

# Speed-building Tips

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## BUILDING SPEED #1

### QUICK TIP

REMEMBER: There's no "secret" to the formula for success.

(1) Recognize your priorities: ACCURACY FIRST. Speed without accuracy has no value.

(2) Establish your final goal: I WRITE ACCURATE REALTIME MACHINE SHORTHAND AT X WORDS PER MINUTE. (10-20 wpm above graduation speed—or as high as you want to strive for).

(3) Establish interim goals which break your final goal down into smaller, less intimidating, achievable steps: I INCREASE MY WRITING SPEED BY 10 WPM EACH MONTH.

The person who reaches each goal the fastest and most successfully is the person who cares enough, who has enough pride and sense of self-worth, to challenge himself/herself to do his/her very best at every step toward each goal.

If you follow this formula, THE ONLY SURE WAY TO FAIL WILL BE TO QUIT.

Building speed is NOT a matter of "forcing" your fingers to move faster. It doesn't make any difference whether you're writing machine shorthand, or typing, or running a race, or tying your shoelaces—SPEED is the natural result of ELIMINATING HESITATION and streamlining your motions. And always keep in mind that if you make ACCURACY your first priority, you'll have a lot less hesitation you have to eliminate in order to increase speed.

MENTAL HESITATION: How fast you can write machine shorthand is much more dependent on how fast your brain functions than on how fast your fingers move. So some of the hesitation which needs to be eliminated is mental hesitation—and during every minute you spend writing on the keyboard, you're training yourself to hear faster, process the information faster, and transmit the necessary information to your fingers faster.

MANUAL HESITATION: Everyone can increase their writing speed by increasing their finger strength, control, and dexterity and eliminating hesitation in moving fingers between stroking positions. As the saying goes, "That's a no-brainer." But don't worry about how "fast" you can move your fingers. If you have average manual dexterity, your fingers CAN move fast enough to keep up with whatever your brain can process—and there are finger drills available which are specifically designed to maximize your manual skills and eliminate hesitation.

But first things first. To get off on the right foot towards building speed you have to make sure your keyboard is the right height and distance from your body.

All right already!!! I can hear the groans clear out here in Phoenix: "Another lecture on 'good posture'! What can that possibly have to do with speed????"

This is much more important than a "Sit up straight! Get those shoulders back!" lecture from mom—and it has ONE HECK OF A LOT to do with speed! No, I CAN'T tell you a "secret position" that will add 30 wpm to your speed—but I sure CAN tell you positions to avoid so you're not DETRACTING 30 wpm from your speed.

If your keyboard is too close to your body, it creates sharp angles at the wrists—which reduces your finger mobility and dexterity, causes fingering errors, and restricts your speed. (E.g., if strokes such as TKHR-, PWHR- feel awkward, always check to see if your keyboard is too close to your body.) Creating sharp angles at the wrists also makes you a prime candidate for carpal tunnel syndrome, tendinitis, and other physical discombobulations and discomforts, any one of which can certainly limit your speed—but, even worse, could bring an abrupt end to a great career.

If your keyboard is too high, you have to do one of two things: (1) Elevate your arms, which can strain muscles affecting your neck, across the top of your shoulders, and down into your upper arms; or (2) Bend your hands up sharply at the wrist—creating the same problems we just talked about when angles at the wrists are created.

If your keyboard is too far away, you have to (1) lean forward into it, using muscles in your lower back; or (2) extend your arms forward, using upper back and shoulder muscles—a reach which means you also have more of a tendency to write flat-fingered (decreased dexterity, slower movement between fingering positions, more likelihood of dragging unwanted keys into strokes).

Any time you're "using" muscles (even if you're not aware that you're using them), you're expending energy. Expending energy leads to fatigue and, eventually, discomfort. You can't write your best or your FASTEST if you're tired and/or uncomfortable.

Everyone's body is different, plus you sit in all different types and heights of chairs when writing. So it's NOT possible to say: "The front of your keyboard should always be X inches away from your belt buckle or Y inches from the floor." Sooooo—sit comfortably in your chair with both feet flat on the floor. Let your arms hang straight down naturally from your shoulders—not scrunched against your body or held away from your body; just hanging comfortably. Without moving your upper arms, bend your arms at the elbows and raise your forearms until they are at or slightly below a 90 degree angle (parallel) with the floor—then move your forearms closer together horizontally until your hands are positioned in relationship to each other as they would be for writing on the keyboard. Your keyboard should be at a height and distance from your body so that it is directly under your fingers (in home position) with your body and arms in this posture.

This is a natural body position which can be maintained for long periods of time without stress or strain to muscles and with the minimum possible discomfort or fatigue. And that means you're more alert and have better concentration, comprehension, and retention—all of which translates into less hesitation, MORE SPEED.

Every time you sit down to write, follow the steps given above and CHECK YOUR BODY/KEYBOARD POSITION. It takes 30 seconds—and the physical problems it can avoid, plus what it adds to your stroking dexterity and writing speed, are well worth every one of those seconds a thousand times over.

**QUICK TIP**

The fastest and surest way to become a high-speed writer is to make ACCURACY your first and foremost priority. Speed is a natural, logical result of creating ACCURATE automatic responses. Accuracy is NOT a natural, logical result of increased speed.

Today let's check your stroking technique.

First, NEVER watch your hands/finger movements while writing. I won't bore you with a lengthy explanation as to why. But please trust me: IF you rely on watching your fingers and try to "consciously" place them on the correct keys or even just "consciously" be aware of their placement, you will never become a high-speed writer. Fasten a picture of Brad Pitt or Mel Gibson or your favorite Playgirl or Playboy centerfold on the wall, whatever it takes to keep your eyes off that keyboard, but DO NOT WATCH YOUR HANDS.

Second, remember that in home position (between strokes) the fingers are ABOVE—not resting on—the keys. Why? Because when we move fingers to depress keys, we have a tendency to also move other fingers on that same hand ever so slightly. Even though the movement may be so slight that the keys they're resting on don't even create shadows on the paper tape, electronic keyboards are sometimes so sensitive that the keys WILL register electronically, and you'll have extraneous letters in the strokes in the electronic data recorded on the writer or keyboard. I've seen numerous reporters whose paper notes are beautiful, BUT the corresponding electronic data is so full of extraneous, unwanted letters that the steno on the LCD or on the computer is GARBAGE—all because they started out on manual keyboards and they haven't broken the habit of resting their fingers on the keys.

The biggest culprits are P- and -P because they're stroked with the longest fingers (the forefingers). When the forefingers are resting even very lightly on the P keys, moving other fingers prompts those long fingers to also move just enough to cause the P keys to register electronically. And remember that there's no "shading" in the electronic data, so these extra letters don't appear as "shadows" which can be ignored or fairly easily read through. There's nothing to clue you that the N- should really be a TH, the M- was intended to be an H-, the B should have been a W, the F should have been a T, the -M should have been an -L, the -N should have been a -B, etc.—except you have an unwanted P in the stroke.

Third, fingers are slightly curved, NOT held straight. If you hold your fingers straight and stroke "flat-fingered," (1) your fingers have to travel slightly farther to reach the correct position to actually depress the keys (loss of speed); (2) your dexterity is reduced (loss of speed); (3) it's more difficult to depress a key on the top bank without also "triggering" the key on the bottom bank (extra letters resulting in non-translates or mistranslates).

Fourth, keys are depressed with the padded TIPS of the fingers. And I'm sorry, ladies, but you can't depress an upper and lower key combination with the padded tip of the same finger IF YOU HAVE LONG

FINGERNAILS. Place your hands, open-fingered, palms up in front of you. If you can SEE your fingernails extending beyond the tips of your fingers, they're too long.

I know, more groans from those of you who love your long fingernails. And probably some of you can say, "But I know a court reporter who has long fingernails!" I've known a few also. And it's no coincidence that their notes are full of "extra" letters, that they have to spend more time editing to produce a final product, and that scopists are NOT standing in line clamoring for the privilege of scoping for them. As a working reporter, if you're happy with that tradeoff, fine. But as a student who wants to build speed, get out of school, and start your career, for heaven's sake cut off those fingernails. You'll be surprised at how much more secure you'll feel on the keyboard, how much cleaner your notes will be, and how much FASTER you can write. For me, the choice was pretty obvious: short nails; write cleaner and faster; graduate sooner and go to work making enough money to be able to afford a jazzy set of nails for any special occasion.

Fifth, stroke with a light, quick stroke—on and off the keys and immediately ready to move to the next stroking position. DO NOT give a little "push" at the bottom of the keystroke, flex (straighten) your fingers between strokes, or raise your hands above the keyboard. Any of these extraneous movements will SIGNIFICANTLY reduce your speed.

Let's take giving a little push at the bottom of the strokes as an example. That's the least time-consuming of these extraneous movements, so it causes the least hesitation and the least damage to writing speed. And let's see just how much giving that extra little push can affect your speed. I'm certainly not an expert on time and motion studies, and the EXACT amount of time lost may be slightly less or slightly more than I'm postulating. But if that extra little "push" at the bottom of the stroke only takes one-fifth of a second on each stroke, you've added 20 seconds to the time it takes you to write every 100 strokes—you've sacrificed about 20% of your writing SPEED. And that's without even considering the additional wear and tear on your hands and fingers, all the unnecessary energy you're wasting, and the fact that you're going to become very tired very quickly—which will REALLY hamper your speed.

If you've fallen into any of these poor stroking habits which detract from your speed, make a concerted effort to correct them NOW. Practice by writing audio material that is slow enough that you can make a conscious effort to execute each stroke with a very light, quick stroke, and immediate release; NO PUSH AT THE BOTTOM OF THE STROKE, NO STRAIGHTENING OR FLEXING OF FINGERS, NO UPWARD MOVEMENT OF THE HANDS AWAY FROM THE KEYBOARD. If it helps, pretend there are electrical contacts at the bottom of the keystrokes which will give you an electric shock if you don't release the keys instantly. Correcting your stroking technique is very, very important to being able to reach your speed potential, so if you find any practice methods, special techniques, or tricks that help you in overcoming flaws in technique, please share them here with other students.

Sixth, when writing, only your FINGERS should move. Keep your HAND movement to an absolute minimum. I've seen students who actually lift their hands six to eight inches above the keyboard between each stroke—the "Liberace Syndrome." If you can lose about 20% of your writing speed by giving an extra push on the bottom of the stroke, just imagine how much speed can be lost with all this

extra hand movement!! And who do you think has the highest likelihood of hitting the correct keys: the person whose fingers are just slightly above the keys or the person whose fingers are "diving" at the keys from several inches in the air?

It you have more than very slight hand movement while writing, place a "reminder" on the back of each hand (a small, flat object such as a quarter, a flat rectangular eraser, etc.) and practice writing without dislodging your "reminders" from the back of your hands. With enough practice, you're guaranteed to accomplish one of two things: (1) Become a much better writer by learning to write with MINIMAL hand movement; or (2) Lose an inch or two off your waist from bending down so often to pick your "reminder" up off the floor.<<VBG>>

**QUICK TIP**

READ, READ, READ!! READING shorthand notes is as important and contributes as much to learning to write shorthand and to BUILDING SPEED as stroking shorthand! Read back everything you write.

Everyone should take pride in the ACCURACY with which they write, but having bragging rights about your stroking accuracy is the LEAST important reason for keeping your notes clean.

First of all, zealously protecting your stroking ACCURACY is the fastest, surest, least frustrating way to BUILD SPEED.

When we perform the exact same physical action repeatedly, after enough repetitions we create what is called "muscle memory": Our subconscious actually records the exact position/tension of every muscle/tendon/sinew involved in performing that action and stores that information in our subconscious memory. And after enough repetitions, that muscle memory becomes so strong that we can perform that action with incredible accuracy without looking, without thinking, without hesitating. It becomes totally automatic. (It's a good thing this phenomenon of "muscle memory" exists or we'd have trouble walking, talking, or doing any one of a thousand other automatic physical movements we perform every day.)

When we always execute each stroke ACCURATELY, we fairly quickly program in the correct muscle memory for every fingering position on the keyboard—even the progression of fingering movements for multi-stroke words or high-frequency series of words. And with enough repetition, that muscle memory becomes so strong that our fingers will just AUTOMATICALLY move to the correct position or sequence of positions. And they'll do it with far greater accuracy and far greater speed than if we were "consciously" directing our fingers. So when we learn to trust this muscle memory and these automatic responses, we start letting go of more and more conscious control—and the more conscious control we relinquish, the faster we can write.

Without this phenomenon of muscle memory and automatic responses, we'd have no accomplished musicians, no high-speed typists, no court reporters. We cannot THINK fast enough to consciously control the necessary physical movements; we have to rely on muscle memory and automatic responses in order to become a high-speed typist, a concert pianist, or write machine shorthand at court reporting speeds.

Now, stop for a minute and think about what happens when you DON'T stroke accurately because you're just plain careless or you're trying to write at speeds which are so unreasonable that you're "scrambling" all over the keyboard. If you're not stroking with near total accuracy, you're NOT programming in the muscle memory and automatic responses which you MUST have to eventually be able to write at court reporting speeds. The only thing you're "programming" into your subconscious is a lot of contradictions and confusion—which you'll pay a very dear price for later in trying to build speed.

I know, I know. Some uninformed teachers still instruct students to "Just get something down for everything you hear. You can clean up your notes when you get more speed." I'm sorry, but that advice has created more frustration for students, ruined the potential of more students, and is responsible for more students being unable to reach graduation speeds than any other single thing I can think of. Would you send your child to a typing teacher or a piano teacher who taught with that same philosophy? I don't think so!

It's been my experience that students who sacrifice accuracy for speed inevitably hit a plateau in the 170 to 200 wpm area. They've hit a brick wall because they've reached the level where they can no longer THINK fast enough to consciously direct their fingers to the right keys. But they can't write WITHOUT thinking of every finger movement because they haven't created the necessary muscle memory and automatic responses which would move their fingers to the right positions without thinking, they can't trust their fingers to respond correctly WITHOUT conscious control. Repairing the damage at this point is such a frustrating, time-consuming process, many students don't have the stamina or the resources to stick it out, and they drop out.

If I can convince you of nothing else, PLEASE, PLEASE, PLEASE remember that always writing with near perfect stroking accuracy is ultimately the FASTEST, surest, least frustrating way to get to court reporting speeds.

Just how accurately is it reasonable for you to expect to be able to write? If you train yourself correctly FROM THE VERY BEGINNING, you can write shorthand notes with the same impeccable accuracy as an excellent typist types or an excellent pianist plays music. I've seen students write five-minute tests at 200 wpm with no more than four or five stroking errors—with one particular student, NO stroking errors.

Historically, machine shorthand has most-frequently been taught with all the emphasis on SPEED and little concern for accuracy. Why court reporting teachers have assumed that we alone are magically exempt from the proven dynamics of developing keyboarding skills on every other keyboard in the world is beyond me. Frankly, I don't know whether it stems from arrogance or ignorance. But the truth is that we are NOT exempt; if WE want to be as successful in developing skills on OUR keyboard, we have to observe the same principles: stroke with maximum accuracy, develop the necessary muscle memory and automatic responses, make sure we stroke as efficiently as possible, do finger drills to increase our finger control, strength, and dexterity, and practice, practice, practice, and SPEED is the natural result.

Placing emphasis on speed and ignoring accuracy has never been an intelligent way to teach machine shorthand—but it was survivable before CAT because with a good enough memory and enough imagination, we could READ through the garbage and produce a record. Today's reality is a totally different story. Computers don't READ through garbage; they translate it "like it is." And if your strokes don't EXACTLY match a dictionary entry, they simply don't translate.

When you're practicing at home, you should ideally write material that is 10 wpm above your present speed—and certainly no more than 20 wpm above your present speed. You want material that makes



you STRETCH as far as possible, while maintaining your stroking accuracy and rhythm. So what are you supposed to do when you're in class and your teacher is dictating at speeds so far beyond your ability that you can't possibly keep up? You grit your teeth, you maintain your stroking accuracy, you maintain your stroking rhythm; and no matter how far behind you get, you keep writing until you no longer remember what was said next. Then you pick up with the next word you hear and continue writing. And you have to swallow your pride because you'll probably have "drops" and your classmates with garbage notes might not have drops. And I know that's very hard to do and how much you'll hate it. But I can assure you that you'll have the last laugh. You'll be the one graduating as a realtime writer, not a garbage writer. You'll be the one with the best and highest-paying jobs available to you; you'll be the one who is comfortable on the job and really enjoys your career; not the one who's stressed out and supporting the antacid manufacturers.

Which brings us to the other very important reasons why ACCURACY should always be your first priority.

I don't care if you can write at 300 wpm with one hand tied behind your back: if you can't write accurately, YOU DON'T HAVE A MARKETABLE SKILL. You can forget about being a captionist, a CART reporter, or a realtime court reporter (the CRR test requires 96% stroking accuracy: not transcription accuracy; STROKING accuracy). If you're thinking you'll get your act together and clean up your notes after you get out of school and that while you're doing that you can just work for a deposition firm on jobs that don't need to be realtime, or maybe even an officialship where a lot of what you write won't even have to be transcribed, you need a good reality check. The good memory and vivid imagination which might make it possible for you to read through garbage if you can run right to the typing/computer lab and immediately transcribe your school or certification tests won't help you much in deciphering garbage notes when preparing transcripts ordered five weeks, five months, or five years after you wrote them.

Accuracy is money in your pocket. The more accurate your notes, the less editing you have to do, the faster you can produce a final work product, the more jobs you can write, the more money you can make.

And let's not forget job stress. There's always been a lot of conversation about how stressful court reporting can be. I think there's a big distinction between "pressure" and "stress." Schedules, deadlines, difficult witnesses, surly attorneys—those are job pressures very much like those we all have to deal with in ANY responsible, well-paying job. "Stress" is knowing you're writing garbage notes and that this attorney is notorious for asking for readbacks. "Stress" is when the clerk tells you the jury is waiting for you to read back two hours of testimony from yesterday afternoon's session. If you write garbage notes, THAT'S BIG TIME STRESS, it's time to grab the Maalox bottle. If you write clean notes, it's a walk in the park.

Remember, ACCURACY is the fastest, surest, least frustrating way to reach court reporting speeds. It also means the best job opportunities, the best income, and the least amount of stress.

**QUICK TIP**

Do you frequently get strokes for little words confused—like stroking "it" for "the" and vice versa, or "this" for "that," "have" for "had," etc.? This is HESITATION; it's slowing you down. Don't sit there and wait for the problem to just "resolve itself"; do something about it!

Pick one word you're having trouble with: let's start with "the." Grab a magazine or newspaper article, the novel you're reading, a list of words, anything. Now write the article or list and stroke "the" in front of EVERY word. Write it again and insert "the" after every word. For example, I have a joke sitting here. One sentence is, "The elves were complaining about not getting paid for the overtime they had while making the toys." To practice "the," I would write: the elves the were the complaining the about the not the getting the paid the for the overtime," etc. It doesn't matter if it doesn't make sense in context. All you're doing is programming and reinforcing the "muscle memory" for stroking "the" to the point that when you see, hear, or think "the," your fingers just AUTOMATICALLY go to the right key(s).

Use the same material or pick some different material and do exactly the same thing for each of the other words you've been confusing. You'll be amazed at how quickly the intense repetition will create very solid muscle memory, eliminating these stroking problems and this hesitation—and that translates into more writing SPEED.

If you want to "kill two birds with one stone," use your list of brief forms, your list of "problem words," vocabulary lists from your medical or legal classes, etc., for this practice material!

It's a very common and very natural mistake for students to feel you should stroke each word just as soon as it leaves the speaker's mouth. You're afraid that if you don't, you'll get too far behind and not be able to catch up, or you won't remember what was said next. And you certainly don't want your teacher or your classmates to think you "can't keep up."

The experienced writer, the "smart" writer, writes FAR ENOUGH BEHIND THE SPEAKER so that words are understood in context before they're stroked.

If you glance down through your paper notes and you see instance after instance where a false start has been asterisked out and re-stroked, it's a pretty safe bet that you're trying to "stay right on top of the speaker." For example, you heard—and wrote—"They went there," before you hear "own separate ways," and then you realize you stroked "there" instead of "their" and you have to hit the asterisk and make a correction. Or you're writing and you realize you've already written the first word or two of what could have been a one-stroke phrase—and you hesitate while you decide whether to just keep writing it out or asterisk it out and rewrite it using your phrase. Or you just plain mishear a word that you would have understood perfectly if you'd just had the benefit of context. You miss stroking a piece of critical

punctuation that can change the whole meaning of what was said—because you didn't yet understand the context.

Regardless of whether you take time to asterisk out and make the correction or whether you just continue writing and hope you can catch and correct the error during readback or transcription, you've been distracted by realizing you made an error, you've hesitated at least momentarily while deciding what to do about it, your concentration has been interrupted, you've been distracted from hearing the ongoing dictation and may have missed a few words, your stroking rhythm has been interrupted—all of which detract from your SPEED.

ALWAYS write far enough behind the speaker so that you understand the words in context before you actually stroke them. This will probably seem awkward and a little intimidating at first—until you recognize that your brain IS a multi-tasking computer and that you ABSOLUTELY CAN be writing one thing and listening to, understanding, and retaining something else at the same time—and can do it very accurately and comfortably. With enough practice, you can also make a grocery list or plan the menu for your dinner party at the same time. (That's not recommended—but it is doable.<gg>>)

And again, the key is PRACTICE. When working on this area of skill development in class, the instructor starts dictating—but students are not allowed to start stroking until the instructor gives a hand signal. You can practice on this on your own just as well. Start out very conservatively by only writing three or four words behind the speaker. When the dictation starts, wait until the first three or four words are spoken BEFORE you start stroking, and try to always stay at least that distance behind the speaker. As soon as you're comfortable with that, let five or six words pass before you start stroking each take. And keep building from there.

What's the maximum number of words you should try to be able to "trail"? As a practice exercise, I'd keep pushing it as far as I could—because it's an excellent way to increase your RETENTION, and good retention can sometimes be a life saver. When you're "on the job," you'll find yourself adjusting the distance you "trail" depending upon the particular speaker and how easy he/she is to understand. If the speaker has an accent, a speech impediment, mumbles, or is just plain difficult to hear or understand, you'll almost automatically start writing a little further behind because your comprehension will be a little slower.

And let's put it in a perspective that may make this technique of "trailing" seem a little less intimidating. If someone is speaking at 180 wpm, that's an average of three words per second. So if you're "trailing" by ten words, that's only about three seconds. That's not so intimidating, is it?

Learning to "write behind the speaker" is one of the most valuable lessons you can learn. You'll eliminate a lot of hesitation and distraction while you "recognize" an error and decide what to do about it, you'll write fewer strokes because you won't be stroking the asterisk and stroking corrections, you'll be able to retain better concentration, you'll write a cleaner, more accurate, more readable record. And your SPEED will be higher.

And as you build your ability to "retain" what was said, you'll gradually realize that there's no need to panic just because you've fallen behind. In the real world, people don't speak at a nice, steady pace. They usually talk in spurts and pauses—but that doesn't mean you have to write in spurts and pauses, which can be pretty hard in your nervous system. If you have good powers of retention, you can saunter along at a comfortable pace, knowing that you can remember and write everything that was said and still be ready for their next burst of speech.

Trust me, the person who tries to write every word the minute it leaves the speaker's mouth works a heck of a lot harder than the person who trails behind the speaker—they work harder while they're writing, and they work harder when they have to clean all those false starts out of the transcript.

On everything you write from now on, either in class or at home, ALWAYS write behind the speaker. And when practicing at home, keep gradually increasing the number of words you're trailing so you keep improving your retention.

## QUICK TIP

There are some letters/sounds which are more commonly confused than others. For example, B- and D-, final "sh" and "ch," N- and M-, N- and Y-, -K and -X. Regardless of which letters you may be confusing, they still represent hesitation and lost speed and need to be corrected NOW. For example, if you're one of many students who say, "I'm always misstroking D- for -B or B- for D-," use your language dictionary, type a list of words beginning with B and D randomly mixed together, and make writing that list part of your daily practice until you've created such strong muscle memory for the D-sound and the B-sound that your fingers automatically move to the correct stroking position whenever you hear either sound. Each one of these areas of hesitation you eliminate adds to your writing SPEED.

Creating lists of words for "beginning sounds" is simple because you can take them right from your language dictionary. If anyone needs help compiling a list of words with problem ending sounds, holler. I can create a list from one of my sources and post it here.

Would you like to know how someone writing at 200 wpm can write exactly the same number of words in exactly the same length of time as someone who's writing at 220 wpm? Sounds like a trick question or a silly riddle, doesn't it? But it's NOT a trick. In fact, it's a very real and very common scenario.

Let's take just one minute of writing: 200 words dictated at 200 wpm. Suzy writes at a very steady, even pace, finishes writing the 200 words in exactly one minute. Johnny writes sporadically, in bursts. He hustles like crazy for 15 seconds, pauses for a couple of seconds, scrambles like mad again for 15 seconds, hesitates for a couple of seconds, and continues this pattern throughout the dictation. Johnny also finishes writing the 200 words in exactly one minute.

So what's the big deal; what's the difference? The DIFFERENCE is that Johnny scrambled, then hesitated, scrambled, then hesitated; so during the time he was actually STROKING, he HAD TO WRITE AT 222.5 WPM in order to write exactly the same words in exactly the same length of time as Suzy, who moseyed along at a steady, comfortable pace of 200 wpm. So who's writing "smarter"? The writer who writes with a steady, even stroking rhythm will invariably (1) win the race, (2) have better control over his/her writing (e.g., better stroking accuracy); (3) be less stressed and do considerably less damage to his/her nervous system, (4) be able to write for much longer periods of time with considerably less fatigue.

Start by writing at a comfortable speed and FORCING YOURSELF to write with a steady, even stroking rhythm, as though you were stroking in time to a metronome: stroke, stroke, stroke, stroke. Because of the inconsistency in the density of material from one sentence to the next, and depending on pauses for inflection/punctuation, etc., it's only natural that at times you'll fall a little further behind the speaker and then catch up, fall behind again and catch up. With a little experience, you'll become very comfortable with this fluctuation because you'll KNOW that when you just continue with your nice, steady stroking rhythm you WILL catch right back up. If on occasion you feel like you're falling far

enough behind the dictation that you may not be able to retain what was said, try speeding up your tempo just a bit, but DON'T panic and don't abandon your stroking rhythm. And if on occasion you do fall far enough behind that you can no longer remember what was said, pick up with the next word you hear and just continue stroking in rhythm.

Practice and practice and practice. I never personally used a metronome to work on stroking rhythm. But I've read comments from working reporters who have stated that actually writing against a metronome was invaluable to them in developing/improving their stroking rhythm. It's certainly worth a try.

When you combine the ability to write behind the speaker and the ability to write with a regular stroking rhythm, YOU'RE IN CONTROL! And that is the greatest, the most empowering feeling you can have on the steno keyboard. Even if the speaker talks in fits and starts, talking 90 miles an hour, and then pausing, going again like a bat out of hell, and then pausing, YOU don't have to write at "90 miles an hour," your writing doesn't have to be as spastic—and as hard on your nervous system—as his/her speech is. Remember, when you've developed the retention, the ability to write behind the speaker, and the ability to stroke with a steady, even rhythm, you can saunter along at 200 wpm and still finish writing a couple of seconds after a "spastic" speaker who's talking 240 wpm in fits and starts!!!

These two aspects of writing—steady, even stroking rhythm and trailing behind the speaker—are so important to your writing speed and comfort, make them part of every day's practice.

## QUICK TIP

A Conflict Distinction Stroke can be a very handy thing!

There are over 3,000 English homonym pairs/triplets/multiples. Understandably, sometimes it's hard to recall instantly exactly how you decided to distinguish a particular homonym (AE vowel, asterisk, spelling, etc.). Maybe using a Conflict-Distinction stroke as one consistent way of distinguishing homonyms will work better for you.

For example, Phoenix Theory uses R-R as a conflict distinction stroke. I chose R-R because: (1) It's stroked with the two strongest, most dexterous fingers; (2) It's directly under those fingers when in home position and requires the least amount of finger travel; and (3) It creates no conflicts. However, you can designate any unused key combination as your conflict distinction stroke. (If you would like to use R-R but are presently using it as a brief for railroad, try R-RD or R\*R as a new brief for railroad.)

How does it work? For example, your dictionary entry for "tick" would be TEUBG; your dictionary entry for "tic" would be TEUBG/R-R; "pray" would be PRAEU, "prey" would be PRAEU/R-R. You program the less-frequently-encountered homonym or the homonym with the least common spelling so it's distinguished by following the stroke for the sound of the word with R-R. The advantages are: (1) You can write all homonyms by sound. (2) It can be totally consistent—no hesitation trying to decide which technique you decided to use to distinguish each homonym. (3) Frequently, we don't recognize that a word is a homonym which requires distinction until we're actually in the middle of stroking it. Instead of having to asterisk out and restroke, when you think, "Oops, that should be "herd," not "heard," you just immediately stroke R-R.

On the really high-frequency homonyms which you prefer to learn and use a one-stroke distinction for, fine, program it in both ways so you have the best of both worlds. For example, "seed" = SAOED; "cede" = SAO\*ED or SAOED/R-R. If you realize the word should be "cede" before you start stroking it and if you instantly recall it's distinguished with the asterisk, great, stroke SAO\*ED. If you don't realize it should be "cede" until after you've already stroked it, or if you can't recall your one-stroke distinction instantly, just immediately stroke R-R.

Your conflict-distinction stroke can be a big help in other areas, too.

Use it to distinguish abbreviations: foot = TPAOT; ft. = TPAOT/R-R; street = STRAOET; St. = STRAOET/R-R, captain = KAP/T-PB, Capt. = KAP/T-PB/R-R, etc.

Simplify stroking for common, hyphenated phrases. Distinguish them as hyphenated phrases rather than individual words by including the conflict-distinction stroke in your dictionary entry: black-and-blue, two-by-four, out-and-out, cock-and-bull, cash-and-carry, etc. On some really high-frequency

hyphenated phrases, you may prefer to program in the hyphenated phrase WITHOUT the R-R, and add the R-R only on the rare occasion when those words would NOT be hyphenated.

Use it to distinguish proper names: Is it "Central City area," or "central city area," Carr or car, Byrd or bird, Lake Pleasant or "Isn't the lake pleasant?" Include the CD stroke in your dictionary entries for proper names which could create conflicts.

Unforeseen problems: You just created a beautiful shortcut for First Interstate Bank and now the witness is shortening it to First Interstate? Continue to use your handy brief for First Interstate Bank, but make a quick dictionary entry for your brief followed by R-R to translate as just First Interstate. A CD stroke can resolve some very sticky situations.

A MAJOR source of hesitation—and LOST SPEED—when writing machine shorthand comes from specific fingering positions or progressions between fingering positions which are less comfortable—and therefore, slower—for you to execute. You may be totally unaware that there are particular fingering positions which are detracting from your speed, and the fingering positions which are a "piece of cake" for you may be a real bugaboo for someone else. You can write machine shorthand for 20 years and never recognize where you're hesitating, where you're LOSING SPEED, unless you take very specific steps to identify and eliminate these areas of hesitation.

And the best possible way to do that is with finger drills. If you want to gain speed more rapidly, make finger drills part of your everyday practice routine.

Why? For the same reason the pianist plays scales and chords: It's the fastest, most effective way to: (1) Master the "theory" and the keyboard; (2) Develop and reinforce proper fingering technique; (3) Increase finger control and dexterity; (4) Develop stroking rhythm; (5) Create automatic responses; (6) Eliminate hesitation and INCREASE YOUR STROKING SPEED.

As I stated earlier, the dynamics of developing machine shorthand keyboard skills are virtually identical to developing skill on a musical keyboard. And it's as illogical to assume you can reach your potential speed in the shortest possible time simply by writing new material every day, without writing exercises designed to reinforce mastery of the keyboard and increase finger dexterity and control, as it would be to assume a pianist can become a concert pianist in the shortest possible time just by playing new material every day, without practicing scales and chords. It truly is "a no-brainer."

Remember, speed comes FROM ELIMINATING HESITATION. When you're writing text, you're not aware of the innumerable times you hesitate an extra fraction of a second. You can write machine shorthand 8 hours a day, 5 days a week for the next 20 years and never recognize or eliminate the hesitation that's limiting your speed.

I recommend Fast Track to Machine Shorthand Speed. I have to because I wrote it<gg> Of course I'm biased! But the schools who use FTTMSS as a required part of their training program, the captioning companies which use it as part of their in-house training of captioners, and the court reporters who



credit it with dramatic improvements in their stroking accuracy and writing speed because it's made it possible for them to identify and eliminate hesitations they didn't realize they had even after 20 years of reporting—these people don't have any reason to be biased. They've just found something that really works and has helped them become cleaner, faster writers.

There are 107 finger drills in FTTMSS with a graduated level of difficulty. The unique benefits of the FTTMSS finger exercises comes from their reinforcement of specific finger positions and the progression from one fingering position to the next. The exercises include reinforcement of every finger position on the keyboard, plus every progression from one finger position to any other finger position. Because the finger drills are comprised of WORDS, you get maximum benefit from the drills by reinforcing left-side fingering positions, right-side fingering positions, and the vowels simultaneously.

Whatever finger drill program you elect to use, making finger drills part of your daily practice routine is an absolute MUST if you want to build the most speed in the shortest possible time. And remember, to be effective, finger drills MUST be written against a metronome.

**QUICK TIP**

Keep a list of "hesitation words"—words which cause you a little extra hesitation when writing them—PLUS all brief forms which you've decided to adopt into your writing but which aren't yet TOTALLY automatic. Keep a Post-It on top of your keyboard. Whenever a word comes up in the dictation which causes you a little extra hesitation when writing it, as soon as the dictation ends or during readback, jot that word down on your Post-It. At the end of the day, add the words from your Post-It to your list of "hesitation words ."

This list represents HESITATION which detracts from your writing speed, hesitation which you need to take positive steps to eliminate. Practicing these words/briefs should be part of your DAILY practice.

You could just write through the list several times each day and make noticeable improvement. But we have a tendency to "memorize" lists to the point where we can write them with great speed—but still hesitate on the individual words when they occur in a different sequence, when they're preceded by a different fingering position.

And you could create 10 or 15 "sandwiches" for each word (inserting your "target" word between two other words), but that can be very time consuming and you'd still have a very limited number of fingering progressions you're practicing—you're writing your target words over and over and over in exactly the same context.

Your practice time is very valuable. You want to accomplish the most REPETITIONS of your target words in the least possible amount of time. So a better alternative is: Each time you add a new word/brief form to your list, write through your list and stroke the NEW word BEFORE every other word on your list. (And again, it makes absolutely no difference whether the sequence of two words makes sense in context.) This way you're placing the most emphasis (the greatest number of repetitions) on your NEW word, you're practicing every other word on your list from a new preceding fingering position, and you're doing it with the least amount of practice time.

Let's talk about brief forms. "Brief forms"—their benefits/detriments—are a hotly-debated subject, with very strong opinions. The extremists on either side of the subject are just about as far apart as two opinions could possibly be: Side 1 says: Brief forms shouldn't even be introduced during theory; Side 2 says: Never teach a student to write a word out if a brief form is available.

Can't get much further apart than that! <VBG>

Another interesting phenomenon about brief forms is that one reporter may say, "Oh, I use scads of brief forms," but when you look at their actual notes, they use fewer brief forms than the reporter who claims, "I write almost everything out." Go figure!

All I can do is give you my opinion and tell you what I've seen during 30 years of professional experience, and then duck when the bricks start flying<gg>

If when you started investigating attending court reporting school you had been told that you would be learning a totally new language, and that one of the course requirements was that you must memorize 5,000 abbreviations for words, and memorize them so thoroughly that you could recall them and actually write the abbreviations in this new language at 240 words per minute, you would probably have thought that requirement was so absurd, so impossible, that you would have made a hasty exit and never looked back. But that's exactly what many students attempt to do.

WHY students (even some working reporters) feel they NEED a brief form for every word of more than two syllables is an interesting question in itself and one we'll talk about later.

But the question right now is: IS MEMORIZING AND USING EVERY POSSIBLE BRIEF FORM THE FASTEST WAY TO GET TO GRADUATION SPEED? And the answer is: NO!

The next question is: BUT AREN'T I GOING TO EVENTUALLY NEED ALL THESE BRIEF FORMS IN ORDER TO HAVE ENOUGH SPEED TO BE A REALLY GREAT COURT REPORTER, OR MAYBE EVEN COMPETE IN SPEED CONTESTS? And again the answer is: NO! (Example: One former winner of the national speed contest has stated that he uses brief forms on the job; but he DOESN'T use them when writing speed contests because he doesn't have time to THINK about them. There's a very important message there!)

Brief forms for high-frequency words, even some fairly infrequent words with a construction which makes them particularly awkward to stroke out, can be absolutely invaluable—IF they're memorized and practiced to the point where they're totally automatic. You'd never catch ME stroking out "Ladies and gentlemen of the jury," "vague and ambiguous," "manufacture" etc.<gg>

But writing machine shorthand at court reporting speeds is much more dependent on MENTAL agility than manual dexterity. Memorized brief forms reduce the number of strokes—but they add SIGNIFICANTLY to the mental agility required. And every individual has to decide how many brief forms THEY can memorize and use successfully without placing too much of a burden on mental agility. (Remember our speed champion who can write FASTER without his brief forms than with them?)

When I was in school, I was like a lot of you: It was obvious to me that a one-stroke brief was faster than stroking words out, that briefs were the fastest way to speed and graduation, and I never practiced my homework without going through it first and underscoring every brief and bracketing every phrase to make certain I always used the shortcut. UNTIL friends who were working reporters told me: Some briefs are great; but unless they're for really high-frequency words, you won't use the majority of them when you start working—they don't come up often enough to be able to recall them instantly and you don't have time to THINK about them; it's much more natural and much FASTER to just stroke them out. You're wasting all this valuable time memorizing brief forms you'll never use once you start working, and you could be using your time to LEARN TO WRITE and build speed.

I also had a favorite "mentor"—an exceptional court reporter who finished school in San Francisco in six months, who had 20 years experience and the reputation of being able to write difficult medical and technical testimony with one hand tied behind his back, who's favorite trick was to sit there casually finishing his cigarette AFTER the examination had started, and if anyone looked at him inquiringly, he'd grin and say, "Oh, that's okay. Go ahead. I'll catch up." And the lesson he repeated and repeated and repeated to me was: The best advice I can give you is, "ALWAYS write behind the speaker. And the longer you write, the LONGER you write." Meaning, the more experienced you become, the better writer you become, the fewer shortcuts you use and the more you just write everything out.

I used to have a company which had over 100 working reporters as clients, and I've had the privilege of personally reading the shorthand notes of some of the best possible writers, including speed contest writers. And I can say without any reservations that the best writers I have ever seen—fastest, cleanest, capable of writing almost unimaginably difficult material—use a minimum of brief forms.

I've also had the unfortunate experience of seeing students who couldn't be dissuaded from the "brief forms are the key to speed" philosophy graduate, go to work, and QUIT after one month, six months, etc. They didn't realize that it was one thing to have enough time to be able to recall and use all those memorized brief forms when they were writing at 60 wpm, 150 wpm, even 200 wpm while they were in school; but it was an entirely different matter to try to recall and use them at 240 wpm under the pressure of writing on the job. And because they had been so totally focused on and so reliant on using these memorized brief forms, which they now couldn't remember fast enough to use at working speeds and under job pressures, they froze and couldn't respond to stroking the words out.

Brief forms for high-frequency words, memorized and practiced to the point where they are totally automatic, can be an invaluable asset and can enhance your speed. But At 200 wpm, a brief form which takes a second to recall REDUCES your speed. The number of briefs you can process successfully at 180 wpm in school may cause a short circuit at 240 wpm on the job.

IF a brief form is for a high-frequency word, IF when you see the brief form it immediately brings to mind the word it represents so you have little likelihood of misreading it—or worse yet, forgetting what it stands for, IF the fingering is simple enough that you can assimilate the brief form into your writing to the point where it's totally automatic and is in fact faster to RECALL and stroke at court reporting speeds than stroking the word out, then by all means use it. Just remember that when selectively and wisely used, brief forms can increase your speed; when not assimilated to the point where they're automatic, they can actually detract from your speed. Brief forms reduce the number of strokes and ease the burden on your fingers, but they increase the demands upon the mental agility of a sometimes very weary brain.

YOU'RE the only one who can decide how many brief forms YOU can use successfully.

**QUICK TIP**

Use "wide keys" to make some reaches more comfortable and FASTER to stroke.

**WIDE ASTERISK KEY:** Before CAT, the asterisk was generally used only for indicating a misstroke or a new paragraph. Computer-compatible theories make frequent use of the asterisk to distinguish homonyms, to identify strokes as word beginnings or endings, or to resolve conflicts between endings such as -s/-t/-st, -t/-th, etc. A wide asterisk key reduces the gap between the asterisk and adjoining keys and makes including it in strokes a much easier, more comfortable, FASTER reach.

**WIDE T/S or WIDE D/Z KEYS:** In order to stroke -D or -Z, the right-hand little finger has to reach one key further than is required of the left-hand little finger. Also, realtime theories generally require the -ss spelling to be stroked as -SZ to avoid conflicts. If you have small hands, the reach can be awkward—or your little finger can actually get caught in the gap between the -S and -Z. Simplify the stroking by using either wide T/S keys or wide D/Z keys.

Whether the wide T/S or the wide D/Z is the appropriate choice for YOU depends upon the length of your little finger in relation to the rest of your fingers. If the tip of your little finger is even with the first knuckle on your ring finger, it's considered to be of "average" length in relation to your other fingers. If your little finger is SHORTER than average, wide D/Z keys are the better choice—they shorten the reach to the D/Z keys. If your littler finger is LONGER than average, the wide T/Z keys are the better choice—because with the extension on the D/Z keys, you could have a tendency to overreach and catch the D/Z keys and drag them into a stroke where they don't belong. If your little finger is of average length, wheedle classmates who have the wide D/Z keys and the wide T/S keys into letting you write on their keyboards for a few minutes so you can decide which is the better choice for you.

When buying a new keyboard, wide keys are an option you may select. Otherwise, almost any steno machine service center or repairmen can replace your existing keys with wide keys, usually at a fairly nominal cost. The added writing comfort and SPEED are well worth the investment.

A MAJOR source of hesitation, frustration, and LOST SPEED for most students—even many experienced reporters—is writing "big" words.

"Big" words are NOT difficult to stroke—each syllable is written with the same simple strokes you use for one-syllable words.

But "big" words can cause a tremendous amount of hesitation and can be very SLOW to write because (1) sometimes the sequence of sounds takes a second to sort your way through; (2) every word of more than one stroke requires at least one DECISION on where to break it into shorthand strokes: Is it better to stroke "dancer" as DANS/-R or DAN/S-R? Does it make any difference? Making decisions takes time;

decisions involve hesitation; hesitation reduces your speed. Words with many syllables, requiring many decisions, can cause a heck of a lot of hesitation and LOST SPEED.

It's this hesitation involved in sorting out all the sounds and making all the decisions on where to break big words into shorthand strokes which causes many writers to grab for their brief form book. But in many instances, if not most, there are much better ways to "cut these big words down to size" rather than having to MEMORIZE a brief form for each one to the point where you can recall it and execute a stroke for it at 240 wpm.

There are several techniques we use to both simplify the sound and reduce the number of strokes.

ELISION PRINCIPLE: OMIT medial syllables (strokes) consisting of only an unaccented, single-vowel. For example: Each of the following words has an unaccented, single-vowel syllable: REL uh tiv; PEN uh tunt; SEL uh brayt, PAS uh fy. Use the elision principle, omit the single-vowel syllable, and stroke the words as REL tiv, PEN tunt, SEL brayt, and PAS fy, according to your particular writing theory. You've simplified the sound; you've reduced the number of strokes; and because you've omitted that vowel sound, you don't have to know how the darned thing is SPELLED in order to stroke the word so it matches a dictionary entry—and you still have excellent readability! And you accomplished all that without having to MEMORIZE a brief form.

You DO have to use some judgment to avoid creating conflicts. For example, eliminating the single-vowel syllable can create conflicts such as the following: homophone/home phone; isolate/ice late, caraway/care way, millibar/mill bar. Whether or not a conflict would be created depends on your particular theory: e.g, if the theory makes a distinction between words ending in an ee sound (bee, see, fee, key, me, etc.) and ee sound word endings (-by, -cy, -fy, -ky, -my, etc), you can reduce HAIR uh see, to HAIR see. If your theory doesn't make a distinction between ee sound words and ee sound word endings, you'd be creating the conflict heresy/hair see. And sometimes you may opt to shorten a word even though a possible conflict is created IF the likelihood of the conflict occurring is very remote. For example: you reduce KAD uh lak to KAD lak, creating the possible conflict cadillac/cad lack. "Cadillac" is a common word; the chance of encountering "cad lack" is remote; and if it does come up, you can execute an "insert space" stroke (KAD/SP-Z/HRABG) and get correct translation.

This "elision principle" can be used to cut thousands of words down to size. For example, the first time you encounter spes uh FIS uh tee (specificity), it could be easy to get lost in the sounds. But spes FIS tee is a snap. USE THE ELISION PRINCIPLE!

COMPRESSING SOUNDS: "Compress" two syllables together by omitting an UNACCENTED vowel sound between two consonants: Examples: buh LOON, fuh REN sik, dee LEET, kuh REKT, su POHZ. Omit the vowel, compressing the sound, and stroke BLOON, FRENS ik, DLEET, KREKT, SPOHZ. Again you've simplified the sound and reduced the number of strokes by omitting an unaccented vowel sound, you don't have to know how the omitted vowel was SPELLED, you have excellent readability—all without resorting to a "memorized" shortcut. This is actually the principle used in arriving at many of what are commonly thought of as brief forms: KLEKT, KREKT, DREKT, DLAOEUT, BLAOEF, BLONG, KRUP, etc.

Again, judgment is required to avoid creating conflicts. For example, you can eliminate the vowel, compress the sound, and shorten "derogatory" to drog tory; but you CAN'T follow the same technique with "derive" because the resulting stroke would be the same as for "drive." If you ALWAYS come back for the final -ed in a separate stroke, as encouraged but not required by NCRA, you can compress "deride" to the sound DRIDE; but if your theory includes the -ed with the same stroke as for the word, you'd have a conflict with "dried."

**SHORTCUTS FOR MULTI-SYLLABLE (STROKE) WORD ENDINGS:** Many English words are constructed of a very simple root or beginning, followed by a frequently-used multi-syllable ending—an ending which could be pretty intimidating and time-consuming to write if you had to sort your way through and stroke every sound every time one of those words came up: e.g., -ification, -(c)ization, -ologist, etc. Rather than memorizing a brief for each of these words, it's much easier to cut a whole group of words down to size with a shortcut for the ending which can be used for ALL words with that ending. For example, I use F-KZ as a shortcut for -ification. I'd hate to have to sort my way through all the individual sounds and strokes for mor tuh fuh KAY shun, klair uh fuh KAY shun, stul tuh fuh KAY shun, klas uh fuh KAY shun, etc. But it's no problem to hear or write mort F-KZ, klair F-KZ, stult F-KZ, klas F-KZ.

Review your theory and make certain you know and are using all the word ending shortcuts available in your theory. Then practice them until they're totally automatic. If you need practice material to really focus on making these endings an automatic part of your writing, there are 400-plus writing exercises in the last section of the Fast Track to Machine Shorthand book (and on the audio cassettes) where words are grouped according to ENDING sounds based on how machine shorthand is written. The words can LOOK and sound pretty intimidating until you realize, "Hey, I can write that whole three- or four-stroke ending in one stroke; so most of these "big" words can be written with two very simple strokes." If you don't have Fast Track, beg, borrow, or buy a rhyming dictionary and write lists of words from there.

Even though you use the elision principle, compress sounds, and use all your shortcuts for multi-stroke word endings to great advantage, you can still have a lot of hesitation and lose a lot of speed when writing big words because of all the remaining decisions on where to break big words into shorthand strokes.

In the next section we'll talk about a couple of guidelines which can eliminate most of that decision-making, hesitation, and LOST SPEED—plus increase your stroking "efficiency."

## QUICK TIP

To produce a first-pass realtime transcript, you have to include necessary punctuation and required capitalization AS YOU WRITE. Do you always remember to include your "cap next" stroke when needed? I don't <sigh>! It would never occur to me to not hit the "cap" key when typing, but I still forget sometimes that, unlike the shorthand I learned a million years ago where we didn't even think about capitalization when writing, if I want a first-pass realtime record, or even avoid a lot of editing on a draft, I have to remember my "caps next" stroke.

Now (hurrah!) some CAT programs have a "retroactive capitalization" function—you can execute strokes to prompt the computer to RETROACTIVELY capitalize one, two, or three words. It's simpler to depress one stroke and capitalize the previous three words than to stroke a "caps next" stroke before EACH of those three words. Plus, if you don't realize until AFTER you're in the middle of stroking, for example "great western land" that it's a proper name, you can capitalize it retroactively and it will appear correctly as "Great Western Land" without having to asterisk out and restroke.

GREAT FEATURE! Keep it in mind when shopping for software.

Another MAJOR area of hesitation when writing machine shorthand is the hesitation involved in trying to decide WHERE to break words into shorthand strokes. The decision can be as simple as whether to break "filter" into strokes as FIL ter or FILT er. Without guidelines, even a common word such as "carpenter" could be broken into strokes as CAR pen ter, CAR pent er, CARP en ter, CARP ent er. With some "big" words, there could be as many as three or four decisions to make, with as many as 10 or 15 different ways the word could logically be broken into shorthand strokes based on any particular theory. That's a lot of decision making, hesitation, LOST SPEED—and a very big incentive to scramble looking for a memorized brief form.

Many of you will already have been instructed by your teacher to "carry each stroke as far as possible through the sound of the word." That's good advice. I expand on that a little and say: (1) If, based on the sound of the word, you have a logical choice as to whether to end a stroke before or after a consonant, end it AFTER the consonant (e.g., major = MAJ or, not MA jr); (2) If, based on the sound of the word, you have a logical choice as to whether to end a stroke between two consonants or after the consonant combination, end it AFTER the consonant combination (e.g., carton = CART on, not CAR ton). But basically, it does come down to the same thing: Carry each stroke as far through the sound of the word as possible.

WHY? First and foremost, it gives you a consistent guideline to follow so you're not hesitating on every word of more than one stroke while you try to decide what's the best way to stroke it. And there's a lot to be said for "consistency" and what it contributes to speed. If you decide, for example, that you ALWAYS break strokes AFTER a specific consonant combination—say, the -rb—you'll develop an automatic response to hearing -rb and your fingers will immediately automatically move to that stroking



position. If you DON'T make and follow such a decision, when you hear -rb, your fingers can't even start to move until after you take TIME to make a CONSCIOUS decision on how to write that consonant combination for this particular word or in this particular instance. That's lost speed!

Also, on many words, when you carry strokes through a consonant combination, it simplifies the sound, reduces the number of strokes, and reduces spelling dependency. Let's still use

-rb as our example, and let's assume you've decided you'll consistently carry strokes through an -rb combination. On a simple word like "carbon," the difference between breaking it as CAR bon or CARB on may not seem like a big deal. (There IS a difference in stroking "efficiency," and we'll talk about that in a minute.) But now look at "carbonate." Because you've trained yourself to "hear" and stroke -RB instead of -R/PW-, you'll react to that word as KARB uh nayt, and immediately recognize that you can omit that "uh" sound syllable (remember the elision principle?) and just stroke KARB/TPHAEUT. If you DON'T carry the stroke through the -rb, you have to decide whether to stroke KAR bon ate or KAR bo nate, either of which requires an additional stroke. Lost speed! Plus, if you write a spelling-dependent theory, you have to know how that "uh" vowel sound is spelled and conform your stroke to the vowel spelling. Sure, you know how to spell "carbonate." But English is funny. That "uh" vowel sound can be spelled with any vowel and several combinations of vowels. How many words are you going to run into where you don't know how the "uh" sound is SPELLED, where you have to think about it or guess at it? Lost speed!

And what happens when you get to even more complicated words like "carboniferous"? If you follow the guidelines, "carboniferous" is a breeze to hear and stroke: KARB/TPHEUFRS. Without any guidelines, there are a dozen different ways it could be stroked, with a number of decisions to be made and some spelling to think about. Lost speed!

Another reason for carrying the stroke as far through the sound as possible is that it may prevent conflicts which exist in a spelling-dependent theory—and conflicts are the nightmare of the realtime writer. Let's take a couple of our earlier examples and use them again here. We have to assume that every computer-compatible theory has eliminated the conflicts between vowel-consonant word beginnings and endings (er-/er, or-/or, em-/em, in-/in,

al-/al, etc., etc.) So if you follow the guidelines and break "filter" as FILT er, you won't have a conflict. If you write a spelling-dependent theory and you stroke "filter" as FIL ter, those are the identical strokes you'd use to stroke the word "fill" followed by the word beginning "ter-." When CAT software translates steno, it keeps checking the next stroke, and the next stroke and the next stroke to see if including that next stroke would create a word. So if you stroke "fill" followed by any word starting with ter-, it will mistranslate as "filter": e.g., "Fill terrible gaps" will miss translate as "Filterable gaps." KART/ONZ won't create a conflict, but KAR/TONS can create a conflict with "car tons." Other examples of possible conflicts when strokes are not carried as far as possible through the sound (always depending on the particular theory) are : candid/can did, carbide/car bide, bargain/bar gain, damper/dam per, damsel/dam sell, feces/fee seize, futile/few tile, gastric/gas trick, global/glow ball, guidance/guy dance, gypsum/gyp sum, halo/hay low, hamper/ham per, helper/hell per, hermit/her mitt, hyper/high per, jargon/jar gone, judo/Jew dough, kilo/key low, Kuwait/cue wait, latents/lay tents, license/lie sense, lilac/lie lack, masons/may sons, etc., etc.

Also, carrying strokes as far as possible through the sound frequently results in increasing stroking "efficiency." For example, carrying a sound through the consonant and stroking the consonant with what would otherwise be idle fingers on your right hand may require less dexterity and actually be faster than carrying the consonant sound over to the next stroke and having to reposition the fingers of your left hand to stroke it. Example: It may be faster for you to stroke "caper" as KAEUP/-R, than to stroke KA/P-R, placing the responsibility for stroking both the K- and the P- on the left hand while your right-hand fingers sit idle. Carrying strokes through a consonant sound and stroking the consonant with the right hand frequently involves fewer fingers, traveling a shorter distance, than carrying the consonant sound over to the next stroke and stroking it with the left-hand fingers. Try it. The difference may be very slight but still noticeable to you. Logically, the fewer fingers you must move, the shorter distance your fingers have to travel, the faster the strokes can be executed and the less the likelihood of stroking error.

And please remember, I said when you have a logical choice, based upon the pronunciation of the word. You don't have to force words into some distorted pronunciation just so you can carry the stroke further through the sound. Nor do you have to make an absolute rule that you always carry a stroke through EVERY consonant combination. We each have particular fingering strengths and weaknesses. For example, it may be faster for YOU to break strokes BETWEEN a -kt consonant sound. The important thing is that you make decisions on how it's best for YOU to handle specific sounds that can impact many words rather than having to make individual decisions on every word which contains those sounds. And in those areas where you can train yourself to HEAR through the sounds and carry each stroke as far through the sounds as possible, it can simplify the hearing, reduce the number of strokes required, reduce the decision-making, reduce the spelling dependency, and avoid a few conflicts. All of which can contribute to writing speed.

**QUICK TIP**

Would you like to add some variety to your practice material? Do you need longer dictation takes so you can develop more endurance?

With sufficient writing speed, writing TV programs can be informative and enjoyable and also expose you to current events, with related terminology and the names of people, places, and things involved.

Do you have a CD encyclopedia with audio? Interesting, sometimes challenging writing on a broad spectrum of subject matter and vocabulary.

Your local library has books on audio tapes on a variety of subjects and undoubtedly including some of your favorite authors of fiction. Great fun to write, exposure to different speaking voices, different styles of speech, interesting vocabulary. And if you have a variable speed tape player, you have the added advantage of being able to adjust the speed!

And remember, you don't make significant breakthroughs in speed if you're not focused on what you're doing or if you're writing with an, "I'll just get down what I can write comfortably" attitude. Whatever you write and whenever you're writing, concentrate solely on hearing and writing EVERY word. "Stretch" just as hard as you possibly can to write EVERY word. Write as though you're writing an actual job and you know the attorney is going to ask you to read every word back. Write as though you're making the official record of some proceeding to which you're a party and the accuracy and completeness of the record could have an impact on YOUR life.

Use one-minute takes to increase your writing speed and accuracy.

Select a one-minute segment from one of your practice tapes, get permission from your teacher to record a warm-up session, find a newspaper or magazine article and dictate it yourself, or con a friend or family member into dictating one-minute takes for you on a variety of material. And it doesn't have to be counted or EXACTLY one minute.

First write the take at a comfortable speed where you can stroke it with total (or near total) accuracy. Read it back against the audio and circle EVERY fingering error or shadow. Write it again at the same speed, read it back, write it again, read it back—until you can write the entire one-minute take with near-perfect notes (no more than two or three stroking errors).

Now, using your variable speed tape player, increase the speed slightly, write it again, check your notes. If you're still writing with the necessary accuracy, increase the speed slightly and write it again. If fingering errors start to creep in, stay at that speed until you again have the accuracy under control; then start increasing the speed again.

Continue this process until you've pushed the speed on this short take JUST AS HIGH AS YOU POSSIBLY CAN!

You're accomplishing several things: You're training yourself to hear and process information faster; you're training your fingers to respond and to move faster; the repetition is reinforcing the muscle memory for all the fingering positions and fingering progressions involved, so you're learning to write the individual words and even sequences of words more automatically and faster; and you're reinforcing your stroking ACCURACY for all the words and word sequences in the take. And you're PROVING to yourself, "Hey, I really CAN write faster!"

In fact, you may be amazed at just how fast you can write these short "speed push/accuracy" takes. At the school I formerly owned, these "speed push" takes were a regular assignment which the students treated as a challenge and a contest—with themselves and with their classmates. Students would practice these takes as part of their homework assignment; then the teacher would dictate them for readback in class. In my high-speed classes, I'd continue increasing the dictation speeds as long as even one student in the class could keep on writing the speeds, and it wasn't unusual to have to dictate at 260, 280, even 300 wpm. And the students enjoyed competing to see if THEY could be the fastest on any particular segment or on any particular day.

If it's important to you to know the exact speeds at which you're writing, count the number of words in the take; time yourself with the sweep hand on your watch or clock. Divide the number of seconds into the total number of words to see how many words you wrote per second; then multiply by 60 to find out how many words you wrote per minute.

It would be ideal if you could include three of these "speed push/accuracy" exercises in your weekly practice. If time doesn't allow for three, even one will add to your progress in building speed and reinforcing your stroking accuracy.

**QUICK TIP**

Transcribe EVERY test, even if you don't think you'll get a passing grade.

One important reason for this advice is that I've seen far too many instances where students said with certainty, "I know I didn't pass this one," but after urging them to type it up anyhow, and after grading it with an eagle eye, they did in fact pass the test with flying colors. The drop they "knew" must have been "h-u-g-e" turned out to be three words, or the area where they "totally screwed up" turned out to be two words reversed!

But the main reason for typing up every test is because you LEARN SO MUCH about your writing—and also about your reading, typing, and proofing abilities—when you transcribe your notes. You learn things that could make a difference between being successful or unsuccessful on the next tests: e.g., "Ouch, three of my errors were typing 'that' when my notes said 'this,' so I'll really watch that in the future"; "I'm leaving out small words when I type"; "I'm misreading this brief form"; "Geez, look at the time I lost asterisking out false starts and rewriting"; "There's only one way this word is pronounced, but I wrote it three different ways. It's time to decide the best way for me to write it and add it to my hesitation list"; "I spent so long trying to decide how to write this word that I dropped two words after it; definitely add THAT word to my hesitation list"; "Oh, oh! I stroked PWHR- several times when it should have been TKHR-; better do some drills and nip that in the bud"; "I should have trusted my notes; I should have trusted my notes"; "I should have stuck to my notes and come up with a word closer to this botched outline rather than sticking in a word that made sense but had no relationship to the steno"; etc.

When proofreading, we have a tendency to see what we EXPECT to see. When you proofread, actually SAY each word to yourself, even put in inflection, so you're actually seeing and reading EACH word and grasping the context. Obviously, you can't have a room full of people all reading their transcripts out loud as they proof. You can SAY each word to yourself without actually making any sound, almost without even moving your lips. If you'll do this, you can catch a lot of errors that you might otherwise overlook. It's very disappointing to be unsuccessful in writing a test; but it's heartbreaking to WRITE the test successfully and still get a failing grade because of transcribing errors and/or proofing oversights.

Let's review the basic principles everyone has to observe in order to increase speed as quickly as possible and as far as possible:

Use correct keyboard/body position. It impacts your dexterity, your comfort, your endurance, and your SPEED.

Use correct stroking technique: Fingers slightly above the keys in home position, NOT resting on the keys; quick, light strokes and immediate release; no extraneous finger or hand movement such as a

"push" at the bottom of the stroke, flexing (straightening) fingers between strokes, or upward movement of the hands, all of which significantly detract from your writing SPEED.

Make accuracy your FIRST priority. (1) Speed without accuracy has no value, it's not a marketable skill; (2) Speed is a natural, logical result of accurate repetitions; accuracy is NOT the natural result of more speed.

Write far enough behind the speaker so you understand words in context BEFORE you stroke them.

Stroke with a smooth, steady rhythm. Remember the tortoise and the hare<gg>.

Use finger drills to (1) solidify your mastery of the keyboard, (2) increase your finger strength, dexterity, and control; (3) create ACCURATE muscle memory and automatic responses; (4) increase SPEED.

Brief forms can either increase or decrease speed. Be selective in your use of brief forms and practice each brief form you adopt until it is so totally automatic you can recall and stroke it instantly even at 240 wpm.

Get rid of your intimidation and hesitation in writing "big" words. "Cut them down to size" by simplifying the hearing and reducing the number of strokes by: Reviewing, practicing, and using shortcuts for multi-syllable word endings; using the elision principle to omit unnecessary strokes; "compressing" sounds to eliminate strokes; making and following decisions on how it's best for YOU to break sounds into shorthand strokes so you avoid the hesitation and lost speed of having to make decisions for each multi-syllable word you encounter; maximizing your stroking efficiency.

The next big question, and one of the questions asked most frequently by students, is: How much time should I spend practicing each day? The only realistic answer is: As much time as you can possibly make available for quality practice!

Ideally, I think a reasonable amount for day students would be two hours a day outside class; for night students, three hours a day. And I'd certainly recommend one hour a day as an absolute minimum for any student. HOWEVER, not too many people have "ideal" schedules. If the night student has a full-time day job, three hours a day isn't even realistic. And everyone has days so hectic, even an hour might be almost an impossibility on those days. Each individual has to assess their own situation, their family/job/church/civic/social obligations. So I repeat: The only realistic answer to the question of how much time YOU should spend practicing is: As much time as YOU can possibly make available for quality practice.

Maybe you can only set aside 1 hour for practice today, but you have fewer commitments tomorrow and can squeeze in 3 hours. And you don't have to cram all your practice for the day into one sitting. Maybe you have a half hour in the morning after the kids leave for school; a half hour during the afternoon; another hour of quiet time at night while everyone else is watching television or after everyone is in bed.

Maybe you don't need more time as much as you need a situation where you can accomplish more in the time you have. Writing machine shorthand is primarily a mental skill. So if you're trying to practice when your concentration and your writing are continually being interrupted, if you're so exhausted physically, mentally, or emotionally that you can't really focus and do your best, you're not accomplishing very much other than setting yourself up for frustration and discouragement. Walk away from it for the moment—but try to find a better time later.

And the next question is: WHAT should I practice on?

WHATEVER the amount of time you can find to practice, a good general routine would be:

First, finger drills, plus exercises for writing numbers and alphabet functions. I'd start my day's practice with finger drills because they're an excellent wake up call for both my fingers and my brain and an excellent warm-up for the rest of my day's practice. I'd spend a little less than one-third of my available time on finger drills, AND number and alphabet functions.

Second, I'd spend a little less than a third of my practice time writing my list of hesitation words/brief forms and any problem-solving exercises I'm writing PLUS practicing my one-minute "speed push/accuracy" take. I'd want to review my hesitation words/brief forms and problem areas BEFORE I start my five-minute speed takes—because those words might come up in the material I'm about to write. And my one-minute speed push limbers up my fingers even further and also makes the speed SOUND slower<gg> on the five-minute takes.

The balance of my time, I'd spend on writing and reading back five-minute takes plus writing longer takes for endurance. I'd write those five-minute takes at speeds which push me 10 to 20 wpm beyond my present ability, recognizing that I'll have drops (which will get smaller and smaller as I gain just a little more speed), and I'd write them as though my life depended on my getting every word down with accurate notes.

And I'd END my day's practice with a take of five-minutes or longer at a speed about 10 wpm BELOW my present writing speed so I can ENJOY the fun and challenge of writing and end the session feeling good about myself and how far I've come, how much faster I can write today than I could four months ago, or even four weeks ago.

And if I was an independent-study student who was not typing weekly transcripts as a class requirement, I'd transcribe and proof at least two five-minute takes (or longer) every week, just as though I were submitting them for a grade.