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Collecting
vintage hand-made
brass slot car chassis

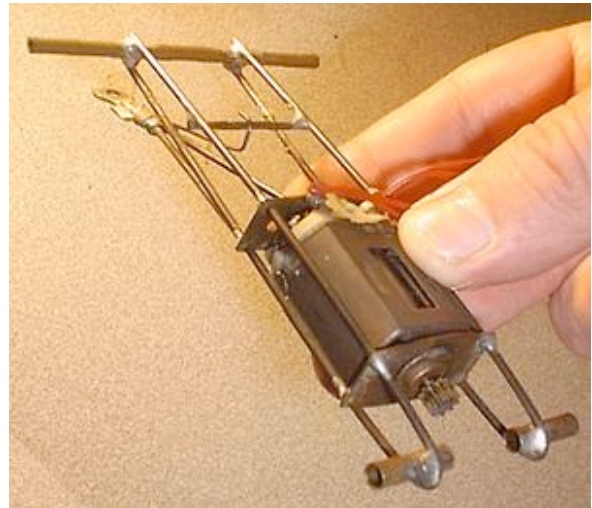
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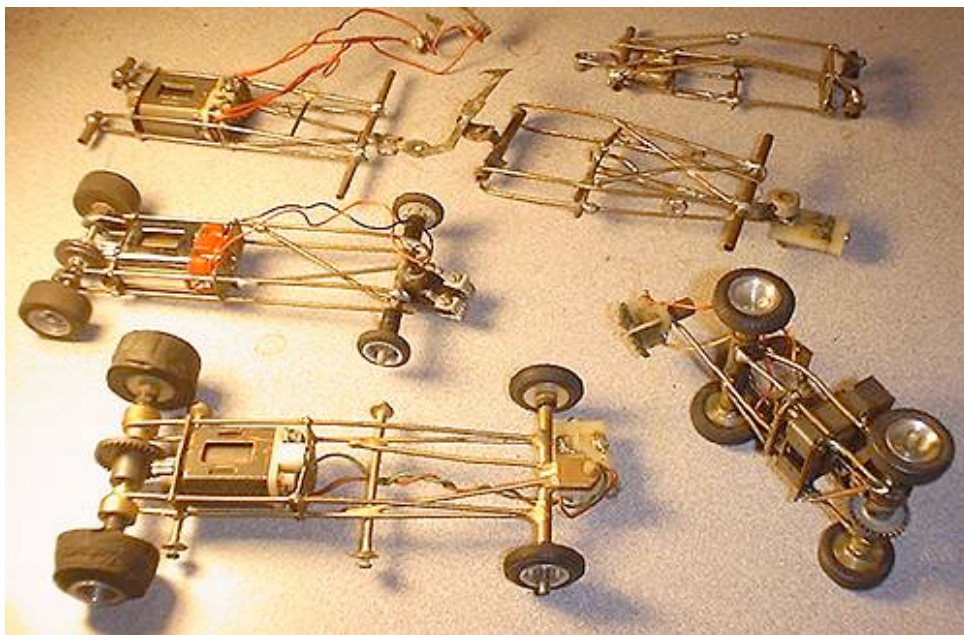
Chassis Come Down to the Ground

by Jim Allen, March 3, 2003

In 1965, the space frame chassis was all the rage. If you were scratchbuilding slot car chassis, you were most likely building space frames, whose name and conceptual scheme were borrowed directly from 1:1 sports and racing cars.

On each side of a space frame chassis are two long rods, arranged above and below one another, running from axle to axle, front to back. Several short braces reach top to bottom, and longer cross-members stretch from left to right, connecting the two sides. The space frame was strong enough for slot racing and wrecking, and simple enough to picture in your mind and then scratchbuild.





Typical space frames, about 1965

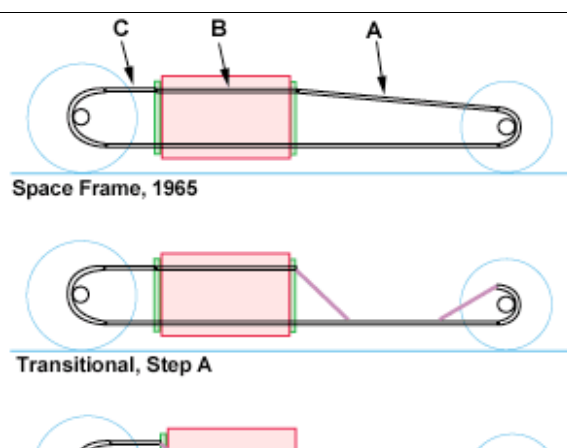
By 1967, 2 short years later, all competitive chassis were built flat to the ground, completely in two dimensions, except for the uprights needed to hold the motor and axles. This new chassis geometry had its own weaknesses, mostly solved by the adoption of the U-shaped motor bracket. As chassis came down to the ground, at first they were narrow, but soon spread like pancake batter on the griddle - but that's a topic to be chewed over another time.



Some of the earliest flat chassis, about 1967.

It may be clear to us in hindsight, but in 1965 it was not obvious how to progress from the space frame design. Chassis builders recognized that they could lower the center of gravity by removing the upper rod of the space frame. However, this weakened the chassis structurally, inducing an up-and-down flex that could result in the motor's chin (or is that its butt?) digging into the track.

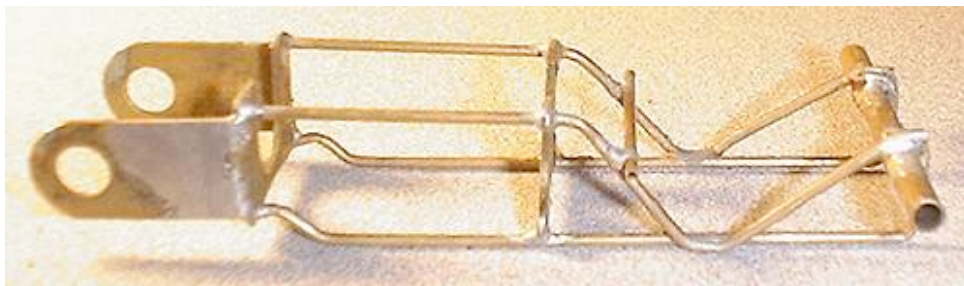
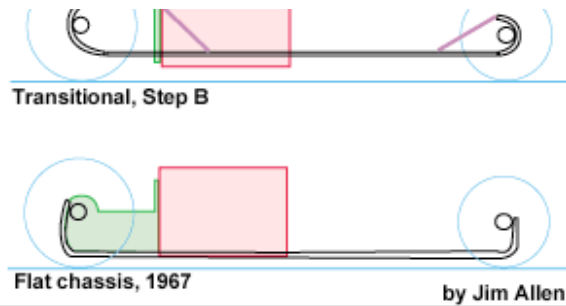
The solution to the flex problem was to solder in diagonal braces. In chassis builders who were transitioning down from the space frame, we can track the conceptual change, as each portion of the



upper space frame rod was removed, and the chassis was braced with diagonals. I have collected several of these Transitional Chassis, see the images below.

When the last piece of the upper space frame rod was to disappear, U-shaped rear brackets appeared in the scratchbuilder's toolkit, which eliminated the worst chassis flex. Most diagonal bracing disappeared. The slot car chassis had come down to the ground.

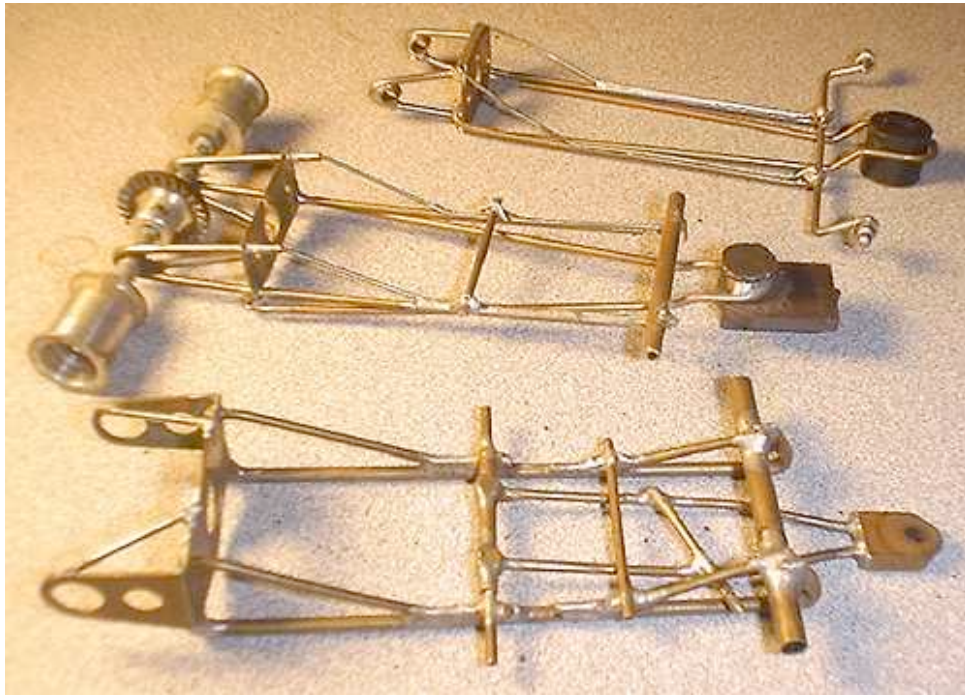
--Jim Allen



Transitional Chassis Step A



Transitional Chassis Step B



Chassis in Transition Step B from space frame to flat.

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