The Dvorak Zine

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The Dvorak Zine
"CHANGING THE WORLD...
ONE KEYBOARD AT A TIME!"

Narrated by

FREE! DVzine.org
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I'LL START BY TALKING ABOUT THE HISTORY OF THE TYPEWRITER AND HOW THE FIRST KEYBOARD WAS DEVELOPED.

NEXT, I'LL EXPLAIN THE DVORAK SIMPLIFIED KEYBOARD LAYOUT AND SOME OF ITS BENEFITS!

THEN I'LL GIVE YOU ALL THE INFORMATION YOU'LL NEED TO START TYPING DVORAK TODAY!

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“THE DVORAK ZINE” 2005 ALEC LONGSTRETH, FRUNCH (AKA MICHAEL CARDIFF) AND GABE CARLETON-BARNES. PLEASE READ, LEARN AND REDISTRIBUTE THIS ZINE! QUESTIONS/COMMENTS: DVzine@gmail.com

TYPING IS REALLY IMPORTANT THESE DAYS.

WITH TECHNOLOGY THE WAY IT IS, MOST OF US TYPE EVERY SINGLE DAY.

HAVE YOU EVER REALLY LOOKED AT A KEYBOARD THOUGH?

I MEAN, HOW DID WE COME UP WITH SUCH A RANDOM ARRANGEMENT OF KEYS?

WELL, IT ALL BEGAN WITH AN INVENTOR NAMED CHRISTOPHER LATHAM SHOLES

IN 1868 SHOLES SECURED A PATENT FOR HIS NEW INVENTION, THE “TYPEWRITER.”

HIS PROTOTYPE AS YOU'D EXPECT, HAD THE KEYS ARRANGED ALPHABETICALLY.

*PUN INTENDED!!!

WHEN THE USER STRUCK A KEY, IT SWUNG A "TYPE BAR" UP TO THE PAPER, STAMPING IT WITH A LETTER OF PRINTING TYPE.

BUT THESE ORIGINAL TYPE BARS DIDN'T WORK VERY WELL BECAUSE THEY FELL SLOWLY BACK INTO PLACE BY GRAVITY.
AS A RESULT, WHEN TWO NEIGHBORING KEYS WERE STRUCK IN RAPID SUCCESSION THE TYPEWRITER WOULD JAM.

KLAK
KLAK

HMMPH... THAT'S GOING TO BE A PROBLEM.

BUT INSTEAD OF IMPROVING THE TYPE BARS' LEVER DESIGN, SHOLES BECAME PREOCCUPIED WITH REARRANGING THE KEYS.

"IF I CAN SEPARATE THESE KEYS ON THE KEYBOARD, THEY WON'T JAM!"

THE SCHOLES KEYBOARD LAYOUT WAS ALSO KNOWN AS "QWERTY" (BECAUSE OF THE FIRST SIX LETTERS ON THE TOP ROW).

234567890-+
QWERTYUIOP{}
ASDFGHJKL;
ZXCVBNM,.;?

EXCITED BY THE POTENTIAL OF HIS INVENTION, SCHOLES ENLISTED THE HELP OF A MACHINIST, CARLOS GLIDDEN AND A BUSINESS MAN, JAMES DENSMORE.

THEIR MAIN GOAL FOR IMPROVING THE NEXT TYPEWRITER MODEL WAS TO PHYSICALLY SEPARATE KEYS THAT WERE FREQUENTLY STRICKED IN SEQUENCE.

NOW HOLD ON FOR A SECOND, I WANT TO REINFORCE SOMETHING HERE!

MOST QWERTY CRITICS WILL TELL YOU THAT SCHOLES REARRANGED THE KEYBOARD TO SLOW DOWN "ALL THE PEOPLE" WHO WERE TYPING "TOO FAST."

KLAK
KLAK

DENSMORE'S BROTHER AMOS, AN EDUCATOR, PREPARED DATA ON COMMON LETTER PAIRS, OR "DIGRAPHS."

"WH" "AT" "AB" "AD" "TD" "EA"

USING THIS DATA, SCHOLES MOVED THE KEYS AROUND EXPERIMENTALLY WHILE TRYING TO SEPARATE AS MANY DIGRAPHS AS POSSIBLE.

THIS IS KIND OF FUN!

TOTALLY RANDOM

EVEN I BELIEVED THIS BEFORE DOING THE RESEARCH FOR THIS BINE!

CAN YOU BELIEVE THAT?! QWERTY IS DESIGNED TO BE INEFFICIENT!!!

HE DECIDED HIS NEW KEYBOARD WOULD NOT NEED A NUMBER 1 KEY THEY CAN JUST TYPE AN "1" INSTEAD!

AND SUPPOSEDLY DENSMORE SUGGESTED HE PUT ALL THE LETTERS IN THE WORD "TYPEWRITER" ON THE TOP ROW.

HA HA! GOOD IDEA!

I DON'T THINK ANY INVENTOR WOULD WANT TO MAKE THEIR INVENTION WORSE!

I DON'T THINK ANY INVENTOR WOULD WANT TO MAKE THEIR INVENTION WORSE!

WHEN SCHOLES REARRANGED THE KEYS HE DIDN'T ELIMINATE THE JAMMING PROBLEM BUT HE GREATLY REDUCED IT.

ENOUGH SO THAT HIS INVENTION COULD NOW ACTUALLY BE USED TO TYPE!
With the completion of the new prototype, Sholes's team turned from design to production. But Sholes was no businessman, so after five years of working on the typewriter he sold all his rights to Densmore.

Densmore went straight to Remington, the famous gun manufacturer. And so, in 1873 the Sholes & Glidden typewriter was released to the public. The No. 2 had lots of improvements, including the ability to see what you were typing!

But then, in 1878 the Remington Number Two was released! The No. 2 also introduced the shift key, allowing upper and lower case letters. The No. 2 also reincorporated the number 0 key.

Most importantly though, the No. 2 had spring mounted type bars which quickly snapped back into place after typing.

The type bars struck the paper from underneath, so you couldn't even see what you were typing! The No. 2 also introduced the shift key, allowing upper and lower case letters. The No. 2 also reincorporated the number 0 key.

This eliminated key jams for all but the fastest typists!

As a result, the first typewriter did not sell very well.

From 1873 to 1878 Remington only sold 5,000 typewriters in the U.S.A.

But Sholes found that Remington had no desire to alter his old invention.

You see, by 1900 Remington was selling 100,000 typewriters a year.
AND EVERY SINGLE ONE OF THOSE MILLIONS OF TYPEWRITERS WAS SOLD WITH THE QWERTY KEYBOARD LAYOUT!!!

PEOPLE ALL ACROSS AMERICA BEGAN MEMORIZING THIS RANDOM ARRANGEMENT OF KEYS!

PRETTY SOON PEOPLE HAD DEVELOPED METHODS TO TOUCH TYPE WITH ALL TEN FINGERS!

IT WAS NOT UNTIL 30 YEARS LATER THAT SOMEONE REALLY TRIED TO CHANGE THE MODERN KEYBOARD LAYOUT...

AND BY THEN QWERTY HAD SUNK ITSELF INTO THE AMERICAN SUBCONSCIOUS.

DO YOU SEE HOW FRUSTRATING THIS IS? RIGHT WHEN QWERTY BECAME OBSOLETE IT BEGAN TO BE WIDELY DISTRIBUTED!!!

FRUNCH!

TAKE OVER FOR ME. I'M GETTING SO DEPRESSED.

Yeah?

LADIES AND GENTLEMEN, PLEASE MEET DR. AUGUST Dvorak!

A DISTANT RELATIVE OF THE FAMOUS CZECH COMPOSER ANTONIN DVORAK!

DR. DVORAK WAS AN EDUCATIONAL PSYCHOLOGIST AND PROFESSOR OF EDUCATION AT THE UNIVERSITY OF WASHINGTON, IN SEATTLE.

IN 1932, WITH FUNDS FROM THE CARNEGIE FOUNDATION, DVORAK SET OUT TO CREATE A NEW KEYBOARD LAYOUT BASED ON RESEARCH AND LOGIC.

NOT ONLY DID HE RESEARCH LETTERS, DIGRAPHS AND WORDS, BUT HE ALSO EXAMINED ACTUAL TYPISTS AND THEIR PRACTICES.

LATER THAT YEAR Dvorak FILED A PATENT FOR THE DVORAK SIMPLIFIED KEYBOARD LAYOUT.

Hooray!

Um, I coughed so let's take a look at the logic behind Dvorak's layout.

The Foundation of the design is based on the "Home Row".
The "home row" is the row of keys that the typist's fingers are over in the resting position. The typist then "reaches out" from the home row to strike the other "outer keys".

If you are typing QWERTY only 31% of your key strokes are on the home row.

Well, as you know, QWERTY was developed experimentally to overcome mechanical problems, so the home row is just as random as the rest of the layout. Dvorak, however, put a great deal of thought into the design of his home row. Now let's see... which letters are used the most?

Dvorak put all of the most commonly typed consonants on the home row, as well as all of the vowels. This was smart because every word has at least one vowel in it!

In fact, if you use only the letters on the Dvorak home row, you can type more than 3,000 words! With the QWERTY home row you can only type about 300 words.

Seeing, there is only one vowel on the QWERTY home row.

Well, I mean, come on! How often do you type a semi colon?? It's a wasted key on the home row no less!

Sigh... Okay, okay. Sorry! Interrupted.

Well, by keeping 70% of the keystrokes on the home row, Dvorak reduces finger movement by a factor of three!
AND THAT REDUCTION IN
FINGER MOVEMENT MEANS
MORE COMFORTABLE
AND ERGONOMIC TYPING.

THINK
ABOUT
IT!

WITH QWERTY
YOU START BY
PLACING YOUR
FINGERS ON THE
HOME ROW...

WITH QWERTY
IT’S SIMPLY
UNCOMFORTABLE
to TYPE!

OH!

DURING HIS RESEARCH,
DR. DVORAK ALSO DISCOVERED
THAT PEOPLE CAN TYPE
MUCH FASTER WHEN THEY
ALTERNATE BETWEEN HANDS.

KLAK
KLAK

YOU CAN
EASILY SEE
THIS FOR
YOURSELF.

HMM!

TAKE ONE
FINGER AND
TAP IT ON A
TABLE AS FAST
AS YOU CAN.

TAP
TAP
TAP

THEN YOU SPEND 69%
of your time reaching
for keys that are not
on the home row.

THAT’S WHY SO
MANY QWERTY
TYPISTS DEVELOP
REpetitive stress
Injuries!

OUCH!

NOW TAKE ONE
FINGER FROM
EACH HAND
AND TAP THEM
ALTERNATELY.

TAP-A
AP-A-TA
TAPPITY
TAP-TAP!

SO DVORAK
HAS ALL OF
THE VOWELS
UNDER YOUR
LEFT HAND...

TAP-A
AP-A-TA
TAPPITY
TAP-TAP!

SEE?

ONE WAY DR. DVORAK
ACHIEVED THIS WAS BY
TAKING ADVANTAGE OF
VARYING FINGER STRENGTHS.

DR. DVORAK ADJUSTED HIS
LAYOUT SO THAT THE MOST
POPULAR LETTERS ARE IN
THE MIDDLE, WHILE
THE LESSER-USED LETTERS
ARE PUSHED TO THE
OUTSIDE CORNERS.

LIKE THE
SEMI COLON!

AND ALL OF THE
Most common
CONSONANTS
UNDER YOUR RIGHT.

THAT PRACTICALLY
GUARANTEES AT LEAST
ONE ALTERNATION
PER WORD.

Let’s take an
example...

Hey alec, what’s
something you
type every day?

STARWARS.COM!

QWERTY

3 HAND
ALTERNATIONS

STARWARS.COM

DVORAK

8 HAND
ALTERNATIONS

STARWARS.COM

Dr. dvorak’s 1932 study
found that Qwerty typers
who switch to dvorak
improve their speed by 20% and
their accuracy by 50%!
As part of his study, Dr. Dvorak trained two separate groups of people who had never typed before: one with qwerty... and one with dvorak.

It took the qwerty students 56 hours of training to achieve a typing speed of 40 words per minute.

The Dvorak students, however, achieved 40 words per minute after only 16 hours of training.

Dr. Dvorak also took a third group of people, who were already proficient qwerty typists and retrained them using the Dvorak layout. This is my new simplified keyboard layout.

It took only 52 hours of training for the typists to achieve their previous qwerty typing speeds!

In 1936 Dr. Dvorak tried to gain some public interest in his layout by writing the book "Typing Behavior." He typed it using Dvorak!

In the 1940s Dvorak developed his last keyboard layout for one-handed typing.

Even so, Dr. Dvorak met with great resistance everywhere he tried to implement his new creation.

Typewriter manufacturers, still doing just fine, thanks!

Even the U.S. government!

Accuracy, eh? Efficiency, hah! The government needs not these things.

In 1958 he died in 1975 a bitter old man...

"I'm tired of trying to do something worthwhile for the human race. They simply don't want to change!"

Direct quote!
In 1982, seven years after his death Dr. Dvorak's simplified keyboard layout was officially recognized by the American National Standards Institute.

That at least made sure that Dvorak would not be forgotten.

But there is still hope, Frunch! New people are learning about Dvorak every day!

It's so frustrating though, GCB! It's a better layout and people still don't use it!

But first, let's wrap up the history of the keyboard, bringing it into the present day...

Namely, the invention of the computer!!

Computers are great!

And not only because they are impossible to jam!

Computers are also highly adaptable.

To change the keyboard layout on a typewriter you'd have to physically change all of the letters on the type bars!

But with computers it can all be done super easily with a piece of software!

When you push a key on the keyboard, this software tells the computer which character should be displayed.

Here Mr. Software, read this instead!

Wait! He's hitting the same key but now it's the letter 'g'!

Hi, my name is Gabe Carleton-Barnes.

I'm going to show you how to start typing Dvorak today!

Mr. Software

What a pain!

Robot typing 1,000 W.P.M.

HAI

MORE!

Cough

Cough

Cough

Well, I'll let you try to convince them.

Thanks, Frunch!

"GCB" for short

He hit the semi colon

Okay

Dvorak

Swerty
IF YOU USE WINDOWS
USE THESE DIRECTIONS

USING WINDOWS XP...

1. Click on "Start" and
   find the "Control Panel"
   under "Settings."

   - Settings
   - Connect To
   - Run...
   - All Programs
   - Start
   - Control Panel
   - Control Panel
   - HTTP://DOZLEON.O

2. Select the "Regional"
   Control Panel.

3. In the "Languages"
   Tab, click the "Details" button.

   - Regional Options
     - Language: Danish
     - Keyboard layout:
     - United States-Dvorak

4. Then Click "Add" and
   select Dvorak from the options.

5. Hit "Apply" and "OK" and
   a blue icon will appear by your clock,
   which lets you switch from QWERTY to Dvorak.

OR, USING OLDER
WINDOWS VERSIONS...

1. First follow step
   1 for Windows XP.
   And find the "Keyboard"
   Control Panel.

2. In the "Languages"
   tab, click "Add."

3. You can choose any
   language (we use Danish)
   just make sure you
   set the "Properties" to
   "United States-Dvorak."

4. Then follow step
   5 for Windows XP
   and you're all set!

SERIOUSLY FOLKS,
Gabe is pretty good
at explaining this stuff,
how he makes his living?

HEH... $COUGH$ THANKS ALEC.

OKAY, NOW PLEASE
TAKE THIS ZINE
OVER TO YOUR
COMPUTER!
IF YOU USE A MAC

USING MAC OS X...

1. Select "System Preferences" from the Dock.

2. Next, select the "International" icon.

3. Under the "Input Menu" tab you will find a whole slew of layouts.

   Language Format & Input Menu
   - Select keyboard layouts, input masks and palettes for the input menu
   - Danish Language
   - Afghan Dari Keyboard Unicode

4. Select "Dvorak" and you are all set!

   - Danish Keyboard Roman
   - Devanagari Keyboard Roman
   - Dutch Keyboard Roman
   - U.S. Dvorak Keyboard Roman

5. A small menu will appear up next to your clock. You can use it to switch between QWERTY and Dvorak.

OR, USING OLDER MAC OS VERSIONS...

1. In the Apple menu find the "Control Panels".

2. Select the "Keyboard" control panel.

3. Then follow steps 3, 4 & 5 for Mac OS X!

   - Danish
   - Devanagari
   - Dutch
   - Dvorak

4. Also... with Macs you can set up

   Option + [ a ] + SPACE

   To toggle between Dvorak and QWERTY

5. A small menu will appear up next to your clock. You can use it to switch between QWERTY and Dvorak.

IF YOU USE LINUX

...you're awesome!!!

There are lots of ways to set up Dvorak in Linux. Here's one simple method...

in Xwindows, run "setxkbmap dvorak" and "setxkbmap us" to switch back and forth

~DATE~setxkbmap dvorak
~DATE~setxkbmap us

Both KDE and GNOME have easy keyboard switching functions. Check them out!

Okay! Pfew! Did everyone make it?

If not, please feel free to email me with any questions about setting up Dvorak on your computer!

Okay! You now know why it's awesome and you've got it all set up on your computer...

Now it's time to type some Dvorak!
As with most things, the easiest way to learn Dvorak is to start typing Dvorak!

"But Gabe!"

"How will I know where the letters are?"

"I can't look at the keyboard, it's got QWERTY all over it!"

"Cough!"

Well Alec, if you've ever taken a typing class, you'll know that you're not supposed to look at your fingers.

"I'm not??!!"

You may have noticed that the back of this zine has a nice big Dvorak key map on it!

"I'm not??!!"

Stand up this zine like a tent next to your keyboard.

Then refer to this map as you teach yourself the layout!

Hmm, where is "E"? Aha! There it is.

"But Gabe!"

Okay Alec... enough with the script.

"That's so easy!"

Heh... cough... remember! Start with the home row! Vowels are on the left, the most popular consonants are on the right.

Most of the other good consonants are on the right side of the top row.

Most of your punctuation marks are on the left side of the top row.

And then all that other stuff we don't use as much is on the hard-to-reach bottom row.

You can find typing tutors and exercises plus all kinds of other helpful stuff at our website.

www.DVzine.org

"Changing the world... one keyboard at a time"

"But Gabe!"

Okay Alec... enough with the script.

"That's so easy!"

Heh... cough... remember! Start with the home row! Vowels are on the left, the most popular consonants are on the right.

Try writing a short email in Dvorak. It takes a bit of concentration at first.

But pretty soon it will become second nature to you!

Have you ever heard of... "Dvorak?"
I was a quick "hunt-and-peck" QWERTY typist. I could do about 45 words per minute.

Then, one fall break at college I decided to learn TOUGH TYPING with Dvorak.

After nine days I was typing 30 words per minute and after two weeks I was typing 60.

I've now been happily typing Dvorak for seven years! At about 70 words per minute!

Frunch is the REAL SPEED demon though!

I can type about 95 words per minute with Dvorak!

And yes, I can still type Qwerty at about 80 words per minute.

But going back to Qwerty after typing Dvorak is just painful!

"You said Frunch!"

"Now listen to similar success stories from our real friends!"

"Aggh!"

In college I had this ten page paper to write. I decided to teach myself Dvorak by typing the whole paper with it.

It took longer, but it was worth it.

It seemed like I learned Dvorak by cutting out little pieces of paper with all the letters on them and taping them to my keyboard.

It really fast.

A lot faster than Qwerty.

Sam: Maybe it was waaay faster learning Dvorak because it was my second language? Or because it makes more sense? Probably both.

And I can totally still type Qwerty.

Nobody worries that their English gets worse because they learned Spanish. I can still "speak" Qwerty even though Dvorak is now my "native tongue."

Pete: I consider typing Dvorak on my machine a security measure.

I use Dvorak at work and if someone tries to type on my computer they get a bunch of gibberish!

Gwyn: In college I had this ten page paper to write. I decided to teach myself Dvorak by typing the whole paper with it.

It took longer, but it was worth it.

At the end of the year I typed my entire senior honors thesis in Dvorak with ease!
WELL, THAT'S OUR ZINE!

WE REALLY HOPE WE'VE CONVINCED YOU TO GIVE DVORAK A TRY!

WE KNOW SOMETIMES IT'S HARD TO LEARN NEW THINGS.

LEARNING DVORAK CAN BE A LOT LIKE ALL THOSE OTHER THINGS YOU KEEP MEANING TO DO...

BIKING TO WORK BUYING LOCAL PRODUCE BUT LEARNING DVORAK IS REALLY WORTH IT!

YOUR HANDS ARE IMPORTANT! YOU SHOULD TAKE CARE OF THEM!

IT COULD BE THE DIFFERENCE BETWEEN WORKING IN YOUR GARDEN WHEN YOU'RE 70 OR WEARING WRIST BRACES WHEN YOU'RE 40.

PLUS, WITH ALL THE TYPING WE DO THESE DAYS A FEW EXTRA WORDS PER MINUTE MIGHT GIVE YOU SOME EXTRA TIME TO DO THE THINGS YOU LOVE!

VIVA LA DVORAK

DVzine@gmail.com

PLEASE CONTACT US IF YOU HAVE ANY QUESTIONS ABOUT LEARNING DVORAK. ALSO, WE'D LOVE TO HEAR YOUR STORIES ABOUT LEARNING AND TYPING DVORAK!

www.DVzine.org

TYING TUTORS, HELP FILES, FAQs, TUTORIALS AND MUCH MORE TO HELP YOU SET UP AND LEARN DVORAK. ALSO ORDERING AND DISTRIBUTION INFORMATION!

THANKS

CHARLOTTE PHILLIPS, SAM GREENBERG, PETE LYONS, GWYN HUGHES, MARTHA STEWART LIVING OMNIMEDIA, NEWSWEEK, PHASE SEVEN COMICS, AARON RENIER, THE INTERNET AND GOOGLE.

DEDICATED TO DR. AUGUST DVORAK 1894 - 1975

1:7 - http://www.typewritermuseum.org/history/inventors_sholes.html#
2:3 - http://www.library.wisc.edu/text/WIReader/images/WEIR1936.html
2:8 - http://www.maxmon.com/1874ad.htm
4:4 - http://home.earthlink.net/~dcrehr/IMAGES/9tr Scarborough.jpg
4:8 - http://home.earthlink.net/~dcrehr/firsttw.html
5:1 - 5:4 - see 4:8
7:6 - U.S. Patent # 2,040,278 (see link from 1:6)
8:3 - 8:4 - Cryptanalysis by H.F. Gaines, Dover, New York, 1956.
10:5 - http://www.mtt.edu/8001/people/jcb/dvorak/
11:1- see 10:9 / 11:2- see 9:9-3:9
12:3 - 12:4 - "The Curse of QWERTY" by Jared Diamond, Discover Magazine Vol 18 No. 4 April 1997
13:5 - see 7:3-7:5 / 13:4 - see 12:3-12:4
The Dvorak Simplified Keyboard!!!

1. Stand this zine up like a tent next to your computer.
2. Refer to the key-map above as you learn to type Dvorak!
3. Visit our site: DVzine.org
   For typing tutors, help files, FAQs, tutorials and much much more!!!