

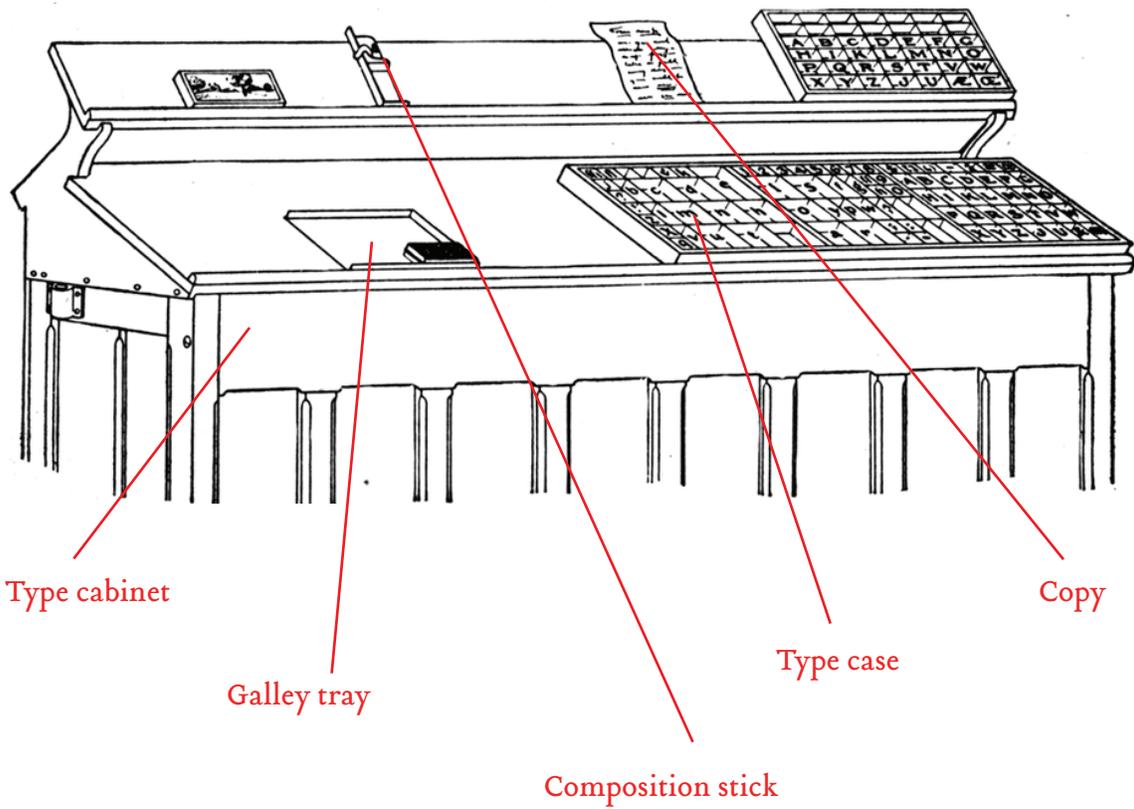
A HANDY GUIDE

for letterpress printing & using

THE TYPE SHOP

California Job Case

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GLOSSARY

Ampersand: symbol representing Latin word *et*, meaning and: often elaborately designed ‘&’

Ascender/Descender: the rising stem of lowercase letters like b, d, h, or part that descends below the baseline, q, p, y.

Bastard: Composing material cut to odd lengths.

Blind Embossed: An impression stamped forcefully onto card creating a relief effect. No ink is used in this process.

Bleed: A sheet or page is said to be bled when it has been trimmed into the printed portion. To design something with a full bleed is to have the printed area go beyond the edges of the paper, usually after it has been trimmed.

Boxes: the compartments in the type cases for individual letters.

Brayer: A small hand roller for rolling out ink for proofing forme.

Case/Type Case: standardised—each letter has its place. The two upper rows contain the majuscules (capital letters) of a font. Apart from that the arrangement is based on the frequency of a letters usage. The non-capital ‘e’ is used most frequently, thus its place is closest to the right hand.

Chase: An iron or steel frame, in which forms are locked, so that they may be held firmly on the bed of the chase. Used more commonly with a platen press.

Composing Stick: hand tool used in composing lines of type.

Devil: The apprentice or errand boy (or girl) in the printing plant is often known as a printer’s devil.

Die: A steel block or copper plate with engraved text, required for all die-stamped stationery.

Dingbat: star, dot, flower, or other mark outside a fount: may be used for separation. *

Diphthong: Æ, æ, Œ, œ found in many styles of lettering, but distinguished from a ligature.

Dirty Case: A type case in which the letters are badly mixed.

Distribute: replace material after use into correct storage places, esp handset

Draw Sheet: The top sheet of the tympan, or packing, on the platen of a job press, or cylinder of a cylinder press.

Dummy: A general lay-out for a folder or booklet, or a preliminary sketch of a project.

Flatbed Press or Cylinder Press: A press that has a horizontal bed for the printing forme or plate. An inked roller passes over the plate, followed by the paper attached to a cylinder that passes over the inked forme.

Frisket: On a hand press, the thin metal frame, hinged to the tympan, that protects the margins of the paper.

Fleuron: Typographical ornament, generally small, sometimes in the shape of a flower, used to mark text openings and other typographic separations. 🌸

Flush Left: Type that aligns on the left hand side.

Flush Right: Type that aligns on the right hand side, as opposed to centered, or completely justified.

Font: contains a complete outfit of letters of one size and style of type, the quantity of each individual character varying in accordance with the frequency of its use in the English language.

Forme: matter (type or blocks) assembled into chase or bed of press ready for printing

Foundry Type: handset type of a quality made in a traditional typefoundry

Furniture: strips of larger spacing (wood, lead, light metal, bakelite) used to lock up the type or image.

Galley: Can refer to the proof of hand set text, image, figures, etc., or the tray in which the proof is set up.

Gingerbread: A common printers' term for useless or meaningless ornament applied to a job.

Hammond Glider Trim-o-Saw: High quality saw calibrated in pica that is used to cut and trim type

Hell Box: A box for damaged type, and ruined lino slugs.

Impose: arrange type matter and illustrations within a chase in position for printing

Imposing Stone: A slab of stone or metal used to lock-up type into a chase.

Imposition: The imposing of pages of type. A particular arrangement of imposed pages: some samples of 16-page impositions.

Justify: adjust interword spacing so that line exactly makes the measure and is tight, or to justify a page is to adjust spacing so that each line is the same length.

Kern: adjust the spacing between (letters or characters) in a piece of text to be printed.

Kerned Letters: Types on which a part of the face projects beyond the body. Some Italic types are kerned, in order that the proper slope of the letters may be had without separating the individual letters too widely.

Lead: A strip of spacing material mainly used between lines.

Letter Space: Use of thin or hair spaces between letters in one word to avoid awkward word spaces.

Ligature: Two or more letters conjoined and cast on one body, as ff fi, fl, ffi, etc.

Line Gauge or Pica Rule: A ruler used by LP composers, calibrated in picas (and other units).

Make-ready: Work of securing an even impression of a form in the press, by building up lower parts and cutting down higher ones. This is more common with a platen press.

Nick: A groove cast into the body of a type for purposes of identification

Off its Feet: Type is said to be off its feet when the individual letters lean towards either side of the line, resulting in an imperfect print.

Offset: A sheet is said to be offset when fresh ink from its surface is transferred to another sheet.

Out of Sorts: When a certain letter has been set out, the case having no more, the compositor is said to be out of sorts.

Point: Unit of the printers' measure, approximately one seventy-second of an inch.

Proof: Printed text, images, figures, etc. used to check for errors and other issues prior to production printing.

Pica: Type on a 12-point body. Approx. 1/6 inch

Point: 1/12 pica; 12 points = 1 pica

Pi: Type broken or indiscriminately mixed.

Platen Press: Also called a clamshell press or a job press, consists of a vertical clamp that holds the chase against the bed, which carries the form into which the composed type is locked, and the platen, which carries the sheet of paper while it is being printed.

Quoin: wedge or wedging device for locking type, spacing, etc into chase for printing

Quoin Key: Expanding screw to adjust quoins

Roman: Roman is an upright serif typeface (not on a slant like Italic, nor a handwriting style like Script). Times Roman is the best known of Roman typefaces but there are thousands more.
Rule: type-high strip of any material which prints a straight line: may be brass, typemetal, wood, steel: may be multiple line, dashed or dotted or ornamental border.

Script: A typeface that resembles elegant copperplate handwriting.

Serif: A serif is the small tick-mark that decorates the tips and ends of each letter of certain typefaces. More recently typefaces have been designed without serifs; these are known as sans-serif faces.

Swash: Special characters included in some fonts, which are embellished by elongated strokes or additional curves or flourishes. Q

Slug: A six or twelve-point lead

Slurring: A printing defect characterized by the smearing of the trailing edges of a printed impression, which is typically caused by slippage of the paper or by loose type.

Sort: A letter or piece of a font in type, or characters not secured in regular fonts, or in standard assortments, but which are obtained individually.

Spacing Material: Metal spaces based off the EM space used to separate and kern words as well as justify lines of type. Spaces are lower than type high so they can't be inked. (2-em quad, 3-em quad, em quad, en quad, 3-em space, 4-em space, 5-em space, 2 pt. thin, brass, copper, and paper space)

Type: The relief surface from which words are printed: individual letters

Type Family: A number of related typefaces: eg a Roman and its Italic, its Bold, its condensed. a basic typeface and its variants, designed to be used together: the Bembo family

Type High: The height of type:, 0.918 inch.

Tying Off: When the type has been assembled it can be tied to be fixed or for purposes of archiving by use of a page cord. The cord should be long enough to reach around the type four to five times. Starting on the right hand corner the last part is tied to a loop and either pushed under the collar or knotted with the help of the bodkin.

Tympan: The packing placed on the platen of a job press or the cylinder of a cylinder press, consisting of paper, pressboard, etc and covered with a draw-sheet, against which the forme is printed.

Weight: The thickness, or weight within a given type famil: regular, semi-bold, demi-bold, bold, black, etc.

Work-ups: A defect of letterpress printing characterized by ink spots in non-image areas of the substrate, caused by foreign material typically located beneath the raised image but which, under pressure during printing, is forced up to the surface of the type or plate.

X-Height: In typography, the height of the lowercase letter 'x,' representing the most important area of a letterform for 90% of lowercase characters. A character's x-height does not take into account ascenders or descenders and is thus a more realistic measurement of the size of a typeface than point size. Also known as body height, body size and z-height.

Measurement & Setting Type

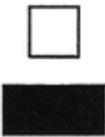
Diagrams showing spacing material and anatomy of a piece of type.

PRINTING INSTRUCTION CHARTS No. 7

SPACES USED IN SETTING TYPE



3-em
Quad



2-em
Quad



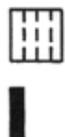
Em
Quad



En
Space



3-em
Space



4-em
Space



5-em
Space



Hair
Space

Spaces are non-printing types less than one em in width. Thickness is designated by the number of pieces that add up to approximately one em, as 5-to-em, 4-to-em, 3-to-em, and 2-to-em called en spaces. The Em quad is the square of any given body size, while 2 and 3 em quads are multiples of the em quad.

BODY SIZE	3-EM SPACE	4-EM SPACE	5-EM SPACE	THIN SPACE
6-pt.	2 pts.	1½ pts.		
8-pt.	3 pts.	2 pts.	1½ pts.	
10-pt.	3½ pts.	2½ pts.	2 pts.	1½ pts.
12-pt.	4 pts.	3 pts.	2½ pts.	2 pts.
14-pt.	5 pts.	4 pts.	3 pts.	2 pts.

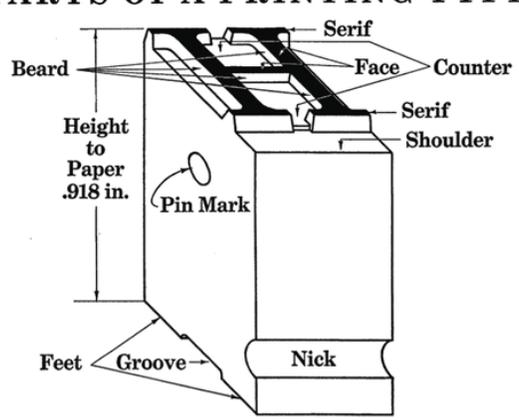
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10-POINT SPACES AND QUADS

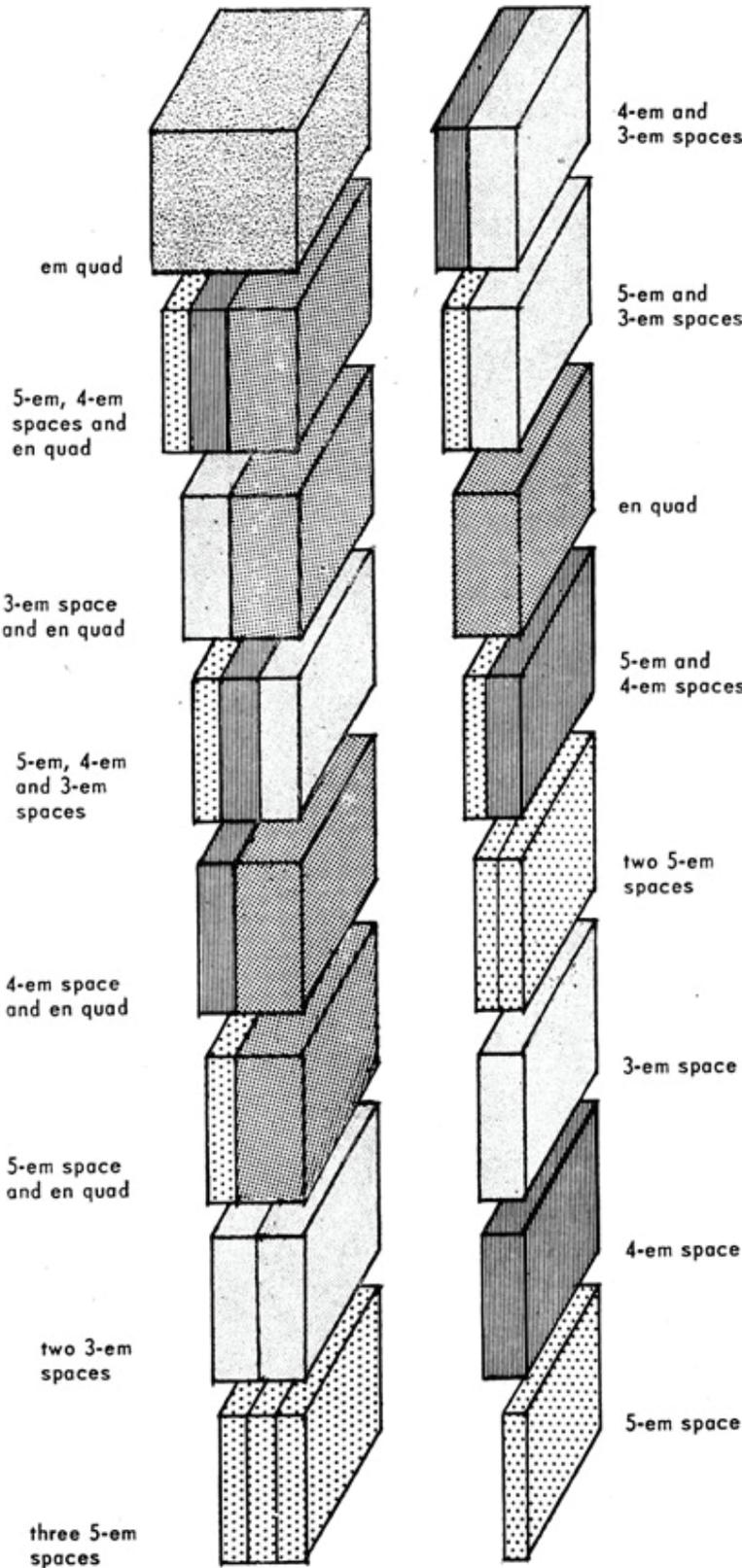
- hair space |
- five-to-em █
- four-to-em █
- three-to-em █
- en quad █
- em quad █
- two-em . . . █
- three-em █

PRINTING INSTRUCTION CHARTS No. 1

PARTS OF A PRINTING TYPE



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How to Combine Spaces and Quads for Proper Line Justification

By R. Randolph Karch

State Department of Public Instruction, Harrisburg, Pa., and author of *Graphic Arts Procedures, Basic Lessons in Printing Layout, How to Recognize Type Faces, etc.*

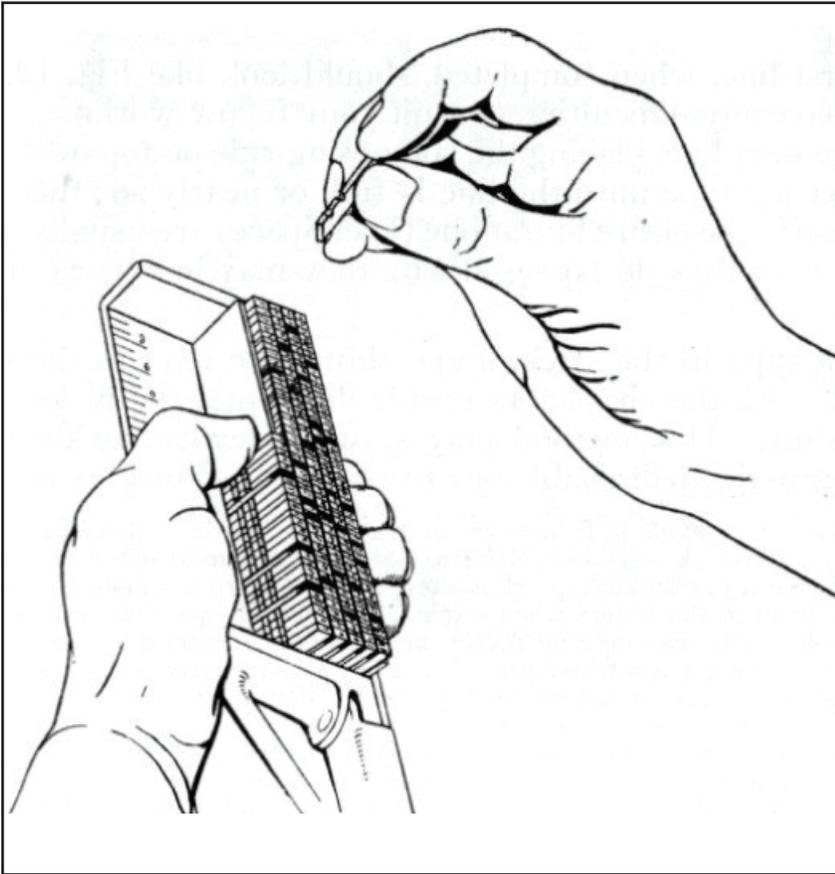
THE accompanying visual presentation of the relative thicknesses of spaces and quads will convey necessary information to the student more quickly than will the actual spaces and quads themselves. The chart is large enough to be seen, but the actual spaces and quads, in the 10-point size, are microscopic when differences in thicknesses are looked for.

The chart will illustrate the small differences between the thicknesses and combinations of spaces and quads, which will teach correct justification of lines in the composing stick.

When increasing space between words, the normal procedure is to substitute an en quad for a three-em space. Very often this procedure does not work out, because a three-em space makes a line loose, and the en quad makes the line too tight. The illustration shows *two* combinations of spaces, which are between the thicknesses of the three-em space and the en quad: the five-em and four-em, and two five-em spaces. Also if a line of type is slightly over length for correct justification, the five-em and four-em spaces (together), substituted for an en quad already in the line, will bring about better justification.

Placed where students can see it, this chart will help learning difficulties, and solve student problems before the students contact the instructor for help. ★

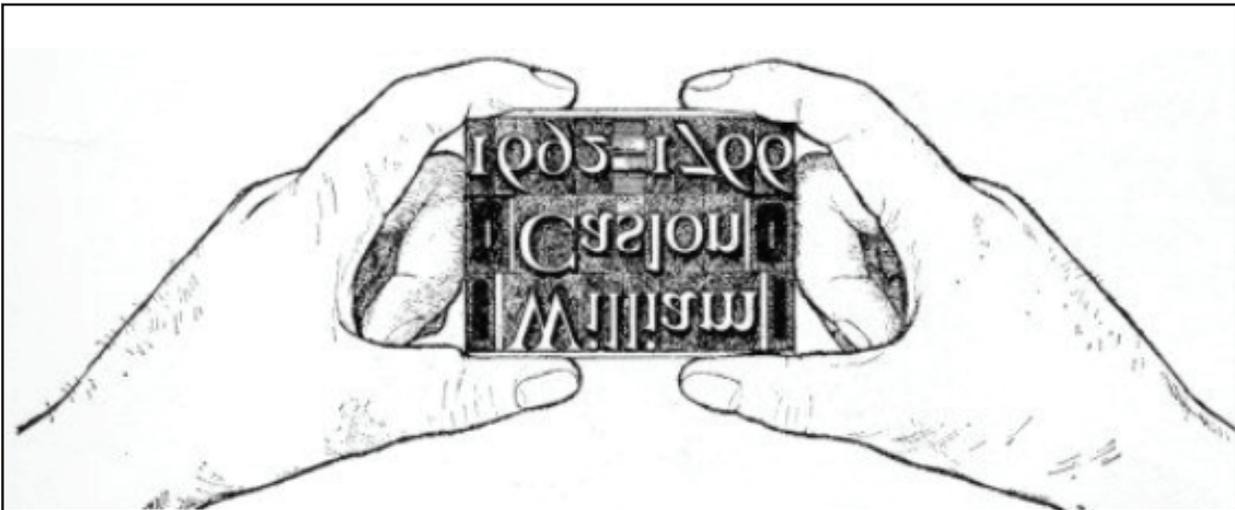
[NOTE: Reprints of this page can be secured for class notebook or bulletin board use from SCHOOL SHOP, Ann Arbor, Michigan, for 5c each in quantities of 10 or more.]



Proper way to hold your composition stick while setting type. Use your left thumb if you're right handed to hold the line of type steady while picking out the type from the case with your right hand. Reverse if left handed.

Remember to set the type left to right, bottom to top as you would read it, but the nicks will all be facing up. See diagram below.

Squeeze together and slide type carefully onto galley tray once the composition stick is full. The type can easily be moved in the tray.



Preparing to Print

PREPARING YOUR DUMMY OR MOCK-UP

Carefully make a plan of the page(s) you intend to print. There are many ways to do this. One is to make proofs of the type to be printed and arrange these proofs with tape or paste on a sheet of paper of the desired size. Careful attention is paid to the squareness of the page and lines of type, the accuracy of margins and other spacing, and the unity of the design. Another method is to layout the design on frosted mylar or tracing paper with pencil lines (T-square and triangle!) indicating all text and image locations, margins, etc. Measurements can be taken from this layout for lockup and it can also be placed over press proofs to check the accuracy of the lockup.

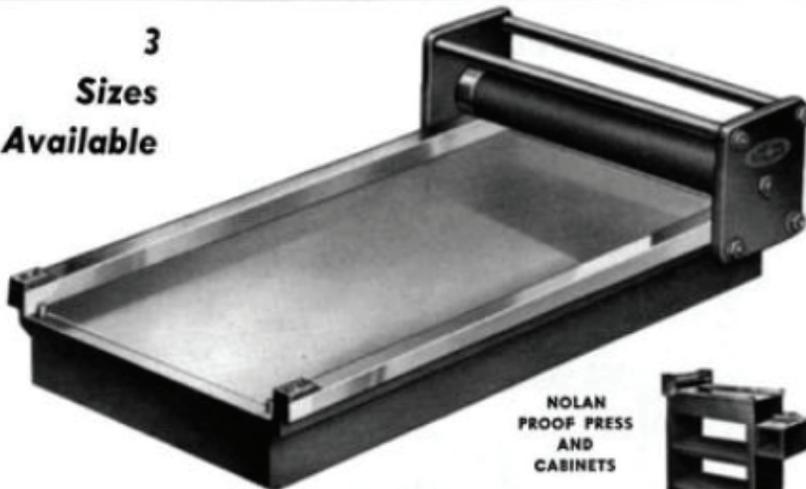
PREPARING THE TYPE

After the type has been set according to your design—correct style, size, line length, composition, etc. pull a neat, sharp proof on the hand press. Working with another person, proofread this against your original manuscript or text source: One person reads aloud from the original, the other follows along on the proof. Then, switch sides and do it again.

Besides proofing for textual accuracy, watch for damaged characters, wrong font letters, and consistent spacing (letter, word, and line). Work with the type enough to be sure, when you go to the press, that it is perfect for your plan. You may need to clean the type, using a type brush, typewash, and a clean rag. You may want to inspect the leading to remove any bent leads that could interfere with lockup. You will want to ‘feel’ the tightness of the lines with your fingertips, to find any inconsistencies before going onto the press. Any changes or corrections you make in the galley will be easier than changes on press.

NOLAN PROOF PRESS

**3
Sizes
Available**



**NOLAN
PROOF PRESS
AND
CABINETS**

STANDARD EQUIPMENT

All presses are furnished complete with galley thickness bed plate and lock-up pins. Special thickness bed plates available on order.

OPTIONAL EQUIPMENT

Steel Cabinets: Including combination ink plate and rag bin. Brayers: With cast aluminum handle (polished finish) and all-season cast roller, 6" wide.

	No. 1	No. 2	No. 3
PRESS:			
Bed Size	13 1/2" x 26"	15 1/2" x 34 1/2"	25 1/2" x 42"
Max. Form	12 1/2" x 20"	15" x 28 1/2"	25 1/2" x 34"
Shpg. Weight	105 lbs.	165 lbs.	410 lbs.
Price	\$410.00	\$167.00	\$356.00
CABINETS:			
Shpg. Weight	80 lbs.	110 lbs.	176 lbs.
Price	\$43.00	\$52.00	\$97.50
Gripper Bar	45.00	45.00	60.00

Preparing the Paper

PRINTING PAPER

Cut or tear the paper for the edition to the size to be printed. This is usually, but not always, the size of the final piece. Sometimes, you may cut or tear down sheets after printing, utilizing larger margins for better paper handling or easier lockups. Generally, all of the paper for an edition is the same. Different papers may be printed, but they are not considered to be part of the 'edition.'

PROOFING PAPER

This is paper that is cheaper than the edition paper, but the same 'weight' or thickness, allowing you to test and adjust the lockup, ink level, and impression before printing on the 'good' paper. Some sheets of proofing paper are often kept handy while printing the edition in case you have to stop and add ink, change type, make a correction, etc. The proof is printed before going on with the edition. Sometimes, proof paper may be paper of the right type that has already been printed on. It may not matter for proofing. Most importantly, the proofing paper should be cut or torn to the same size and at the same time as the edition paper.

WASTE PAPER

This may be newsprint or leftovers from other projects, used to proof changes in ink or impression before going to proof or good paper. It is for less accurate proofing and may require several sheets to equal a thicker and more expensive printing paper.

PACKING PAPER

Several sheets of different papers should be on hand, perhaps in your drawer, which may be used under the printing paper to create the right pressure for a correct impression. These should be hard surfaced papers; soft papers like newsprint can become crushed in printing and lose their packing value. Thin tracing papers are good, as are coated papers or actual tympan paper. Some typing papers or copier papers work well.

Preparing the Ink

Inks should be chosen before press time. Often, it is good to proof type on the hand press using a chosen color and on a piece of the chosen paper. If a mixed color is desired, choose the different base colors needed to mix it and consider the proportions. Start with a pile of the largest component color and add the contributing colors in small dabs, mixing well each time with a separate ink knife. The quantity of ink needed for most small press runs is about two to three tablespoons.

Test the mixed color by one of two methods: 1. Press the mixing knife down hard on a sample of the printing paper to create a drawdown, a band of the ink. 2. Tap your finger into the ink, then tap it several times on the slab to even it out. Tap your inked finger several times onto the paper sample making a spot with dense ink in the center, lighter ink on the edges.

Printing on the Vandercook Proof Press

PREPARE

List of supplies needed before you start:

Paste-up, mock-up, or layout of design. Type that has been proofed, corrected, and proofread. Printing paper (cut or torn to size), proofing paper (same size as printing paper), tracing paper, tissue, masking tape, clear tape, pica rule, pencil, tweezers, planing block, mixed ink, ink knife, X-Acto knife, clean rags, triangle, magnifying glass or loupe, notes from press demonstration.

INSPECT THE PRESS BEFORE BEGINNING

Are the rollers clean? If you will be using white or light-colored ink, you may want to clean them again. Are the rollers seated properly in their holders? Is the drawsheet on the cylinder clear of all taped-on papers and tape? Is it clean? Does it have dents? Wipe down the bed of the press with a clean rag.



SET UP

Place your galley tray(s) on the bed and slide your tied-up type forms off. Place your paste-up, dummy, or mock-up on the feed board in the position that it will feed into the press. Adjust the side guide so that your paper will be met by at least two paper guides in the front and held by at least two grippers. With paper edge under the grippers, check the alignment of the front guides. Be sure they are square and straight. Lower the grippers and leave the paste-up dummy in position.

Measure with a pica rule from the front edge of the paste-up to the beginning of the type in picas and points. **Subtract 3.5 picas to account for the gripper edge.** Slide your type block on the bed to near position at the dead line bar. Lay the pica rule on the dead line bar with 3.5 pica mark at the edge of the bar. Slide the type up until the first letter is at the required measurement on the pica rule. Pick up the rule and measure the actual space between the dead line bar and the type block, in picas and points. Fill in this space with the right amount of furniture (120 picas, two 60-pica pieces end-to-end for the SP20, 90 picas, 40- and 5-pica pieces end-to-end for the Universal I) from the furniture rack. Slide the type up to it.

Measure from the inside edge of the cylinder roll edge bar to the beginning of the type on the paste-up, in picas and points. Lay the pica rule on the inside edge of the cylinder bearer. Slide the type block up until the type begins at the required measurement on the pica rule. Pick up the rule and measure the actual space on the bed of the press from the side to the type block. Measure, too, the width of the type form to the nearest 5 pica measurement. Fill in the space from the side of the press to the type with the proper width furniture. Remove the string from the type form. Continue filling out this column with more furniture on the other side of the type block, remembering to insert a quoin of the right length. Fill in any remaining space with right-length leads and slugs until the column with type is snug.

Place a length of 4-pica furniture against the outer edge of the type. Place the Vandercook Positive Action Lock-up Bar in position. On the SP20 (the tall press), place two 2-point leads between the side and the bar. Lock up the type by turning the quoin key and opening the lever on the Lock-up Bar at the same time until they are snugly tight. Do not bear down on either one and over-tighten.

CHECK LOCK-UP

Place your fingertips on each line of the locked-up type and wiggle them. If there is movement, you must unlock the form, insert coppers or brasses in the loose lines, re-tighten, and check again. Do not print if your type is loose.

Place a planing block on top of the type and gently slide it around to make sure all type is down and 'on its feet.' If the block balks, loosen the type, gently tap the block on top of the high type, re-tighten, and check again.

Remove all tools, rules, and other materials from the bed of the press. Open the grippers and remove your paste-up. Place a piece of proofing paper in the grippers plus a sheet of typing paper or newsprint underneath. Set the press to 'Print' and crank the paper through. Check the impression in the paper (it should be slightly heavy or deep) and measure from the guide edges with the pica rule to see if the margins are what you had planned on in your paste-up.

If necessary, move the type to adjust the placement; exchange furniture or slugs and leads to move the type to the correct location. Minor adjustments may be made by moving the side guide on the feed board.

When the type position has been corrected and checked, check the lock-up again for tightness and flatness.

INK & PRESSURE

With the rollers in the 'up' position, add two rows of dabs of your mixed ink to the metal oscillating roller. Turn on the motor and lower the rollers. The ink will begin distributing. Allow it to run and distribute for 2 minutes. Listen to the sound of the ink. Lift the rollers and add more ink, in small amounts, if you think there should be more. When you think the ink is right, or actually, a little less than right, set the press on 'Trip' and crank the cylinder to the end of the press and back to ink the type. Set the press on 'Print.' Place a piece of proofing paper (should be the same thickness as your good printing paper) and crank it through. Turn it around (not over) or discard it and put another one in and print again.

Examine this proof for 1) position of type on the page; 2) amount of ink; and 3) amount of pressure. Use one of the magnifying glasses or loupes in the shop to look at the ink. You should see letters that are fully inked but which do not have a ring of ink pushed out to the edge of the letter, indicating the 'squash' of too much ink (or too much pressure).

Check the pressure first by looking at the back side of the paper. Do you see the letters pushing through the paper? Too much pressure. No visible impression at all? Possibly not enough pressure. Now look at the front again using the magnifier. Each letter should be seen to slightly impress into the paper surface. The amount of this depends in part on the thickness of the paper (thicker printmaking papers and some handmades can take a great deal of impression) and personal taste. If the pressure is light, crank another sheet through with an additional sheet of tissue, tracing paper, glassine, or some other thin, hard paper underneath. If that improves the impression satisfactorily, tape that sheet to the packing with cellophane tape or masking tape, being sure your tape does not lie under an area of type.

Make changes as necessary to establish the right balance between ink and pressure. It is easier to add ink in small increments to come up to full inking than it is to remove ink. Always try adding a little more pressure before adding ink.

Should you need to remove ink, follow this procedure: Put on the rubber gloves. Put the rollers in the up position. Pour a little presswash solvent onto a rag and wipe off a band of ink from the top, oscillating roller, say about two inches wide, so the metallic roller is clean in that band. Gently blow on the roller to evaporate any solvent residue. When dry, turn on the press and lower the rollers. While they redistribute the ink, take another clean rag with typewash and clean the ink from the type. Use the type brush if the type was quite overinked. Blow on the type to evaporate the solvent when done. Re-ink the type and pull two proofs. Examine the third proof for the new ink/pressure level.

PRINTING

Set up your stack of good printing paper on the feedboard, leaving room for feeding and registering each sheet. You may bring a drying rack up to the press so you can easily place each printed sheet into the rack or, with small sheets, place one of the drying rack shelves on the feedboard and add to it until full, then replace it. After ten copies or so, stop and examine the ink level again with the magnifier. If you are printing a large area of text or image, the ink may need replenishing. With some runs, you may not need to add ink at all before you're done. With others, you may need to add a little ink every 10–15 copies. It varies with the job. If you add ink, raise the rollers and add a few small dabs of ink to the top oscillating roller. Lower the rollers and let them distribute the ink until it is all smooth again. Then continue printing.

SPECIAL CIRCUMSTANCES

If you are printing a sheet of paper that is much longer than wide, it is best to use two side guides rather than just the one on the press. After all preliminary lineup is accomplished, place a piece of paper in the grippers that is larger than your paper and has machine-cut edges. That is, a sheet that you know is cut square. Slide it in the grippers up to the side guide and drop the grippers. Take a 6-10 pica slug and place a long piece of masking tape on it lengthwise. Slide the slug up to the far end of the long side of the paper, on the same side as the press's side guide, bringing it to the edge of the paper. Push the tape down so it becomes a secure side guide for the paper. When printing, slide your large or long sheet of paper against the two side guides, then forward into the front guides until it stops. Drop the grippers and print.

If you are printing a type form or image that leaves some distance on the press bed from the dead line bar to the type, the paper may drop from your fingers as you crank the cylinder before it meets the type. If so, you will lose control over registration. The sheet will flop, and flop slightly differently, each time you print, putting the image in a slightly different place each time, sometimes at an angle. The solution is to tape the end of the sheet to the cylinder as it passes under your left hand. When you start, tear off several pieces of masking tape about 2.5" long. Fold over one about .75" to make a tab that you can grab. Lightly touch the tape on your shirt or pants to de-tack it so it doesn't tear up fibers from your paper and the tab is ready. Line up the tabs on the edge of the feedboard and use them as you print until they lose their tack and you discard them.

If you are printing wood type or a linoleum block with large ink areas, you may not be able to get it to full inking without overloading the rollers with ink. One solution is to double ink, by setting the press on 'Trip' in between printing and passing the rollers over the type or block again to double ink the surface.

If you are trying to print a very long line of type, lengthwise on the press, it may be longer than the circumference of the ink rollers. Consequently, the rollers will have little or no ink to lay down on the end of the line. A form of double inking is the solution, in which you put the press on 'Trip,' raise the rollers, and crank the cylinder to the end of the press. Drop the rollers, crank it back over the line to the point at which the rollers would run out of ink, then lift them again and continue cranking back to the start position. Then set it on 'Print' and print normally. It's a pain to stop in between each print, but it can solve the problem without having to re-lock-up the type at right angles to the original orientation.

CLEAN-UP

First, put on rubber gloves. Yes, even if your hands are already dirty. You could clean your hands first. For press clean-up, go to the plastic rag pail for vegetable oil rags and pick out two or three semi-dirty rags to begin with. Always. With these, you will soak up much of the ink.

With the press off and the rollers down, apply several daps of Crisco along the top roller, as demonstrated in class. Turn the press on and allow the rollers to roll and distribute the oil.

Solvents in the Shop

TYPEWASH

A light solvent that evaporates quickly. Used on type because it removes inks and oil and leaves a dry surface with no residues. Do not use on rubber rollers because it will dry them out and do damage. We are using methanol. Don't breathe a lot of it. Don't drink it—it is a poison. Use sparingly on a soft rag for cleanup.

CRISCO/VEGETABLE OIL

Used for dissolving oily inks and cleaning them from ink slabs, ink knives, and rollers. Don't use it on type, as it will leave an oily residue. It is harmless.

GAMOSOL, ODORLESS MINERAL SPIRITS

A mineral spirits type of petroleum solvent. Used for cleaning rollers, the press, ink slab, and tools after initial cleaning with vegetable oil and a thorough wiping down. Can be irritating to skin. Don't breathe a lot of it. Don't drink it. Don't use it to clean type.

WONDERWASH

This solvent is made in part from citrus—a naturally occurring ketene that is effective in dissolving oily inks plus other materials, like dried adhesives or gum. It takes a little longer to dissolve the ink on rollers or ink slab, and takes a little more elbow grease, but as far as we know it is non-toxic, biodegradable, and it smells good!

HAND CLEANER

If you're so inclined to use only non-toxic materials and help us be more green—you can use a dab of vegetable oil and mix a scoop of coffee ground to remove the inky solvents from your skin. It works great, but you'll need to soap up after as your hands will be oily.

The other option is to use the Gojo Hand Cleaner. For inky hands, put a blob the size of a marble in one hand. Finish by rinsing with warm water and soap.

WEAR GLOVES WHEN USING ALL SOLVENTS!

SOME SHOP RULES

- **Never** store type in a composing stick.
- **Never** leave sticks or magnets or furniture in a galley tray.
- **Always** tie-up type for storage in a galley tray.
- **Always** clean ink from the type before storing.
- **Always** distribute type after a project is printed and before the next one is begun.
- **Type is fragile** and easily damaged; *treat it with care!*
- **Only clean** metal type with Type Wash, press rollers with first Crisco and then mineral spirits, and the ink slab with vegetable oil then mineral spirits.
- **Put the type cases away**, in order, in the right place.
- **Push the cases in** to the cabinets, *all the way*.

PLEASE CLEAN UP AFTER YOURSELF!

QUIZ

1) List (using numbers) the correct order of steps:

- Proof your type
- Get a pica rule
- Choose a typeface to work with
- Create a mock-up of your design
- Tie up your type
- Look for possible ligatures in your text
- Cut your paper to size
- Get a galley tray
- Determine size of leading needed
- Get a composition stick
- Get the correct box of spacing material

2) How can you increase the impression of the print?
(circle all that apply)

- A. Use thinner paper
- B. Place a thin sheet of paper under the print
- C. Tighten the press
- D. Use more ink
- E. Use more packing or tympan paper

3) What is the purpose of furniture?
(circle all that apply)

- A. As spacers on the press bed
- B. To use in your house
- C. To put even weight on the form as you tighten
- D. To tighten the form

4) What is make-ready? (circle all that apply)

- A. The adjustments to align and register your image.
- B. Tightening up the form on the bed using quoins.
- C. The adjustments to make the impression perfect

5) What is a ligature? (circle all that apply)

- A. Two letterforms combined into one
- B. An antique typeface
- C. A decorative ornament

6) When do you know if you're using too much pressure? (circle all that apply)

- A. The type is not legible
- B. The ink is squishing out around the letters
- C. The back of your paper is indented
- D. The press gets stuck

7) When do you set the press to 'trip'?

8) What is spacing material used for?

9) What do you need to do if you want your image to go off the edge of your paper (full bleed print)?
(circle all that apply)

- A. Make the image bigger than the paper
- B. Use a larger paper size, trim down later
- C. Move the image over slightly
- D. Use a larger form

10) List (using numbers) the correct order of steps:

- Sign up for the press
- Turn the press on
- Cut proofing paper
- Place form on press bed
- Ink up the form
- Lock up your form
- Adjust paper registration guide
- Make sure no type is loose
- Take your first proof

11) How do you determine the correct placement of your form on the press bed and your paper on the feed board?

12) When you're done cleaning the press, what is the last thing you do? (circle all that apply)

- A. Clean the glass inking slab
- B. Set the press to 'print'.
- C. Raise the rollers

13) What do you use to lock up the form in the press?
(circle all that apply)

- A. Furniture
- B. Quoins
- C. Lock-up bar
- D. String

14) What measurements do you need to know to determine the size of your paper and placement of your form in the press bed? (circle all that apply)

- A. Lock-up bar
- B. Maximum paper size
- C. Dead bar
- D. Maximum form size

15) Which do you use in-between words? (circle one)
Quads EN space 3M space 4M space 5M space