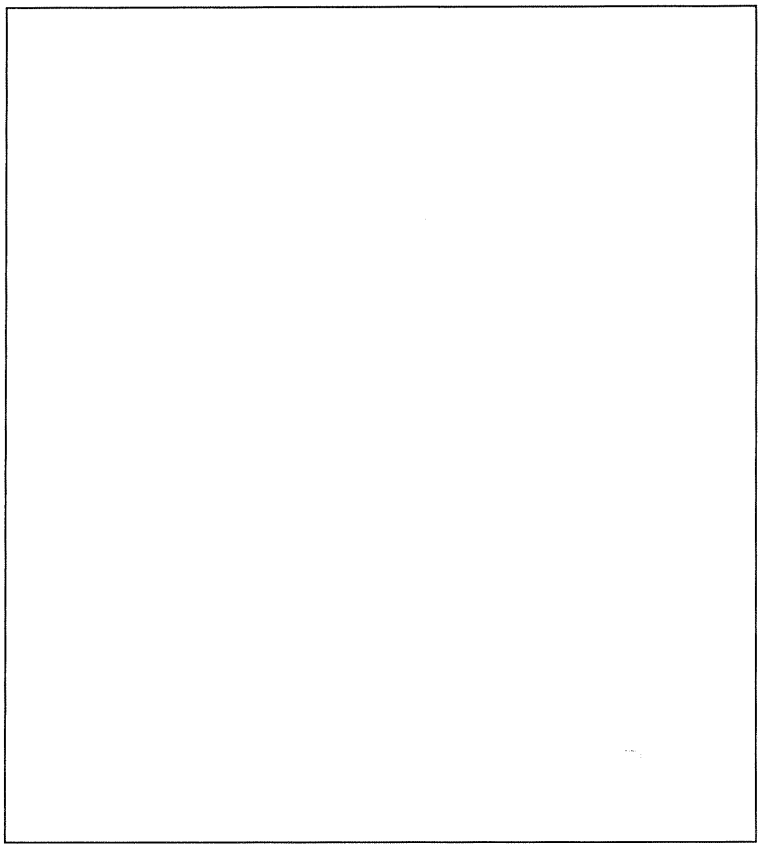
Kirk-Rudy, Inc.

Instruction and Parts Manual 211/211E Labeling Head

Manual



Manufactured by Kirk-Rudy, Inc.

Before using this machine, all operators must study this manual to understand and follow the safety warnings and instructions. Keep these instructions with the machine for future reference. If you have any questions, contact your local Kirk-Rudy, Inc. Distributor.

10000-211 REV. 1 08/16/99

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NOTE: FIGURES AND DIAGRAMS ARE NOT INCLUDED IN PAGE NUMBERS.

1 Important Safety Instructions

SAVE THESE INSTRUCTIONS. Read all instructions before using this product.

WARNING

* NEVER OPERATE THE MACHINE WITHOUT ALL GUARDS OR SAFETY DEVICES IN PLACE.

* ALWAYS TURN POWER OFF WHEN MAKING ADJUSTMENTS.

* ALWAYS DISCONNECT THE POWER SUPPLY BEFORE ANY MAINTENANCE OR SERVICE WORK.

* NEVER START THE MACHINE WITHOUT FIRST CHECKING ALL PERSONNEL ARE CLEAR OF MOVING PARTS.

* KEEP FINGERS CLEAR OF ALL MOVING PARTS.

* NEVER REMOVE THE PRODUCT FROM THE MACHINE WHILE MACHINE IS RUNNING.

* SHOULD MISFED PRODUCT JAM THE MACHINE AND STOP IT FROM RUNNING, ALWAYS PRESS THE STOP BUTTON BEFORE CLEARING PRODUCT. IF THE STOP BUTTON IS NOT PRESSED AND THE JAM IS CLEARED, THE MACHINE WILL BEGIN RUNNING.

* IT IS NOT RECOMMENDED THAT LOOSE CLOTHING, JEWELRY AND LONG HAIR BE WORN WHILE OPERATING THIS MACHINERY.

* ALWAYS USE AN EXPERIENCED ELECTRICIAN WHEN TROUBLE-SHOOTING ELECTRICAL PROBLEMS.

* CHANGES OR MODIFICATIONS TO THIS UNIT NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

NOTE: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE. SHIELDED CABLES MUST BE USED WITH THIS UNIT TO ENSURE COMPLIANCE WITH THE FCC CLASS A LIMITS.

2 INSTALLATION

2.1 Change Gears

The KR Model 211 computer label head comes equipped with 3, 4, and 5 across gears as standard equipment. Gears are mounted (while facing rear of machine) as follows:

3 across – both gears are the same size and can be mounted on either shaft.
4 across – large gear to the left, small gear to the right.
5 across – large gear to the left, small gear to the right.
NOTE: In most cases the gears will be stamped: e.g. 5L

2.2 Change Gear Timing (Refer to Figure 1)

Rotate the machine by hand until 105905 feeder belt has just stopped. The feeder belt operates on a start/stop motion – change gear timing requires that the belt has just stopped. Remove both change gears presently mounted on the machine and install one of the desired gears – either the right or left change gear. By hand, rotate the 501014 cam bracket (do not loosen the bracket retaining screw) counterclockwise until the upper guillotine knife begins its downward travel and makes contact with the lower guillotine knife approximately 5 ½" from the right (while facing the front of the machine) edge – this position will be between the 4th and 5th hex head bolt that mounts the upper guillotine knife. At this point install the second change gear – the 501014 cam bracket can be pivoted slightly until change gear teeth are meshed.

2.3 Circular Knife Alignment

The 500967 shaft contains a 1/10" scale denoting various label sizes. The most common sizes (2.6", 2.8", and 3.4") are etched into the entire width of the scale and would enable you to position all the circular knife assemblies in alignment with these label sizes. To adjust for label lengths other than the aforementioned, position the right (while facing the rear of the machine) circular knife assembly to the desired label length and measure for label length between the remaining circular knives.

NOTE: The circular knife assemblies are positioned with the right (while facing rear of machine) 103203 bushing aligned with the desired label length etched into the scale.

2.4 Circular Knife Adjustment

Turn all the top adjusting knobs on the 500965 knife levers counter-clockwise to their respective stops. Loosen the bottom (locking) knobs and pivot knives away from the 501029 hub assemblies. Loosen the allen set screws retaining the 501029 hub assemblies and locate all the hubs until approximately centered with their respective circular knives. Circular knife pressure is adjusted as follows:

A. Marginal trim knives – pivot knife assembly toward 501053 pin wheel hub until 102704 spring is compressed approximately half the total distance – at this point tighten lower (locking) hand knob and turn top (adjusting) hand knob approximately 3 turns clockwise. It is important that the marginal trim knives cut the paper clean through.
B. Internal knives – pivot knife assembly toward 501029 hub until 102704 spring is slightly compressed – at this point tighten lower (locking) hand knob and turn top (adjusting) hand approximately 2 turns clockwise or until desired cut

is achieved. Ideally the internal knives should not cut the paper clean through but would leave the entire label strip slightly enjoined.

2.5 Marginal Trim Adjustment

Horizontal location of computer address label formats will vary thereby requiring minor adjustments for proper marginal trim. Determine if the address labels will be run through the machine head-first or foot-first and adjust for trim as follows:

A. Pencil a vertical line .2" in front of the first printed character on label #1.
B. Traverse the 501053 pin wheel hub on its shaft until its respective marginal trim knife is aligned with the pencil marking.
C. Align opposite 501053 pin wheel hub for width of computer form: at this point both sets of pins should be centered with feed holes on computer form.
D. Positions 500984 paper stripper guides so one time is located inside the slot in 501053 pin wheel hub. Do not overtighten stripper guide retaining screws.

NOTE: Prior to putting "live" list in machine it is recommended to thread a blank piece of computer paper a few inches beyond the circular knives: remove from machine a superimpose on "live" list sheet to check for proper trim and label length alignment.

2.6 Feeder Belt Adjustment

The 105905 feeder belt must travel approximately the same distance as the label length: e.g., 4 across, 3.4" format, the feeder belt should travel 3.4".

TO CHECK: Rotate the machine by hand until the feeder belt just stops. Pencil a line on the belt adjacent to the line stamped in the 500909 feeder bar, or O position. Continue to rotate the machine by hand until the belt just stops – at this point the pencil line should be aligned with the required label length numeral(s) stamped in the feeder.

TO ADJUST: Loosen 10x32 allen set screw in 500979 hub – this will permit you to turn the hub's 1/4x20 allen cap screw. Turn cap screw counter-clockwise to lengthen belt stroke and clockwise to shorten stroke.

IMPORTANT: Feeder belt travel must always be checked when belt has momentarily stopped and from the O position stamped in the feeder bar. Maintain rigid tension on feeder belt at all times – this is accomplished by loosening the 1/4x20 allen screw retaining 501907 hub assembly and pivoting hub for required belt tension.

2.7 Label Buckle Adjustment (Refer to Figure 2)

Loosen allen set screw that retain the 501031 roller and 501051 brake cam to their respective shafts. Rotate 501031 roller is high point is straight up and not in contact with 500986 spacer roller. Turn 501051 brake cam until 500998 lever is at the high point (500986 spacer roller will be contacting 501048 guide plate). Hold 501031 roller and 501051 brake cam in the aforementioned position. With labels on feeder belt, rotate machine by hand until lead edge of label contacts 500986 spacer roller – continue to rotate machine until label buckles approximately ¼" to $^{3}/_{8}$"; at this point turn 501031 clockwise until its high point just makes contact with 500986 spacer roller – tighten roller set screw.

2.8 Label Brake Timing (Refer to Figure 3)

The 501051 brake cam (with set screw still loose) should continue to be held in the position explained in "Label Buckle Adjustment". Rotate machine until 501031 roller is within ¼" of rotating off its high point – turn 501051 brake cam clockwise until its high point just begins to depress 500998 laver or rear edge of label is released and tighten brake cam set screw. Exercise caution when making this adjustment as only slight movement of 500998 lever will be noticable when depressed by brake cam.

2.9 Label Wheel Timing

The lead edge of the label should fall approximately 1/32" to 1/16" from the lead edge of 500918 pad. To adjust, loosen 1/4x20 allen screw in 500911 wheel hub and rotate wheel to desired position.

2.10 Setting the Guillotine Knife

NOTE: All right and left are as you stand on operators side of the machine.

1. Remove all knock downs behind the upper knife.
2. Remove upper knife from head.
3. Remove right hand gib.
4. Remove lower knife
5. Rotate lower knife or replace with sharp knives and tighten all screws just finger tight.
6. Put right hand gib back on the machine.
7. Put upper knife on the head. To do this put the right hand side of the upper knife down even with the lower knife and tighten one gib screw on the right side. Put 5/32 allen wrench between the upper and lower knife all the way on the left side. Remove allen wrench and bring down just a little more. A 1/8 allen wrench should now just fir in between the upper and lower knife, if a 5/32 will still fit you need to come down a little further yet. Now tighten the gib screw on the left side.
8. Push upper knife down and tighten gib screw so knife is held down. Loosen the gib screw until the upper knife pops up, repeat until all six screws are adjusted.
9. Adjust the lower knife on the left side so the knife will cut.
10. Now adjust the right hand side too so the right side of the knife will cut.
11. Before you adjust knives remove the gib screws so the upper knife will move freely.
12. Remove the upper knife casting and tighten buttonhead screws on the lower knife from the center out.
13. Put the upper knife back in and repeat the setting of the angle or lead.
14. Adjust from right to left on lower knife so the full length of the knife is cutting. Always keep ahead of your cut when you are making adjustments.

2.11 Set-up for 3-up Label 4.5

Put first circular knife on, 2.7 on circular knife shaft scale. Put ¼-20 bolt in upper hole on aluminum arm close to grit wheel. Set stroke on 4.5.

Raise the little rubber roller so it will just clear the belt. The label will not have any blister in it at the pick up point. Adjust cam behind pick up wheel so label can be picked off by vacuum wheel.

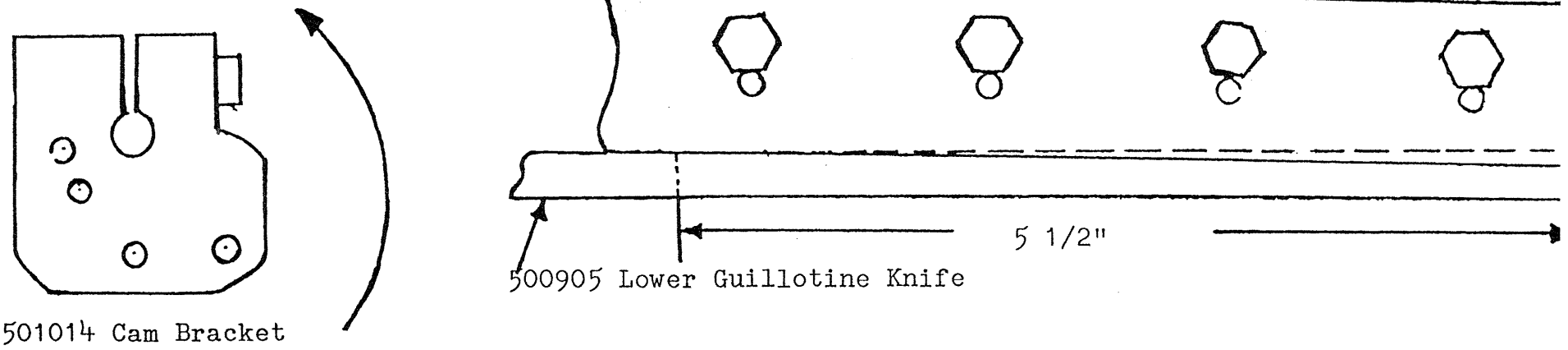

500912 Upper Guillotine Knife
5 1/2"
500905 Lower Guillotine Knife
501014 Cam Bracket

FIGURE 1

FIGURE 2

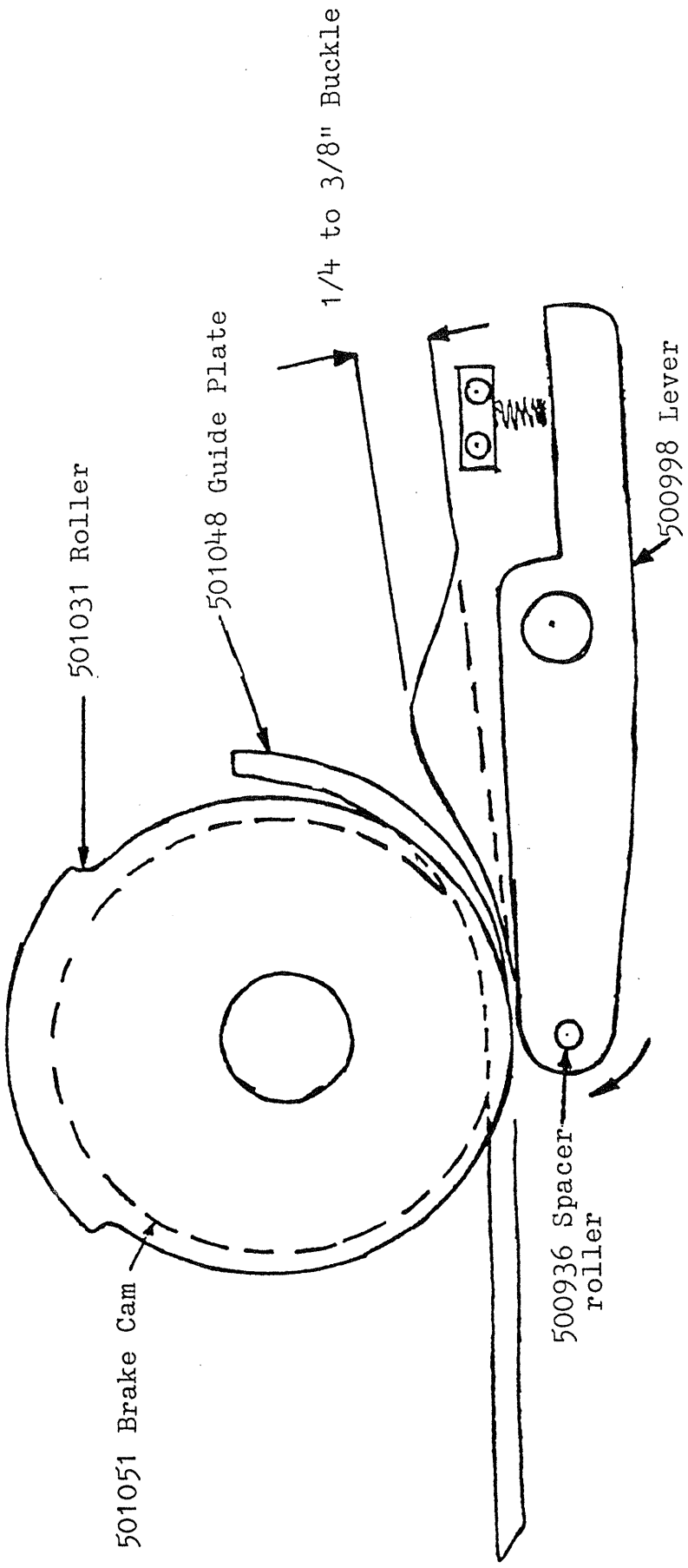
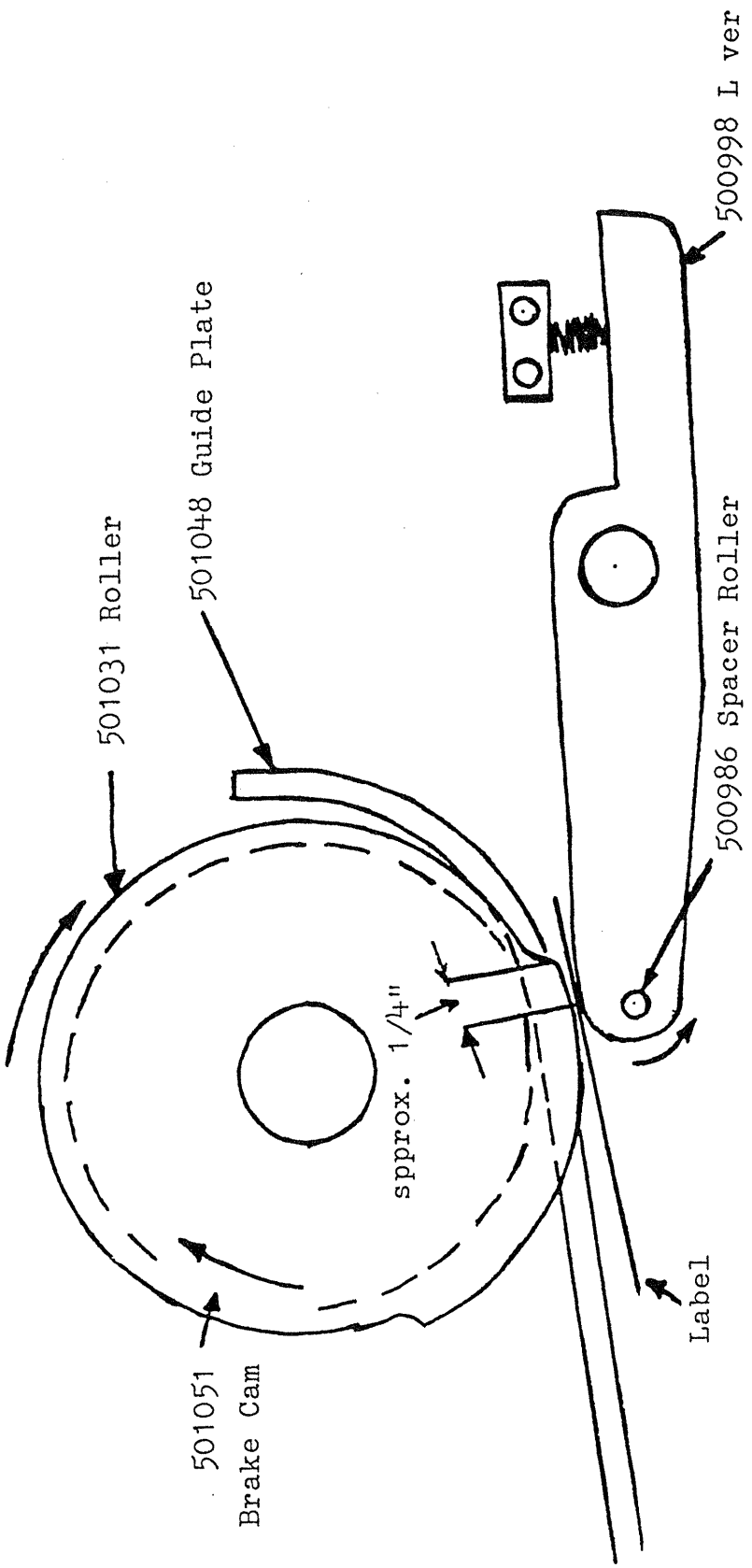

1/4 to 3/8" Buckle
501048 Guide Plate
501031 Roller
500998 Lever
500936 Spacer roller
501051 Brake Cam

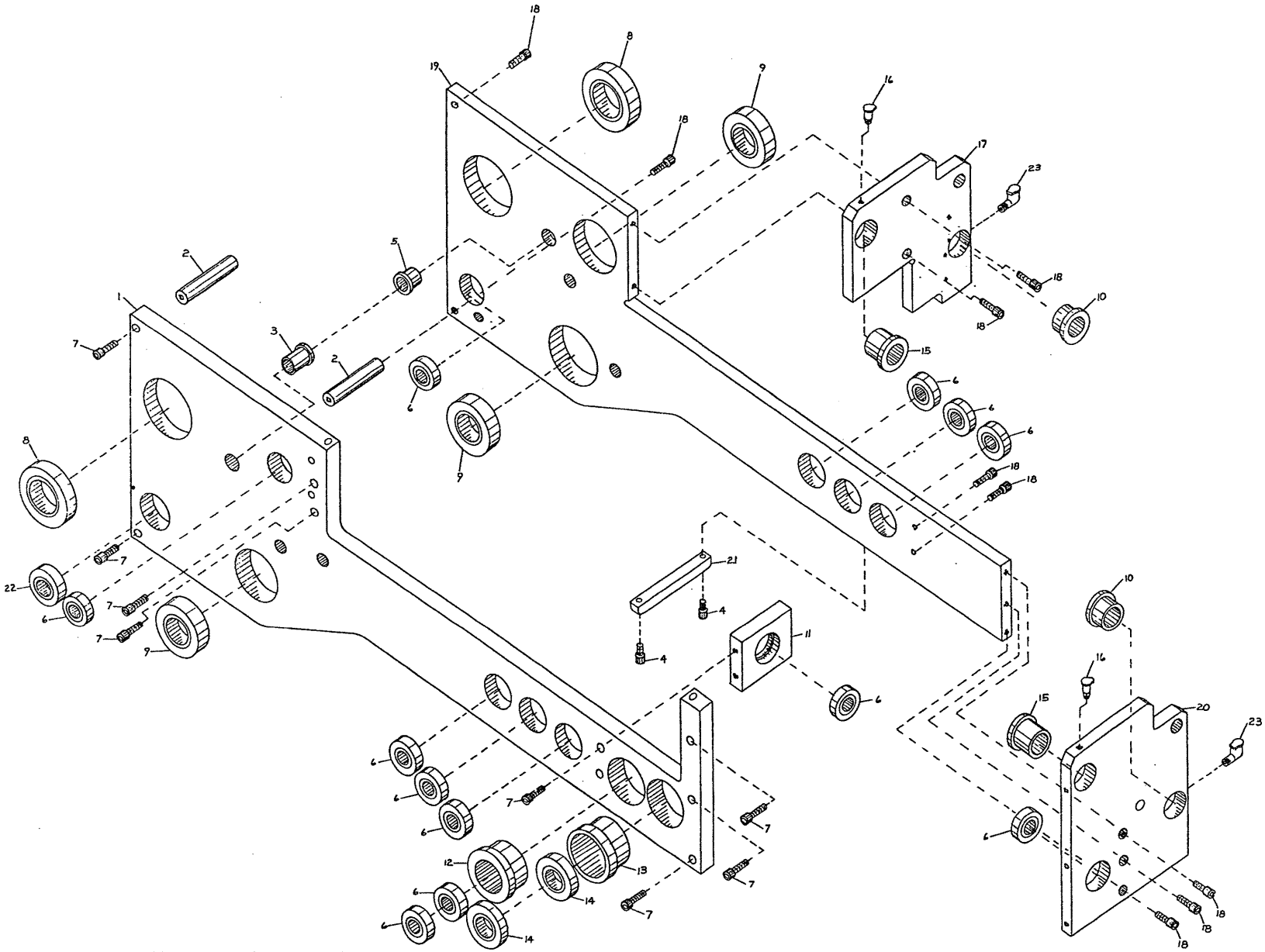
FIGURE 3


501031 Roller
501048 Guide Plate
500998 L ver
500986 Spacer Roller
sprox. 1/4"
501051
Brake Cam
Label

3 PARTS LISTS AND DIAGRAMS

3.1 FRAME ASSEMBLY, LABELING HEAD

Item	Qty	Part #	Description
1	1	500903	PLATE, FRONT
2	2	501022	SPACER, FRAME
3	1	100304	BUSHING
4	2	107417	SCREW, CAP (10-32x3/8)
5	1	100315	BUSHING
6	12	103108	BEARING
7	9	107407	SCREW, 1/4-20 x 1
8	2	103120	BEARING, BALL
9	3	103116	BEARING, BALL
10	2	100325	BUSHING, BRONZE
11	1	501001	BLOCK, SPACER
12	1	501023	HUB, BEARING
13	1	501032	HUB, BEARING
14	2	103112	BEARING, BALL
15	2	100321	BUSHING, BRONZE
16	2	109610	CUP, OIL
17	1	500906-1	PLATE, CENTER
18	9	107401	SCREW, CAP (1/4-20 x 3/4)
19	1	500902	PLATE, REAR
20	1	500907-1	PLATE, END
21	1	501061	BAR, REST
22	1	103109	BEARING
23	2	190638	CUP, OIL



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DATE: 10-31-72		REVISED
FRAME ASSY- LABELING HEAD		
DRAWING 1		DRAWING NUMBER

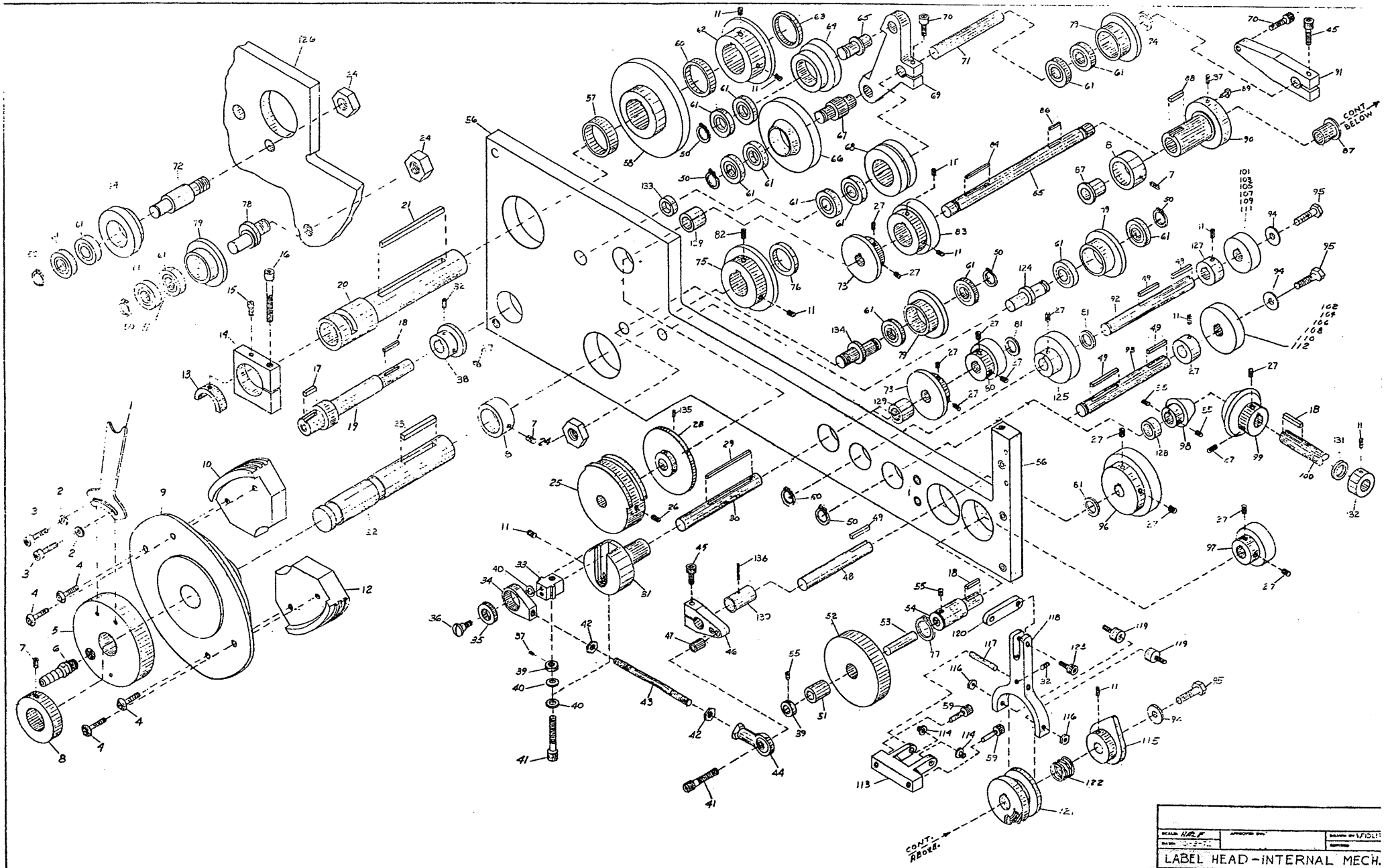
3.2 LABELING HEAD, INTERNAL MECHANISM

Item	Qty	Part #	Description
1	1	500997	ARM, VACUUM DISC
2	2	100606	WASHER
3	2	107429	SCREW, CAP(10-32 x 5/8)
4	4	106800	SCREW BUTTON HD(1/4-20 x 3/4)
5	1	500922	DISC
6	1	190604	NIPPLE
7	3	107645	SCREW, SET (5/16-18 x 3/8)
8	3	102212	COLLAR
9	1	500911	WHEEL
10	1	500918	PAD
11	9	107633	SCREW, SET (1/4-20 x 1/4)
12	1	500923	PAD
13	1	500975	SHOE
14	1	500976	CLAMP
15	1	107437	SCREW, CAP (6-32 x 3/8)
16	2	107425	SCREW, CAP (1/4-20 x 1 ¾)
17	1	105314	KEY
18	3	105304	KEY
19	1	500935	SHAFT
20	1	500977	SHAFT
21	1	105324	KEY
22	1	500985	SHAFT
23	1	105332	KEY
24	3	106704	NUT
25	1	501031	ROLLER
26	1	107635	SCREW, SET (1/4-20 x 3/8)
27	15	107623	SCREW, SET (10-32 x 1/4)
28	1	501051	CAM
29	1	105310	KEY
30	1	500980	SHAFT
31	1	500979	HUB
32	2	107601	SCREW, SET (6-32 x 3/16)
33	1	500992	BLOCK
34	1	500952	CRANK
35	1	103106	BEARING

Item	Qty	Part #	Description
36	1	107100	SCREW SHOULDER
37	2	107621	SCREW, SET (10-32 x 1/8)
38	1	501009	SPROCKET
39	2	102209	COLLAR
40	3	100605	WASHER
41	2	107404	SCREW, CAP (1/4-20 x 1 ½)
42	2	106721	NUT
43	1	500949	ROD
44	1	103501	BEARING
45	2	107401	SCREW, CAP (1/4-20 x 3/4)
46	1	500954	CRANK
47	1	501025	SPACER
48	1	500945	SHAFT
49	5	105306	KEY
50	8	104106	RING SNAP
51	1	101100	BEARING, ONE WAY
52	1	500960	PULLEY
53	1	105405	PIN, DOWEL
54	1	500981	SHAFT
55	4	107622	SCREW, SET(10-32 x 3/16)
56	1	500903	PLATE, FRONT
57	1	102319	SPACER
58	1	501005	GEAR ASSEMBLY
59	2	107408	SCREW, CAP(10-32 x 1)
60	1	102318	SPACER
61	16	103108	BEARING
62	1	501011	SPROCKET
63	1	102317	SPACER
64	2	401018	GEAR
65	1	500964	STUD, IDLER
66	1	501017	GEAR
67	1	500939	STUD
68	1	500934	GEAR
69	1	500916	BRACKET
70	2	107407	SCREW, CAP (1/4-20 x 1)

Item	Qty	Part #	Description
71	1	500972	SHAFT
72	1	500953	STUD
73	2	501007	SPROCKET
74	1	100600	WASHER
75	1	501010	SPROCKET
76	1	102321	SPACER
77	1	104103	RING, SNAP
78	1	500983-1	STUD
79	4	501008	SPROCKET
80	1	101924	GEAR
81	3	102303	SPACER
82	1	107632	SCREW, SET (1/4-20 x 3/16)
83	1	501019	GEAR
84	1	105311	KEY
85	1	501059	SHAFT
86	1	105302	KEY
87	2	100304	BUSHING
88	1	105315	KEY
89	1	500961	PAWL
90	1	500928	HUB
91	1	500951	LEVER
92	1	500947	SHAFT
93	1	500944	SHAFT
94	3	501093	WASHER
95	3	107306	SCREW, HEX HD (14/20 x 3/4)
96	1	101921	GEAR
97	1	101922	GEAR
98	1	101002	GEAR
99	1	101001	GEAR
100	1	500943	SHAFT
101	1	101710	GEAR, 2-WIDE
102	1	101709	GEAR, 2-WIDE
103	1	101712	GEAR, 3-WIDE
104	1	101711	GEAR, 3-WIDE
105	1	101714	GEAR, 4-WIDE

Item	Qty	Part #	Description
106	1	101713	GEAR, 4-WIDE
107	1	101928	GEAR, 5-WIDE
108	1	101927	GEAR, 5-WIDE
109	1	102001	GEAR, 6-WIDE
110	1	101000	GEAR, 6-WIDE
111	1	101930	GEAR, 1-WIDE
112	1	101929	GEAR, 1-WIDE
113	1	500957	BRACKET
114	2	100309	BUSHING
115	1	501037	CAM
116	2	106710	NUT
117	1	105407	PIN
118	1	500941	YOKE
119	2	103408	FOLLOWER, CAM
120	1	500955	LINK
121	1	500936	COLLAR
122	1	102707	SPRING
123	1	107430	SCREW, CAP(10-32 x 3/4)
124	1	500927	STUD
125	1	101923	GEAR
126	1	500902	PLATE, REAR
127	2	501092	SPACER
128	1	501102	SPACER
129	2	501103	SPACER
130	1	501026	SPACER
131	1	102301	SPACER
132	1	102205	COLLAR
133	1	501110	SPACER
134	1	500983-2	STUD
135	2	107612	SCREW, SET (8-32 x 3/16)
136	1	105203	PIN, ROLL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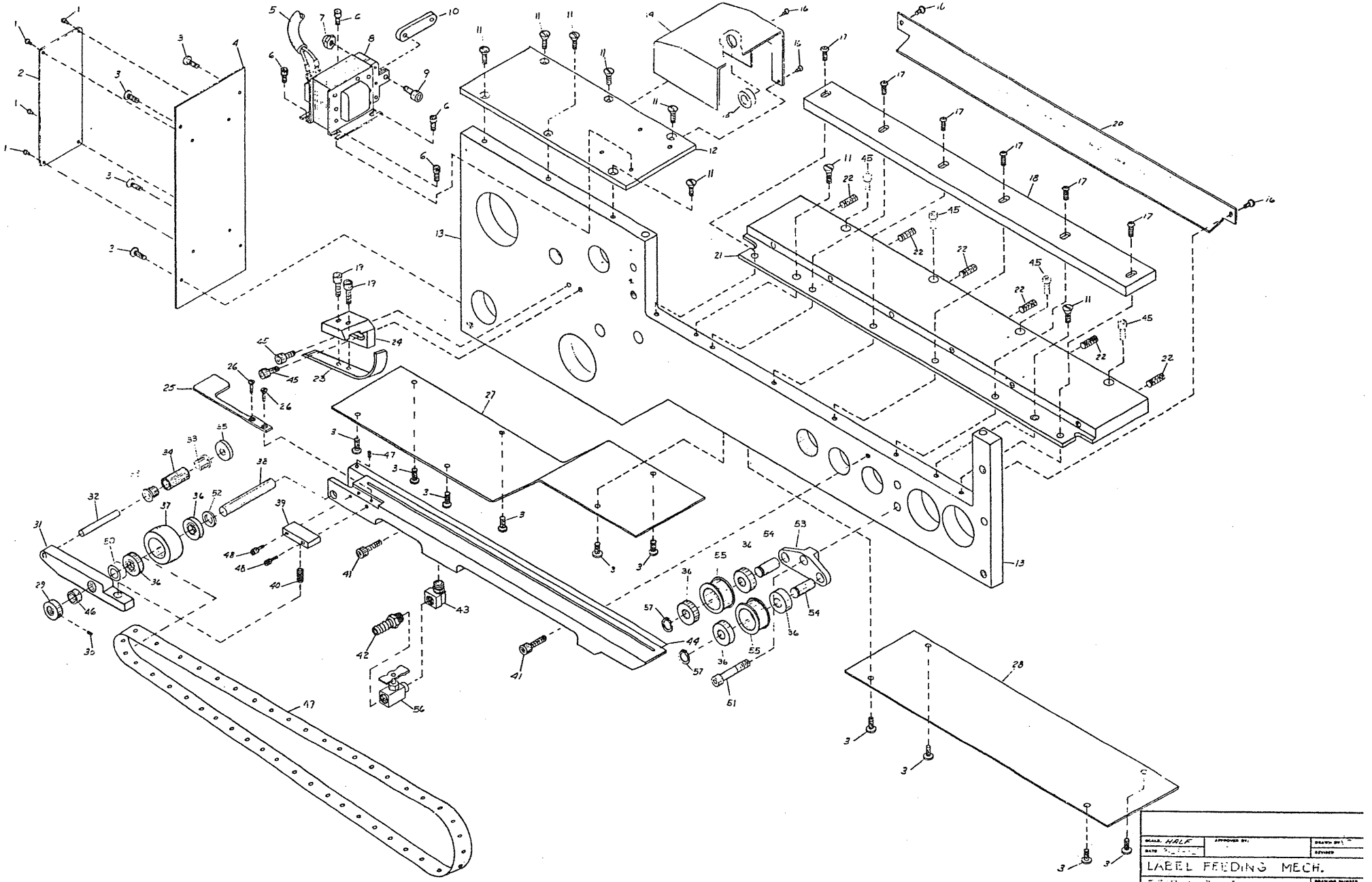
LABEL HEAD - INTERNAL MECH.
DRAWING 2

3.3 LABEL FEEDING MECHANISM

Item	Qty	Part #	Description
1	4	104500	RIVET
2	1	190619	PLATE, NAME
3	14	107701	SCREW, RD HD (6-32 x 1/4)
4	1	500915	PLATE BACK
5	1	190211	WIRE
6	4	107417	SCREW, CAP (10-32 X 3/8)
7	1	106734	NUT, ELASTIC STOP
8	1	190002	SOLENOID
9	1	107408	SCREW, CAP (10-32 X 1)
10	1	500955REF	LINK
11	8	107500	SCREW, FLAT HD (10-32 X 1/2)
12	1	500913	PLATE, TOP
13	1	500903	PLATE, FRONT
14	1	501041	HOUSING
15	1	101500	GROMMET
16	4	107702	SCREW, RD HD (6-32 X 3/16)
17	6	106800	SCREW, BUTTON HD (1/4-20 X 3/4)
18	1	500905	KNIFE, LOWER
19	2	107413	SCREW, CAP (8-32 X 1/2)
20	1	501038	PLATE, GUIDE
21	1	500908	PLATE, KNIFE
22	6	107639	SCREW, SET
23	1	501048	PLATE, GUIDE
24	1	501047	HOLDER
25	1	500987	PLATE
26	2	107511	SCREW, FLAT HD (6-32X1/4)
27	1	500904	PLATE, BOTTOM REAR
28	1	500904	PLATE, BOTTOM FRONT
29	1	102200	COLLAR
30	1	107632	SCREW, SET (1/4-20 X 3/16)
31	1	500998	LEVER
32	1	105408	PIN, DOWEL
33	2	100310	BUSHING
34	1	500986	SPACER
35	1	103105	BEARING

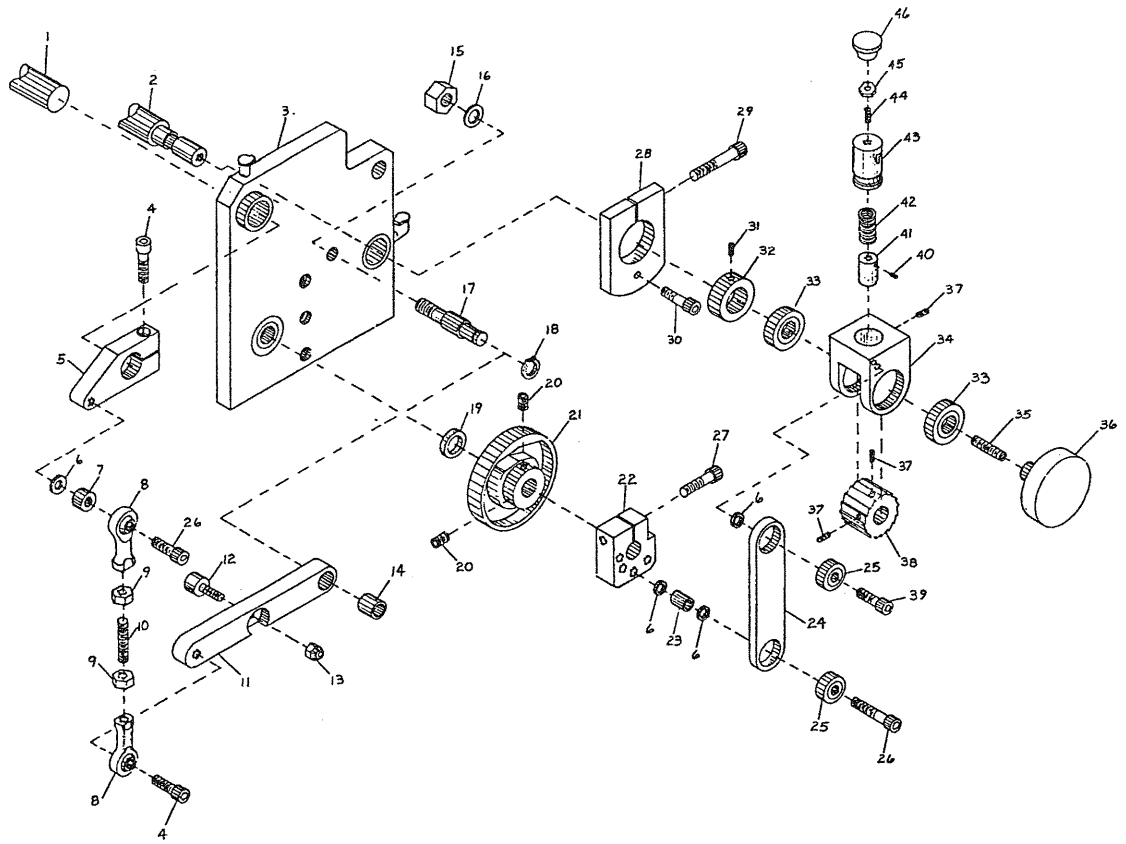
Item	Qty	Part #	Description
36	6	103106	BEARING
37	1	500958	PULLEY
38	1	500999	SHAFT
39	1	500988	BLOCK
40	1	102714	SPRING
41	2	107407	SCREW, CAP (1/4-20 X 1)
42	1	190605	NIPPLE
43	1	190606	ELBOW
44	1	500909	BAR FEEDER
45	6	107429	SCREW, CAP (10-32 X 5/8)
46	1	100117	BUSHING
47	1	107625	SCREW, SET (10-32 X 3/8)
48	2	107436	SCREW, CAP (6-32 X 1/2)
49	1	105905	BELT, FEEDER
50	1	501101	SPACER
51	1	107407	SCREW, CAP (1/4-20 X 1 ½)
52	1	100601	WASHER
53	1	501097	BRACKET
54	2	501329	SHAFT, BELT TIGHTENER PULLEY
55	2	501098	PULLEY
56	1	190649	VALVE, SHUT OFF
57	2	104100	SNAP, RING


LABEL FEEDING MECH.
SCALE: HALF

3.4 MECHANISM ASSEMBLY, END PLATE

Item	Qty	Part #	Description
1	1	500966REF	SHAFT
2	1	501030	SHAFT
3	1	500907-1REF	PLATE, END
4	2	107407	SCREW, CAP (1/4-20 X 1)
5	1	500956	LEVER
6	3	100604	WASHER
7	1	102206	COLLAR
8	2	103501	ROD, END
9	2	106721	NUT
10	1	107665	SCREW, SET (1/4-28 X 1 ¼)
11	1	500963	LEVER
12	1	103408	CAM, FOLLOWER
13	1	106724	NUT, ELASTIC STOP
14	1	100129	BUSHING
15	1	106700	NUT
16	1	100601	WASHER
17	1	501020	STUD
18	1	104100	RING, SNAP
19	1	100600	WASHER
20	2	107632	SCREW, SET (1/4-20 X 3/16)
21	1	500937-1	CAM
22	1	501014	BRACKET, CAM
23	1	501025	SPACER
24	1	500946	LEVER
25	2	103105	BEARING
26	1	107404	SCREW, CAP (1/4-20 X 1 ½)
27	2	107401	SCREW, CAP (1/4-20 X 3/4)
28	1	500995REF	BRAKE, FORM
29	1	107431REF	SCREW, CAP
30	1	107418REF	SCREW, CAP
31	1	107643REF	SCREW, CAP
32	1	102215REF	COLLAR
33	2	103108	BEARING
34	1	501013	BLOCK, RATCHET
35	1	107670	SCREW, SET (1/4-20 X 1)

Item	Qty	Part #	Description
36	1	502842	KNOB
37	3	107622	SCREW, SET (10-32 X 3/16)
38	1	500917	RATCHET
39	1	107428	SCREW, CAP (1/4-20 X 5/8)
40	1	107602	SCREW, SET (6-32 X 1/4)
41	1	501043	PAWL, RATCHET
42	1	102700	SPRING
43	1	501024	HOUSING, SPRING
44	1	107674	SCREW, SET (10-34 X 1 ¼)
45	1	106710	NUT
46	1	102114	KNOB

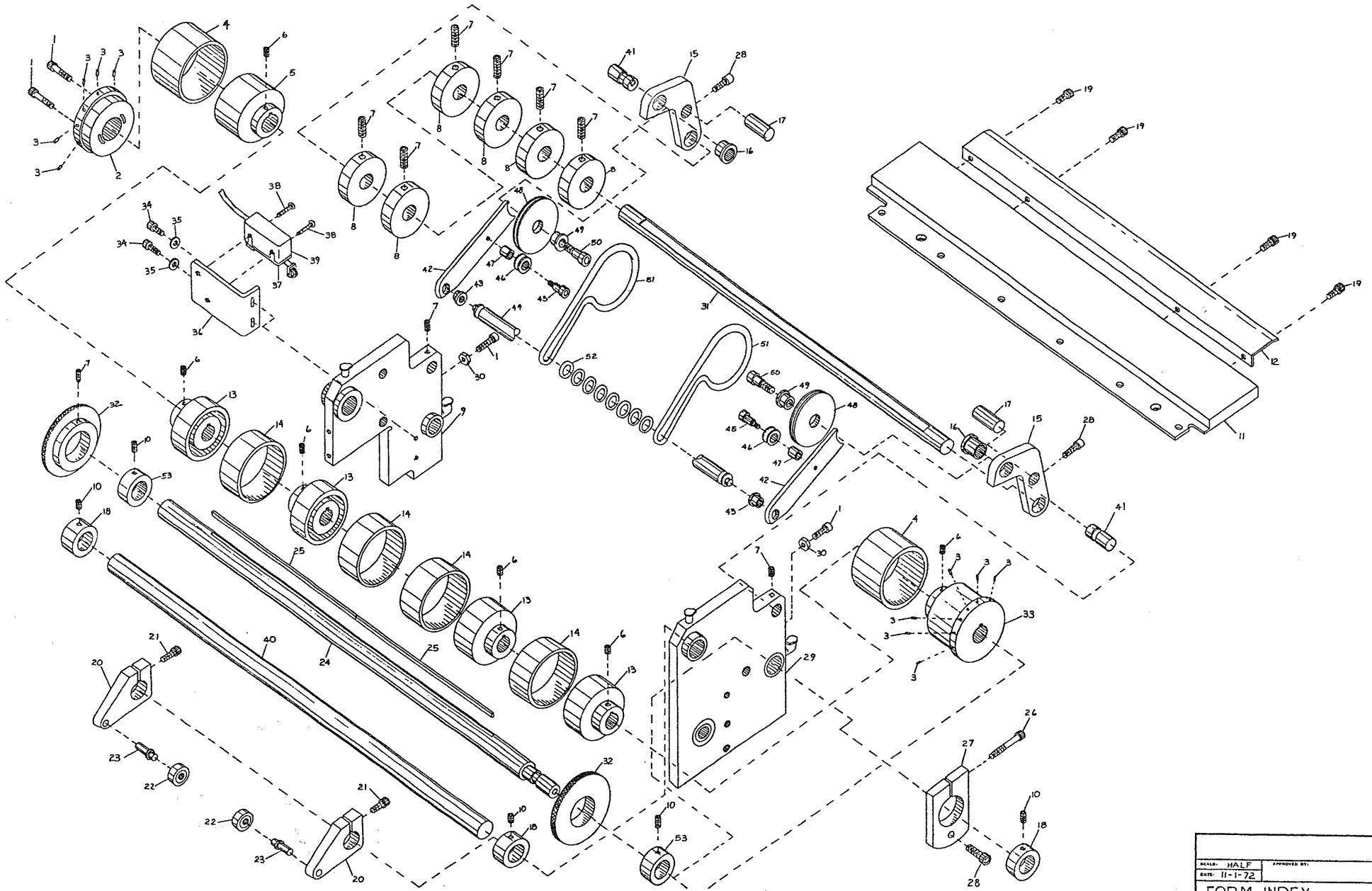


SCALE: 1/2	APPROVED BY:	DRAWN BY: WFIDLI
DATE: 10-6-72		REVISED
MECHANISM ASSY- END PLATE		
DRAWING 4		DRAWING NUMBER

3.5 FORM INDEX, LABELING HEAD

Item	Qty	Part #	Description
1	4	107430	SCREW, CAP (10-32 X 3/4)
2	1	501053	HUB, PINWHEEL
3	32	500962	PINWHEEL
4	2	500929	RIM, PINWHEEL
5	1	501054	HUB, PINWHEEL
6	6	107632	SCREW, SET (1/4-20 X 3/16)
7	8	107623	SCREW, SET (10-32 X 1/4)
8	6	501108	ROLLER, PAPER FEED
9	1	500906	PLATE, CENTER
10	4	107643	SCREW, SET (5/16-18 X 1/4)
11	1	500908REF	PLATE, KNIFE
12	6	501091	GUIDE, PAPER
13	4	501029	HUB
14	4	501028	RIM, HUB
15	2	501084	BRACKET
16	2	100323	BUSHING
17	2	501106	SHAFT
18	4	102215	COLLAR
19	12	107409	SCREW, CAP (10-32 X 1/2)
20	2	500942	ARM KNIFE
21	2	107429	SCREW, CAP (10-32 X 5/8)
22	2	103105	BEARING
23	2	500950	STUD, KNIFE ARM
24	1	501030	SHAFT, PINWHEEL
25	2	105318	KEY
26	1	107406	SCREW, CAP (10-32 X 1 ¼)
27	1	500995	BRAKE, FORM
28	3	107408	SCREW, CAP (10-32 X 1)
29	1	500907	PLATE, END
30	2	106710	NUT
31	1	503275	SHAFT
32	2	501190	DRIVE, HUB BELT
33	1	500930	HUB, RIM
34	2	107417	SCREW, CAP (10-32 X 3/8)
35	2	100606	WASHER

Item	Qty	Part #	Description
36	1	501042	BRACKET
37	1	190100	MICROSWITCH
38	2	107700	SCREW, RD HD (6-32,X,1)
39	1	190203	COVER
40	1	500966	SHAFT, KNIFE ARM
41	2	501195	HUB, BELT PULLEY
42	2	501193	ARM, FEED ROLLER
43	2	100309	BUSHING
44	1	501194	SHAFT, FORM DRIVE
45	2	107002	BOLT, SHOULDER (1/4)
46	2	501192	PULLEY, BELT TAKE-UP
47	2	100114	BUSHING
48	2	501191	PULLEY, O-RING BELT
49	2	100300	BUSHING
50	2	107101	BOLT, SHOULDER (5/16)
51	2	190647	O-RING
52	10	190646	O-RING
53	2	501334	SLEEVE



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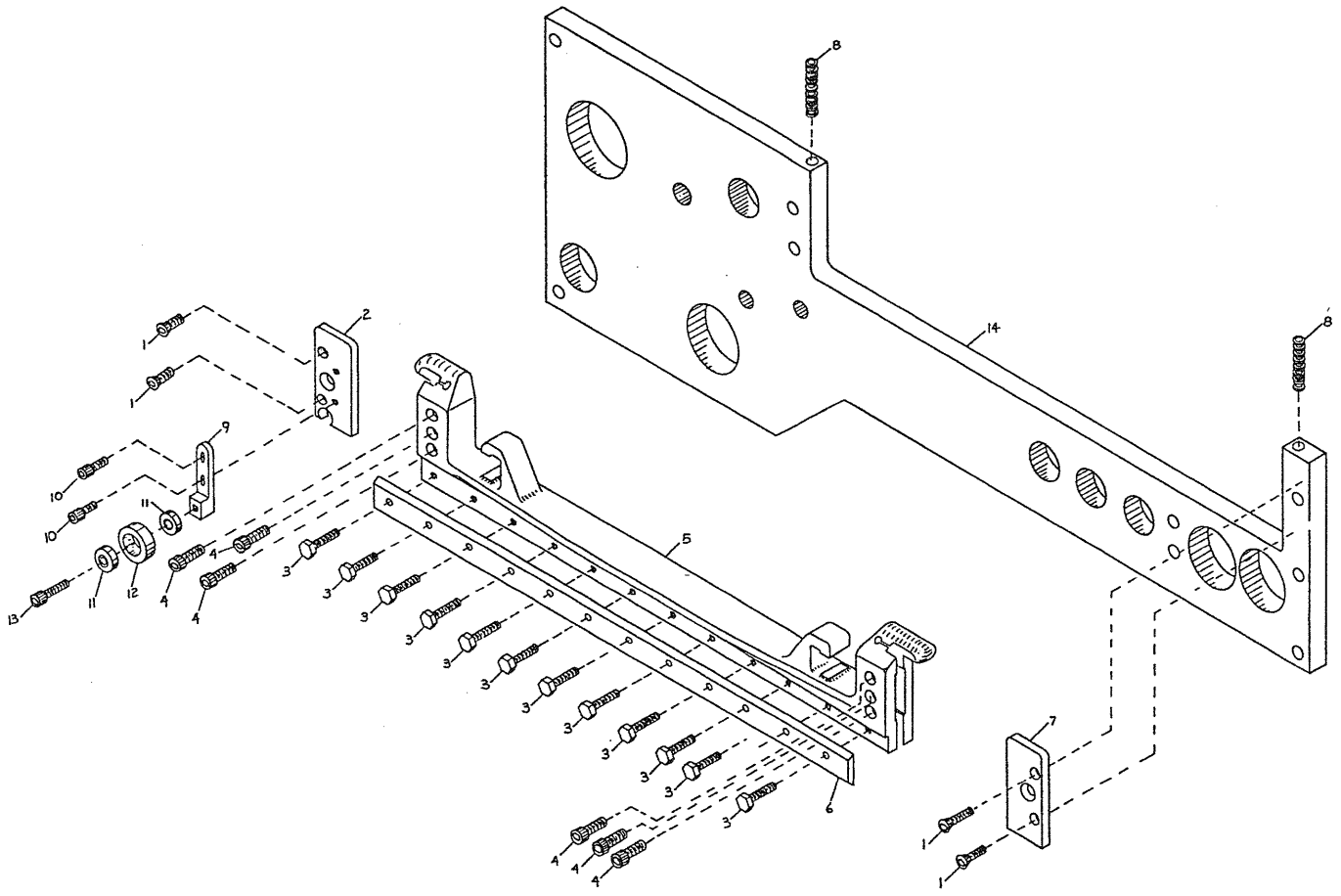
DATE: 11-1-72	DRAWN BY: F. IDLE
	REVISED: 12-15-72
FORM INDEX	
DRAWING 5	DRAWING NUMBER

3.6 UPPER KNIFE LABELING HEAD

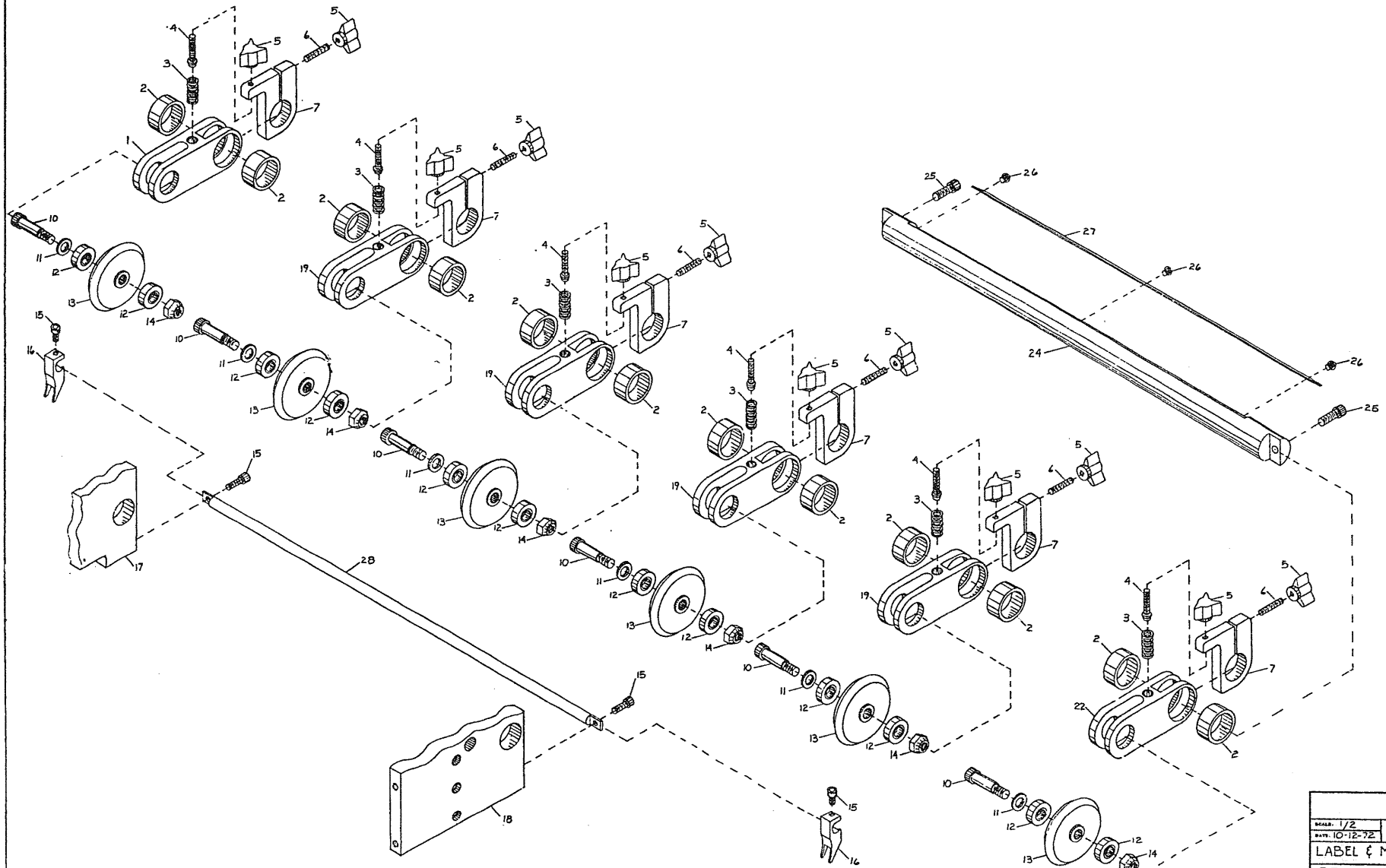
Item	Qty	Part #	Description
1	4	107503	SCREW, FLAT HD (1/4-20 X 5/8)
2	1	501033	PLATE
3	12	107321	SCREW, HEX HD (10-32 X 1/2)
4	6	107430	SCREW, CAP (10-32 X 3/4)
5	1	500901-1	HOLDER
6	1	500912	KNIFE
7	1	501044	PLATE
8	2	102705	SPRING
9	1	500938	BRACKET
10	2	107409	SCREW, CAP (10-32 X 1/2)
11	2	103104	BEARING
12	1	501057	ROLLER
13	1	107401	SCREW
14	1	500903	PLATE



SCALE: HALF	APPROVED BY:	DRAWN BY: WFIDLER	
DATE: 11-1-72		REVISED	
UPPER KNIFE			
DRAWING 6		DRAWING NUMBER	

3.7 LABEL & MARGIN SLITTER ASSEMBLY

Item	Qty	Part #	Description
1	1	500924	BRACKET, KNIFE HOLDER LH
2	12	100116	BUSHING
3	6	102704	SPRING
4	6	501109	SCREW, SPRING ADJUSTING
5	12	102117	KNOB
6	6	107674	SCREW, SET (10-32 X 1 ¼)
7	6	500965	LEVER, KNIFE
8	4	107437	SCREW, CAP (6-32 X 3/8)
9	1	501079	GUIDE, PAPER LH
10	6	106900	BOLT, SHOULDER
11	6	100609	WASHER
12	12	103203	BEARING
13	6	501039	KNIFE, CIRCULAR
14	6	106726	NUT
15	2	107438	SCREW, CAP (10-32 X 1/4)
16	2	500984	GUIDE, PAPER STRIPPER
17	2	105405	PIN, DOWEL
18	2	501090	BRACKET, PAPER STRIPPER
19	4	500925	BRACKET, KNIFE HOLDER
20	12	107321	SCREW, HEX (10-32 X 1/2)
21	4	501082	GUIDE, PAPER
22	1	500926	BRACKET, KNIFE HOLDER RH
23	1	501079	GUIDE, PAPER RD
24	1	500967	SHAFT
25	1	107428	SCREW, CAP (1/4-20 X 5/8)
26	3	107708	SCREW, BUTTON HEAD (6-32 X 3/16
27	1	501081	SCALE



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DATE: 10-12-72	DRAWN BY: WFIDLER
	REVISED: 12-16-73

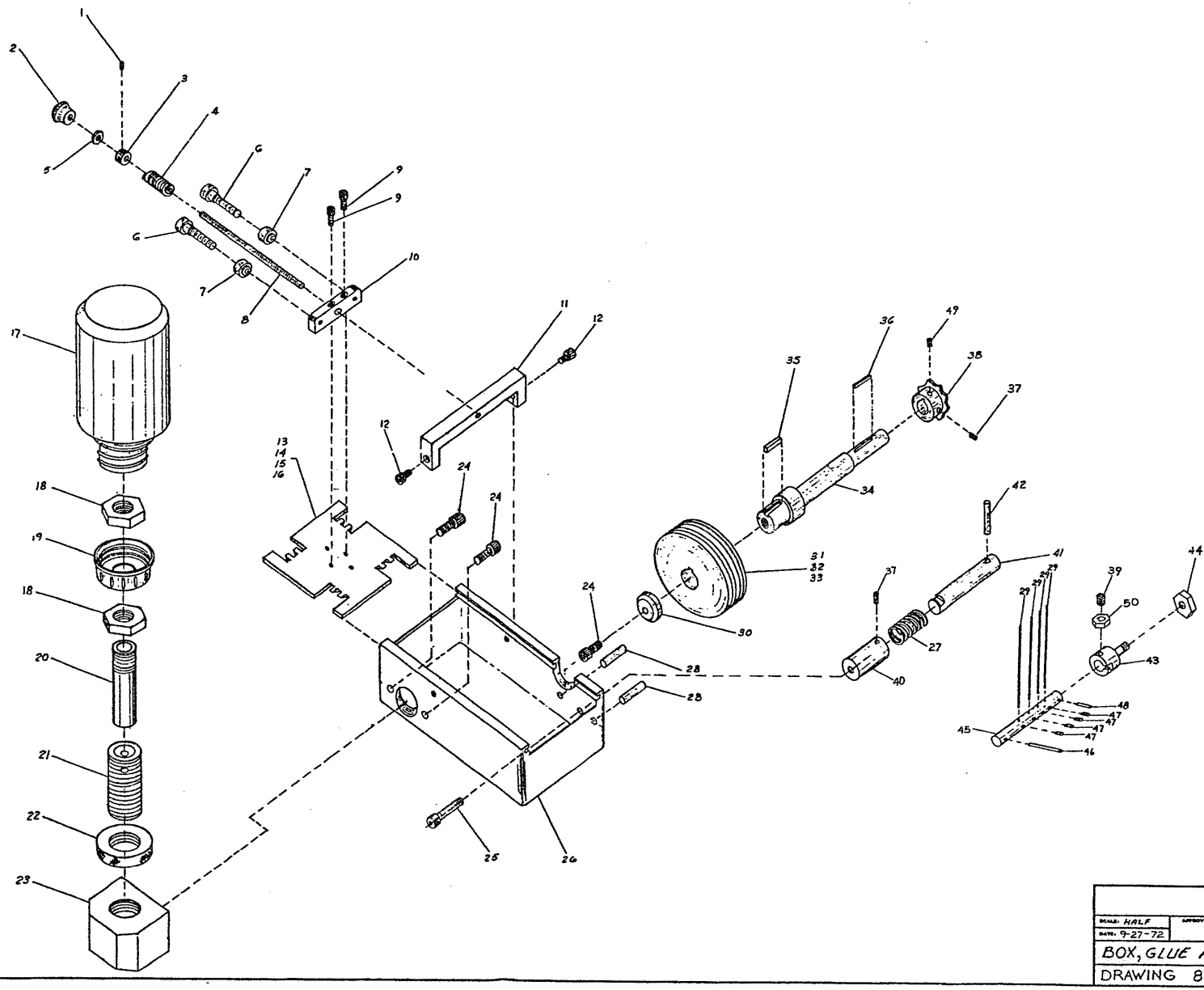
LABEL & MARGIN SLITTER ASSY

DRAWING 7

3.8 BOX GLUE ASSEMBLY, LABELING HEAD

Item	Qty	Part #	Description
1	1	107662	SCREW, SET (10-32 X 3/16)
2	1	102114	KNOB
3	1	102210	COLLAR
4	1	102708	SPRING
5	1	106710	NUT
6	2	501104	SCREW, ADJUSTING
7	2	501105	NUT
8	1	105612	SCREW, HR HS (10-32 X 4)
9	2	108107	SCREW, CAP (8-32 X 1/2)
10	1	500973	BLOCK, SCRAPER MTG
11	1	500982	BRACKET, GLUE BOX HOLDER
12	2	108109	SCREW, CAP (10-32 X 1/2)
13	1	500914	SCRAPER, 1"
14	1	500919	SCRAPER, 1 ½"
15	1	500920	SCRAPER, 2"
16	1	500921	SCRAPER (ALL)
17	1	190624	GLUE BOTTLE
18	2	190628	NUT, GLUE BOTTLE
19	1	190623	CAP, GLUE BOTTLE
20	1	190626	PIPE, GLUE BOTTLE
21	1	190627	PIPE
22	1	190635	NUT
23	1	501056	BLOCK, GLUE FILL
24	3	108102	SCREW, CAP (¼-20 X 5/8)
25	1	108110	SCREW, CAP (1/4-20 X 1 ¾)
26	1	500910	GLUE BOX
27	1	102707	SPRING
28	2	501066	STAINLESS STEEL PIN
29	4	501074	STRIPPER
30	1	501040	WASHER
31	1	500969	GLUE WHEEL, 1"
32	1	500970	GLUE WHEEL, 1 ½"
33	1	500971	GLUE WHEEL, 2"
34	1	500935REF	GLUE WHEEL SHAFT
35	1	105313	KEY

Item	Qty	Part #	Description
36	1	105302REF	KEY
37	2	107623REF	SCREW, SET (10-32 X 1/4)
38	1	501009REF	SPROCKET, 35B10
39	1	107903	PLUNGER, BALL (1/4-20)
40	1	501062	NUT, RETAINER
41	1	501063	ROD, NUT
42	1	105400	PIN
43	1	501070	HOLDER
44	1	106721	NUT
45	1	501071	SHAFT, STRIPPER
46	1	105427	PIN, DOWEL
47	4	107612	SCREW, SET (8-32 X 3/16)
48	1	105431	PIN, DOWEL
49	1	107622REF	SCREW, SET (10-32 X 3/16)
50	1	106720	NUT, HEX



SCALE: HALF	APPROVED BY:	DRAWN BY: W. FIDLE
DATE: 9-27-72		DRAWING

BOX, GLUE ASS'Y. LABELING HEAD

DRAWING 8

DRAWING NUMBER

4 KR 211E LABELING HEAD

THE FOLLOWING PAGES ARE FOR THE KR211E LABELING HEAD.

4.1 ELECTRONIC INDEXER

Description: The electronic indexer is a drive system for indexing the mailing list through the labeling head in very precise increments. This system replaces the manual ratchet assembly. All paper movements in this direction are made with push button or proximity switch control.

The stepping motor moves in increments called steps. Label sizes are set with decade thumb wheel switches in steps per inch. Controls are provided for on-off, forward-reverse, index, jog, and single step.

Front Panel Controls: ON-OFF—Applies power to stepping motor drive. FWD-REV—Determines direction of stepping motor rotation. JOG—The jog pushbutton will allow the motor to continuously step at a slow rate. SINGLE STEP—The single step push button allows the motor to move one step. DECADE THUMBWHEEL—The three-decade thumbwheel switch determines how many steps the stepping motor moves for one index.

Set-up: Mechanical Knife Head

1. Advance the labeling head so that the knife is in the up position and has just cleared the lower knife and paper guide.
2. Set the magnet ring on the knife cam to operate the proximity switch.
3. Insert the mailing list on to the pinwheels of the labeling head.
4. Using the JOG push button move the mailing list through the slitter knives and the guillotine knife.
5. Align the mailing list with the proper cut position between labels using the FWD-REV and single step push button.
6. Set the decade thumbwheel switch for correct number of steps for the label size.

Set-up: Electronic Knife Clutch Head

1. Advance head until label vacuum belt just starts to move.
2. Set magnet under knife proximity switch.
3. Cycle machine. Knife should cut just as belt stops. Move magnet for fine adjustment.
4. Set paper proximity switch magnet a few degrees in front of knife magnet.

4.2 LABEL SIZE CHART

Pulley Combination: 25 on motor
48 on Pinwheel Shaft
48 step/inch

Thumbwheel Setting: 48 multiplied by label size (inches)

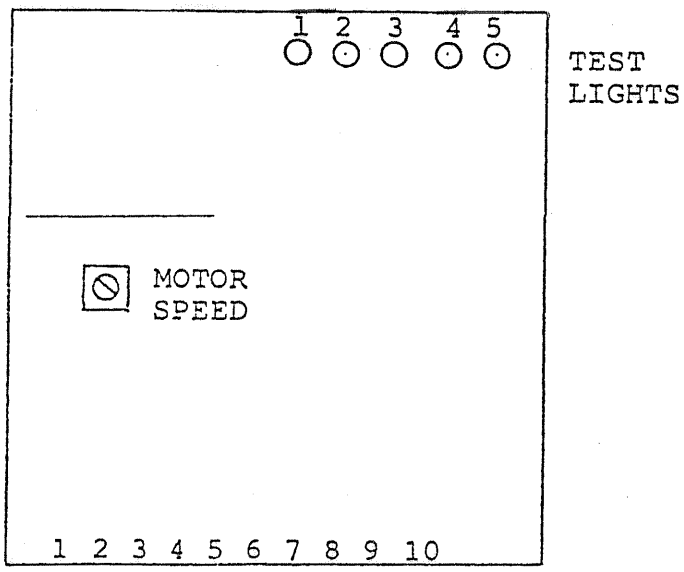
½" = 24	1" = 48	2" = 96	4" = 192	6" = 288
5/8" = 30	1-1/2" = 72	3" = 144	5-2/3" = 272	

4.3 PROBLEM DIAGNOSTIC GUIDE

Test Lights: Indexer

1. Motor Oscillator: The light will be on when the power is turned on. The single step switch causes the light to go off. When the single step is released the light will come back on.
2. Main Oscillator: The light will be on when power is turned on. The JOG push button will turn the light off. When the JOG push button is released the light will be on.
3. Power-up: This light will come on when power is applied to the board.
4. Motor Drive: This light will be on for the period of an index or a jog for as long as the single step is held. The light will not be as bright on JOG and INDEX as on SINGLE STEP.
5. Index: This light will come on when the proximity switch is activated.

Adjust motor speed potentiometer for the speed at which the motor indexes reliably at operating machine speed.



4.4 PROBLEM DIAGNOSTICS

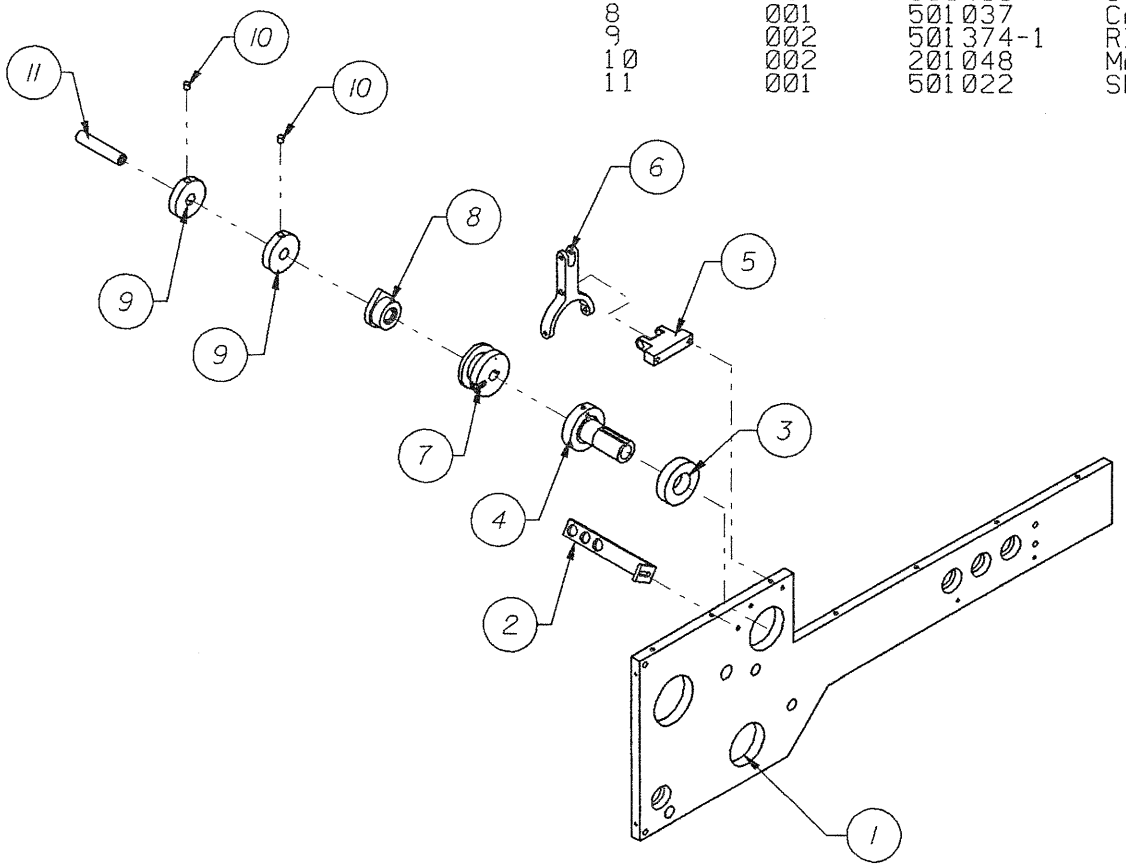
Problem	Possible Cause	Correction
Inconsistent label size	Motor stalling	Adjust motor speed Reduce drag on paper
Motor will not step	Logic board	Perform indicator light check. Replace logic board if test fails.
	-20 VDC Power Supply	Replace power supply
	Defective STM1800C Translator	Replace translator
Motor steps with push buttons but not with proximity switch	Proximity switch not close enough to magnet	Adjust switch
	Defective switch	Replace switch
	Defective magnet	Replace magnet
	Magnet inserted in wrong direction	Proximity switch operates with the South Pole. The North Pole is marked in red. Rotate magnet and re-insert.

4.5 PARTS & DIAGRAMS

Item	Qty	Part #	Description
1	1	101102	BEARING, ONE-WAY
2	1	102220	COLLAR, 0.750 ID
3	2	103104	BEARING, FLAT
4	3	103108	BEARING, FLAT
5	4	103112	BEARING, FLAT
6	1	103116	BEARING, FLAT 1.000
7	2	103803	BEARING, HUB
8	2	103812	BEARING, HUB
9	1	104020	CLUTCH, WARNER
10	1	108736	PULLEY, 25L037
11	1	108737	PULLEY, 48L037
12	1	108765	PULLEY, 60XL037
13	1	109003	BELT, 140XL037
14	1	109009	BELT, 24 XL037
15	1	200164	MOTOR
16	2	201048	MAGNET
17	2	500901-2	HOLDER, UPPER KNIFE
18	1	500902	PLATE, REAR
19	1	500903	PLATE, FRONT
20	1	500906-3	PLATE, CENTER
21	1	500907-3	PLATE, END
22	1	500912	KNIFE, UPPER
23	1	500928	HUB
24	1	500936	COLLAR
25	1	500938	BRACKET, ROLLER
26	1	500941	YOKE
27	1	500943	SHAFT, KNIFE DRIVE
28	1	500945-1A	SHAFT, CRANK DRIVE
29	1	500957	BRACKET, YOKE
30	1	500960-4	PULLEY
31	1	500981-1A	SHAFT, DRIVE ASSY
32	1	500995	BRAKE
33	1	501022	SPACER
34	1	501023	HUB, BEARING
35	1	501030-2	SHAFT, PINWHEEL

Item	Qty	Part #	Description
36	1	501032	HUB, BEARING
37	1	501033	PLATE, GUIDE LH
38	1	501037	CAM
39	1	501044	PLATE, GUIDE RH
40	1	501057	ROLLER
41	2	501193	ARM, FEED ROLLER
42	1	501194-1	SHAFT, FORM DRIVE
43	2	501374-1	RING, MAGNET
44	1	501382-1	PLATE, MOTOR MOUNT
45	1	501383	PLATE, MOTOR MOUNT
46	2	501403	BRACKET, ECCENTRIC SHAFT
47	2	501404	ARM
48	2	501405	BRACKET, KNIFE HOLDER
49	1	501412	SHAFT, ECCENTRIC
50	1	501413	PLUG, END PLATE
51	1	501414	PULLEY, 30XL037
52	1	501415	CLAMP, CLUTCH
53	REQ'D	501417	SPACER
54	1	501418	PLATE, CLUTCH LOCKING
55	1	504842-2	BRACKET

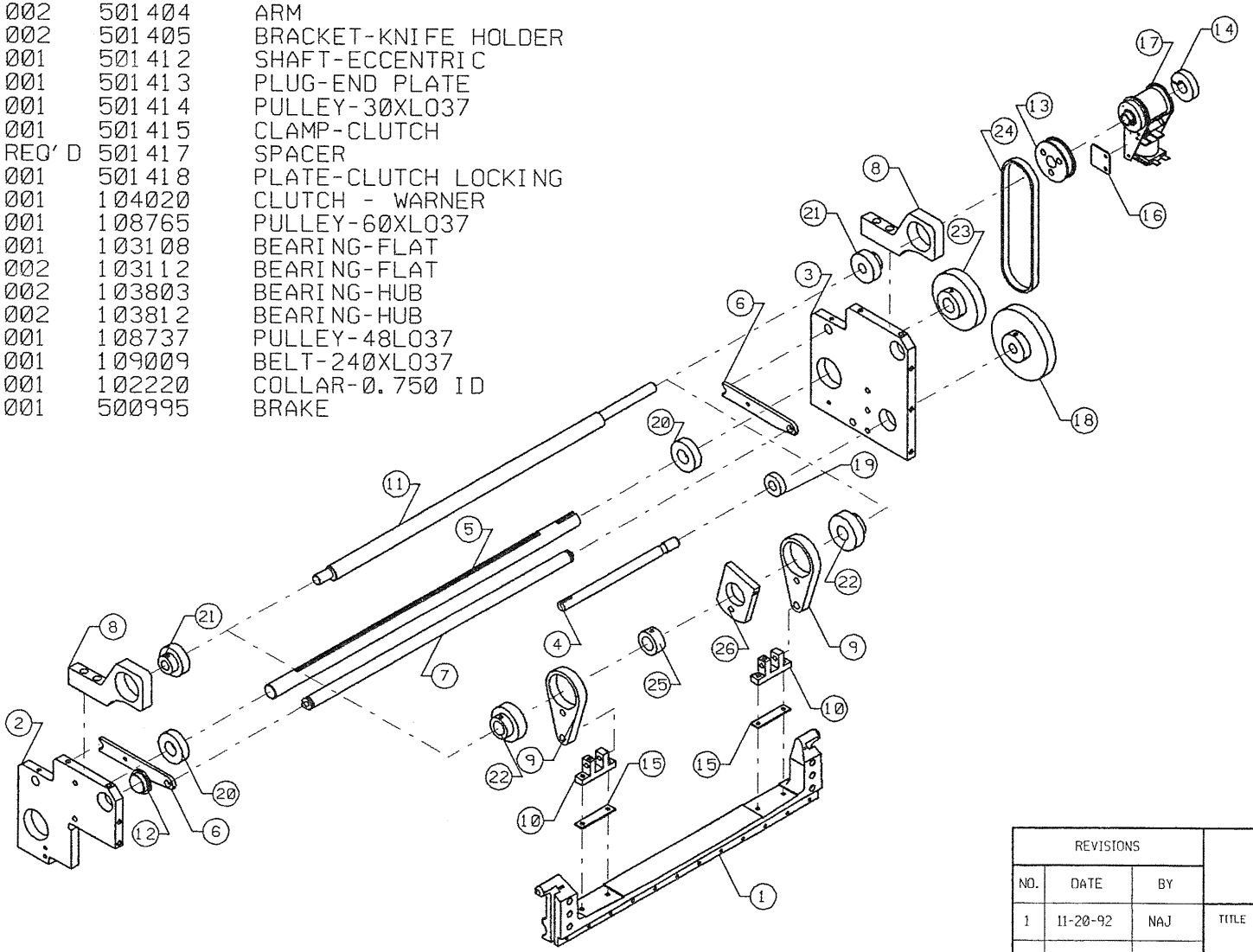
ITEM	QTY	PART #	DESCRIPTION
1	001	500902	PLATE - REAR
2	001	504842-2	BRACKET
3	001	103116	BEARING - FLAT 1.000
4	001	500928	HUB
5	001	500957	BRACKET - YOKE
6	001	500941	YOKE
7	001	500936	COLLAR
8	001	501037	CAM
9	002	501374-1	RING - MAGNET
10	002	201048	MAGNET
11	001	501022	SPACER



REVISIONS			KIRK-RUDY, INC. KENNESAW,GEORGIA	
NO.	DATE	BY		
1	11-20-92	NAJ	TITLE PLATE ASS' Y	
2				
3			DATE 11-08-90	DWG. NO. 501400
4			DRAWN BY NAJ	

FILENAME: 501400.lexp

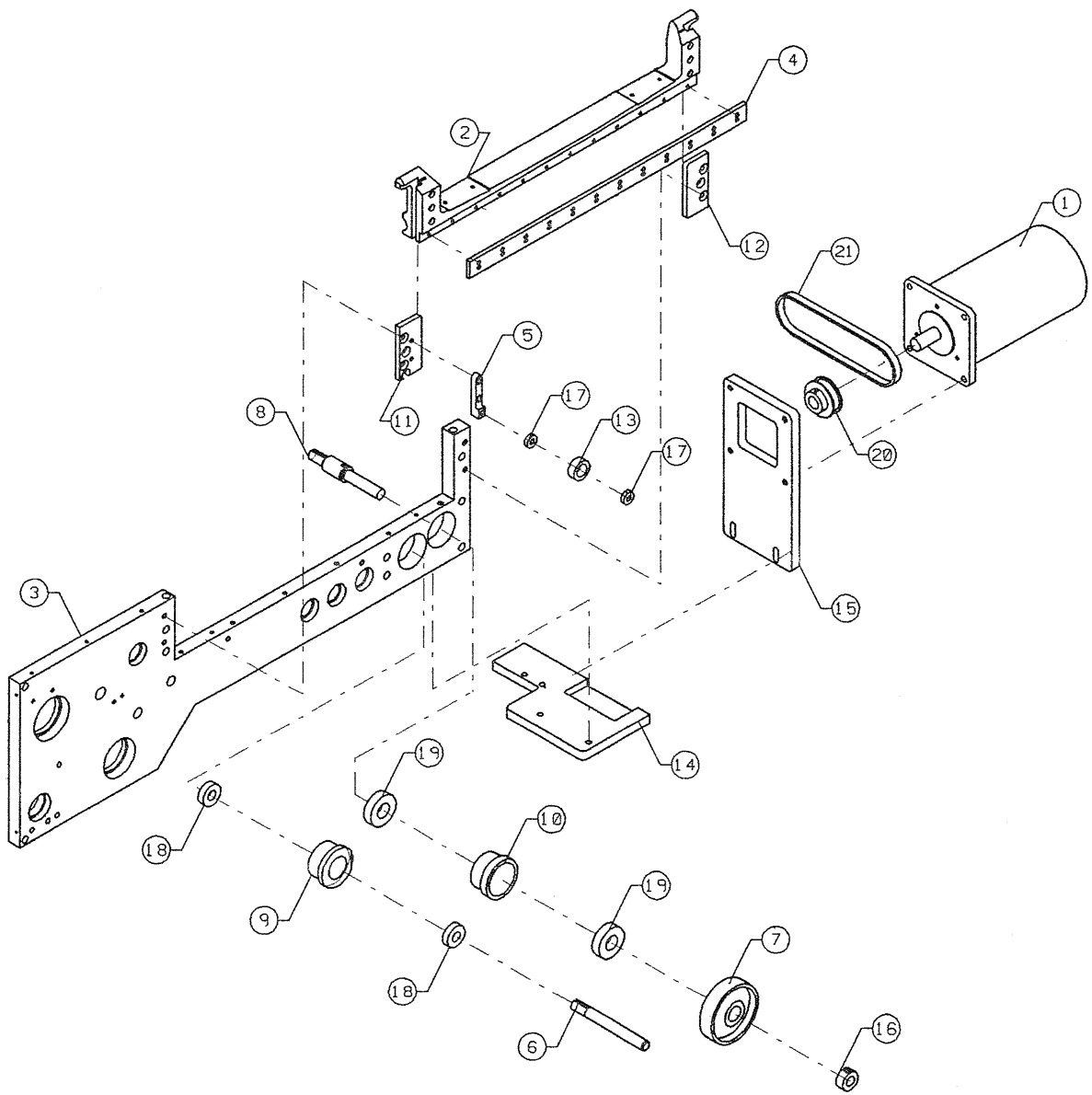
ITEM	QTY	PART#	DESCRIPTION
01	001	500901-2	HOLDER-UPPER KNIFE
02	001	500906-3	PLATE-CENTER
03	001	500907-3	PLATE-END
04	001	500943	SHAFT-KNIFE DRIVE
05	001	501030-2	SHAFT-PINWHEEL
06	002	501193	ARM-FEED ROLLER
07	001	501194-1	SHAFT-FORM DRIVE
08	002	501403	BRACKET-ECCENTRIC SHAFT
09	002	501404	ARM
10	002	501405	BRACKET-KNIFE HOLDER
11	001	501412	SHAFT-ECCENTRIC
12	001	501413	PLUG-END PLATE
13	001	501414	PULLEY-30XL037
14	001	501415	CLAMP-CLUTCH
15	REQ'D	501417	SPACER
16	001	501418	PLATE-CLUTCH LOCKING
17	001	104020	CLUTCH - WARNER
18	001	108765	PULLEY-60XL037
19	001	103108	BEARING-FLAT
20	002	103112	BEARING-FLAT
21	002	103803	BEARING-HUB
22	002	103812	BEARING-HUB
23	001	108737	PULLEY-48L037
24	001	109009	BELT-240XL037
25	001	102220	COLLAR-0.750 ID
26	001	500995	BRAKE



REVISIONS			KIRK-RUDY, INC.
NO.	DATE	BY	KENNESAW,GEORGIA
1	11-20-92	NAJ	TITLE: PLATE ASS'Y
2			
3			DATE: 11-08-90
4			DRAWN BY: NAJ

DWG. NO. 501400

FILENAME: 501400.lexp



ITEM	QTY	PART#	DESCRIPTION
01	001	200164	MOTOR
02	001	500901-2	HOLDER-UPPER KNIFE
03	001	500903	PLATE-FRONT
04	001	500912	KNIFE-UPPER
05	001	500938	BRACKET-ROLLER
06	001	500945-1A	SHAFT-CRANK DR.
07	001	500960-4	PULLEY
08	001	500981-1A	SHAFT-DRIVE ASS'Y
09	001	501023	HUB-BEARING
10	001	501032	HUB-BEARING
11	001	501033	PLATE-GUIDE LH
12	001	501044	PLATE-GUIDE RH
13	001	501057	ROLLER
14	001	501382-1	PLATE-MOTOR MOUNT
15	001	501383	PLATE-MOTOR MOUNT
16	001	101102	BEARING-ONE WAY
17	002	103104	BEARING-FLAT
18	002	103108	BEARING-FLAT
19	002	103112	BEARING-FLAT
20	001	108736	PULLEY-25L037
21	001	109003	BELT-140XL037

REVISIONS		
NO.	DATE	BY
1	11-20-92	NAJ
2		
3		
4		

KIRK-RUDY, INC.
KENNESAW,GEORGIA

TITLE
FRAME ASS'Y

DATE 11-9-90

DRAWN BY NAJ

DWG. NO.
501400

FILENAME:
501400.lexp

SEQUENCE OF OPERATION

A. PB1 TURNED, POWER APPLIED TO CONTROLS.

B. PB2 SELECTS FOWARD/REVERSE

C. BCD SWITCH SELECTS # OF STEPS OF MOTOR FOR EACH INDEX

D. PB3, JOG ALLOWS MOTOR TO MOVE CONTINOUSLY.

E PB4, SINGLESTEP MOVES MOTOR ONE STEP

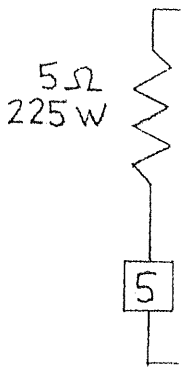
F. LS1, MOUNTED NEAR KNIFE CAM (WITH MAGNET) INDEXES MOTOR AFTER EACH KNIFE OPERATION.

PL1, PIN #	BCD SWITCH	
1	1	UNITS
2	2	
3	4	
4	8	
5	1	TENS
6	2	
7	4	
8	8	
9	1	HUNDREDS
10	2	
11	4	
12	8	

PL2, PIN #

1 — 12VDC

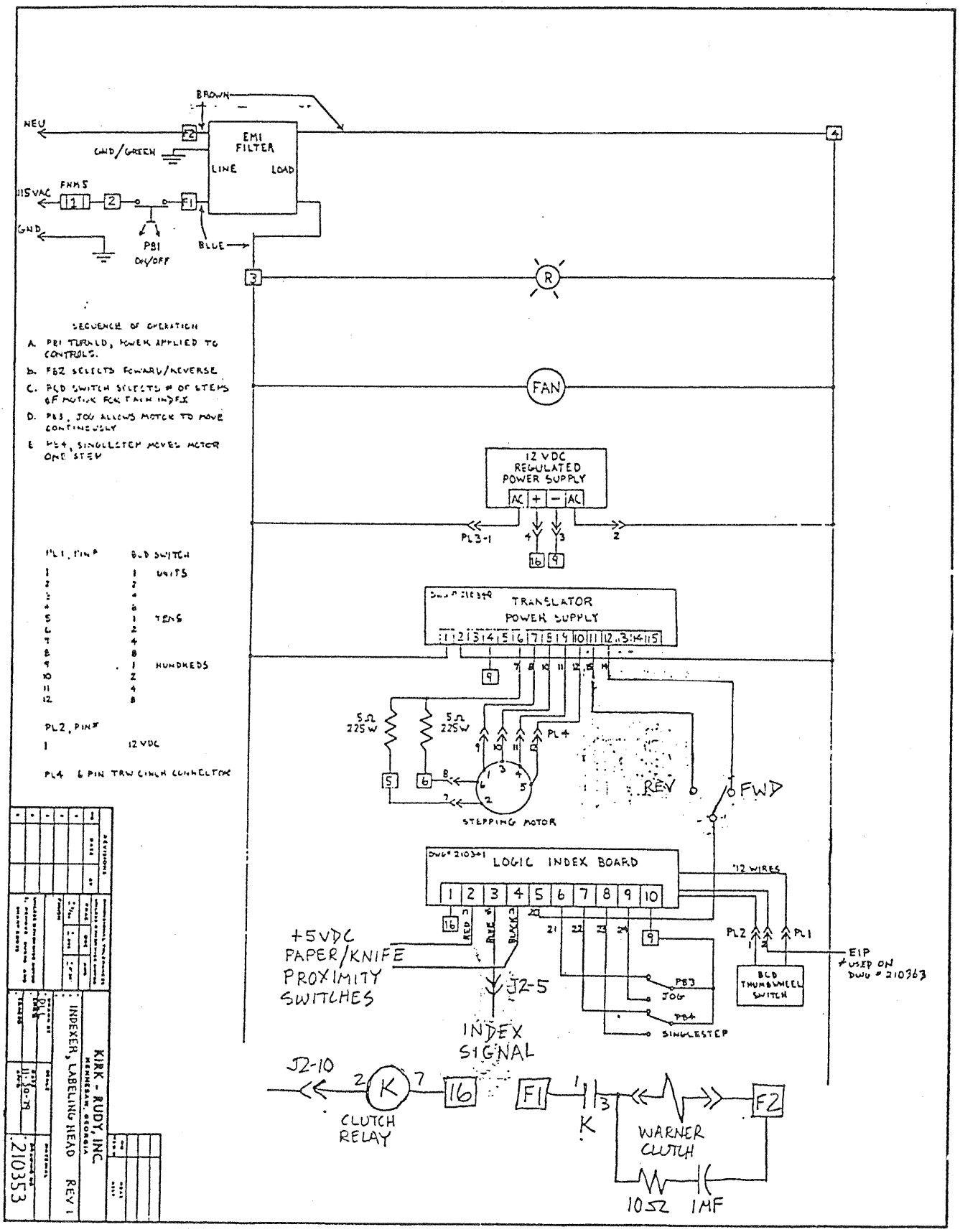
PL4 6 PIN TRW CINCH CONNECTOR



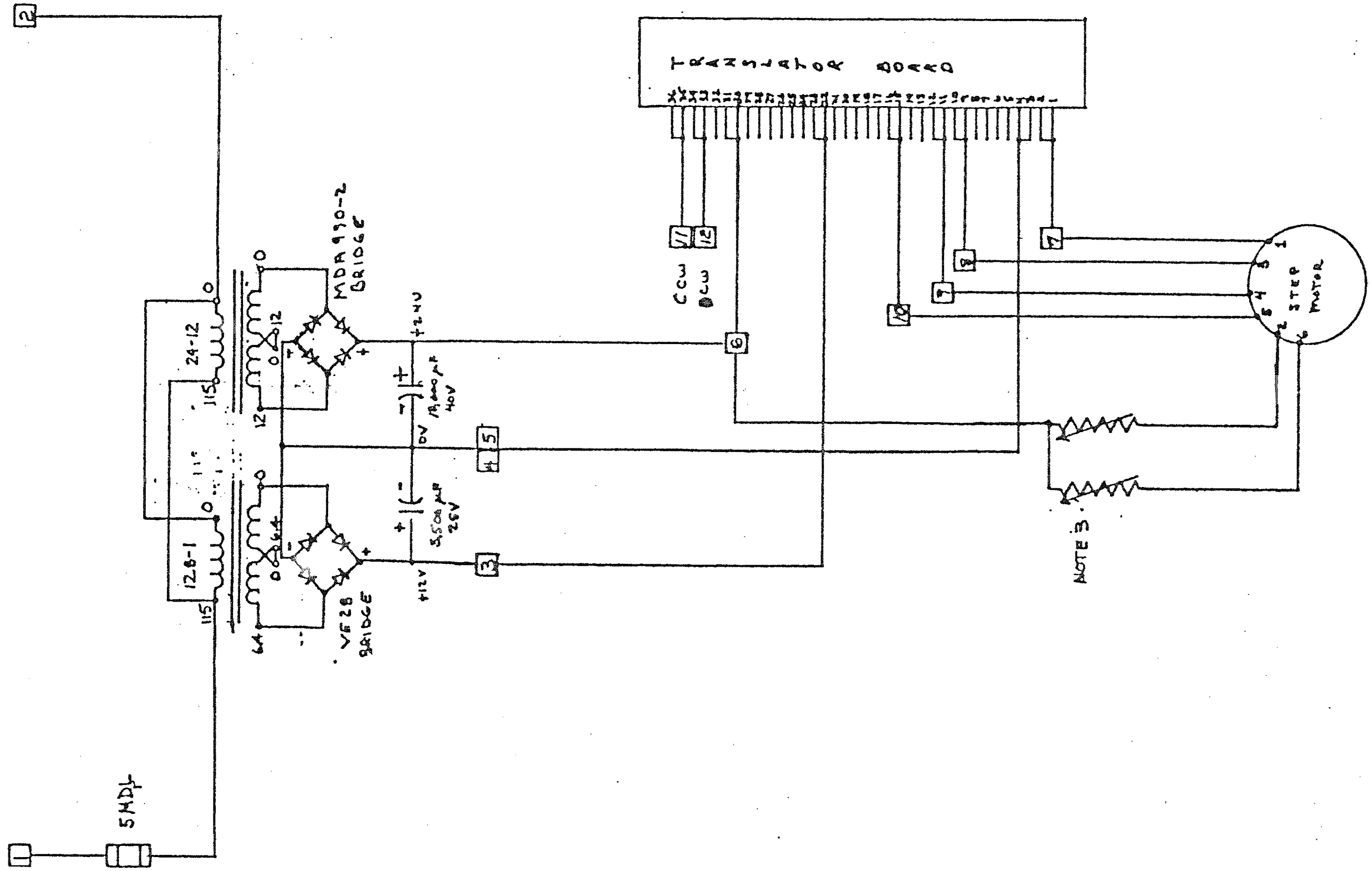
NO.	DATE	BY	REVISIONS
5			
4			
3			
2			
1			

DIMENSIONS UNLESS O... FRAC. ± 1/64 FINISH ... UNLESS OT... REMOV... SHARP

For 5A and 5B


BROWN
NEU
GND/GREEN
EMI FILTER
LINE
LOAD
115VAC
FUSE
F1
PB1
ON/OFF
GND
BLUE
R
FAN
12 VDC REGULATED POWER SUPPLY
AC + - AC
PL3-1
TRANSLATOR POWER SUPPLY
5Ω 225W
5Ω 225W
PL4
REV
FWD
STEPPING MOTOR
LOGIC INDEX BOARD
12 WIRES
+5VDC PAPER/KNIFE PROXIMITY SWITCHES
J2-5
INDEX SIGNAL
PB3 JOG
PB4 SINGLESTEP
BCD THUMBWHEEL SWITCH
PL2
PL1
EIP * USED ON DWG # 210363
J2-10
CLUTCH RELAY
K
WARNER CLUTCH
10Ω 1MF
F2
SEQUENCE OF OPERATION
A. PB1 TURNED, POWER APPLIED TO CONTROLS.
B. PB2 SELECTS FORWARD/REVERSE
C. BCD SWITCH SELECTS # OF STEPS OF MOTOR FOR EACH INDEX
D. PB3, JOG ALLOWS MOTOR TO MOVE CONTINUOUSLY
E. PB4, SINGLESTEP MOVES MOTOR ONE STEP
PL1, PIN # BCD SWITCH
1 UNITS
5 TENS
9 HUNDREDS
PL2, PIN #
1 12 VDC
PL4 6 PIN TRW CINCH CONNECTOR
KIRK - RUDY, INC.
INDEXER, LABELING HEAD REV 1
210353

5B



NOTES

1. THIS POWER SUPPLY IS USED ON DYMO MACHINES AFTER SER#10
2. FUSE CHANGED TO 5MDL
3. 10Ω 225-W ADJUSTABLE RESISTOR USED FOR M093 FC11 STEPMOTOR
   5Ω 225-W FIXED RESISTOR USED FOR M112 FF12 STEPMOTOR

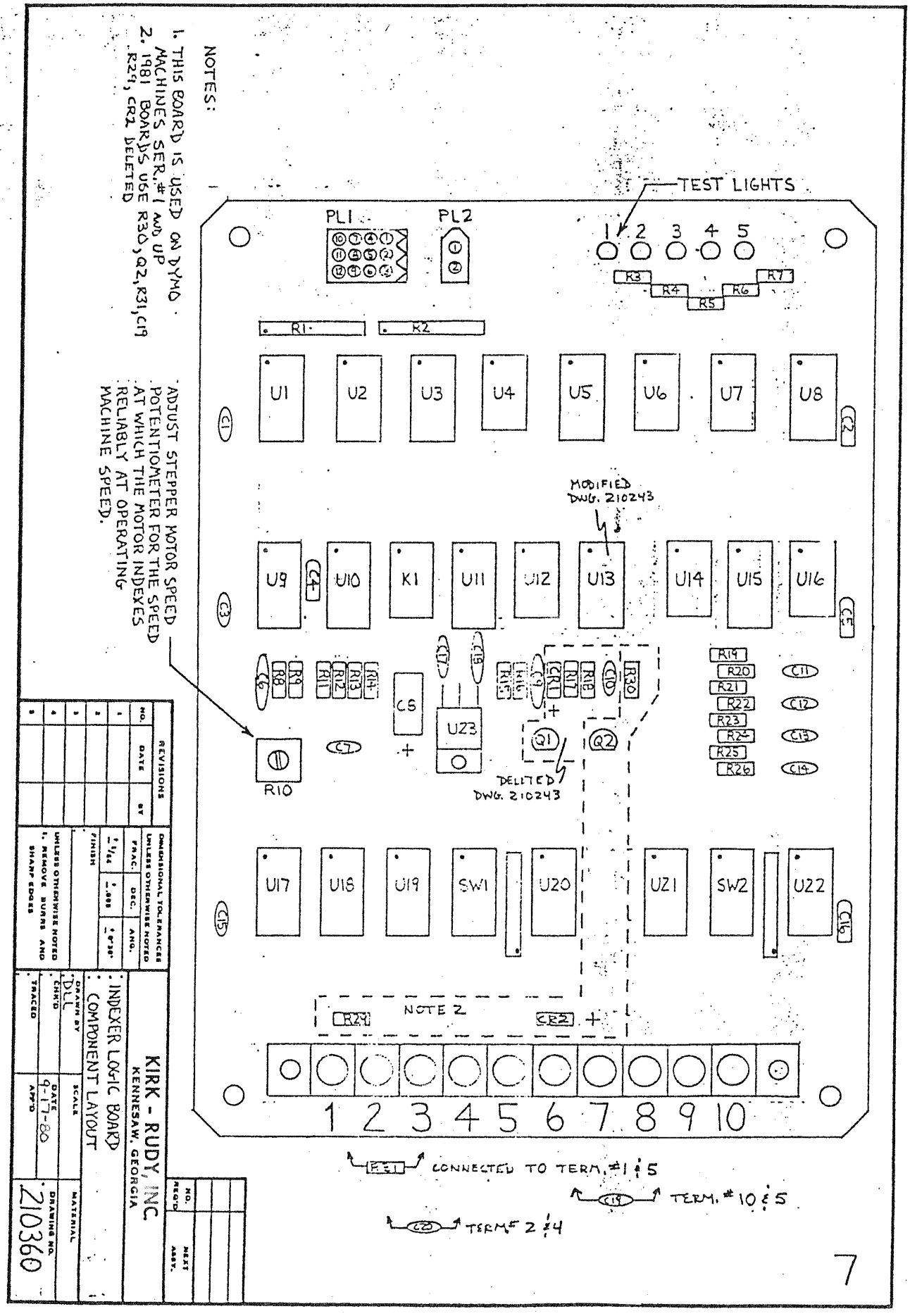
REVISIONS		
NO.	DATE	BY
1		
2		
3		
4		

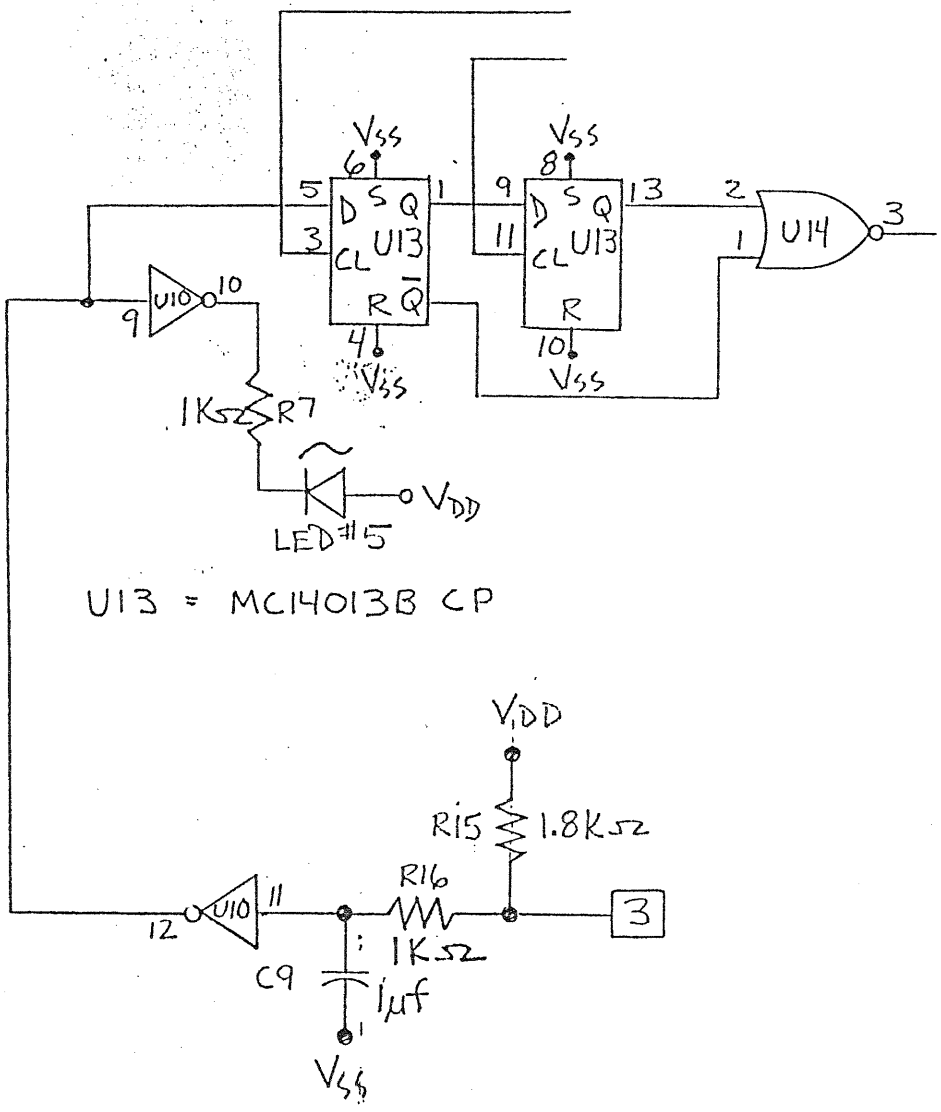
KIRK - RUDY, INC.
KENNESAW, GEORGIA

TRANSLATOR & POWER SUPPLY DIAGRAM

DRAWN BY: GNS
DATE: 11-27-78
DRAWING NO. 210349

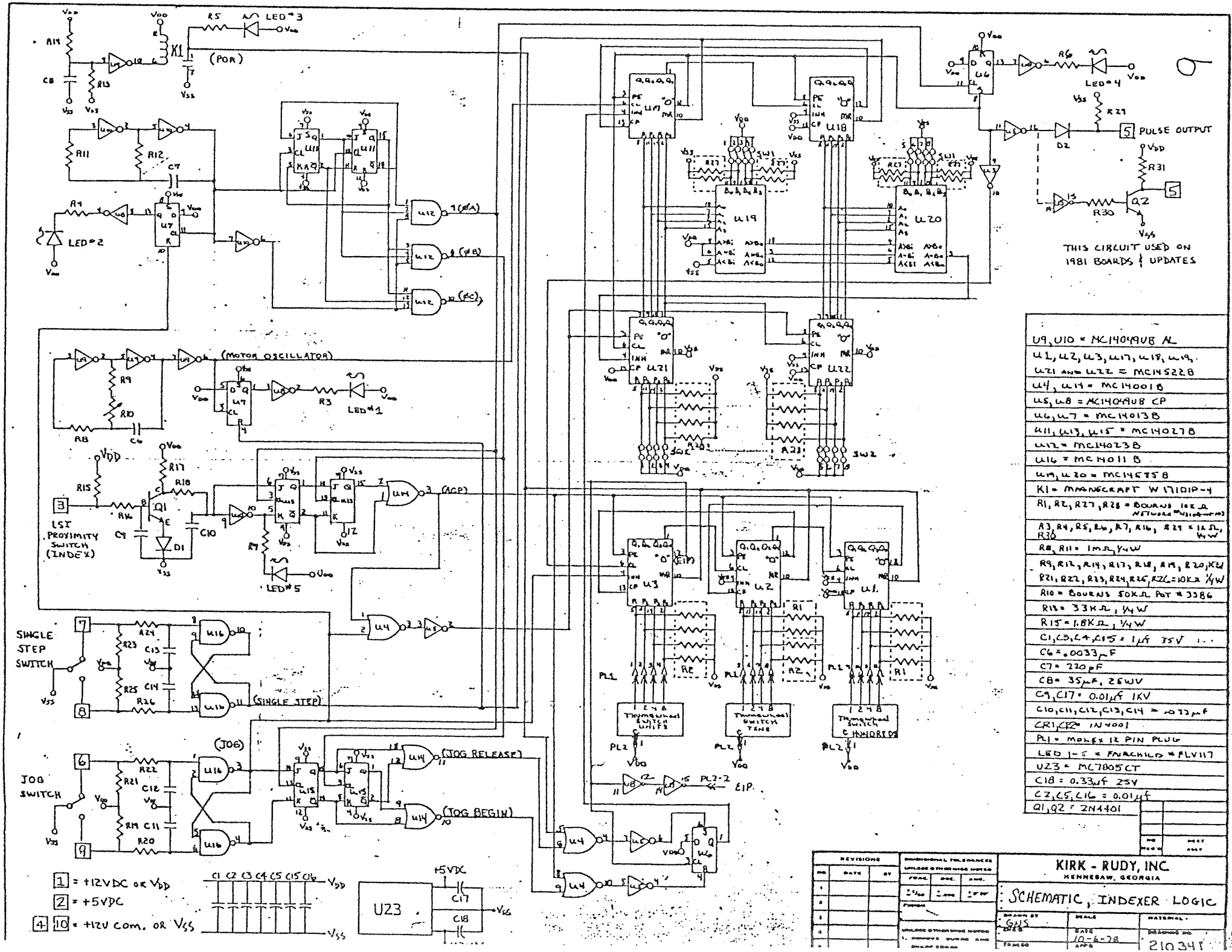
6


NOTES:
1. THIS BOARD IS USED ON DYMO MACHINES SER.#1 AND UP
2. 1981 BOARDS USE R30, Q2, R31, C19 R29, CR2 DELETED
ADJUST STEPPER MOTOR SPEED POTENTIOMETER FOR THE SPEED AT WHICH THE MOTOR INDEXES RELIABLY AT OPERATING MACHINE SPEED.
TEST LIGHTS
PL1
PL2
1 2 3 4 5
R3
R4
R5
R6
R7
R1
R2
U1
U2
U3
U4
U5
U6
U7
U8
C1
C2
MODIFIED DWG. 210243
U9
U10
K1
U11
U12
U13
U14
U15
U16
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
R30
U23
Q1
Q2
CR1
DELETED DWG. 210243
U17
U18
U19
SW1
U20
U21
SW2
U22
NOTE 2
R29
CR2
1 2 3 4 5 6 7 8 9 10
P3 CONNECTED TO TERM. #1 & 5
C19 TERM. #10 & 5
C20 TERM. #2 & 4
REVISIONS
NO. DATE BY
DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED
FRAC. ±1/64
DEC. ±.005
ANG. ±0°30'
UNLESS OTHERWISE NOTED 1. REMOVE BURRS AND SHARP EDGES
FINISH
DRAWN BY DLL
CHK'D
TRACED
DATE 9-17-80
APP'D
SCALE
MATERIAL
DRAWING NO. 210360
KIRK - RUDY, INC
KENNESAW, GEORGIA
INDEXER LOGIC BOARD
COMPONENT LAYOUT
NO. REQ'D
NEXT ASSY.



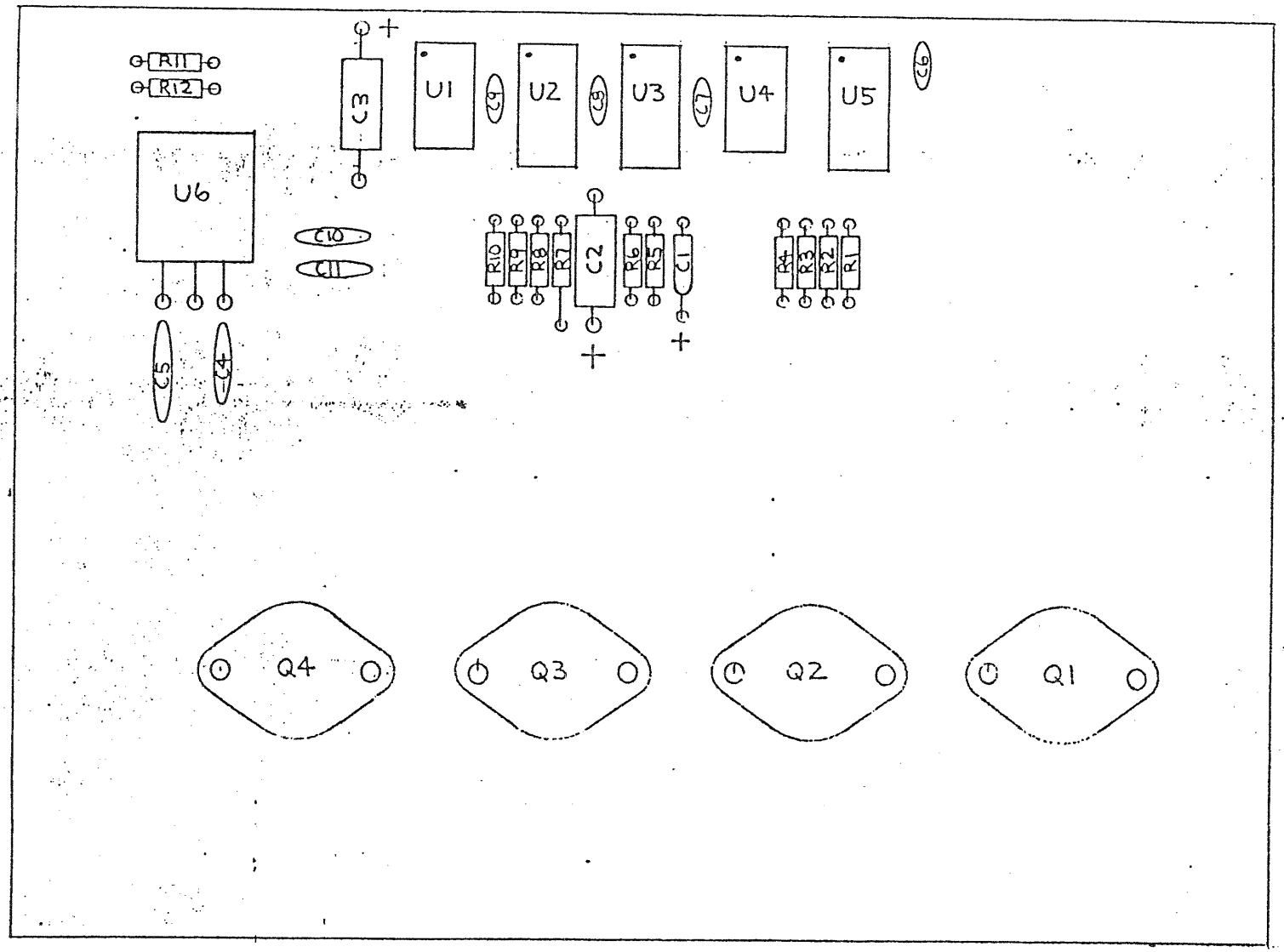
* REVISIONS OF DWG. #210341
INDEXER LOGIC
4-15-83
DLL

210243



U9, U10 = MC14049UB AL	
U1, U2, U3, U17, U18, U19, U21 AND U22 = MC14522B	
U4, U14 = MC14001B	
U5, U8 = MC14049UB CP	
U6, U7 = MC14013B	
U11, U13, U15 = MC14027B	
U12 = MC14023B	
U16 = MC14011B	
U20, U20 = MC14555B	
K1 = MAGNECRAFT W171DIP-4	
R1, R2, R27, R28 = BOURNS 10K Ω NETWORKS 4116R-001-103	
R3, R4, R5, R6, R7, R16, R29 = 1KΩ, ¼W R30	
R8, R11 = 1MΩ, ¼W	
R9, R12, R14, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26 = 10KΩ ¼W	
R10 = BOURNS 50KΩ POT # 3386	
R13 = 33KΩ, ¼W	
R15 = 1.8KΩ, ¼W	
C1, C3, C4, C15 = 1μF 35V	
C6 = .0033μF	
C7 = 220pF	
C8 = 35μF, 25WV	
C9, C17 = 0.01μF 1KV	
C10, C11, C12, C13, C14 = .033μF	
CR1, CR2 = 1N4001	
P1 = MOLEX 12 PIN PLUG	
LED 1-5 = FAIRCHILD # FLV117	
U23 = MC7805CT	
C18 = 0.33μF 25V	
C2, C5, C16 = 0.01μF	
Q1, Q2 = 2N4401	

REVISIONS			UNLESS OTHERWISE NOTED: FRACT. DEC. ANG. ±1/64 ±.005 ±0°30' FINISH	KIRK - RUDY, INC. KENNESAW, GEORGIA	
NO.	DATE	BY		SCHEMATIC, INDEXER LOGIC	
				DRAWN BY GHS DATE	SCALE DATE 10-6-78 APPD.
				MATERIAL	DRAWING NO. 21034



NOTES:

THIS BOARD IS USED ON DYMO MACHINES AFTER SER# 10

01

NO. REQ'D	NEXT ASSY.

REVISIONS		
NO.	DATE	BY
1		
2		
3		
4		
5		

DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED

FRAC.	DEC.	ANG.
± 1/64	± .005	± 0°30'

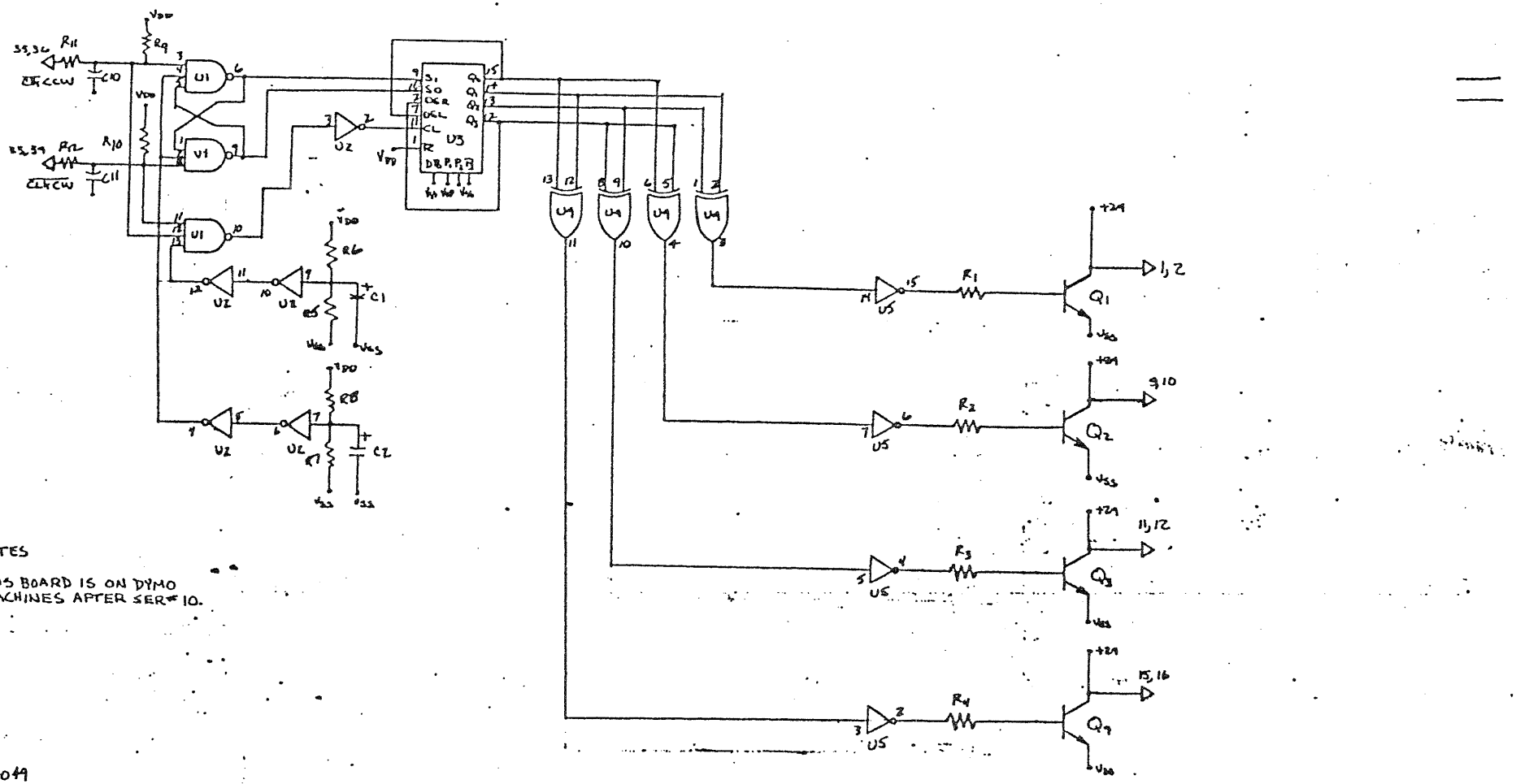
FINISH

UNLESS OTHERWISE NOTED
1. REMOVE BURRS AND SHARP EDGES

KIRK - RUDY, INC.
KENNESAW, GEORGIA

TRANSLATOR BOARD
COMPONENT LAYOUT

DRAWN BY	SCALE	MATERIAL
DLL		
CHK'D	DATE 9-16-80	DRAWING NO. 210359
TRACED	APP'D	



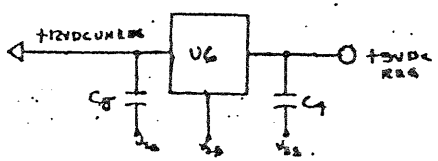
NOTES

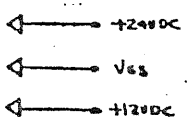
THIS BOARD IS ON DYMO MACHINES AFTER SER# 10.

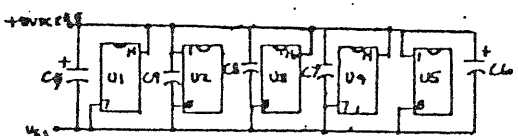
U5 - 14049
U1 - MC13
U2 - MC10
U3 - MC14
U4 - MC07
Q1-Q4 - ZN6577 OR MJ4035

R_4, R_8, R_9, R_{10} - 10KΩ, ¼W
R_5, R_7 - 33KΩ ¼W
R_1, R_2, R_3, R_4 - 47KΩ, ¼W
R_6, R_{12} - 1KΩ ¼W

U6 - MC7808CT
C1 - .01μF TANTALUM
C2, C3 - 10μF ELECTROLYTE
C4 - .01μF CERAMIC
C5 - .33μF CERAMIC
C6, C7, C8, C9 - .01μF MONOLYTHIC
C10, C11 - .01 CERAMIC







REVISIONS			DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED			KIRK - RUDY, INC. KENNESAW, GEORGIA		
NO.	DATE	BY	FRAC.	DEC.	ANG.	TRANSLATOR		
			±1/64	±.005	±0°30'	DRAWN BY DLL	SCALE	MATERIAL
			FINISH			CHK'D	DATE 6-18-80	DRAWING NO. 210352
			UNLESS OTHERWISE NOTED: 1. REMOVE BURRS AND BREAK SHARP EDGES			TRACED	APP'D	

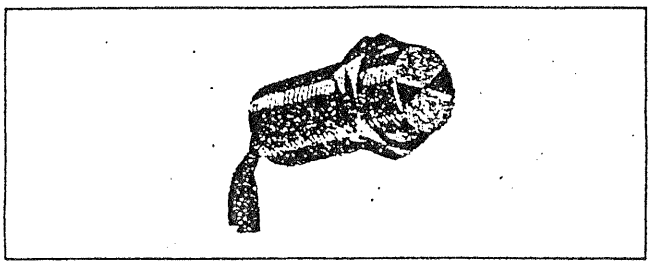
MICRO SWITCH
a Honeywell Division

Installation instructions for 103SR Series Hall effect position sensors

PK 8755 3

GENERAL INFORMATION

103SR Series Hall effect position sensors are completely sealed in threaded aluminum bushings, and meet NEMA 3, 3R, 3S, 4, 4X, 6, 12 and 13 requirements. The output can be directly interfaced with most electronic circuitry such as microprocessors, integrated logic, discrete transistors and SCRs, providing voltage and current requirements are compatible.



ELECTRICAL SPECIFICATIONS

Supply Voltage (VDC)	Supply Current (mA max.)	Output Type	Output Voltage (V)	Output Current (max.)	Catalog Listings* 6" stranded leadwires	Catalog Listings* 1 meter jacketed	Magnetics Type
4.5 to 5.5	4.0	Sink	0.4	8mA	103SR5A-1	103SR5A-2	Unipolar
		Source	(Vs-1.5)	20mA	103SR11A-1	103SR11A-2	
6 to 16	13.0				103SR12A-1	103SR12A-2	
		Sink	0.4		103SR13A-1	103SR13A-2	
					103SR17A-1	103SR17A-2	Bipolar
4 to 10	3.5	Linear Source	1.75 to 2.25 V @ 5 V, 0 gauss	—	103SR3F-5**		

*Leadwire length:
-1 152,4mm (6.0 in.), Type 1
-2 1 meter (39.37 in.), Type 2
-3 1,52 meter (60.0 in.), Type 1
-4 304,8mm (12.0 in.) Type 1
-5 4,57 meter (180 in.), Type 1
-6 3,05 meter (120 in.), Type 1
-8 1 meter (39.37 in.), Type 2, stainless steel bushing

Leadwire type:
Type 1 - 22 gage stranded, teflon insulated
Type 2 - 22 gage PVC insulated conductors with yellow molded PVC jacket

**Linear listing - 152,4mm (6.0 in.), Type 1

Contact local sales office for other listings. All leadwire types and lengths not established for all other listings.

MAGNETIC CHARACTERISTICS

Catalog listings	Magnetic gauss characteristics & temperature: 0 to 70° C Max. op.	0 to 70° C Min. rel.	0 to 70° C Min. dif.	-40 to 100° C Max. op.	-40 to 100° C Min. rel.	-40 to 100° C Min. dif.	25° C Typical Typ. op.	25° C Typical Typ. rel.	25° C Typical Typ. dif.
103SR11A-1	735	25	50	—	—	—	350	215	135
103SR5A-1	735	25	50	—	—	—	350	215	135
103SR12A-I	475	135	40	495	40	40	330	245	85
103SR13A-1	475	135	40	495	40	35	330	245	85
103SR17A-1	180	-180	40	205	-205	35	50	-50	100
103SR3F-5	(-400 to +400 gauss) 0.75 to 1.06 mV/gauss								

CAUTION

DO NOT reverse supply voltage polarity.
DO NOT exceed maximum ratings.

Positive gauss represents the South pole of the magnet facing and sensing area. Negative gauss represents the North pole of the magnet facing the sensing area.

Bipolar sensor, magnetic: a Hall effect sensor that has a plus (South pole) maximum operate point, and a minus (North pole) minimum release point. Operate and release points can be both positive or both negative. Therefore, **latching cannot be guaranteed.** Ring magnets are usually used with bipolar sensors.

Unipolar sensor, magnetic: A Hall effect sensor that has a plus maximum operate point, and a plus minimum release point. One magnetic pole (South) is required to operate and release a unipolar sensor.

ABSOLUTE MAXIMUM RATINGS*

Parameters	4.5 to 5.5VDC	6 to 16VDC
Supply Voltage (Vs)	-1.2 to +10VDC	-1.2 to +20VDC
Voltage Externally Applied to Output	+10VDC max. (OFF only)	+20VDC max. (OFF only)
	-0.5VDC min. (ON or Off)	-0.5VDC min. (ON or OFF)
Output Current	20mA	40mA
Temperature, Operate and Storage	-40° C to +100° C (-40° F to +212° F)	

*Performance at maximum ratings cannot be guaranteed. However, sensors will not be damaged unless these ratings are exceeded.

PROXIMITY SWITCH
210255
12

TROUBLE SHOOTING

If sensor does not operate, follow these steps:

1. Make certain all wiring is correct. Load must be connected.
2. Measure supply voltage across Red (+) and Black (-) leads to verify that proper supply voltage is present.
3. Connect positive lead of voltmeter to the Blue (output) lead and the negative lead of the voltmeter to the Black (ground) lead. With magnet removed (or north-pole present), reading should be:

103SR5A-1	Vs
103SR11A-1	0
103SR12A-1	0
103SR13A-1	Vs
103SR17A-1*	Vs

When magnet (south pole) is moved toward sensing face (beyond operating point), the output should change state. Reading should be:

103SR5A-1	.4V max.
103SR11A-1	3.4V min.
103SR12A-1	(Vs-2)V min.
103SR13A-1	.4V max.
103SR17A-1*	.4V max.

*North magnetic pole must be present to assure device is OFF due to bipolar magnetic operation.

NEMA RATINGS
NON-HAZARDOUS LOCATIONS

Type 3 enclosure — intended for outdoor use primarily to provide a degree of protection against windblown dust, rain, sleet, and external ice formation.

Type 3R enclosure — intended for outdoor use primarily to provide a degree of protection against falling rain, sleet, and external ice formation.

Type 4 enclosure — intended for indoor or outdoor use primarily to provide a degree of protection against windblown dust and rain, splashing water, and hose-directed water.

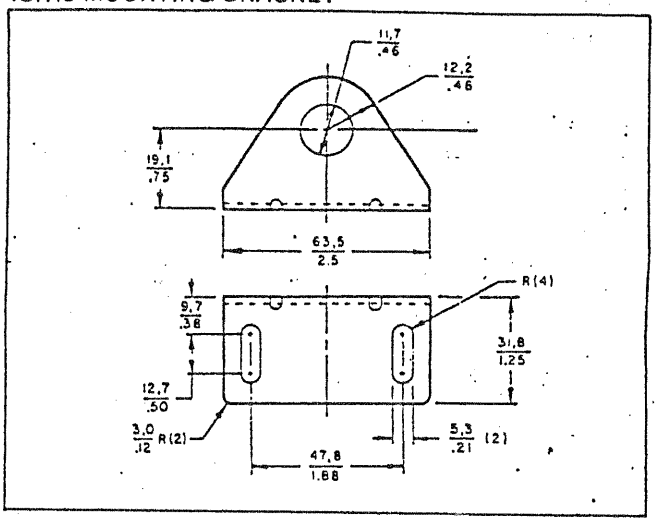
Type 4X enclosure — intended for indoor or outdoor use primarily to provide a degree of protection against corrosion, windblown dust and rain, splashing water, and hose-directed water.

Type 6 enclosure — intended for indoor or outdoor use primarily to provide a degree of protection against the entry of water during occasional temporary submersion at a limited depth.

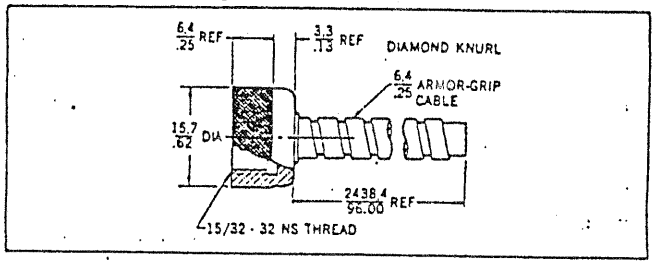
Type 12 enclosure — intended for indoor use primarily to provide a degree of protection against dust, falling dirt, and dripping noncorrosive liquids.

Type 13 enclosure — intended for indoor use primarily to provide a degree of protection against dust, spraying of water, oil, and noncorrosive coolant.

1SR15 MOUNTING BRACKET



38PA1-SR BUSHING



Warranty/Remedy

Seller warrants its products to be free from defects in design, material and workmanship under normal use and service. Seller will repair or replace without charge any such product it finds to be so defective on its return to Seller within 18 months after date of shipment by Seller. **The foregoing is in lieu of all other expressed or implied warranties (except of title), including those of merchantability and fitness for a particular purpose.** The foregoing is also purchaser's sole remedy and is in lieu of all other guarantees, obligations, or liabilities or any consequential, incidental, or punitive damages attributable to negligence or strict liability, all by way of example.

While we provide application assistance on MICRO SWITCH products, personally and through our literature, it is up to the customer to determine the suitability of the product in the application.

MICRO SWITCH
a Honeywell Division

PK 8755 3 982 PRINTED IN USA

MICRO SWITCH PK 8909 2

PERMANENT MAGNET

This Permanent Magnet is designed for use with MICRO SWITCH magnetically operated solid state switches. It is fully magnetized before shipping and is ready to use.
(The North Magnetic Pole is marked N, + or a Red Color)*

CAUTION

1. To prevent shifting the magnetic pole location and demagnetizing the magnet slightly, avoid contact or close proximity between magnets or other ferromagnetic objects. Any demagnetization or shifting of the pole location will have an appreciable effect on the operate and release distances from the face of the magnet to surface of the switch.
2. Don't force the like poles of two magnets together, as contact in a repelling position will partially demagnetize them.
3. Never separate two contacting magnets with unlike poles together by sliding in the direction of magnetization, as this will cause a drastic reduction in magnetization. Separate with a direct pull.

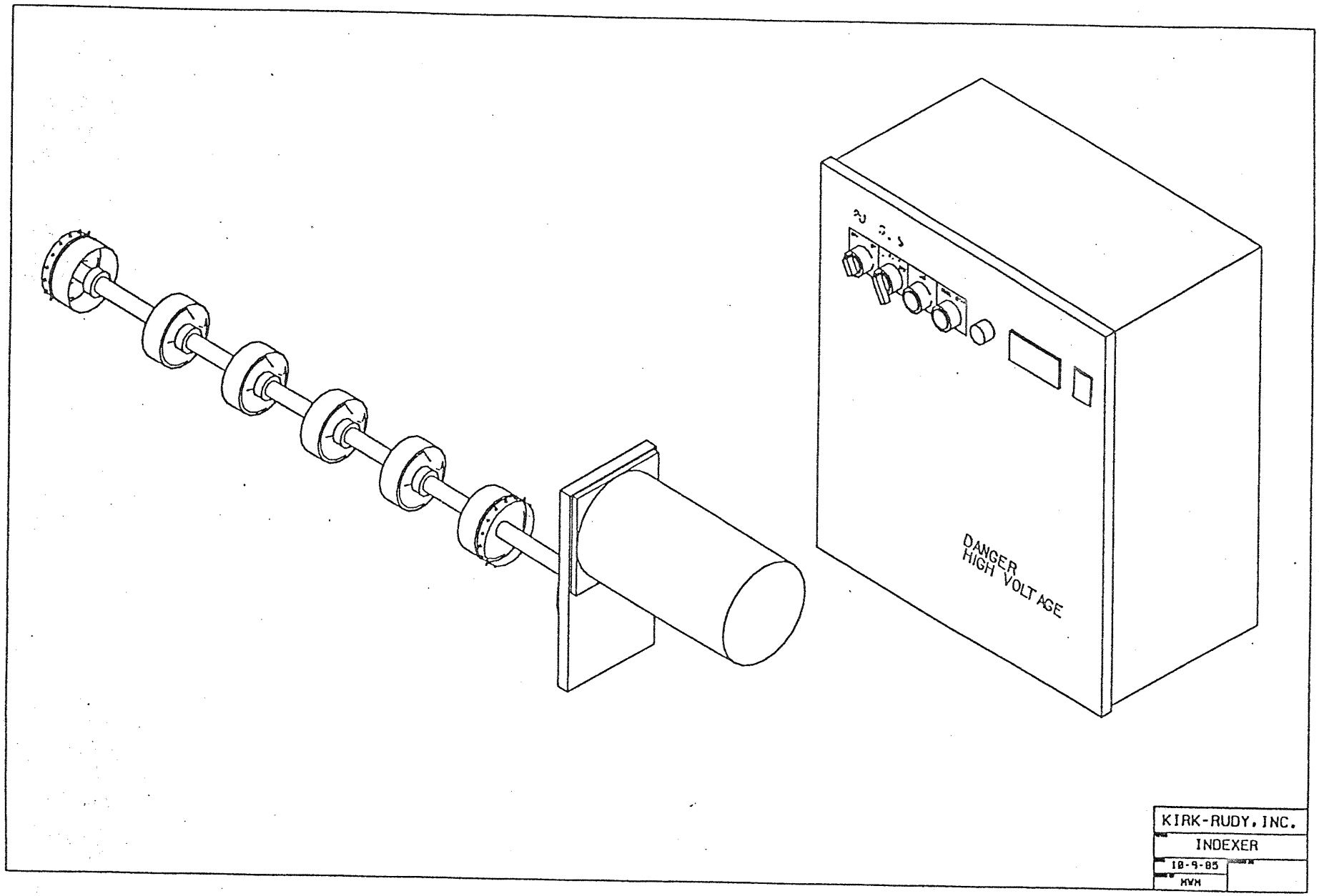
* Ref: American Society for Testing Materials (ASTM)

MICRO SWITCH
FREEPORT, ILLINOIS 61032
A DIVISION OF HONEYWELL

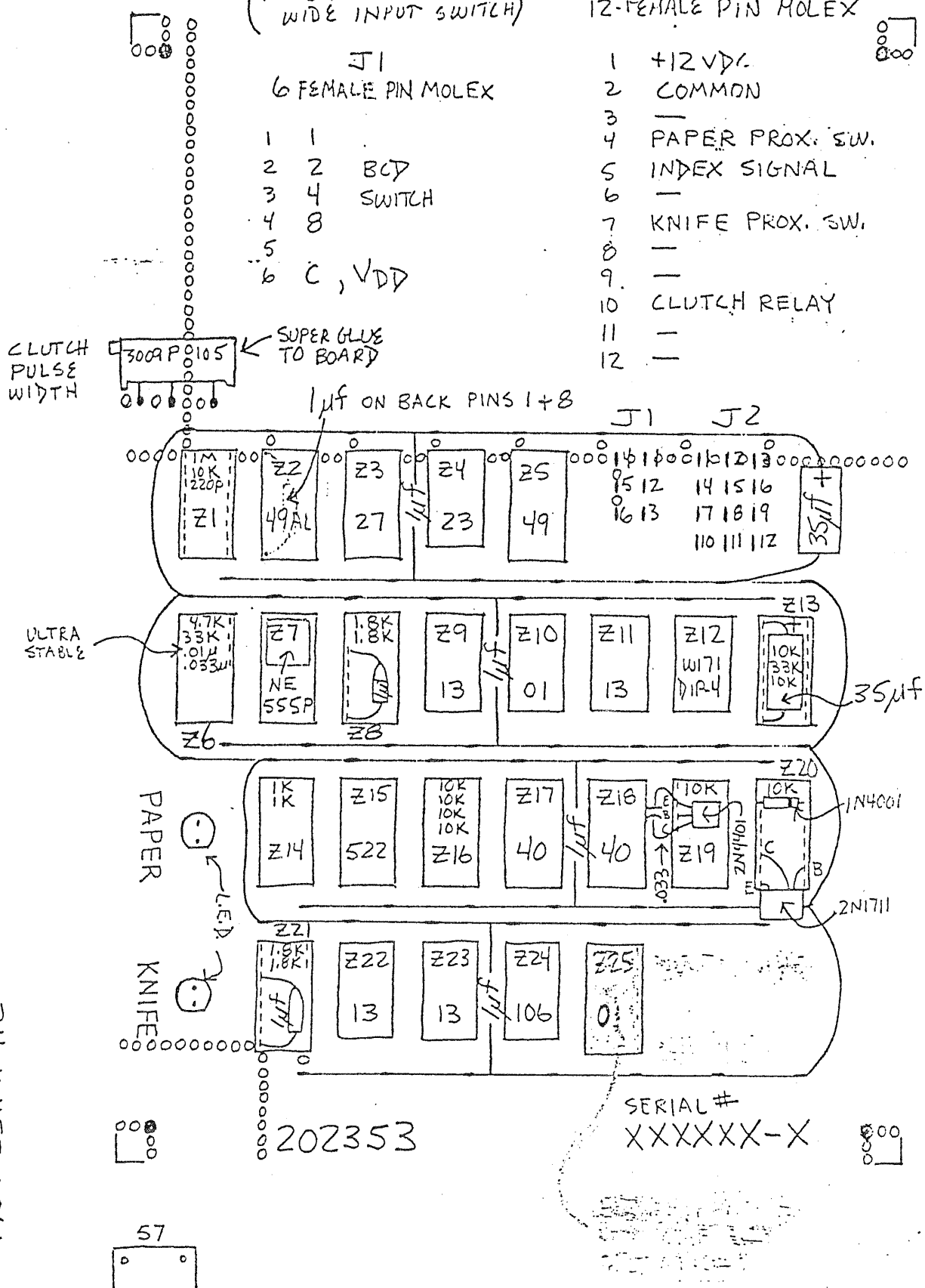
PK 8909 2 874 PRINTED IN USA

210256

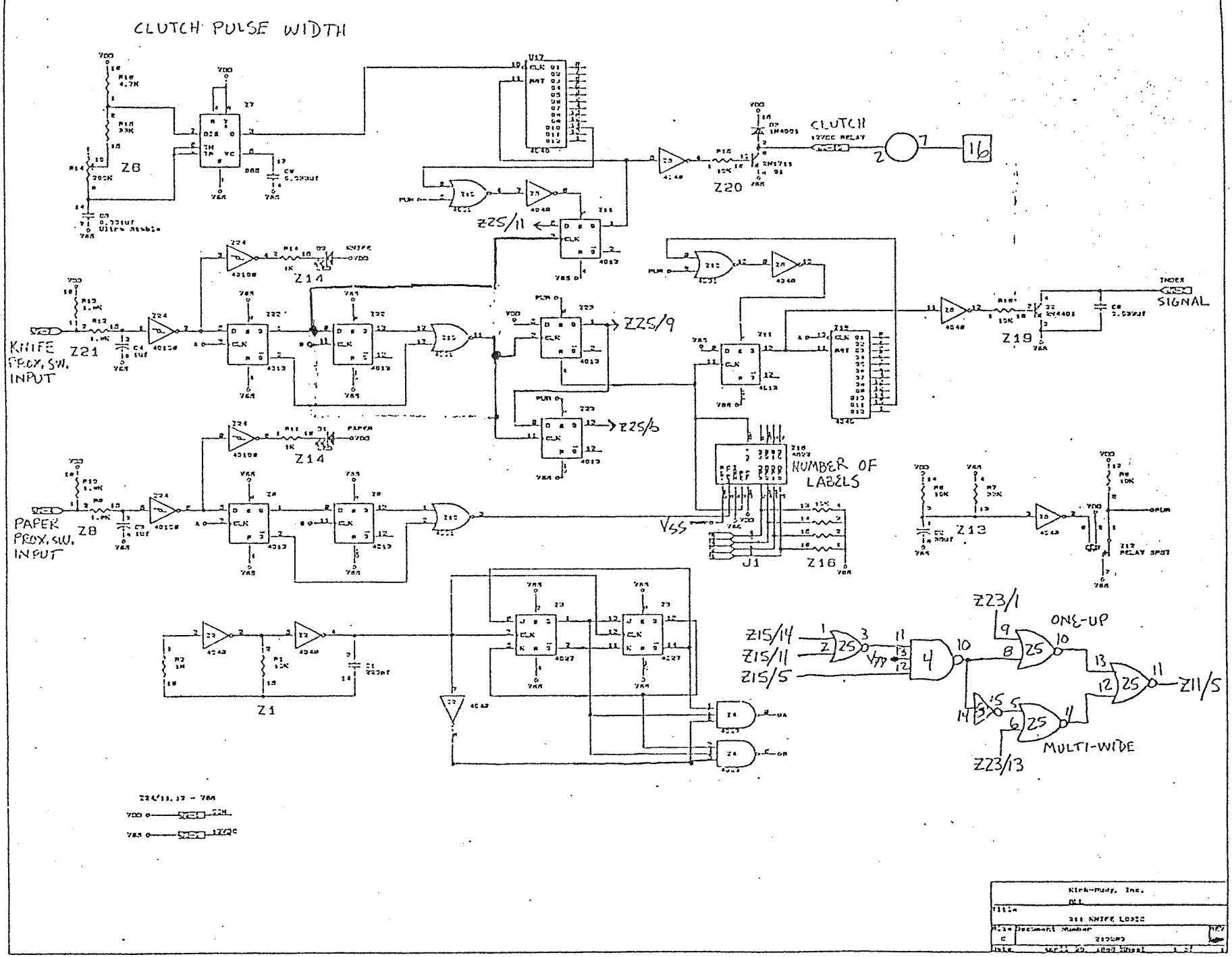
14

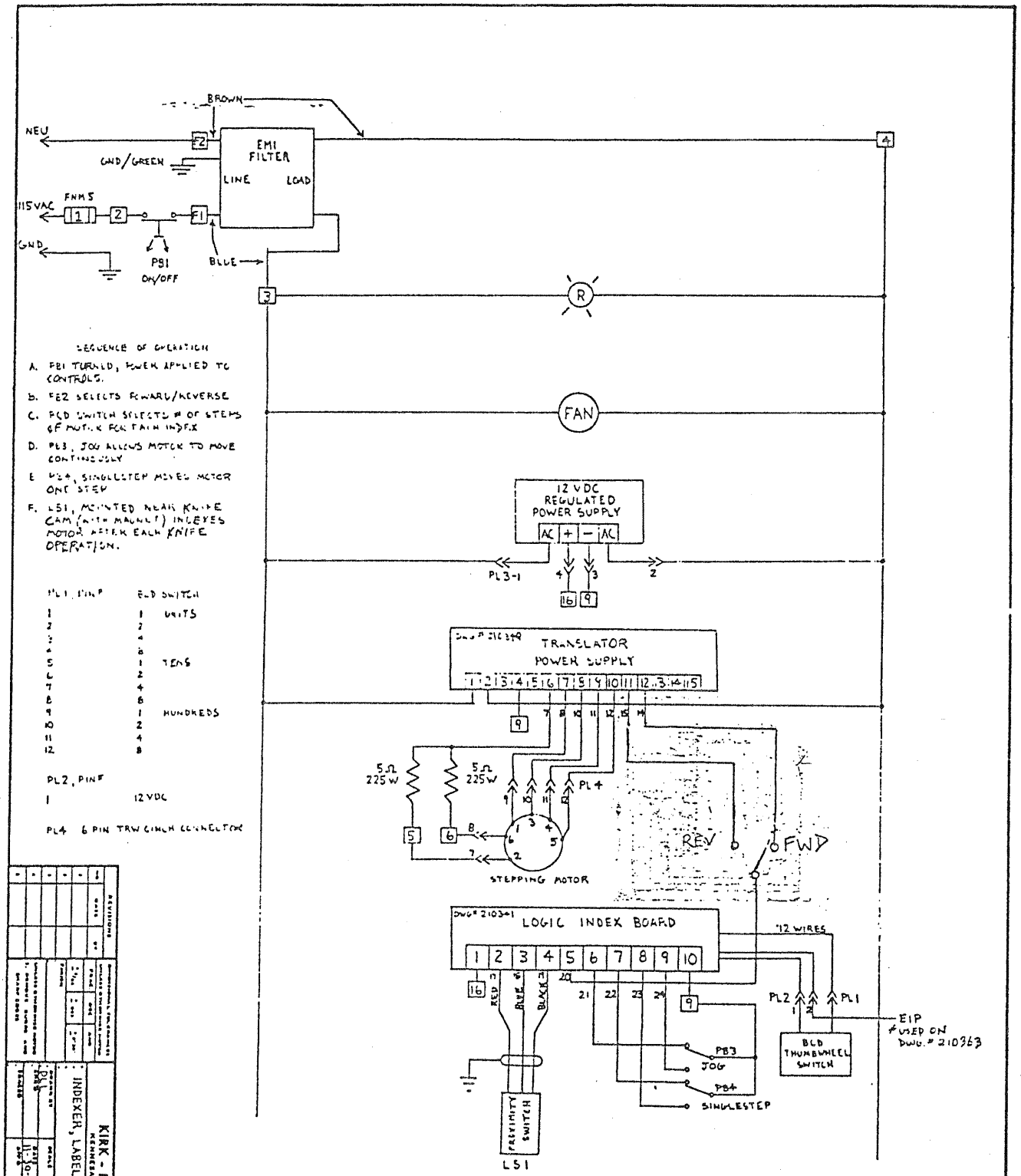


KIRK-RUDY, INC.
INDEXER
10-9-85
MVM



211 KNIFE LOGIC LAYOUT
DLL
1-30-89


CLUTCH PULSE WIDTH
KNIFE PROX. SW. INPUT
Z21
PAPER PROX. SW. INPUT
Z8
Z14
Z14
Z1
Z20
CLUTCH
Z19
INDEX SIGNAL
Z13
NUMBER OF LABELS
J1
Z16
Z225/9
Z225/6
Z225/11
Z15/14
Z15/11
Z15/5
Z23/1
Z23/13
ONE-UP
MULTI-WIDE
Z11/5
Vss
Kirk-Rudy, Inc.
311 KNIFE LOGIC
REV 2


BROWN
NEU
GND/GREEN
EMI FILTER
LINE
LOAD
115VAC
FNMS
PSI ON/OFF
BLUE
GND
R
FAN
12 VDC REGULATED POWER SUPPLY
PL3-1
TRANSLATOR POWER SUPPLY
5Ω 225W
5Ω 225W
PL4
STEPPING MOTOR
REV
FWD
LOGIC INDEX BOARD
12 WIRES
PL2
PL1
EIP #USED ON DWG.# 210363
BCD THUMBWHEEL SWITCH
PB3
JOG
PB4
SINGLESTEP
PROXIMITY SWITCH
LS1
SEQUENCE OF OPERATION
A. PB1 TURNED, POWER APPLIED TO CONTROLS.
B. PB2 SELECTS FORWARD/REVERSE
C. BCD SWITCH SELECTS # OF STEPS OF MOTOR FOR FABRIC INDEX
D. PB3, JOG ALLOWS MOTOR TO MOVE CONTINUOUSLY
E. PB4, SINGLESTEP MOVES MOTOR ONE STEP
F. LS1, MOUNTED NEAR KNIFE CAM (WITH MAGNET) INDEXES MOTOR AFTER EACH KNIFE OPERATION.
PL1, PIN# BCD SWITCH
1 1 UNITS
2 2
3 4
4 8
5 1 TENS
6 2
7 4
8 8
9 1 HUNDREDS
10 2
11 4
12 8
PL2, PIN#
1 12 VDC
PL4 6 PIN TRW CINCH CONNECTOR
KIRK - RUDY, INC.
KENNESAW, GEORGIA
INDEXER, LABELING HEAD REV 1
210353

5A

5 NOTES

13 WARRANTY AND SERVICE

WARRANTY

Warranty: Kirk-Rudy, Inc., warrants to the original retail purchaser that this product is free from defects in the material and workmanship, and agrees to repair or replace, at Kirk-Rudy's option, any defective product within (90) days from the date of purchase. This warranty is not transferable. It covers damage resulting from defects in material or workmanship, and it does not cover conditions or malfunctions resulting from normal wear, neglect, abuse or accident.
THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESSED WARRANTIES ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE.

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USE ONLY GENUINE KIRK-RUDY REPLACEMENT PARTS

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