

The Story of a Line That Wanted to Write in Every Language

Orach Technic Pro • Forty Years Between the Beauty of Letters and the Precision of Machines

Imagine a line so fine it is almost invisible. Yet it wants to become a letter. Not just one letter, or one writing system, but a word in any corner of the world. It wants to appear on paper, on a screen, on metal, wood, or glass. And wherever it goes, it wants to remain the same — beautiful, clear, and precise.

That, in a few words, is the story of Orach Technic Pro.

It All Began with One Difficult Question

Almost forty years ago, in a workshop where drawing, engraving, and machinery came together, a seemingly simple question arose: why should lettering that looks perfect on a screen lose its beauty, spacing, or precision when it reaches the tool that must bring it into the real world?

A designer thinks about the shape of a letter. An engineer thinks about the path of a tool. A typographer watches the space between characters. And a machine only knows where it must move. Each speaks a different language — and too often, they do not understand one another.

The idea was not to create yet another font. It was to bring these four worlds together at last.

Letters That Grew Up Together

Over the years, different forms of the same lettering emerged: finer for delicate engraving, clearer for technical drawings, fuller for graphic presentation. Their proportions, widths, positions, and spacing were not developed in isolation. They were carefully coordinated to belong to one family — like instruments in an orchestra, able to play the same melody without losing the rhythm.

And so ProGRAV, ProCAD, ProGRAF, and other variants became more than different visual styles. They became different ways to write, display, and produce the very same idea.

The most important member of the family did not need to be the most conspicuous. It was a single open path: Orach 1L Pass-1, designed so that a tool could follow the center of a stroke without unnecessarily tracing around its outlines.

One Click Between a Drawing and Reality

Imagine a carefully composed inscription: every letter is in its place, every line aligned, the entire layout finished. In a conventional workflow, preparing that inscription for single-line engraving can mean doing much of the work again — or making countless manual corrections.

The Orach approach is different. First, the text is composed and checked in the appropriate Orach font, within a familiar graphics environment. Then, thanks to its precise correspondence with the matching Pass-1 design and a dedicated Illustrator tool, it is transformed into open paths for further machine processing — while preserving the intended layout.

It is not magic, although at first glance it may seem that way. Behind that simple step lie decades of drawing, measuring, refining, and testing.

When the World Becomes Much Bigger Than the Alphabet

But the world does not write in Latin letters alone. There is Cyrillic and Greek; Arabic letters that change shape when they join; Indian scripts; East Asian ideographs; mathematical notation; arrows; technical symbols; and Braille.

Sometimes progress was almost invisible. Over 35 years of work, the Greek alphabet alone went through 35 design variations. Not every new version brought a sweeping redesign. Sometimes changing just one letter was enough — because time, experience, and countless real-world applications had revealed a shape that could be more harmonious, more legible, or more precise. That is how Orach evolved: not only by adding new characters, but by patiently perfecting those that had existed for years.

In this way, Orach gradually grew beyond the limits of an ordinary technical font. Its international character repertoire was developed to support writing in more than 1,600 languages, alongside a vast range of specialist characters and symbols. Every new script raised another question: how could the distinctive character of its letters be preserved while also making them practical for technical production?

Then came an even greater challenge: Chinese, Japanese, and Korean writing — CJK. Thousands of intricate characters had to find their place within the same family, with the same care for form and manufacturing precision. With their addition, Orach Technic Pro grew into the world's most extensive technical font system. The world of writing had become almost boundless, but the goal remained unchanged: whatever a person writes should be something a machine can truly make.

The answer could not simply be a larger collection of characters. It had to be a system.

Beauty Is Not the Opposite of Precision

In the technical world, there is a constant temptation to choose: either visual elegance or ease of production. Orach Technic Pro was born from a refusal to accept that choice.

Good lettering should look beautiful to the person reading it. But when the same lettering becomes a marking on an industrial component, a nameplate, an instrument, or a product, it must also make sense in production. A difference of a few tenths of a millimeter can matter far more than it appears to on a monitor.

That is why the letters were refined over the years not only by eye, but through geometry. The spaces between characters, their widths, their inner spaces, and the position of each stroke all belong to the same vision.

Orach Technic Pro – SCHOOL

From CNC engraving to schools, science, and education.

Orach Technic Pro began almost forty years ago as a precise technical font for CNC engraving. However, through decades of development, it gradually grew beyond its original purpose. Enriched with writing systems from around the world, mathematical symbols, and technical characters, it also became a tool for education.

Its simple, clear, and precisely designed letters are suitable for education — from the first years of school to university studies and doctoral dissertations.

The letters are easy to read and can be written by hand with a pencil, chalk, or marker. The same forms are used on computers, in technical drawings, schoolwork, and scientific publications.

With support for more than 1,600 languages, a complete repertoire of 820 mathematical symbols, and a large number of specialist characters, Orach Technic Pro can connect education, science, and technology through one consistent writing system.

The Orach Technic Pro – SCHOOL program is already in practical use. Charts of writing systems made with this font are used as teaching aids in several primary and secondary schools in Serbia.

From the classroom blackboard to the scientific laboratory — the same clarity, the same precision, the same Orach.

The Story Continues

Today, Orach Technic Pro is not merely a library of letters. It is a bridge between writing, graphic design, and technical manufacturing. Between a person with an idea and a machine that turns that idea into a mark on a material.

Perhaps its greatest value is not the number of characters, styles, or languages. It lies in one quiet possibility: that text, once composed with care, should not have to be reinvented every time it moves from design to production.

And that first, almost invisible line? After forty years, it is still traveling. Only now, it speaks so many more languages.

Orach Technic Pro
infoFORM
www.design.rs

Technical Terms and Applications

One Line Font / Single Line Font

In engraving, CNC technology, and technical lettering, the term One Line Font / Single Line Font is not always precisely defined.

In practice, the same term is used for two different font constructions: fonts in which every stroke of a letter is represented by one open line, and fonts in which the same stroke consists of two completely overlapping lines.

Although both types of font may look identical on screen, they do not behave in the same way during engraving.

For this reason, during the development of Orach Technic Pro, infoFORM introduced clear technical designations describing how the lettering is processed.

- **Orach Technic Pro 1L – Pass-1 OTF**
A true single-line font in which each letter stroke is represented by one open path, intended for one pass of the engraving tool. This construction enables fast and efficient processing,

especially when engraving special-purpose engraving plastics and other materials for which one pass is sufficient.

- **Orach Technic Pro 1L – Pass-2 OTF**

A font in which each letter stroke is represented by two completely overlapping lines, intended for two passes of the tool along the same path. This construction allows double processing without changing letter geometry and can be useful for achieving better engraving results, especially on metals.

An Important Technical Distinction

The designations Pass-1 and Pass-2 do not refer to letter thickness, graphic style, or the number of visible lines. They indicate the number of engraving-tool passes intended by the path construction. The actual execution of those passes also depends on the software and machine settings.

Both fonts belong to the Orach Technic Pro system and are based on the same character geometry. This makes it possible to use different engraving methods while preserving the appearance and layout of the lettering.

In this way, infoFORM makes a clear distinction between Single Line Font, One Pass Engraving Font, and Two Pass Engraving Font, linking typography, vector geometry, and practical CNC production.

Orach Technic Pro – Thin (ProGRAV) is the main font of the Orach Technic Pro system, developed primarily for professional engraving. Its construction addresses the key challenges of technical lettering, legibility, precision, and use in different engraving technologies.

Orach Technic Pro 1L – Pass-1 and Pass-2 are not replacements for the main font. They are specialized alternatives intended for particular technological requirements and machining processes.

Engraving Font

A font intended for engraving and marking text on metal, wood, glass, and other materials.

Standard graphic fonts have closed outer letter contours (outlines). In contour engraving, machines follow these outlines rather than the centerlines of the strokes. For this reason, standard graphic fonts cannot be used directly for single-line engraving without additional processing or conversion.

Single-line engraving fonts provide a more direct connection between letter shapes and toolpaths, reducing the need for additional graphic processing.

Technical Font

A font with clear, precise, and easily readable letters, intended for technical drawings, engineering, and technical documentation.

For centuries, until the arrival of computers, technical lettering was based mainly on single-line construction. It was used to write dimensions, labels, explanations, and other technical information on drawings.

Until fairly recently, technical schools used lettering templates and technical pens in drafting classes to produce accurate and consistent letters.

In its original meaning, a technical font is a font whose letterforms can be written by hand, traced with a technical pen through a template, engraved directly with a pantograph, and today also engraved with a CNC machine or laser. Its defining feature is simple, clear, and precise geometry adapted to technical use.

With the development of computers, digital graphics, and new production technologies, the term technical font acquired a broader meaning. Today it also includes other types of fonts intended mainly for technical drawing, design, engineering, and industrial applications.

Nevertheless, single-line construction remains one of the fundamental historical principles of technical lettering, because it allows the same letter shape to be directly connected with its physical writing or engraving.

Educational Font

A font intended for education and for learning letters, numbers, Greek letters, mathematical symbols, and technical lettering.

Traditional school fonts, especially cursive fonts with connecting strokes, play an important role in learning handwriting.

In the modern world, handwriting is used less and less in everyday communication. Mobile phones, computers, and other digital devices have become the main tools for writing messages and exchanging information.

This increases the importance of clear, simple, and easily recognizable printed letterforms, as well as their suitability for writing by hand when needed.

Orach Technic Pro offers a parallel approach to learning and technical education, based on simple, clearly formed, separate letters.

A letter that a student sees in a textbook should have a shape that can be reproduced clearly, simply, and naturally with a pencil on paper or chalk on a blackboard.

Education pays great attention to the legibility of printed letters, but often overlooks how suitable they are for handwriting. Many standard printing fonts have complex contours, serifs, and variations in stroke thickness that a student cannot easily reproduce.

Orach Technic Pro starts from a different principle: a letter should be equally natural to read, write, and use in technical work. Its precise geometry and simple strokes connect what a student sees with what the student can write independently.

This construction is especially suitable for recognizing, learning, and reproducing letterforms. The large number of Greek, mathematical, and technical symbols further extends its use in different areas of education — from primary school to university.

Its special value lies in the fact that the same writing system can be used throughout education and later in professional technical work.

Multilingual Font

A font intended for writing in multiple languages.

One important challenge in developing multilingual fonts is achieving visual consistency between letters from different writing systems.

The problem of inconsistency is especially visible on road signs, highways, and at border crossings, where Latin, Cyrillic, and Greek lettering often appears in completely different styles, as though the signs did not belong together.

Although they are different writing systems, their visual appearance should be stylistically consistent, particularly when they are used together on the same sign or in the same documentation.

Modern multilingual fonts partly solve this problem by providing a harmonious appearance across different scripts. However, existing signs will continue to show the old differences for a long time.

A particularly great challenge for modern typography is the visual coordination of the world's writing systems with Chinese, Japanese, and Korean (CJK) scripts, because of their major differences in construction and graphic complexity.

We have devoted special attention to this consistency in the development of Orach Technic Pro, aiming to bring different writing systems, including CJK, together as one unified and visually harmonious typographic whole.

Orach Technic Pro supports writing in more than 1,600 languages, combining a large international character repertoire with shared principles of graphic and technical design.

Mathematical Symbols

Characters used in mathematics, science, engineering, and education.

The Unicode standard includes a large number of mathematical symbols arranged in different character groups.

For many years, we developed and used around 200 mathematical symbols in a separate Orach Technic font. During the development of Orach Technic Pro, we brought all the existing mathematical symbols together into one unified font and added the missing characters. Today, this system includes a total of 820 mathematical symbols.

This makes it possible to write ordinary text, mathematical expressions, and technical formulas using the same font, with complete typographic consistency and a unified graphic style.

infoFORM
Belgrade, Serbia
www.design.rs