

The Ultimate Oldschool PC Font Pack v2.2: FONT LIST

- All fonts include the full [CP437\[→\]](#) (DOS/US) character range; fonts labeled "+Plus" have extended Unicode versions, too.
- Most of these fonts were made for CRT or LCD monitors that didn't necessarily have square pixels, unlike current displays. Alongside the simple square-pixel versions, these fonts have aspect-corrected variants to reproduce the original appearance.
- For fonts that *were* originally used in square-pixel resolutions (or close enough that the difference is negligible), no aspect-corrected variants are provided.

I. FONTS FROM THE IBM PC AND FAMILY

These are the original character sets provided with the IBM PC line (PC, XT, PCjr, AT, PS/2, etc.) in hardware or firmware, and with official add-on products from IBM, such as graphics adapters and certain versions of DOS. Naturally, they were also duplicated by a huge number of 3rd-party hardware manufacturers.

IBM PC SYSTEM BIOS

With pre-EGA video, the system BIOS provides the default 8x8 font for graphics mode (the firmware contains only the lower 128 ASCII characters; the upper half has to be loaded separately). For [EGA and up](#), IBM included the full version in the on-board video ROM, for text *and* graphics modes that require an 8x8 font.

The wide '2x' version is seen e.g. in 160x200 (PCjr) or 320x400 (VGA). The '2y' version is what you get in 640x200 modes.

Font/Charsets:	Aspect:	Sample text:
----- IBM BIOS 8x8; CP437, +Plus	Square 1:1	IBM BIOS ■ AaBbCcDd 0123456
	Correct 5:6	IBM BIOS ■ AaBbCcDd 0123456789
IBM BIOS-2x 8x8; CP437, +Plus	Square 2:1	IBM BIOS-2x ■ AaBbCc
	Correct 5:3	IBM BIOS-2x ■ AaBbCcD 012
IBM BIOS-2y 8x8; CP437, +Plus	Square 1:2	IBM BIOS-2y ■ AaBbCcDd 0123456789
	Correct 5:12	IBM BIOS-2y ■ AaBbCcDd 0123456789

IBM FIRST-GENERATION VIDEO - CGA/MDA

IBM's first two video solutions shared the same character ROM, which provided the text mode font: neither CGA nor MDA could redefine it. Cards for the US market contained the CP437 character set; the non-US characters in the 'Plus' fonts were adapted from localized ROMs off cards sold internationally (most of the Greek, Cyrillic and Hebrew blocks), plus manual additions.

CGA (COLOR/GRAPHICS ADAPTER) AND PCJR:

For CGA, the ROM contains two different 8x8 fonts usable in text mode. The default 'thick' variant differs from the [BIOS font](#) in only four characters (♣, ♠, *, S); PCjr text modes use this font too. The alternate 'thin' one is selectable in CGA only and requires hardware modification. I've included 1:1 (40-column) and half-width (80-column) versions for both of these.

Font/Charsets:	Aspect:	Sample text:
----- IBM CGA 8x8; CP437, +Plus	Square 1:1	IBM CGA ■ AaBbCcDd 0123456
	Correct 5:6	IBM CGA ■ AaBbCcDd 0123456789
IBM CGA-2y 8x8; CP437, +Plus	Square 1:2	IBM CGA-2y ■ AaBbCcDd 0123456789
	Correct 5:12	IBM CGA-2y ■ AaBbCcDd 0123456789
IBM CGAthn 8x8; CP437, +Plus	Square 1:1	IBM CGAthn ■ AaBbCcDd 0123
	Correct 5:6	IBM CGAthn ■ AaBbCcDd 0123456789
IBM CGAthn-2y 8x8; CP437, +Plus	Square 1:2	IBM CGAthn-2y ■ AaBbCcDd 0123456789
	Correct 5:12	IBM CGAthn-2y ■ AaBbCcDd 0123456789

MDA (MONOCHROME DISPLAY/PRINTER ADAPTER):

The same ROM includes the 14-scanline font used by the MDA for its single mode - 80-column text. Its characters are stored as 8 pixels wide, but displayed with an additional 9th column: blank for most glyphs, but for box/block-drawing chars it duplicates the 8th. The same font was used on the Hercules Graphics Card and a host of other clones.

Font/Charsets:	Aspect:	Sample text:
----- IBM MDA 9x14; CP437, +Plus	Square 1:1	IBM MDA ■ AaBbCcDd 0123456789
	Correct 2:3	IBM MDA ■ AaBbCcDd 0123456789

IBM SECOND-GENERATION VIDEO - EGA/MCGA/VGA

These adapters introduced fully programmable character sets, so DOS could now redefine them for international scripts - the multilingual 'Plus' versions here are based on various DOS code pages. 80-column text was evidently the main focus by this point: at 40 columns, the funny pixel aspect ratio makes the default font even *less* readable than CGA.

EGA (AND LATER):

The EGA's text modes (and 640x350 graphics mode) use the new 8x14 font by default. The 8x8 font is identical to the [PC BIOS](#) one, but it gets its own version, since the narrower aspect ratio in 350-line modes is specific to EGA:

Font/Charsets:	Aspect:	Sample text:
----- IBM EGA 8x14 8x14; CP437, +Plus	Square 1:1	IBM EGA 8x14 ■ AaBbCcDd 0123456789
	Correct 3:4	IBM EGA 8x14 ■ AaBbCcDd 0123456789

IBM EGA 8x14-2x 8x14; CP437, +Plus	Square 2:1	IBM EGA 8x14-2x ■ AaBbCcDd
	Correct 3:2	IBM EGA 8x14-2x ■ AaBbCcDd 01234567
IBM EGA 8x8 8x8; CP437, +Plus	Square 1:1	IBM EGA 8x8 ■ AaBbCcDd 0123
	Correct 3:4	IBM EGA 8x8 ■ AaBbCcDd 0123456789
IBM EGA 8x8-2x 8x8; CP437, +Plus	Square 2:1	IBM EGA 8x8-2x ■ AaB
	Correct 3:2	IBM EGA 8x8-2x ■ AaBbCcD 01

When the EGA is used with a monochrome monitor, character cells receive a bonus 9th column just like on MDA/Hercules. The 14-line font even sports wider variants of some glyphs for this purpose.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
IBM EGA 9x14 9x14; CP437, +Plus	Square 1:1	IBM EGA 9x14 ■ AaBbCcDd 0123456789
	Correct 2:3	IBM EGA 9x14 ■ AaBbCcDd 0123456789
IBM EGA 9x14-2x 9x14; CP437, +Plus	Square 2:1	IBM EGA 9x14-2x ■ AaBbCc
	Correct 4:3	IBM EGA 9x14-2x ■ AaBbCcDd 012345678
IBM EGA 9x8 9x8; CP437, +Plus	Square 1:1	IBM EGA 9x8 ■ AaBbCcDd 0
	Correct 2:3	IBM EGA 9x8 ■ AaBbCcDd 0123456789
IBM EGA 9x8-2x 9x8; CP437, +Plus	Square 2:1	IBM EGA 9x8-2x ■ A
	Correct 4:3	IBM EGA 9x8-2x ■ AaBbCcD 01

VGA/MCGA (AND LATER):

The PS/2 standards further modified the system font, with a character cell 16 pixels tall and a few stylistic changes ('0', '0' etc.).

With VGA, 9-dot character cells were now the default, and the resulting 9x16 glyphs make up the famous font which remains most strongly associated with ASCII art on the PC, and probably with the entire DOS era in general. The [EGA](#) sizes were also available, but with different aspect ratios due to the extra vertical resolution.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
IBM VGA 9x16 9x16; CP437, +Plus	Square 1:1	IBM VGA 9x16 ■ AaBbCcDd 0123456789
	Correct 3:4	IBM VGA 9x16 ■ AaBbCcDd 0123456789
IBM VGA 9x16-2x 9x16; CP437, +Plus	Square 2:1	IBM VGA 9x16-2x ■ AaBbCc
	Correct 3:2	IBM VGA 9x16-2x ■ AaBbCcDd 01234

IBM VGA 9x14 9x14; CP437, +Plus	Square 1:1	IBM VGA 9x14 ■ AaBbCcDd 0123456789
	Correct 3:4	IBM VGA 9x14 ■ AaBbCcDd 0123456789
IBM VGA 9x14-2x 9x14; CP437, +Plus	Square 2:1	IBM VGA 9x14-2x ■ AaBbCc
	Correct 3:2	IBM VGA 9x14-2x ■ AaBbCcDd 01234
IBM VGA 9x8 9x8; CP437, +Plus	Square 1:1	IBM VGA 9x8 ■ AaBbCcDd 0
	Correct 3:4	IBM VGA 9x8 ■ AaBbCcDd 012345678
IBM VGA 9x8-2x 9x8; CP437, +Plus	Square 2:1	IBM VGA 9x8-2x ■ A
	Correct 3:2	IBM VGA 9x8-2x ■ AaBbCcD

Plain old 8-dot characters were still available, both on VGA and on its lobotomized low-end cousin, MCGA (where they were the only option). The 8x8 size here was exactly the same as the [PC BIOS](#) font once again, so no sense in adding yet another version of it.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
IBM VGA 8x16 8x16; CP437, +Plus	Square 1:1	IBM VGA 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	IBM VGA 8x16 ■ AaBbCcDd 0123456789
IBM VGA 8x16-2x 8x16; CP437, +Plus	Square 2:1	IBM VGA 8x16-2x ■ AaBbCcDd
	Correct 5:3	IBM VGA 8x16-2x ■ AaBbCcDd 012345
IBM VGA 8x14 8x14; CP437, +Plus	Square 1:1	IBM VGA 8x14 ■ AaBbCcDd 0123456789
	Correct 5:6	IBM VGA 8x14 ■ AaBbCcDd 0123456789
IBM VGA 8x14-2x 8x14; CP437, +Plus	Square 2:1	IBM VGA 8x14-2x ■ AaBbCcDd
	Correct 5:3	IBM VGA 8x14-2x ■ AaBbCcDd 012345

OTHER IBM HARDWARE

3270 PC (IBM 5271):

This one has some [rather exotic video hardware\[>\]](#), but also offers a basic 80x25 text mode with a distinct, (mostly) sans-serif 9x14 font. Unlike most PC hardware fonts, the 9th column is stored in the actual bitmap data.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
IBM 3270pc 9x14; CP437	Square 1:1	IBM 3270pc ■ AaBbCcDd 0123456789
	Correct 2:3	IBM 3270pc ■ AaBbCcDd 0123456789

PGC (PROFESSIONAL GRAPHICS CONTROLLER):

IBM's first high-end PC graphics card has a 400-line text mode with an **8x16** character cell. It basically takes the 8x14 [EGA font](#) and adds two scanlines, which most characters simply use as extra padding.

Font/Charsets:	Aspect:	Sample text:
----- IBM PGC 8x16; CP437	Square 1:1	----- IBM PGC ■ AaBbCcDd 0123456789
	Correct 5:6	IBM PGC ■ AaBbCcDd 0123456789
IBM PGC-2x 8x16; CP437	Square 2:1	IBM PGC-2x ■ AaBbCcDd 01234
	Correct 5:3	IBM PGC-2x ■ AaBbCcDd 0123456789

PC CONVERTIBLE (IBM 5140):

Mostly based on CGA, the Convertible adds support for redefinable **8x8** charsets. The default is a rather elaborate serif font, which IBM also used as a basis for PC-DOS 3.20's LCD-specific codepages.

The squat, built-in monochrome LCD had square pixels at 640x200 (that's 16:5 - how's that for you widescreen fanatics?), but the optional external monitor was a regular 4:3 CRT, so the aspect-corrected versions are based on that.

Font/Charsets:	Aspect:	Sample text:
----- IBM Conv 8x8; CP437	Square 1:1	----- IBM Conv ■ AaBbCcDd 0123456
	Correct 5:6	IBM Conv ■ AaBbCcDd 0123456789
IBM Conv-2x 8x8; CP437	Square 2:1	IBM Conv-2x ■ AaBbCc
	Correct 5:3	IBM Conv-2x ■ AaBbCcD 01
IBM Conv-2y 8x8; CP437	Square 1:2	IBM Conv-2y ■ AaBbCcDd 0123456789
	Correct 5:12	IBM Conv-2y ■ AaBbCcDd 0123456789

PS/2 MODEL 30 (EARLY REVISION):

In the earliest variant of the PS/2 Model 30 (the 'rev. 0' BIOS dated 09/02/86), the built-in **8x16** font is slightly different from the [MCGA/VGA font](#) of the later units: "0", "O", "ß", and characters with descenders and umlauts are closer to their [EGA forms](#). The Model 30 is MCGA-only, so there is no 9-dot-wide version.

Font/Charsets:	Aspect:	Sample text:
----- IBM Model30r0 8x16; CP437	Square 1:1	----- IBM Model30r0 ■ AaBbCcDd 0123456789
	Correct 5:6	IBM Model30r0 ■ AaBbCcDd 0123456789
IBM Model30r0-2x 8x16; CP437	Square 2:1	IBM Model30r0-2x ■ AaBbCcDd
	Correct 5:3	IBM Model30r0-2x ■ AaBbCcDd 01234

PS/2 16-BIT ISA MODELS (ALTERNATE FONTS):

PS/2 models based on the 16-bit ISA bus (at least the 25-286, 30-286, 25 SX, 35 SX) include additional fonts in ROM, alongside the usual [VGA fonts](#). These are all rather nondescript, and I'm not aware of any software that ever actually used them; they're not documented and the video BIOS code doesn't seem to reference them, so such software is unlikely to exist.

Font/Charsets: -----	Aspect: -----	Sample text: -----
IBM Model3x Alt1 8x16; CP437	Square 1:1	IBM Model3x Alt1 ■ AaBbCcDd 0123456789
	Correct 5:6	IBM Model3x Alt1 ■ AaBbCcDd 0123456789
IBM Model3x Alt2 8x16; CP437	Square 1:1	IBM Model3x Alt2 ■ AaBbCcDd 0123456789
	Correct 5:3	IBM Model3x Alt2 ■ AaBbCcDd 0123456789
IBM Model3x Alt3 8x16; CP437	Square 1:1	IBM Model3x Alt3 ■ AaBbCcDd 0123456789
	Correct 5:3	IBM Model3x Alt3 ■ AaBbCcDd 0123456789
IBM Model3x Alt4 8x16; CP437	Square 1:1	IBM Model3x Alt4 ■ AaBbCcDd 0123456789
	Correct 5:3	IBM Model3x Alt4 ■ AaBbCcDd 0123456789

PS/55:

The [PS/2's Japanese cousin\[→\]](#) had generously large bitmap fonts to support that language's various scripts. Since full CJK fonts are outside the scope of this collection, the version here is a **CUSTOM REMAPPING** to CP437 (with supplements).

Internally the bitmaps are 12x24 dots. Later, they were replicated in IBM DOS/V for generic PCs; at least the half-width Latin alphanumerics appear to be exactly the same, so this version is almost identical to the ["JP-24" font](#) in the DOS/V section. Almost, but not quite: the [PS/55's display adapter\[→\]](#) [padded the characters\[→\]](#) to 13x29, so this font follows suit.

Font/Charsets: -----	Aspect: -----	Sample text: -----
IBM PS/55 re. 13x29; CP437	Square 1:1	IBM PS/55 re ■ AaBbCcDd 0123456789

8514/A, XGA, XGA-2, IMAGE ADAPTER/A - ADAPTER INTERFACE DRIVERS:

These are a bit of an exception here, since they're not really hardware fonts. IBM's more advanced PC video standards had, among other things, hardware-accelerated text output for their high-resolution graphics modes. These were accessed with an API called simply the Adapter Interface ("AI"), and the AI drivers for DOS contained some fonts for this purpose. (There's also an 8x14 size, but it basically copies the EGA/VGA font.) True text modes remained purely a VGA function, although XGA(-2) had integrated the VGA part into the chipset, so they still used [the same fonts as VGA](#).

Font/Charsets: -----	Aspect: -----	Sample text: -----
IBM XGA-AI 7x15 7x15; CP437	Square 1:1	IBM XGA-AI 7x15 ■ AaBbCcDd 0123456789
IBM XGA-AI 12x20 12x20; CP437, +Plus	Square 1:1	IBM XGA-AI 12x20 ■ AaBbCcDd 012345
IBM XGA-AI 12x23 12x23; CP437	Square 1:1	IBM XGA-AI 12x23 ■ AaBbCcDd 012345

FONTS FROM SPECIFIC IBM PC-DOS VERSIONS

These are NOT what most would call "the" DOS fonts, since DOS normally uses the video hardware's character set (or .CPI versions that strongly resemble it). Still, a number of DOS versions provided different fonts for specific purposes.

ISO-COMPLIANT IBM PC-DOS FONTS:

Starting with IBM PC-DOS 5.02 (and later in MS-DOS as well), the "ISO.CPI" file included a bunch of new 8x16 codepage fonts. These were intended to comply with the (then-new) ISO standard for display ergonomics, namely ISO 9241-3:1992, "Ergonomics - Office Work with Visual Display Terminals (VDTs) - Visual Display Requirements", which went into extreme detail regarding character height, stroke width, size uniformity, spacing, and so on so forth.

Font/Charsets: -----	Aspect:	Sample text: -----
IBM DOS IS08 8x16; CP437	Square 1:1	IBM DOS IS08 ■ AaBbCcDd 0123456789
	Correct 5:6	IBM DOS IS08 ■ AaBbCcDd 0123456789
IBM DOS IS08-2x 8x16; CP437	Square 2:1	IBM DOS IS08-2x ■ AaBbCcDd
	Correct 5:3	IBM DOS IS08-2x ■ AaBbCcDd 01234
IBM DOS IS09 9x16; CP437	Square 1:1	IBM DOS IS09 ■ AaBbCcDd 0123456789
	Correct 3:4	IBM DOS IS09 ■ AaBbCcDd 0123456789
IBM DOS IS09-2x 9x16; CP437	Square 2:1	IBM DOS IS09-2x ■ AaBbCc
	Correct 3:2	IBM DOS IS09-2x ■ AaBbCcDd 01

DOS/V - JAPANESE VERSIONS OF IBM (PC-)DOS / MS-DOS:

Technically these aren't hardware/text mode fonts, so they're another exception here. DOS/V (V for VGA, not 5.0) ran in permanent graphics mode to support Japanese full-width glyphs and double-byte charsets, so you could choose from [a whole heap of resolutions\[→\]](#) (all with a square pixel ratio) and character cell sizes.

However, the following versions do *not* include the Japanese scripts. They're **REMAPPED/REMADE** for codepage 437/US, so they preserve only the half-width Latin alphanumerics, with custom additions to fill out the rest.

These originate from the various IBM versions of PC-DOS/V. The **8x19** and **12x30** fonts mostly duplicate their smaller siblings, with more generous vertical padding. For the 24/30-pixel versions, cf. [IBM PS/55](#):

Font/Charsets: -----	Aspect:	Sample text: -----
DOS/V re. JPN12 6x12; CP437	Square 1:1	DOS/V re. JPN12 ■ AaBbCcDd 0123456789
DOS/V re. JPN16 8x16; CP437	Square 1:1	DOS/V re. JPN16 ■ AaBbCcDd 0123456789
DOS/V re. JPN19 8x19; CP437	Square 1:1	DOS/V re. JPN19 ■ AaBbCcDd 0123456789
DOS/V re. JPN24 12x24; CP437	Square 1:1	DOS/V re. JPN24 ■ AaBbCcDd 0123456789

DOS/V re. JPN30
12x30; CP437

Square
1:1

DOS/V re. JPN30 ■ AaBbCcDd 0123456789

Microsoft came in a bit later in the game; MS-DOS/V used a similar system, through it redesigned (and renamed) the font files:

Font/Charsets:

Aspect:

Sample text:

DOS/V re. ANK16
8x16; CP437

Square
1:1

DOS/V re. ANK16 ■ AaBbCcDd 0123456789

DOS/V re. ANK19
8x19; CP437

Square
1:1

DOS/V re. ANK19 ■ AaBbCcDd 0123456789

DOS/V re. ANK24
12x24; CP437

Square
1:1

DOS/V re. ANK24 ■ AaBbCcDd 0123456789

DOS/V re. ANK30
12x30; CP437

Square
1:1

DOS/V re. ANK30 ■ AaBbCcDd 0123456789

CHINESE PC-DOS VERSIONS (TAIWAN & PRC):

These were technically DOS/V as well, and the ASCII portion of the 24/30-pixel fonts is identical to the Japanese version, so these larger charsets are not repeated here.

In Taiwan, the Latin fonts unique to PC-DOS T7.0/V do have native CP437 encoding, so no remapping was needed. In fact they look like they're probably derived from OS/2:

Font/Charsets:

Aspect:

Sample text:

DOS/V TWN16
8x16; CP437

Square
1:1

DOS/V TWN16 ■ AaBbCcDd 0123456789

DOS/V TWN19
8x19; CP437

Square
1:1

DOS/V TWN19 ■ AaBbCcDd 0123456789

The fonts from the PRC version are once again REMAPPED, and slightly adjusted for legibility to boot. Interestingly, they look quite close to those used on the Japanese [IBM JX\[→\]](#) (still missing from this collection).

Font/Charsets:

Aspect:

Sample text:

DOS/V re. PRC16
8x16; CP437

Square
1:1

DOS/V re. PRC16 ■ AaBbCcDd 0123456789

DOS/V re. PRC19
8x19; CP437

Square
1:1

DOS/V re. PRC19 ■ AaBbCcDd 0123456789

II. FONTS FROM PC-COMPATIBLE COMPUTERS

The deluge of IBM PC compatibles included some outliers that extended on IBM's video standards, although most of them didn't. A lot of the clone makers contented themselves with cloning IBM's character bitmaps, too. These are naturally absent from this collection - only those with their own font designs are included here.

ACER INC. / MULTITECH ELECTRONICS

ACER 710:

Acer's 'Turbo XT' machine from ~1987 includes an on-board video controller for CGA, MDA, and Hercules compatibility. The Acer folks went through the trouble of modifying IBM's glyph designs, albeit not very daringly. A bit more obvious in the monochrome font, where they toned down the serifs a little like [ATI](#) did.

This CGA font was also seen earlier in some Multitech cards from the mid-1980, before the rebranding to Acer, e.g. the CGA-PC PB85048-3A (but not all of them; the Multitech MPF-PC CGA for one pretty much ripped the IBM font).

Font/Charsets: -----	Aspect: -----	Sample text: -----
Acer710 CGA 8x8; CP437	Square 1:1	Acer710 CGA ■ AaBbCcDd 0123
	Correct 5:6	Acer710 CGA ■ AaBbCcDd 0123456789
Acer710 CGA-2y 8x8; CP437	Square 1:2	Acer710 CGA-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Acer710 CGA-2y ■ AaBbCcDd 0123456789
Acer710 Mono 9x14; CP437	Square 1:1	Acer710 Mono ■ AaBbCcDd 0123456789
	Correct 2:3	Acer710 Mono ■ AaBbCcDd 0123456789

AMSTRAD CONSUMER ELECTRONICS

AMSTRAD PC1512 / PC1640 / PPC:

These computers all feature a nicely readable 8x8 font with a consistent style; very small differences exist between models. Characters are wider and more tightly spaced than in IBM's fonts. Besides the default codepage 437, Danish and Greek fonts were available, and the PC1640/PPC models added Portuguese; I used these as a basis for the 'Plus' unicode version. The PPC line adds built-in monochrome support, along with the 9x14 font that this entails, but it's nearly identical to that of the [IBM MDA](#).

Font/Charsets: -----	Aspect: -----	Sample text: -----
Amstrad PC 8x8; CP437, +Plus	Square 1:1	Amstrad PC ■ AaBbCcDd 0123
	Correct 5:6	Amstrad PC ■ AaBbCcDd 0123456789
Amstrad PC-2y 8x8; CP437, +Plus	Square 1:2	Amstrad PC-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Amstrad PC-2y ■ AaBbCcDd 0123456789

AST RESEARCH

AST PREMIUM EXEC:

This laptop came with a 3:4, 640x480 VGA LCD. At only 400 scanlines, normal 8x16 VGA text would appear squashed, so the display could be set to "Expand mode", which enables 8x19 characters for a square-pixel 80x25 text mode. AST's version of DOS 5.0 includes 19-scanline fonts for multiple codepages, which I've combined into the 'Plus' version here.

Font/Charsets:	Aspect:	Sample text:
----- AST PremiumExec 8x19; CP437, +Plus	Square 1:1	----- AST PremiumExec ■ AaBbCcDd 0123456789

AT&T INFORMATION SYSTEMS

AT&T PC6300:

The rebadged Olivetti M24, with its enhanced CGA-compatible video, introduced 400-line text and graphics modes for increased resolution. These supported an 8x16 character set, which was similar to the [IBM MDA](#) font, but with more of a slab serif style on the uppercase letters, and more consistent metrics for the lowercase and accented Latin characters. This is the text mode version - in the 640x400 graphics mode, the only difference is a more rounded 'h' (identical to the IBM MDA one). The 8x8 BIOS font, on the other hand, was exactly the same as [IBM's](#).

Font/Charsets:	Aspect:	Sample text:
----- AT&T PC6300 8x16; CP437	Square 1:1	----- AT&T PC6300 ■ AaBbCcDd 0123456789
	Correct 5:6	AT&T PC6300 ■ AaBbCcDd 0123456789
AT&T PC6300-2x 8x16; CP437	Square 2:1	AT&T PC6300-2x ■ AaBbCcDd 0
	Correct 5:3	AT&T PC6300-2x ■ AaBbCcDd 0123456

COMPAQ COMPUTER CORP.

COMPAQ PORTABLE III, PORTABLE 386:

In terms of video these two portables are identical: both are CGA-compatible, but add an extended 640x400 resolution and allow redefinable characters. The default font is loaded from the BIOS, rather than a dedicated ROM. The orange plasma screen uses square pixels, so the 1:1 fonts here are already aspect-correct.

Font/Charsets:	Aspect:	Sample text:
----- Compaq Port3 8x16; CP437	Square 1:1	----- Compaq Port3 ■ AaBbCcDd 0123456789
	Correct 5:6	Compaq Port3 ■ AaBbCcDd 0123456789
Compaq Port3-2x 8x16; CP437	Square 2:1	Compaq Port3-2x ■ AaBbCcDd 0
	Correct 5:3	Compaq Port3-2x ■ AaBbCcDd 0123456

COMPAQ-DOS (ALTERNATE FONTS):

Compaq's OEM versions of MS-DOS include their own lighter versions of the system font, loadable from a command-line utility. These versions come from Compaq-DOS v3.31; later versions introduced slight differences, but chiefly in the way of adding more of those weird little gaps in the glyphs. These fonts aren't specific to a video mode/resolution, so there's no "correct" pixel aspect as such.

Font/Charsets:	Aspect:	Sample text:
----- CompaqThin 8x8 8x8; CP437	Square 1:1	----- CompaqThin 8x8 ■ AaBbCcDd Ø
CompaqThin 8x14 8x14; CP437	Square 1:1	CompaqThin 8x14 ■ AaBbCcDd 0123456789
CompaqThin 8x16 8x16; CP437	Square 1:1	CompaqThin 8x16 ■ AaBbCcDd 0123456789

CORONA DATA SYSTEMS / CORDATA

CORDATA PPC-21:

Corona rode the initial wave of PC compatibles, and was praised for its high-quality text displays. This particular 'luggable' has 640x325 mono graphics, but in the 80-column text mode, each character is 16 dots horizontally - twice the usual resolution. With the original CRT's 1:3 pixel aspect, the result is very well-defined.

Font/Charsets:	Aspect:	Sample text:
----- Cordata PPC-21 16x13; CP437, +Plus	Square 1:2	----- Cordata PPC-21 ■ AaBbCcDd 0123456789
	Correct 1:3	Cordata PPC-21 ■ AaBbCcDd 0123456789

CORDATA PPC-400:

This 1984 portable increased the text resolution even further: the monochrome CRT now handled 400 scanlines, and character cells were 16x16. At 80 columns, you effectively have a pixel resolution of 1280x400 - much sharper than even VGA and later. Another very nice font which deserves a 'Plus' enhancement.

Font/Charsets:	Aspect:	Sample text:
----- Cordata PPC-400 16x16; CP437, +Plus	Square 1:2	----- Cordata PPC-400 ■ AaBbCcDd 0123456789
	Correct 5:12	Cordata PPC-400 ■ AaBbCcDd 0123456789

DATA GENERAL CORP.

DATA GENERAL/ONE (FIRST MODEL):

Known from the minicomputer market, DG introduced in 1984 what was probably the first true PC-compatible laptop with a full-sized 4:3 LCD panel. Alas, the display panel was remembered mostly for its atrociously poor contrast, and perhaps that was the reason for the alternate font with its heavier weight. However, it's also possible that it was used as a substitute for high-intensity CGA

text, since the panel couldn't handle multiple shades of gray; to emulate such a behavior, these fonts have both regular and bold styles.

Font/Charsets:	Aspect:	Sample text:
----- DG One 8x8; CP437	Square 1:1	----- DG One ■ AaBbCcDd 012345678
	Correct 5:6	DG One ■ AaBbCcDd 0123456789
(Bold)	Square 1:1	DG One ■ AaBbCcDd 012345678
	Correct 5:6	DG One ■ AaBbCcDd 0123456789
DG One-2y 8x8; CP437	Square 1:2	DG One-2y ■ AaBbCcDd 0123456789
	Correct 5:12	DG One-2y ■ AaBbCcDd 0123456789
(Bold)	Square 1:2	DG One-2y ■ AaBbCcDd 0123456789
	Correct 5:12	DG One-2y ■ AaBbCcDd 0123456789

HEWLETT-PACKARD CO.

HP 100LX/200LX PALMTOP PCS:

HP's successful PDAs from the mid '90s were very much PC compatible, form factor notwithstanding, and came with MS-DOS and lots of other goodies in ROM. These models were 80186- and CGA-compatible, but the display system had a few more tricks up its sleeve such as zoomable text modes with different font sizes to match.

The built-in charsets were multilingual - Latin alphabets only, but the 'Plus' versions here include even more custom enhancements.

Font/Charsets:	Aspect:	Sample text:
----- HP 100LX 6x8 6x8; CP437, +Plus	Square 1:1	----- HP 100LX 6x8 ■ AaBbCcDd 0123456789
HP 100LX 6x8-2x 6x8; CP437, +Plus	Square 2:1	HP 100LX 6x8-2x ■ AaBbCcDd
HP 100LX 8x8 8x8; CP437, +Plus	Square 1:1	HP 100LX 8x8 ■ AaBbCcDd 012
HP 100LX 8x8-2x 8x8; CP437, +Plus	Square 2:1	HP 100LX 8x8-2x ■ Aa
HP 100LX 10x11 10x11; CP437, +Plus	Square 1:1	HP 100LX 10x11 ■ AaBbCcDd 01
HP 100LX 16x12 16x12; CP437, +Plus	Square 1:1	HP 100LX 16x12 ■ AaBbC

ITT INFORMATION SYSTEMS

ITT XTRA:

An early (1984) PC clone, although this font comes from the 1985 BIOS (v2.0), with the upper ASCII part courtesy of ITT's version of MS-DOS. A squarish, (mostly) sans-serif design that somehow looks like a cross between the earlier and later versions of the Amiga Topaz font.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
ITT Xtra 8x8; CP437	Square 1:1	ITT Xtra ■ AaBbCcDd 0123456
	Correct 5:6	ITT Xtra ■ AaBbCcDd 0123456789
ITT Xtra-2y 8x8; CP437	Square 1:2	ITT Xtra-2y ■ AaBbCcDd 0123456789
	Correct 5:12	ITT Xtra-2y ■ AaBbCcDd 0123456789

KAYPRO CORP.

KAYPRO 2000 (GRAPHICS MODE):

One of the first PC-compatible laptops. The text-mode font was pretty much the same as the IBM CGA, but the BIOS (i.e. graphics mode) one is quite different, with thin strokes and sort of a 'techno' look. Interestingly the built-in LCD came in [two form factors](#)[>]: the aspect-correct versions are based on the larger screen; the smaller one has 1:1 pixels (or close enough) at 640x200.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
Kaypro2K G 8x8; CP437	Square 1:1	Kaypro2K G ■ AaBbCcDd 01234
	Correct 5:4	Kaypro2K G ■ AaBbCcDd
Kaypro2K G-2y 8x8; CP437	Square 1:2	Kaypro2K G-2y ■ AaBbCcDd 0123456789
	Correct 5:8	Kaypro2K G-2y ■ AaBbCcDd 0123456789

LEADING EDGE HARDWARE PRODUCTS

LEADING EDGE PC MODEL M:

See the [Sperry PC \(HT3070-03\)](#), a somewhat improved version marketed by another vendor.

LEADING EDGE PC MODEL D:

The rather successful Model D was another system with a dual mode on-board video controller, which could be switched to CGA or monochrome, and the respective ROM fonts shared the same basic style between them. (I'm not certain that my source for the CGA charset was 100% correct, so please let me know if you own this PC and want to help out.)

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
LE Model D CGA 8x8; CP437	Square 1:1	LE Model D CGA ■ AaBbCcDd 0
	Correct 5:6	LE Model D CGA ■ AaBbCcDd 1234567

LE Model D CGA-2y
8x8; CP437

Square
1:2

LE Model D CGA-2y ■ AaBbCcDd 0123456789

Correct
5:12

LE Model D CGA-2y ■ AaBbCcDd 0123456789

LE Model D Mono
9x14; CP437

Square
1:1

LE Model D Mono ■ AaBbCcDd 0123456789

Correct
2:3

LE Model D Mono ■ AaBbCcDd 0123456789

MICRO BYTE SYSTEMS

MICRO BYTE PC230:

An interesting Australian computer based on the NEC V30 CPU, with built-in video hardware that could handle CGA, monochrome (Hercules) and EGA graphics. The firmware was extended by a 'SoftBIOS' loaded off the system disk, and at least some versions supported an extended "EGA+" mode, which accounts for the presence of an 8x16-pixel font.

Font/Charsets:

Aspect:

Sample text:

MBytePC230 CGA
8x8; CP437

Square
1:1

MBytePC230 CGA ■ AaBbCcDd 0

Correct
5:6

MBytePC230 CGA ■ AaBbCcDd 1234567

MBytePC230 CGA-2y
8x8; CP437

Square
1:2

MBytePC230 CGA-2y ■ AaBbCcDd 0123456789

Correct
5:12

MBytePC230 CGA-2y ■ AaBbCcDd 0123456789

MBytePC230 EGA
8x14; CP437

Square
1:1

MBytePC230 EGA ■ AaBbCcDd 0123456789

Correct
3:4

MBytePC230 EGA ■ AaBbCcDd 0123456789

MBytePC230 Mono
9x14; CP437

Square
1:1

MBytePC230 Mono ■ AaBbCcDd 0123456789

Correct
2:3

MBytePC230 Mono ■ AaBbCcDd 0123456789

MBytePC230 8x16
8x16; CP437

Square
1:1

MBytePC230 8x16 ■ AaBbCcDd 0123456789

Correct
5:6

MBytePC230 8x16 ■ AaBbCcDd 0123456789

NEC HOME ELECTRONICS

NEC MULTISPEED:

NEC's 1986 answer to IBM's [PC Convertible](#) was a laptop based on its own 10MHz V30 CPU, 8086-compatible but more advanced. The supertwist LCD display provides a CGA-compatible 640x200 resolution with 8 gray levels. In text mode, a thin-stroke font represents normal intensity, and a bolder version is used for high intensity (there's also a DIP switch to reverse that assignment).

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
NEC MultiSpeed 8x8; CP437	Square 1:1	NEC MultiSpeed ■ AaBbCcDd 01
	Correct 3:5	NEC MultiSpeed ■ AaBbCcDd 0123456789
(Bold)	Square 1:1	NEC MultiSpeed ■ AaBbCcDd 01
	Correct 3:5	NEC MultiSpeed ■ AaBbCcDd 0123456789
NEC MultiSpeed-2x 8x8; CP437	Square 2:1	NEC MultiSpeed ■ AaBb
	Correct 6:5	NEC MultiSpeed ■ AaBbCcDd 0123456789
(Bold)	Square 2:1	NEC MultiSpeed ■ AaBb
	Correct 6:5	NEC MultiSpeed ■ AaBbCcDd 0123456789

NIXDORF COMPUTER AG

NIXDORF 8810 M15:

This 10MHz laptop (manufactured by Matsushita) features a 4:3 monochrome LCD and CGA-level compatibility. As the resolution is 640x400, the character cell is doubled in size to 8x16, with an atypically heavy-weight font.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
Nix8810 M15 8x16; CP437	Square 1:1	Nix8810 M15 ■ AaBbCcDd 0123456789
	Correct 5:6	Nix8810 M15 ■ AaBbCcDd 0123456789

NIXDORF 8810 M16:

A 286 model - once again with line-doubled CGA emulation on a 4:3 640x400 panel, and a more standard-looking 8x16 font this time around. There was also a VGA version, but that one used generic copies of the IBM fonts.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
Nix8810 M16 8x16; CP437	Square 1:1	Nix8810 M16 ■ AaBbCcDd 0123456789
	Correct 5:6	Nix8810 M16 ■ AaBbCcDd 0123456789

NIXDORF 8810 M35:

The M35 is a desktop machine, once again sourced from Matsushita, with a conservative 4.77MHz 8088 CPU and an on-board CGA controller. (There's a possibility that it also supports monochrome, with a corresponding 14-line font; if you have a source, please drop me a line.)

Font/Charsets:	Aspect:	Sample text:
Nix8810 M35 8x8; CP437	Square 1:1	Nix8810 M35 ■ AaBbCcDd 1234
	Correct 5:6	Nix8810 M35 ■ AaBbCcDd 0123456789
Nix8810 M35-2y 8x8; CP437	Square 1:2	Nix8810 M35-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Nix8810 M35-2y ■ AaBbCcDd 0123456789

OLIVETTI PERSONAL COMPUTERS

OLIVETTI M24:

See [AT&T PC6300](#), the rebadged model for the US market.

OLIVETTI M15, M15 PLUS:

These two 80c88-based portables share a CGA-resolution (640x200), 4:3 monochrome display, with a distinct system font which shaves one pixel off the usual cap/ascender height. That reduces the tendency of adjacent rows to stick together, and makes text more legible than the average 8x8 job.

Font/Charsets:	Aspect:	Sample text:
Olivetti M15 8x8; CP437	Square 1:1	Olivetti M15 ■ AaBbCcDd 1234
	Correct 5:6	Olivetti M15 ■ AaBbCcDd 0123456789
Olivetti M15-2y 8x8; CP437	Square 1:2	Olivetti M15-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Olivetti M15-2y ■ AaBbCcDd 0123456789

OLIVETTI M211V, M316, D33:

See [CL GD-610/620 'Stingray'](#) (these laptops used Cirrus Logic's mobile VGA chipset).

OLIVETTI MS-DOS (3.30A, ALTERNATE FONTS):

This particular OEM version of MS-DOS comes with an inexplicably large EGA/VGA code page file, which includes more character sets than its header and metadata indicate. For some unknown reason, four of these are plain old CP 437, but use an original thin-stroke design which comes in two widths and two heights.

Font/Charsets:	Aspect:	Sample text:
OlivettiThin 8x14 8x14; CP437	Square 1:1	OlivettiThin 8x14 ■ AaBbCcDd 0123456789
	Correct 5:6	OlivettiThin 8x14 ■ AaBbCcDd 0123456789
OlivettiThin 9x14 9x14; CP437	Square 1:1	OlivettiThin 9x14 ■ AaBbCcDd 0123456789
	Correct 3:4	OlivettiThin 9x14 ■ AaBbCcDd 0123456789

OlivettiThin 8x16 8x16; CP437	Square 1:1	OlivettiThin 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	OlivettiThin 8x16 ■ AaBbCcDd 0123456789
OlivettiThin 9x16 9x16; CP437	Square 1:1	OlivettiThin 9x16 ■ AaBbCcDd 0123456789
	Correct 3:4	OlivettiThin 9x16 ■ AaBbCcDd 0123456789

SANYO BUSINESS SYSTEMS

SANYO MBC-550/555:

3.58-MHz 8088 computers in a "pizza-box" form factor (likely a repurposed Sanyo VCR chassis). They were introduced in 1983 as the cheapest PC clones of their time, although for a number of reasons they weren't all that IBM-compatible - they should really be in the "semi-compatibles" section, but I've kept them here next to their younger MBC brothers.

The display hardware is better than CGA, with 8 colors at 640x200, but its 8x8 font still sticks pretty closely to IBM's (with only subtle differences, as in the slashes) so it's here mostly for completeness' sake.

Font/Charsets: ----- SanyoMBC55x 8x8; CP437	Aspect: ----- Square 1:1	Sample text: ----- SanyoMBC55x ■ AaBbCcDd 0123
	Correct 5:6	SanyoMBC55x ■ AaBbCcDd 0123456789
SanyoMBC55x-2y 8x8; CP437	Square 1:2	SanyoMBC55x-2y ■ AaBbCcDd 0123456789
	Correct 5:12	SanyoMBC55x-2y ■ AaBbCcDd 0123456789

SANYO MBC-775/885:

The 775 was much more of a true compatible, and perhaps the first portable PC clone (really a "luggable") to come with a color RGB CRT; The 885 was the hard-drive version. The built-in video appears to be true CGA this time, but they go a bit more out there with the character design here: see that weird serpentine 'S', stroked 'Z', curvy 'l' (not to mention foreign objects like the 'Ç'/'æ').

Font/Charsets: ----- SanyoMBC775 8x8; CP437	Aspect: ----- Square 1:1	Sample text: ----- SanyoMBC775 ■ AaBbCcDd 0123
	Correct 5:6	SanyoMBC775 ■ AaBbCcDd 0123456789
SanyoMBC775-2y 8x8; CP437	Square 1:2	SanyoMBC775-2y ■ AaBbCcDd 0123456789
	Correct 5:12	SanyoMBC775-2y ■ AaBbCcDd 0123456789

SANYO MBC-16:

I do not have much information about this computer, beyond the fact that it has CGA (and perhaps mono?) capabilities. As a matter of fact, I need a better source for the font(s) - the upper/non-ASCII half here can be considered a placeholder. If you own one, please get in touch; the same 8x8 font also appears to be used on the MBC-670, and perhaps others.

Font/Charsets:	Aspect:	Sample text:
----- SanyoMBC16 8x8; CP437	Square 1:1	SanyoMBC16 ■ AaBbCcDd 01234
	Correct 5:6	SanyoMBC16 ■ AaBbCcDd 0123456789
SanyoMBC16-2y 8x8; CP437	Square 1:2	SanyoMBC16-2y ■ AaBbCcDd 0123456789
	Correct 5:12	SanyoMBC16-2y ■ AaBbCcDd 0123456789

SCHNEIDER COMPUTER DIVISION

SCHNEIDER EUROPC/EUROPC II:

After partnering with Amstrad to sell the 8-bit CPC in the German-speaking market, Schneider came up with PC/XT clones using the same "computer-in-a-keyboard" form factor. Both include an on-board video chip which handles CGA and Hercules graphics, and provide fonts in the expected formats, although they're not all that different from IBM's [CGA](#) and [MDA](#) fonts respectively:

Font/Charsets:	Aspect:	Sample text:
----- EuroPC CGA 8x8; CP437	Square 1:1	EuroPC CGA ■ AaBbCcDd 0123456
	Correct 5:6	EuroPC CGA ■ AaBbCcDd 0123456789
EuroPC CGA-2y 8x8; CP437	Square 1:2	EuroPC CGA-2y ■ AaBbCcDd 0123456789
	Correct 5:12	EuroPC CGA-2y ■ AaBbCcDd 0123456789
EuroPC Mono 9x14; CP437	Square 1:1	EuroPC Mono ■ AaBbCcDd 0123456789
	Correct 2:3	EuroPC Mono ■ AaBbCcDd 0123456789

SEEQUA COMPUTER CORP.

SEEQUA CHAMELEON:

Although this is an interesting dual-CPU (Z80+i8088) luggable, the PC-compatible half of its split personality is compatible enough to be included in this category. Text and graphics output are CGA-type, and the 8x8 font doesn't try very hard to distinguish itself from IBM's original.

Font/Charsets:	Aspect:	Sample text:
----- SeequaCM 8x8; CP437	Square 1:1	SeequaCM ■ AaBbCcDd 0123456
	Correct 5:6	SeequaCM ■ AaBbCcDd 0123456789
SeequaCM-2y 8x8; CP437	Square 1:2	SeequaCM-2y ■ AaBbCcDd 0123456789
	Correct 5:12	SeequaCM-2y ■ AaBbCcDd 0123456789

SHARP CORP.

SHARP PC-3000:

Designed by DIP Research like the earlier [Atari Portfolio](#), this 80C88-based palmtop computer is more of an actual PC compatible. Its square-pixel 640x200 monochrome LCD panel displays CGA graphics (aspect ratio issues aside), with some adjustment options, like inverting the screen colors for a CRT-like white on black, and swapping the default **8x8** font for a lighter one using a hotkey.

Font/Charsets:	Aspect:	Sample text:
----- Sharp PC3K 6x8; CP437	Square 1:1	----- Sharp PC3K ■ AaBbCcDd 01234
Sharp PC3K-2x 6x8; CP437	Square 2:1	Sharp PC3K-2x ■ AaBbC
Sharp PC3K Alt 8x8; CP437	Square 1:1	Sharp PC3K Alt ■ AaBbCcDd 01
Sharp PC3K Alt-2x 8x8; CP437	Square 2:1	Sharp PC3K Alt-2x ■ A

SPERRY CORP.

SPERRY PC (HT3070-03):

The Sperry PC was basically the original [Leading Edge](#) PC (latter designated the "Model M") sold concurrently by a different vendor, but Sperry souped up their version a little. Most interestingly, there was an optional adapter/monitor combo that pulled off such tricks as 256 colors at 320x200, and hi-res 640x400 video (using **8x16**-dot characters) with 16-color text/graphics overlay: not bad at all for 1984! Both the CGA and hi-res fonts are reproduced here.

Font/Charsets:	Aspect:	Sample text:
----- SperryPC CGA 8x8; CP437	Square 1:1	----- SperryPC CGA ■ AaBbCcDd 012
	Correct 5:6	SperryPC CGA ■ AaBbCcDd 123456789
SperryPC CGA-2y 8x8; CP437	Square 1:2	SperryPC CGA-2y ■ AaBbCcDd 0123456789
	Correct 5:12	SperryPC CGA-2y ■ AaBbCcDd 0123456789
SperryPC 8x16 8x16; CP437	Square 1:1	SperryPC 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	SperryPC 8x16 ■ AaBbCcDd 0123456789

TANDY CORP.

TANDY VIDEO I - EARLY TANDY 1000 SERIES (1000, A, HD, EX, SX, TX, HX):

One peculiarity of the 1000 series is the 225-scanline text mode, using an **8x9** character cell to improve readability. All but the earliest models (pre-EX) boot into this mode by default, so the 8x9 variant is more commonly seen in text mode. You can still set "TV mode" for standard 200-line text, and graphics modes are always 200 pixels tall in any case, so the **8x8** size is still around.

Font/Charsets:	Aspect:	Sample text:
Tandy1K-I 200L 8x8; CP437	Square 1:1	Tandy1K-I 200L ■ AaBbCcDd 0
	Correct 5:6	Tandy1K-I 200L ■ AaBbCcDd 1234567
Tandy1K-I 200L-2x 8x8; CP437	Square 2:1	Tandy1K-I 200L-2x ■ A
	Correct 5:3	Tandy1K-I 200L-2x ■ AaBbC
Tandy1K-I 200L-2y 8x8; CP437	Square 1:2	Tandy1K-I 200L-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Tandy1K-I 200L-2y ■ AaBbCcDd 0123456789
Tandy1K-I 225L 8x9; CP437	Square 1:1	Tandy1K-I 225L ■ AaBbCcDd 0
Tandy1K-I 225L-2y 8x9; CP437	Square 1:2	Tandy1K-I 225L-2y ■ AaBbCcDd 0123456789

TANDY VIDEO II - LATER TANDY 1000 SERIES (SL, SL/2, TL, TL/2, TL/3, RL):

By this point, MS-DOS 3.x was included in the system ROM; but the Tandy Video II chip still couldn't redefine fonts for code-page support, so two character sets from MS-DOS were built in: CP437 (US) and CP850 (Western European Latin). As they're identical to the DOS .CPI fonts, the expanded 'Plus' version here is based on the latter.

Font/Charsets:	Aspect:	Sample text:
Tandy1K-II 200L 8x8; CP437, +Plus	Square 1:1	Tandy1K-II 200L ■ AaBbCcDd 0
	Correct 5:6	Tandy1K-II 200L ■ AaBbCcDd 1234567
Tandy1K-II 200L-2x 8x8; CP437, +Plus	Square 2:1	Tandy1K-II 200L-2x ■
	Correct 5:3	Tandy1K-II 200L-2x ■ AaBb
Tandy1K-II 200L-2y 8x8; CP437, +Plus	Square 1:2	Tandy1K-II 200L-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Tandy1K-II 200L-2y ■ AaBbCcDd 0123456789
Tandy1K-II 225L 8x9; CP437, +Plus	Square 1:1	Tandy1K-II 225L ■ AaBbCcDd 0
Tandy1K-II 225L-2y 8x9; CP437, +Plus	Square 1:2	Tandy1K-II 225L-2y ■ AaBbCcDd 0123456789

The Video II chip could also drive a monochrome monitor (for MDA/Hercules modes), hence the additional 9x14 font. This one was cribbed from MS-DOS as well, so it lacks the wider 'M'/'T'/'W'/etc., which usually show up in hardware 9-dot fonts.

Font/Charsets:	Aspect:	Sample text:
Tandy1K-II Mono 9x14; CP437	Square 1:1	Tandy1K-II Mono ■ AaBbCcDd 0123456789
	Correct 2:3	Tandy1K-II Mono ■ AaBbCcDd 0123456789

TELEVIDEO SYSTEMS

TELEVIDEO TS-1605/TS-1605H (TELE-PC/TELE-XT):

Two 1984 machines, pretty much identical except for the 'H' model having a hard drive. Not all that special in terms of capabilities, but the VLSI chipset allowed most functions to reside on board, and the design was based on TeleVideo's own terminals, complete with a swivel-mounted 14" monitor (green monochrome, but CGA-capable).

Coming from terminals, TeleVideo put in the effort to improve legibility by making the character cells taller (**8x9**), so there's actually some spacing between rows of text. The default font is still clearly based on [IBM's thin CGA font](#); a jumper changes this to a heavier double-dot one (not yet extracted for this collection).

Font/Charsets:	Aspect:	Sample text:
----- TelePC 9x8; CP437	Square 1:1	----- TelePC ■ AaBbCcDd 012345678
TelePC-2y 9x8; CP437	Square 1:2	TelePC-2y ■ AaBbCcDd 0123456789

TOSHIBA CORP.

TOSHIBA SATELLITE SERIES:

The earlier Satellite laptops were released when text mode was still a relevant use-case, and their built-in VGA fonts share a consistent sans-serif design which is quite distinctive and readable. Optionally, the text display could be stretched to fill the 4:3 screen, so the aspect-corrected versions conform to the expected VGA pixel aspects.

This version of the font comes from the Satellite 4200; some other models introduced a few (negligible) differences.

Font/Charsets:	Aspect:	Sample text:
----- ToshibaSat 8x8 8x8; CP437, +Plus	Square 1:1	----- ToshibaSat 8x8 ■ AaBbCcDd 01
	Correct 5:6	ToshibaSat 8x8 ■ AaBbCcDd 01234567
ToshibaSat 9x8 9x8; CP437, +Plus	Square 1:1	ToshibaSat 9x8 ■ AaBbCcDd
	Correct 3:4	ToshibaSat 9x8 ■ AaBbCcDd 0123456
ToshibaSat 8x14 8x14; CP437, +Plus	Square 1:1	ToshibaSat 8x14 ■ AaBbCcDd 0123456789
	Correct 5:6	ToshibaSat 8x14 ■ AaBbCcDd 0123456789
ToshibaSat 9x14 9x14; CP437, +Plus	Square 1:1	ToshibaSat 9x14 ■ AaBbCcDd 0123456789
	Correct 3:4	ToshibaSat 9x14 ■ AaBbCcDd 0123456789
ToshibaSat 8x16 8x16; CP437, +Plus	Square 1:1	ToshibaSat 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	ToshibaSat 8x16 ■ AaBbCcDd 0123456789
ToshibaSat 9x16 9x16; CP437, +Plus	Square 1:1	ToshibaSat 9x16 ■ AaBbCcDd 0123456789
	Correct 3:4	ToshibaSat 9x16 ■ AaBbCcDd 0123456789

TOSHIBA T-SERIES:

This doesn't apply to the original T1x00 laptops, which used duplicates of IBM's fonts, but to later models starting somewhere around 1986's T3100. They came with either amber plasma displays or LCD panels, and allowed the selection of single-dot or double-dot fonts - both of which had a custom-made stylized design.

The aspect-corrected variants are based on the gas-plasma models (e.g. T3100, T3200, T5100) which sported 640x400 pixels on their 4:3 screens.

Font/Charsets:	Aspect:	Sample text:
ToshibaTxL1 8x8 8x8; CP437	Square 1:1	ToshibaTxL1 8x8 ■ AaBbCcDd
	Correct 5:6	ToshibaTxL1 8x8 ■ AaBbCcDd 012345
ToshibaTxL1 8x16 8x16; CP437, +Plus	Square 1:1	ToshibaTxL1 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	ToshibaTxL1 8x16 ■ AaBbCcDd 0123456789
ToshibaTxL2 8x8 8x8; CP437	Square 1:1	ToshibaTxL2 8x8 ■ AaBbCcDd
	Correct 5:6	ToshibaTxL2 8x8 ■ AaBbCcDd 012345
ToshibaTxL2 8x16 8x16; CP437, +Plus	Square 1:1	ToshibaTxL2 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	ToshibaTxL2 8x16 ■ AaBbCcDd 0123456789

MISCELLANEOUS CLONES - BIOS/OEM FONTS

These all replace the 8x8 PC BIOS font in their respective machines, so they only ever show up in graphics mode, and include just the lower 128 ASCII characters. The other 128 were added manually to complete the CP437 character set, with varying amounts of effort to keep the design consistent (and most of these didn't merit much effort).

AMERICAN MEGATRENDS (AMI) BIOS:

See the 8x8 [AMI EGA](#) font, which is identical to what AMI used in its system BIOS firmware.

COPAM ELECTRONICS BIOS:

A prolific PC clone manufacturer from Taiwan. At least for version 3.86 of their generic XT-class BIOS (1985), the author seemingly grabbed a copy of the standard CGA font and proceeded to add/remove pixels pretty much at random. The result is about as hideous as you'd expect.

Font/Charsets:	Aspect:	Sample text:
Copam BIOS 8x8; CP437	Square 1:1	Copam BIOS ■ AaBbCcDd 01234
	Correct 5:6	Copam BIOS ■ AaBbCcDd 0123456789
Copam BIOS-2y 8x8; CP437	Square 1:2	Copam BIOS-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Copam BIOS-2y ■ AaBbCcDd 0123456789

DTK/ERSO XT CLONE BIOS:

Yet another variation on the CGA character set, without much of an effort put into it. This particular font is taken from v2.42 of the generic Taiwanese clone BIOS, although the other revisions were probably every bit as nondescript.

Font/Charsets:	Aspect:	Sample text:
----- DTK BIOS 8x8; CP437	Square 1:1	----- DTK BIOS ■ AaBbCcDd 0123456
	Correct 5:6	DTK BIOS ■ AaBbCcDd 0123456789
DTK BIOS-2y 8x8; CP437	Square 1:2	DTK BIOS-2y ■ AaBbCcDd 0123456789
	Correct 5:12	DTK BIOS-2y ■ AaBbCcDd 0123456789

PHOENIX TECHNOLOGIES BIOS (V2.X):

Phoenix's brand of BIOSes (at least two known revisions: v2.27, v2.51) used an interesting graphics mode font with a bit of an Amiga style to it, although the capitals and numerals also resemble the classic Atari/Namco arcade font somewhat. As a result of the Phoenix BIOS line's success, this font can be found on quite a number of machines -- from generic beige boxes to Commodore's PC-compatible range (Commodore PC-I/II/III/Colt).

Font/Charsets:	Aspect:	Sample text:
----- Phoenix BIOS 8x8; CP437	Square 1:1	----- Phoenix BIOS ■ AaBbCcDd 012
	Correct 5:6	Phoenix BIOS ■ AaBbCcDd 012345678
Phoenix BIOS-2y 8x8; CP437	Square 1:2	Phoenix BIOS-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Phoenix BIOS-2y ■ AaBbCcDd 0123456789

PHOENIX TECHNOLOGIES BIOS (V3.X):

See the 8x8 [Phoenix EGA](#) font – at least some later iterations (e.g. v3.13) of Phoenix's system BIOS replaced their internal font with that one.

VTECH LASER XT BIOS:

Another nasty-looking font, this time a thin-stroked one, which seems to imitate a disheveled version of the alternate/thin CGA font. In sharp contrast, it clearly has the happiest-looking smiley faces in the bunch.

Font/Charsets:	Aspect:	Sample text:
----- VTech BIOS 8x8; CP437	Square 1:1	----- VTech BIOS ■ AaBbCcDd 01234
	Correct 5:6	VTech BIOS ■ AaBbCcDd 0123456789
VTech BIOS-2y 8x8; CP437	Square 1:2	VTech BIOS-2y ■ AaBbCcDd 0123456789
	Correct 5:12	VTech BIOS-2y ■ AaBbCcDd 0123456789

III. FONTS FROM 3RD-PARTY VIDEO HARDWARE

This is where we cover all non-IBM graphics cards that were available for PC compatibles over the years (without being restricted to particular machines). Here too, the great majority of chipset/board makers manufacturers never really bothered to depart from IBM's original character designs, but there are quite

ACER INC. / MULTITECH ELECTRONICS

MULTITECH PC-CGA (PB85048):

See [Acer 710](#); this board's 8x8 font was reused for the 710 after the company's name change.

ACER M3125 VGA:

At least some VGA boards based on Acer's M3125 video BIOS used their own 8x8 font design. For the other standard VGA character sizes, the bitmaps matched those of IBM, so only the 8x8 charset has been included here.

Font/Charsets:	Aspect:	Sample text:
----- Acer VGA 8x8 8x8; CP437	----- Square 1:1	----- Acer VGA 8x8 ■ AaBbCcDd 012
	Correct 5:6	Acer VGA 8x8 ■ AaBbCcDd 123456789
Acer VGA 8x8-2y 8x8; CP437	Square 1:2	Acer VGA 8x8-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Acer VGA 8x8-2y ■ AaBbCcDd 0123456789
Acer VGA 9x8 9x8; CP437	Square 1:1	Acer VGA 9x8 ■ AaBbCcDd
	Correct 3:4	Acer VGA 9x8 ■ AaBbCcDd 12345678

AMERICAN MEGATRENDS, INC.

VIDEO CARDS W/AMI EGA BIOS:

EGA boards using AMI's video BIOS (e.g. the Matrox PG1281) have the following fonts, which cannot seem to decide whether they're serif or sans-serif, often in the same character. The 8x8 size also shows up in machines based on AMI's *system* BIOS, from the 8088 to the 486 era at least, as the default graphics mode font for CGA.

Font/Charsets:	Aspect:	Sample text:
----- AMI EGA 8x8 8x8; CP437	----- Square 1:1	----- AMI EGA 8x8 ■ AaBbCcDd 0123
	Correct 5:6	AMI EGA 8x8 ■ AaBbCcDd 123456789
AMI EGA 8x8-2y 8x8; CP437	Square 1:2	AMI EGA 8x8-2y ■ AaBbCcDd 0123456789
	Correct 5:12	AMI EGA 8x8-2y ■ AaBbCcDd 0123456789

AMI EGA 8x14 8x14; CP437	Square 1:1	AMI EGA 8x14 ■ AaBbCcDd 0123456789
	Correct 3:4	AMI EGA 8x14 ■ AaBbCcDd 0123456789
AMI EGA 9x14 9x14; CP437	Square 1:1	AMI EGA 9x14 ■ AaBbCcDd 0123456789
	Correct 2:3	AMI EGA 9x14 ■ AaBbCcDd 0123456789

ATI TECHNOLOGIES

ATI WONDER (AND LATER) VIDEO CARDS:

This series of fonts includes every standard cell size supported by the usual CGA/EGA/VGA modes, and is used on a very wide range of ATI cards: most of the EGA/VGA Wonder, Mach 32/64, Rage, and similar lines. The style is maintained across sizes, and the 9-column variants have their own alternate wide glyphs ('M', 'T' and co.) to replace their 8-column counterparts.

Font/Charsets: -----	Aspect:	Sample text: -----
ATI 8x8 8x8; CP437	Square 1:1	ATI 8x8 ■ AaBbCcDd 01234567
	Correct 5:6	ATI 8x8 ■ AaBbCcDd 0123456789
ATI 8x8-2y 8x8; CP437	Square 1:2	ATI 8x8-2y ■ AaBbCcDd 0123456789
	Correct 5:12	ATI 8x8-2y ■ AaBbCcDd 0123456789
ATI 9x8 9x8; CP437	Square 1:1	ATI 9x8 ■ AaBbCcDd 01234
	Correct 3:4	ATI 9x8 ■ AaBbCcDd 0123456789
ATI 8x14 8x14; CP437	Square 1:1	ATI 8x14 ■ AaBbCcDd 0123456789
	Correct 5:6	ATI 8x14 ■ AaBbCcDd 0123456789
ATI 9x14 9x14; CP437	Square 1:1	ATI 9x14 ■ AaBbCcDd 0123456789
	Correct 3:4	ATI 9x14 ■ AaBbCcDd 0123456789
ATI 8x16 8x16; CP437	Square 1:1	ATI 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	ATI 8x16 ■ AaBbCcDd 0123456789
ATI 9x16 9x16; CP437	Square 1:1	ATI 9x16 ■ AaBbCcDd 0123456789
	Correct 3:4	ATI 9x16 ■ AaBbCcDd 0123456789

ATI SMALL WONDER GRAPHICS SOLUTION:

ATI's enhanced CGA/MDA/HGC clone offered (among other things) the ability to output 132-column text. The card has a specific 'thin' font for this purpose; on a monochrome display (MDA-compatible), 132-

column mode is achieved by using 6 pixel wide character cells. This results in a pixel aspect of 5:8 on a typical 3:4 monitor. (The normal CGA/MDA fonts on the card are identical to IBM's, rather than the usual ATI fonts seen above.)

Font/Charsets:	Aspect:	Sample text:
----- ATI SmallW 6x8 6x8; CP437	Square 1:1	----- ATI SmallW 6x8 ■ AaBbCcDd 0123456789
	Correct 5:8	ATI SmallW 6x8 ■ AaBbCcDd 0123456789

CIRRUS LOGIC INC.

CL-GD510/520 ('EAGLE II') VGA:

This 1988 Super VGA chipset offered a few extended video modes, true register-level backward compatibility with EGA/CGA/MDA/HGC, and the ability to drive the pre-VGA digital monitors required by those earlier standards. But this impressive level of fidelity didn't extend to VGA text mode appearance - the 8/9x16 fonts got quite the overhaul.

Font/Charsets:	Aspect:	Sample text:
----- CL EagleII 8x16 8x16; CP437	Square 1:1	----- CL EagleII 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	CL EagleII 8x16 ■ AaBbCcDd 0123456789
CL EagleII 9x16 9x16; CP437	Square 1:1	CL EagleII 9x16 ■ AaBbCcDd 012345678
	Correct 3:4	CL EagleII 9x16 ■ AaBbCcDd 0123456789

CL-GD5320 ('EAGLE III') VGA:

A later (1990) revision of the Eagle II, which simplifies integration by requiring less external circuitry, and adds some more modes and features along the way. The 'III' designation only seems to show up in a support utility or two, but it makes for a catchier font name than "CL-GD5320".

Again, only the 8x16/9x16 font designs are unique to this model. They're styled like those of its older brother the II, just with the glyph heights toned back down a notch.

Font/Charsets:	Aspect:	Sample text:
----- CL EagleIII 8x16 8x16; CP437	Square 1:1	----- CL EagleIII 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	CL EagleIII 8x16 ■ AaBbCcDd 0123456789
CL EagleIII 9x16 9x16; CP437	Square 1:1	CL EagleIII 9x16 ■ AaBbCcDd 01234567
	Correct 3:4	CL EagleIII 9x16 ■ AaBbCcDd 0123456789

CL-GD610/620 ('STINGRAY') MOBILE VGA:

No relation to Hercules' Stingray 3dfx boards. This 1989 SVGA controller was specialized for flat-panel output, so it cropped up in a variety of portable machines from the likes of GRiD Systems, Olivetti, and others. For industry-standard 25-row text on 640x480 square-pixel displays, there's a

new **8x19** font size; and as flat panels were often monochrome at the time, the **x16/x19** sizes also get bold versions, which stand in for high-intensity text.

CRTs are supported too, but the fonts used in that case are identical to the [Eagle II](#).

Font/Charsets:	Aspect:	Sample text:
----- CL Stingray 8x16 8x16; CP437	Square 1:1	----- CL Stingray 8x16 ■ AaBbCcDd 0123456789
(Bold)	Square 1:1	CL Stingray 8x16 ■ AaBbCcDd 0123456789
CL Stingray 8x19 8x19; CP437	Square 1:1	CL Stingray 8x19 ■ AaBbCcDd 0123456789
(Bold)	Square 1:1	CL Stingray 8x19 ■ AaBbCcDd 0123456789

EAGLE COMPUTER

EAGLE SPIRIT CGA BOARD (ALTERNATE FONTS):

Eagle Computer produced a number of early PC compatibles; the Spirit was a 1983 luggable with a built-in 9" CRT. This CGA board was released for that specific machine, although it's (probably) usable with any IBM or clone. The default font is yet another identical copy of IBM's CGA charset, but interestingly the character ROM contains 3 more alternate fonts.

The first one ('Alt1') is identical to the system font from Eagle's 1630 and PC-2 computers, if not others. The other two are sci-fi & fantasy-inspired fonts: clearly not meant for "serious" use, but pretty elaborate and well-done regardless.

Font/Charsets:	Aspect:	Sample text:
----- EagleSpCGA Alt1 8x8; CP437	Square 1:1	----- EagleSpCGA Alt1 ■ AaBbCcDd
	Correct 5:6	EagleSpCGA Alt1 ■ AaBbCcDd 01234
EagleSpCGA Alt1-2y 8x8; CP437	Square 1:2	EagleSpCGA Alt1-2y ■ AaBbCcDd 0123456789
	Correct 5:12	EagleSpCGA Alt1-2y ■ AaBbCcDd 0123456789
EagleSpCGA Alt2 8x8; CP437	Square 1:1	EagleSpCGA Alt2 ■ AaBbCcDd
	Correct 5:6	EagleSpCGA Alt2 ■ AaBbCcDd 01234
EagleSpCGA Alt2-2y 8x8; CP437	Square 1:2	EagleSpCGA Alt2-2y ■ AaBbCcDd 0123456789
	Correct 5:12	EagleSpCGA Alt2-2y ■ AaBbCcDd 0123456789
EagleSpCGA Alt3 8x8; CP437	Square 1:1	EagleSpCGA Alt3 ■ AaBbCc
	Correct 5:6	EagleSpCGA Alt3 ■ AaBbCcDd 01234
EagleSpCGA Alt3-2y 8x8; CP437	Square 1:2	EagleSpCGA Alt3-2y ■ AaBbCcDd 0123456789
	Correct 5:12	EagleSpCGA Alt3-2y ■ AaBbCcDd 0123456789

EPSON CORP.

EPSON MGA Q205A:

The Q205A is a "Multi-mode Graphics Adapter" - the 'M' doesn't just stand for monochrome, as this board could be toggled for either CGA or Hercules compatibility. As such, it was provided with 8x8 and 9x14 ROM fonts to match, and even went the extra mile of including an alternate single-dot CGA font.

This board was often sold with the earlier Epson Equity-series computers, and the same fonts were used for the Equity LT laptop.

Font/Charsets:	Aspect:	Sample text:
----- EpsonMGA 8x8; CP437	Square 1:1	----- EpsonMGA ■ AaBbCcDd 0123456
	Correct 5:6	EpsonMGA ■ AaBbCcDd 123456789
EpsonMGA-2y 8x8; CP437	Square 1:2	EpsonMGA-2y ■ AaBbCcDd 0123456789
	Correct 5:12	EpsonMGA-2y ■ AaBbCcDd 0123456789
EpsonMGA Alt 8x8; CP437	Square 1:1	EpsonMGA Alt ■ AaBbCcDd 012
	Correct 5:6	EpsonMGA Alt ■ AaBbCcDd 123456789
EpsonMGA Alt-2y 8x8; CP437	Square 1:2	EpsonMGA Alt-2y ■ AaBbCcDd 0123456789
	Correct 5:12	EpsonMGA Alt-2y ■ AaBbCcDd 0123456789
EpsonMGA Mono 9x14; CP437	Square 1:1	EpsonMGA Mono ■ AaBbCcDd 0123456789
	Correct 2:3	EpsonMGA Mono ■ AaBbCcDd 0123456789

EVEREX SYSTEMS

EVEREX MICRO ENHANCER:

The Micro Enhancer series was a line of so-called "super EGA" boards with various extended feature sets. The ME Deluxe EV-657 supported (among other things) some proprietary text modes in a rare example of odd character widths, e.g. 132x44 characters at 5x8 dots each, and 94x51 at 7x8.

The EV-659A was a similar board, which supported resolutions such as 640x480 (although it wasn't VGA-compatible). It is assumed that this explains the 8x16 VBIOS font.

Font/Charsets:	Aspect:	Sample text:
----- EverexME 5x8 5x8; CP437	Square 1:1	----- EverexME 5x8 ■ AaBbCcDd 0123456789
	Correct 3:4	EverexME 5x8 ■ AaBbCcDd 123456789
EverexME 7x8 7x8; CP437	Square 1:1	EverexME 7x8 ■ AaBbCcDd 0123456
	Correct 5:6	EverexME 7x8 ■ AaBbCcDd 123456789
EverexME 8x16 8x16; CP437	Square 1:1	EverexME 8x16 ■ AaBbCcDd 0123456789

INTEGRAPHICS SYSTEMS

INTEGRAPHICS IGA 1680:

A mid-1990s 2D-accelerated SVGA chip, found in PCI video boards like the Shuttle HOT-137/139. IGS's video BIOS contains the usual set of IBM-derived fonts, except for the **8x16/9x16** sizes, which seem to be updated takes on earlier ones from [Cirrus Logic](#).

Font/Charsets:	Aspect:	Sample text:
----- IGS VGA 8x16 8x16; CP437	Square 1:1	IGS UGA 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	IGS UGA 8x16 ■ AaBbCcDd 0123456789
IGS VGA 9x16 9x16; CP437	Square 1:1	IGS UGA 9x16 ■ AaBbCcDd 012345678
	Correct 3:4	IGS UGA 9x16 ■ AaBbCcDd 0123456789

PARADISE SYSTEMS

PARADISE VGA PLUS:

This SVGA board had its own set of extended modes, and the DOS drivers included a set of fonts for them. At least on non-multisync monitors, they were rendered as 7 rather than 8 dots wide: 132x43 characters at **7x9** pixels each, and 132x25 at the **7x16** size. These are clearly thin-stroke versions of the original IBM bitmap fonts.

Font/Charsets:	Aspect:	Sample text:
----- Paradise132 7x9 7x9; CP437	Square 1:1	Paradise132 7x9 ■ AaBbCcDd 01234567
	Correct 3:5	Paradise132 7x9 ■ AaBbCcDd 123456789
Paradise132 7x16 7x16; CP437	Square 1:1	Paradise132 7x16 ■ AaBbCcDd 0123456789
	Correct 3:5	Paradise132 7x16 ■ AaBbCcDd 123456789

PHOENIX TECHNOLOGIES

VIDEO CARDS W/PHOENIX EGA BIOS:

Phoenix's EGA firmware has these character sets built in. They all follow a consistent design with less rounded curves, sharper diagonals, and thinner strokes on the more elaborate characters. All the usual character sizes for EGA text modes make an appearance, complete with the monochrome-friendly **9x14** size.

Some of these cards were based on C&T's 82C435 controller, and unlike standard EGA it also supported a 400-line text mode; so there's an **8x16** variant (with an unusually small x-height), but no VGA-compliant 8x16. The **8x8** size can also be seen in machines based on the Phoenix *system* BIOS v3.x, as the default for CGA graphics.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
PhoenixEGA 8x8 8x8; CP437	Square 1:1	PhoenixEGA 8x8 ■ AaBbCcDd 0
	Correct 5:6	PhoenixEGA 8x8 ■ AaBbCcDd 0123456
PhoenixEGA 8x8-2y 8x8; CP437	Square 1:2	PhoenixEGA 8x8-2y ■ AaBbCcDd 0123456789
	Correct 5:12	PhoenixEGA 8x8-2y ■ AaBbCcDd 0123456789
PhoenixEGA 8x14 8x14; CP437	Square 1:1	PhoenixEGA 8x14 ■ AaBbCcDd 0123456789
	Correct 3:4	PhoenixEGA 8x14 ■ AaBbCcDd 0123456789
PhoenixEGA 9x14 9x14; CP437	Square 1:1	PhoenixEGA 9x14 ■ AaBbCcDd 0123456789
	Correct 2:3	PhoenixEGA 9x14 ■ AaBbCcDd 0123456789
PhoenixEGA 8x16 8x16; CP437	Square 1:1	PhoenixEGA 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	PhoenixEGA 8x16 ■ AaBbCcDd 0123456789

VIDEO CARDS W/PHOENIX VGA BIOS:

An ambiguous categorization here; Phoenix seemed to have its fingers in every pie in the VBIOS kitchen at some point, and most of them are all over the place in terms of charset design. However, this set most closely descends from the [older Phoenix EGA/system BIOS fonts](#), with enough differences to make it count. The particular Phoenix firmware it comes from was for a Biostar Venus 3D Voodoo Rush board, of all things.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
PhoenixVGA 8x8 8x8; CP437	Square 1:1	PhoenixVGA 8x8 ■ AaBbCcDd 0
	Correct 5:6	PhoenixVGA 8x8 ■ AaBbCcDd 0123456
PhoenixVGA 9x8 9x8; CP437	Square 1:1	PhoenixVGA 9x8 ■ AaBbCcD
	Correct 3:4	PhoenixVGA 9x8 ■ AaBbCcDd 0123456
PhoenixVGA 8x14 8x14; CP437	Square 1:1	PhoenixVGA 8x14 ■ AaBbCcDd 0123456789
	Correct 5:6	PhoenixVGA 8x14 ■ AaBbCcDd 0123456789
PhoenixVGA 9x14 9x14; CP437	Square 1:1	PhoenixVGA 9x14 ■ AaBbCcDd 0123456789
	Correct 3:4	PhoenixVGA 9x14 ■ AaBbCcDd 0123456789
PhoenixVGA 8x16 8x16; CP437	Square 1:1	PhoenixVGA 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	PhoenixVGA 8x16 ■ AaBbCcDd 0123456789
PhoenixVGA 9x16 9x16; CP437	Square 1:1	PhoenixVGA 9x16 ■ AaBbCcDd 0123456789
	Correct 3:4	PhoenixVGA 9x16 ■ AaBbCcDd 0123456789

RENDITION INC.

RENDITION VERITE CHIPSETS:

Various 3D boards based on **Verite 1000 / 2x00** chipsets (Sierra Screamin' 3D, Intergraph Intense 3D 100, QDI Vision-1, etc.) use these charsets, which are nicely readable with a squarish/more angular take on the [IBM VGA](#) character design, including stylized punctuation marks and special chars. There are no alternate wide glyphs for 'M', 'T' and their likes, as there usually are for the 9-dot-wide variants.

Font/Charsets: -----	Aspect:	Sample text: -----
Verite 8x8 8x8; CP437	Square 1:1	Verite 8x8 ■ AaBbCcDd 01234
	Correct 5:6	Verite 8x8 ■ AaBbCcDd 0123456789
Verite 8x8-2y 8x8; CP437	Square 1:2	Verite 8x8-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Verite 8x8-2y ■ AaBbCcDd 0123456789
Verite 9x8 9x8; CP437	Square 1:1	Verite 9x8 ■ AaBbCcDd 01
	Correct 3:4	Verite 9x8 ■ AaBbCcDd 0123456789
Verite 8x14 8x14; CP437	Square 1:1	Verite 8x14 ■ AaBbCcDd 0123456789
	Correct 5:6	Verite 8x14 ■ AaBbCcDd 0123456789
Verite 9x14 9x14; CP437	Square 1:1	Verite 9x14 ■ AaBbCcDd 0123456789
	Correct 3:4	Verite 9x14 ■ AaBbCcDd 0123456789
Verite 8x16 8x16; CP437	Square 1:1	Verite 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	Verite 8x16 ■ AaBbCcDd 0123456789
Verite 9x16 9x16; CP437	Square 1:1	Verite 9x16 ■ AaBbCcDd 0123456789
	Correct 3:4	Verite 9x16 ■ AaBbCcDd 0123456789

SIGMA DESIGNS INC.

REALMAGIC GX/64:

The entire point of the RealMagic series was its hardware MPEG video decoding, so it may come as a surprise that this card's VGA BIOS bothers with a triviality like the appearance of text modes. Actually, this is a close relative of the [Rendition Verite](#) font set (and others from the same general [Phoenix VBIOS](#) lineage), with a few minor adjustments, and this time we do get alternate wider glyphs in the **9x14/9x16** versions.

Font/Charsets: -----	Aspect:	Sample text: -----
Sigma RM 8x8 8x8; CP437	Square 1:1	Sigma RM 8x8 ■ AaBbCcDd 012
	Correct 5:6	Sigma RM 8x8 ■ AaBbCcDd 012345678

Sigma RM 9x8 9x8; CP437	Square 1:1	Sigma RM 9x8 ■ AaBbCcD 0
	Correct 3:4	Sigma RM 9x8 ■ AaBbCcDd 01234567
Sigma RM 8x14 8x14; CP437	Square 1:1	Sigma RM 8x14 ■ AaBbCcDd 0123456789
	Correct 5:6	Sigma RM 8x14 ■ AaBbCcDd 0123456789
Sigma RM 9x14 9x14; CP437	Square 1:1	Sigma RM 9x14 ■ AaBbCcDd 0123456789
	Correct 3:4	Sigma RM 9x14 ■ AaBbCcDd 0123456789
Sigma RM 8x16 8x16; CP437	Square 1:1	Sigma RM 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	Sigma RM 8x16 ■ AaBbCcDd 0123456789
Sigma RM 9x16 9x16; CP437	Square 1:1	Sigma RM 9x16 ■ AaBbCcDd 0123456789
	Correct 3:4	Sigma RM 9x16 ■ AaBbCcDd 0123456789

STB SYSTEMS

STB AUTOEGA:

STB had a few models with this designation, based on C&T's 82C435 EGA chipset, and at least some of them could be populated with extra RAM chips *and* clock crystals to support higher resolutions. The ROM for this one copies [IBM's 8x8 font](#), but the 8x14/9x14 sizes do their own thing with the design.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
STB AutoEGA 8x14 8x14; CP437	Square 1:1	STB AutoEGA 8x14 ■ AaBbCcDd 0123456789
	Correct 3:4	STB AutoEGA 8x14 ■ AaBbCcDd 0123456789
STB AutoEGA 9x14 9x14; CP437	Square 1:1	STB AutoEGA 9x14 ■ AaBbCcDd 0123456789
	Correct 2:3	STB AutoEGA 9x14 ■ AaBbCcDd 0123456789

TRIDENT MICROSYSTEMS

EARLY TRIDENT TVGA (8800CS):

The very first (S)VGA chipsets from Trident came with matching firmware, which customized the font styles as well. All standard VGA text sizes got a similar treatment, in a kind of rough-looking sans serif type:

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
TridentEarly 8x8 8x8; CP437	Square 1:1	TridentEarly 8x8 ■ AaBbCcDd
	Correct 5:6	TridentEarly 8x8 ■ AaBbCcDd 01234
TridentEarly 9x8 9x8; CP437	Square 1:1	TridentEarly 9x8 ■ AaBbC
	Correct 3:4	TridentEarly 9x8 ■ AaBbCcDd 01234
TridentEarly 8x14 8x14; CP437	Square 1:1	TridentEarly 8x14 ■ AaBbCcDd 0123456789
	Correct 5:6	TridentEarly 8x14 ■ AaBbCcDd 0123456789
TridentEarly 9x14 9x14; CP437	Square 1:1	TridentEarly 9x14 ■ AaBbCcDd 0123456
	Correct 3:4	TridentEarly 9x14 ■ AaBbCcDd 0123456789
TridentEarly 8x16 8x16; CP437	Square 1:1	TridentEarly 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	TridentEarly 8x16 ■ AaBbCcDd 0123456789
TridentEarly 9x16 9x16; CP437	Square 1:1	TridentEarly 9x16 ■ AaBbCcDd 0123456
	Correct 3:4	TridentEarly 9x16 ■ AaBbCcDd 0123456789

There were also some proprietary TVGA text modes that called for an 8x11-dot cell. The 1:1 aspect is as seen in proprietary mode 51h (640x480), but mode 55h (1056x480) had a roughly 3:5 pixel aspect.

This one looks much rougher than the others; I'd say it crosses over firmly into "ugly", but thankfully it didn't see a lot of use.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
TridentEarly 8x11 8x11; CP437	Square 1:1	TridentEarly 8x11 ■ AaBbCcDd 012345
	Correct 3:5	TridentEarly 8x11 ■ AaBbCcDd 0123456789

LATER TRIDENT TVGA SERIES:

Trident's inexpensive video solutions didn't go out of their way to distinguish themselves in terms of speed and performance. Fittingly, later TVGA-based cards make their text characters less distinctive as well, sticking very closely to IBM's VGA and co. with only some token modifications here and there.

Font/Charsets:	Aspect:	Sample text:
-----	-----	-----
Trident 8x8 8x8; CP437	Square 1:1	Trident 8x8 ■ AaBbCcDd 0123
	Correct 5:6	Trident 8x8 ■ AaBbCcDd 012345678
Trident 9x8 9x8; CP437	Square 1:1	Trident 9x8 ■ AaBbCd 012
	Correct 3:4	Trident 9x8 ■ AaBbCcDd 012345678

Trident 8x14 8x14; CP437	Square 1:1	Trident 8x14 ■ AaBbCcDd 0123456789
	Correct 5:6	Trident 8x14 ■ AaBbCcDd 0123456789
Trident 9x14 9x14; CP437	Square 1:1	Trident 9x14 ■ AaBbCcDd 0123456
	Correct 3:4	Trident 9x14 ■ AaBbCcDd 0123456789
Trident 8x16 8x16; CP437	Square 1:1	Trident 8x16 ■ AaBbCcDd 0123456789
	Correct 5:6	Trident 8x16 ■ AaBbCcDd 0123456789
Trident 9x16 9x16; CP437	Square 1:1	Trident 9x16 ■ AaBbCcDd 0123456
	Correct 3:4	Trident 9x16 ■ AaBbCcDd 0123456789

The aforementioned **8x11** size was also changed. Different firmware used different fonts for that one; this one is taken from an Octek TVGA8900B card (with an additional fix in some of the accented characters, to make the baselines consistent).

Font/Charsets: -----	Aspect:	Sample text: -----
Trident 8x11 8x11; CP437	Square 1:1	Trident 8x11 ■ AaBbCcDd 0123456789
	Correct 3:5	Trident 8x11 ■ AaBbCcDd 0123456789

TSENG LABS

TSENG LABS EVA-480 (ET2000):

The ET2000 was Tseng Labs' first real integrated chipset, and featured a superset of EGA capabilities. The EVA-480 board could pull off extended resolutions like 640x480, and had a special daughterboard(!) for 100% CGA/HGC support.

On top of that, the firmware included a couple of condensed fonts (**6x8** and **6x14**) for 132-column text modes. These only worked on multisync monitors - in fact, this board was rebranded as the NEC MultiSync Graphics Card BG-I and marketed for use with NEC's original MultiSync.

Font/Charsets: -----	Aspect:	Sample text: -----
TsengEVA 132 6x8 5x8; CP437	Square 1:1	TsengEVA 132 6x8 ■ AaBbCcDd 01234567
	Correct 5:8	TsengEVA 132 6x8 ■ AaBbCcDd 123456789
TsengEVA 132 6x14 7x8; CP437	Square 1:1	TsengEVA 132 6x14 ■ AaBbCcDd 0123456789
	Correct 5:8	TsengEVA 132 6x14 ■ AaBbCcDd 123456789

WYSE TECHNOLOGY

WYSE WY-700:

Originally a terminal manufacturer, Wyse was noted for its hi-res text displays. The WY-700 was one of the high-end graphics solutions that appeared for the emerging GUI, desktop publishing and CAD markets in the mid-'80s, before VGA, SVGA or VESA were a thing. It could emulate standard CGA/monochrome on its specialized 1280x800 "paper-white" monitor, so it featured a large **16x16** character set, for either 80x25 or 80x50 text mode.

This came in two hardware charsets: a thick serif font, which can pass as a higher-resolution version of the [IBM MDA](#) font, and a thin sans-serif one which is probably less of an eye-strain at 80x50.

Font/Charsets:	Aspect:	Sample text:
----- Wyse700a 16x16; CP437	Square 1:1	----- Wyse700a ■ AaBbCcDd 012
	Correct 5:6	Wyse700a ■ AaBbCcDd 01234567
Wyse700a-2y 16x16; CP437	Square 1:2	Wyse700a-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Wyse700a-2y ■ AaBbCcDd 0123456789
Wyse700b 16x16; CP437	Square 1:1	Wyse700b ■ AaBbCcDd 012
	Correct 5:6	Wyse700b ■ AaBbCcDd 01234567
Wyse700b-2y 16x16; CP437	Square 1:2	Wyse700b-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Wyse700b-2y ■ AaBbCcDd 0123456789

MISCELLANEOUS VIDEO FIRMWARE FONTS

VARIOUS (WANG, CHROMATIC RESEARCH, NEOMAGIC, SILICON MOTION):

Some video hardware manufacturers were pretty promiscuous with their charset designs, so tracing their origins can get touchy. This font, for instance, first(?) cropped up in a Wang Laboratories VGA card circa 1991 (the 3050 / WVGA-16HR), but derivative variants show up in the VGA BIOS of seemingly unrelated products, e.g. desktop and mobile chips from the mid-late '90s: Chromatic Research's Mpack2, NeoMagic's 2160 and 128XD, and Silicon Motion's SM910.

This version is a bit more polished than Wang's, and comes from the Mpack2 firmware, where the bitmap data has this string appended: "VGA FONT 1.05.02 02/16/93 ACM". So for naming purposes, I'll go with that.

Font/Charsets:	Aspect:	Sample text:
----- ACM VGA 8x8 8x8; CP437	Square 1:1	----- ACM VGA 8x8 ■ AaBbCcDd 0123
	Correct 5:6	ACM VGA 8x8 ■ AaBbCcDd 012345678
ACM VGA 9x8 9x8; CP437	Square 1:1	ACM VGA 9x8 ■ AaBbCd 012
	Correct 3:4	ACM VGA 9x8 ■ AaBbCcDd 012345678

ACM VGA 8x14
8x14; CP437

Square
1:1

ACM VGA 8x14 ■ AaBbCcDd 0123456789

Correct
5:6

ACM VGA 8x14 ■ AaBbCcDd 0123456789

ACM VGA 9x14
9x14; CP437

Square
1:1

ACM VGA 9x14 ■ AaBbCcDd 0123456

Correct
3:4

ACM VGA 9x14 ■ AaBbCcDd 0123456789

ACM VGA 8x16
8x16; CP437

Square
1:1

ACM VGA 8x16 ■ AaBbCcDd 0123456789

Correct
5:6

ACM VGA 8x16 ■ AaBbCcDd 0123456789

ACM VGA 9x16
9x16; CP437

Square
1:1

ACM VGA 9x16 ■ AaBbCcDd 0123456

Correct
3:4

ACM VGA 9x16 ■ AaBbCcDd 0123456789

IV. FONTS FROM PC "SEMI-COMPATIBLES"

These computers generally ran some kind of x86 CPU, and their own customized versions of MS-DOS, but only had limited degrees of IBM PC compatibility. That puts these fonts less firmly within the project's scope, but it's not as if they're collected anywhere else, plus some of these machines were more interesting than a vanilla PC clone, so let's bring 'em on.

ACORN COMPUTERS

BBC MASTER 512:

What's an Acorn machine doing in a PC-focused collection, you ask? Well: this 8-bit computer came with an 80186 board that functioned as a PC-compatible extension running Digital Research's DOS Plus (and GEM). Compatibility was far from 100%, due to architectural limitations; that included its CGA emulation, which had some color and speed constraints, and letterboxed the 200 CGA scanlines within the 256-line screen.

The built-in **8x8** font is similar to the usual BBC Micro one, but with the DOS code page 437 charset. The hardware couldn't do 16 colors in text modes, so high-intensity text was made bold instead:

Font/Charsets:	Aspect:	Sample text:
----- Master 512 8x8; CP437	Square 1:1	----- Master 512 AaBbCcDd 01234
(Bold)	Square 1:1	Master 512 AaBbCcDd 01234
Master 512-2y 8x8; CP437	Square 1:2	Master 512-2y AaBbCcDd 0123456789
(Bold)	Square 1:2	Master 512-2y AaBbCcDd 0123456789

There was also what DOS Plus called "Mode 7" (actually Mode 3 in Beeb terms); this was faster, and filled the screen vertically, at the cost of introducing 2 lines of space between each row of text.

Font/Charsets:	Aspect:	Sample text:
----- Master 512-M7 8x8; CP437	Square 1:2	----- Master 512-M7 AaBbCcDd 0123456789
Master 512-M7 8x9; CP437	Square 1:2	Master 512-M7 AaBbCcDd 0123456789

ACT / APRICOT COMPUTERS

APRICOT LINE (PC, XI, F1, F2, XEN):

The desktop Apricots all supported a hi-res 800x400 monochrome monitor, giving 80x25 characters at **10x16** pixels each. Models with the color option added lower resolution fonts: **8x8** on 200-line displays, and **8x10** on 256-line ones (which made the pixels almost-square at 320x256, or 16:15 to be exact).

Font/Charsets:	Aspect:	Sample text:
----- Apricot Mono 10x16; CP437	Square 1:1	----- Apricot Mono ■ AaBbCcDd 01234567
	Correct 2:3	Apricot Mono ■ AaBbCcDd 0123456789

Apricot 200L 8x8; CP437	Square 1:1	Apricot 200L ■ AaBbCcDd 012
	Correct 5:6	Apricot 200L ■ AaBbCcDd 123456789
Apricot 200L-2y 8x8; CP437	Square 1:2	Apricot 200L-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Apricot 200L-2y ■ AaBbCcDd 0123456789
Apricot 256L 8x10; CP437	Square 1:1	Apricot 256L ■ AaBbCcDd 0123456789
Apricot 256L-2y 8x10; CP437	Square 1:2	Apricot 256L-2y ■ AaBbCcDd 0123456789

The 286-based **Xen** was more of a PC-AT competitor, and it retained the hi-res mono option, but the color modes were brought closer to EGA at 640x350, and the corresponding font was accordingly 8x14 dots in size.

Font/Charsets: ----- ApricotXenC 8x14; CP437	Aspect: Square 1:1	Sample text: ----- ApricotXenC ■ AaBbCcDd 0123456789
	Correct 3:4	ApricotXenC ■ AaBbCcDd 0123456789

APRICOT PORTABLE:

The portable version was somewhat different in that it didn't have a true text mode - it permanently ran in 640x200 graphics mode, and as every pixel was addressable, the text could be customized with loadable soft fonts. It was mostly seen with Apricot's default 200-line font (above), but at least one version of the system disk swapped it for this one:

Font/Charsets: ----- ApricotPortable 8x8; CP437	Aspect: Square 1:1	Sample text: ----- ApricotPortable ■ AaBbCcDd
	Correct 3:4	ApricotPortable ■ AaBbCcDd 01234567

ATARI CORP.

ATARI PORTFOLIO:

This was the world's first true palmtop, originally released in the UK by DIP Research but then licensed to Atari. Its 8088 CPU ran a customized DOS from ROM, and its monochrome LCD panel (no backlight) could pull off 240x64-pixel graphics, or 40x8 text characters of 6x8 pixels each.

Font/Charsets: ----- Portfolio 6x8 6x8; CP437	Aspect: Square 1:1	Sample text: ----- Portfolio 6x8 ■ AaBbCcDd 0123456789
--	---------------------------------	--

DIGITAL EQUIPMENT CORP.

DEC RAINBOW 100:

The video system on this dual-CPU computer (Z80+8088, for running both CP/M and MS-DOS) was related to Digital's VT100/VT220 terminals, and could display text in four different column widths. 40/80-column text uses 10-dot-wide character cells, and 66/132-column text shaves off one dot of spacing. Like the terminals, each pixel is doubled horizontally so that one bitmap dot becomes two on the screen (although the effect on double-width text isn't the same as [on the terminals\[→\]](#)).

The Rainbow's [character set\[→\]](#) is also based on the DEC standard, not on the IBM PC one. This means that the CP437 version here is a **custom adaptation**, but all of the original characters (and more) are still available in the 'Plus' fonts.

Font/Charsets:	Aspect:	Sample text:
<u>-----</u> Rainbow100 re.40 10x10; CP437, +Plus	Square 1:1	<u>-----</u> Rainbow100 re.40 ■ AaBb
Rainbow100 re.80 10x10; CP437, +Plus	Square 1:2	Rainbow100 re.80 ■ AaBbCcDd 0123456789
Rainbow100 re.66 9x10; CP437, +Plus	Square 1:1	Rainbow100 re.66 ■ AaBbCc
	Correct 2:3	Rainbow100 re.66 ■ AaBbCcDd 0123456789
Rainbow100 re.132 9x10; CP437, +Plus	Square 1:2	Rainbow100 re.132 ■ AaBbCcDd 0123456789
	Correct 1:3	Rainbow100 re.132 ■ AaBbCcDd 0123456789

FUJITSU

FUJITSU FM-TOWNS SERIES:

A successful line in Japan with quite a few models. Display options varied, but most modes had square-pixel resolutions, so no aspect correction should be needed for the fonts. The FM-Towns didn't have a full CP437 encoding, so rather than 100% faithful conversions, the versions here are **ADAPTED/REMAPPED**; they only cover the half-width character forms.

Font/Charsets:	Aspect:	Sample text:
<u>-----</u> FMTowns re. 8x8 8x8; CP437	Square 1:1	<u>-----</u> FMTowns re. 8x8 ■ AaBbCcDd
FMTowns re. 8x16 8x16; CP437	Square 1:1	FMTowns re. 8x16 ■ AaBbCcDd 0123456789
FMTowns re. 8x16-2x 8x16; CP437	Square 2:1	FMTowns re. 8x16-2x ■ AaBbCcDd 01

HEWLETT-PACKARD CO.

HP 150 TOUCHSCREEN:

HP's first MS-DOS PC, from 1983, was an 8-Mhz 8088 office machine touting an IR touch system for its monochrome CRT. Its 80-column text was especially sharp; there are 9x14 dots per character, but each scanline may be shifted by half a dot, which effectively doubles the horizontal resolution. The attention to detail didn't stop there: each dot is also [stretched wider by ~1/3\[→\]](#), making

vertical and horizontal strokes equally wide despite the pixel aspect ratio. (Bitmap font formats can't emulate that very well, so only the outline fonts replicate this dot-stretching here.)

The 150 can use several [character sets](#)[>] simultaneously, but none of them match up with the IBM PC's; so once again the CP437 version here has been **remapped** for that code page, but the 'Plus' version has a much more complete selection.

Font/Charsets:	Aspect:	Sample text:
----- HP 150 re. 18x14; CP437, +Plus	Square 1:2	----- HP 150 re. ■ AaBbCcDd 01234567
	Correct 1:3	HP 150 re. ■ AaBbCcDd 0123456789

MINDSET COMPUTER CORP.

MINDSET:

This innovative but short-lived 1984 machine offloaded quite a few tasks to custom chipsets, Amiga-style. These coprocessors also handled advanced graphics at 320 or 640 pixels across, and 200 (or 400 interlaced) lines vertically. "Text mode" was emulated in graphics, so it supported custom character sizes and designs - even proportional fonts, but the system font was a monospaced 8x8.

Font/Charsets:	Aspect:	Sample text:
----- Mindset 8x8; CP437	Square 1:1	----- Mindset ■ AaBbCcDd 01234567
	Correct 5:6	Mindset ■ AaBbCcDd 0123456789
Mindset-2x 8x8; CP437	Square 2:1	Mindset-2x ■ AaBbCcD
	Correct 5:3	Mindset-2x ■ AaBbCcD 012
Mindset-2y 8x8; CP437	Square 1:2	Mindset-2y ■ AaBbCcDd 0123456789
	Correct 5:12	Mindset-2y ■ AaBbCcDd 0123456789

NEC INFORMATION SYSTEMS

NEC APC III:

NEC's 8086-based model from '84 was praised for being technically superior to contemporary PCs, and the display was no exception, with low (320x200), medium (640x200) or hi-res (640x400) output in either mono or color, and separate text/graphics buffers.

The APC III is closely related to the PC-9800 series marketed by NEC in Japan, and its fonts appear to be CP437 adaptations of that platform's native character sets.

Font/Charsets:	Aspect:	Sample text:
----- NEC APC3 8x8 8x8; CP437	Square 1:1	----- NEC APC3 8x8 . AaBbCcDd 012
	Correct 5:6	NEC APC3 8x8 . AaBbCcDd 123456789

NEC APC3 8x8-2y 8x8; CP437	Square 1:2	NEC APC3 8x8-2y . AaBbCcDd 0123456789
	Correct 5:12	NEC APC3 8x8-2y . AaBbCcDd 0123456789
NEC APC3 8x16 8x16; CP437	Square 1:1	NEC APC3 8x16 . AaBbCcDd 0123456789
	Correct 5:6	NEC APC3 8x16 . AaBbCcDd 0123456789
NEC APC3 8x16-2x 8x16; CP437	Square 2:1	NEC APC3 8x16-2x . AaBbCcDd
	Correct 5:3	NEC APC3 8x16-2x . AaBbCcDd 0123

PHILIPS INFORMATION SYSTEMS

PHILIPS :YES:

The :YES was an 80186 machine with proprietary on-board video allowing 160/320/640x252 graphics. Consequently, characters are 8x10 pixels each for a total of 25 text rows, at an almost-square pixel aspect ratio. The 40/80-column text mode font ('T') is slightly different from the one used in graphic mode ('G').

There was an optional add-on for hi-res mono support (probably with a matching font), but that's MIA as of this writing.

Font/Charsets:	Aspect:	Sample text:
----- Philips :YES G 8x10; CP437	Square 1:1	----- Philips :YES G AaBbCcDd 0123
Philips :YES G-2y 8x10; CP437	Square 1:2	Philips :YES G-2y AaBbCcDd 0123456789
Philips :YES G-2x 8x10; CP437	Square 2:1	Philips :YES G-2x Aa
Philips :YES T 8x10; CP437	Square 1:1	Philips :YES T AaBbCcDd 0123
Philips :YES T-2y 8x10; CP437	Square 1:2	Philips :YES T-2y AaBbCcDd 0123456789

RESEARCH MACHINES

RM NIMBUS PC-186:

A semi-compatible mainly seen in the British educational market, with a graphics subsystem supporting 320x250 or 640x250 RGB output. For standard 40x25/80x25 text mode, the PC-186 used an 8x10 character cell, like some of the other "incompatibles" in this section. The PC2 model was presumably similar.

Font/Charsets:	Aspect:	Sample text:
----- RM Nimbus 8x10; CP437	Square 1:1	----- RM Nimbus ■ AaBbCcDd 012345678
RM Nimbus-2y 8x10; CP437	Square 1:2	RM Nimbus-2y ■ AaBbCcDd 0123456789

VEB ROBOTRON-ELEKTRONIK

ROBOTRON A7100:

This tenuously PC-compatible machine from 1985 was manufactured in East Germany, and officially ran on a Soviet clone of the 8086 CPU, although most units apparently shipped with actual 8086s imported 'unofficially'. Video (like most other components) was not PC-standard; the basic card provided 80x25 text on the 640x400 monochrome display, using **8x16-dot** characters. A later model, the A7150, had better compatibility and better graphics, but used (pretty much) the same default font.

Font/Charsets:	Aspect:	Sample text:
----- Robotron A7100 8x16; CP437	Square 1:1	----- Robotron A7100 ■ AaBbCcDd 0123456789
	Correct 5:6	Robotron A7100 ■ AaBbCcDd 0123456789

SIEMENS AG

SIEMENS PC-D:

The PC-D was yet another 80186 machine that ran its own customized version of MS-DOS; video output was monochrome at a 640x350 resolution, with a character size of **8x14** pixels to match. The system font is a readable, thin-stroke type which sort of resembles classic engineering/technical drawing text.

Font/Charsets:	Aspect:	Sample text:
----- Siemens PC-D 8x14; CP437	Square 1:1	----- Siemens PC-D ■ AaBbCcDd 0123456789
	Correct 3:4	Siemens PC-D ■ AaBbCcDd 0123456789

TANDY CORP.

TANDY 2000:

For a 1983 computer the 2000 was certainly powerful, and no slouch in terms of visuals either, with a hi-res display and various add-on options providing 640x400 graphics in color or monochrome. The character generator was based on RAM rather than the typical ROM, so custom fonts could be programmed. In text mode, this is the default **8x16** font loaded on boot:

Font/Charsets:	Aspect:	Sample text:
----- Tandy2K 8x16; CP437	Square 1:1	----- Tandy2K ■ AaBbCcDd 0123456789
	Correct 5:6	Tandy2K ■ AaBbCcDd 0123456789
Tandy2K-2x 8x16; CP437	Square 2:1	Tandy2K-2x ■ AaBbCcDd 01234
	Correct 5:3	Tandy2K-2x ■ AaBbCcDd 0123456789

Graphics mode uses a slightly different font, contained in the BIOS ROM. As with IBM's BIOS graphics modes, only the first 128 characters are covered, unless the software provides the rest; this version fills out the code page by analogy with the text-mode font:

Font/Charsets:	Aspect:	Sample text:
----- Tandy2K G 8x16; CP437	Square 1:1	----- Tandy2K G ■ AaBbCcDd 0123456789
	Correct 5:6	Tandy2K G ■ AaBbCcDd 0123456789
Tandy2K G-2x 8x16; CP437	Square 2:1	Tandy2K-2x G ■ AaBbCcDd 0123
	Correct 5:3	Tandy2K-2x G ■ AaBbCcDd 012345678

Other than the 8x16 graphics-mode font, the 2000's BIOS also sets up an 8x8 one, which is normally unused. As per the manuals, it's exclusive to the "medium-resolution graphics option board", AKA the "TV/Joystick Option", for 320x200 graphics on a TV set. It's unclear whether this mythical card was ever released; but that's no reason to keep the font obscure, so here's a version with the non-ASCII characters similarly fleshed out:

Font/Charsets:	Aspect:	Sample text:
----- Tandy2K G-TV 8x8; CP437	Square 1:1	----- Tandy2K G-TV ■ AaBbCcDd 012
	Correct 5:6	Tandy2K G-TV ■ AaBbCcDd 123456789

TELENOVA

TELENOVA COMPIS / COMPIS II:

Another computer aimed at the educational market, this time the Scandinavian one, the Compis (AKA Scandis) natively ran CP/M-86 from ROM, but it also had its own port of MS-DOS - which supported the PC's CP437 character set seen here. (Graphically, it could pull off 640x400 and even a monochrome 1280x800 'ultra hi-res' mode.)

Font/Charsets:	Aspect:	Sample text:
----- Compis 8x16; CP437	Square 1:1	----- Compis ■ AaBbCcDd 0123456789
	Correct 5:6	Compis ■ AaBbCcDd 0123456789

TEXAS INSTRUMENTS

TI PROFESSIONAL COMPUTER/PORTABLE PROFESSIONAL COMPUTER:

These were two more 8088-based MS-DOS PCs which traded IBM compatibility for enhanced features (the later 286-based 'Business Pro' model would be fully compatible). Video was 720x300 in either color or mono; notably, even the portable had a color version at that resolution - in 1984.

That made the **9x12** text nice and sharp, although the lowercase letters and the caps/numerals have completely different styles for some reason.

Font/Charsets:	Aspect:	Sample text:
----- TI Pro 9x12; CP437	Square 1:1	----- TI Pro ■ AaBbCcDd 0123456789
	Correct 5:9	TI Pro ■ AaBbCcDd 0123456789

TOSHIBA CORP.

TOSHIBA T300:

Toshiba's 1983 not-quite-compatible machine one-upped the PC in a few respects, among them a faster 6 MHz 8088 and a selection of improved graphics adapters, from 320/640x200 to a 640x500 option showing 16 colors from a palette of 256. Text modes were all 25 rows, so those 500 scanlines make me unsure about the correct aspect for the 8x16 font.

Font/Charsets:	Aspect:	Sample text:
----- ToshibaT300 8x8 8x8; CP437	Square 1:1	----- ToshibaT300 8x8 AaBbCcDd
	Correct 5:6	ToshibaT300 8x8 AaBbCcDd 123456
ToshibaT300 8x8-2y 8x8; CP437	Square 1:2	ToshibaT300 8x8-2y AaBbCcDd 0123456789
	Correct 5:12	ToshibaT300 8x8-2y AaBbCcDd 0123456789
ToshibaT300 8x16 8x16; CP437	Square 1:1	ToshibaT300 8x16 AaBbCcDd 0123456789
	Correct 5:6	ToshibaT300 8x16 AaBbCcDd 0123456789

WANG LABORATORIES

WANG PROFESSIONAL COMPUTER/ADVANCED PROFESSIONAL COMPUTER:

Synonymous at the time with word processing, Wang's foray into general-purpose computing spawned the 8086 PC and the 286 APC, whose IBM compatibility didn't extend to the hardware level. The popular option was monochrome, at an 800x300 resolution. The color option provided NTSC or analog RGB output at 320/640x225 pixels, yielding an 8x9 character cell and a nearly-square pixel aspect.

Font/Charsets:	Aspect:	Sample text:
----- Wang Pro Mono 10x12; CP437	Square 1:2	----- Wang Pro Mono AaBbCcDd 0123456789
Wang Pro Color 8x9; CP437	Square 1:1	Wang Pro Color ■ AaBbCcDd 01
Wang Pro Color-2y 8x9; CP437	Square 1:2	Wang Pro Color-2y ■ AaBbCcDd 0123456789

ZENITH DATA SYSTEMS

ZENITH Z-100 SERIES:

These were introduced in 1982, with an S-100 bus sporting two CPUs - 8085 and 8088. The video hardware could manage up to 8 colors at a standard resolution of 640x225, giving approximately a 1:2 pixel aspect ratio; for a conventional 80x25 text screen, that meant 8x9-dot characters. The default font has single-dot strokes, but there's a thicker alternative which is very similar to [IBM's 8x8 BIOS font](#), despite the extra scanline:

Font/Charsets:	Aspect:	Sample text:
----- ZenithZ100 8x9; CP437	Square 1:2	----- Zenith Z-100 ■ AaBbCcDd 0123456789
ZenithZ100 Alt 8x9; CP437	Square 1:2	Zenith Z-100 Alt ■ AaBbCcDd 0123456789