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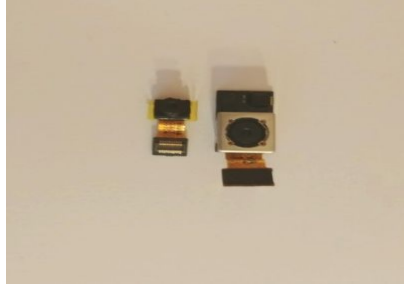
Miraleste Intermediate School Robotics, Team 7035E

The device 7035E selected was the LGG2. We chose the phone because we were interested in learning how the item we use so much, works. Throughout taking apart the LGG2 we encountered many different pieces that made up the phone. We found the motherboard, loudspeaker, ear speaker, battery, cameras, etc. The components in the phone, has many various functions within the phone which makes the phone work efficiently and cohesively.



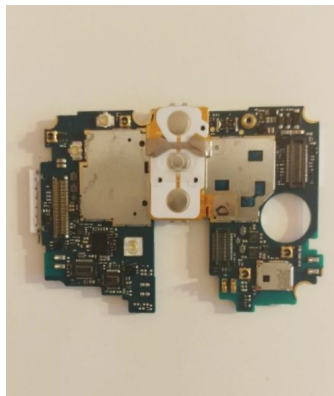
The battery within the phone

The battery on any phone not just this phone, is like the heart of the phone. It gives the phone power and life so that you can do all the things you do everything you need to do. The battery sends volts of power to the different components of the phone to power it. Vex batteries and this phone battery are similar each other, because they both power the brain of the product. So all in all, the battery, is the most important component a phone needs to work and function.



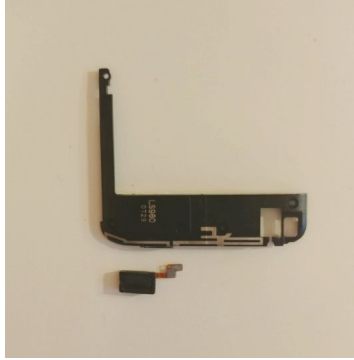
The camera

The cameras of this phone take quality pictures for the user to enjoy. Unfortunately, the front facing camera quality is significantly worse than the rear camera. However, the rear camera is exceptional for phone cameras of its time. When retrieving the camera we noticed that the camera is smaller than we expected it to be. The rear camera is 13 MP while the front camera is only 2.1 MP.



The motherboard

The motherboard/ logic board is the control center of the phone. It is similar to a vex cortex because it is where every piece is told how to react to an action. The motherboard was the most secure part of the interior of the phone. It had the most screws and was protected by a second plastic cover. All of the circuits were on the motorboard and the 2 main connecting wires were attached to the logic board.



Loudspeaker and ear speaker

The speakers of the phone work together to let the user listen to sound from their phone. When we were disassembling the phone the loudspeaker was the first thing we took out. The loudspeaker was much larger than expected.

Throughout this experiment our group learned many valuable lessons. Our team learned that our phones contain many different components that work together to create a functioning product. We noticed that every part of the phone's interior space was used very wisely and was very organized to make the phone as efficient as possible. From that we can learn to have an organized robot to make our robot work as successfully as possible. Our team also learned the value of patience and precision. When taking apart the phone, we had to be very patient when a component of the phone was refusing to be detached. The skill of precision was practiced when we had to take out wires out carefully or unlatch small clasps securing the interior of the phone. Our team, 7035E took apart the LG G2 and learned many valuable lessons.



Overview of all the components we encountered

### List of parts

Battery	Non removable Li-Po 3000 mAh battery
Loudspeaker and ear speaker	24-bit/192kHz audio
Rear camera	13 MP (f/2.4, 29mm, 1/3", 1.12 $\mu\text{m}$ ), autofocus, OIS, LED flash
Front camera	2.1 MP, 1080p@30fps
Sensors	Accelerometer, gyro, proximity, compass
Logic board/motherboard	
Connecting wires	
Rear housing cover	
Power and volume buttons	
Glass Screen	
Plastic cover	
Plastic frame/base	