

The Corrugator Terminal

Content

The Corrugator Terminal Screen	2
The Handling	3
The Menu	3
The Option "Image"	6
<i>Important Functions of the Corrugator Terminal</i>	9
Order Change	9
Producing Once Again	10
Set Current Run	10
Next Run	10
Modify Shift Data	10
Register Production Data Automatically	11
<i>Options</i>	12
1. Change Shift Begin	12
2. Parameters	12
3. Device Parameters	14
4. Calibration	16

◆ **Function of the program**

The Corrugator Terminal is an alternative to the Corrugator Control Program. It is used to produce runs and combinations.

The PC-Topp Corrugator Terminal keeps the Program Memory permanently up-to-date - with only a few easy keystrokes by the corrugator crew at the end of each run. At the same time it displays a program summary as well as run details directly at the corrugator (see page 15).

Production feedback from the corrugator (recording of runs) can be done largely automatically thanks to a *new optional feature* of the PC-Topp Corrugator Terminal. The terminal can now be connected to a signal from the corrugator that indicates the end of a run, enabling the software to register production data automatically.

Other Functions:

- graphic display of the order combinations (with knife and score positions)
- capture of logging data
- display of order and quality data

The options PRINT LABELS and REPRINT LABELS have to be individually adapted to the customers' needs.

On the PC-Topp.NET Corrugator terminal page please click on the Corrugator Terminal link.

A DOS box opens with the Corrugator Terminal screen.

The Corrugator Terminal Screen

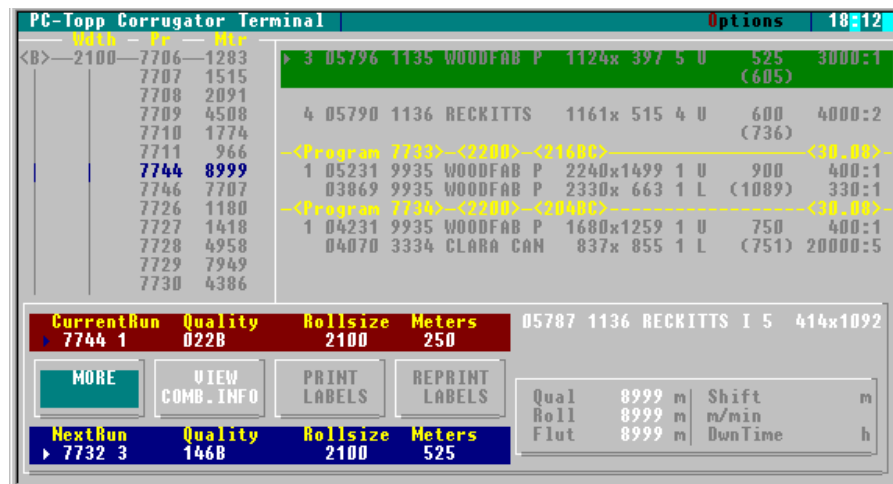


Figure 1

Figure 1 shows the Corrugator Terminal screen. In the upper part of the screen the program memory is displayed in two different ways: On the left a program memory view containing the programs (including width, program number and run meters), on the right a sequence of combinations.

In the window on the bottom to the right the standard view (i.e. the display of the *comment* window has not been enabled):

In the left column of this window the lineal meters appear that are left up to the next change. This might be a quality change, a width change or a flute change.

In the right column you see the current lineal meters, the speed and the run time or the shift information (shift code, m/min and downtimes).

For the window on the bottom to the right (the comment window) four different items are available. The displayed view depends on the settings made at the option VIEW (see paragraph "The Option VIEW").

The Handling

The Corrugator Terminal is handled – similar to the Machine Terminal - with a pushbutton menu. By pressing the MORE-button you can switch between the different menus. The other menu options correspond to the Machine Terminal options.

The Corrugator Terminal contains the following six menus:

The Menus

Order Menu (Green):

MORE	Access to the DOWNTIME menu	
ORDER CHANGE	Entry of current lineal meters.	Is suggested when the order is running
SET NEXT RUN	Selects the next run	
TERMINAL OFF	Returns to DOS	

Downtime Menu (Red)

MORE	Switches to the PERSONNEL menu	
DOWNTIME START	Capture of the beginning of a downtime.	Doesn't appear <i>during</i> a downtime
DOWNTIME CAUSE	Selection or modification of the downtime cause.	Is only active during a downtime, after having confirmed DOWNTIME START
DOWNTIME END	Capture of the end of a downtime; it also is possible to modify the beginning and the end of the downtime	Is only active <i>during</i> a downtime
DOWNTIME CANCEL	Cancels a downtime, switches to the ORDER menu	Only appears in case of a downtime

Shift Menu (Blue)

MORE	Switches to the PERSONNEL menu	
SHIFT BEGIN	Registration of the shift leader.	Is active when no shift is open
SHIFT END	Closes the running shift when work is finished. Makes possible to modify date and time.	Is only active after Shift Begin.
SHIFT CHANGE	Closes the running shift, registration of the shift that is immediately following. Makes possible to modify date and time.	Is set as default only after Shift Begin. Is only active when the current shift is running too long (more than 8 hours).
TERMINAL OFF	Creates a state where the Terminal can be disabled without danger.	

Personnel or Logging Menu (Turquoise)

MORE	Access to the VIEW COMBINATION INFO	
COME	Log in	
LEAVE	Log out	
SHOW PERSONNEL	Displays the currently working personnel	

Menu View Combination Info (Violet)

MORE	Access to the SET CURRENT RUN menu	
VIEW COMB. INFO	Detailed display showing sheet positions etc.	
PRINT LABELS	Only active after installation according to individual needs	
REPRINT LABELS	Only active after installation according to individual needs	

Menu Set Current Run (Orange)

MORE	Switches to the menu Automatic recording of production data	
SET CURRENT RUN	Starts the next run (by moving the cursor to ORDER CHANGE and by entering the data of the current order).	

Menu Automatic Capture of Production Data (Black)

MORE	Switches to the ORDER menu	
SHIFT RPEORT	Like Machine Terminal	
CONFIRM RUN	Automatic capture of production data (Ctrl F12)	
UNPRODUCE THIS	Add the unproduced meters to the counter again.	

◆ **View combination info**

The option VIEW COMBINATION INFO shows a detailed graphic of the selected combinations with their exact position of knives and scores. Order comments are displayed in yellow. You can recall the general order data of the currently marked order by using the option SHOW ORDER.

The Option "Image"

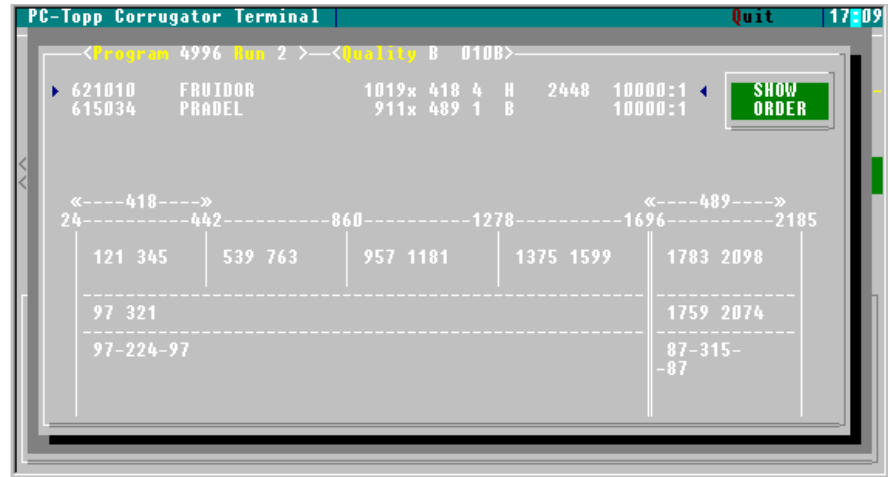


Figure 2

◆ Comment or paper display

With the option VIEW (Alt + v) the screen display can be modified. This way only the information you really need appear on the screen. You can choose the items by entering any character in the corresponding field.

With TAB you move the cursor to the next block, with the ARROW KEYS you move it *within* a block. The symbol near the item visualizes if an item has been selected or not: A "■" means chosen, a "┐" means not chosen.

By hitting ENTER the input is confirmed, QUIT allows to quit the window without confirming.



Figure 3

At first you can choose whether the comment window is supposed to be displayed or not. Once it is active, either the paper consumption or the comments will be displayed. By choosing "Comments" you still have the choice between corrugator code, and the different comments, such as Order Comments, Personalized Comments or Combination Comments.

Paper	Weight	Meters
200K	4480	11200
112FL	3337	14896
190T	4256	11200

Figure 4: Comments and paper consumption enabled

Having selected "Show Comment Window" and "Paper Consumption", the program that is currently located in the Program Memory window (it is marked green in the combination window) will be scrolling in the Comment window. With the TAB key you can move the cursor into the Comment window and scroll through the paper sorts line by line.

Order	Weight	Code	Material
4905005700	04P	WAMURAN	DI
4654129700	07P	PRIMAC	ALS

Figure 5: Comments and order comments enabled

In the "Combination Window" you have four different items at your disposal: Papers, Order Comments, Combination Comments and Program Comments. According to your choice the selected item(s) will be displayed in the Combination window.

◆ Example

In our example (see picture below) *Papers* and *Order Comments* have been chosen. The papers are displayed in yellow, the order comments are displayed in violet.

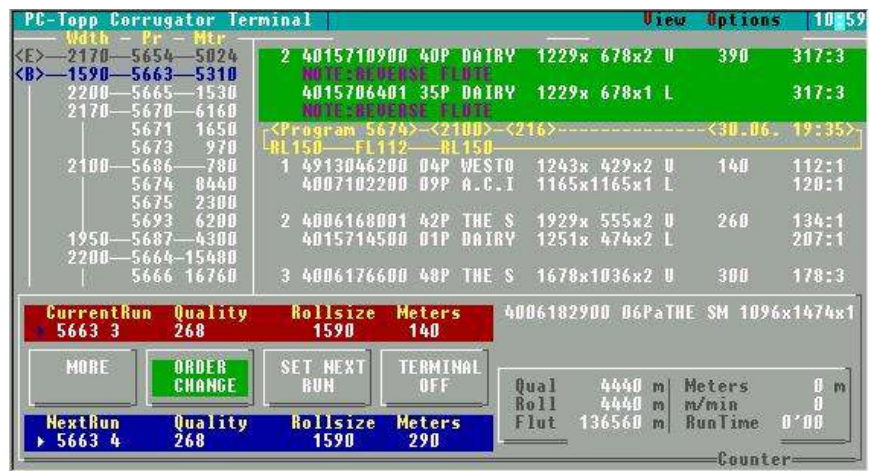


Figure 6

Important Functions of the Corrugator Terminal

Order Change

The option ORDER CHANGE allows recording production data of the running order, i.e. actual production takes place.

◆ Runs and Programs

The meaning of the terms used above:

- A program consists of several runs respectively combinations.
- The combinations consist of several orders.

The following window appears after confirming ORDER CHANGE:



Figure 7

By using the TAB /SHIFT TAB key you can navigate from field to field and backwards. The field "scheduled" cannot be modified afterwards. You can't quit the window (if not with ESC) before the current lineal meters as well as the starting times and the ending times have been entered. If no end date has been entered the start date is automatically suggested.

◆ Active and inactive buttons

As long as the text on a push button appears in black, it is inactive, i.e. confirming with ENTER or with ALT+E is not possible. A text in white indicates that the button active.

◆ Erroneous data

Erroneous entries are displayed in red. After hitting ENTER you are prompted to check your input and to confirm with ENTER again. (The Corrugator Terminal does a lot of calculating for you. That's why several error messages might appear: "This combination is over-run...", "The duration of this run is possibly too short" etc.)

After confirming the production data it is going to be converted; the program memory is updated. The combination will be displayed in gray now, indicating that production data capture is finished. In the Combination window the actual run meters are shown in parenthesis below the ordered quantity.

The ending time is displayed in yellow. The button ORDER CHANGE is marked. The current run is displayed in blue (and additionally marked with the symbol " ▶ "). The next available order is marked also with " ▶ ".

If a Corrugator Control program (TCFC) is in use, the blue mark on the screen follows production, provided that production data capture has been switched off.

Attention: The green marked order (where the cursor is located) *must* not be the current order, crucial is the symbol " ▶ ".

◆ **Automatic Update**

A modification of the current combination in the program memory by the Corrugator Control program etc. automatically causes an update – provided that the parameters have been correspondingly specified.

Producing Once Again

You can even modify the production data of already produced runs subsequently (they are displayed in gray): Please confirm the desired combination by hitting ENTER, after that the production data dialog window appears.

Set Current Run

This option is used to mark the current run: It is displayed in blue with a " ▶ " (and it also appears on the red bar that indicates the current run on the bottom to the left). The button ORDER CHANGE is marked. An error message will appear if one tries to confirm an already produced run as Current Run.

Next Run

This option is used to select the next run: The next available run is marked with " ▶ " (the mark will take over the color of the order in question). The order appears on the blue bar on the bottom of the screen.

Modify Shift Data

The button SHIFT CHANGE contains the options ENTER – QUIT - MODIFY. MODIFY allows to modify the shift data subsequently. This refers to the fields shift code, shift begin, shift end etc.

In the "Shift" field three shifts are suggested after using PGDN or ↓: the morning, afternoon and night shift (M / A / N). There is only one unique input field for the date and the shift code to avoid erroneous input, e.g. modification of the shift code without modifying the date.

After confirming the same production data dialog appears as after hitting the button ORDER CHANGE.

Register Production Data Automatically

In order to change the mode of production data capture you have to modify the line "Auto mode = ON/OFF" with F10.



—< Auto-Mode **On** F10 for Off >—

Figure 8

Confirm Run

Here the automatic production data recording takes place. Mark the current run (displayed in blue) and press CTRL + F12. The run's color changes into brown pointing out that the run is produced on the corrugator but still has to be confirmed manually.

As soon as the run is produced, it is displayed in grey.

Unproduce This

You can unproduce a run that is produced on the corrugator and displayed in brown by pressing UNPRODUCE THIS. The produced run meters will be added to the counter again, the run changes its color and turns grey.

Options

1. Change Shift Begin

This option is password protected. After entering the correct password the time of the shift begin can be modified.

2. Parameters

With ALT + P a window opens to specify the parameters. Here you can choose the following items:

- display of quantity and format
- update of the program memory etc.

The item Parameters contains 3 pages:

Page 1: General Parameters



Figure 9

- Selection of the corrugator: Enter and confirm the desired code
- Refresh delay x sec. Specifies the update frequency of your data. The program memory will be re-read and - in case of modifications - the display will be updated.
- Print pallet labels. This option has to be individually installed according to the customer's needs.
- Terminal Off: There are three different possibilities to quit the Terminal: With or without a message or only after entering a password.
- Update program memory: Refers to the automatic update of the program memory.
- Shift handling: creates a shift report
- Export data: A so-called CSV-file is exported to a HTML generator making possible to recall data on a HTML-site.
- Write data every x sec.: frequency of the data transport

- ◆ **Attention:** If "update program memory" has been set on NO, there will be no capture of downtimes!

Page 2: Display Parameters

With PGDN a second parameter page opens:



Figure 10

It contains the following settings:

- Quantity view in cuts or sheets
- Format view
- Default downtime used if no downtime code is entered
- Pre-display meters: At the option ORDER CHANGE the same value can be suggested for the actual run meters and the scheduled meters.
- Export Data
- Write data every x sec.

The TAB KEY allows to navigate to the next block by keeping the input made until now. With the ARROW KEYS $\uparrow\downarrow$ the symbols near an item will change and the selection can be modified. With SHIFT TAB you move backwards.

As soon as an item is confirmed with ENTER you will quit the Corrugator Terminal settings, that's why you are supposed to complete your input before hitting ENTER.

Page 3: Quality Check Parameters

With PGDN a third parameter page opens:



Figure 11

The frequency of the quality checks can be specified here.

3. Device Parameters

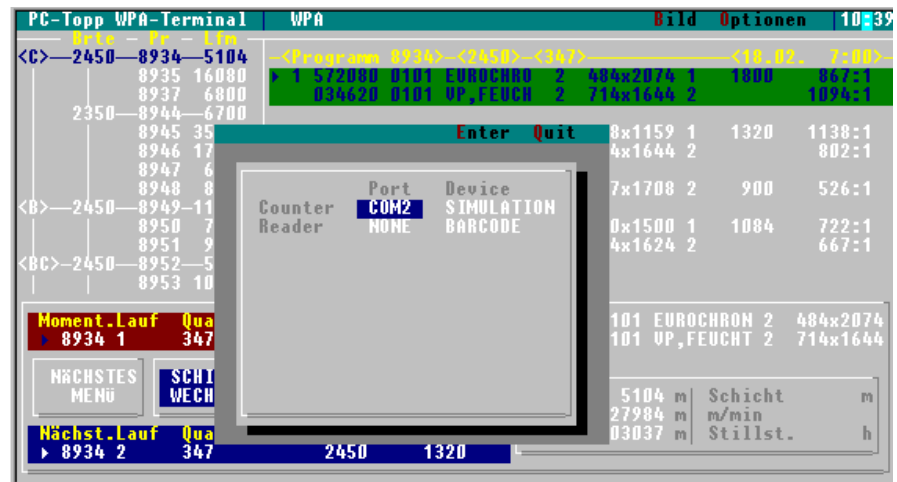


Figure 12

This option allows to specify the counter setting and the card reader setting of the Corrugator Terminal. Similar to the Machine Terminal you can choose the "SIMU" mode for trainings etc.

With ALT+F2 the counter display (on the bottom to the right) is enabled. Instead of Shift and Breakdown the Meters and the RunTime are displayed:



Figure 13

CTRL + F1 allows to increase the simulation mode speed (m/min),
CTRL + F2 allows to lower it.

Counter Connection

By connecting the Corrugator Terminal with a counter (the exact type is NE 212) which can register two separate signals, one for the lineal meters produced and the other at every format change, manual data entry is no longer required: Format changes can be detected automatically.

Automatic Mode and Manual Confirmation

In automatic mode, the terminal records the starting and ending times as well as the lineal meters produced and marks the run that just ended as produced, in a preliminary way: The run is shown in a special color (brown) until the operator confirms it. The operator can choose to confirm little batches of runs now and then; the terminal can store the data of many runs that have been finished.

- ◆ **Special situations** A special situation occurs when the terminal is first started, for example in the morning: PC-Topp cannot be sure that the run known to the terminal as "current run" is still in production, or if one or several changes have occurred while the terminal wasn't "watching".
- ◆ **Starting in manual mode** That's why the Terminal always starts in manual mode, where it requires operator input after each and every run. Once the operator has made sure that the current run is shown right, he can switch to Automatic Mode by hitting a function key (F10).

Password Distribution

All password protected options don't ask for a password as long as a little red asterisk is visible on top to the left of the screen (ca. 60 sec.).

- ◆ **Automatic updates** If the current order in the program memory has been modified (by the Corrugator Control program etc.) the Corrugator Terminal automatically updates the order.

4. Calibration

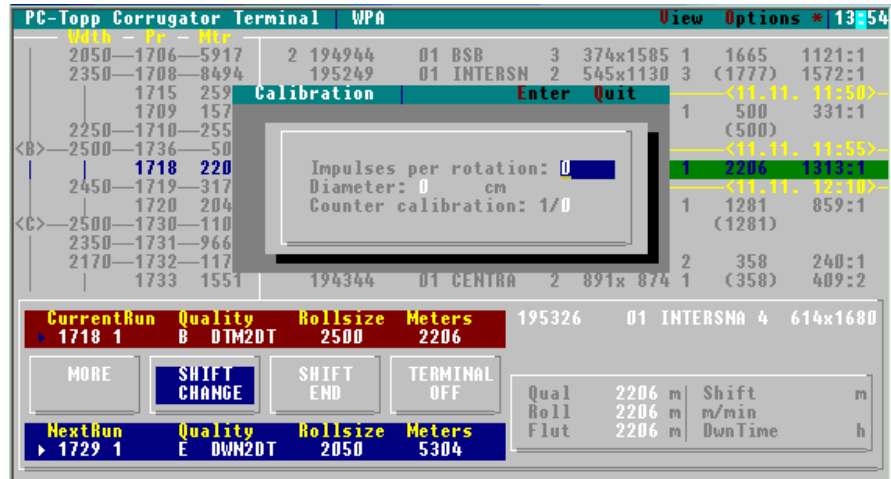


Figure 14

The impulses per rotation, the diameter and the counter calibration can be specified here.