	1CCDF J OUTLINED LATIN CAPITAL LETTER J
10CB3 THE UPPER RIGHT QUADRANT TELEVISION	1CCE0 © OUTLINED LATIN CAPITAL LETTER K 1CCE1 OUTLINED LATIN CAPITAL LETTER L
1CCB4 LOWER LEFT QUADRANT TELEVISION 1CCB5 LOWER RIGHT QUADRANT TELEVISION	1CCE2 M OUTLINED LATIN CAPITAL LETTER M
1CCB6 UPPER LEFT QUADRANT MICROCOMPUTER	1CCE3 № OUTLINED LATIN CAPITAL LETTER N
1CCB7 ☐ UPPER RIGHT QUADRANT MICROCOMPUTER	1CCE4 O OUTLINED LATIN CAPITAL LETTER O
1CCB8 LOWER LEFT QUADRANT MICROCOMPUTER	1CCE5 P OUTLINED LATIN CAPITAL LETTER P
1CCB9 🖺 LOWER RIGHT QUADRANT MICROCOMPUTER	1CCE6 Q OUTLINED LATIN CAPITAL LETTER Q 1CCE7 R OUTLINED LATIN CAPITAL LETTER R
Chess symbols	1CCE8 S OUTLINED LATIN CAPITAL LETTER S
May appear as white or black chess pieces.	1CCE9 T OUTLINED LATIN CAPITAL LETTER T
1CCBA UPPER LEFT QUADRANT CHESS KING	1CCEA ♥ OUTLINED LATIN CAPITAL LETTER U 1CCEB ♥ OUTLINED LATIN CAPITAL LETTER V
\rightarrow 2654 $\stackrel{\circ}{\otimes}$ white chess king	1CCEB ♥ OUTLINED LATIN CAPITAL LETTER V 1CCEC ₩ OUTLINED LATIN CAPITAL LETTER W
→ 265A 🍲 black chess king	1CCED X OUTLINED LATIN CAPITAL LETTER X
1CCBB L UPPER RIGHT QUADRANT CHESS KING	1CCEE
1CCBB UPPER RIGHT QUADRANT CHESS KING 1CCBC LOWER LEFT QUADRANT CHESS KING	1CCEF \mathbb{Z} OUTLINED LATIN CAPITAL LETTER Z
1CCBD 🗗 LOWER RIGHT QUADRANT CHESS KING	1CCEF Z OUTLINED LATIN CAPITAL LETTER Z
1CCBD LOWER RIGHT QUADRANT CHESS KING 1CCBE UPPER LEFT QUADRANT CHESS QUEEN	1CCEF Z OUTLINED LATIN CAPITAL LETTER Z Outlined ASCII digits
1CCBD ☑ LOWER RIGHT QUADRANT CHESS KING 1CCBE ☑ UPPER LEFT QUADRANT CHESS QUEEN → 2655 ভ white chess queen	Outlined ASCII digits 1CCF0 © OUTLINED DIGIT ZERO 1CCF1 1 OUTLINED DIGIT ONE
1CCBD ■ LOWER RIGHT QUADRANT CHESS KING 1CCBE 1 UPPER LEFT QUADRANT CHESS QUEEN → 2655 ₩ white chess queen → 265B ₩ black chess queen	Outlined ASCII digits 1CCF0 OUTLINED DIGIT ZERO 1CCF1 OUTLINED DIGIT ONE 1CCF2 OUTLINED DIGIT TWO
1CCBD ☑ LOWER RIGHT QUADRANT CHESS KING 1CCBE 1 UPPER LEFT QUADRANT CHESS QUEEN → 2655 ভ white chess queen → 265B ভ black chess queen 1CCBF 1 UPPER RIGHT QUADRANT CHESS QUEEN	Outlined ASCII digits 1CCF0 OUTLINED DIGIT ZERO 1CCF1 OUTLINED DIGIT ONE 1CCF2 OUTLINED DIGIT TWO 1CCF3 OUTLINED DIGIT THREE
1CCBD LOWER RIGHT QUADRANT CHESS KING 1CCBE 1 UPPER LEFT QUADRANT CHESS QUEEN → 2655 white chess queen → 265B black chess queen 1CCBF 1 UPPER RIGHT QUADRANT CHESS QUEEN 1CCC0 LOWER LEFT QUADRANT CHESS QUEEN	Outlined ASCII digits 1CCF0 OUTLINED DIGIT ZERO 1CCF1 OUTLINED DIGIT ONE 1CCF2 OUTLINED DIGIT TWO 1CCF3 OUTLINED DIGIT THREE 1CCF4 OUTLINED DIGIT FOUR
1CCBD ☑ LOWER RIGHT QUADRANT CHESS KING 1CCBE 1 UPPER LEFT QUADRANT CHESS QUEEN → 2655 ভ white chess queen → 265B ভ black chess queen 1CCBF 1 UPPER RIGHT QUADRANT CHESS QUEEN	Outlined ASCII digits 1CCF0 OUTLINED DIGIT ZERO 1CCF1 OUTLINED DIGIT ONE 1CCF2 OUTLINED DIGIT TWO 1CCF3 OUTLINED DIGIT THREE 1CCF4 OUTLINED DIGIT FOUR 1CCF5 OUTLINED DIGIT FIVE
1CCBD LOWER RIGHT QUADRANT CHESS KING 1CCBE UPPER LEFT QUADRANT CHESS QUEEN → 2655 white chess queen → 265B black chess queen 1CCBF UPPER RIGHT QUADRANT CHESS QUEEN 1CCC0 LOWER LEFT QUADRANT CHESS QUEEN 1CCC1 LOWER RIGHT QUADRANT CHESS QUEEN	Outlined ASCII digits 1CCF0 © OUTLINED DIGIT ZERO 1CCF1 1 OUTLINED DIGIT TWO 1CCF2 2 OUTLINED DIGIT TWO 1CCF3 3 OUTLINED DIGIT THREE 1CCF4 4 OUTLINED DIGIT FOUR 1CCF5 5 OUTLINED DIGIT FIVE 1CCF6 6 OUTLINED DIGIT SIX 1CCF7 7 OUTLINED DIGIT SEVEN
1CCBD LOWER RIGHT QUADRANT CHESS KING 1CCBE 1 UPPER LEFT QUADRANT CHESS QUEEN → 2655 white chess queen → 265B black chess queen 1CCBF 1 UPPER RIGHT QUADRANT CHESS QUEEN 1CCC0 LOWER LEFT QUADRANT CHESS QUEEN 1CCC1 LOWER RIGHT QUADRANT CHESS QUEEN 1CCC2 UPPER LEFT QUADRANT CHESS ROOK	Outlined ASCII digits 1CCF0 OUTLINED DIGIT ZERO 1CCF1 OUTLINED DIGIT ONE 1CCF2 OUTLINED DIGIT TWO 1CCF3 OUTLINED DIGIT THREE 1CCF4 OUTLINED DIGIT FOUR 1CCF5 OUTLINED DIGIT FIVE 1CCF6 OUTLINED DIGIT SIX 1CCF7 OUTLINED DIGIT SEVEN 1CCF8 OUTLINED DIGIT SEVEN 1CCF8 OUTLINED DIGIT EIGHT
1CCBD LOWER RIGHT QUADRANT CHESS KING 1CCBE White chess queen → 2655 black chess queen 1CCBF UPPER RIGHT QUADRANT CHESS QUEEN 1CCC0 LOWER LEFT QUADRANT CHESS QUEEN 1CCC1 UPPER LEFT QUADRANT CHESS QUEEN 1CCC2 UPPER LEFT QUADRANT CHESS ROOK → 2656 white chess rook → 265C black chess rook 1CCC3 UPPER RIGHT QUADRANT CHESS ROOK	Outlined ASCII digits 1CCF0 OUTLINED DIGIT ZERO 1CCF1 OUTLINED DIGIT ONE 1CCF2 OUTLINED DIGIT TWO 1CCF3 OUTLINED DIGIT THREE 1CCF4 OUTLINED DIGIT FOUR 1CCF5 OUTLINED DIGIT FIVE 1CCF6 OUTLINED DIGIT SIX 1CCF7 OUTLINED DIGIT SEVEN 1CCF8 OUTLINED DIGIT EIGHT 1CCF9 OUTLINED DIGIT NINE
1CCBD UPPER LEFT QUADRANT CHESS KING 1CCBF White chess queen → 2655 black chess queen 1CCBF UPPER RIGHT QUADRANT CHESS QUEEN 1CCC0 LOWER LEFT QUADRANT CHESS QUEEN 1CCC1 UPPER LEFT QUADRANT CHESS QUEEN 1CCC2 UPPER LEFT QUADRANT CHESS ROOK → 2656 white chess rook 1CCC3 UPPER RIGHT QUADRANT CHESS ROOK 1CCC4 UPPER RIGHT QUADRANT CHESS ROOK 1CCC4 LOWER LEFT QUADRANT CHESS ROOK	Outlined ASCII digits 1CCF0 OUTLINED DIGIT ZERO 1CCF1 OUTLINED DIGIT ONE 1CCF2 OUTLINED DIGIT TWO 1CCF3 OUTLINED DIGIT THREE 1CCF4 OUTLINED DIGIT FOUR 1CCF5 OUTLINED DIGIT FIVE 1CCF6 OUTLINED DIGIT SIX 1CCF7 OUTLINED DIGIT SEVEN 1CCF8 OUTLINED DIGIT SEVEN 1CCF8 OUTLINED DIGIT EIGHT
1CCBD UPPER LEFT QUADRANT CHESS KING 1CCBF White chess queen → 2655 White chess queen → 2658 black chess queen 1CCBF UPPER RIGHT QUADRANT CHESS QUEEN 1CCC0 LOWER LEFT QUADRANT CHESS QUEEN 1CCC1 UPPER LEFT QUADRANT CHESS ROOK → 2656 white chess rook → 265C black chess rook 1CCC3 UPPER RIGHT QUADRANT CHESS ROOK 1CCC3 LOWER RIGHT QUADRANT CHESS ROOK 1CCC4 LOWER LEFT QUADRANT CHESS ROOK 1CCC5 LOWER RIGHT QUADRANT CHESS ROOK	Outlined ASCII digits 1CCF0 OUTLINED DIGIT ZERO 1CCF1 OUTLINED DIGIT ONE 1CCF2 OUTLINED DIGIT TWO 1CCF3 OUTLINED DIGIT THREE 1CCF4 OUTLINED DIGIT FOUR 1CCF5 OUTLINED DIGIT FIVE 1CCF6 OUTLINED DIGIT SIX 1CCF7 OUTLINED DIGIT SEVEN 1CCF8 OUTLINED DIGIT SEVEN 1CCF9 OUTLINED DIGIT SIX 1CCF9 OUTLINED DIGIT NINE Block mosaic terminal graphic
1CCBD LOWER RIGHT QUADRANT CHESS KING 1CCBE UPPER LEFT QUADRANT CHESS QUEEN → 2655 black chess queen → 265B UPPER RIGHT QUADRANT CHESS QUEEN 1CCC0 LOWER LEFT QUADRANT CHESS QUEEN 1CCC1 LOWER RIGHT QUADRANT CHESS QUEEN 1CCC2 UPPER LEFT QUADRANT CHESS ROOK → 265C black chess rook 1CCC3 UPPER RIGHT QUADRANT CHESS ROOK 1CCC4 LOWER RIGHT QUADRANT CHESS ROOK 1CCC5 LOWER RIGHT QUADRANT CHESS ROOK 1CCC6 UPPER LEFT QUADRANT CHESS ROOK 1CCC6 UPPER LEFT QUADRANT CHESS ROOK 1CCC6 UPPER LEFT QUADRANT CHESS BISHOP	Outlined ASCII digits 1CCF0 OUTLINED DIGIT ZERO 1CCF1 OUTLINED DIGIT ONE 1CCF2 OUTLINED DIGIT TWO 1CCF3 OUTLINED DIGIT THREE 1CCF4 OUTLINED DIGIT FOUR 1CCF5 OUTLINED DIGIT FIVE 1CCF6 OUTLINED DIGIT SIX 1CCF7 OUTLINED DIGIT SEVEN 1CCF8 OUTLINED DIGIT EIGHT 1CCF9 OUTLINED DIGIT NINE Block mosaic terminal graphic characters
1CCBD LOWER RIGHT QUADRANT CHESS KING 1CCBE UPPER LEFT QUADRANT CHESS QUEEN → 2655 black chess queen UPPER RIGHT QUADRANT CHESS QUEEN 1CCC0 LOWER LEFT QUADRANT CHESS QUEEN 1CCC1 LOWER RIGHT QUADRANT CHESS QUEEN 1CCC2 UPPER LEFT QUADRANT CHESS ROOK → 2656 black chess rook → 265C black chess rook 1CCC3 UPPER RIGHT QUADRANT CHESS ROOK 1CCC4 LOWER RIGHT QUADRANT CHESS ROOK 1CCC5 LOWER RIGHT QUADRANT CHESS ROOK 1CCC6 UPPER LEFT QUADRANT CHESS BISHOP → 2657 white chess bishop	Outlined ASCII digits 1CCF0 OUTLINED DIGIT ZERO 1CCF1 OUTLINED DIGIT ONE 1CCF2 OUTLINED DIGIT TWO 1CCF3 OUTLINED DIGIT THREE 1CCF4 OUTLINED DIGIT FOUR 1CCF5 OUTLINED DIGIT FIVE 1CCF6 OUTLINED DIGIT SIX 1CCF7 OUTLINED DIGIT SEVEN 1CCF8 OUTLINED DIGIT SEVEN 1CCF8 OUTLINED DIGIT SIX 1CCF9 OUTLINED DIGIT NINE Block mosaic terminal graphic characters The term "octant" refers to block mosaics divided into eight
1CCBD LOWER RIGHT QUADRANT CHESS KING 1CCBE UPPER LEFT QUADRANT CHESS QUEEN → 2655 black chess queen UPPER RIGHT QUADRANT CHESS QUEEN 1CCC0 LOWER LEFT QUADRANT CHESS QUEEN 1CCC1 LOWER RIGHT QUADRANT CHESS QUEEN 1CCC2 UPPER LEFT QUADRANT CHESS ROOK → 2656 black chess rook UPPER RIGHT QUADRANT CHESS ROOK 1CCC3 UPPER RIGHT QUADRANT CHESS ROOK 1CCC4 UPPER RIGHT QUADRANT CHESS ROOK 1CCC5 UPPER RIGHT QUADRANT CHESS ROOK 1CCC6 UPPER LEFT QUADRANT CHESS BISHOP → 2657 white chess bishop → 265D black chess bishop	Outlined ASCII digits 1CCF0 © OUTLINED DIGIT ZERO 1CCF1 1 OUTLINED DIGIT ONE 1CCF2 2 OUTLINED DIGIT TWO 1CCF3 3 OUTLINED DIGIT THREE 1CCF4 4 OUTLINED DIGIT FOUR 1CCF5 5 OUTLINED DIGIT FIVE 1CCF6 © OUTLINED DIGIT SIX 1CCF7 7 OUTLINED DIGIT SEVEN 1CCF8 © OUTLINED DIGIT SEVEN 1CCF9 © OUTLINED DIGIT NINE Block mosaic terminal graphic characters The term "octant" refers to block mosaics divided into eight parts.
1CCBD LOWER RIGHT QUADRANT CHESS KING 1CCBE UPPER LEFT QUADRANT CHESS QUEEN → 2655 white chess queen 1CCBF UPPER RIGHT QUADRANT CHESS QUEEN 1CCC0 LOWER LEFT QUADRANT CHESS QUEEN 1CCC1 LOWER RIGHT QUADRANT CHESS QUEEN 1CCC2 UPPER LEFT QUADRANT CHESS ROOK → 2656 white chess rook → 265C black chess rook 1CCC3 UPPER RIGHT QUADRANT CHESS ROOK 1CCC4 LOWER LEFT QUADRANT CHESS ROOK 1CCC5 LOWER RIGHT QUADRANT CHESS ROOK 1CCC6 UPPER LEFT QUADRANT CHESS BISHOP → 265D black chess bishop ∪PPER RIGHT QUADRANT CHESS BISHOP 1CCC7 LOWER LEFT QUADRANT CHESS BISHOP 1CCC8 LOWER LEFT QUADRANT CHESS BISHOP 1CCC8 LOWER LEFT QUADRANT CHESS BISHOP 1CCC8 LOWER LEFT QUADRANT CHESS BISHOP	Outlined ASCII digits 1CCF0 © OUTLINED DIGIT ZERO 1CCF1 1 OUTLINED DIGIT ONE 1CCF2 2 OUTLINED DIGIT TWO 1CCF3 3 OUTLINED DIGIT THREE 1CCF4 4 OUTLINED DIGIT FOUR 1CCF5 5 OUTLINED DIGIT FIVE 1CCF6 6 OUTLINED DIGIT SIX 1CCF7 7 OUTLINED DIGIT SEVEN 1CCF8 8 OUTLINED DIGIT EIGHT 1CCF9 © OUTLINED DIGIT NINE Block mosaic terminal graphic characters The term "octant" refers to block mosaics divided into eight parts. 1CD00 - BLOCK OCTANT-3 1CD01 - BLOCK OCTANT-23
1CCBD LOWER RIGHT QUADRANT CHESS KING 1CCBE UPPER LEFT QUADRANT CHESS QUEEN → 2655 black chess queen UPPER RIGHT QUADRANT CHESS QUEEN 1CCC0 LOWER LEFT QUADRANT CHESS QUEEN 1CCC1 LOWER RIGHT QUADRANT CHESS QUEEN 1CCC2 UPPER LEFT QUADRANT CHESS ROOK → 2656 black chess rook UPPER RIGHT QUADRANT CHESS ROOK 1CCC3 UPPER RIGHT QUADRANT CHESS ROOK 1CCC4 UPPER RIGHT QUADRANT CHESS ROOK 1CCC5 UPPER RIGHT QUADRANT CHESS ROOK 1CCC6 UPPER LEFT QUADRANT CHESS BISHOP → 2657 white chess bishop → 265D black chess bishop	Outlined ASCII digits 1CCF0 OUTLINED DIGIT ZERO 1CCF1 OUTLINED DIGIT ONE 1CCF2 OUTLINED DIGIT TWO 1CCF3 OUTLINED DIGIT TWO 1CCF3 OUTLINED DIGIT THREE 1CCF4 OUTLINED DIGIT FOUR 1CCF5 OUTLINED DIGIT FIVE 1CCF6 OUTLINED DIGIT SIX 1CCF7 OUTLINED DIGIT SEVEN 1CCF8 OUTLINED DIGIT SEVEN 1CCF9 OUTLINED DIGIT NINE Block mosaic terminal graphic characters The term "octant" refers to block mosaics divided into eight parts. 1CD00 BLOCK OCTANT-3

```
1CD48 ■ BLOCK OCTANT-357
1CD03 - BLOCK OCTANT-4
        BLOCK OCTANT-14
                                                                     1CD49 BLOCK OCTANT-2357
1CD4A BLOCK OCTANT-12357
1CD04
1CD05 BLOCK OCTANT-124
                                                                     1CD4B BLOCK OCTANT-457
1CD4C BLOCK OCTANT-1457
1CD4D BLOCK OCTANT-12457
1CD06 — BLOCK OCTANT-34
1CD07 ► BLOCK OCTANT-134
1CD08 - BLOCK OCTANT-234
1CD09 BLOCK OCTANT-234
1CD0A BLOCK OCTANT-5
1CD0B BLOCK OCTANT-15
1CD0C BLOCK OCTANT-125
1CD0D BLOCK OCTANT-135
                                                                     1CD4E BLOCK OCTANT-3457
1CD4F BLOCK OCTANT-13457
                                                                      1CD50 BLOCK OCTANT-23457
                                                                     1CD51 BLOCK OCTANT-67
1CD52 BLOCK OCTANT-16'
                                                                                  BLOCK OCTANT-167
                                                                     1CD52
1CD53
1CD54
1CD0E BLOCK OCTANT-235
1CD0F BLOCK OCTANT-1235
                                                                                   BLOCK OCTANT-267
                                                                                  BLOCK OCTANT-1267
                                                                     1CD10 - BLOCK OCTANT-45
1CD11 - BLOCK OCTANT-145
1CD12 - BLOCK OCTANT-245
1CD13 ■ BLOCK OCTANT-1245
                                                                                   BLOCK OCTANT-12367
1CD14 ■ BLOCK OCTANT-345
1CD15 ► BLOCK OCTANT-1345
                                                                     1CD5A BLOCK OCTANT-1467
1CD5C BLOCK OCTANT-12467
1CD5D BLOCK OCTANT-3467
1CD5E BLOCK OCTANT-13467
1CD5F BLOCK OCTANT-23467
1CD60 BLOCK OCTANT-23467
1CD16 ■ BLOCK OCTANT-2345
1CD17 ■ BLOCK OCTANT-12345
1CD18 - BLOCK OCTANT-6
1CD19 - BLOCK OCTANT-16
1CD1A BLOCK OCTANT-26
1CD1B BLOCK OCTANT-126
                                                                                  BLOCK OCTANT-123467
                                                                     1CD61
1CD62
1CD63
1CD64
1CD1C <u>■ BLOCK OCTANT-36</u>
                                                                                  BLOCK OCTANT-567
1CD1D ■ BLOCK OCTANT-136
                                                                                   BLOCK OCTANT-1567
1CD1E ■ BLOCK OCTANT-236
                                                                                  BLOCK OCTANT-2567
1CD1F ■ BLOCK OCTANT-1236
                                                                                  BLOCK OCTANT-12567
                                                                     1CD65 BLOCK OCTANT-13567
1CD66 BLOCK OCTANT-13567
1CD67 BLOCK OCTANT-23567
1CD68 BLOCK OCTANT-123567
1CD20 ■ BLOCK OCTANT-146
         ■ BLOCK OCTANT-246
1CD21
                                                                                  BLOCK OCTANT-13567
1CD22 ■ BLOCK OCTANT-1246
                                                                                  BLOCK OCTANT-23567
1CD23 ■ BLOCK OCTANT-346
                                                                                  BLOCK OCTANT-123567
                                                                     1CD69 BLOCK OCTANT-4567
1CD6A BLOCK OCTANT-14567
1CD6B BLOCK OCTANT-24567
1CD6C BLOCK OCTANT-12456
1CD24 ■ BLOCK OCTANT-1346
1CD25 ■ BLOCK OCTANT-2346
1CD26 ■ BLOCK OCTANT-12346
1CD27 — BLOCK OCTANT-56
1CD28 — BLOCK OCTANT-156
1CD29 — BLOCK OCTANT-256
1CD2A — BLOCK OCTANT-1256
                                                                                   BLOCK OCTANT-124567
                                                                     1CD6E BLOCK OCTANT-134567
                                                                                  BLOCK OCTANT-134567
                                                                     1CD6F
1CD70
                                                                                  BLOCK OCTANT-234567
1CD2B BLOCK OCTANT-356
1CD2C BLOCK OCTANT-1356
                                                                                   BLOCK OCTANT-1234567
                                                                      1CD71
                                                                                   BLOCK OCTANT-18
                                                                              =
1CD2D ■ BLOCK OCTANT-2356
                                                                      1CD72
                                                                                   BLOCK OCTANT-28
                                                                     1CD72
1CD73
1CD74
1CD75
1CD2E ■ BLOCK OCTANT-12356
                                                                                   BLOCK OCTANT-128
1CD2F BLOCK OCTANT-456
1CD30 BLOCK OCTANT-1456
                                                                                  BLOCK OCTANT-38
                                                                                   BLOCK OCTANT-138
                                                                     1CD76
1CD31 ■ BLOCK OCTANT-2456
                                                                                   BLOCK OCTANT-238
1CD32 BLOCK OCTANT-12456
                                                                                   BLOCK OCTANT-1238
                                                                     1CD78
1CD79
1CD33 ■ BLOCK OCTANT-3456
                                                                                   BLOCK OCTANT-48
1CD34 ■ BLOCK OCTANT-13456
                                                                                   BLOCK OCTANT-148
1CD35 ■ BLOCK OCTANT-23456
1CD36 ■ BLOCK OCTANT-17
1CD37 ■ BLOCK OCTANT-27
                                                                     1CD7A
                                                                                   BLOCK OCTANT-248
                                                                     1CD7A
1CD7B
1CD7C
1CD7D
1CD7E
                                                                                   BLOCK OCTANT-1248
1CD37
1CD38
                                                                                   BLOCK OCTANT-348
1CD38 BLOCK OCTANT-127
1CD39 BLOCK OCTANT-37
1CD3A BLOCK OCTANT-137
1CD3B BLOCK OCTANT-237
1CD3C BLOCK OCTANT-1237
1CD3D BLOCK OCTANT-147
1CD3E BLOCK OCTANT-147
1CD3F BLOCK OCTANT-247
             BLOCK OCTANT-127
                                                                                   BLOCK OCTANT-1348
                                                                                   BLOCK OCTANT-2348
                                                                     1CD7E
                                                                                   BLOCK OCTANT-12348
                                                                     1CD80
1CD81
                                                                                   BLOCK OCTANT-58
             BLOCK OCTANT-1237
                                                                                   BLOCK OCTANT-158
                                                                     1CD82
1CD83
                                                                                   BLOCK OCTANT-258
                                                                                  BLOCK OCTANT-1258
                                                                     1CD84 ■
                                                                                  BLOCK OCTANT-358
1CD40 BLOCK OCTANT-1247
                                                                     1CD85 ■
                                                                                   BLOCK OCTANT-1358
                                                                     1CD86
1CD87
             BLOCK OCTANT-347
1CD41
                                                                                   BLOCK OCTANT-2358
1CD41 BLOCK OCTANT-347
1CD42 BLOCK OCTANT-1347
1CD43 BLOCK OCTANT-2347
1CD44 BLOCK OCTANT-1234
                                                                                   BLOCK OCTANT-12358
                                                                     1CD88 BLOCK OCTANT-458
1CD89 BLOCK OCTANT-1458
1CD8A BLOCK OCTANT-2458
1CD8B BLOCK OCTANT-12458
1CD44
1CD45
             BLOCK OCTANT-12347
             BLOCK OCTANT-157
1CD46
1CD47
             BLOCK OCTANT-257
                                                                      1CD8C ■ BLOCK OCTANT-3458
            BLOCK OCTANT-1257
```

1CD8D ■	BLOCK OCTANT-13458
1CD8E 🚅	BLOCK OCTANT-23458
1CD8F 🖷	BLOCK OCTANT-123458
1CD90	BLOCK OCTANT-168
1CD91	BLOCK OCTANT-268
1CD92	BLOCK OCTANT-1268
1CD93 -	BLOCK OCTANT-368
1CD94 -	BLOCK OCTANT-2368
1CD95 🚾	BLOCK OCTANT-12368
1CD96 ■	BLOCK OCTANT-468
1CD97 " ■	BLOCK OCTANT-1468
1CD98	BLOCK OCTANT-12468
1CD99 🖜	BLOCK OCTANT-3468
1CD9A 🖶	BLOCK OCTANT-13468
1CD9B -	BLOCK OCTANT-23468
1CD9C _	BLOCK OCTANT-568
1CD9D	BLOCK OCTANT-1568
1CD9E	BLOCK OCTANT-2568
1CD9F =	BLOCK OCTANT-12568
1CDA0	BLOCK OCTANT-3568
1CDA1	BLOCK OCTANT-13568
1CDA2	BLOCK OCTANT-23568
1CDA3	BLOCK OCTANT-123568
1CDA4	BLOCK OCTANT-4568
1CDA5	BLOCK OCTANT-14568
1CDA6	BLOCK OCTANT-24568
1CDA7	BLOCK OCTANT-124568
1CDA8	BLOCK OCTANT-34568
1CDA9	BLOCK OCTANT-134568
1CDAA	BLOCK OCTANT-234568
1CDAB	BLOCK OCTANT-1234568
1CDAC	BLOCK OCTANT-178
1CDAD =	BLOCK OCTANT-278 BLOCK OCTANT-1278
1CDAL =	BLOCK OCTANT-1278 BLOCK OCTANT-378
1CDB0	BLOCK OCTANT-1378
1CDB1	BLOCK OCTANT-1378 BLOCK OCTANT-2378
1CDB2	BLOCK OCTANT-12378
1CDB3	BLOCK OCTANT-478
1CDB4	BLOCK OCTANT-1478
1CDB5	BLOCK OCTANT-2478
1CDB6	BLOCK OCTANT-12478
1CDB7	BLOCK OCTANT-3478
1CDB8 🖶	BLOCK OCTANT-13478
1CDB9	BLOCK OCTANT-23478
1CDBA	BLOCK OCTANT-123478
1CDBB	BLOCK OCTANT-578
1CDBC	BLOCK OCTANT-1578
1CDBD 1CDBE 1CDBF 1CDC0 1CDC1	BLOCK OCTANT-2578 BLOCK OCTANT-12578
1CDBE 1	
1CDC0	BLOCK OCTANT-3578 BLOCK OCTANT-13578
1CDC0	
1CDC1	BLOCK OCTANT-23578 BLOCK OCTANT-123578
1CDC2	BLOCK OCTANT-1253/8 BLOCK OCTANT-4578
1CDC3	BLOCK OCTANT-14578 BLOCK OCTANT-14578
1CDC5	BLOCK OCTANT-14578 BLOCK OCTANT-24578
1CDC6	BLOCK OCTANT-124578
1CDC7	BLOCK OCTANT-34578
1CDC8	BLOCK OCTANT-134578
1CDC9	BLOCK OCTANT-234578
1CDCA	BLOCK OCTANT-1234578
1CDCB	BLOCK OCTANT-678
1CDCC	BLOCK OCTANT-1678
1CDCD _	BLOCK OCTANT-2678
1CDCE	BLOCK OCTANT-12678
1CDCF	BLOCK OCTANT 12678
1CDD0 🚣	BLOCK OCTANT-13678 BLOCK OCTANT-23678
1CDD1 =Ξ	

```
1CDD2 BLOCK OCTANT-123678
           1CDD3 BLOCK OCTANT-4678
1CDD4 BLOCK OCTANT-14678
1CDD5 BLOCK OCTANT-24678
1CDD6 BLOCK OCTANT-124678
1CDD0
1CDD7
1CDD8
1CDD8
1CDD9

           1CDDE BLOCK OCTANT-35678
             1CDDF BLOCK OCTANT-235678
1CDE0 BLOCK OCTANT-1235678
           1CDE1 BLOCK OCTANT-1255076
1CDE2 BLOCK OCTANT-145678
1CDE3 BLOCK OCTANT-1245678
1CDE4 BLOCK OCTANT-1345678
             1CDE5 BLOCK OCTANT-2345678
```

Game sprites

The term "frame" used here refers to frames of an

	3 3 5
animation.	
1CDE6 🚓	TOP HALF STANDING PERSON
1CDE7	BOTTOM HALF STANDING PERSON
1CDE8	TOP HALF RIGHT-FACING RUNNER FRAME-1
1CDE9	BOTTOM HALF RIGHT-FACING RUNNER
_	FRAME-1
1CDEA 🕹	TOP HALF RIGHT-FACING RUNNER FRAME-2
1CDEB 🔊	BOTTOM HALF RIGHT-FACING RUNNER
	FRAME-2
1CDEC 🗘	TOP HALF LEFT-FACING RUNNER FRAME-1
1CDED ¶	BOTTOM HALF LEFT-FACING RUNNER FRAME-
_	1
1CDEE 🔥	TOP HALF LEFT-FACING RUNNER FRAME-2
1CDEF 🤨	BOTTOM HALF LEFT-FACING RUNNER FRAME-
	2
1CDF0 🚣	TOP HALF FORWARD-FACING RUNNER

- 1CDF1 BOTTOM HALF FORWARD-FACING RUNNER FRAME-1 1CDF2 **▼** BOTTOM HALF FORWARD-FACING RUNNER FRAME-2
- 1CDF3 T BOTTOM HALF FORWARD-FACING RUNNER FRAME-3
- 1CDF4 BOTTOM HALF FORWARD-FACING RUNNER FRAME-4
- 1CDF5 A MOON LANDER
 1CDF6 TOP HALF FLAILING ROBOT FRAME-1
 - bottom half is 1CDF4
- 1CDF7 ♣ TOP HALF FLAILING ROBOT FRAME-2 1CDF8 ★ DOWN-POINTING AIRPLANE
- \rightarrow 1F6E7 \square up-pointing airplane
- 1CDF9 + LEFT-POINTING AIRPLANE
 - → 2708 → airplane
- SMALL UP-POINTING AIRPLANE 1CDFA ⋆
- 1CDFB ♠ UP-POINTING FROG
 - represents the frog in the Mattel Aquarius port of Frogger
 - \rightarrow 1F438 \square frog face
- 1CDFC ♣ DOWN-POINTING FROG
- 1CDFD 🏟 EXPLOSION FRAME-1

- 1CDFE EXPLOSION FRAME-2 1CDFF EXPLOSION FRAME-3

Printed: 24-Nov-2021

Terminal graphic characters

1CE00 RIGHT HALF AND LEFT HALF WHITE CIRCLE LOWER HALF AND UPPER HALF WHITE CIRCLE 1CE02 <u>M</u> EXPLOSION AT HORIZON

Symbols for Legacy Computing Supplement

C L 0 0	Symbols for Legacy C	ompau	ng supprement
1CE03	UPPER HALF HEAVY WHITE SQUARE	1CE23 _	LARGE TYPE PIECE SHORT UPPER TERMINAL
	\rightarrow 23B4 \Box top square bracket	1CE24 🧲	LARGE TYPE PIECE UPPER RIGHT ARC
1CE04 L	LOWER HALF HEAVY WHITE SQUARE	1CE25 -	LARGE TYPE PIECE RIGHT ARM
_	\rightarrow 23B5 \square bottom square bracket	1CE26 4	LARGE TYPE PIECE UPPER RIGHT CROTCH
1CE05	HEAVY WHITE SOUARE CONTAINING BLACK	1CE27	LARGE TYPE PIECE UPPER RIGHT CORNER
_	VERY SMALL SQUARE	1CE28	LARGE TYPE PIECE STEM WITH RIGHT CROSSBAR
	\rightarrow 2B1D \Box black very small square	1CE29 ■	LARGE TYPE PIECE STEM
	\rightarrow 1F791 \Box heavy white square	1CE2A	LARGE TYPE PIECE DIAGONAL UPPER RIGHT
	\rightarrow 1F794 \square white square containing black		AND LOWER RIGHT
	very small square	1CE2B	LARGE TYPE PIECE DIAGONAL UPPER RIGHT
1CE06 -	₩HITE VERTICAL RECTANGLE WITH	1CE2C	LARGE TYPE PIECE DIAGONAL LOWER RIGHT
	HORIZONTAL BAR	1CE2D 1	LARGE TYPE PIECE SHORT LOWER TERMINAL LARGE TYPE PIECE LOWER LEFT AND UPPER
	\rightarrow 25AF \square white vertical rectangle	ICEZE 🤰	LEFT ARC
1CE07 ⁴		1CE2F ✓	LARGE TYPE PIECE CENTRE OF K
	TRIANGLE	1CE30	LARGE TYPE PIECE LOWER HALF VERTEX
	→ 25C2 • black left-pointing small	40504	OF M
10500	triangle	1CE31	LARGE TYPE PIECE UPPER HALF VERTEX OF W LARGE TYPE PIECE CENTRE OF X
ICE08	Y FUNNEL = filter		LARGE TYPE PIECE CENTRE OF X LARGE TYPE PIECE CENTRE OF Y
1CE00 4		1CF34	LARGE TYPE PIECE CENTRE OF Z WITH
10009 %	BOX DRAWINGS DOUBLE DIAGONAL LOWER LEFT TO MIDDLE CENTRE TO LOWER RIGHT	10201 2	CROSSBAR
	✓ BOX DRAWINGS DOUBLE DIAGONAL UPPER		LARGE TYPE PIECE RAISED UPPER RIGHT ARC
	LEFT TO MIDDLE CENTRE TO UPPER RIGHT	1CE36 -	LARGE TYPE PIECE STEM WITH LEFT CROSSBAR
1CE0B	LEFT HALF WHITE ELLIPSE	1CE37 ₹	LARGE TYPE PIECE LOWER RIGHT AND UPPER
40500	\rightarrow 2B2D \square white horizontal ellipse	10207	RIGHT ARC
1CEOC _	RIGHT HALF WHITE ELLIPSE	1CE38 <	LARGE TYPE PIECE DIAGONAL UPPER LEFT
Dash	ed lines	1CE39 ◀	AND LOWER LEFT
	- LEFT HALF TRIPLE DASH HORIZONTAL		LARGE TYPE PIECE STEM WITH LEFT JOINT LARGE TYPE PIECE STEM WITH CROSSBAR
TOLUD -		1CE3B	LARGE TYPE PIECE DIAGONAL UPPER LEFT
	→ 2504 ··· box drawings light triple dash horizontal	1CE3C ■	LARGE TYPE PIECE LOWER TERMINAL
10505			LARGE TYPE PIECE LOWER LEFT CORNER
ICEUE	- RIGHT HALF TRIPLE DASH HORIZONTAL		
Lines	with tick marks		
	HORIZONTAL LINE WITH TICK MARK	1CE40 🗕	LARGE TYPE PIECE CROSSBAR WITH UPPER
	LEFT HALF HORIZONTAL LINE WITH THREE	1CE41 🗸	STEM LARGE TYPE PIECE VERTEX OF V
	TICK MARKS		
1CE11 -	RIGHT HALF HORIZONTAL LINE WITH THREE TICK MARKS		OF W
1CF12 -	HORIZONTAL LINE WITH THREE TICK MARKS	1CE43 🖊	LARGE TYPE PIECE LOWER RIGHT ARC
1CE13		1CE44 -	LARGE TYPE PIECE LOWER RIGHT CORNER
	TICK MARKS	1CE45 ➤	LARGE TYPE PIECE LOWER RIGHT ARC WITH TAIL
1CE14		1CE46 ◀	LARGE TYPE PIECE LOWER RIGHT CROTCH
1CE15	TICK MARKS VERTICAL LINE WITH THREE TICK MARKS	1CE47 _	LARGE TYPE PIECE STEM-45
IOLIO .	VERTICAL LINE WITH THREE HCK MARKS	1CE48 ■	LARGE TYPE PIECE STEM-2345
Box o	drawing characters	1CE49 -	LARGE TYPE PIECE STEM-4
	BOX DRAWINGS LIGHT VERTICAL AND TOP	1CE4A ■	LARGE TYPE PIECE STEM-34
	RIGHT	1CE4B ■ 1CE4C ■	LARGE TYPE PIECE STEM-234
1CE17	BOX DRAWINGS LIGHT VERTICAL AND	1CE4C ■	LARGE TYPE PIECE STEM-1234 LARGE TYPE PIECE STEM-3
1CE18 -	BOTTOM RIGHT BOX DRAWINGS LIGHT VERTICAL AND TOP	10E4E ■	LARGE TYPE PIECE STEM-23
ICLIO	LEFT	1CE4F =	LARGE TYPE PIECE STEM-2
1CE19 _	BOX DRAWINGS LIGHT VERTICAL AND	1CE50 ■	LARGE TYPE PIECE STEM-12
	BOTTOM LEFT	C	.4
Large	type pieces	•	ited mosaic terminal graphic
•	• •	charac	ters
	generate large text headlines on HP terminals.	The term "	'sextant" refers to block mosaics divided into six
	LARGE TYPE PIECE UPPER LEFT ARC	parts.	
	 ■ LARGE TYPE PIECE UPPER LEFT CORNER ■ LARGE TYPE PIECE UPPER TERMINAL 	1CE51 -	SEPARATED BLOCK SEXTANT-1
10210	LARGE TYPE DIECE UPPER TERMINAL LARGE TYPE DIECE UPPER TERMINAL		SEPARATED BLOCK SEXTANT-2

- 10E10 LARGE TYPE PIECE OFFER TERMINAL
 10E1D LARGE TYPE PIECE UPPER LEFT CROTCH
 10E1E LARGE TYPE PIECE LEFT ARM
 10E1F LARGE TYPE PIECE CROSSBAR
- 1CE20 LARGE TYPE PIECE CROSSBAR WITH LOWER STEM
- 1CE21 LARGE TYPE PIECE UPPER HALF VERTEX OF M 1CE22 LARGE TYPE PIECE DIAGONAL LOWER LEFT

- 1CE52 SEPARATED BLOCK SEXTANT-2
 1CE53 SEPARATED BLOCK SEXTANT-12
- 1CE54 SEPARATED BLOCK SEXTANT-3
- 1CE55 SEPARATED BLOCK SEXTANT-13
- 1CE56 SEPARATED BLOCK SEXTANT-13
 1CE57 SEPARATED BLOCK SEXTANT-123
- 1CE58 SEPARATED BLOCK SEXTANT-4

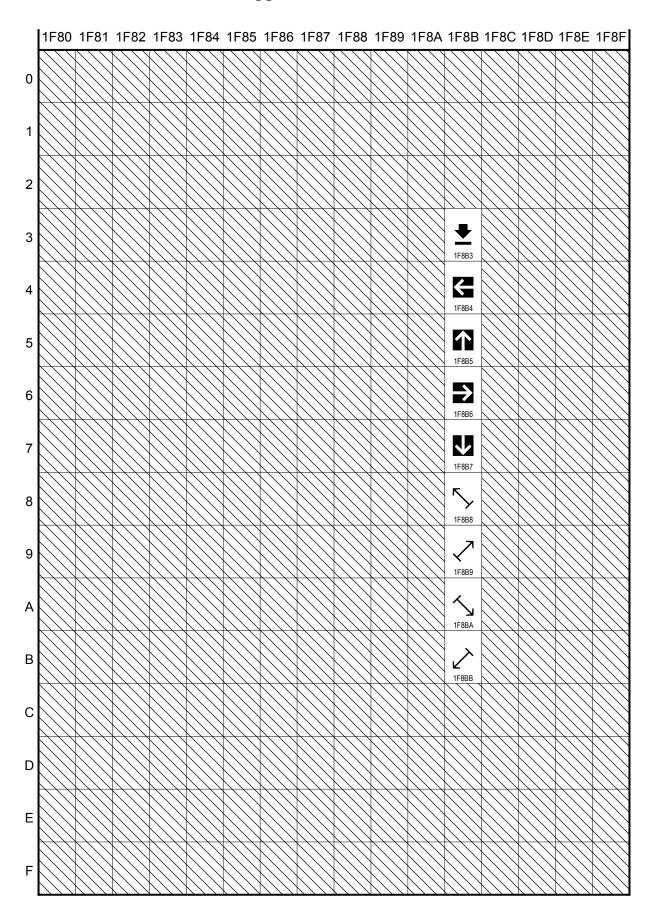
1CE59 -	SEPARATED BLOCK SEXTANT-14
1CE5A =	SEPARATED BLOCK SEXTANT-24
1CE5B ==	SEPARATED BLOCK SEXTANT-124
1CE5C	SEPARATED BLOCK SEXTANT-34
1CE5D = ■	SEPARATED BLOCK SEXTANT-134
1CE5E ==	SEPARATED BLOCK SEXTANT-134 SEPARATED BLOCK SEXTANT-234
::===	
	SEPARATED BLOCK SEXTANT-1234
1CE60	SEPARATED BLOCK SEXTANT-5
CE0 -	SEPARATED BLOCK SEXTANT-15
10E02 _	SEPARATED BLOCK SEXTANT-25
ICLUS _	SEPARATED BLOCK SEXTANT-125
1CE64 = 1CE65 =	SEPARATED BLOCK SEXTANT-35
1CE65 ≣	SEPARATED BLOCK SEXTANT-135
1CE66 = 1CE67	SEPARATED BLOCK SEXTANT-235
1CE67 ■	SEPARATED BLOCK SEXTANT-1235
1CE68	SEPARATED BLOCK SEXTANT-45
1CE69 -	SEPARATED BLOCK SEXTANT-145
1CE6A _=	SEPARATED BLOCK SEXTANT-245
1CE6B	SEPARATED BLOCK SEXTANT-1245
	SEPARATED BLOCK SEXTANT-345
1CE6D ■	SEPARATED BLOCK SEXTANT-1345
1CE6E	SEPARATED BLOCK SEXTANT-2345
1CE6F	SEPARATED BLOCK SEXTANT-12345
1CE70	SEPARATED BLOCK SEXTANT-6
1CE71 -	SEPARATED BLOCK SEXTANT-16
1CE72	SEPARATED BLOCK SEXTANT-26
1CE73 1CE74 -	SEPARATED BLOCK SEXTANT-126
1CE74 - _	SEPARATED BLOCK SEXTANT-36
1CE75 = 1CE76 = 1CE77 = 1	SEPARATED BLOCK SEXTANT-136
1CE76 -	SEPARATED BLOCK SEXTANT-236
1CE77 =	SEPARATED BLOCK SEXTANT-1236
1CE78 =	SEPARATED BLOCK SEXTANT-46
1CE79 " ■	SEPARATED BLOCK SEXTANT-146
1CE7A	SEPARATED BLOCK SEXTANT-246
1CE7B	SEPARATED BLOCK SEXTANT-1246
1CE7C -=	SEPARATED BLOCK SEXTANT-346
1CE7D ■	SEPARATED BLOCK SEXTANT-1346
1CE7E -	SEPARATED BLOCK SEXTANT-2346
1CE7F	SEPARATED BLOCK SEXTANT-12346
1CF80	SEPARATED BLOCK SEXTANT-56
40004 =	SEPARATED BLOCK SEXTANT-156
1000 =	SEPARATED BLOCK SEXTANT-256
1CE83 ==	SEPARATED BLOCK SEXTANT-1256
	SEPARATED BLOCK SEXTANT-1250 SEPARATED BLOCK SEXTANT-356
1CE84 1CE85	SEPARATED BLOCK SEXTANT-1356
	SEPARATED BLOCK SEXTANT-2356
1CE87 ■ 1CE88 ■	SEPARATED BLOCK SEXTANT-12356
1CE88 == 1CE89 ==	SEPARATED BLOCK SEXTANT-456 SEPARATED BLOCK SEXTANT-1456
10009	
1CE8A 1CE8B	SEPARATED BLOCK SEXTANT-2456
	SEPARATED BLOCK SEXTANT-12456
1CE8C ==	SEPARATED BLOCK SEXTANT-3456
1CE8D == 1CE8E ==	SEPARATED BLOCK SEXTANT-13456
	SEPARATED BLOCK SEXTANT-23456
1CE8F	SEPARATED BLOCK SEXTANT-123456

Block elements

- 1CE90 " UPPER LEFT ONE SIXTEENTH BLOCK
- 1CE91 UPPER CENTRE LEFT ONE SIXTEENTH BLOCK
- 1CE92 UPPER CENTRE RIGHT ONE SIXTEENTH BLOCK
- 1CE93 UPPER RIGHT ONE SIXTEENTH BLOCK
- 1CE94 UPPER MIDDLE LEFT ONE SIXTEENTH BLOCK
- 1CE95 UPPER MIDDLE CENTRE LEFT ONE SIXTEENTH BLOCK
- 1CE96 UPPER MIDDLE CENTRE RIGHT ONE SIXTEENTH BLOCK
- 1CE97 UPPER MIDDLE RIGHT ONE SIXTEENTH BLOCK
- 1CE98 LOWER MIDDLE LEFT ONE SIXTEENTH BLOCK

- LOWER MIDDLE CENTRE LEFT ONE 1CE99 •
 - SIXTEENTH BLOCK

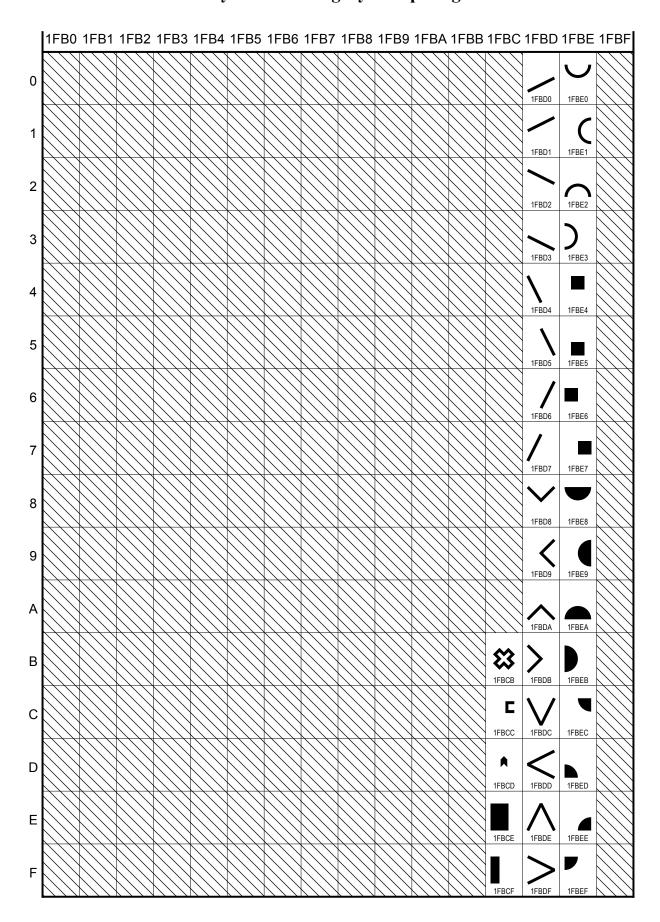
- 1CE9A LOWER MIDDLE CENTRE RIGHT ONE SIXTEENTH BLOCK
- 1CE9B LOWER MIDDLE RIGHT ONE SIXTEENTH BLOCK
- 1CE9C _ LOWER LEFT ONE SIXTEENTH BLOCK
- 1CE9D _ LOWER CENTRE LEFT ONE SIXTEENTH BLOCK
- 1CE9E LOWER CENTRE RIGHT ONE SIXTEENTH BLOCK
- 1CE9F LOWER RIGHT ONE SIXTEENTH BLOCK
- 1CEA0 RIGHT HALF LOWER ONE QUARTER BLOCK
- 1CEA1 RIGHT THREE QUARTERS LOWER ONE
 - QUARTER BLOČK
- 1CEA2 _ LEFT THREE QUARTERS LOWER ONE
- QUARTER BLOCK 1CEA3 _ LEFT HALF LOWER ONE QUARTER BLOCK
- 1CEA4 ▮ LOWER HALF LEFT ONE QUARTER BLOCK
- 1CEA5 LOWER THREE QUARTERS LEFT ONE
- QUARTER BLOCK 1CEA6 ▮ UPPER THREE QUARTERS LEFT ONE QUARTER BLOCK
- 1CEA7 UPPER HALF LEFT ONE QUARTER BLOCK
- 1CEA8 LEFT HALF UPPER ONE QUARTER BLOCK
- 1CEA9 -LEFT THREE QUARTERS UPPER ONE QUARTER **BLOCK**
- 1CEAA -RIGHT THREE QUARTERS UPPER ONE QUARTER BLOCK
- 1CEAB -RIGHT HALF UPPER ONE QUARTER BLOCK
- UPPER HALF RIGHT ONE QUARTER BLOCK 1CEAC
- 1CEAD ■ UPPER THREE QUARTERS RIGHT ONE QUARTER BLOCK
- 1CEAE LOWER THREE QUARTERS RIGHT ONE QUARTER BLOCK
- 1CEAF ■ LOWER HALF RIGHT ONE QUARTER BLOCK



Printed: 24-Nov-2021

Arrows for legacy computing

1F8B3 ➡ DOWNWARDS BLACK ARROW TO BAR \rightarrow 2913 \square downwards arrow to bar \rightarrow 2B07 \square downwards black arrow → 2B73 □ downwards triangle-headed arrow to bar 1F8B4 NEGATIVE SQUARED LEFTWARDS ARROW \rightarrow 2190 \leftarrow leftwards arrow 1F8B5 NEGATIVE SQUARED UPWARDS ARROW \rightarrow 2191 \(\gamma\) upwards arrow 1F8B6 → NEGATIVE SQUARED RIGHTWARDS ARROW \rightarrow 2192 \rightarrow rightwards arrow 1F8B7 **U** NEGATIVE SQUARED DOWNWARDS ARROW → 2193 ↓ downwards arrow These arrows complement the set in the range 21A4-21A7. 1F8B8 > NORTH WEST ARROW FROM BAR 1F8B9 🗸 NORTH EAST ARROW FROM BAR 1F8BA ✓ SOUTH EAST ARROW FROM BAR 1F8BB ╭ SOUTH WEST ARROW FROM BAR



Terminal graphic characters

- 1FBCB ☎ WHITE CROSS MARK
 - \rightarrow 274C \square cross mark
- 1FBCC RAISED SMALL LEFT SQUARE BRACKET
- 1FBCD BLACK SMALL UP-POINTING CHEVRON
 - \rightarrow 1F835 \square upwards finger-post arrow
 - \rightarrow 1FBCA \triangle white up-pointing chevron

Block elements

- LEFT TWO THIRDS BLOCK
- 1FBCF LEFT ONE THIRD BLOCK

Character cell diagonals

- 1FBD0 BOX DRAWINGS LIGHT DIAGONAL MIDDLE RIGHT TO LOWER LEFT
- 1FBD1 / BOX DRAWINGS LIGHT DIAGONAL UPPER RIGHT TO MIDDLE LEFT
- 1FBD2 BOX DRAWINGS LIGHT DIAGONAL UPPER
- LEFT TO MIDDLE RIGHT 1FBD3
 BOX DRAWINGS LIGHT DIAGONAL MIDDLE
- LEFT TO LOWER RIGHT BOX DRAWINGS LIGHT DIAGONAL UPPER 1FBD4 \
- LEFT TO LOWER CENTRE 1FBD5 BOX DRAWINGS LIGHT DIAGONAL UPPER
- CENTRE TO LOWER RIGHT
- 1FBD6 BOX DRAWINGS LIGHT DIAGONAL UPPER RIGHT TO LOWER CENTRE
- 1FBD7 / BOX DRAWINGS LIGHT DIAGONAL UPPER CENTRE TO LOWER LEFT
- 1FBD8 ✓ BOX DRAWINGS LIGHT DIAGONAL UPPER LEFT TO MIDDLE CENTRE TO UPPER RIGHT
- 1FBD9 BOX DRAWINGS LIGHT DIAGONAL UPPER RIGHT TO MIDDLE CENTRE TO LOWER RIGHT
- 1FBDA A BOX DRAWINGS LIGHT DIAGONAL LOWER LEFT TO MIDDLE CENTRE TO LOWER RIGHT
- 1FBDB > BOX DRAWINGS LIGHT DIAGONAL UPPER LEFT TO MIDDLE CENTRE TO LOWER LEFT
- 1FBDC V BOX DRAWINGS LIGHT DIAGONAL UPPER LEFT TO LOWER CENTRE TO UPPER RIGHT
- 1FBDD < BOX DRAWINGS LIGHT DIAGONAL UPPER RIGHT TO MIDDLE LEFT TO LOWER RIGHT
- 1FBDE \ BOX DRAWINGS LIGHT DIAGONAL LOWER LEFT TO UPPER CENTRE TO LOWER RIGHT
- 1FBDF > BOX DRAWINGS LIGHT DIAGONAL UPPER LEFT TO MIDDLE RIGHT TO LOWER LEFT

Geometric shapes

- 1FBE0 TOP JUSTIFIED LOWER HALF WHITE CIRCLE
 - \rightarrow 25E1 \vee lower half circle
- 1FBE1 (RIGHT JUSTIFIED LEFT HALF WHITE CIRCLE
 - \rightarrow 1F907 \square left half circle
- 1FBE2 O BOTTOM JUSTIFIED UPPER HALF WHITE CIRCLE
 - \rightarrow 2312 \cap arc
 - \rightarrow 25E0 \(^{\text{o}}\) upper half circle
- LEFT JUSTIFIED RIGHT HALF WHITE CIRCLE
- 1FBE3 1FBE4 UPPER CENTRE ONE QUARTER BLOCK
- 1FBE5 LOWER CENTRE ONE QUARTER BLOCK
- 1FBE6 MIDDLE LEFT ONE QUARTER BLOCK
- MIDDLE RIGHT ONE QUARTER BLOCK 1FBE7
- 1FBE8 TOP JUSTIFIED LOWER HALF BLACK CIRCLE
 - \rightarrow 2BCB \square bottom half black circle
- 1FBE9 RIGHT JUSTIFIED LEFT HALF BLACK CIRCLE
 - → 25D6 left half black circle
- 1FBEA BOTTOM JUSTIFIED UPPER HALF BLACK CIRCLE
 - \rightarrow 2BCA \square top half black circle
- 1FBEB LEFT JUSTIFIED RIGHT HALF BLACK CIRCLE
 - → 25D7 right half black circle

- 1FBEC TOP RIGHT JUSTIFIED LOWER LEFT OUARTER BLACK CIRCLE
- 1FBED _ BOTTOM LEFT JUSTIFIED UPPER RIGHT QUARTER BLACK CIRCLE
- 1FBEE BOTTOM RIGHT JUSTIFIED UPPER LEFT
- QUARTER BLACK CIRCLE 1FBEF ▼ TOP LEFT JUSTIFIED LOWER RIGHT QUARTER
 - BLACK CIRCLE

Figures.

Figures showing legacy character charts or "dumps" are presented first, followed by examples of usage and other illustrations. Screenshots showing the number of search results for each platform on Google Search, Bing Search, and Google Video are presented last.



Figure 1. A character chart of the Amstrad CPC English character set, with U+1CC57 UP-POINTING ROCKET SHIP, U+1CC63 DOWN-POINTING ATOMIC BOMB, and U+1CC64 MUSHROOM CLOUD highlighted in red. (CPCWiki)



Figure 2. Character dump for the Apple IIGS shown on a Macintosh-based emulator, with U+2427 SYMBOL FOR DELETE SQUARE CHECKER BOARD FORM highlighted in red.

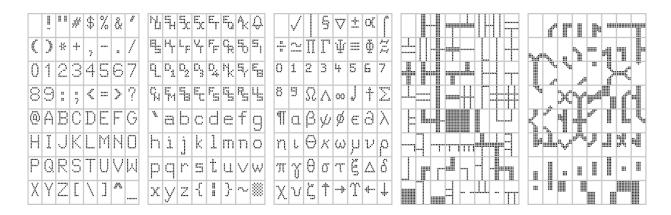


Figure 3. Dumps of HP 2640 series terminal character ROMs. From left to right: uppercase, lowercase, math, line drawing, and "large type" character sets. (CuriousMarc.com)

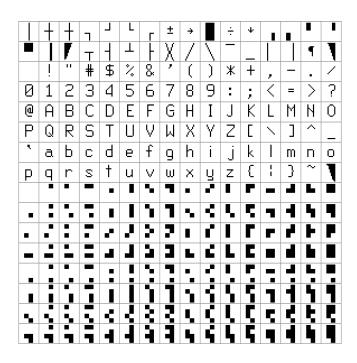


Figure 4. Kaypro II character set. Note the 2×4 block semigraphics above ASCII.

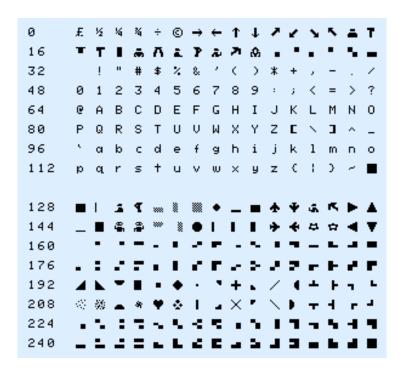


Figure 5. Mattel Aquarius character set. Several of the glyphs in this collection were identified and included in the previous proposal; the remaining glyphs are proposed here.

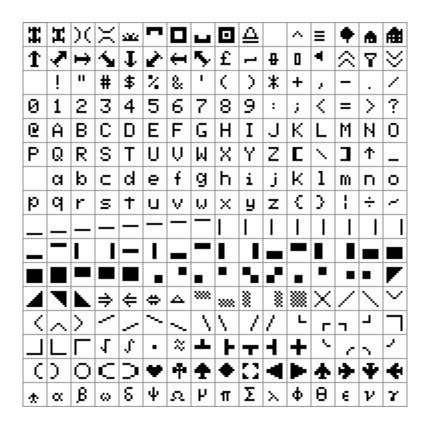


Figure 6. A character chart of the Ohio Scientific character set.

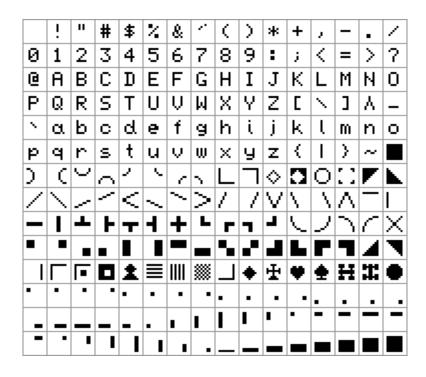


Figure 7. A character chart of the Robotron Z9001 character set.

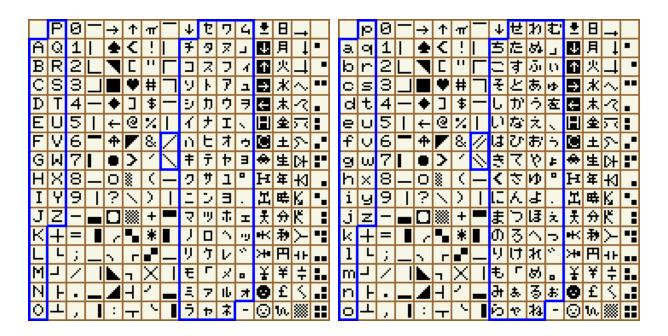


Figure 8. Character charts of the Sharp MZ Japanese character set, with differences between primary (uppercase, single box drawing diagonals, and katakana) and alternate (lowercase, double box drawing diagonals, and hiragana) highlighted in blue.

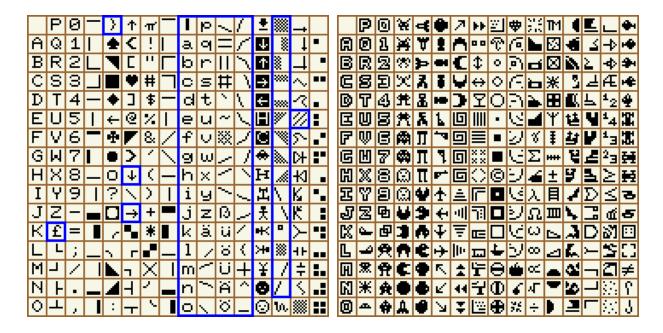


Figure 9. Character charts of the Sharp MZ European character set, with differences between Japanese and European primary sets highlighted in blue. The alternate set is entirely different.



Figure 10. A printed character chart of the Sharp X1 character set. (Sharp)

Figure 11. Character dump for the TRS-80 Model III shown on a Macintosh-based emulator, with U+1FBCB WHITE CROSS MARK highlighted in red.



Figure 12. Examples of art created using the Sharp MZ Japanese character set. (Text-Mode.org)



Figure 13. Title screen of a Sharp MZ program using outlined letters in the "UR SOFT" logo.

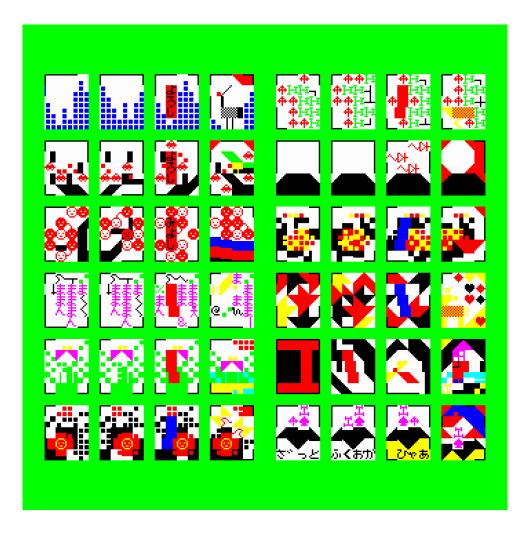


Figure 14. Hanafuda cards drawn using Sharp MZ characters.



Figure 15. Screen capture of a Windows-based editor for Sharp MZ art. (Text-Mode.org)

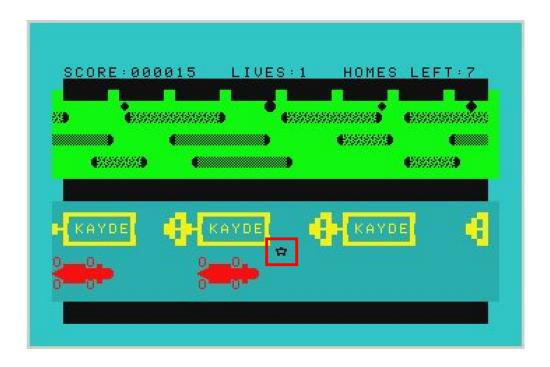
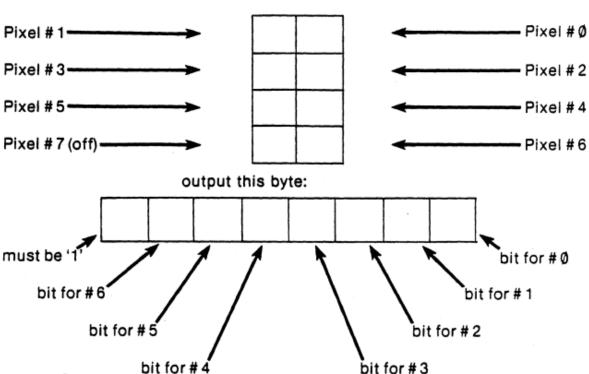


Figure 16. Screen capture of the Mattel Aquarius game *Phrogger* from 1983, with U+1CDFB UP-POINTING FROG highlighted in red. (vdSteenoven.com)

GRAPHICS CHARACTERS

Each of the character positions on the screen occupies the same area as eight pixels (4 high, 2 wide). Thus, pixels can be addressed in groups of eight at a time. To set pixels in a character position, the cursor is moved to that position, and then a byte is sent to the console output. This byte must have the highorder bit set to 1 to distinguish it from normal characters. The remaining seven bits are used to set 7 of the 8 pixels.

i.e., to write these pixels....



 Pixel # 4 Pixel #6

As shown above, pixel # 7 is off. To write a pixel with it on, send the inverse video command (ESC,B,Ø), then output the inverse for bits Ø through 6, i. e., 10000000b would print a blank graphics character; (ESC,B,0),1000000b would print a solid character.

With video mode on, 2 bytes are required for each graphic character. The Least Significant Bit of byte 1 controls pixel #7. The rest of the characters are controlled by byte #2 in the normal manner.

Figure 17. Illustration of the use of semigraphics to plot "pixels" on the Kaypro by displaying the appropriate 2×4 block graphic. (Kaypro)

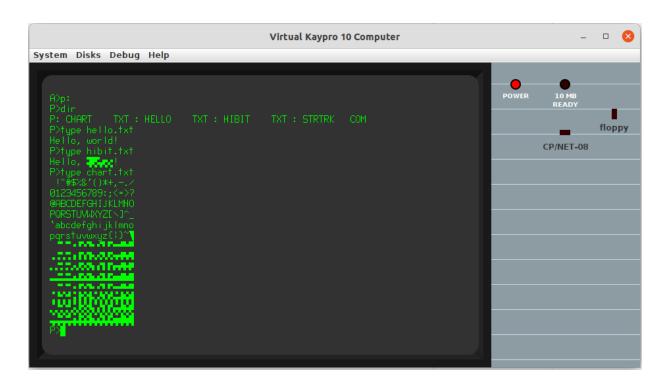


Figure 18. Screen shot of text files containing semigraphics characters being displayed in a Java-based Kaypro 10 emulator.

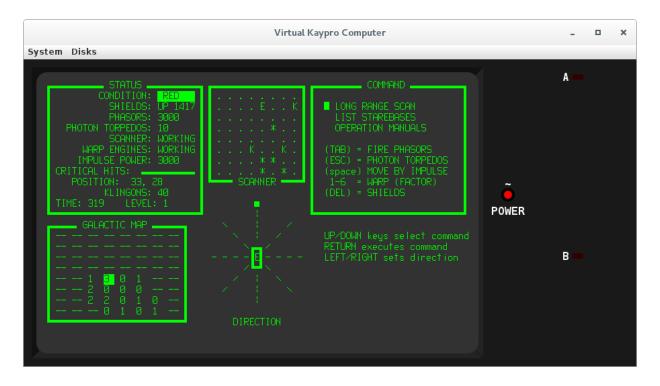


Figure 19. Screen shot of a Star Trek game running in a Java-based Kaypro emulator. Note the use of semigraphics for borders, in the manner of box-drawing characters. (Miller)

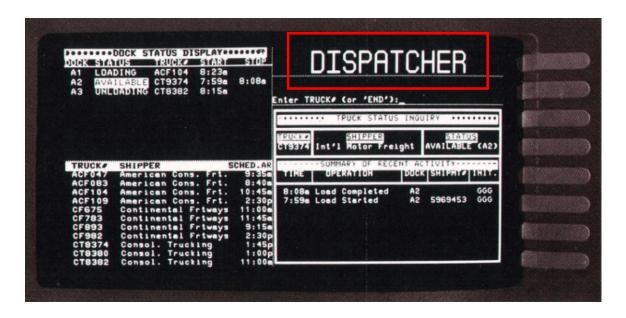
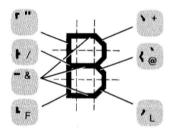


Figure 20. Image of an HP terminal with "large type" characters highlighted in red. (HP Journal)

Large Character Set

When LARGE CHAR is selected as the active alternate character set, you construct each large character by combining up to ten individual character segments. Each character segment corresponds to one of the alphanumeric or symbol keys (see figure B-8). For example, you construct the letter "prr using the following nine keystrokes:



As with any of the alternate character sets, you enable the Large Character set with a <50> control code (control-N) and disable it with a <51> control code (control-O).

Table B-3 shows the standard keystrokes (USASCII keyboard) for generating all of the available large characters.

Math Set

When MATH is selected as the active alternate character set, you can generate mathematical symbols using the alphanumeric and symbol keys (see figure B-9). Three of the symbols (left bracket, right bracket, and integral sign) require two or more characters, depending on how many screen rows the entire symbol is to encompass. Some examples of these symbols are as follows:



As with any of the alternate character sets, you enable the Math set with a **<SD>** control code (control-N) and disable it with a **<SI>** control code (control-O).



Figure B-8. Large Character Set Elements



Figure B-9. Math Set Elements

Figure 21. Excerpt from an HP terminal manual demonstrating the use of "large type" and math characters. (Hewlett-Packard Company)

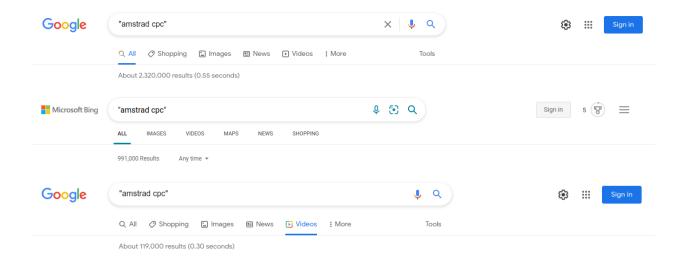


Figure 22. Search results for the Amstrad CPC.

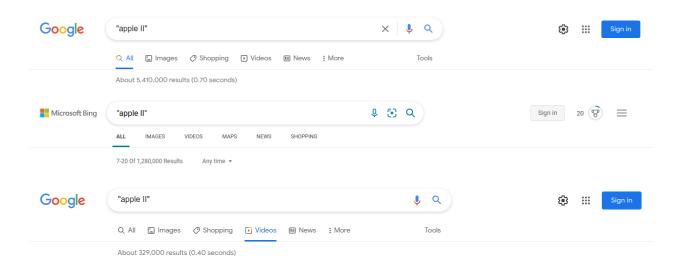


Figure 23. Search results for the Apple II.

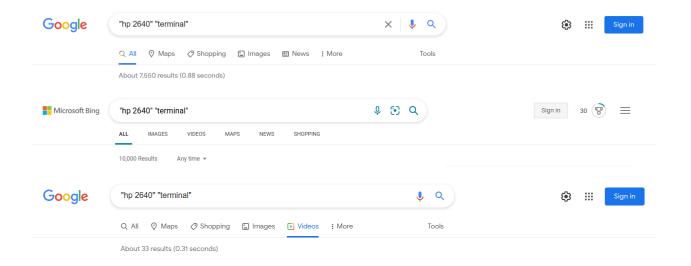


Figure 24. Search results for the HP 2640 series terminal.

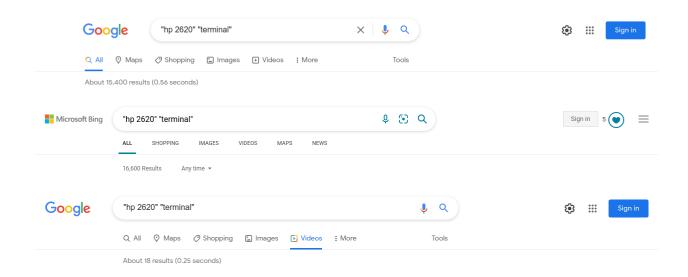


Figure 25. Search results for the HP 2620 series terminal.

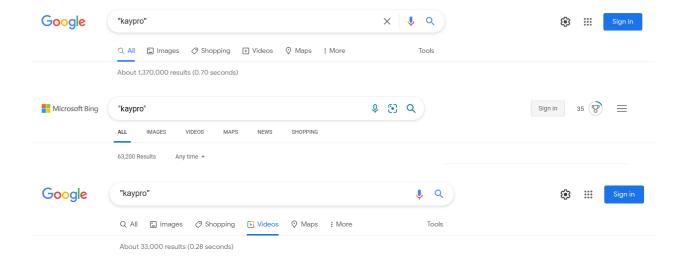


Figure 26. Search results for the Kaypro.

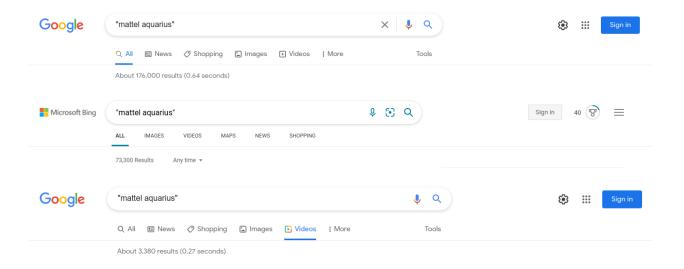


Figure 27. Search results for the Mattel Aquarius.

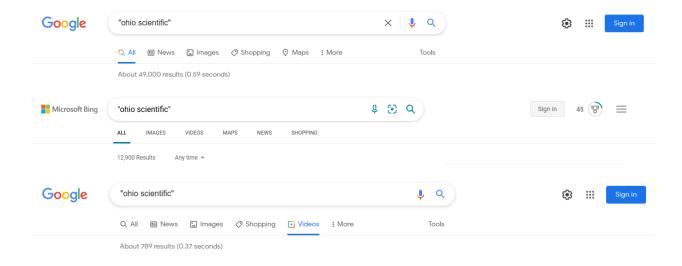


Figure 28. Search results for the Ohio Scientific.

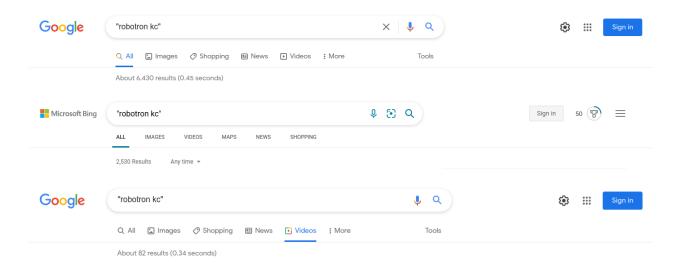


Figure 29. Search results for the Robotron KC.

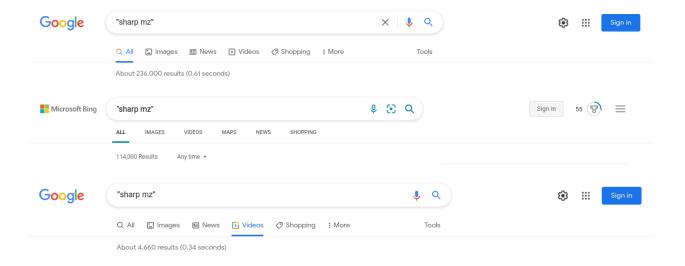


Figure 30. Search results for the Sharp MZ.

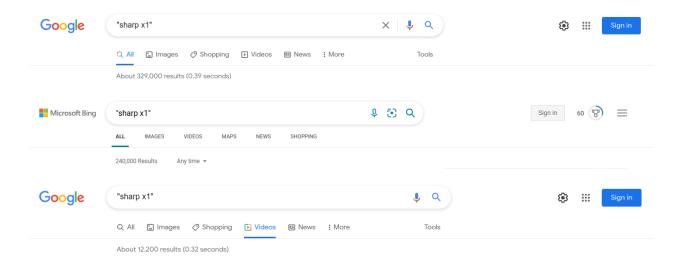


Figure 31. Search results for the Sharp X1.

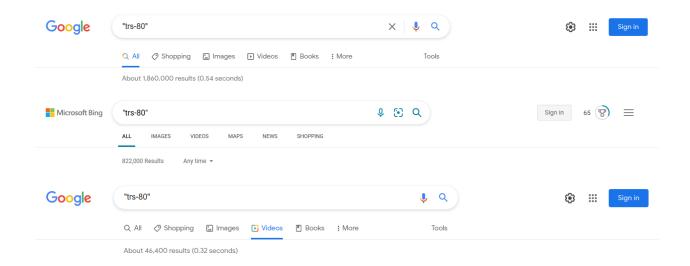


Figure 32. Search results for the TRS-80.

A. Administrative

1. Title

Proposal to add further characters from legacy computers and teletext to the UCS

2. Requester's name

Terminals Working Group (Rebecca Bettencourt et al.)

3. Requester type (Member body/Liaison/Individual contribution)

Individual contribution.

4. Submission date

2021-12-20

- 5. Requester's reference (if applicable)
- 6. Choose one of the following:

6a. This is a complete proposal

Yes.

6b. More information will be provided later

No.

B. Technical - General

1. Choose one of the following:

1a. This proposal is for a new script (set of characters)

Yes.

1b. Proposed name of script

Symbols for Legacy Computing Supplement.

1c. The proposal is for addition of character(s) to an existing block

No.

1d. Name of the existing block

2. Number of characters in proposal

731.

3. Proposed category (A-Contemporary; B.1-Specialized (small collection); B.2-Specialized (large collection); C-Major extinct;

D-Attested extinct; E-Minor extinct; F-Archaic Hieroglyphic or Ideographic; G-Obscure or questionable usage symbols)

Category B.1.

4a. Is a repertoire including character names provided?

Yes.

4b. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?

Yes.

4c. Are the character shapes attached in a legible form suitable for review?

Yes.

5a. Who will provide the appropriate computerized font (ordered preference: TrueType, or PostScript format) for publishing the standard?

Rebecca Bettencourt.

5b. If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:

Rebecca Bettencourt, FontForge.

6a. Are references (to other character sets, dictionaries, descriptive texts, etc.) provided?

Yes.

6b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?

Yes.

7. Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration, etc. (if yes please enclose information)?

Yes.

8. Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script.

See above.

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.

No.

2a. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?

Yes.

2b. If YES, with whom?

r/Amstrad (Amstrad CPC subreddit); Sharp MZ user community

2c. If YES, available relevant documents

3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?

Contemporary use by specialists and hobbyists.

4a. The context of use for the proposed characters (type of use; common or rare)

Rare.

4b. Reference

5a. Are the proposed characters in current use by the user community?

Yes.

5h If VES where?

Worldwide, but particularly in North America, Europe, and Japan.

6a. After giving due considerations to the principles in the P&P document, must the proposed characters be entirely in the BMP?

6b. If YES, is a rationale provided?

6c. If YES, reference

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?

Mostly yes, but this is not required.

8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?

Yes, the "outlined" digits and uppercase Latin letters can be considered presentation forms of U+0030 through U+0039 and U+0041 through U+005A, respectively.

8b. If YES, is a rationale for its inclusion provided?

Ves.

8c. If YES, reference

Included in proposal.

9a. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?

No.

9b. If YES, is a rationale for its inclusion provided?

9c. If YES, reference

10a. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?

Yes.

10b. If YES, is a rationale for its inclusion provided?

Yes.

10c. If YES, reference

The proposal document describes new semigraphics, some of which are superficially similar to existing characters.

11a. Does the proposal include use of combining characters and/or the use of composite sequences (see clauses 4.12 and 4.14 in ISO/IEC 10646-1:2000)?

No.

11b. If YES, is a rationale for such use provided?

11c. If YES, reference

11d. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?

11e. If YES, reference

12a. Does the proposal contain characters with any special properties such as control function or similar semantics?

No.

12b. If YES, describe in detail (include attachment if necessary)

13a. Does the proposal contain any Ideographic compatibility character(s)?

No.

13b. If YES, is the equivalent corresponding unified ideographic character(s) identified?