



## EXECUTIVE SUMMARY

### *Leading brand 4-Drawer set storage solution*

Eight consumers were each given a 4-Drawer set storage solution in an unopened box and instructed to set up a fully functional 4-drawer storage unit with smooth-gliding drawers. All tested consumers had an interest in home storage solutions and had bought competing or similar types of storage products in the past (e.g., closet organizers, etc.). Their vocations ranged from a retired economist to a housewife.

Eighty-eight percent of consumers properly assembled the drawer set, with setup time, ranging from 9:55 (minutes: seconds) to 39:48—for those that properly assembled the unit. However, during the assembly process, consumers encountered a broad range of setup issues. These issues did not stem from product design, rather they were the result of sparse documentation and labeling. This drawer set is an unusually well-designed product, in and of itself.

The major issues with the included instructions are:

1. **The exclusively diagrammatic format provides sparse details**, and assumes the consumer will make fine visual distinctions (e.g., frame orientation – see Illustration: #1).
2. **A parts manifest is not included** (see Illustrations: #2, and #3).
3. **A sequence for assembly is not indicated** (click here for sequencing example).
4. **Instructions have inaccuracies in their depiction** (connectors are shown as solid on all facets). This led to confusion about connection orientation, and a heightened concern over tight connections. See Illustration: #3.
5. **Connection tolerances make hand assembly difficult for most** (see Illustration: #5). Based on testing data, reference to the “optional use” of a hammer is needed (see instruction back-side mock-up, Illustration: #4).

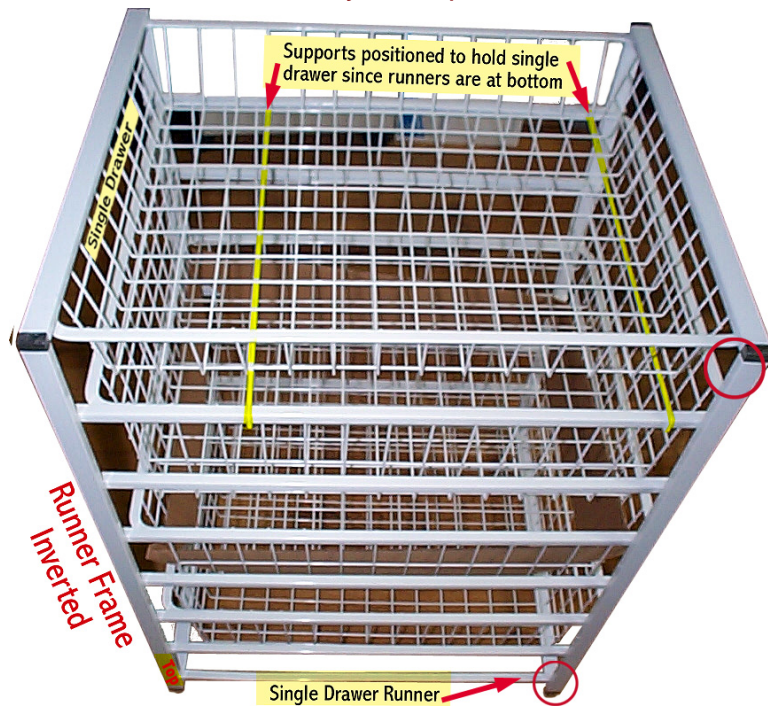
Assembly issue most commonly observed were:

1. **Furious swapping of crossbar and Runner Frame connections.** The explanation of this finding is two-part: First, without an expectation of the normal resistance one might expect to find in mating connectors to the structural members, when certain connections did not slide together without significant force, consumers feared they were doing something wrong. Second, certain facets of the included connectors were notched, but not depicted as such in the instructions; thus, consumers wondered if the connection resistance they were experiencing was due their improper orientation of the connector. See Illustrations: #3, #4 and #5.
2. **Leaving large gaps in connector joints** caused drawers to fall through the runners, and supports that looked too short to fit (see Illustration: #5). Consumers were observed trying numbers of ways to close these gapped connections--without use of a hammer, all proved minimally effective.

With notable gaps in many or most connections, 75% of consumers struggled, with limited success, to stretch the support pins the distance needed to secure them. The 25% who avoided this problem did not place both the top Crossbrace and the bottom Crossbrace on the frame runner before attempting to secure the support pins. With one end free, the Runner Frame was easily maneuvered to accommodate the support pins.

3. **Misorienting Runner Frames** resulted in drawers that didn't fit in the right sequence, hit the support, or went askew (see Illustration: #7). Consumers had to assemble and disassemble the drawer set multiple times until the configuration proved correct. Manifestations of these repeated assembly/ disassembly cycles included "T" shaped connectors on the top of an otherwise perfectly constructed drawer set (see Illustration: #8).

#### Failed assembly example . . .



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The 4-Drawer qualifies for the 30-minute or less setup time certification. A revised offering based on this report's findings would represent an exemplary consumer friendly ready-to-assemble storage solution—and would likely allow the drawer set to be reassigned a setup time rating of 20-minutes or less!