

# Basic plan for research of two-wire transmission lines.

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Below we provide basic information about tests that will be performed to figure out how parameters of transmission line affect on its' characteristics.

The full list of our tests is provided below:

1. Two-wire ribbon line:
  - (a) Determine how thickness of the applied insulator affects parameters.
2. Twisted pair:
  - (a) Determine how the number of twists per meter affects line parameters.
  - (b) Perform tests with various conditions (wet insulator, temperature change).
3. Shielded pair:
  - (a) Determine how choice of shielding material affects protection from stray magnetic fields.
4. Air coaxial line:
  - (a) Determine how geometry parameters affect line parameters (a,b).
  - (b) Determine how washer material selection affects line parameters.
5. Flexible coaxial line:
  - (a) Determine how geometry parameters affect line parameters (a,b).
6. Two-wire open line:
  - (a) Determine how distance between conductors affects parameters of the line.
  - (b) Calculate radiation losses and cross-talk of the line.

P.S.: Common test for all lines is how the choice of insulator affects line parameters.