

Sony icf-c318 Clock Radio



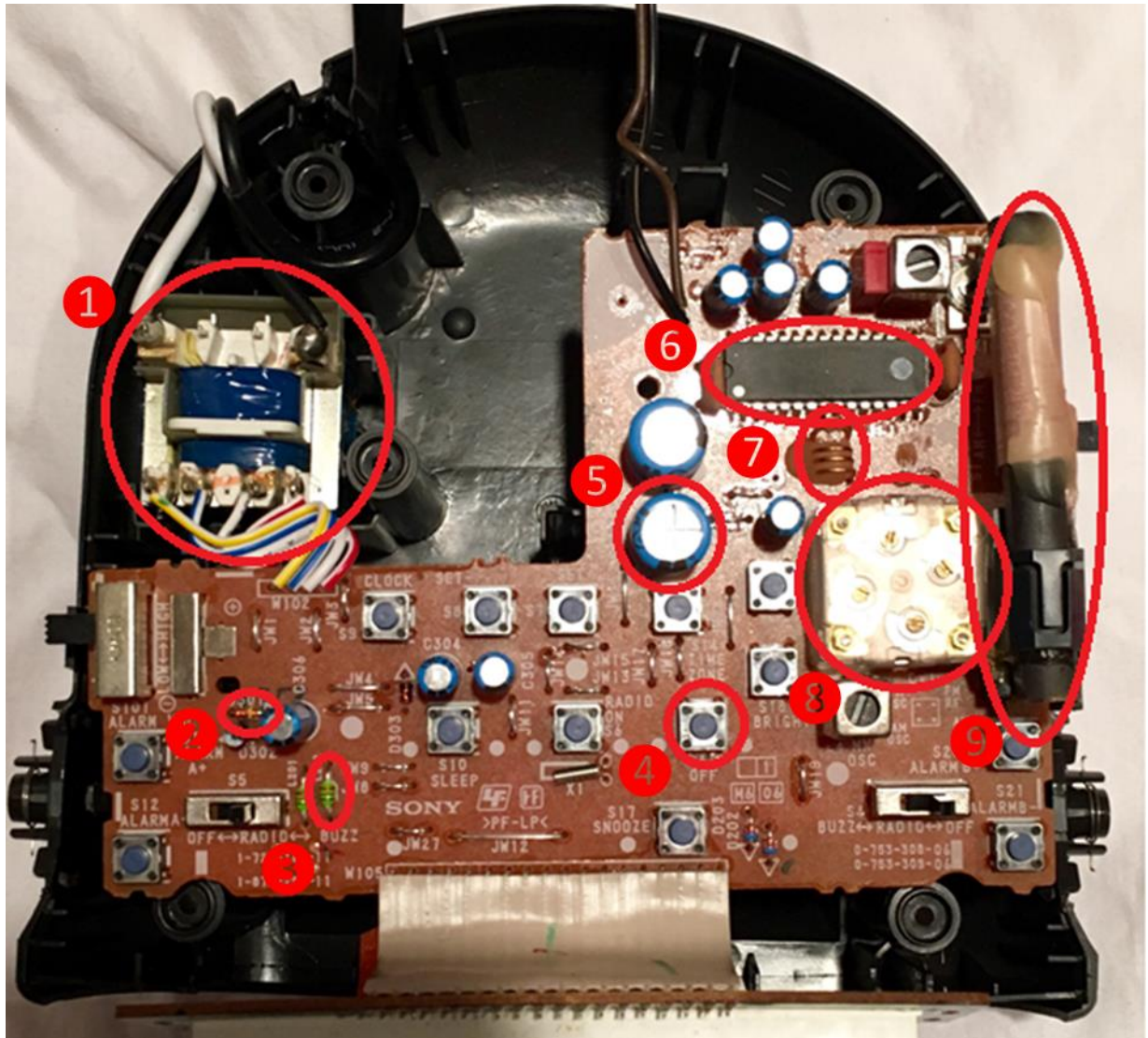
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Team 8900B

Introduction:

In 1954, Texas Instruments revolutionized the radio industry by creating the first transistor radio. Since then, these radios have made information and education very accessible.

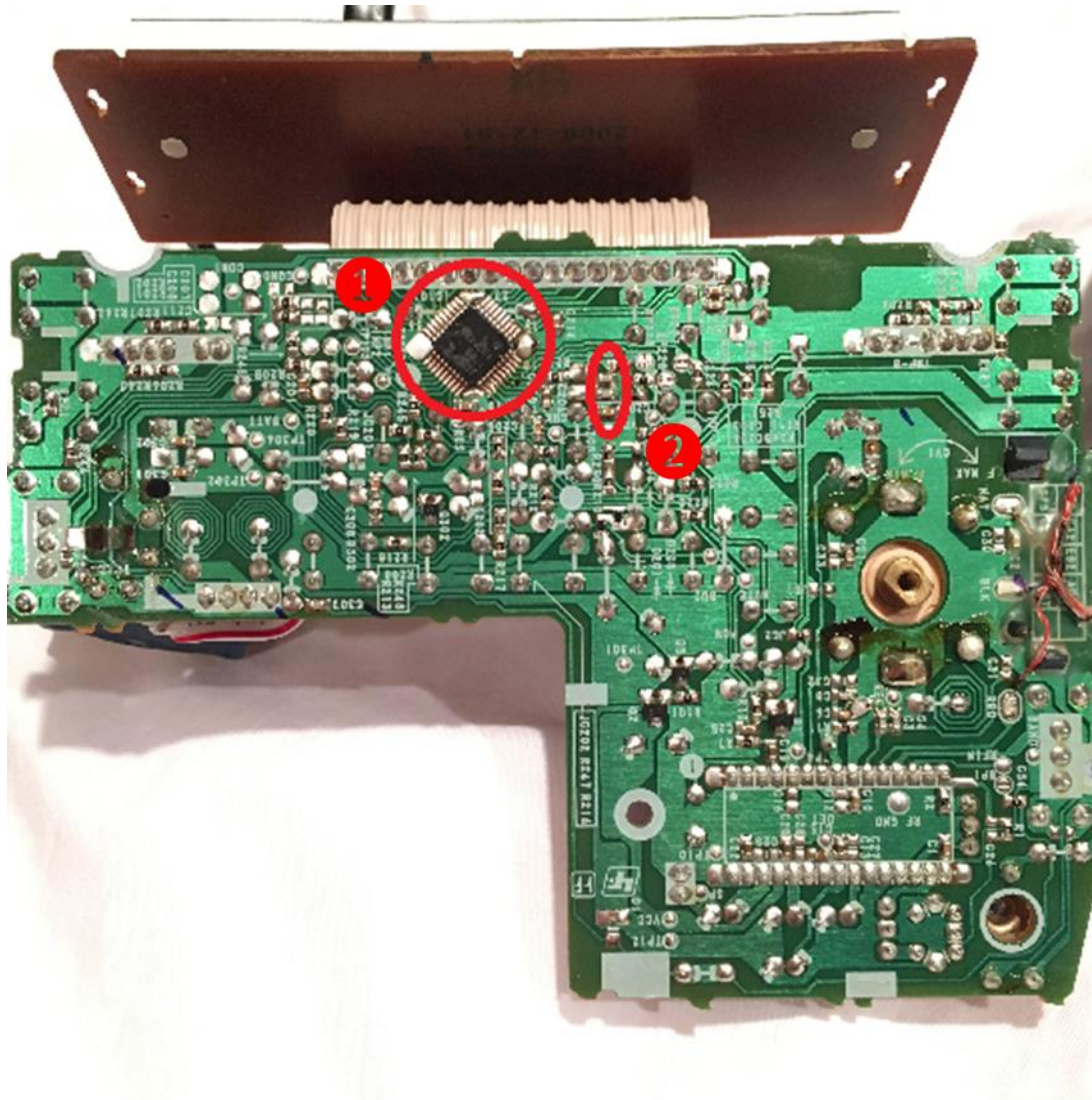
The Components:



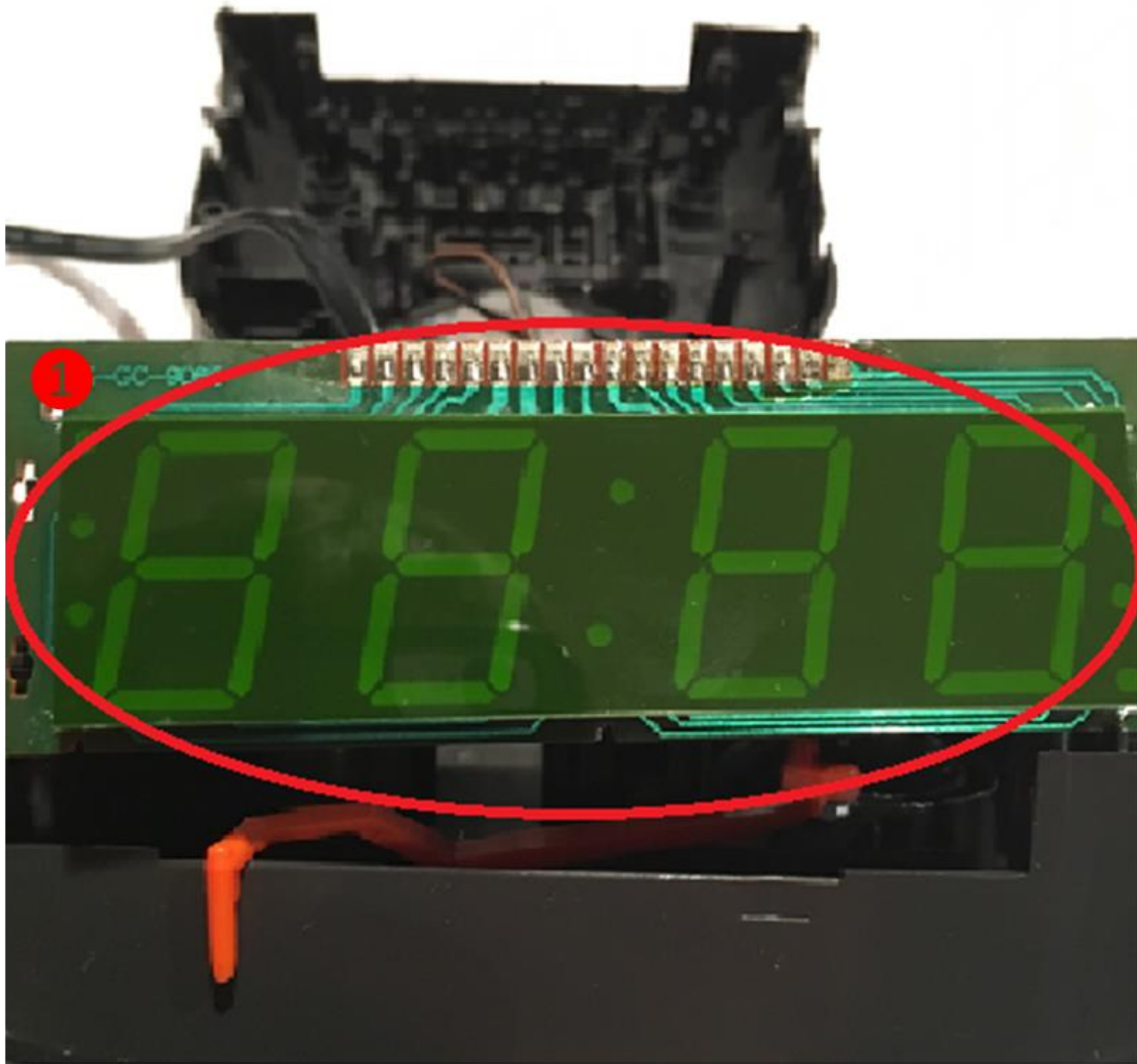
1. **Transformer:** Lowers the voltage.
2. **Diode:** Only allows the flow of electricity one way.
3. **Resistor:** Limits the flow of electricity.
4. **Button:** Breaks the flow of electricity when it is pressed.
5. **Capacitor:** Acts as a battery with a set discharge rate.
6. **CXA1019S:** This chip helps amplify radio waves and transform them into sound waves. It contains many transistors, which can control, generate, and amplify electricity. These amazing semiconductors do the “thinking” in today’s technology. Not surprisingly, they

were pioneered by TI in 1954 when they opened the gates for the digital revolution with the first commercial transistor.

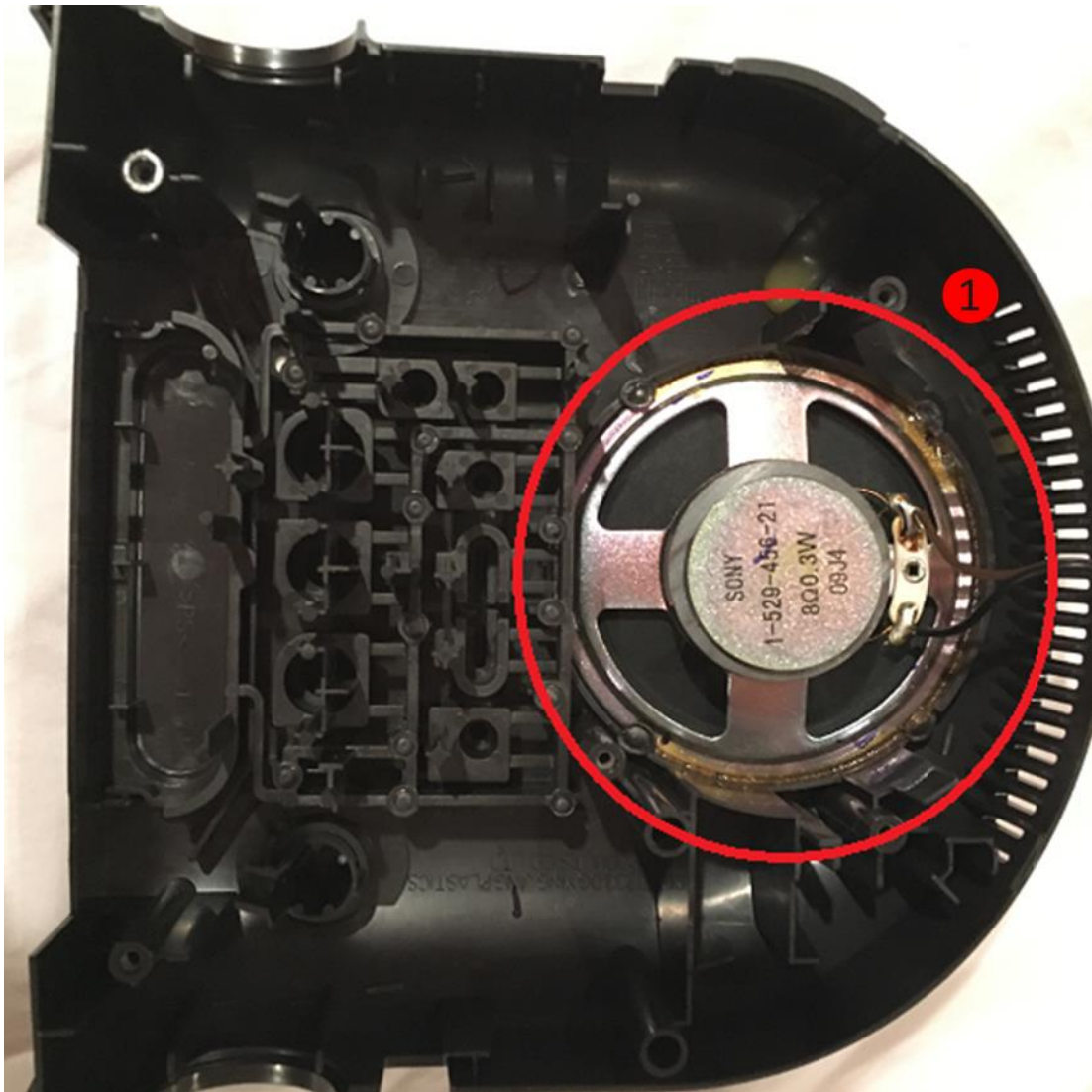
7. **Inductor:** Affected by radio waves, a type of magnetic field so these inductors are a key component of a radio receiver.
8. **Variable capacitor:** Used to tune the radio.
9. **AM antenna:** Receives the radio waves, the power cord is used as an FM antenna.



1. **872B06a:** In charge of keeping/setting/displaying the time. Contains an oscillator to keep time. Like a pendulum in a grandfather clock, this keeps the precise rhythm required for timing.
2. **Surface-Mount-Device:** Capacitors/Resistors (Same purpose as components above), these just make manufacturing easier. TI's components are mostly available in this form, making their technology cheap and accessible.



1. **Display:** Using segmented LEDs which can display the time, this component turns electrical signals into visible information.



1. **Speaker:** An electromagnet moves a membrane to produce sound waves.

Conclusion:

Our exploration of the Sony iCF-C318 clock radio enabled us to see the amazing complexity of today's technology. We now appreciate all the hard work and thought engineers put into these machines.