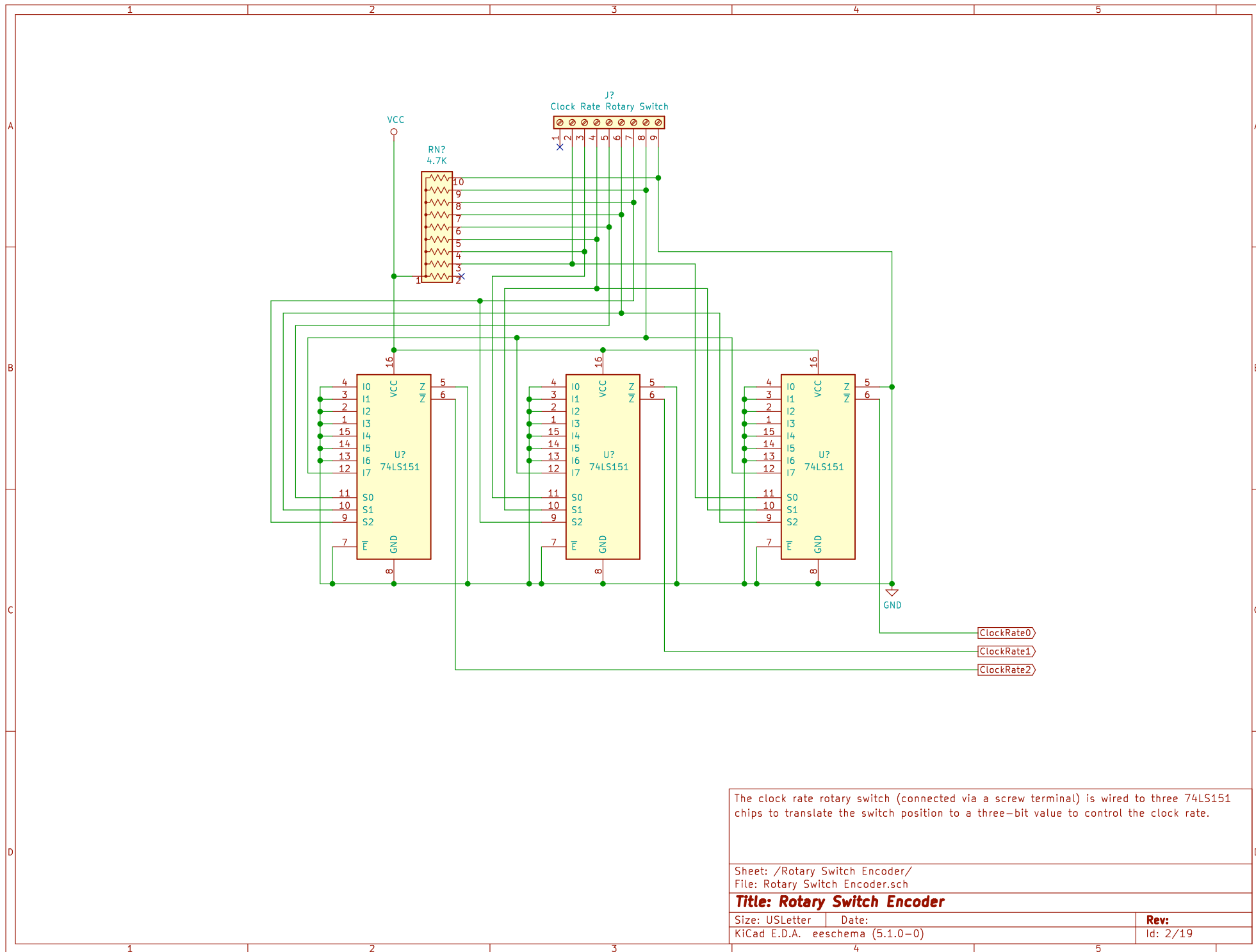


| | | | | | | | | | | | | |
|--------------|--|----------|--|--|---|---|---------|-------|------|--------------|--------------------|----------|
| | 1 | 2 | 3 | 4 | 5 | | | | | | | |
| A | | | Sheet: Rotary Switch Encoder <div></div> File: Rotary Switch Encoder.sch Sheet: Clock <div></div> File: Clock.sch Sheet: Program Counter <div></div> File: Program Counter.sch Sheet: Instruction ROM <div></div> File: Instruction ROM.sch Sheet: Instruction Register <div></div> File: Instruction Register.sch Sheet: Instruction Decoder <div></div> File: Instruction Decoder.sch Sheet: Execute <div></div> File: Execute.sch Sheet: Control Word Display <div></div> File: Control Word Display.sch | Sheet: Output Display <div></div> File: Output Display.sch Sheet: Register D <div></div> File: Register D.sch Sheet: Register A <div></div> File: Register A.sch Sheet: ALU <div></div> File: ALU.sch Sheet: Register B <div></div> File: Register B.sch Sheet: Transfer Register <div></div> File: Transfer Register.sch Sheet: Data RAM <div></div> File: Data RAM.sch Sheet: Bus Display <div></div> File: Bus Display.sch | | | | | | | | |
| B | Sheet: Power-on Reset <div></div> File: Power-on Reset.sch Sheet: Instruction RAM <div></div> File: Instruction RAM.sch | | | | | | | | | | | |
| C | | | | | | | | | | | | |
| D | | | | | | <div>"Firenze" is the name of my TTL microcomputer. Firenze is another name for Florence and, of course, this is a machine. Hence the name.</div> <div>Sheet: / File: Firenze.sch</div> <div>Title: Firenze</div> <table><tr><td>Size: A</td><td>Date:</td><td>Rev:</td></tr><tr><td>KiCad E.D.A.</td><td>eeschema (5.1.0-0)</td><td>Id: 1/19</td></tr></table> | Size: A | Date: | Rev: | KiCad E.D.A. | eeschema (5.1.0-0) | Id: 1/19 |
| Size: A | Date: | Rev: | | | | | | | | | | |
| KiCad E.D.A. | eeschema (5.1.0-0) | Id: 1/19 | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | | | | | | | |



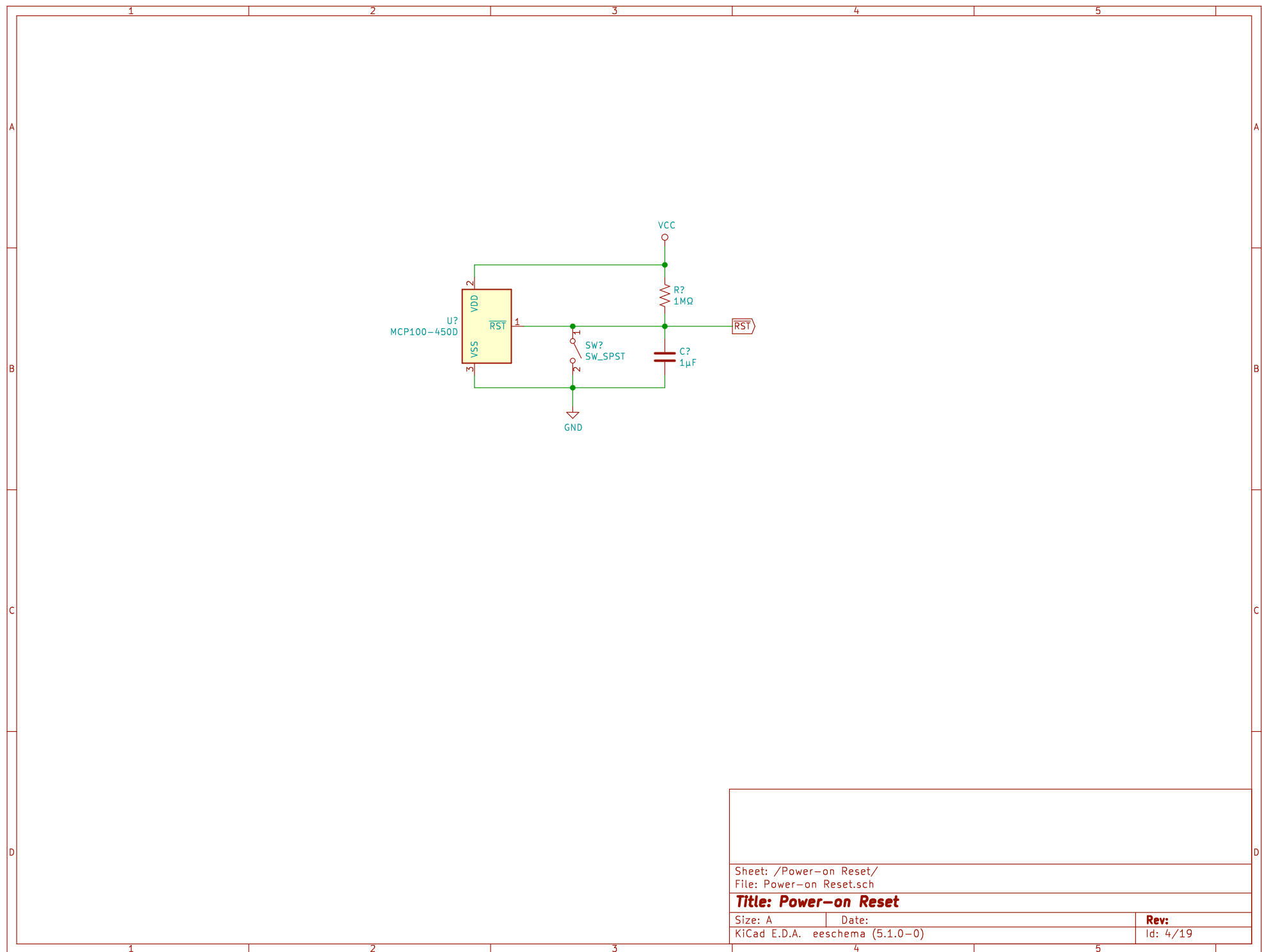
The clock rate rotary switch (connected via a screw terminal) is wired to three 74LS151 chips to translate the switch position to a three-bit value to control the clock rate.

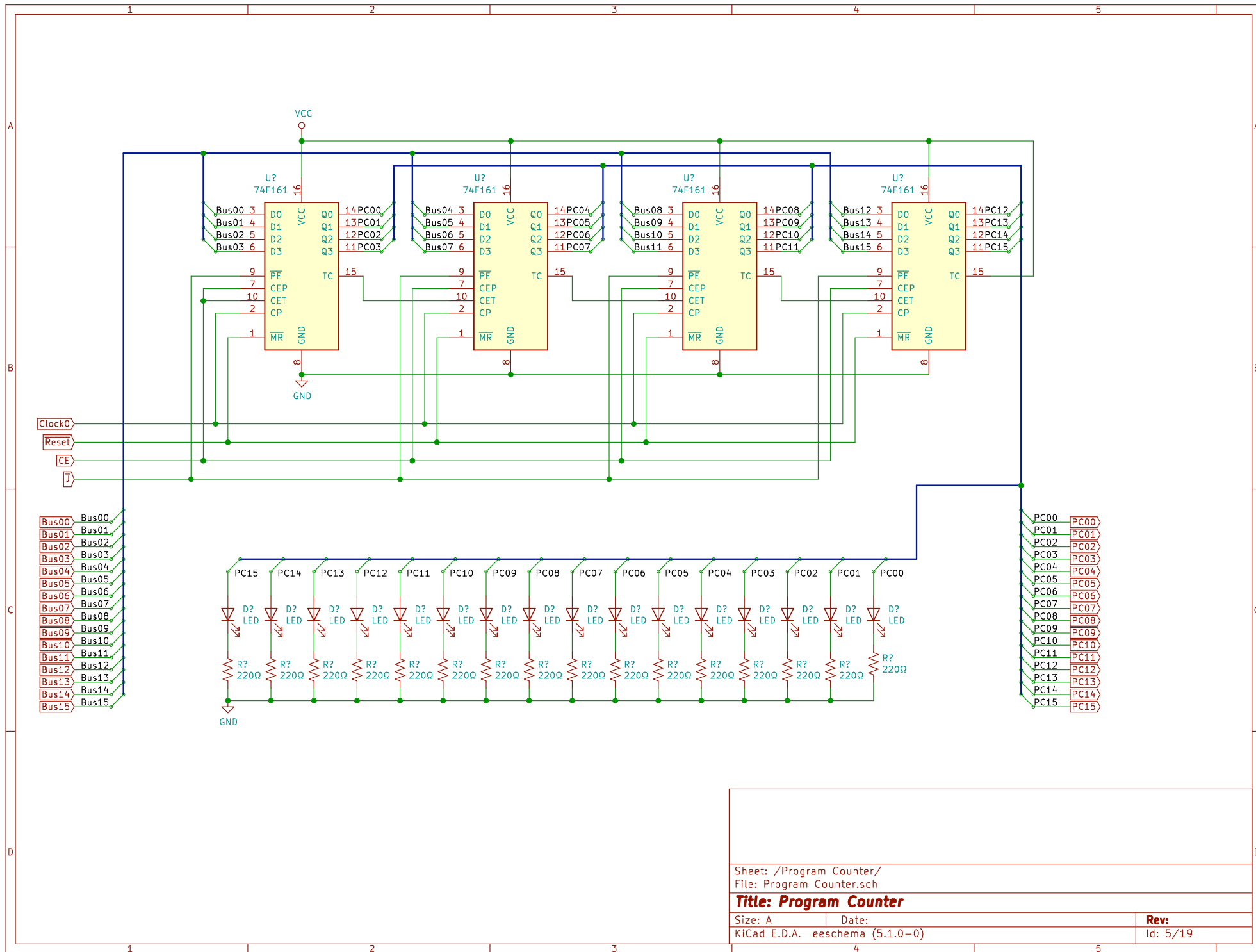
Sheet: /Rotary Switch Encoder/
File: Rotary Switch Encoder.sch

Title: Rotary Switch Encoder

Size: USLetter Date:
KiCad E.D.A. eeschema (5.1.0-0)

Rev:
Id: 2/19



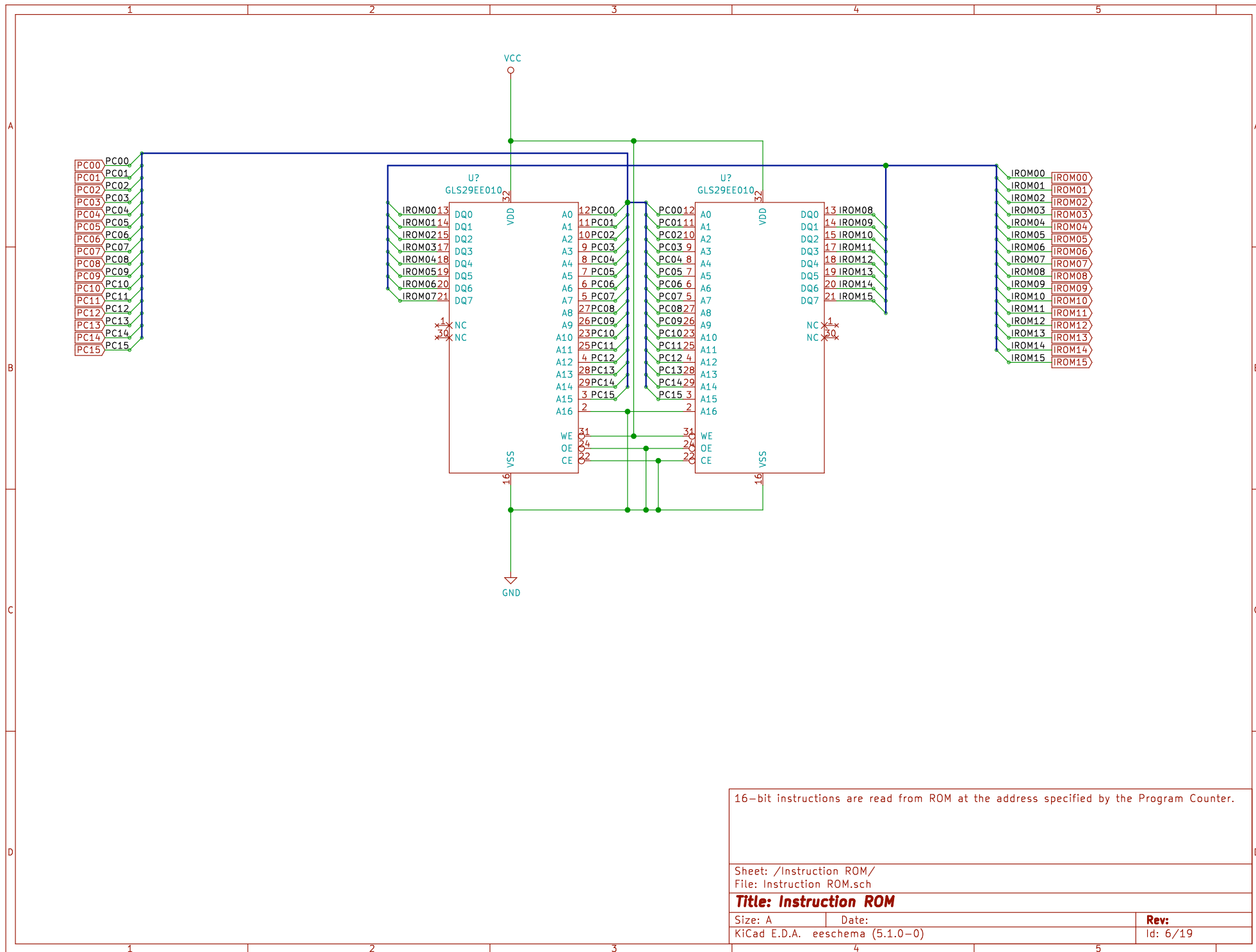


Sheet: /Program Counter/
File: Program Counter.sch

Title: Program Counter

Size: A Date:
KiCad E.D.A. eeschema (5.1.0-0)

Rev:
Id: 5/19



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| 1 | | | | | 2 | | | | | 3 | | | | | 4 | | | | | 5 | | | | | |
| A | | | | | | | | | | | | | | | | | | | | | | | | | A |
| B | | | | | | | | | | | | | | | | | | | | | | | | | B |
| C | | | | | | | | | | | | | | | | | | | | | | | | | C |
| D | | | | | | | | | | | | | | | | | | | | | | | | | D |
| 1 | | | | | 2 | | | | | 3 | | | | | 4 | | | | | 5 | | | | | |

Sheet: /Instruction RAM/
File: Instruction RAM.sch

Title: **Instruction RAM**

Size: A

Date:

KiCad E.D.A. eeschema (5.1.0-0)

Rev:

Id: 7/19

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| 1 | | | | | 2 | | | | | 3 | | | | | 4 | | | | | 5 | | | | | |
| A | | | | | | | | | | | | | | | | | | | | | | | | | A |
| B | | | | | | | | | | | | | | | | | | | | | | | | | B |
| C | | | | | | | | | | | | | | | | | | | | | | | | | C |
| D | | | | | | | | | | | | | | | | | | | | | | | | | D |
| 1 | | | | | 2 | | | | | 3 | | | | | 4 | | | | | 5 | | | | | |

Sheet: /Instruction Decoder/
File: Instruction Decoder.sch

Title: **Instruction Decoder**

Size: ADate:

KiCad E.D.A. eeschema (5.1.0-0)

Rev:
Id: 8/19

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| Sheet: /Instruction Decoder/ | |
| File: Instruction Decoder.sch | |
| Title: Instruction Decoder | |
| Size: A | Date: |
| KiCad E.D.A. eeschema (5.1.0-0) | |
| Rev: 8/19 | |

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| 1 | | | | | 2 | | | | | 3 | | | | | 4 | | | | | 5 | | | | | |
| A | | | | | | | | | | | | | | | | | | | | | | | | | A |
| B | | | | | | | | | | | | | | | | | | | | | | | | | B |
| C | | | | | | | | | | | | | | | | | | | | | | | | | C |
| D | | | | | | | | | | | | | | | | | | | | | | | | | D |
| 1 | | | | | 2 | | | | | 3 | | | | | 4 | | | | | 5 | | | | | |

Sheet: /Execute/
File: Execute.sch

Title: Execute

Size: A

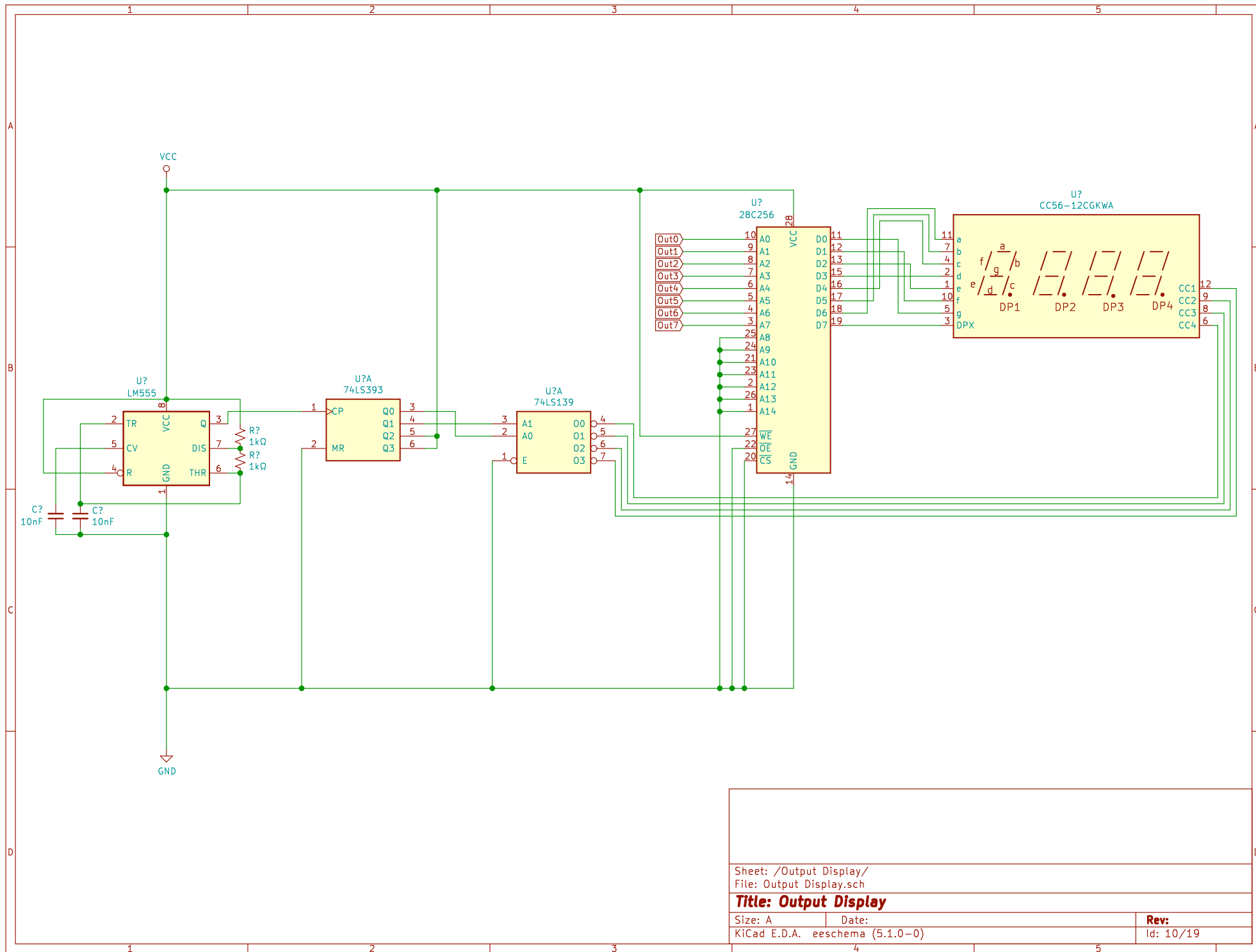
Date:

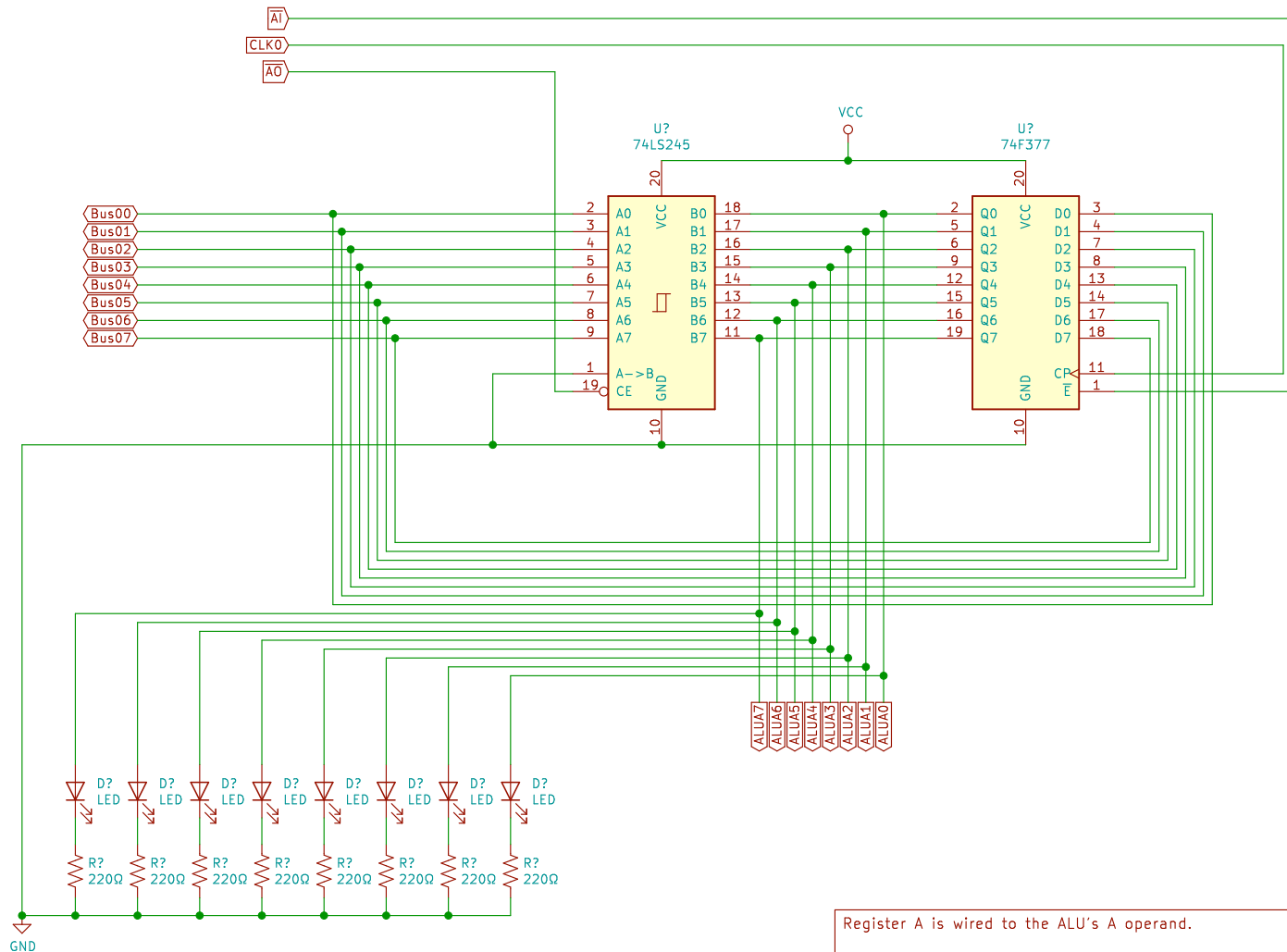
KiCad E.D.A. eeschema (5.1.0-0)

Rev:

Id: 9/19

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| Sheet: /Execute/ | | |
| File: Execute.sch | | |
| Title: Execute | | |
| Size: A | Date: | Rev: |
| KiCad E.D.A. eeschema (5.1.0-0) | | Id: 9/19 |





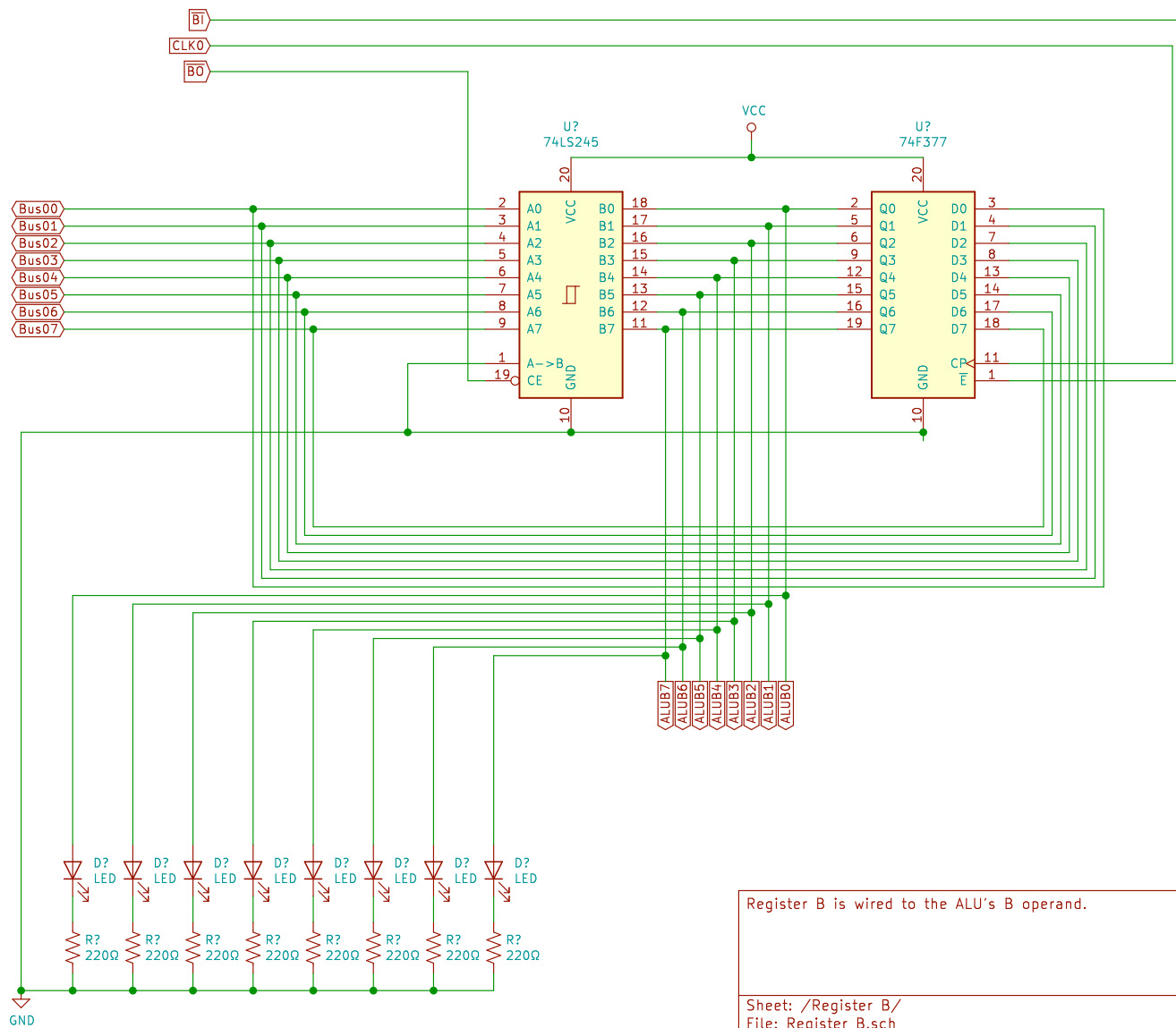
Register A is wired to the ALU's A operand.

Sheet: /Register A/
File: Register A.sch

Title: Register A

Size: A Date:
KiCad E.D.A. eeschema (5.1.0-0)

Rev:
Id: 11/19



Register B is wired to the ALU's B operand.

Sheet: /Register B/
File: Register B.sch

Title: Register B

Size: A Date:
KiCad E.D.A. eeschema (5.1.0-0)

Rev:
Id: 13/19

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| 1 | | | | | 2 | | | | | 3 | | | | | 4 | | | | | 5 | | | | | |
| A | | | | | | | | | | | | | | | | | | | | | | | | | A |
| B | | | | | | | | | | | | | | | | | | | | | | | | | B |
| C | | | | | | | | | | | | | | | | | | | | | | | | | C |
| D | | | | | | | | | | | | | | | | | | | | | | | | | D |
| 1 | | | | | 2 | | | | | 3 | | | | | 4 | | | | | 5 | | | | | |

Sheet: /Transfer Register/
File: Transfer Register.sch

Title: Transfer Register

Size: A

Date:

KiCad E.D.A. eeschema (5.1.0-0)

Rev:

Id: 14/19

Sheet: /Transfer Register/
File: Transfer Register.sch

Title: Transfer Register

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| Size: A | Date: | Rev: |
| KiCad E.D.A. eeschema (5.1.0-0) | | Id: 14/19 |

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| 1 | | | | | 2 | | | | | 3 | | | | | 4 | | | | | 5 | | | | | |
| A | | | | | | | | | | | | | | | | | | | | | | | | | A |
| B | | | | | | | | | | | | | | | | | | | | | | | | | B |
| C | | | | | | | | | | | | | | | | | | | | | | | | | C |
| D | | | | | | | | | | | | | | | | | | | | | | | | | D |
| 1 | | | | | 2 | | | | | 3 | | | | | 4 | | | | | 5 | | | | | |

Sheet: /Data RAM/
File: Data RAM.sch

Title: Data RAM

Size: A

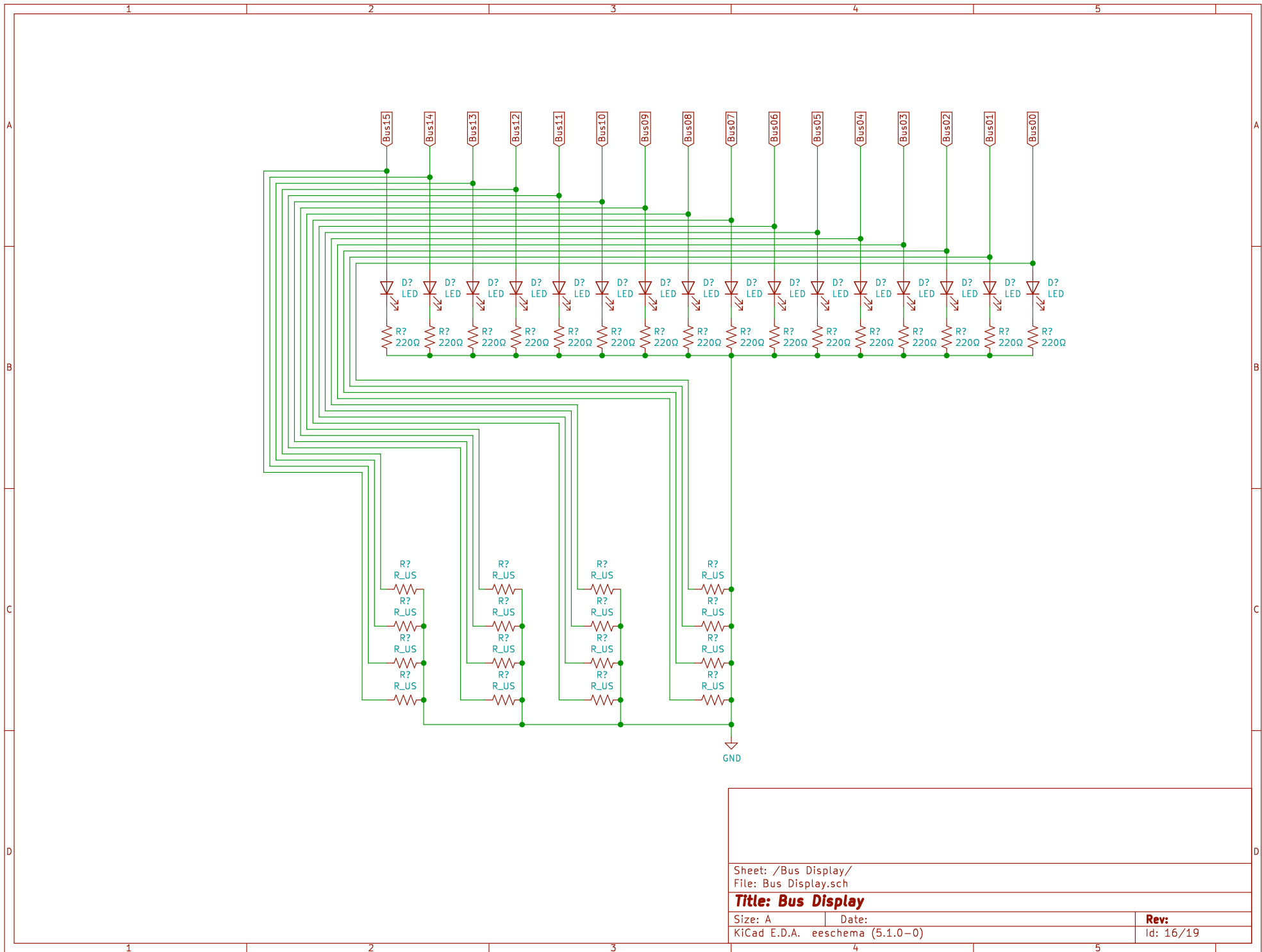
Date:

KiCad E.D.A. eeschema (5.1.0-0)

Rev:

Id: 15/19

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|---------------------------------|-------|-----------|
| Sheet: /Data RAM/ | | |
| File: Data RAM.sch | | |
| Title: Data RAM | | |
| Size: A | Date: | Rev: |
| KiCad E.D.A. eeschema (5.1.0-0) | | Id: 15/19 |

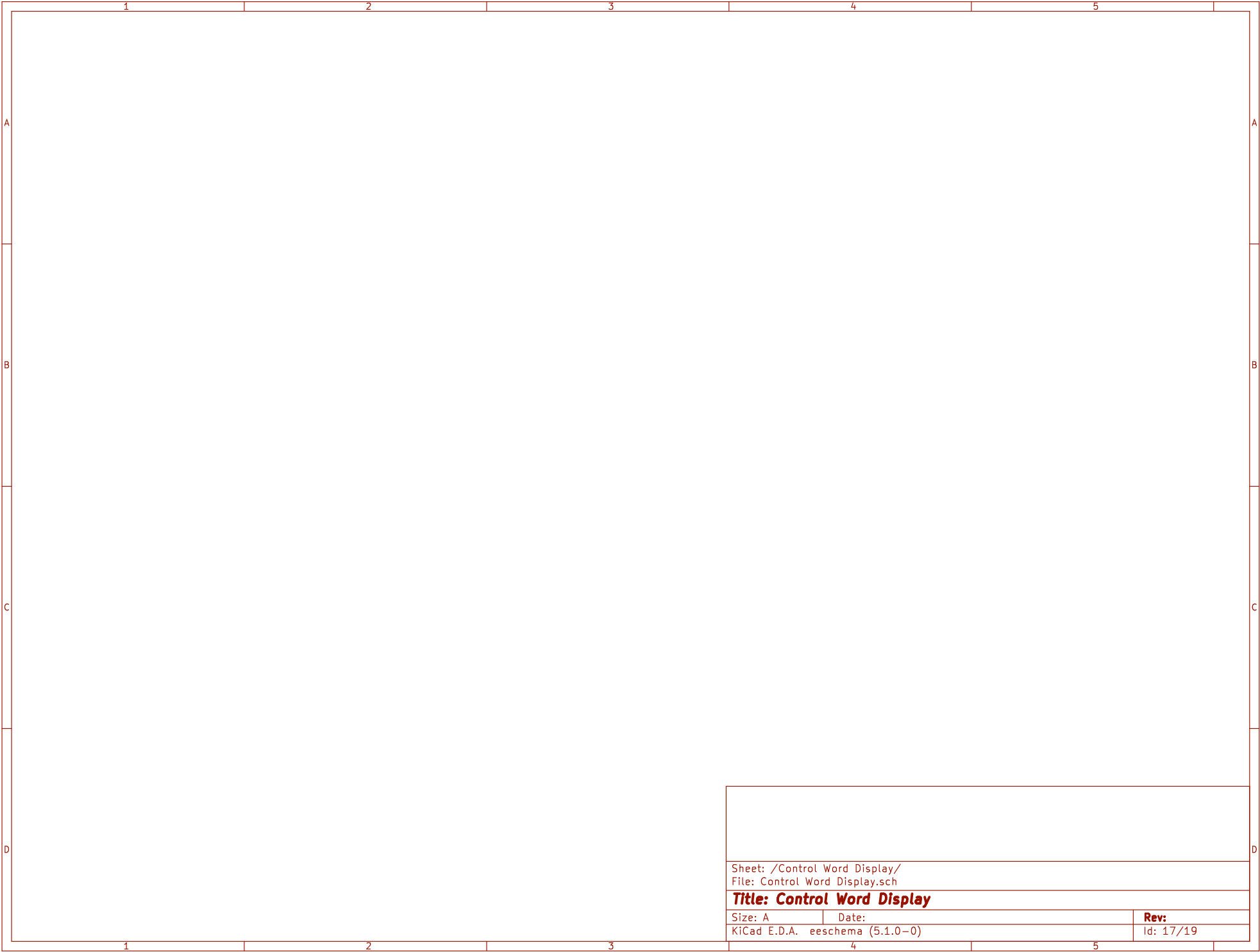


Sheet: /Bus Display/
File: Bus Display.sch

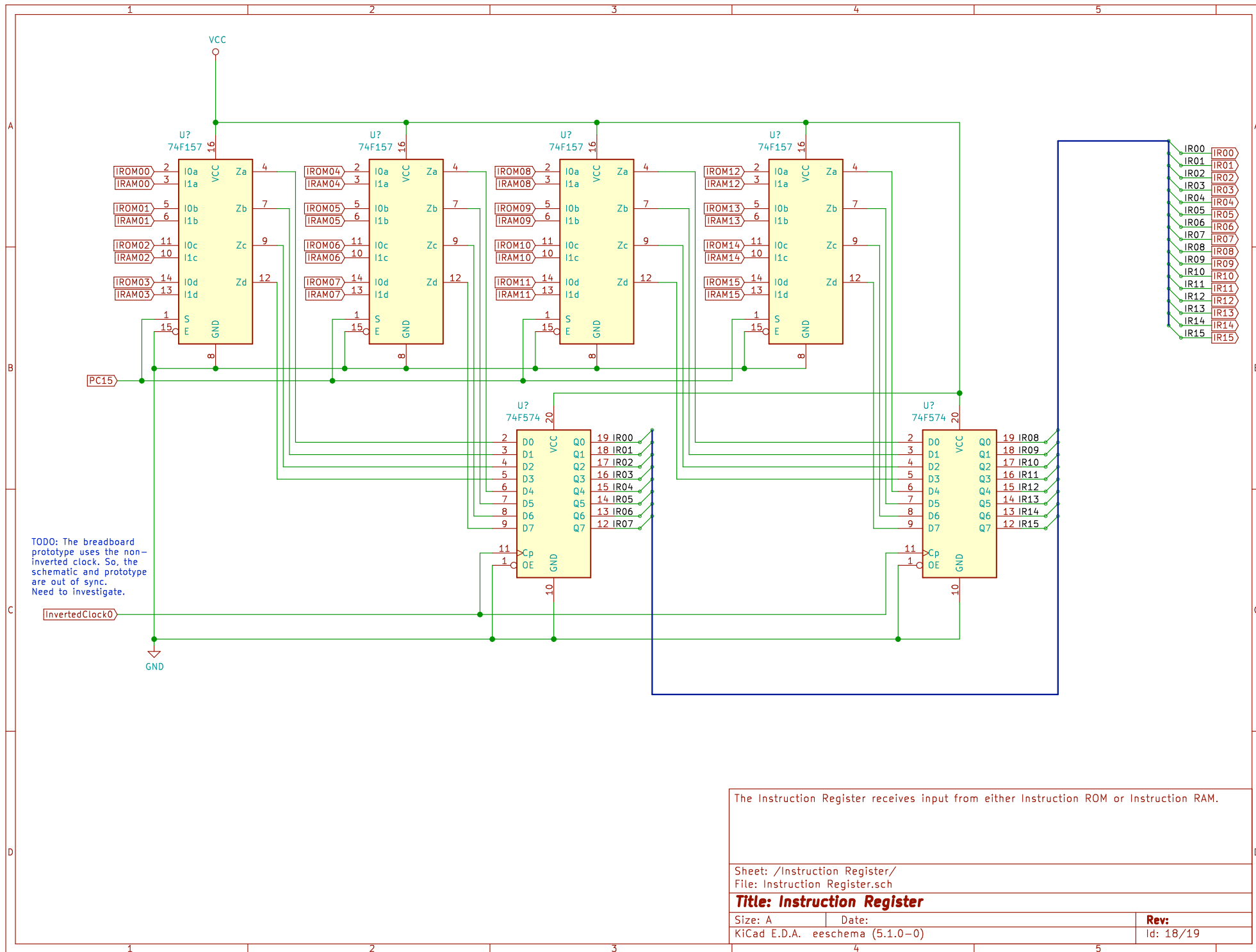
Title: Bus Display

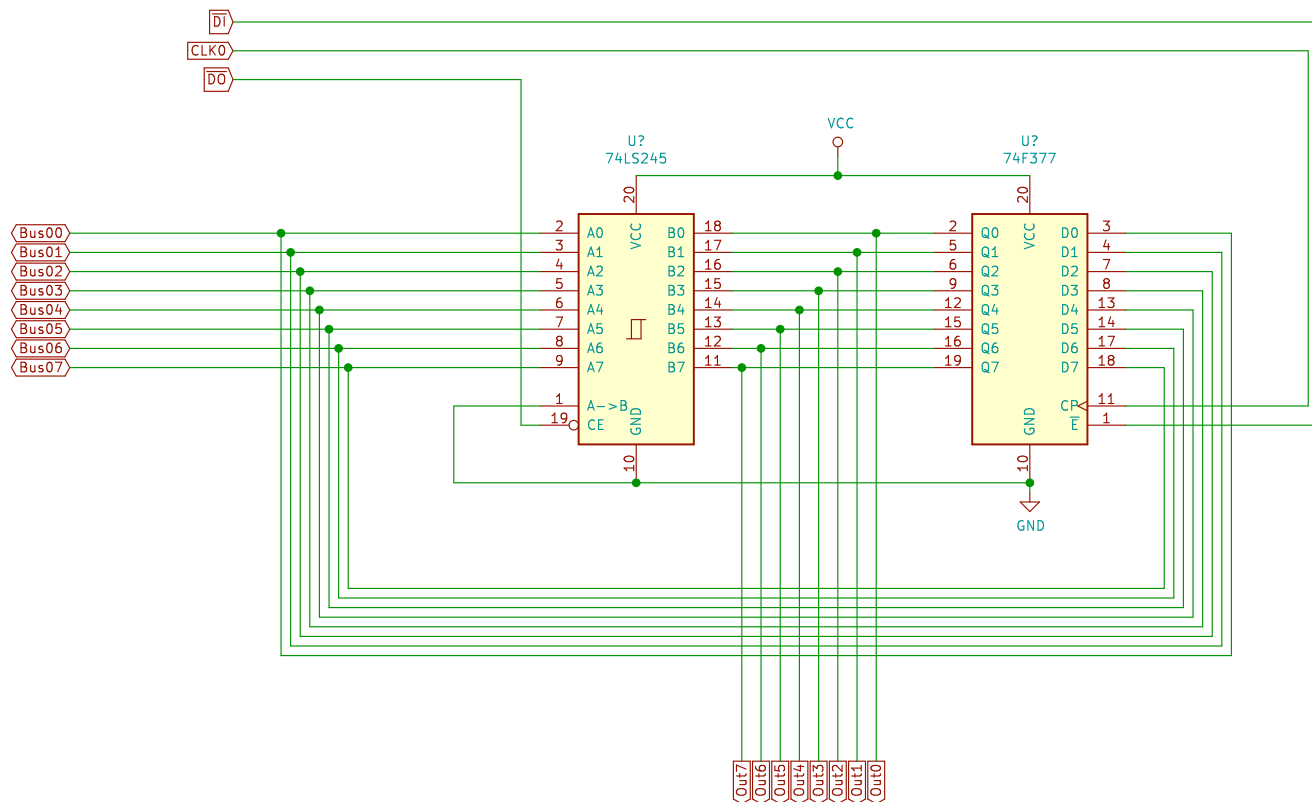
Size: A Date:
KiCad E.D.A. eeschema (5.1.0-0)

Rev:
Id: 16/19



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|---|-------|-------------|
| Sheet: /Control Word Display/ File: Control Word Display.sch | | |
| Title: Control Word Display | | |
| Size: A | Date: | Rev: |
| KiCad E.D.A. eeschema (5.1.0-0) | | Id: 17/19 |





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| Register D is wired directly to the Output Display Module. | | |
| Sheet: /Register D/ File: Register D.sch | | |
| Title: Register D | | |
| Size: A | Date: | Rev: |
| KiCad E.D.A. eeschema (5.1.0-0) | | Id: 19/19 |