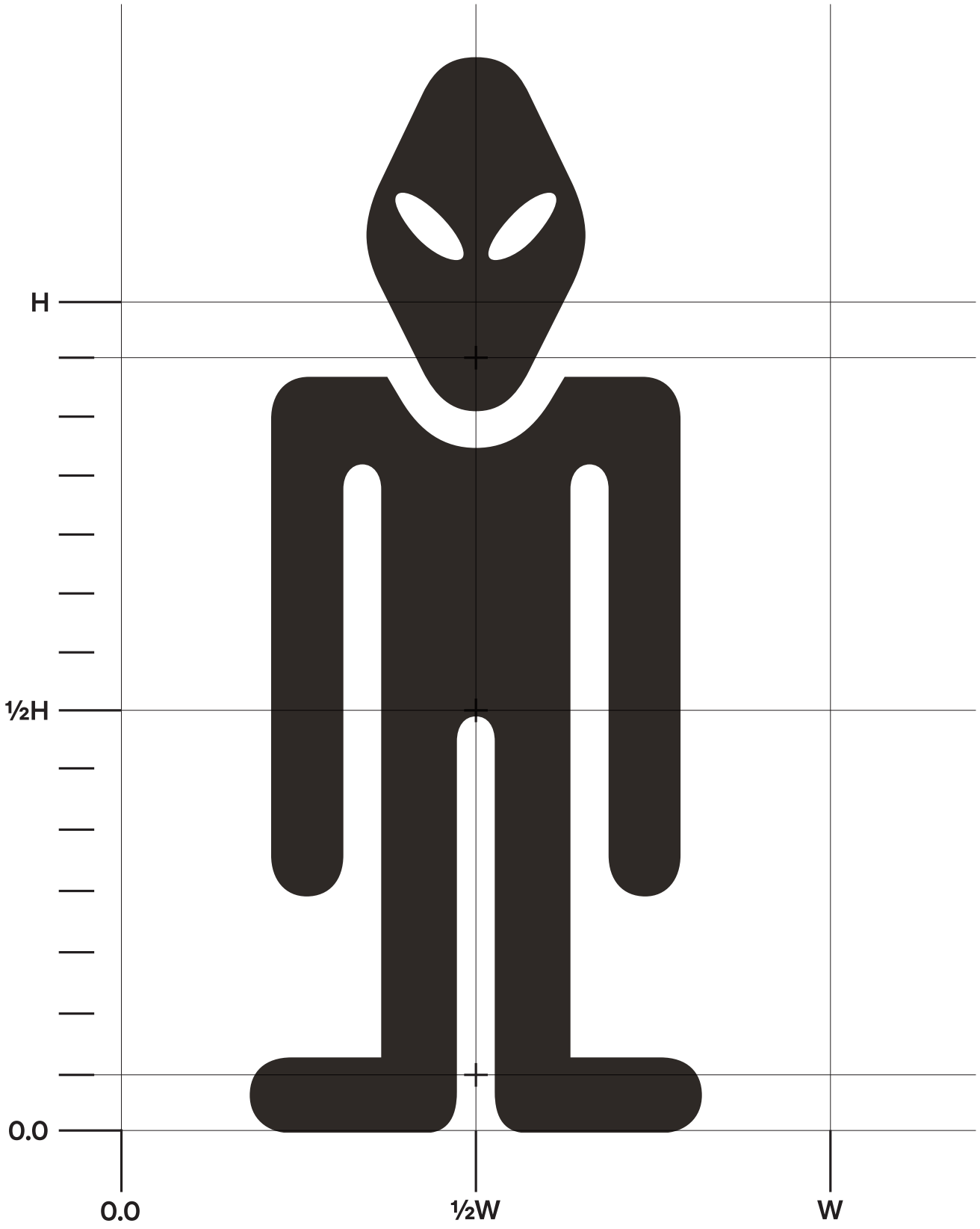
E003 Alien Body



593 pt
209 mm
790 px

OCR-X

Jonas Berthod 1/3

ONLY COOL RIDE

Designed by Eurostandard and Maximage, OCR-X is both a homage to and an extension of the infamous OCR-A typeface from 1966. Taking its predecessor's skeleton as a starting point, OCR-X reinterprets it and expands it in six weights. The Regular is a revival of the original cut of OCR-A offering lifted details and variations. For instance, aligned punctuation and alternative glyphs are available as stylistic sets. The Thin cut underlines the hexagonal and geometric construction of the OCR-A system, while the Bold and Black morph into a new, blocky variation. The versatility across the cuts means that OCR-X can be used on both screen and print. Its extended character set makes it a highly functional typeface, fully aligned with today's standards. A variable version of the typeface is also available on request.

ALIEN STANDARDS

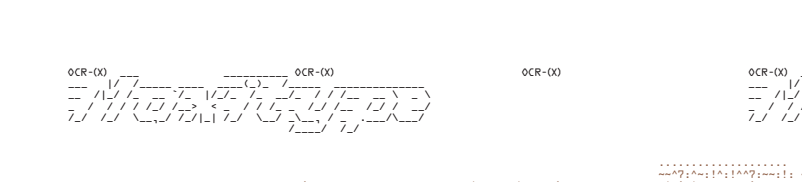
OCR-A was created in 1966 (1) by the American Type Founders (ATF) (2) on a commission by the American National Standards Institute (ANSI, the North American equivalent of the Deutsches Institut for Normung – DIN – (3) to whom we owe standardized paper formats). The ANSI required a highly differentiated monospace to ensure successful recognition with the comparatively low-resolution optic readers available in the 1960s. This restrictive logic determined OCR-A's unusual letter shapes, evidenced for instance in its lozenge-shaped O, skewed Q, kooky C, flat S and unusually high M. Its construction was meant to be recognizable on a small optical grid of five by nine units. Its orthogonal connections and rounded ends, but also its peculiar punctuation (including blocky symbols) all make it seem like it was designed either by a cyborg intern from *Star Wars*' Yavin 4 or by someone taking part in the Space Race (who I like to imagine was wearing one of Paco Rabanne's metal dresses).

OCR-A's numerals also draw from its predecessor E13B (1958), which was developed over ten years at the Stanford Research Institute under the direction of Kenneth R. Eldredge after a commission by the American Bankers Association to develop an automated cheque-processing system. E13B's highly unusual shapes were determined by the functionality of magnetic ink readers. Each glyph is drawn to be read on a seven-by-ten square matrix and includes peculiar protuberances that allow characters to be recognized even when folded, misaligned, or partially missing. The typeface is designed to be printed with magnetic ink at the bottom of cheques. Reflecting its use, the character set only includes the ten digits and four processing symbols (transit, amount, on-us and dash), in contrast to OCR-A, which contains a full character set of ninety-six core glyphs (plus nine national letters and currency signs), all available in three sizes (I, III and IV respectively) to accommodate different brands of readers.

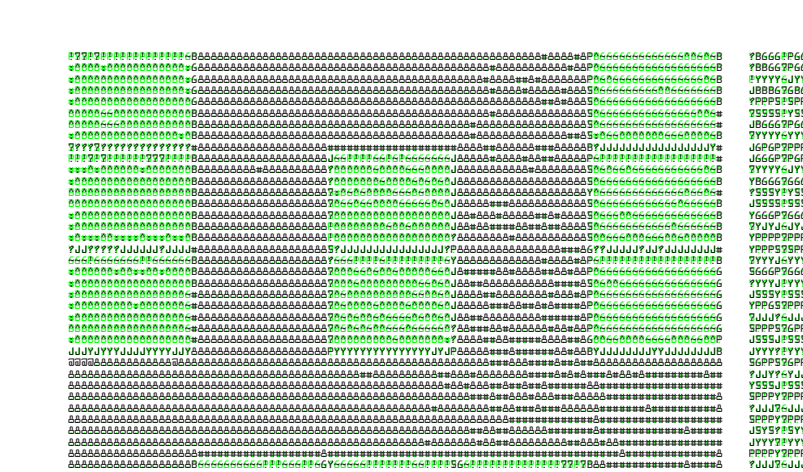
1 – Though some sources date OCR-A to 1968, the foreword to the ANSI X3.17-1981 standard confirms that it was "first developed in the United States in 1961 as a numeric font only. In 1966 an alphanumeric font which contained 57 characters, including the existing numeric font, 4 abstract characters, and only capital letters, was issued. The revised standard was entitled American National Standard Character Set for Optical Character Recognition, ANSI X3.17-1966."

2 – The ATF company (not to be confused with the ATF association) was founded in 1892 to consolidate twenty-three of the most prominent type foundries in the US, which felt threatened by the recent arrival of automated mechanical typesetting machines, the Linotype and the Monotype.

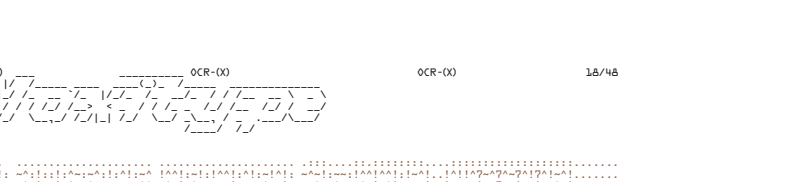
3 – Like the ANSI, the DIN enshrined OCR-A in a norm: DIN 66008



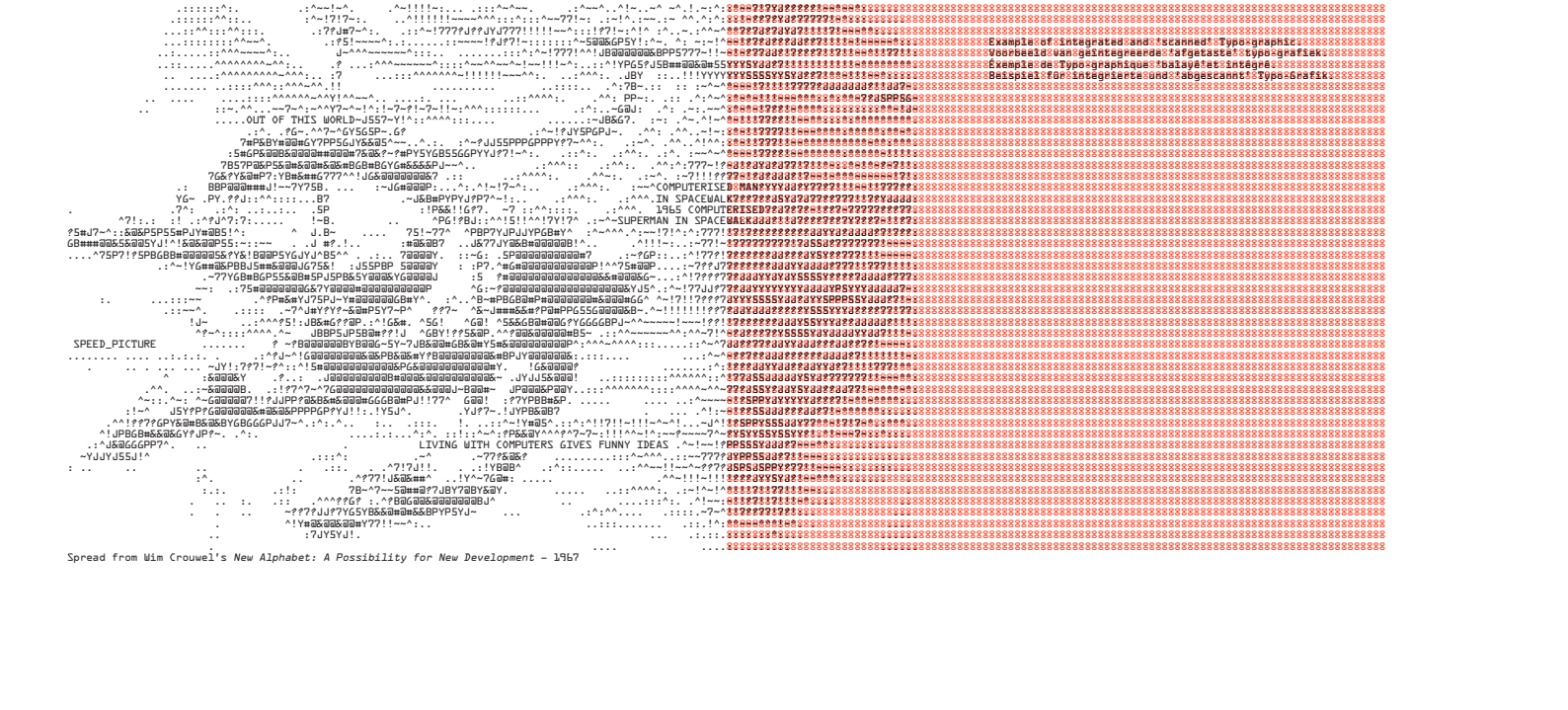
E13B (MICR) font – 1958



OCR-A typeface – 5 × 9 grid



Adrian Frutiger's OCR-B typeface – 14 × 19 grid



Spread from Wim Crouwel's *New Alphabet: A Possibility for New Development* – 1967

FROM ROBOT ROCK TO RADIO SWISS POP

E13B gives off a sort of robotic vibe and these awkward, technical shapes were soon adopted by type designers who produced a range of typefaces affecting the original, but without its function of character recognition.(4) By the late 1960s and early 1970s, the reference had progressively transitioned from technical to increasingly histrionic. An abundance of E13B-adjacent typefaces flaunted their robotic buxomness across book covers, film titles and vinyl sleeves, including Colin Brignall's Countdown (1965), Leo Maggs's Westminster (developed in 1965 and commercialized by Berthold in 1973), James H. Moore's Moore Computer (1968), Bob Newman's Data 70 (1970) and countless others. The initial function (machine recognition) had been replaced by flamboyant form (for human recollection). The optical nerve is quick in reading these distant cousins as signifiers for a technological, sometimes dystopian "future" in which the machine rules (perhaps more appropriately described as a future-in-the-past).

Though neither E13B nor OCR-A were ever designed as futuristic-looking typefaces – the ANSI was probably as dry a client as there could be – the beauty of their shapes is embodied in a tense dance of form and function that sees the logic of the computer converging with the human eye. But this was not to the taste of everyone. In Europe, Gilbert Weil, an engineer who worked at Bull Electronics,(5) itself working for the ECMA,(6) and Robert Blanc, the director of École Estienne in Paris, were particularly unhappy about OCR-A, which they perceived as caricatural; tellingly, it was soon nicknamed the "robot typeface".(7) Intent on avoiding its spread in Europe, they contacted Adrian Frutiger in 1963 to come up with a more popular solution, or at least one that would suit the local tastes. The resulting typeface, named OCR-B for obvious reasons and consecrated in the ISO 1073 standard of 1976, relied on a higher definition optical recognition grid – fourteen by nineteen, compared to five by nine for OCR-A – which enabled Frutiger and his team (which included at different points André Gürtler and Nicole Delamarre) to create more-"designed" shapes. They did so by first drawing curves which ignored the grid, and which were only later tested using the optical recognition grid.(8) The result was certainly far less "stylized" and much more "conventional", to borrow the polite terminology of the ECMA-11 standard.(9) Conversely, for Maximage, OCR-B had completely lost its fuel, and its magic, with its smoother curves and more conventional humanist approach. This convinced our designers to dream up an alternate reality where the evolution of A was not B, but X.

TECHNO-LOGIC TYPE DESIGN

In the 1960s, the increasing development of electronic displays also contributed to redefining typefaces. Because of the limitations of coarse monochrome cathode-ray tube monitors and video displays, but also of low memory capacity, designers needed to adapt shapes and drawing methods: for instance, the early digital typeface designers Hermann Zapf and Gerard Unger had to draw each pixel of their typefaces on large-scale gridded paper before they could be "translated" digitally by a technician and made available on the Digiset.(10) This proved inspirational for Wim Crouwel. With his New Alphabet (1967), the Dutch designer proposed a parametric, monospaced typeface that took the limitations of low-resolution displays as a creative challenge; simultaneously, Crouwel also aimed to renegotiate the alphabet with the goal of adapting to the increasing quantity of printed material.

4 – Owens, Mark, and David Reinfurt. 2005."Pure Data: Moments in a History of Machine-Readable Type". *Visual Communication* 4 (2). SAGE Publications: 144–50.

5 – Bull Electronics developed CMC7 (1957), the other ISO 1004 standard font alongside E13B, which is still in use today.

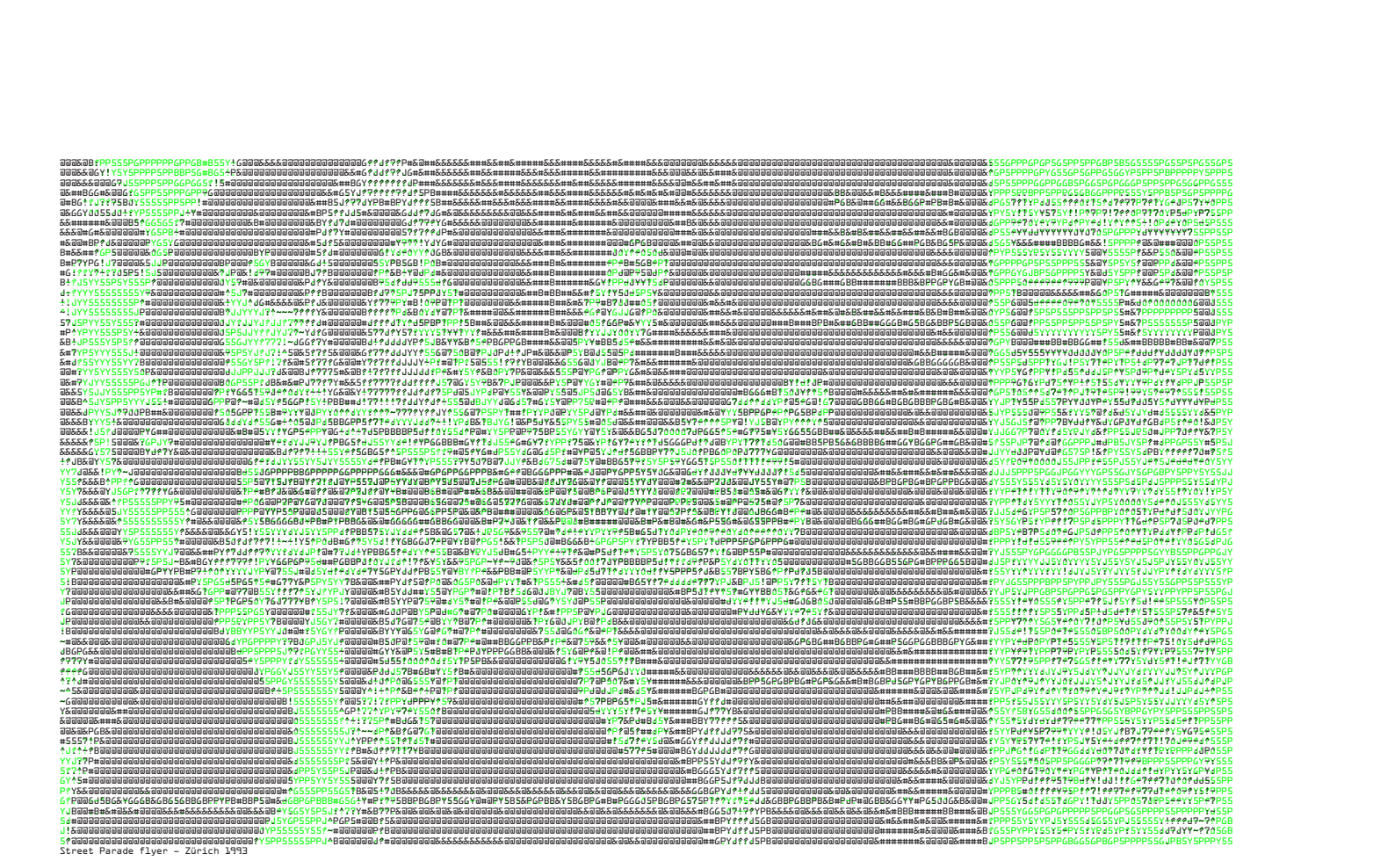
6 – The ECMA is the European Computer Manufacturer's Association, the same body which commissioned CMC7. It was founded by thirteen computer and typewriter manufacturers in 1961, notably to standardize optical character recognition.

7 – Frutiger, Adrian. 2009. *Caractères: L'OEuvre complète*. Edited by Heidrun Osterer and Philipp Stamm. Birkhäuser: 176.

8 – Ibid.

9 – 'Standard ECMA-11 for the Alphanumberic Character Set OCR-B for Optical Recognition'. 1976. 3rd Edition. European Computer Manufacturers Association.

10 – Owens, Sarah. 2006. 'Electrifying the Alphabet'. *Eye* 16 (62). https://www.eyemagazine.com/feature/article/electrifying-the-alphabet.



i-D magazine 99th issue (Spread by Wolfgang Tillmans) - December 1991

Street Parade flyer – Zürich 1993

Drawn using horizontal and vertical strokes to be compatible with CRT displays, the lowercase-only New Alphabet resorts to using macrons below letters to differentiate those that would otherwise appear similar and proposes experimental shapes at the limit of what is optically recognizable. Crouwel's proposal sparked responses, for instance Timothy Epps and Christopher Evans's 1969 typeface for electronic recognition which they produced at the Computer Science Division of the National Physical Laboratory in England. Like Crouwel's, the Epps-Evans typeface relied on humans learning new symbols to adapt to machine readability.

Conversely, in the 1990s, culture once again turned to typefaces to evoke technology – or rather, to echo techno: the cover of *i-D*'s ninety-ninth "Transglobal!" issue (December 1991) displayed a series of excited titles typeset in OCR-A which announced articles on the European fashion and techno scenes (including full spreads designed by Wolfgang Tillmans). The magazine used the typeface until 1993, which was also the year that the Street Parade in Zürich announced its programme on an acid-yellow, teal and blue flyer featuring the same font, which had by then become a shorthand for these musical scenes. In 1999, it made a return on silver screens, though techno was no longer the echo. On *The Matrix*'s posters and film credits, OCR-A was once again used to evoke a technological, dystopian world.

READS LIKE TEEN SPIRIT

Age is, of course, just a number – but whatever that number is, in the early 2000s Maximage and Eurostandard were more interested in Isostar than ISO standards. Scrolling through the fonts on their school computers, they were struck by the enigmatic power and the promise held by the OCR-A typeface, which they intuitively picked to design their first posters, flyers and bootleg record covers. By contrast, under no circumstance would they have resorted to using OCR-B. In art school a few years later, it seemed natural to continue using OCR-A. Soon enough however, their modernist teachers were encouraging them to swap the A for their top Gs – that is, respectable sans-serifs like Akzidenz Grotesk (and perhaps Helvetica Bold at a stretch). At the time, the youngsters felt like school was taking the fun away. With OCR-X, they now have their revenge.

Today, the question of forcing characters, bonsai-like, into specific shapes to pass the test of optical recognition sounds almost far-fetched. As telephone cameras can recognize even pixelated portions of handwritten text, there is no need for an OCR typeface – if anything, we need machine-unreadable type. Liberated from its predecessor's computational requirements, OCR-X is free to take on other meanings on the walls of the city. Maxitype propose an extension and homage to letterforms that were created for function, not for style; still, OCR-X is the most stylish system font with that drop of Alien Lean.