# Tempest dual game ROM replacement (TEMPEST-DUAL-DB) Instructions

## **Version 1.0**

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Figure 1 – Image of TEMPEST-DUAL-DB v1.0 PCB board. Note the 6502 CPU is NOT included and shown only for reference

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# Summary

The Tempest dual game ROM replacement (TEMPEST-DUAL-DB) is an easy to use replacement to solve the problem of trying to maintain/fix/replace the 10 2716 ROMS on the Atari TEMPEST game. It is a PLUG AND PLAY replacement board. It contains both the Tempest v3 and Tempest Tubes game code and allows a user to configure their tempest board to play either game via a physical switch (not included) or by setting a jumper.

#### Potential Uses for the TEMPEST-DUAL-DB

1. As a single, generic adapter to convert a board, including game boards, to use a single ROM on a permanent basis.

- As a troubleshooting tool to assist in the repair of boards, including game boards, by bypassing the existing ROMs and their sockets, without the need to cut traces or make other permanent modifications to the board.
- 3. An inexpensive solution to switching between Tempest and Tempest tubes via an external switch (not provided)

#### Caveats to Understand about the TEMPEST-DUAL-DB

The following are a few things to be aware of before buying and using the TEMPEST-DUAL-DB:

There are a few things to be aware of before buying this board

- 1. By default the game will be set to play Tempest v3
- 2. You can alter the board to instead permanently play Tempest Tubes via a physical jumper connection
- 3. You can install an external switch (not included) to allows easy changing between Tempest and Tempest Tubes. When using an external switch you must power off or reset the game cabinet after altering the switch selection.

### Using an external switch

The TEMPEST-DUAL-DB comes configured to play the original Tempest v3 code. It can be altered to instead play Tempest Tubes, or to support switching between games via a physical switch (not included)

The default configuration of the adapter is to play Tempest and looks as pictured below



Figure 2 -A15 default permanent Tempest operation

## Configuring the board to permanently play Tempest Tubes



Figure 3 – Permanent Tempest Tubes configuration



Figure 5 – Selectable game using external switch