

TEAM 457B

Team Members

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Texas Instruments Electronics Online Challenge

Introduction-

For this challenge we decided to take apart Sony RMT-V266A Video Remote. We chose this remote because we wanted to better understand how a remote functions. This remote was a right fit for the challenge because it was old and it was not functioning.

Summary-

First, we used a flathead screwdriver to separate the rear housing from the front housing. Once the two halves were split apart, we found a Single Layer PCB, a Elastomer button pad, and a SPDT switch. On the Single Layer PCB we found a lot of components. Here is a list of parts with all of the components-

Sony Video Remote RMT-V266A Parts List

Part Number	Reference Designator	Description
700A12042A	N/A	Single Layer PCB
3-052-891	N/A	Front Housing
3-052-892	N/A	Rear Housing
3-709-432	N/A	Battery Cover
N/A	N/A	Elastomer
22493 114	IC1	SANWA 30 pin integrated circuit
4000A	X1	Crystal
N/A	R1	220Ω Resistor
N/A	R2	4.7Ω Resistor
N/A	Q1	Transistor (BF)
N/A	D1	IR LED (Infrared Light Emitting Diode)
N/A	D2	Diode
N/A	C1	Capacitor 6.3V 100μF
N/A	C2	Capacitor
N/A	C3	Capacitor
N/A	SW1	SPDT Switch

Research-

On the Single Layer PCB there are a lot of components. One of the components is, the SANWA 30 Pin IC which is a chip used to control the functions of the RMT-V266A Sony Video Remote Control. There is one Crystal labeled X1 which is where you get a synced signal from the VCR so, that it is linked to only each other. There are two resistors which limit the flow of an electronic circuit. There is one transistor which amplifies the signal. There are two diodes. One is a IR led to send a signal to the VCR. The other one is used to allow electric currents in one direction but not the other direction. There are three capacitors. Which are used for storing electricity. Then the last component is a SPDT switch. Which is used for switching between TV and VIDEO.

Conclusion-

This Challenge for us helped us understand how remotes work. The remote we found out looked very simple but was indeed very complex. We found out that remotes are very interesting machines.

Pictures-



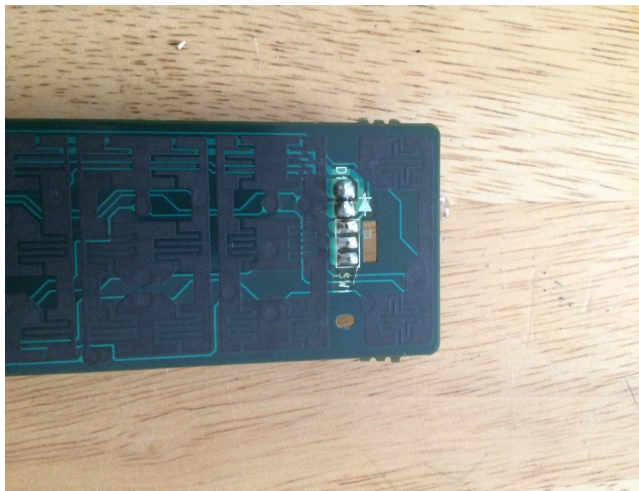
Before We Split It Apart



After We Split It Apart



The Lower Part Of The Single Layer PCB



The Upper Part Of The Single Layer PCB