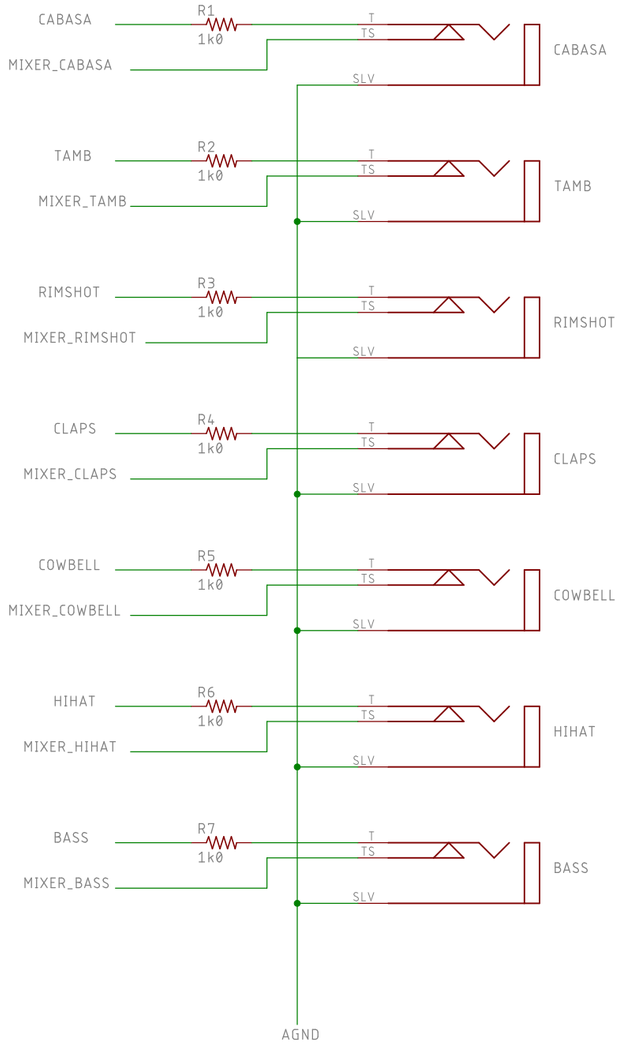
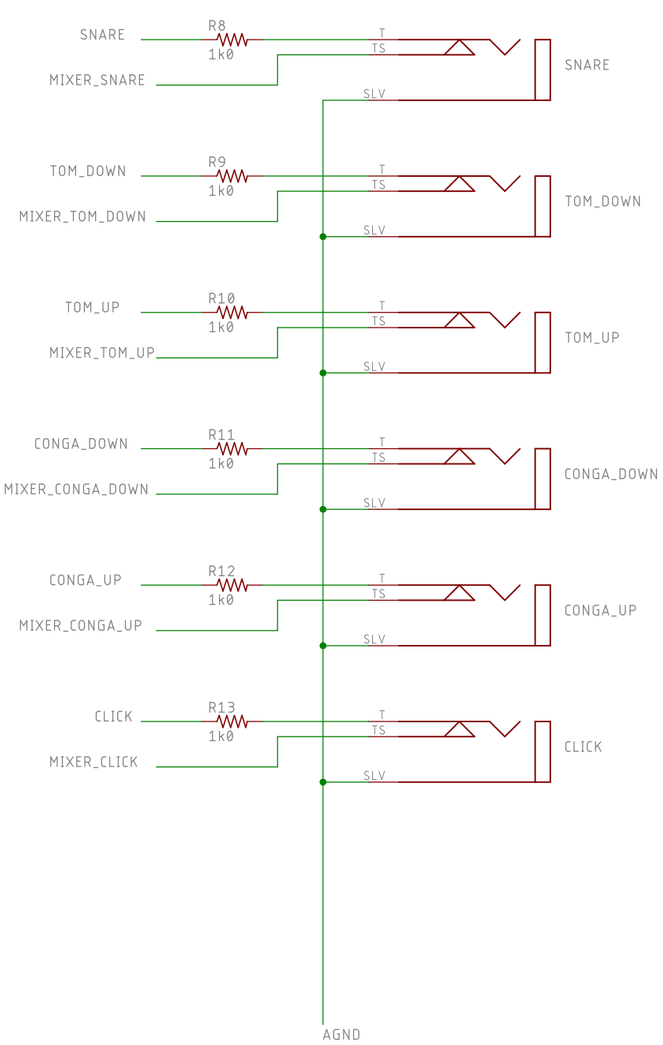
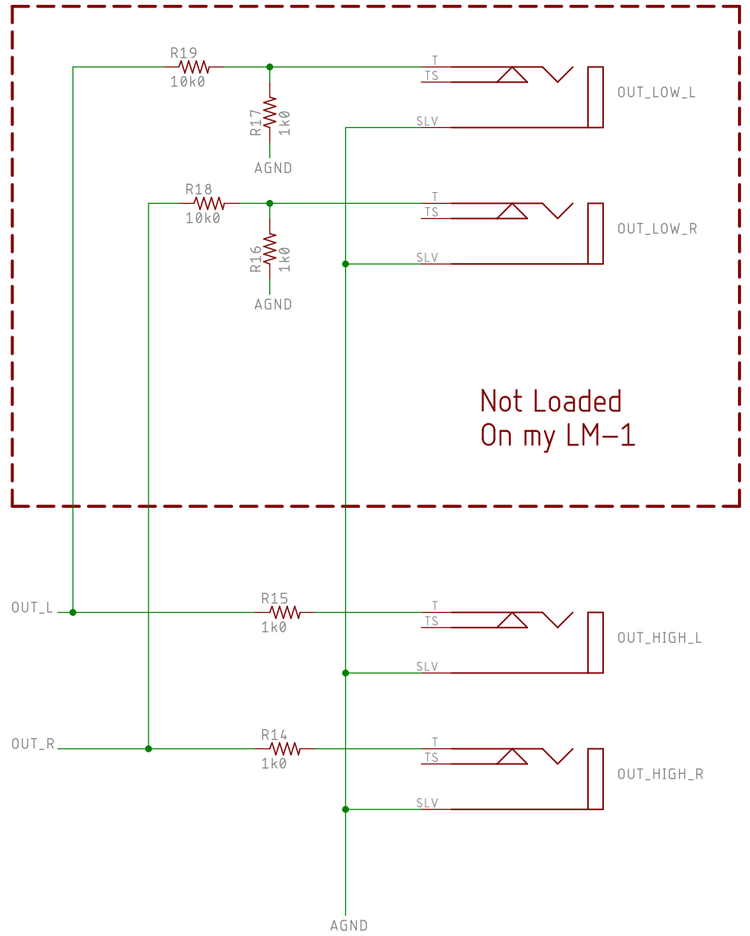
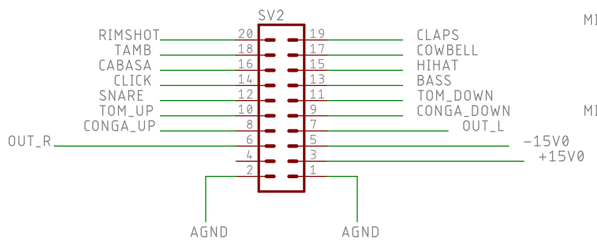
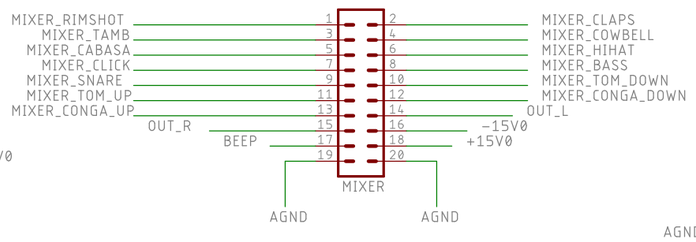






NOTE THESE ARE FLIPPED





https://github.com/joebritt/luma1
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I/O JACKS – ANALOG SIDE

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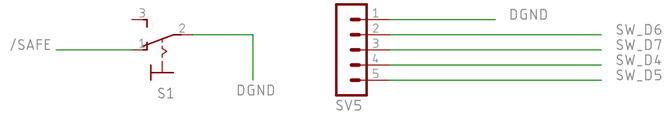
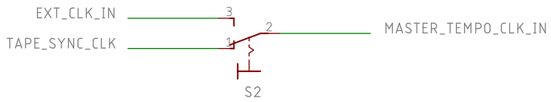
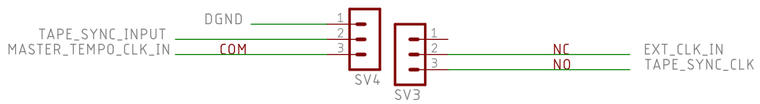






These 6 pads are for the TAPE SYNC FROM
jack. Only 5 pads are used, and one of those is Ground.

The other 4:

TAPE SYNC input signal (Tip), goes to XR2211 tone decoder pin 2 (input)

The remaining 3 are from a SPDT switch in the TAPE SYNC FROM jack:

NO (no jack plugged in): XR2211 tone decoder pin 7 (data output)

COM: Data bit 0 on input port – THIS IS THE TEMPO CLOCK INPUT! (MASTER_TEMPO_CLK_IN)

NC (no jack plugged in): EXT_CLK_IN, which is normally INT_TEMPO_CLK (when nothing plugged in)

SO
When an audio cable supplying FSK encoded tape sync is plugged into the TAPE SYNC jack,
the LM-1 tempo clock will come from the decoded tape sync data instead of the external clock
input jack OR the internally generated tempo clock.

My LM-1 has a 4PDT toggle switch on the 4 clock routing signals:

tapeclk / EXT_CLK_IN / MASTER_TEMPO_CLK_IN / TAPE_SYNC_CLK

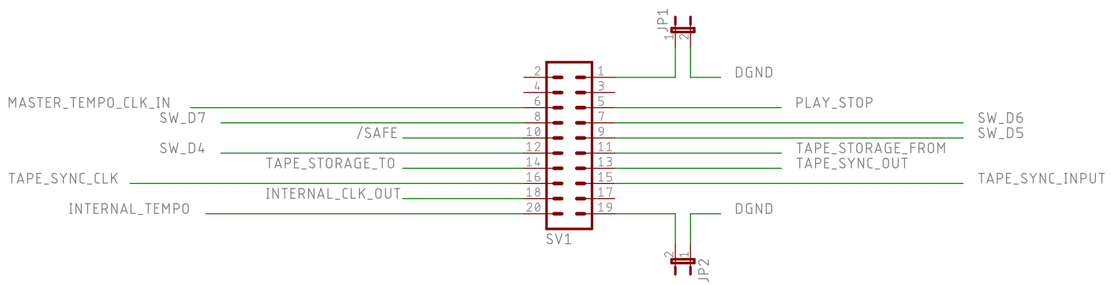
In one position, those 4 signals are routed to their normal places. The jacks themselves enforce priority:

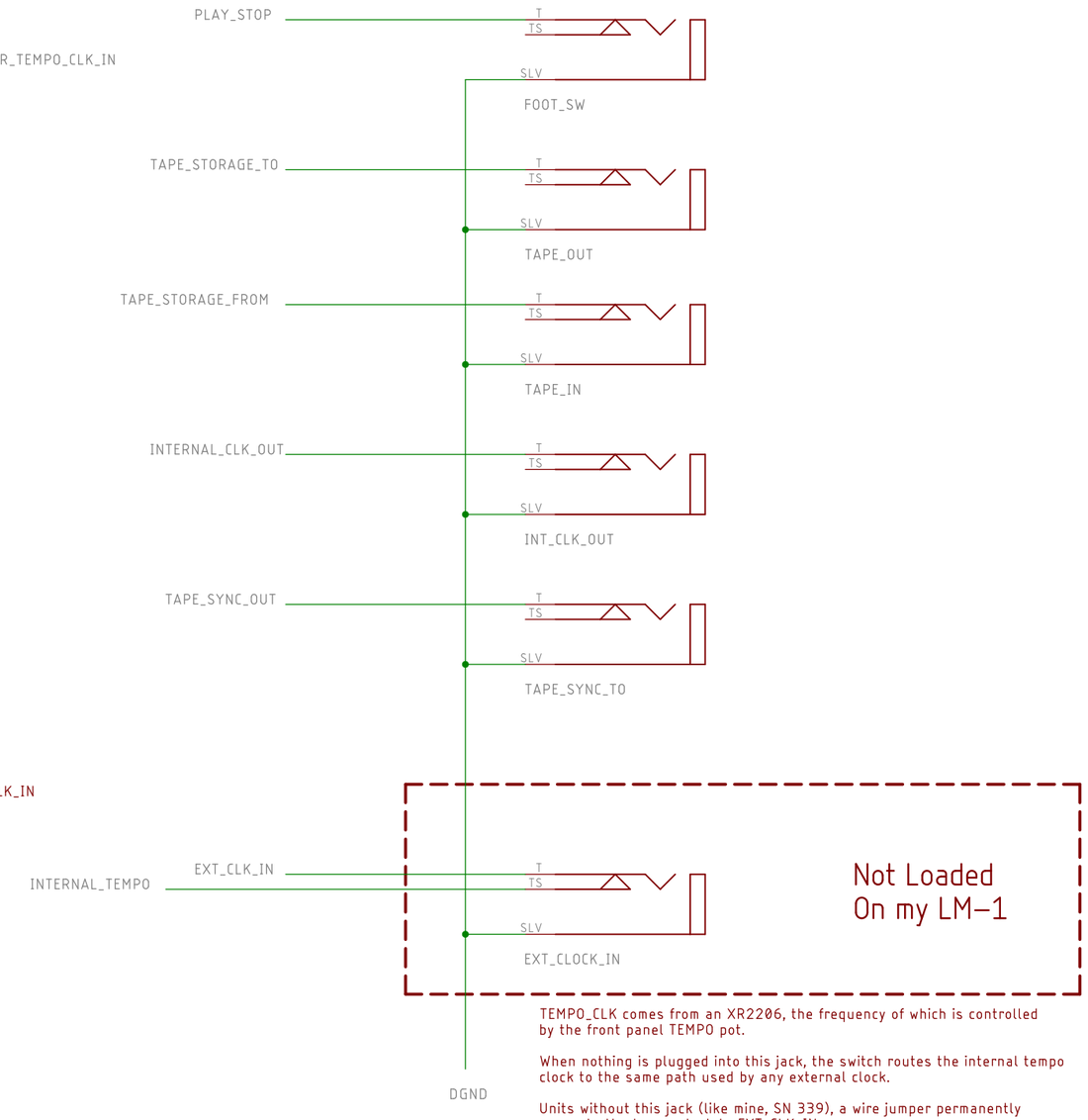
Nothing in Ext Clock In OR Tape Sync From: INT_TEMPO_CLK -> EXT_CLK_IN -> MASTER_TEMPO_CLK_IN

Plug in Ext Clock In AND Noting in Tape Sync From: INT_TEMPO_CLK disconnects, INT_TEMPO_CLK -> EXT_CLK_IN -> MASTER_TEMPO_CLK_IN

Plug in Tape Sync From (does not matter if anything in Ext Clock In): Tape Sync signal to XR2211 decoder, resulting TAPE_SYNC_CLK to MASTER_TEMPO_CLK_IN

In the other position, EXT_CLK_IN is connected directly to MASTER_TEMPO_CLK_IN.
This switch lets one bypass the Tape Sync In (and falling back to the internal clock) without unplugging the Tape Sync In cable.





TEMPO_CLK comes from an XR2206, the frequency of which is controlled by the front panel TEMPO pot.

When nothing is plugged into this jack, the switch routes the internal tempo clock to the same path used by any external clock.

Units without this jack (like mine, SN 339), a wire jumper permanently connects the tempo clock to EXT_CLK_IN.

https://github.com/joebritt/luma1
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I/O JACKS – DIGITAL SIDE

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