Wireless Charging System for Low-Power Devices

Introduction:
Many Smartphone users have experienced a broken or missing charging cable at some point. Over 200 million Americans own a low-power device (according to a Pew Research Center Survey taken in October of 2015). So there is a large target market for this sleek option to charge low-power devices.

System Overview:

Receiver:
- Attaches to the low-power device.
- Contains a coil, high-frequency AC to DC converter, USB to connect to different types of devices.
- Using a frequency of 120kHz.
- Coil Inductance of 13uH.

Transmitter:
- Contains an inverter, capacitors, inductors, and a transmitter coil.
- These components together create a high frequency current at the transmitter coil.
- Coil Inductance of 12uH.

Results:
- The System charges a low-power device such as your cell phone.
- It transfers 5 Watts of power and takes about 2 hours to charge.

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