Manual Rewinder Option

Contents

General

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Note: **Please follow the notes shown in this text - it will help to cover all situations and keep your engine working.**

Error handling and search

To verify functionality of mechanical and electronically functions - if there is not a evidently defect - use status report 'STA0 to STA3' (see User Manual) - printout to check the unit.

Media fixation

characteristics	possible reason	solution
media moves on core	forgotten clamp handle	check and fix it
	media sticks not to core	fix media
	core size to wide	change core
media moves to inner or outer side	dancer arm bent	adjust dancer arm
	media guiding wrong adjusted (ring)	adjust guiding
	rewind option not mounted properly	fix rewinder to printer
rewind unit is not moving	stepper not plugged in correctly	plug in stepper motor
	stepper motor defect	check and change stepper
	sensor not plugged in	check and plug in

characteristics	possible reason	solution
	option board defect or not there	check and replace or insert
	sensor wedge not mounted correctly	check and adjust
	tooth belt defect	check and change
	belt tighten loose	check and adjust
wrong direction of movement	direction programmed wrong	check and change
	stepper connection wrong	check and change

(wiring)

printer falls to head side	support not adjusted well	check and adjust
	roll to heavy	check and use smaller roll
	printer stand is not flat	move printer to flat surface
dancer arm is not moving	spring is out of function	check
guiding roll is not moving	maybe dirty	check and clean

(wiring)

Technical Specification

|		
-	**drive**	stepper motor
-	**sense of position**	infra red sensor
-	**rewind speed**	self adjusting
-	**max. roll**	as used printer (see User Manual) 4250 g TTX 450/650 Puma/Lion 7250 g TTX 950 Tiger
-	**direction of movement**	user selectable clock - counter clockwise
-	**used media**	self adhesive-, cardboard- and plastic media up to 240 g/qm
-	**label size**	see printer manual
-	**electrical specification**	see printer manual
-	**environment specification**	operating temperature: +5 to +35 Grad C storage temperature: -20 to +70 Grad C humidity: 45 to 75% not condensing
-	**construction**	solid version build from strong aluminium and stainless steal, all mobile axles pivoted open assembly of parts and components for easy, plain operating and service

Technical Service

Mechanic

Rewinder complete

Before mounting the rewinder option
an other option has to be disassembled
(like cutter, or infeed).

Assembly/Disassembly rewinder

- set printer to a flat surface

- the surface has to big enough
  to hold as well the support foot

- mount the rewinder with two
  hexagonal screws - use the defined
  holes

- adjust the support foot in a way
  that the weight of the rewound roll
  is absorbed by the support

- small differences are regulated by the
  rubber feet

- connect the sensor cable to the
  responding connector at the front
  of the printer

- select option on the display and
  activate the option (PEPH)

- select direction at the display
  (see User Manual)

- adjust sensor (as described under electronic)

Steppermotor

Sensor
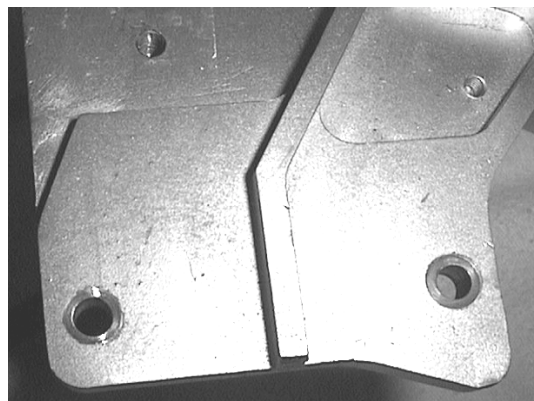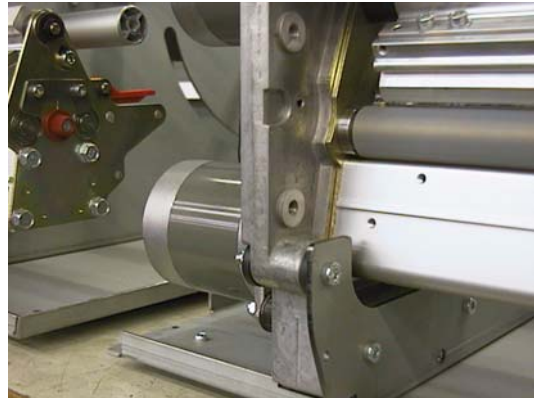
Attention: The rewind option is now ready to operate - all other options are
deactivated!

Support foot

The support foot is used to balance the weight of the printer and the rewound material on the rewind roll. The maximum roll weight of the biggest printer is more than 7000 g - so you can see that the function of this part is very important.
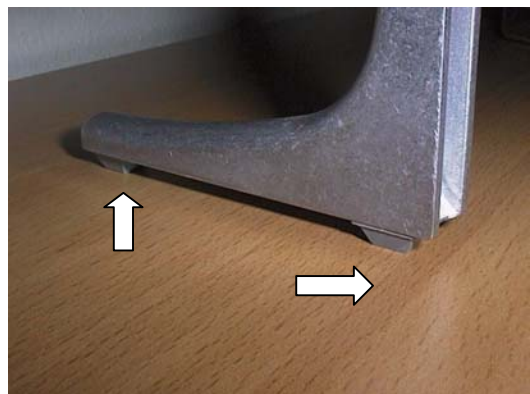
Assembly/Disassembly/Adjustment support foot

- set printer with the mounted rewind option to a flat surface

- loose support foot by opening the hexagonal screw

- press the rubber feet to the surface and close the screw again

- adjust the support foot that it is parallel to the metal casting

- tighten the screw very well

Tooling

hexagonal socket SW 4

Support foot

Media guiding

The media guiding of the rewind option is used to control the movement of the media before the media is rewound. Otherwise the media will run outside or inside on the rewind core.

Assembly/Disassembly/Adjustment media guiding

- the roll can be disassembled complete from the dancer arm (together with the guiding rings)

- open the lock washer as shown on the picture

- the roll can be removed from the axle

Sicherungsring

- sometimes it is possible that the roll has collected glue or dust - then it is necessary to clean the roll

- the plastic bearing can be replaced as well if it is necessary

- the guiding rings can be adjusted by moving the rings on the roll

- the roll is fixed to the lower position as well with a lock washer
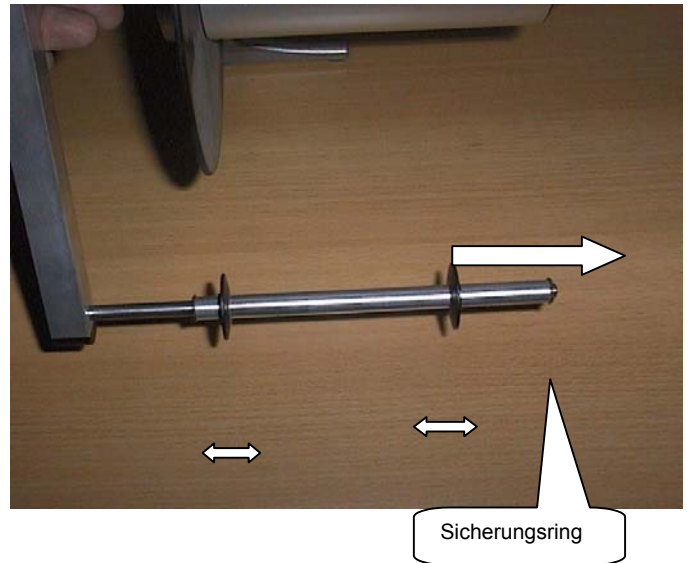
Tooling

screw driver small

Clamp handle

Using the clamp handle you will fix either a core or the media itself to the rewind core!
The core and the handle are available in 3" and 4" diameter.

Assembly/Disassembly clamp handle

- responding to the used method you will use the handle with a core or without

- using the paper core you have to fix the material (with a sticky label) to the core

- after fixing the media with the handle to the profile it should not be possible move the media on the core

Roll profile

Same as the handle the roll profile is available in a diameter of 3" and 4" - at the rear side you can see two fixation points and flat area of the axle guiding. Mounting the profile to the disc watch this points.

Assembly/Disassembly roll profile

- the roll profile is mounted to the guiding disc and fixed to a axle in the centre

- disassemble the profile by open the lock washer by hand (see picture)

- the profile can be removed

- the guiding disc is fixed with a separate lock washer to the axle

Tooling

screw driver small

Guiding disc

The guiding disc is used to control the movement of the rewound material during rewind operation. The covered part of the guiding disc is as well the transport part (a gear wheel is part of the disc). Fixed with a lock washer to the axle - the guiding disc shows two holes for the roll profile to fix it there.

Assembly / Disassembly guiding disc

- before disassembling the disc - the tooth belt should be relived (see tooth belt)

- after removing the lock washer the disc can be removed

- now you can reach the tooth belt - the tooth belt tighten part and the gear of the stepper motor

- as well the sensor - the sensor, sensor wedge, dancer arm spring can be watched
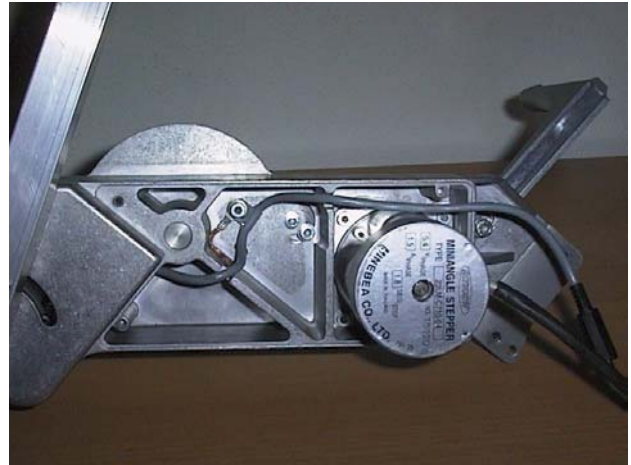
Tooling
screw driver small

Tooth belt tighten part

The tooth belt tighten part is used to tighten the tooth belt in a proper way - this means mechanical tolerances given by production and assembly can be controlled.

Assembly/Disassembly tooth belt tighten part

- open two cross recessed screws and the back cover part can be removed

- remove cover carefully over the stepper motor

- as well during assembly and disassembly the wires should be watched

- the two hexagonal screws of the tighten part are now visible

- the screw in the long hole is used to tighten the belt

- open the screw - move the part in the direction you think of and close the screw

- to remove the tighten part the roll profile and the guiding disc have to be removed before (see roll profile and guiding disc)

Tooling

cross recessed head size 1
hexagonal socket SW 3

Stepper motor

The stepper motor is the driving part of the unit. Driven and controlled by the printer - is the only intelligent part on the rewinder the optical encoder of the dancer arm. Controlling speed and position of the rewinder.

Assembly/Disassembly stepper motor

- open two cross recessed screws and the back cover part can be removed

- remove cover carefully over the stepper motor

- as well during assembly and disassembly the wires should be watched

- the two hexagonal screws of the tighten part are now visible

- the fore hexagonal screws of the stepper motor are now easy to reach open them and the stepper can be r removed

- the gear is pressed to the axle and can not be removed

- during assembly watch the position of the stepper - otherwise the motor cable will block the cover

Tooling

cross recessed head size 1
hexagonal socket SW 3

Tooth belt

The tooth belt is transferring the power from the stepper motor to the guiding disc and has to be controlled from time to time.

Assembly/Disassembly tooth belt

- remove roll profile and guiding disc
  (see roll profile and guiding disc)

- the tooth belt can be removed c
  controlled and maybe changed

- to insert the belt again follow
  the steps below

- insert tooth belt around stepper gear
  and tighten part (tighten part has to
  be open)

- mount guiding disc to axle

- hold down the belt with a small screw
  driver in the area of the motor gear
  (see picture)

- moving guiding disc slow to slip the
  belt over the gear

- secure guiding disc

Tooling

screw driver small

Gear plate

The gear plate is used to give more stability to the dancer arm mounting!

Assembly/Disassembly gear plate

- remove roll profile and guiding disc
  (see roll profile and guiding disc)

- open the two hexagonal socket screws

- the gear plate can be removed

Tooling

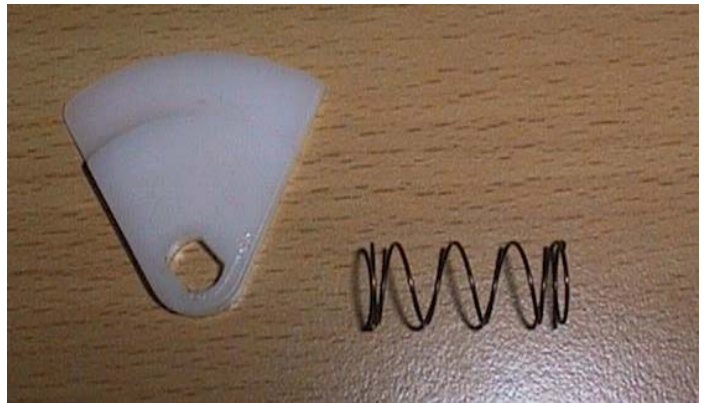hexagonal socket SW 3
screw driver small

Gear plate

Sensor wedge

This part is controlling position and speed of the stepper motor (controlled by the dancer arm).

Assembly/Disassembly sensor wedge

• remove roll profile and guiding disc
  (see roll profile and guiding disc)

• open the two hexagonal socket
  screws

• the gear plate can be removed

•open lock washer on the axle

• pressure spring and wedge can
  be removed

• the dancer arm axle is locked
  with a second lock washer

Tooling

screw driver small
hexagonal socket SW 3

Dancer arm spring

The dancer arm spring gives a defined zero position to the dancer arm. If this position is not working on your unit - maybe the spring is not working properly.

Assembly/Disassembly dancer arm spring

- remove roll profile and guiding disc
  (see roll profile and guiding disc)

- open the two hexagonal socket screws

- the gear plate can be removed

- dancer arm spring can be removed

Tooling

screw driver small
hexagonal socket SW 3

Dancer arm

The dancer arm is a very important part - controlling more then one mission. First of all the dancer arm is controlling that the media is always rolled up with the same friction. Second the media is controlled and guided to the right position - the speed of the stepper motor is as well controlled by the dancer arm.

Attention: It is clear that the dancer arm is very important for the correct function of the unit. Never use the dancer to move the unit or to carry it!

Assembly/Disassembly dancer arm

- remove roll profile and guiding disc (see roll profile and guiding disc)

- open the two hexagonal socket screws

- the gear plate can be removed

- remove lock washer from axle

- pressure spring and wedge can be removed

- remove the second lock washer from the axle - the axle can be removed

Tooling

screw driver small
hexagonal socket SW 3

Attention: The dancer arm is an assembly and can not be disassembled!

Electronics

Sensor

The sensor (light transmission) is used to control the position together with the sensor wedge. Different light sensibility is measured by the sensor and results in a different speed.
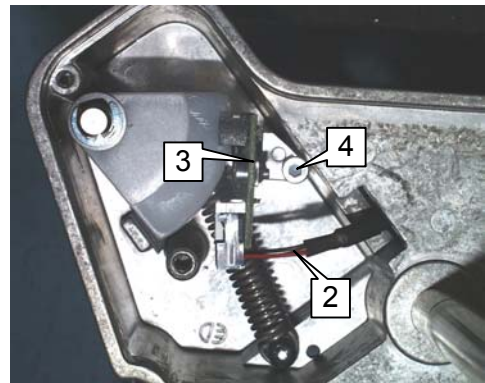
Assembly / Disassembly sensor

1. Remove roll profile and guiding disc (see Roll profile and Guiding disc).

2. Remove back cover (1) (see back cover).

3. Unplug cable (2) from the connector on the light sensor board (3).

4. Remove screw (4) and light sensor board.
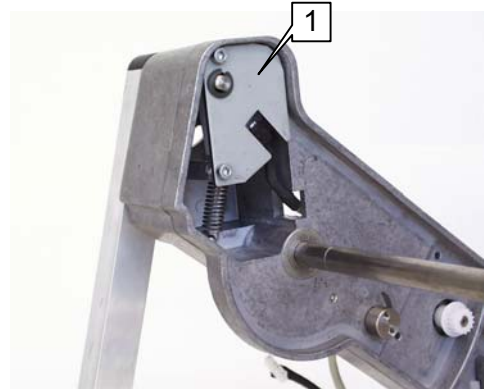
Tooling

cross recessed head size 1
screw driver small

Activate rewinder

As an additional option the rewinder is a part of the TTX group Using the rewinder first time, the software function has to be activated. Therefore use the printer menu.

1. Select SYSP

2. Select PEPH

3. Select RWND

4. Choose direction of rotation and select between DIRL (left – counter clockwise) and DIRR (right –clockwise) – seen frontal towards the rewind core.
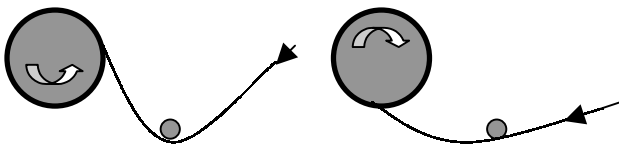
Fig. 1:   Left side: Setting DIRL; Right side: Setting DIRR.

Attention**:**   During OFFLINE Mode the rewinder is not moving. The rewinder is switched ON and OFF using the CUT key !

Using the DIRR mode will result in not using the complete possible movement area of the dancer arm. This is done via software (no additional adjustment necessary) – the reason for is the angel of the dancer arm together with bigger outside diameter. So it is better to use only a part of the movement area.

If there is no media in the media end sensor and is the sensor activated the rewinder is not moving – as well not by pressing CUT.

The display is showing **ST13** if the feed motor is not moving and the rewinder is not reaching home position after 4 seconds of constant maximum speed.The rewinder will be switched OFF.

Is the feed motor running and the rewinder is unable to reach the home position after 4 seconds of constant run – the rewinder will be re started ! Reason for – maybe the stepper motor was blocked and has to be re started.

Adjusting the rewinder sensor

To adjust differences given by assembly and parts – we have given the possibility to adjust the sensor via potentiometer.
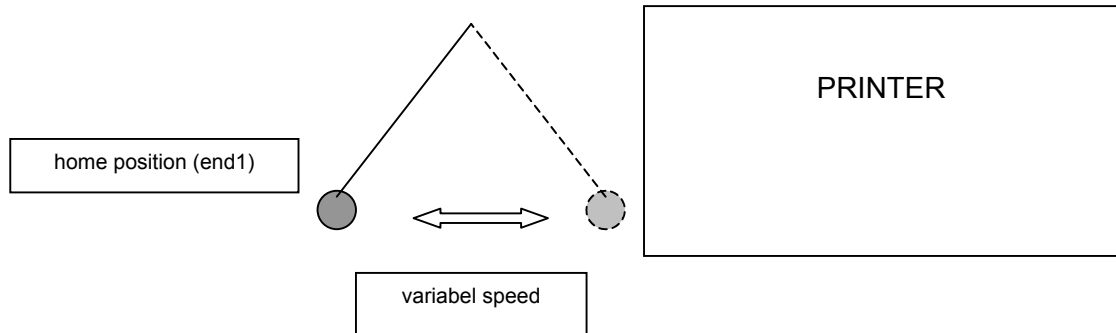

Fig. 2:   End positions of the dancer.

First please check the sensor by using the menu point SCHK.

The point Wxxx will show the value of the sensor depending on the position of the dancer arm (between 0 ... 255).

➠   The difference between the two end points must be bigger then 100!

If the difference between the two end points is not big enough, use the potentiometer on the rewinders light sensor board (Fig. 3:) to set the current through the sensor. To do so, proceed as follows:
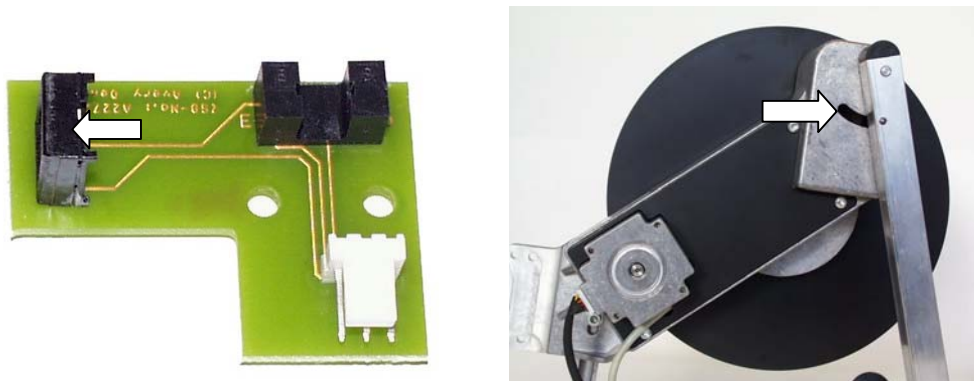

Fig. 3:   Left side: Pot. (arrows) on the light sensor board; Right side: Use the slot in the housing to set the pot. from outside.

1. Turn the potentiometer at the rewinder (Fig. 3:, arrows) clockwise to its limit.

2. Activate the sensor check for sensor W.

3. Move the dancer in succession to both end positions. Keep an eye on the printer display: The difference between both displayed values in the end positions must be greater than 110.

   If the difference between the values is smaller, please check if the peripherals board is set correctly.
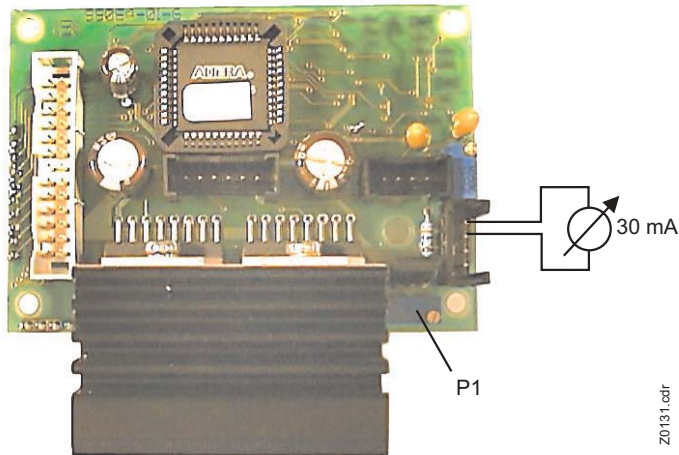
*Fig. 4:   Setting the peripheral board: disconnect the sensor, set the current by means of P1 to 30 mA.*

If the difference is big enough the sensor itself has to be adjusted now.

1. Select SYSP.

2. Select PEPH.

3. Select RWND.

4. Select RADJ (behind DIRL and DIRR) and select YES by using ENTER or leave the menu by using ESC.

5. First adjust the home position of the dancer - RNUL. Acknowledge with ENTER – shown is the momentary sensor value, by moving the dancer, the value is changing. By pressing ENTER the value is overtaken by the program.

Attention: Do not set the value at the limit position but the position ~ 5 mm before!

6. Acknowledge the value by pressing ENTER. The display switches to REND.

7. Acknowledge by pressing ENTER – move the dancer arm to the opposite position (close to the support foot, shown is the actual value of the sensor. Accept as well by pressing ENTER – the value will be accepted.

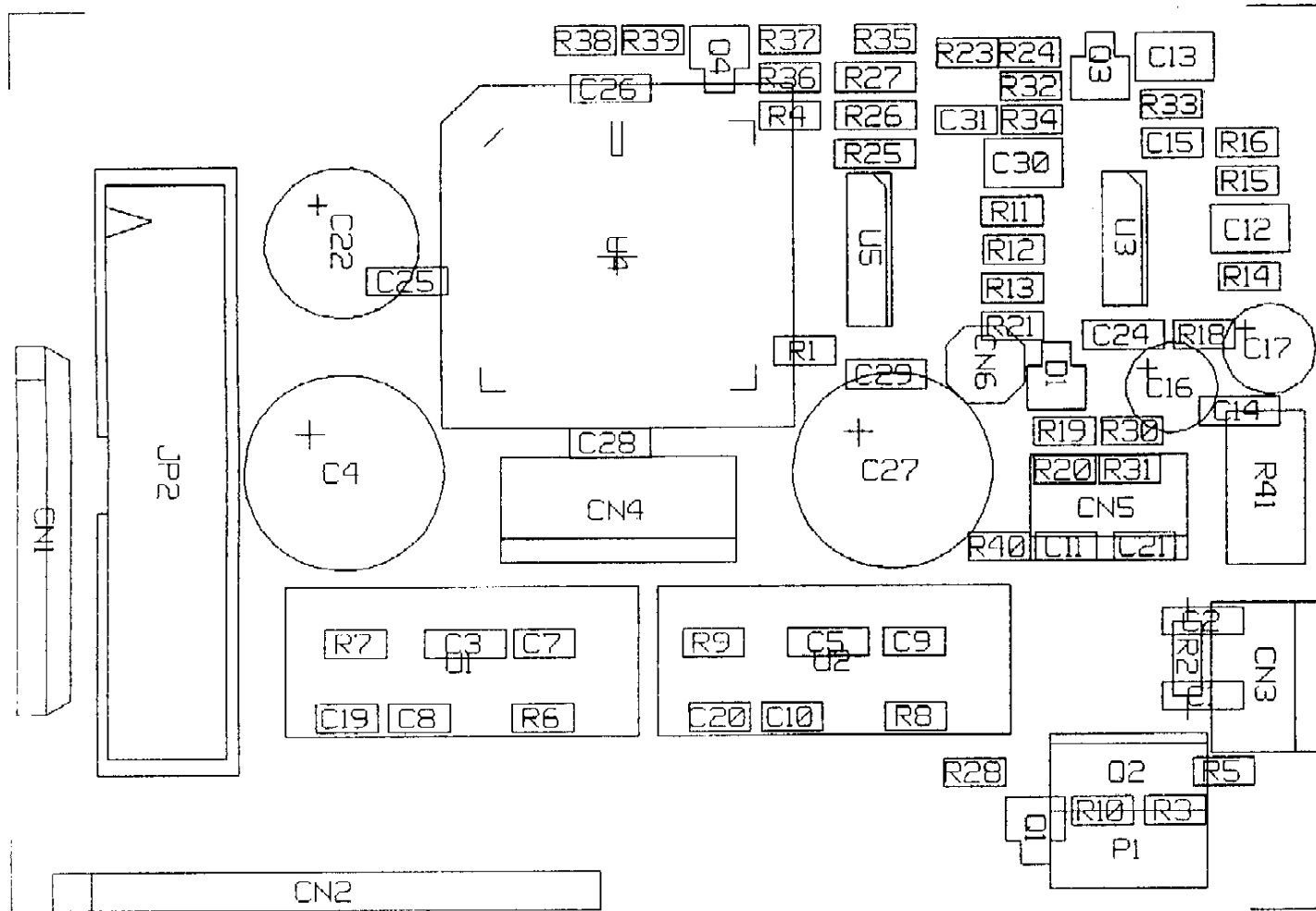Attention: Do not set the value at the limit position but the position ~ 5 mm before!
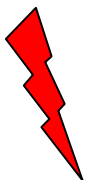
Watch carefully that the difference between the two shown values is bigger the 100 !

Is the program step broken by using the ESC key the printer is using default values – maybe ending with mail functions.

Diagrams, components, wiring

Diagrams, components, wiring

Component peripherial board 99054-xx-6

Adjustment peripherial board

Peripherial board 99054

CN 6 test point

CN 4 main stepper connector

CN 5 touch down
home sensor

JP 2 signal / power
connecting to dispenser

Poti R 41 label present sensor

CN 3 infrared sensor
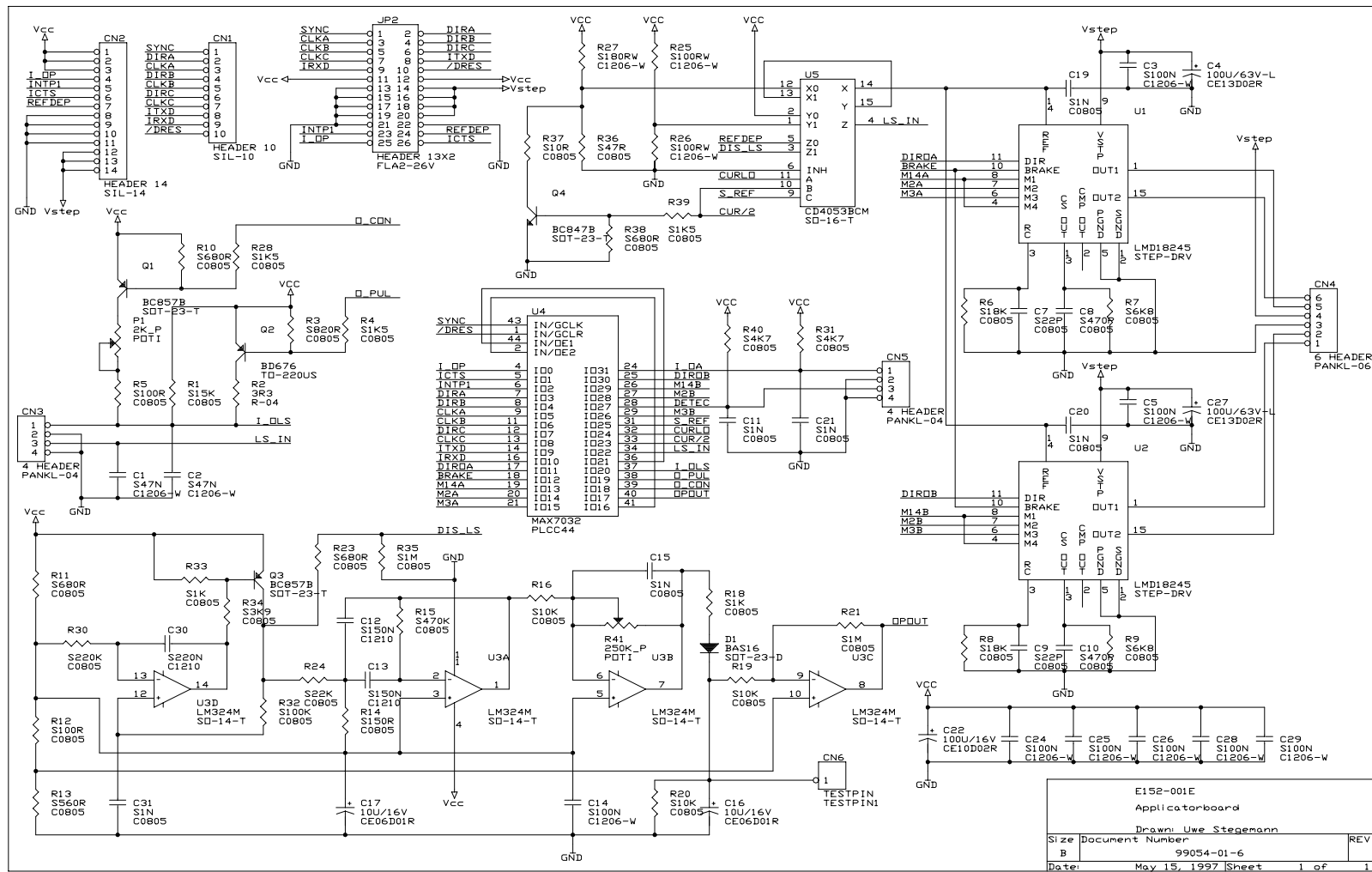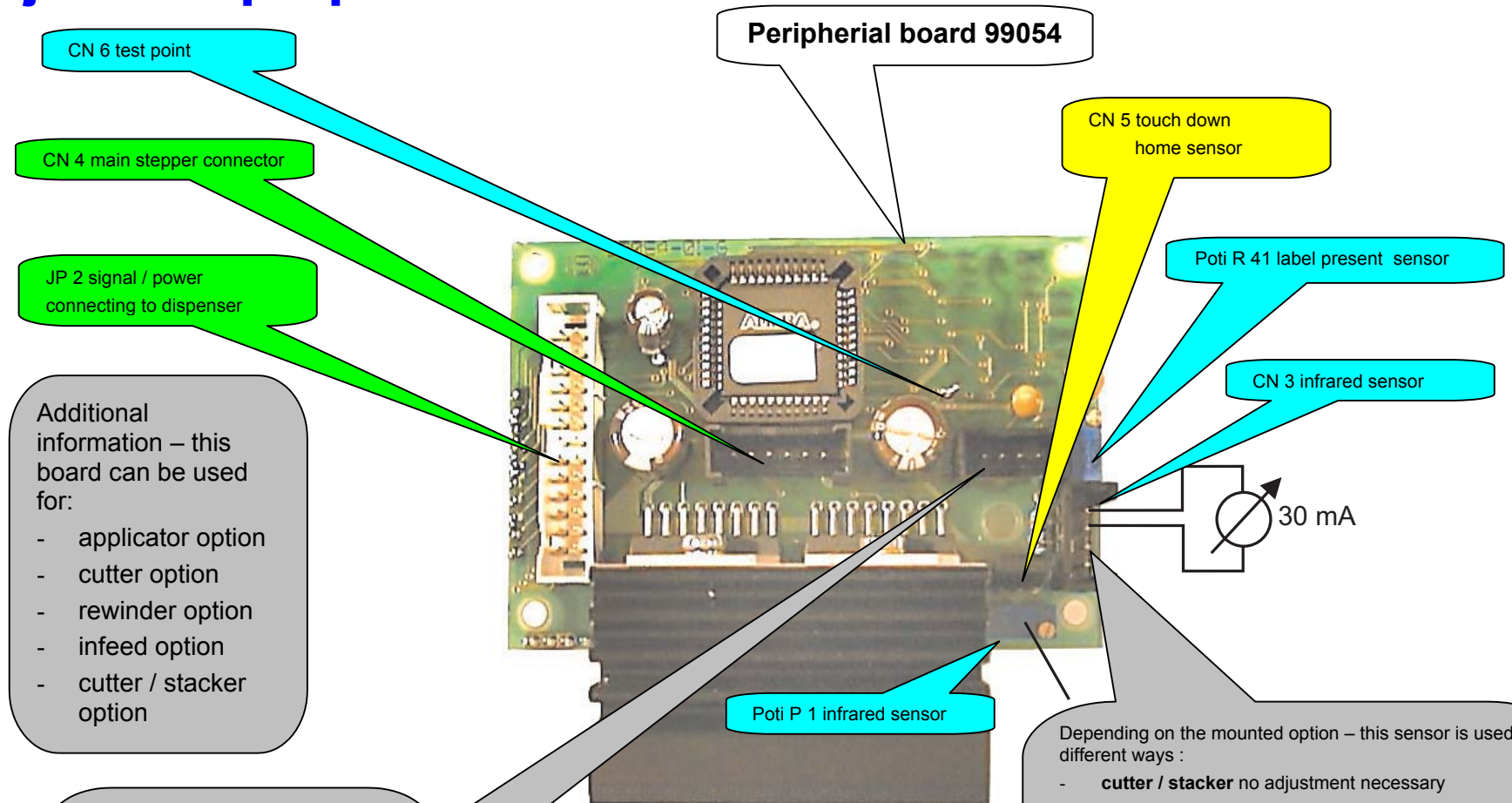
Additional information – this board can be used for:

- applicator option
- cutter option
- rewinder option
- infeed option
- cutter / stacker option

30 mA

Poti P 1 infrared sensor

Depending on the mounted option – this sensor is used in different ways :

- **cutter / stacker** no adjustment necessary
- **cutter** no adjustment necessary
- **infeed** use Poti P1 to adjust the sensor
- **rewinder** set current to 30 mA by use of P1 with unplugged sensor as illustrated.
- for **label present sensor** (manual application) use Poti R 41 to adjust between test point CN 6 and ground a value of 2.5 Volt (no media in and cover closed)

CN5 signals :

touch down – digital signal that the applicator base plate get in contact with the surface of He product ! Applicator moves back.
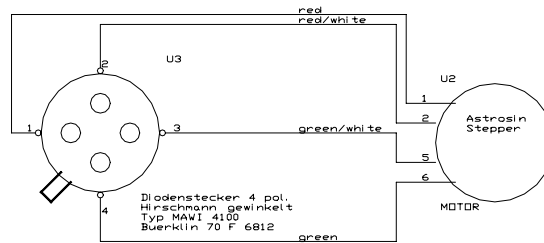
Wiring

Messermotor – Anschlusskabel

L = 190 mm

red
red/white

U3

U2

Astrosin
Stepper

green/white

MOTOR

Diodenstecker 4 pol.
Hirschmann gewinkelt
Typ MAWI 4100
Buerklin 70 F 6812

green

ACHTUNG: Kabel muss durch Gewebeband abgeschirmt werden.
Gewebeband am Metallgehaeuse MAWI 4100 leitend verbinden.

No	Beschreibung	Approv.	Date
01	Die Laenge des Kabels ist auf 160 mm erhoeht worden		09.10.95
02	Die Laenge des Kabels ist auf 190 mm erhoeht worden		17.04.97

E137-014E

Messermotor – Anschlusskabel

Drawn: Uwe Stegemann

Size	Document Number		REV
B	96529-02-3		
Date:	April 17, 1997	Sheet 18 of 38	

L = 430 mm

4   red
3   green
2   red
1   white

AMP MT Intsys
4 pol. blue
Federleiste

GND P2 P1

Klinkeneinbaubuchse 3 pol.
3,5 mm
Lutronic KLB 4

No	Beschr.	Approv.	Date		
				E137-009E	
				Messersensoranschluss Intern	
				Drawn: Uwe Stegemann	
				Size Document Number	REV
				B 97793-00-0	
				Date: October 9, 1995 Sheet 12 of 38	

AMP MT-INTSYS
6 polig black
Federleiste
826371-6

Diodeneinbaubuchse
8 polig
Binder Serie 680
047480-08

1: Ground
2: Homeposition
3: 40 Volt
4: Step !B
5: Step A
6: Step B
7: Step !A
8: Touch down

AWG22 (Kabel verdrillen)

AMP MT-INTSYS
4 polig black
Federleiste
826371-4

L = 490 mm

No	Beschreibung	Approv.	Date	
				E152-003E
01	Austausch des 8 poligen AMP – Steckers gegen einen 6 poligen und 4 poligen AMP Stecker		11.04.97	Peripheriecable
				Drawn: Uwe Stegemann

Size	Document Number	REV
A	99056-01-6	1
Date:	April 24, 1997	Sheet	of

Messersensor – Anschlusskabel

L = 200 mm (AWG 22)

white

green

GND   red

OPB 825A

max.
5 mm

P1 P2

Achtung:

metallische Abschirmung
an GND vom Klinkenstecker
leitend verbinden.
Schirm moeglichst nah an
die OPB 825A bringen.
(mit Abschirmschlauch
und Schrumpfschlauch)

GND

P2

P1

Klinkenstecker 3pol gerade
LUTRONIC KLS 40 SL
Farnell Best.Nr. 46007-2

No	Beschr.	Approv.	Date
01	Kabellaenge um 50 mm auf 180 mm erhoeht Kabel am Sensor seitlich ausgefuehrt		08.03.96
02	Kabellaenge um 20 mm auf 200 mm erhoeht Klinkenstecker in gerader Ausfuehrung		27.11.96

E137-015E

Messersensor – Anschlusskabel

Drawn: Uwe Stegemann

Size	Document Number		REV
B	98206-02-3		2
Date:	November 27, 1996	Sheet 33 of 38	

Appendix

Tooling and work materials

hexagonal socket	SW 3
hexagonal socket	SW 4
cross recessed head	size 1
screw driver size 1	

Parameter menu

OFFLINE

INFO	PRTP	IFAC	SYSP	JCLR	SCLR	OTHR
STA0	PSPD	PORT	EMUL			DOWN
STA1	MTYP	SPOL	NACH			LCLR
STA2	MLEN	BMOD	SENS			CCLR
STA3	MWID	<20H	PUNS			ICLR
DOT1	PUNO	BAUD	FMOD			ADJS
DOT2	BCHI	PARI	OMOD			MCHK
	UPCA	DBIT	SMOD			SCHK
	CSPD	SBIT	EXTR			PCHK
	CPOS	HAND	SGMO			FACT
	CWID	PRID	CODE			SERV
	CDIS		HRES			NULL
	ASPD		HVOF			HADJ
	ADIS		CLCK			ACSC
	MPOS		USMD			
	XPOS		LREP			
	YPOS		CSET			
	SSPD		MEND			
	GAP		SCAN			
	CMOD		SERR			
	DMOD		PEPH			

Standard / standard
Nur mit Messer / cutter only
Spender mit Applikator / dispenser with applicator
Für Spender (MPOS – auch mit Abreißkante) / dispenser only (MPOS – tear off as well)
Nur mit Scanner / scanner only
Nur mit Color Option / with color option only
Nur für Service / for service only

OFFLINE

INFO	PRTP	IFAC	SYSP	JCLR	SCLR	OTHR

EMUL

NACH

SENS

PUNS

FMOD

OMOD

MMOD

SMOD

D_HD

EXTR

CODE

HRES

CLCK

USMD

LREP

CSET

MEND

SCAN

SERR

PEPH   RWND   DIRL

DIRR

RADJ

INDEX