Mini Coder
Coding Machine

INSTRUCTION MANUAL

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MINI CODER INSTRUCTIONS

General Description

The Mini Coder is a coding machine for printing on any intermittent packaging line or similar whilst the film or product is stationary. An ink cartridge is used in conjunction with interchangeable rubber type to produce the print. The print head is pneumatically operated and a control box can be supplied to accept either a pneumatic or electric signal.

The Mini Coder print head is often supplied without a control box for fitting to an existing production machine. A change-over air signal from a suitably timed 5-port valve is all that is needed to operate it in this mode.

The Mini Coder control box can be supplied to make the coding unit self-contained.

AIR SUPPLY

Control Box Version - Line air pressure should be supplied to the control box and must NOT be lubricated. The control box is then set to regulate the air pressure to the print head to 15 p.s.i. (1 bar).

Print Head Only - Filtered air regulated to 15 p.s.i. (1 bar) should be supplied. Lubrication is optional.

Push-in type air fittings are used and the hose diameter is 4mm. To fit the hose push it firmly into the fitting. To remove the hose push on the plastic ring surrounding the fitting and at the same time pull the hose from the fitting. The hose can be cut to length to suit the installation.

PRINT HEAD INSTALLATION

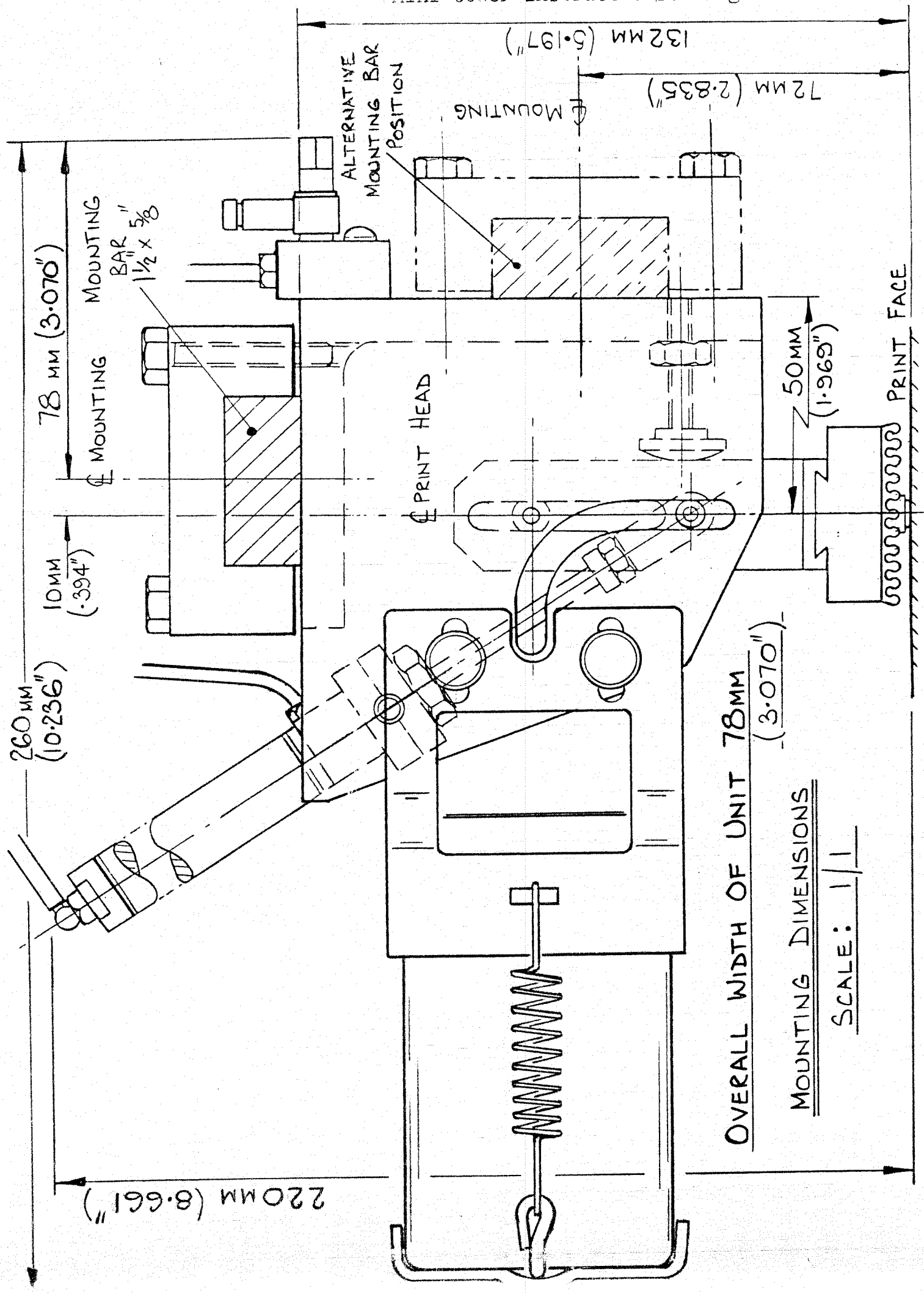
The print head can be mounted any way up but care must be taken that clearance is allowed for changing the ink cartridge and the print type holder.

The print head must be mounted on a suitable frame or cross-bar which must be rigid, to the dimensions shown on page 2. The product to be coded must present a flat coding area, and in the case of film or paper a flat anvil plate must be used as a support. If the code position is critical, suitable adjustment must be provided in the frame design.

Air hose connections - '1' down or print stroke.

'2' up or return stroke.

If the control box is not used in the installation, a change-over air signal of approximately 0.4 second duration must be provided from the parent machine. Typical sources are from 5-port valve fitted to a camshaft or from an existing control circuit via a solenoid valve.


132MM (5·197")
72MM (2·835")
℄ MOUNTING
ALTERNATIVE MOUNTING BAR POSITION
MOUNTING BAR 1½" x 5/8"
78 MM (3·070")
℄ MOUNTING
℄ PRINT HEAD
50MM (1·969")
PRINT FACE
10MM (·394")
260 MM (10·236")
220MM (8·661")
OVERALL WIDTH OF UNIT 78MM (3·070")
MOUNTING DIMENSIONS
SCALE: 1/1

CONTROL BOXES

The front panels of the control boxes are clearly labelled and have internal air-logic circuits as on pages 4 and 5 .

Set the air pressure to 15 p.s.i. using the regulator knob and pressure gauge. Note that the knob has a locking feature.

The code time can be adjusted by removing the blanking plug marked TIMER and adjusting the internal control with a screwdriver. Turn clockwise to increase the time.

The TEST button must be held pressed for longer than the code time to operate the coder correctly.

A clamp is provided to fit the control box onto an 1.1/2" x 5/8" bar. Four rubber feet are also fitted for free standing.

STANDARD PNEUMATIC CONTROL BOX (see page 4)

Standard fitment for signalling this unit is a 3-port cat's whisker valve. This can be replaced with any 3-port valve such as a footswitch, a hand operated button, or a roller operated valve. Normal port markings are:-

1. - Air Supply

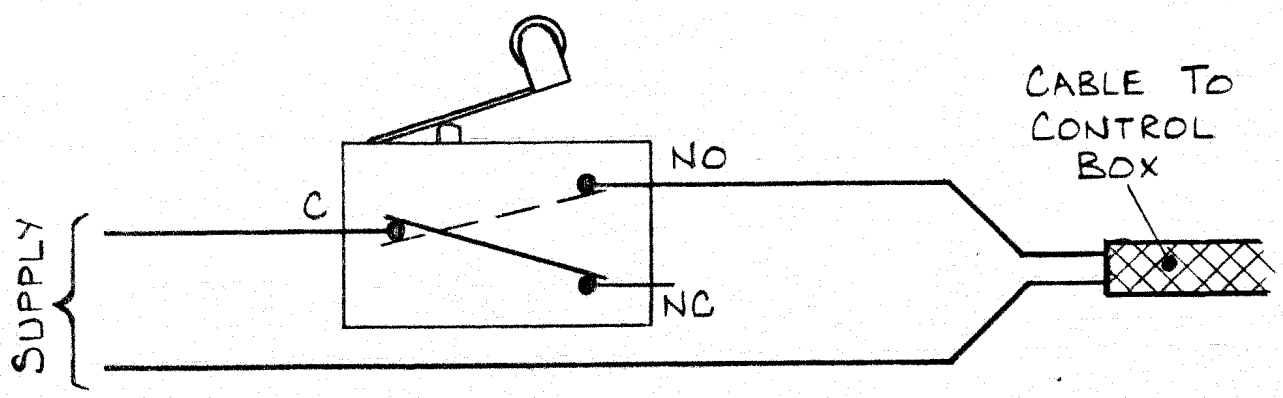
2. - Air Signal to unit

3. - Exhaust port.

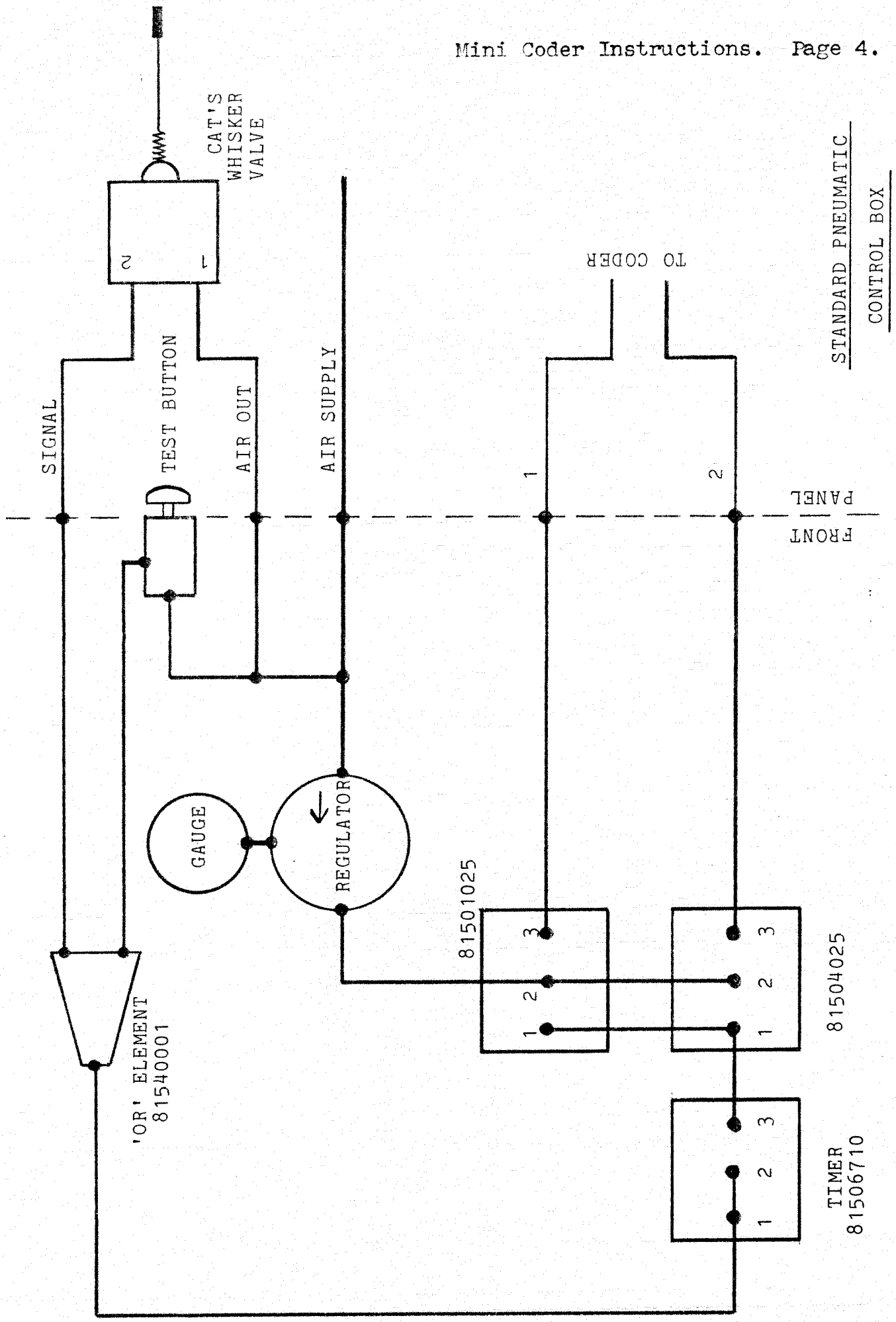
Sensitive cat's whisker valves, gap sensors, etc can be fitted if an amplifier is fitted into the control box circuit. Contact Overprint for further details if required.

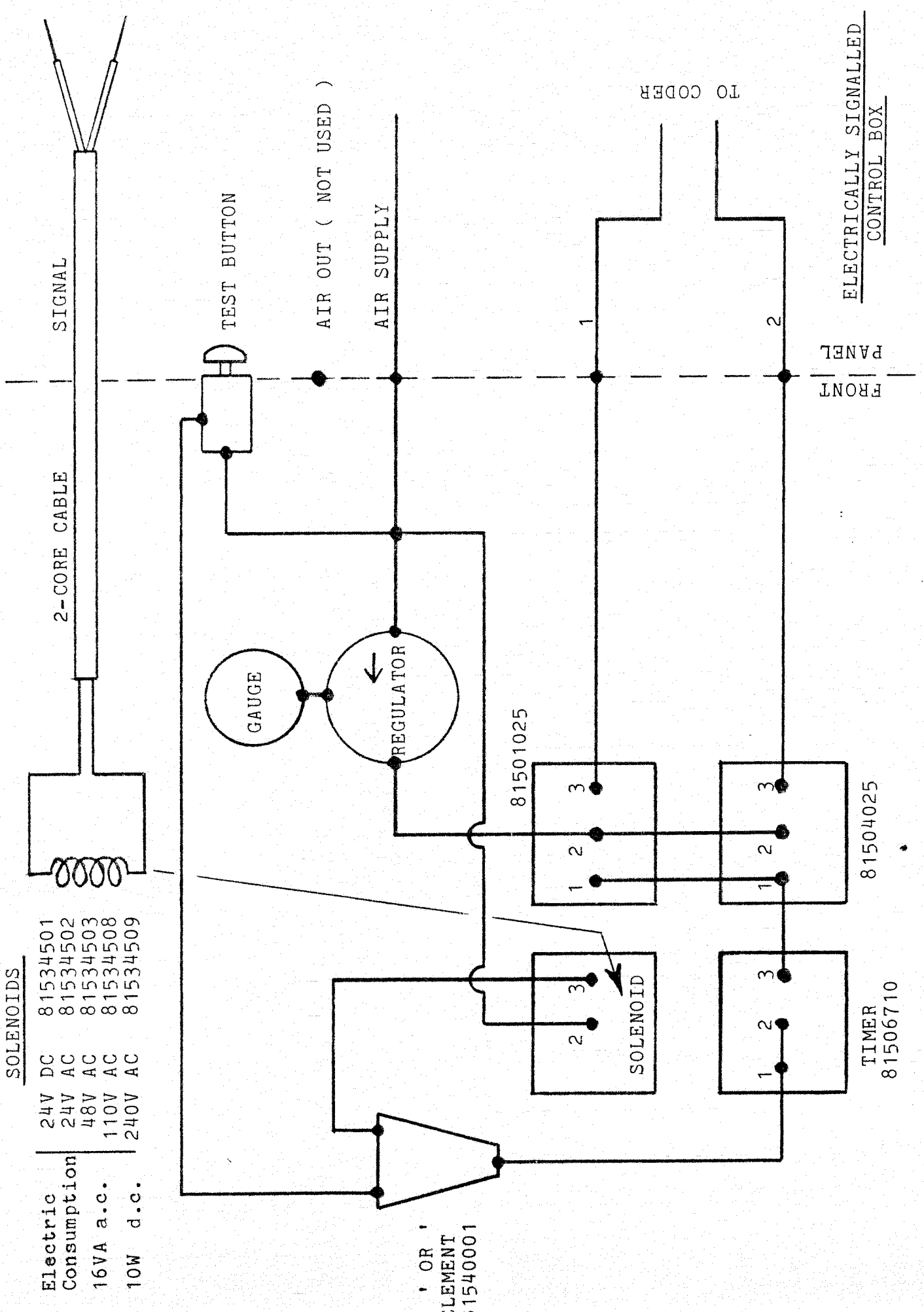
ELECTRICALLY SIGNALLED CONTROL BOX (see page 5)

Check that the voltage of the control box supplied is correct for your application. The 2-wires from the control box connect direct to the internal solenoid. A signal should be provided from a suitable switch, relay, photo-electric cell or direct from the parent machine control. The signal must be held for longer than the code time.



Typical wiring diagram to suit micro-switch.


CAT'S WHISKER VALVE
2
1
SIGNAL
TEST BUTTON
AIR OUT
AIR SUPPLY
TO CODER
1
2
FRONT PANEL
STANDARD PNEUMATIC CONTROL BOX
GAUGE
REGULATOR
'OR' ELEMENT 81540001
81501025
3
2
1
81504025
3
2
1
TIMER 81506710
3
2
1


SIGNAL
2-CORE CABLE
TEST BUTTON
AIR OUT (NOT USED)
AIR SUPPLY
TO CODER
ELECTRICALLY SIGNALLED
CONTROL BOX
FRONT
PANEL
GAUGE
REGULATOR
81501025
81504025
SOLENOID
TIMER
81506710
SOLENOIDS
24V DC 81534501
24V AC 81534502
48V AC 81534503
110V AC 81534508
240V AC 81534509
Electric
Consumption
16VA a.c.
10W d.c.
' OR '
LEMENT
31540001

SETTING THE TYPE

The print head type holder slides into a dove-tail slot in the print head, and is held in place by a ball-catch. With the ink cartridge removed the print head can be pulled clear of the print head through the apertures in the ink cartridge holder.

The rubber type has ribs that register into the riblock backing rubber. This is supplied loose and can be fixed to the print type holder with its self-adhesive backing.

INK CARTRIDGES

See page 10 on ink cartridges. The ink cartridge holder has adjusting screws to enable the amount of ink picked up by the rubber type to be controlled. Always remove the ink cartridge when leaving the Mini Coder for long periods.

RUNNING

The print head is fitted with flow restrictors that regulate the EXHAUSTS from the double acting air cylinder.

Flow restrictor 2 controls the printing stroke speed.

Flow restrictor 1 controls the return stroke speed.

Turning the restrictor screws clockwise decreases the speed.

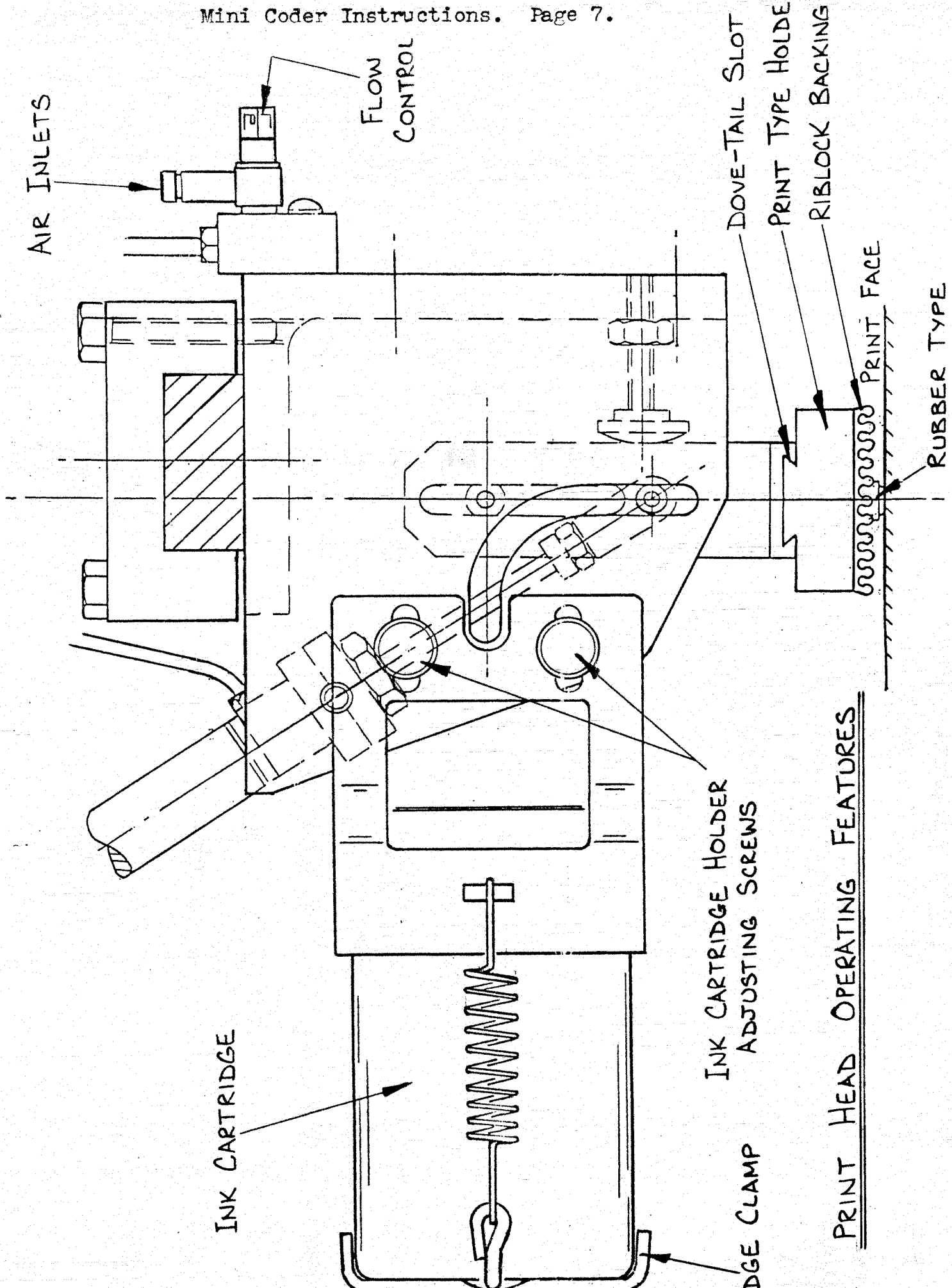
The flow restrictors should be set so that the coder operates as gently as possible whilst giving good prints. They should normally be set in approximately the same amount.

Some final fine-tuning of the air pressure, code time, and the flow regulators may be necessary dependant on the product being coded.

MAINTENANCE

The Mini Coder should require little maintenance apart from being kept as clean as possible. The moving parts can be lightly lubricated with mineral or silicone oil or in dusty environments with a dry lubricant.

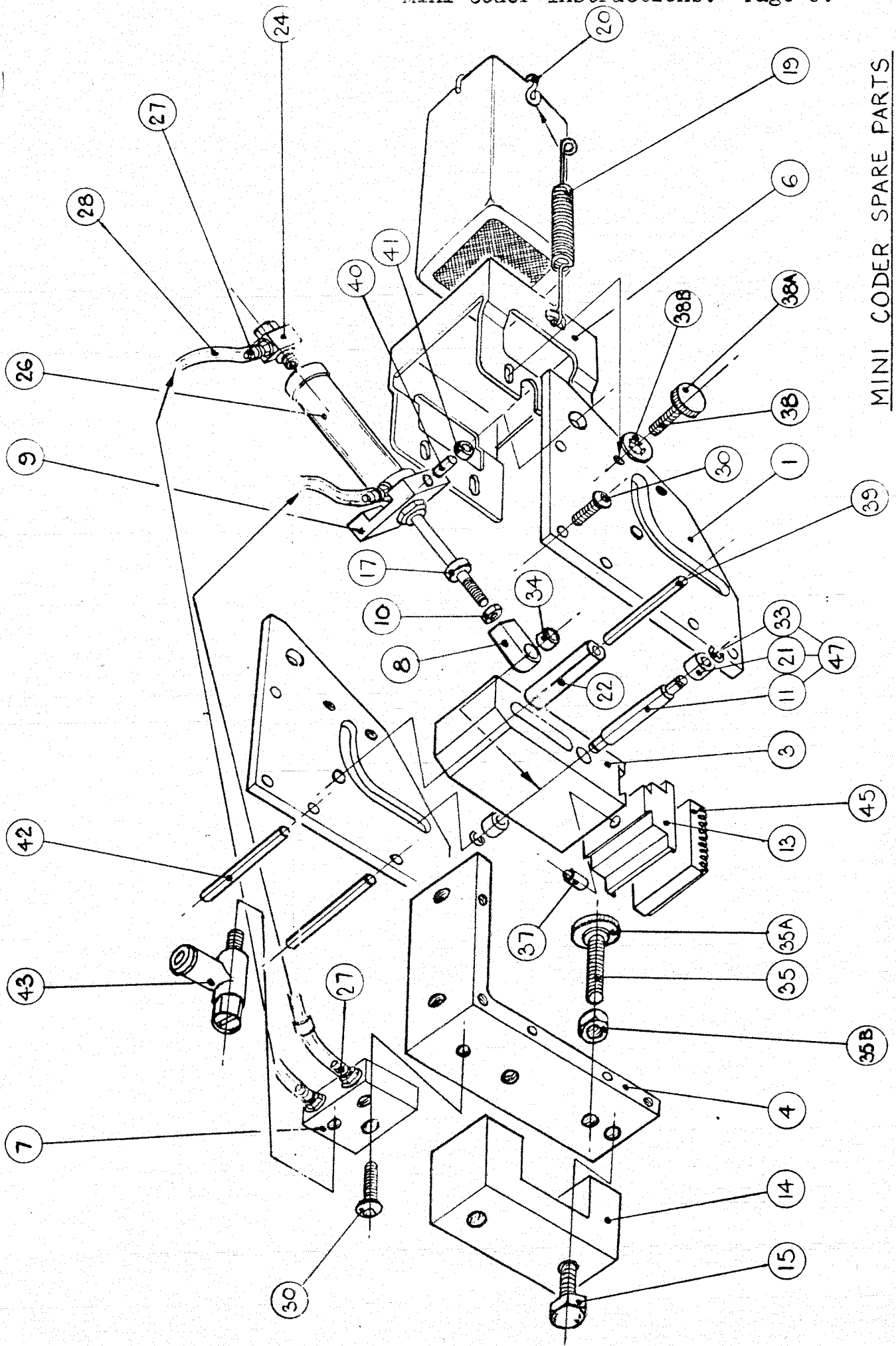
Overprint primer can be used for cleaning off excess ink. The rubber type is best cleaned by dabbing with a solvent soaked cloth or tissue.



PRINT HEAD OPERATING FEATURES

SPARE PARTS LIST - MINI CODER

PART NO.	DESCRIPTION	NO. REQ'D
SMC1	Side plate	2
SMC3	Sliding Block	1
SMC4	Angled Spacer Bridge	1
SMC6	Ink Cartridge Holder	1
SMC7	Air block	1
SMC8	Cylinder Rod End	1
SMC9	Cylinder Mounting Block	1
SMC10	5mm SS Nut	1
SMC11	Pivot Spindle	1
SMC13	Stereo Holder	1
SMC14	Support Clamp	1
SMC15	Hex head Screw M6 x 35 long	2
SMC17	Spacer	1
SMC19	Spring	2
SMC20	Cartridge Clamp	1
SMC21	Bronze Roller	2
SMC22	Bearing - Nylon	1
SMC24	Brass Block Elbow	1
SMC26	Humphrey Air Cylinder	1
SMC27	Air Nipple	4
SMC28	Flexible Air Hose	2ft
SMC30	Button Head Screw M5 x 20	7
SMC33	Circlip 3mm i/d	2
SMC34	Bush 0508	1
SMC35	Support Screw	1
SMC35A	Knoblet 931	1
SMC35B	Nut M6 st/st	1
SMC37	Ball Catch 6mm	1
SMC38	M4 x 10 Socket Cap Screw	4
SMC38A	Knoblet 929	4
SMC38B	Lockwasher M4	4
SMC39	Dowel 4mm dia. x 50 mm long	1
SMC40	Dowel 5mm dia. x 16mm long	2
SMC41	Bush 0505	2
SMC42	Dowel 5mm dia x 50 long	2
SMC43	Flow Restrictor	2
SMC45	Stereo Bckg Rubber 1-1/2"sq	1
SMC47	Shaft Set (SMC11/SMC21/SMC33)	1


MINI CODER SPARE PARTS
(M.J.S. AUG '90)
24
20
19
27
28
6
41
40
38A
38B
38
26
30
1
9
39
17
34
10
33
8
21
47
22
11
3
45
42
13
37
35A
43
27
35
35B
4
7
14
30
15

INK CARTRIDGES

NEW CARTRIDGES

1. Remove sealing tape and plastic lid.

2. Peel off sealing film to expose silk ink pad.

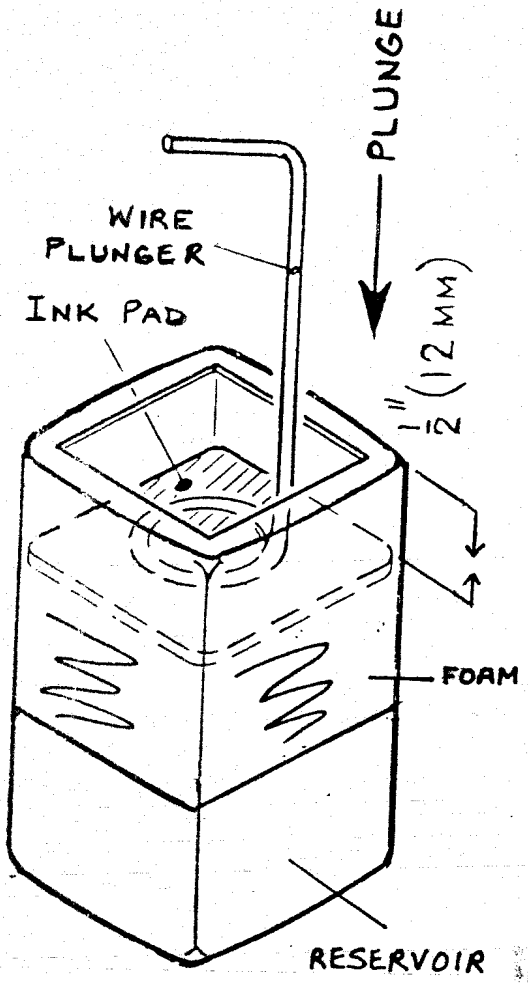
3. Plunge ink pad with wire plunger until ink rises to the ink pad. A small pool of ink should form when the pad is held pushed down about 1/2" (12mm) If the ink doesn't rise immediately, leave the cartridge upside down for a few minutes. The reservoir at the bottom of the cartridge should be empty - all the ink should be absorbed by the foam. Your cartridge should now be ready for use. **N.B.** After use i.e., at the end of the shift, the cartridge **must** be capped to prevent the cartridge from drying out.

4. PRIMING - With ink pad held down add a capful of primer from the bottle. Plunge several times and see if a pool of ink forms. If not, add primer until a pool forms.

5. Cap then turn cartridge upside down and strike firmly on a flat surface to reseat ink pad.

6. Wipe off any surplus ink. The cartridge is now ready for use. Note that on gently squeezing the cartridge plastic container ink should be seen to soak through the silk face of the ink pad.

7. For best results use the two cartridge method - see below.



MAINTAINING CARTRIDGE

1. At the end of each production run or shift re-prime the cartridge until the pool of ink forms. Take care not to add too much primer. Re-seat the ink pad.

2. Replace the plastic lid and store with lid uppermost. If the lid is not replaced, the cartridge will dry out and its life will be shortened drastically.

3. 2 CARTRIDGE METHOD - It is ideal to alternate from shift to shift by using 2 cartridges to give the primer time to diffuse fully into the ink.

IMPORTANT NOTES

1. Cartridges must be used within 3 months of purchase. After this time their ink storage foam will deteriorate.
2. **ALWAYS** fit plastic lids when storing.
3. Overprint supply cartridges and primers with different drying times and for use on various materials and in various environments. Consult Overprint for advice on suitability of cartridges for your applications.
4. Primer can be used for cleaning away surplus ink. Some painted and plastic surfaces may be damaged by primer. Overprint can supply special hand cleaner for ink removal.