This is a list of all corrections made to *Computers & Typesetting*, Volumes A–E, between 16 June 1987 and 20 February 1989. Corrections made to the softcover version of *The TEXbook* are the same as corrections to Volume A. Corrections to the softcover version of *The METAFONTbook* are the same as corrections to Volume C. Some of these corrections have already been made in reprintings of the books. Some of these corrections affect the indexes and mini-indexes of Volumes B and D in ways not shown here. Corrections made up to 15 June 1987 appear in other files.

Page A159, line 22 (2/15/88)

'`\nolimits`' if the normal `\displaylimits` convention has been overridden; a Rad

---

Page A213, lines 34–35 (12/23/87)

---

text will be a single control sequence token, defined to be like `\relax` if its meaning is currently undefined.

Page A299, line 30 (7/6/88)

```
Fatal format file error; I'm stymied.
```

Page A326, line 12 (12/12/87)

---

its natural width. The `\hbox` version also invokes `\everymath`.

Page A359, line 2 (11/6/88)

```
\mathchardef\ldotp="613A\mathchardef\cdotp="6201\mathchardef\colon="603A
```

Page A359, lines 35–38 (5/24/88)

```
\def\updownarrow{\delimiter"326C33F } \def\arrowvert{\delimiter"033C000 }
\def\Updownarrow{\delimiter"326D377 } \def\Arrowvert{\delimiter"033D000 }
\def\vert{\delimiter"026A30C }        \def\Vert{\delimiter"026B30D }
\def\backslash{\delimiter"026E30F }   \def\bracevert{\delimiter"033E000 }
```

Page A364, line 35 (11/6/88)

```
\def\fmtname{plain}\def\fmtversion{2.94} % identifies the current format
```

Page A379, line 15 (10/12/87)

```
\def\deleterightmost#1{\edef#1{\expandafter\xyzzy#1\xyzzy}}
```

Page A383, lines 7–15 from the bottom (1/4/89)

```
209 strings out of 1685
1659 string characters out of 17636
27618 words of memory out of 52821
1172 multiletter control sequences out of 2500
```

Consequently there was plenty of room for more macros: $52821 - 27618 = 25203$ unused cells of main memory, $2500 - 1172 = 1328$ of name memory, $1685 - 209 = 1476$ of string memory, and $17636 - 1659 = 15977$ of character memory. But a fairly large TEX was being used, and only the macros of Appendices B and E were loaded; in other circumstances it might have been necessary to conserve space.

Page A454, lines 23–29 (8/13/87)

If a suitable starting letter is found, let it be in font f. Hyphenation is abandoned unless the `\hyphenchar` of f is between 0 and 255, and unless a character of that number exists in the font. If this test is passed, TEX continues to scan forward until coming to something that's not one of the following three "admissible items": (1) a character in font f whose `\lccode` is nonzero; (2) a ligature formed entirely from characters of type (1); (3) an implicit kern. The first inadmissible item terminates this part of the process; the trial word consists of all the letters found in admissible items. Notice that all of these letters are in font f.

Page A458, left column, line 19 (2/15/88)

`\|` (‖), *146–147*, *171*, 361, 435, 438.

Page A462, left column, line 7 (10/9/87)

152, 178, 360.

Page A463, left column (4/17/88)

*`\day`, 273, 349, *406*.

Page A464, left column, under Displays (12/8/88)

non-centered, 186, 326, 375–376, 420–421.

Page A465, entry for `\everymath` (12/12/87)

[Include also a reference to page 326.]

Page A465, right column (7/6/88)

`Fatal format file error`, 299.

Page A473, entry for 'page builder' (8/13/87)

when exercised, 122, 280–283, 286–287.

Page A474, left column (12/27/88)

*\parshape, 101–102, 214, 271, 277, 283,

Page A480, right column (2/15/88)

\vdots ($\vdots$), *177*, 359.

Page A481, right column (7/3/87)

\z@, 347, 348.
\z@skip, 347, 348.

Page B2, line 32 (2/20/89)

define *banner* ≡ ´This␣is␣TeX,␣Version␣2.97´ { printed when TEX starts }

Page B38, lines 7–9 from the bottom (11/6/88)

[Delete this paragraph; it is being moved to page B214.]

Page B38, line 5 from the bottom (12/14/88)

begin if *log_opened* **then** *selector* ← *term_and_log*

Page B39, line 5 (12/14/88)

if *log_opened* **then** *error*;

Page B52, line 5 (8/13/87)

cannot be done, i.e., if $hi\_mem\_min = lo\_mem\_max + 1$, we have to quit.

Page B54, lines 34–35 (7/9/88)

begin if $hi\_mem\_min - lo\_mem\_max \geq 1998$ **then** $t \leftarrow lo\_mem\_max + 1000$
else $t \leftarrow lo\_mem\_max + 1 + (hi\_mem\_min - lo\_mem\_max)$ **div** 2; { $lo\_mem\_max + 2 \leq t < hi\_mem\_min$ }

Page B108, new line after line 8 (5/24/88)

d: *integer*; { number of characters in incomplete current string }

Page B108, lines 31–33 (5/24/88)

```
str_room(l); d ← cur_length;
while pool_ptr > str_start[str_ptr] do
  begin decr(pool_ptr); str_pool[pool_ptr + l] ← str_pool[pool_ptr];
  end; { move current string up to make room for another }
for k ← j to j + l − 1 do append_char(buffer[k]);
text(p) ← make_string; pool_ptr ← pool_ptr + d;
```

Page B115, line 12 (4/28/88)

```
group_code = 0 .. max_group_code; { save_level for a level boundary }
```

Page B141, line 19 (4/28/88)

```
par_token: halfword; { token representing '\par' }
```

Page B150, line 24 (4/28/88)

358. The present point in the program is reached only when the *expand* routine has inserted

Page B151, mini-index (4/28/88)

Delete the entry for '*no_expand*'; replace it by:

expand: **procedure**, §366.

Page B154, lines 25, 29, 34 respectively (9/20/87)

```
  cvl_backup, radix_backup, co_backup: small_number; { to save cur_val_level, etc. }
co_backup ← cur_order; backup_backup ← link(backup_head);
cur_order ← co_backup; link(backup_head) ← backup_backup;
```

Page B155, new entry for mini-index (9/20/87)

cur_order: *glue_ord*, §447.

Page B156, line 28 (12/23/87)

```
  begin eq_define(cur_cs, relax, 256);
```

Page B157, mini-index (12/23/87)

Delete the entries for '*eqtb*' and '*frozen_relax*'; replace them by the following:

eq_define: **procedure**, §227.
relax = 0, §207.

Page B162, lines 12–14 (4/30/88)

```
repeat link(temp_head) ← null;
  if (info(r) > match_token + 127) ∨ (info(r) < match_token) then s ← null
  else begin match_chr ← info(r) − match_token; s ← link(r); r ← s; p ← temp_head; m ← 0;
```

Page B177, bottom line before mini-index (7/13/88)

cur_val ← 0; *cur_val_level* ← *int_val*; *radix* ← 0; *cur_order* ← 0;

Page B181, line 31 (4/28/88)

[Change 'x units per sp' to 'x sp per unit'! This change also should be made on line 1 of page B183 and line −8 of page B590.]

Page B188, line 8 (5/25/88)

function *str_toks*(*b* : *pool_pointer*): *pointer*; { changes the string *str_pool*[*b* .. *pool_ptr*] to a token list }

Page B188, line 13 (5/25/88)

begin *str_room*(1); *p* ← *temp_head*; *link*(*p*) ← *null*; *k* ← *b*;

Page B188, line 20 (5/25/88)

pool_ptr ← *b*; *str_toks* ← *p*;

Page B188, new line after line 28 (5/25/88)

b: *pool_pointer*; { base of temporary string }

Page B188, line 31 (5/25/88)

else begin *old_setting* ← *selector*; *selector* ← *new_string*; *b* ← *pool_ptr*;

Page B188, line 41 (5/25/88)

selector ← *old_setting*; *the_toks* ← *str_toks*(*b*);

Page B190, lines 16–18 (5/25/88)

b: *pool_pointer*; { base of temporary string }
begin *c* ← *cur_chr*; ⟨ Scan the argument for command *c* 471 ⟩;
old_setting ← *selector*; *selector* ← *new_string*; *b* ← *pool_ptr*; ⟨ Print the result of command *c* 472 ⟩;
selector ← *old_setting*; *link*(*garbage*) ← *str_toks*(*b*); *ins_list*(*link*(*temp_head*));

Page B210, line 36 (5/25/88)

begin if (*pool_ptr* + *name_length* > *pool_size*) ∨ (*str_ptr* = *max_strings*) ∨ (*cur_length* > 0) **then**

Page B211, new line of code before the mini-index (12/14/88)

log_opened: *boolean*; { has the transcript file been opened? }

Page B212, line 5 (12/14/88)

job_name ← 0; *name_in_progress* ← *false*; *log_opened* ← *false*;

Page B213, line 24 (12/14/88)

log_name ← *a_make_name_string*(*log_file*); *selector* ← *log_only*; *log_opened* ← *true*;

Page B214, lines 2 and 3 (12/14/88)

messages or even to *show_context*. The *prompt_file_name* routine can result in a *fatal_error*, but the *error* routine will not be invoked because *log_opened* will be false.

The normal idea of *batch_mode* is that nothing at all should be written on the terminal. However, in the unusual case that no log file could be opened, we make an exception and allow an explanatory message to be seen.

Page B214, lines 7–11 reduce to a single line (12/14/88)

begin *selector* ← *term_only*;

Page B224, second-last line (4/28/87)

done: **if** *file_opened* **then** *b_close*(*tfm_file*);
read_font_info ← *g*;

Page B229, lines 6–8 (11/17/87)

than 2^{27}. If $z < 2^{23}$, the individual multiplications $b \cdot z$, $c \cdot z$, $d \cdot z$ cannot overflow; otherwise we will divide z by 2, 4, 8, or 16, to obtain a multiplier less than 2^{23}, and we can compensate for this later. If z has thereby been replaced by $z' = z/2^e$, let $\beta = 2^{4-e}$; we shall compute

Page B229, lines 11–12 (11/17/87)

if $a = 0$, or the same quantity minus $\alpha = 2^{4+e}z'$ if $a = 255$. This calculation must be done exactly, in order to guarantee portability of TEX between computers.

Page B230, lines 2–5 (11/17/87)

begin *alpha* ← 16;
while *z* ≥ *'40000000* **do**
  begin *z* ← *z* **div** 2; *alpha* ← *alpha* + *alpha*; **end**;
beta ← 256 **div** *alpha*; *alpha* ← *alpha* ∗ *z*;

Page B245, new entry for mini-index (8/7/87)

cur_s: *integer*, §616.

Page B254, line 29 (8/7/87)

cur_s: *integer*; { current depth of output box nesting, initially −1 }

Page B254, line 31 (8/7/87)

[Remove the statement '*cur_s* ← −1;' and put it on page B244 at the end of line 31.]

Page B259, line 13 (11/9/87)

begin *rule_wd* ← *rule_wd* + 10; { compensate for floating-point rounding }
edge ← *cur_h* + *rule_wd*; *lx* ← 0; ⟨ Let *cur_h* be the position of the first box, and set

Page B259, line 17 (11/9/87)

cur_h ← *edge* − 10; **goto** *next_p*;

Page B263, line 21 (11/9/87)

begin *rule_ht* ← *rule_ht* + 10; { compensate for floating-point rounding }
edge ← *cur_v* + *rule_ht*; *lx* ← 0; ⟨ Let *cur_v* be the position of the first box, and set

Page B263, line 25 (11/9/87)

cur_v ← *edge* − 10; **goto** *next_p*;

Page B266, line 8 (8/7/87)

dvi_out(*eop*); *incr*(*total_pages*); *cur_s* ← −1;

Page B266, new code between lines 31 and 32 (8/7/87)

while *cur_s* > −1 **do**
begin if *cur_s* > 0 **then** *dvi_out*(*pop*)
else begin *dvi_out*(*eop*); *incr*(*total_pages*)
end;
decr(*cur_s*);
end;

Page B285, line 21 (4/28/88)

is subsidiary to the *nucleus* field of some noad; the dot is replaced by '_' or '^' or '/' or '\' if p is

Page B338, second-last line (8/19/87)

q ← *link*(*head*); *s* ← *head*;

Page B339, line 4 (8/19/87)

s ← *q*; *q* ← *link*(*q*);

Page B339, new code to insert after line 10 (8/19/87)

if *o* ≠ 0 **then**
begin *r* ← *link*(*q*); *link*(*q*) ← *null*; *q* ← *hpack*(*q*, *natural*);
shift_amount(*q*) ← *o*; *link*(*q*) ← *r*; *link*(*s*) ← *q*;
end;

[These new lines also imply changes to the index that aren't shown in this errata list.]

Page B387, line 2 (5/24/88)

is quite short. In the following code we set $hc[hn+2]$ to the impossible value 128, in order to

Page B387, line 8 (5/24/88)

$hc[0] \leftarrow 127$; $hc[hn+1] \leftarrow 127$; $hc[hn+2] \leftarrow 128$; { insert delimiters }

Page B390, lines 17–18 (5/24/88)

⟨ Enter as many hyphenation exceptions as are listed, until coming to a right brace; then **return** 961 ⟩;

[The same change applies to lines 20–21, and to page 582.]

Page B396, new line after line 34 (5/24/88)

$trie\_link(trie\_size) \leftarrow 0$; $trie\_back(0) \leftarrow trie\_size$; { wrap around }

Page B396, bottom line (12/12/87)

$trie\_link(0) \leftarrow 0$; $trie\_char(0) \leftarrow 0$; $trie\_op(0) \leftarrow min\_quarterword$;

Page B397, lines 15–17 (5/24/88)

begin $c \leftarrow trie\_c[p]$;
if $c < trie\_min$ **then** $trie\_min \leftarrow c$;
if $trie\_min = 0$ **then** $z \leftarrow trie\_link(trie\_size)$
else $z \leftarrow trie\_link(trie\_min - 1)$; { get the first conceivably good hole }

Page B400, lines 3–4 (5/24/88)

⟨ Enter all of the patterns into a linked trie, until coming to a right brace 961 ⟩ ≡

[The same change applies to page B399, lines 29–30, and to page 582.]

Page B402, line 10 (5/24/88)

$r \leftarrow trie\_size$; { finally, we will zero out the holes }

Page B406, line 9 from the bottom (1/23/89)

$shrink\_order(r) \leftarrow normal$; $delete\_glue\_ref(q)$; $glue\_ptr(p) \leftarrow r$; $q \leftarrow r$;

Page B417, line 10 (1/23/89)

$q \leftarrow new\_skip\_param(top\_skip\_code)$; { now $temp\_ptr = glue\_ptr(q)$ }

Page B418, line 14 (1/23/89)

$shrink\_order(r) \leftarrow normal$; $delete\_glue\_ref(q)$; $glue\_ptr(p) \leftarrow r$; $q \leftarrow r$;

Page B507, line 13 (12/14/88)

if *log_opened* **then** *selector* ← *selector* + 2;

Page B527, line 21 (12/14/88)

if *log_opened* **then**

Page B528, line 5 (12/14/88)

if *log_opened* **then**

Page B547, right column (9/20/87)

co_backup: 366.

Page B548, right column (9/20/87)

cur_order: 366, 447, 448, 454, 462.

Page B548, right column (8/7/87)

cur_s: 593, 616, 619, 629, 640, 642.

Page B551, both columns (12/23/87)

[Remove '372' from *eqtb* and put it into *eq_define*.]

Page B552, left column (4/28/88)

[Insert '358' into *expand*.]

Page B554, left column (12/23/87)

[Remove '372' from *frozen_relax*.]

Page B559, new entry (12/14/88)

log_opened, 92–93, 527, 528, 534–535, 1265, 1333–1334.

Page B559, right column (8/13/87)

[Delete the entry for *low_mem_max*.]

Page B562, left column (4/28/88)

[Remove '358' from *no_expand*.]

Page B565, left column (8/7/87)

pop: 584–585, 586, 590, 601, 608, 642.

Page B567, left column (12/23/87)

[Insert '372' into *relax*.]

Page B568, left column (4/28/88)

[Move '269' from *save_index* to *save_level*.]

Page C26, bottom line (7/18/87)

What angle corresponds to the direction North-Northwest?

Page C107, line 13 (10/7/87)

pickup penrazor xscaled *heavyline* rotated (angle($z_{32} - z_{31}$) + 90);

Page C164, line 10 (4/27/88)

$y_{\$c} = top\ y_{\$l}$; $y_{\$d} = y_{\$r}$; $x_{\$c} = x_{\$l} - left\_jut$; $x_{\$d} = x_{\$r} + right\_jut$;

Page C175, line 23 (1/11/88)

expand into a sequence of tokens. (The language SIMULA67 demonstrated that it is

Page C241, line 11 (5/25/88)

numeric $ht\#, dp\#$; $ht\# = body\_height\#$; $.5[ht\#, -dp\#] = axis\#$;

Page C248, line 21 becomes two lines (1/24/89)

which might not be numerically stable in the presence of rounding errors.) Another case, not really desirable, is $left\_jut = right\_jut = 0$.

Page C262, line 15 (12/23/88)

```
string base_name, base_version; base_name="plain"; base_version="1.7";
```

Page C271, line 12 (1/4/89)

the user and METAFONT's primitive picture commands. First, some important program

Page C271, line 4 from the bottom (12/23/88)

```
def cutdraw expr p = % caution: you may need autorounding=0
```

Page C272, lines 5 and 6 (12/23/88)

```
  (cut_ scaled (1+max(pen_lft,pen_rt,pen_top,pen_bot))
   rotated theta shifted z)t_;
```

Page C273, lines 20 and 22 (9/26/88)

```
(z_+(0,pen_top))t_=round((z+(0,pen_top))t_); z_ enddef;
(z_+(0,pen_bot))t_=round((z+(0,pen_bot))t_); z_ enddef;
```

Page C290, line 6 from the bottom (12/23/88)

(2) A throwaway variable, '*whatever*', nullifies an unwanted equation at the beginning

Page C331, just below the illustration (7/18/87)

Such a pattern is, of course, rather unlikely to occur in a `gf` file, but `GFtoDVI` would

Page C337, line 11 (4/28/88)

An online "menu" of the available test routines will be typed at your terminal

Page C346, entry for `autorounding` (12/23/88)

212, *262*, *264*, 271–272.

Page C350, left column (7/6/88)

`Fatal base file error`, 226.

Page C356, left column (1/11/88)

SIMULA67 language, 175.

Page C358, right column (2/15/88)

`*yoffset`, 212, 220, 315, 324.

Page D2, line 27 (12/14/88)

define *banner* ≡ ´`This␣is␣METAFONT,␣Version␣1.7`´ { printed when METAFONT starts }

Page D36, lines 3–5 (11/6/88)

[Delete this paragraph; it is being moved to page D349.]

Page D36, line 7 (12/14/88)

begin if *log_opened* **then** *selector* ← *term_and_log*

Page D36, line 16 (12/14/88)

if *log_opened* **then** *error*;

Page D66, lines 34–35 (7/9/88)

begin if $hi\_mem\_min - lo\_mem\_max \geq 1998$ **then** $t \leftarrow lo\_mem\_max + 1000$
else $t \leftarrow lo\_mem\_max + 1 + (hi\_mem\_min - lo\_mem\_max)$ **div** 2; { $lo\_mem\_max + 2 \leq t < hi\_mem\_min$ }

Page D347, new line of code after line 5 (12/14/88)

log_opened: *boolean*; { has the transcript file been opened? }

Page D347, line 11 (12/14/88)

job_name ← 0; *log_opened* ← *false*;

Page D348, line 4 from the bottom (12/14/88)

log_name ← *a_make_name_string*(*log_file*); *selector* ← *log_only*; *log_opened* ← *true*;

Page D349, lines 6 and 7 (12/14/88)

print error messages or even to *show_context*. The *prompt_file_name* routine can result in a *fatal_error*, but the *error* routine will not be invoked because *log_opened* will be false.

The normal idea of *batch_mode* is that nothing at all should be written on the terminal. However, in the unusual case that no log file could be opened, we make an exception and allow an explanatory message to be seen.

Page D349, lines 11–15 reduce to a single line (12/14/88)

begin *selector* ← *term_only*;

Page D420, bottom line (5/25/88)

if *txx* **mod** *unity* = 0 **then**

Page D441, delete line 2 and change line 12 as follows (5/25/88)

done: **if** *eq_type*(*x*) ≠ *tag_token* **then** *clear_symbol*(*x*, *false*);
if *equiv*(*x*) = *null* **then** *new_root*(*x*);
scan_declared_variable ← *h*;

Page D444, line 8 from the bottom (12/14/88)

if *log_opened* **then** *selector* ← *selector* + 2;

Page D510, line 14 (12/14/88)

if *log_opened* **then**

Page D511, line 11 (12/14/88)

if *log_opened* **then**

Page D530, new entry (12/14/88)

log_opened, 87–88, 782, 783, 788–789, 1023, 1205, 1208.

Page D545, left column (10/31/87)

zscaled primitive: 893.
Zabala Salelles, Ignacio Andres: 812.

Page E32, second-last line (9/20/87)

after which comes '*math_axis*#; **generate** `mathsy`' (which we won't bother to

Page E111, line 29 (10/16/88)

lft $x_{11} = \text{hround}\, u$; $x_{1l} - x_{11} = x_{2l} - x_{12} = x_{22} - x_{2r} = \text{hround}\, 1.6$*cap_jut*;

Page E285, bottom line (12/1/87)

Due to Technical Developments (1968)

Page E333, lines 9–11 (1/9/89)

lft $x_{1l} = \text{hround}(2.5u - .5$*mfudged.stem*$)$; $x_{1l} = x_{1'l} = x_{2l} = x_{2'l}$;
lft $x_{3l} = \text{hround}(.5w - .5$*mfudged.stem*$)$; $x_5 - x_3 = x_3 - x_1$;
if not *monospace*: $r := \text{hround}(x_5 + x_1) + r - w$; **fi** % change width for better fit

Page E353, lines 38–39 (8/12/87)

```
  else: fill diag_end(6r,5r,1,1,5l,6l) -- .9[z5l,z6l]
        ..{z5 - z6}.1[z5r,z6r] -- cycle;                % middle stem
```

Page E387, line 13 (8/12/87)

```
  pickup tiny.nib;  bulb(3,4,5);                        % bulb
```

Page E413, lines 37–38 (8/12/87)

```
  else: fill diag_end(6r,5r,1,1,5l,6l) -- .9[z5l,z6l]
        ..{z5 - z6}.1[z5r,z6r] -- cycle;                % middle stem
```

Page E459, line 24 (8/7/87)

[Delete the '=' sign between '*lft*' and 'x_5'.]

Page E471, line 5 (12/11/88)

$x_2 = good.x\ .5w$; *center_on*(x_2);

Page E471, insert two lines below the rule at bottom of page (12/11/88)

```
def center_on(expr x) = if not monospace:       % change width for symmetric fit
  r := r + 2x - w;  w := 2x;  fi enddef;
```

Page E477, line 20 (12/11/87)

$x_4 = x_8 = good.x\,.5w$; *center_on*(x_4); $x_2 = w - x_6 = good.x(x_4 + a)$;

Page E483, third line of elementary division operator (12/11/88)

$x_3 - .5dot\_size = \text{hround}(.5w - .5dot\_size)$; *center_on*$(x_3)$;

Page E485, line 4 (8/7/87)

[Delete the '=' sign between '*lft*' and 'x_5'.]

Page E487, line 17 (8/4/88)

fill *fullcircle* scaled $(bold + 3.8dw + eps)$ shifted $(.5[z_4, z_8])$; % dot

[Also remove page 487 from the index entry for *dot_size*, and add it to the entries for *bold* and *dw*.]

Page E515, lines 5 and 12 (12/11/88)

$.5[x_1, x_2] = x_3 = good.x\,.5w$; *center_on*$(x_3)$; *lft* $x_1 = \text{hround}(.5w - u * \text{sqrt}48)$;

Page E515, line 21 (1/23/89)

labels$(5, 6)$; *zero_width*; **endchar**;

[Also put labels '5' and '6' on the upper right figure, page E514.]

Page E521, lines 4 and 14 (12/12/88)

$x_1 = x_2 = good.x\,.5w$; *center_on*(x_1); *lft* $x_3 = \text{hround}\,u$; $x_4 = w - x_3$;

Page E537, line 6 (12/11/88)

$x_1 = x_2 = x_3 = x_4$; $x_1 - .5stem = \text{hround}(.5w - .5stem)$; *center_on*$(x_1)$;

Page E537, line 19 (12/11/88)

$x_1 = x_2 = x_3$; $x_1 - .5stem = \text{hround}(.5w - .5stem)$; *center_on*$(x_1)$;

Page E539, line 4 (12/11/88)

$x_1 = x_4 = x_{30} = x_{33} = good.x\,.5w$; *center_on*$(x_1)$;

Page E539, line 21 (12/11/88)

$x_1 = x_4 = good.x\,.5w$; *center_on*(x_1);

Page E541, line 4 (12/11/88)

$x_1 = x_5 = good.x\,.5w$; *center_on*(x_1);

Page E541, line 17 (12/11/88)

$x_1 = x_{10} = good.x\ .5w$; *center_on*$(x_1)$;

Page E550, new line after line 23 (8/15/87)

forsuffixes \$ = *notch_cut*, *cap_notch_cut*: **if** \$ < 3: \$:= 3; **fi endfor**

[To make room for this, combine lines 38 and 39 into a single line.]

Page E550, line 29 (7/9/88)

define_whole_vertical_blacker_pixels(*vair*, *bar*, *slab*, *cap_bar*, *cap_band*);

Page E572, new entry at bottom (12/11/88)