

# Heißes Eisen: Discovering the Properties of a Soldering-Iron Tip and Building a Matching Soldering Station

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## Abstract

*Professional Soldering Stations impose a high financial burden for electronics hobbyists. Some Commercial Tips with integrated heating- and thermal-elements use connectors that can be used with standard sockets. Heißes Eisen describes the process of discovering the thermal-element parameters and the build process of a temperature-controlled soldering station.*

## Part I

# Soldering-Iron Tip

1. mechanical tip properties
2. thermal element
  - 2.1. common element types
  - 2.2. custom measument amplifier
3. heating element

## Part II

# Soldering Station

4. system overview
  - 4.1. UI
5. temperature control
6. performance evaluation