

Connections

Diagram illustrating the connections for the PWR_FLAG and PWR_FLAG pins. The connections are as follows:

- Pin 1: GND
- Pin 2: VCC
- Pin 3: VCC
- Pin 4: VCC

The diagram shows a 4-pin header with pins 1, 2, 3, and 4. Pin 1 is connected to GND. Pin 2 is connected to VCC. Pin 3 is connected to VCC. Pin 4 is connected to VCC. The connections are labeled with arrows and text: GND, VCC, and VCC.

LED Indicators

The image displays two circuit diagrams for LED indicators, each featuring a 5-pin LED strip connected to a 5-pin header. The left diagram shows the LED strip connected to a header with labels MUTE, A14, A13, A12, A11, A10, A9, and A8. The right diagram shows the LED strip connected to a header with labels QDIVISION3, QDIVISION2, QDIVISION1, QDIVISION0, QDIVISION7, QDIVISION6, QDIVISION5, and QDIVISION4. Both diagrams show the LED strip connected to ground (GND) and a common ground point.

Registers

The diagram shows two 74LS574 registers. The left register is connected to a **LOAD_DIVISION** signal (pin 11) and has its Q outputs connected to **QDIVISION0** through **QDIVISION7**. The right register is connected to a **LOAD_META** signal (pin 11) and has its Q outputs connected to **A8** through **A14**, with the **MUTE** output also connected to **A14**. Both registers have D inputs connected to **DATABUS0** through **DATABUS7** and are powered by **VCC** and **GND**.

Frequency Divider Circuit

The diagram illustrates a Frequency Divider Circuit. It consists of two 74LS169 counters and a 74LS30 decoder.

Counter 1 (Left):

- Inputs:**
 - QDIVISION0 (3) to P0
 - QDIVISION1 (4) to P1
 - QDIVISION2 (5) to P2
 - QDIVISION3 (6) to P3
 - ENABLE_COUNTER_LOAD (9) to \overline{PE}
 - CRYSTAL_OSCILLATOR_IN (2) to CP
- Outputs:**
 - Q0 (14) to FREQ0
 - Q1 (13) to FREQ1
 - Q2 (12) to FREQ2
 - Q3 (11) to FREQ3
- Other Pins:**
 - VCC (16) and GND (8) are connected to the power pins.
 - $\overline{U/\overline{D}}$ (1) and \overline{CEP} (7) are connected to GND.
 - \overline{CET} (10) is connected to GND.
 - \overline{TC} (15) is connected to the \overline{PE} pin of Counter 2.

Counter 2 (Right):

- Inputs:**
 - QDIVISION4 (3) to P0
 - QDIVISION5 (4) to P1
 - QDIVISION6 (5) to P2
 - QDIVISION7 (6) to P3
 - ENABLE_COUNTER_LOAD (9) to \overline{PE}
 - CRYSTAL_OSCILLATOR_IN (2) to CP
- Outputs:**
 - Q0 (14) to FREQ4
 - Q1 (13) to FREQ5
 - Q2 (12) to FREQ6
 - Q3 (11) to FREQ7
- Other Pins:**
 - VCC (16) and GND (8) are connected to the power pins.
 - $\overline{U/\overline{D}}$ (1) and \overline{CEP} (7) are connected to GND.
 - \overline{CET} (10) is connected to GND.
 - \overline{TC} (15) is connected to the \overline{PE} pin of Counter 1.

74LS30 Decoder (Right):

- Input:** FREQUENCY_CLOCK_PULSE (15) to A.
- Outputs:**
 - FREQ0 (12) to FREQ7 (1) are connected to the output pins.
 - Output 8 is connected to the \overline{PE} pin of Counter 1.
- Other Pins:**
 - VCC (14) and GND (7) are connected to the power pins.
 - USB (1) is connected to GND.