

# AAdd TearDrop User Guide

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## Purpose

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Adds TearDrops to Thru-hole Pins and Vias.

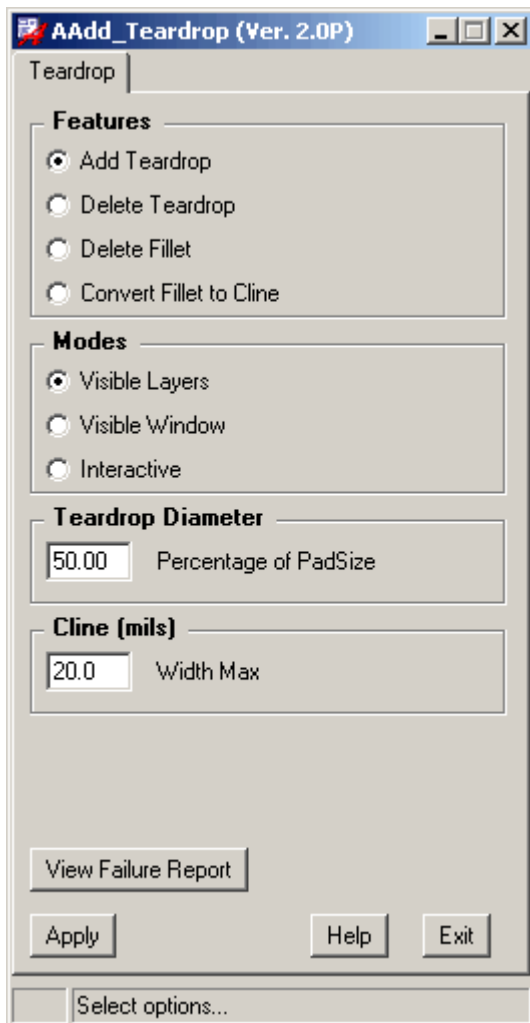
## Description

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Adds circular shaped teardrops (Keyhole Style) to thru hole pads and vias.  
The pad size and maximum trace width are user defined.  
Teardrops can be added or deleted interactively or automatically to all visible layers.

## Benefits

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Maintains the annular ring for drilled holes at the pad to track junction.  
( Improves PCB manufacturing yield ).

CopperCAD's AAdd\_TearDrop software will not add extra track length to length controlled nets.  
( Fewer false DRC's )



## Menu Functions

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**Add Teardrop** → Adds Teardrops to all visible copper layers, one at a time or all pins automatically.

**Delete Teardrop** → Deletes Teardrops from all visible copper layers, inter-actively or automatically

**Delete Fillet** → Deletes all Allegro style fillets on the visible copper layers

**Convert Fillet** → Removes the fillet attribute from clines that are not directly connected to a via or pad.

## Modes of operation:

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**Visible Layers** → Add or delete to all visible layers.

**Visible Window** → Add or delete to all visible layers inside the display window only.

**Interactive** → Add or delete inter-actively, to all visible layers, one via or pin at a time.

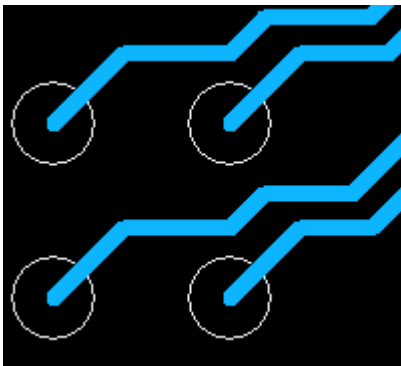
**Teardrop Diameter** → Controls the teardrop size, as a percentage of the target pad size. (default is 50%)  
e.g. If the via pad is 24 thou, the teardrop would be 12 thou in diameter.

**Maximum cline width** → Controls the range of traces to which the teardrop would be added.  
(default is 20 thou). When set to “20”, teardrops would be added to traces in the range of 0 – 20 thou.

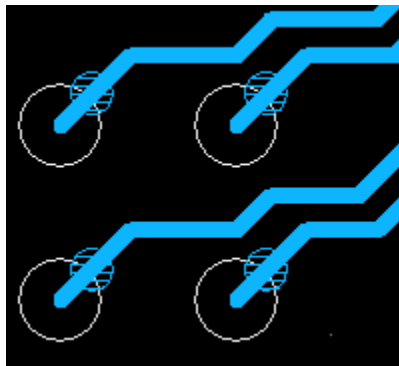
**View Failure Report** → Displays the layer, location co-ordinate for any teardrops that were not added due to DRC's. Also lists the DRC message for the failure.

## ScreenShots

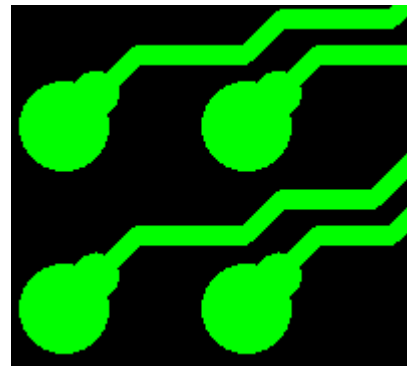
Before



After



Gerber View



## Running the Program

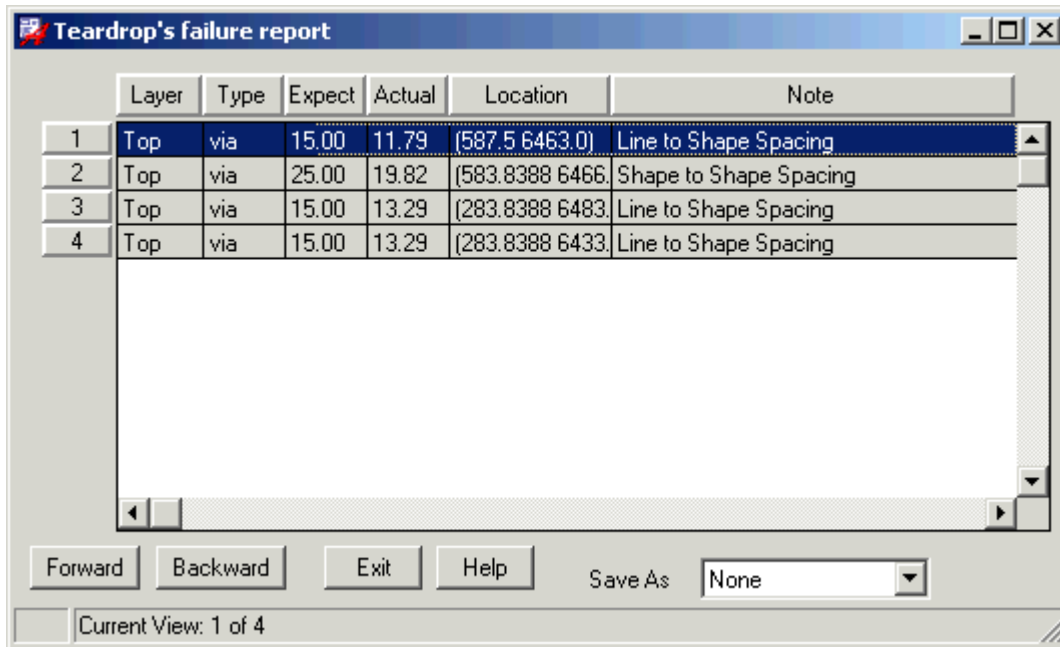
- 1) Choose the menu function → Add, Delete or Delete Fillet.
- 2) Choose the mode of operation → Visible Layer, Visible Window, or Interactive.
- 3) Set the teardrop size and Max Cline Width.
- 4) Click the “**Apply**” button.

**Note 1:** When in the “Interactive” mode use the right mouse button (mouse 3) to quit out of the function.

**Note 2:** To obtain maximum coverage, run AAdd Teardrop multiple times with various decreasing teardrop sizes.

## Report Viewer Window

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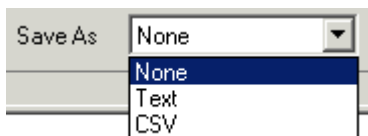


Navigate to individual location simply by clicking on any line.

The “**Forward**” and “**Back**” buttons allow easy sequential navigation of the objects.

The “**% Zoom Oversize**” allows you to customize the size of window view based on the object size.

**Right click** on any of the columns to **re-sort** the data.

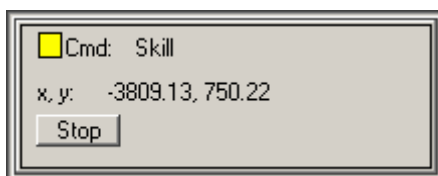


The **Save As** button will save the failure report viewer results in Text or CSV file formats.

Report File names:     **AAdd\_Teardrop\_ReportTxt.txt**  
                          **or**   **AAdd\_Teardrop\_ReportCsv.csv**

## The Stop Button

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While the program is running, the stop button will be displayed in the bottom right corner of the Allegro tool window. The stop button can be used to terminate the Add Teardrop program at any time.

For more information, please contact CopperCAD at [\(905\) 488-8958](tel:9054888958) or [www.CopperCAD.com](http://www.CopperCAD.com)

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