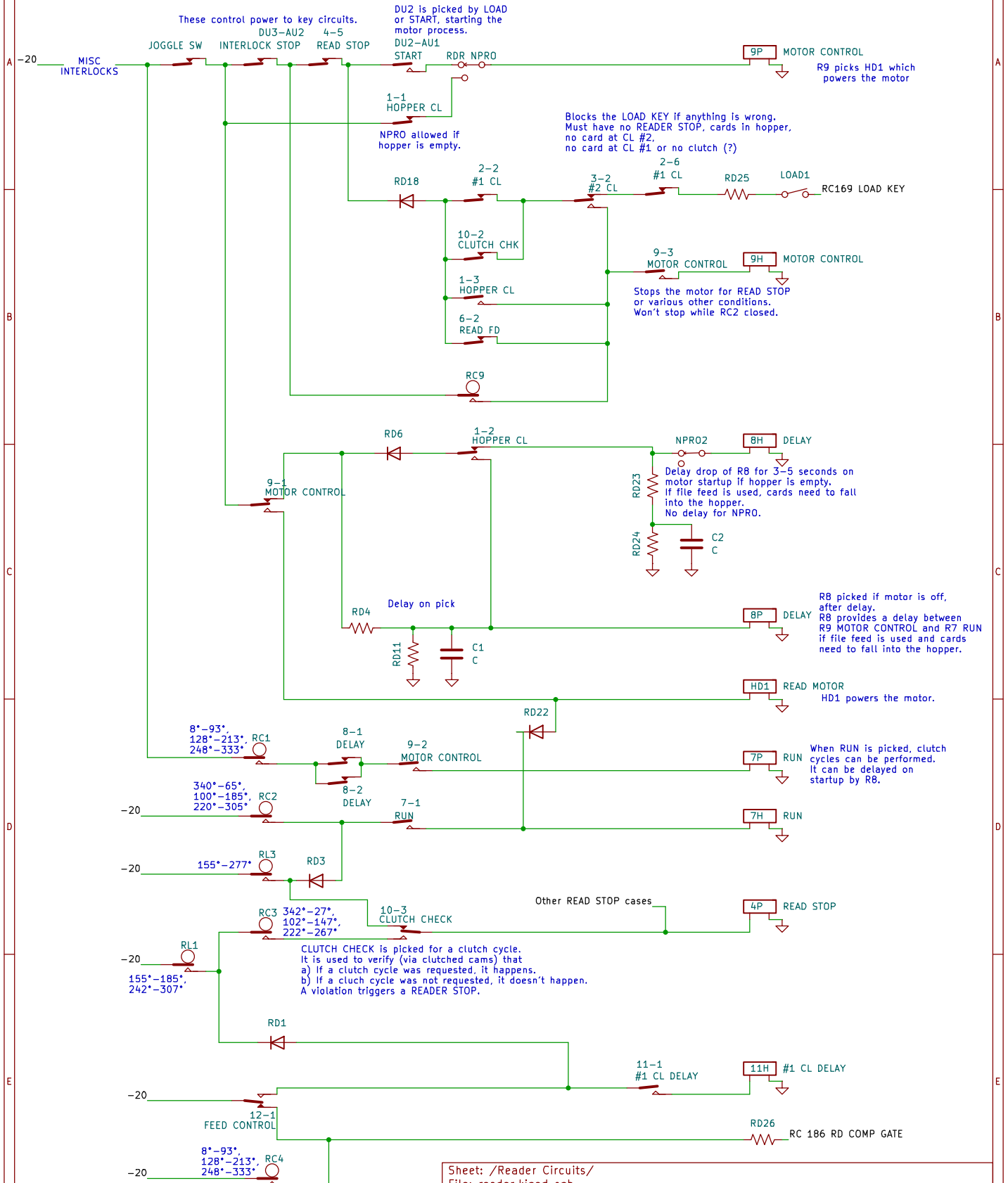


These are miscellaneous cam-controlled reader circuits.



This circuitry tests card levers under control of the cams. It also generates READ FEED (6), FEED CONTROL (12), and JAM DETECT (13) as needed.

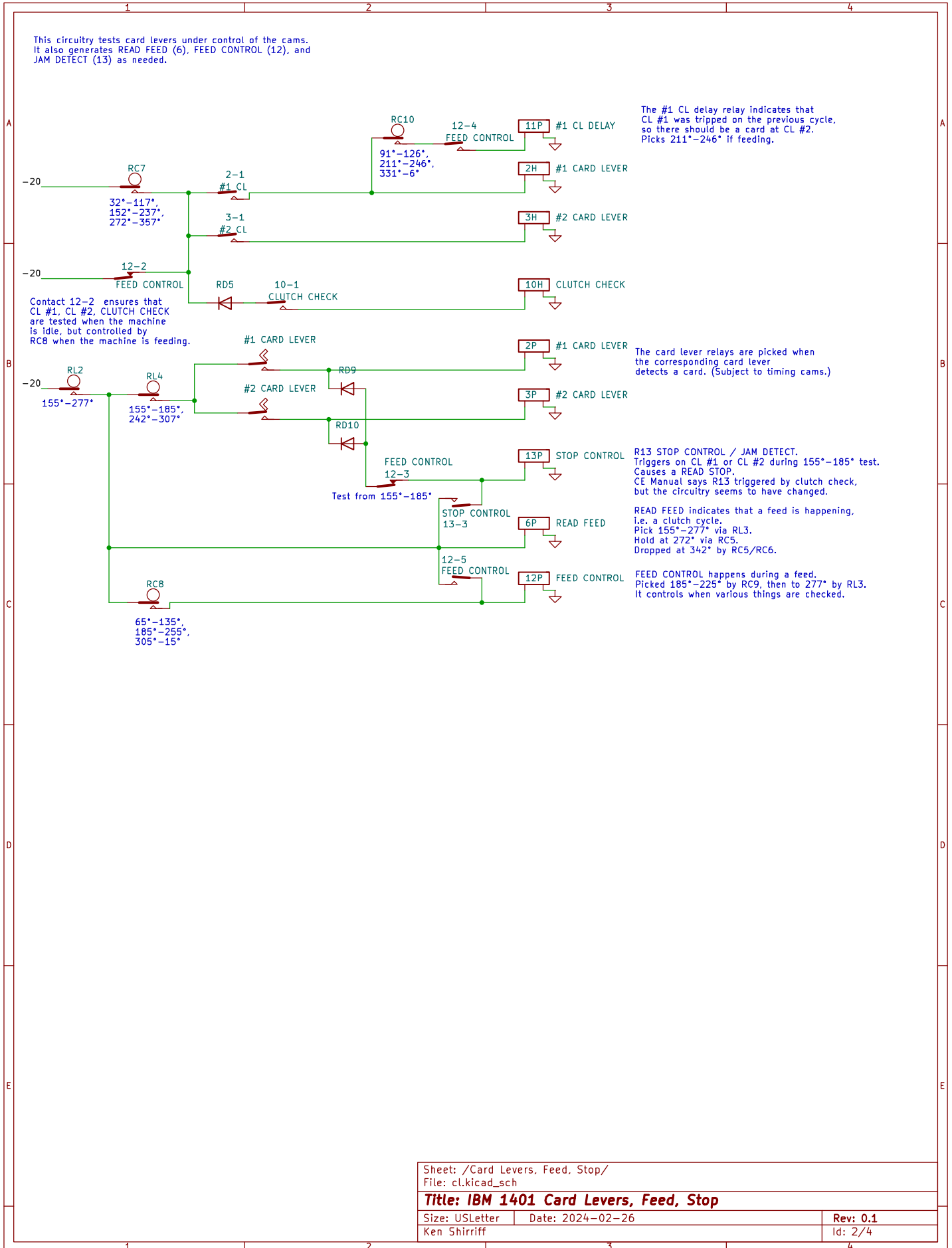
The #1 CL delay relay indicates that CL #1 was tripped on the previous cycle, so there should be a card at CL #2. Picks 211°-246° if feeding.

The card lever relays are picked when the corresponding card lever detects a card. (Subject to timing cams.)

R13 STOP CONTROL / JAM DETECT. Triggers on CL #1 or CL #2 during 155°-185° test. Causes a READ STOP. CE Manual says R13 triggered by clutch check, but the circuitry seems to have changed.

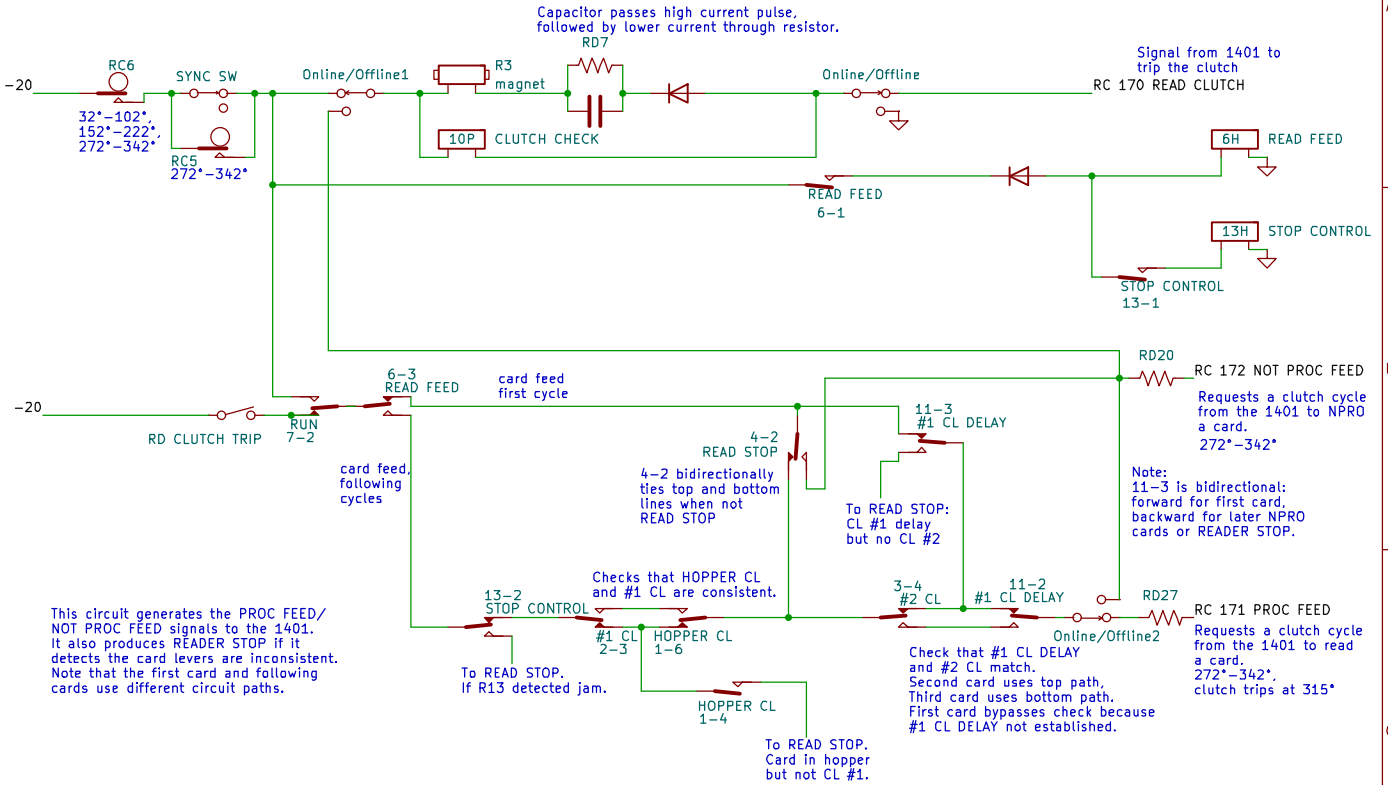
READ FEED indicates that a feed is happening, i.e. a clutch cycle. Pick 155°-277° via RL3. Hold at 272° via RC5. Dropped at 342° by RC5/RC6.

FEED CONTROL happens during a feed. Picked 185°-225° by RC9, then to 277° by RL3. It controls when various things are checked.

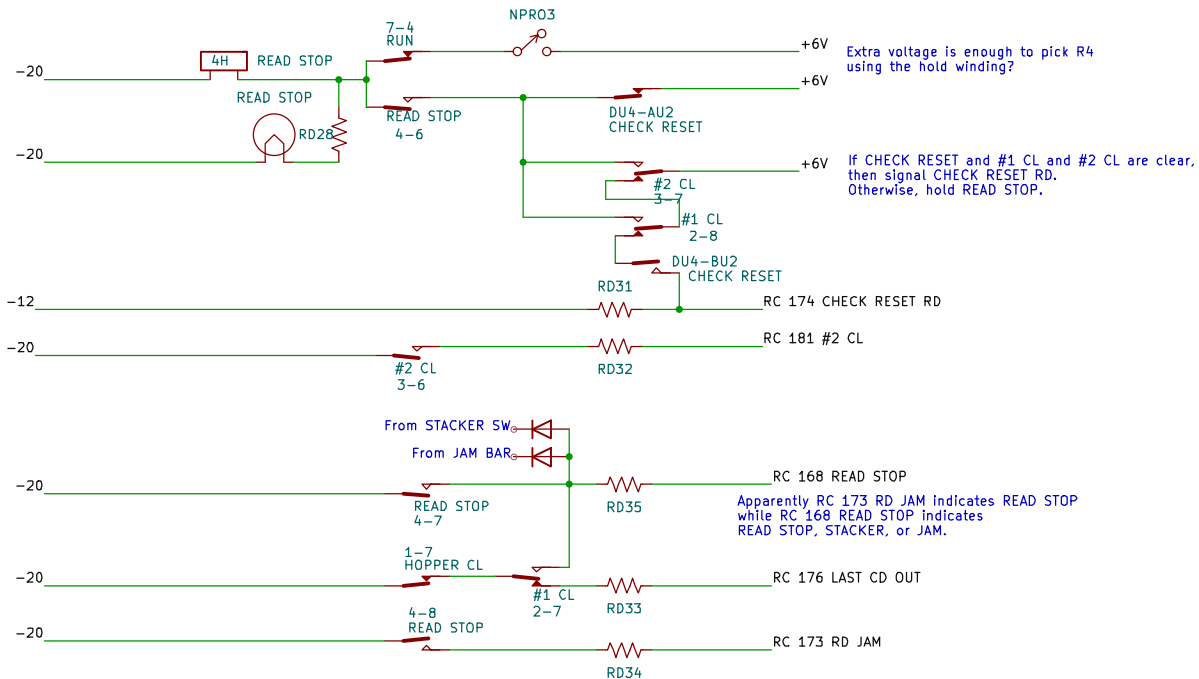


This circuit produces clutch cycles. It generates PROC FEED to feed and process a card or NOT PROC FEED to feed a card without processing it (NPRO). These signals go to the 1401, which responds with READ FEED, which trips the clutch.

In OFFLINE mode, FEED signals trip the clutch directly instead of going through the 1401:  
 1. PROC FEED generates NOT PROC FEED instead.  
 2. NOT PROC FEED drives one side of the clutch magnet.  
 3. The other side of the clutch magnet is grounded.



This circuit latches READ STOP, releases it, and communicates with the 1401.



Sheet: /Clutch, Read Stop circuits/  
 File: clutch.kicad\_sch

Title: IBM 1402 Clutch, Read Stop

Size: USLetter Date: 2024-02-26  
 Ken Shirriff

Rev: 0.1  
 Id: 3/4

|   |  |   |   |   |  |  |
|---|--|---|---|---|--|--|
|   | 1  | 2 | 3   | 4 |  |  |
| A | <div>Card Levers, Feed, Stop</div> <div>These approximately correspond to page 3A,4A</div> <div>File: cl.kicad_sch</div> |   | <div>Clutch, Read Stop circuits</div> <div>These approximately correspond to page 6,7</div> <div>File: clutch.kicad_sch</div> |   |  |  |
| B |  |   |   |   |  |  |
| C |  |   |   |   |  |  |
| D |  |   |   |   |  |  |
| E |  |   |   |   |  |  |
|   | 1  | 2 | 3   | 4 |  |  |

|                                    |                  |          |
|------------------------------------|------------------|----------|
| Sheet: /                           |                  |          |
| File: 1402-schematics.kicad_sch    |                  |          |
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Card Levers, Feed, Stop

These approximately correspond to page 3A,4A

File: cl.kicad\_sch

Clutch, Read Stop circuits

These approximately correspond to page 6,7

File: clutch.kicad\_sch

Reader Circuits

These approximately correspond to page 3A,3B

File: reader.kicad\_sch

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