**Transceiver ICs detail:**

**Transmitter Circuitry**

1. **Power Amplifier:**

**Part Number:** LA4440 (By Sanyo)

**Datasheet:** <http://www.datasheetcatalog.com/datasheets_pdf/L/A/4/4/LA4440.shtml>

**Purchase Link:** <http://www.alibaba.com/showroom/sanyo-la4440.html>

**ICs Required:** 1

**Note:** I think this is obsolete now and not available on the company’s website. (other than the provided link its also available at e-bay but price is high I think).

For our test bed, we purchased its PCB I think which also has an op-amp before Power amplifier.

1. **Audio Transformer.**

No particular part number. It’s a local made transformer, available at college road. May be we get some info from College road. I will check about it.

Description: It is step up audio transformer with 3 input terminal and 5 output terminal. It provides 4 different gains at the output

At second terminal Gain =2.75

At third terminal Gain = 4.5

At fourth terminal Gain =5.75

At fifth terminal Gain = 12.75

**Note:** I think this is obsolete now and not available on the company’s website.

**Receiver Circuitry:**

1. **Op – Amp:**

**Part Number**: AD712JN (By Analog Devices)

**Product info and Datasheet:** <http://www.analog.com/en/all-operational-amplifiers-op-amps/operational-amplifiers-op-amps/ad712/products/product.html>

**ICs Required:** 3

1. **Multiplier:**

**Part Number**: AD633JN

**Product info and Datasheet**: <http://www.analog.com/en/special-linear-functions/analog-multipliersdividers/ad633/products/product.html>

**Ics Required:** 1

**For AGC: (Required List of Ics)**

|  |  |
| --- | --- |
| **Part Number** | **Quantity** |
| AD633JN | 1 |
| AD712JN | 1 |

**For Low Pass Filter and Pre Amplifier: (Required List of Ics)**

|  |  |
| --- | --- |
| **Part Number** | **Quantity** |
| AD712JN | 2 |

**Transceiver Circuitry Complete List:**

|  |  |  |
| --- | --- | --- |
| **Components** | **Description** | **Quantity** |
| LA4440 | Power Amplifier | 1 |
| Audio Transformer | Step-up Transformer | 1 |
| AD633JN | Multiplier | 1 |
| AD712JN | Op-Amp | 3 |
| Capacitor | 1uf (polar) | 8 |
| Capacitor | 100pf (non polar) | 3 |
| Capacitor | 1000uf (polar) | 3 |
| Capacitor | 220uf (polar) | 1 |
| Capacitor | 47uf (polar) | 2 |
| Capacitor | 0.1uf (non polar) | 2 |
| Capacitor | 0.047uf (polar) | 1 |
| Resistor | 47k ohm | 4 |
| Resistor | 10k ohm | 2 |
| Resistor | 1k ohm | 4 |
| Resistor | 1.5k ohm | 1 |
| Resistor | 430 ohm | 2 |
| Resistor | 4.7 ohm | 2 |
| Variable Resistor | 10k ohm | 1 |
| Battery | +12 V | 3 |
| Audio Cable | Insulated cable | 2 meter (not sure) |
| Crocodile clips / connectors |  | 14 |