

REVIEWS CameraTracker



**PRICE**  
• £170 / \$265 / €205

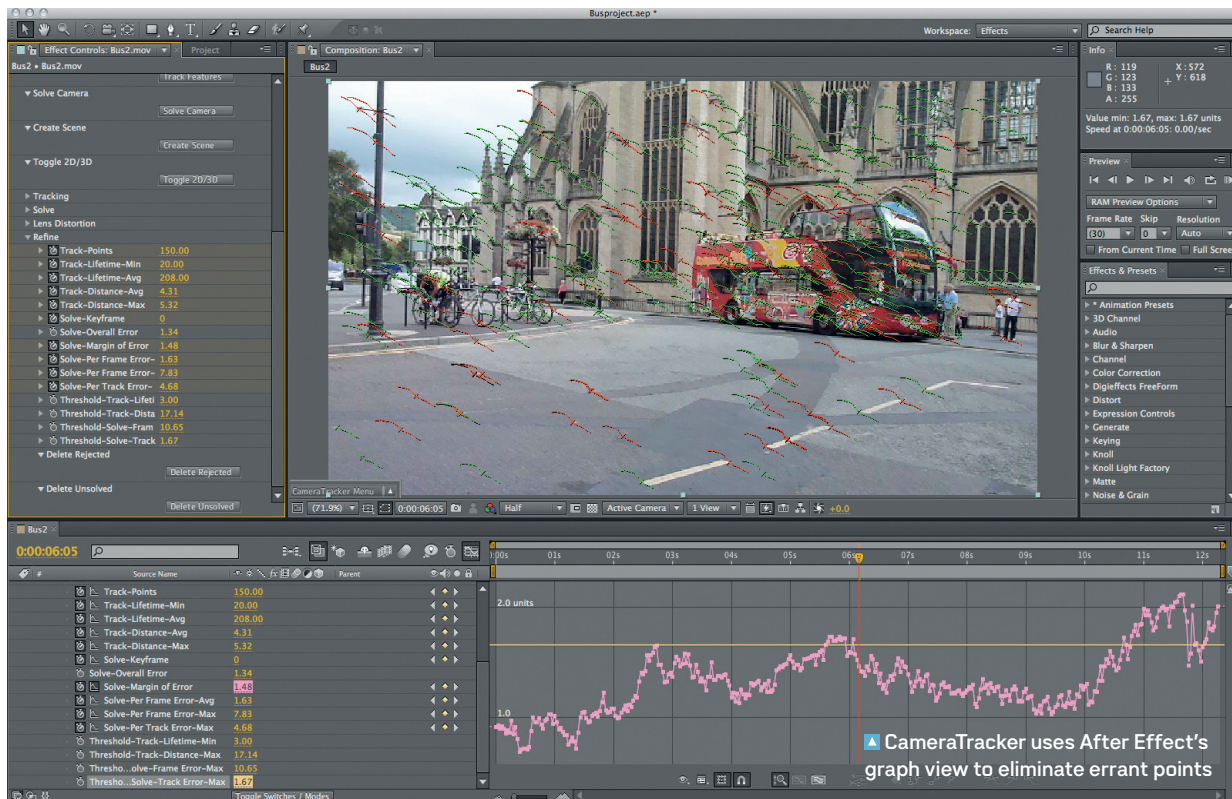
**PLATFORM**  
Windows / Mac

**MAIN FEATURES**

- Camera tracking within After Effects CS 5
- Create nulls, solid objects and ground planes
- Colour-coded track markers
- Graph-based refinement tools
- 3D point cloud view
- Matte footage with precomposed layers
- Works in AE Z-space

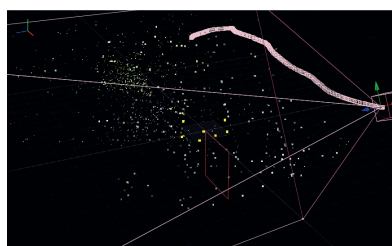
**DEVELOPER**  
The Foundry

**WEBSITE**  
thefoundry.co.uk



# CameraTracker

Taking match-moving technology from Nuke and adding it to After Effects works so well that Adobe should just buy this AE plug-in, says **Steve Jarratt**



▲ CameraTracker in action (top). The 3D view (middle) shows the tracked points in Z-space. To add text, just add a null and then parent the text layer to it (bottom)

**About the author**  
Steve Jarratt has been reviewing creative CG software since the early days of 3D World, and now he has the pleasure of being its esteemed editor  
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Once the domain of high-end VFX houses using bespoke apps costing thousands of dollars, match-moving is now available to everyone. Indeed, with apps like the Pixel Farm's PFHoe and the University of Hannover's Voodoo, it's either inexpensive or free – which is probably why The Foundry has elected to sell its new match-moving plug-in, based on tech found in NukeX, with a user-friendly price tag.

The interface for CameraTracker is fairly standard. All of the controls reside in the Effects panel in After Effects, with the exception of a small pop-up device providing access to the main functions (Track, Solve and Create Scene), plus options for altering the track display, creating solids and nulls and working with a ground plane. This is a neat little addition and helps alleviate some of the usual to-ing and fro-ing with the Effects panel.

At its most basic, CameraTracker's workflow is a three-step process. Once your footage is in the project window, it's just a matter of tracking features, solving for the camera and creating a scene – at which point a camera and control null are added to the timeline. For a lot of the footage you work with, this will probably be enough to generate a useable track.

But, as with all match-moving apps, the more info you can give CameraTracker, the better the end result will be. Providing

information like the camera focal length and film back (or the size of the camera's imaging sensor) really help the accuracy of the solve – and telling CameraTracker if the camera is free-roving or using a nodal pan is pretty much essential.

One of the major benefits of having CameraTracker integrated into After Effects is that you have all of the host app's keying and masking tools to hand, which enables you to remove troublesome areas for a successful solve. It's a simple matter of either doing a quick rot or creating a colour or luma matte on a precomposed layer to drive CameraTracker's Matte Source. Any masked areas are simply excluded from the tracking process.

**TWEAK AND ADJUST**

Further refining of the track is relatively straightforward. Track markers are colour-coded in terms of reliability, so you can see areas where the track is failing or getting confused. Green is good, red is bad and orange is iffy; so you can simply select or marquee-select any markers that look untoward, delete them and re-solve.

If marker density prevents this, you can also use CameraTracker's Refine options. Simply put, the graph display in the timeline provides a representation of various functions of the tracking data, such as the number of points,



the distance the points have moved from frame to frame or the error value for each point. Then it's just a matter of setting a threshold value; any errant points above this line on the graph can be removed and the track re-solved. This mixture of masking and refinement provides an easy way of gradually increasing the quality of your solve and the accuracy of the match. It becomes quite addictive too, when you think you can get that average error value down by another couple of tenths...

Of course, the real worth of a camera tracker is in the quality of its output, and we have no real complaints in this respect. Tracked objects are generally glued

cloud, presenting the scene as tracked points with the camera motion and any nulls or solids. This is a useful way of checking what's going on with the scene: is your camera moving or zooming; are the tracked points in the right places; are your nulls aligned properly, and so on. But for some reason, this view (with only 150 or so points in it) regularly clogs After Effects, complete with lengthy periods of spinning beachball on the Mac. Also, the use of the Tab key to toggle between 2D and 3D views stops working after a while, so this area of the plug-in clearly needs work.

To generate a null, you select a group of related points – such as those on a flat

work within After Effects. With a decent camera solution, the door is wide open to working in After Effect's Z-space: adding titles into the scene is a doddle, and you're free to use plug-ins that work in 3D, such as the Trapcode Suite. If you're a 3D generalist, on the other hand, you'd really be better off with a standalone app such as The Pixel Farm's MatchIt or Andersson Technologies' SynthEyes: the route into and out of After Effects is pretty tortuous for most people (stop looking so smug, Cinema 4D users), so you really need the ability to export 3D scene files natively.

Despite the reservations we've pointed out, CameraTracker gets a pretty solid recommendation, but with one final caveat: if it doesn't get bought by Adobe and bundled into a future version of After Effects, we'd be hugely surprised! ■

▲ This nodal pan-and-zoom shot needed some refinement to get right, but the displaced graffiti image and updated sign are now locked to the footage

*“The mixture of masking and refinement is an easy way of increasing the quality of your solve and the accuracy of the match”*

perfectly to the background, although there were a few instances in our tests where elements would slide slightly at the start or end of the shot – especially with nodal pans, where there's no parallax for the solve to get its teeth into. As with most match-moving software, CameraTracker still isn't plug 'n' play: you can't feed it with any old handheld shakycam footage and expect a perfect solve at the first attempt.

### TEETHING PROBLEMS

However, there are a few genuine issues with the plug-in. A very nice inclusion is the ability to view the data as a point

surface, or grouped around a feature – and use Create Null. We expected the null to be sized and aligned accordingly, but often ended up with nulls that were huge and pointing in the wrong direction. They're pinned to the footage okay, and it's a simple enough task to resize and rotate them to suit, but this can be really disconcerting for beginners. Again, hopefully this can be improved upon in a future release.

The artists gaining the most obvious advantage from CameraTracker are those from the motion graphics and compositing crowd, who prefer to do most of their

## 3D WORLD VERDICT

### PROS

- Quality tracking, affordable price tag
- Employs all of AE's masking/comping tools
- Excellent options for refinement

### CONS

- Point cloud view has issues
- Null alignment a bit variable
- Lack of AE export options

**A few niggling issues need resolving, but for the mograph and compositing crowds, this is a brilliant addition to their AE toolset**