**How to Make RJ45 crossover adaptors**

**Pinouts**

Matrix X-Over (with the TX/RX data lines looped together)

|  |  |
| --- | --- |
| Connector 1 | Connector 2 |
| Pin 1 (Matrix RX Data +ve) | Pin 7 |
| Pin 2 (Matrix RX Data -ve) | Pin 8 |
| Pin 3 (Matrix Audio RX +ve) | Pin 4 |
| Pin 4(Matrix Audio TX +ve) | Pin 3 |
| Pin 5(Matrix Audio TX -ve) | Pin 6 |
| Pin 6 (Matrix Audio RX -ve) | Pin 5 |
| Pin 7 (Matrix TX Data +ve) | Pin 1 |
| Pin 8 (Matrix TX Data -ve) | Pin 2 |
| Screen | Screen |

Audio X-Over (without the TX/RX data lines looped together)

|  |  |
| --- | --- |
| Connector 1 | Connector 2 |
| Pin 1 (Matrix RX Data +ve) | No Connection |
| Pin 2 (Matrix RX Data -ve) | No Connection |
| Pin 3 (Matrix Audio RX +ve) | Pin 4 |
| Pin 4(Matrix Audio TX +ve) | Pin 3 |
| Pin 5(Matrix Audio TX -ve) | Pin 6 |
| Pin 6 (Matrix Audio RX -ve) | Pin 5 |
| Pin 7 (Matrix TX Data +ve) | No Connection |
| Pin 8 (Matrix TX Data -ve) | No Connection |
| Screen | Screen |

E1 X-Over (when link EQUE card E1/T1 back to back or some 3rd party devices)

|  |  |
| --- | --- |
| Connector 1 | Connector 2 |
| Pin 1 (Data TX +ve) | Pin 4 |
| Pin 2(Data TX -ve) | Pin 5 |
| Pin 3 | No Connection |
| Pin 4(Data RX +ve) | Pin 1 |
| Pin 5(Data RX -ve) | Pin 2 |
| Pin 6 | No Connection |
| Pin 7 | No Connection |
| Pin 8 | No Connection |
| Screen | Screen |

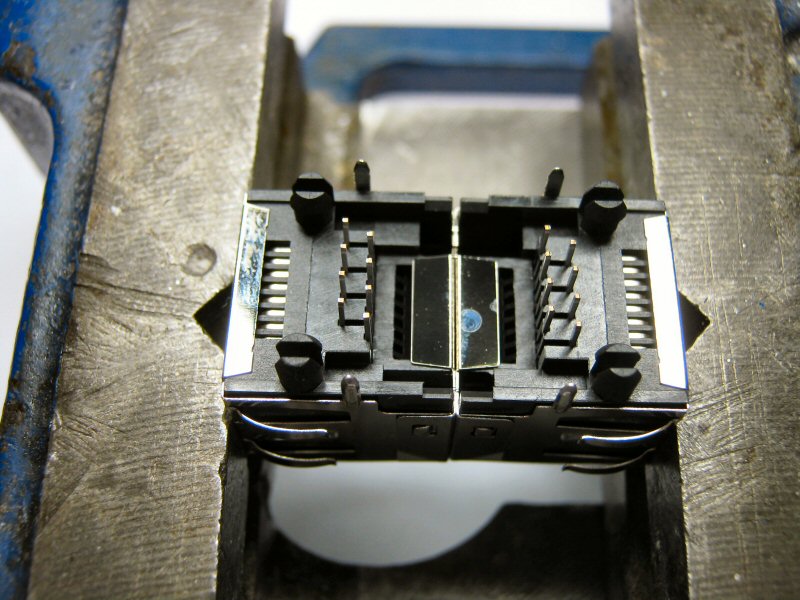
**Construction**

The construction process is identical for all three types:

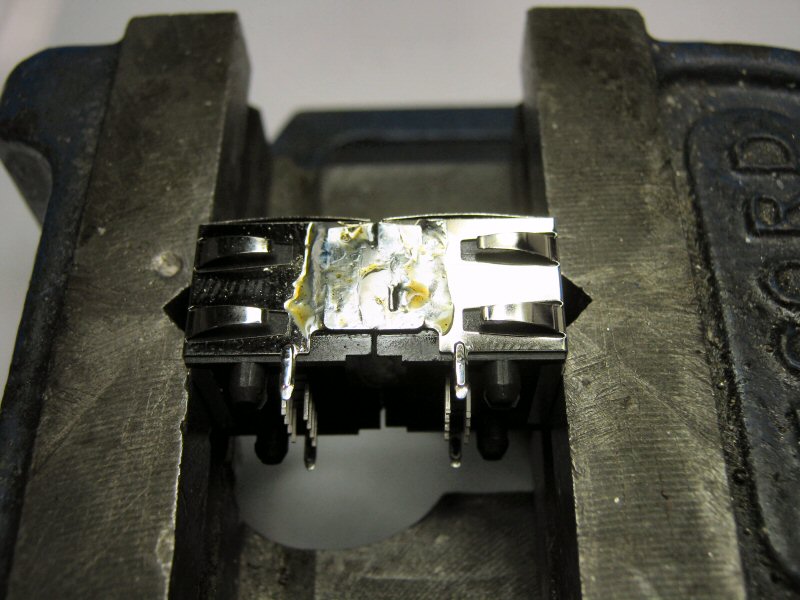
1. Take two PCB Mount RJ45 connectors



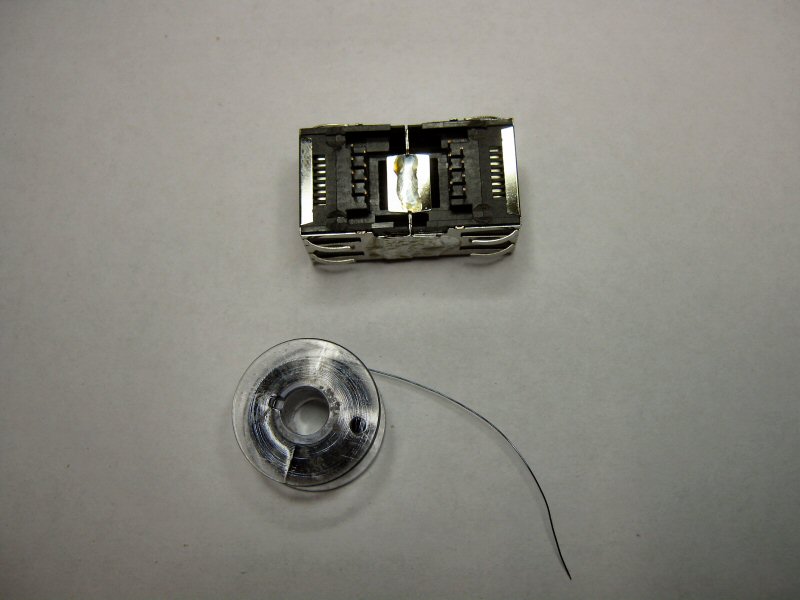
1. Carefully align back to back and clamp in a vice



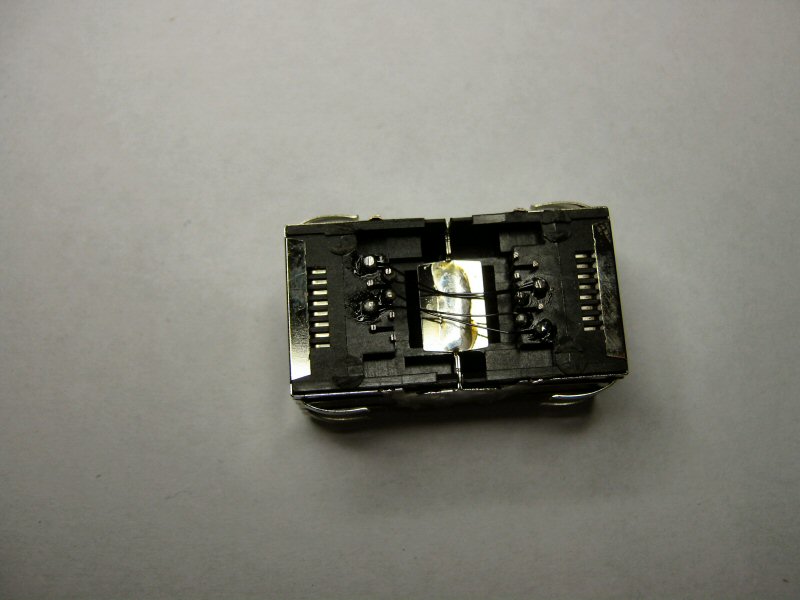
1. Solder the shields together on all four sides



1. Trim off the PCB mounting lugs and wire the connectors according to the appropriate table



1. After wiring trim the legs

  
  
  
6. Cover in Heat Shrink, trim to a neat finish and apply the appropriate label

