Flycatcher

**Ages
8 to 108**
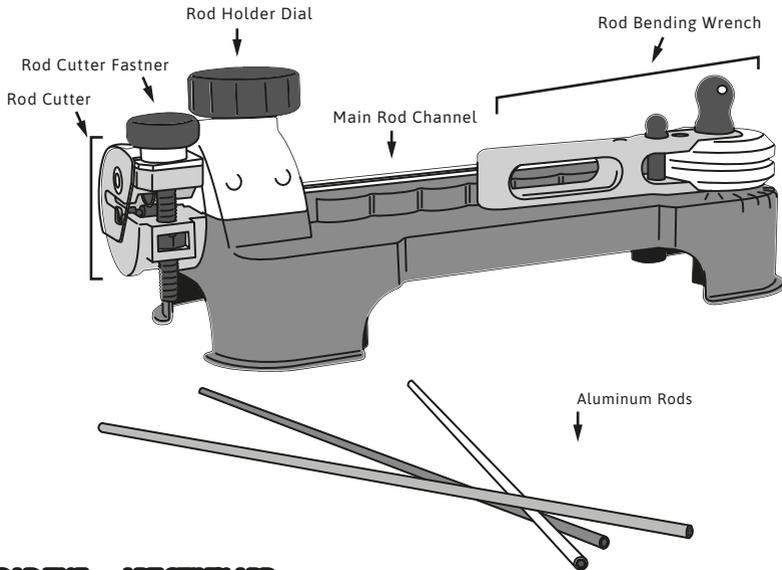
sm**ART**™
STIX
ENGINEER SET
RE-IMAGINE BUILDING
USER MANUAL

smART STIX™ is an innovative, building toy that encourages kids to engineer their projects using bendable aluminum rods, assorted connectors, and a unique smART Workbench.

Kids can build open-ended designs using their imagination or they can download the free smART STIX™ app or go to www.flycatcher.toys/smart-stix/models to access step-by-step instructions for projects ranging from easy to awesome.

Once they choose a project, kids use the smART Workbench to measure and cut the exact size and number of aluminum rods needed, bend them into the desired shapes, and connect them using the connectors to complete their design.

The smART WORKBENCH:

Rod Holder Dial
Rod Bending Wrench
Rod Cutter Fastner
Rod Cutter
Main Rod Channel
Aluminum Rods

DOWNLOAD THE smART STIX™ APP

1) Download the "smART STIX™" app on your mobile device or tablet*.
2) Open the app.
3) If you already have a Flycatcher account, sign in with your account.
If you do not have a Flycatcher account, go ahead and create a new one.

*Requires Android 8.0+
Requires Apple iOS 12.0+

QUICK BUILDING GUIDE:

Once you have a blueprint for your design from the smART STIX™ app or website, there are four simple steps to follow:
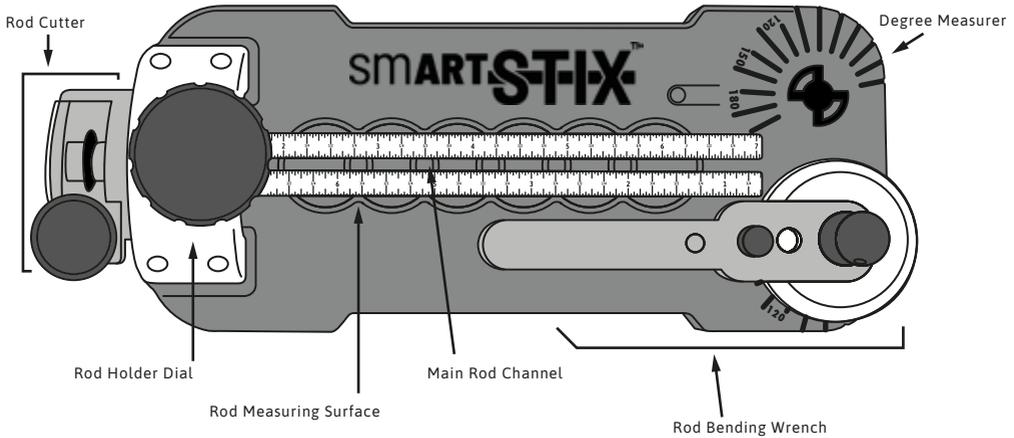
1) Measure
2) Cut
3) Bend
4) Connect

Note – sometimes these steps occur in a different order (for example, you may bend and then cut)

Following the instructions on your smART STIX™ app or from the website, use the smART Workbench and its **built-in measuring surface** to measure the aluminum rods to the desired length.

  1) Loosen the **Rod Cutter Fastener** by turning it counterclockwise.
  2) Loosen the **Rod Holder Dial** by turning it counterclockwise.
  3) Slide a rod through the **Rod Cutter** and into the **Main Rod Channel.**
 4) Align the rod with the desired length unit shown on the **Measuring Surface.**

NOTE: Use the blue-colored measuring surface when measuring to cut a rod.

Rod Cutter

Degree Measurer

Rod Holder Dial

Main Rod Channel

Rod Measuring Surface

Rod Bending Wrench

Cut:
Once you've measured your rods, cut them using the smART Workbench built-in Rod Cutter:

  1) Once your rod is set to the desired length using the **Measuring Surface**, and to ensure that your rod will not roll during the cutting process, turn the **Rod Holder Dial** clockwise until it has pressed down on the rod firmly.
  2) To begin the rod cutting process, turn the **Rod Cutter Fastener** until the **Rod Cutter Blade** is touching the rod you wish to cut (see illustrations below).
  3) Once the **Rod Cutter Blade** is touching the rod you wish to cut, spin the **Rod Cutter** one full revolution, tighten the **Rod Cutter Fastener** by rotating it clockwise half a revolution and then spin the **Rod Cutter** another revolution. Repeat this until your rod is cut, which takes about 6-8 revolutions.

Rod Cutter Blade

Rod

Rod Cutter Blade
touching the Rod

Rod Holder Dial

Rod Cutter Blade

Rod Cutter

Rod Cutter Fastner

Rod

Rod Cutter Blade
NOT touching the Rod
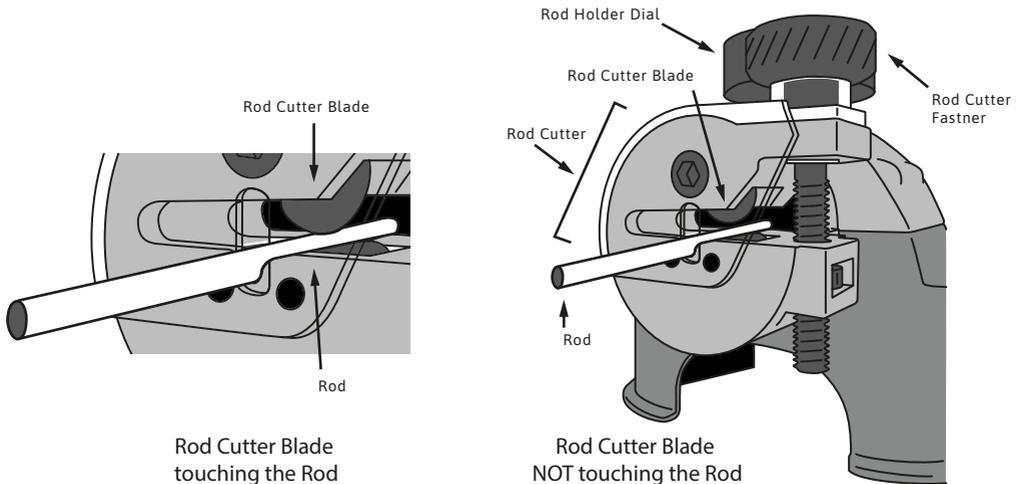
BEND:

To bend your cut rods into the desired shapes, use the **Rod Bending Wrench** on your smART Workbench. Depending on the part you are making, your **Rod Bending Wrench** may call for either the **Small Diameter Circle** ("RADIUS 10") or the **Larger Diameter Circle** ("RADIUS 20").
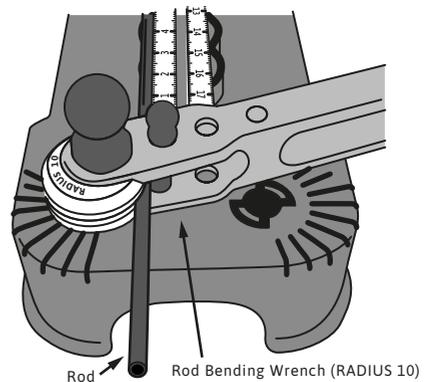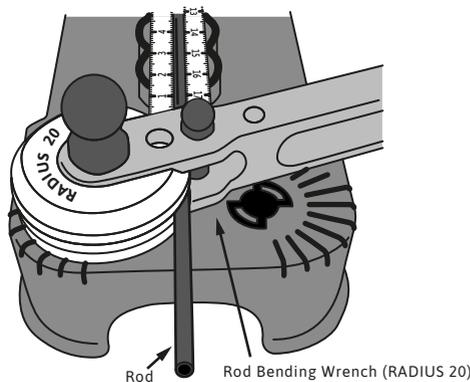
Diameter Circles:
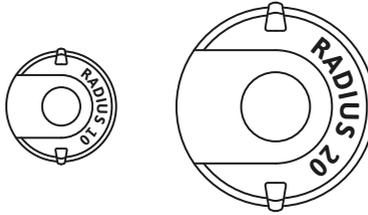
To change the **Diameter Circle** of your **Rod Bending Wrench**, follow these simple steps:

1) Pull out the **Large Pin** of the **Rod Bending Wrench**.
2) Pull out the **Small Pin** of the **Rod Bending Wrench**.
3) Insert the **Diameter Circle** you wish to use ("RADIUS 10" or "RADIUS 20").
4) Replace the **Small Pin**:
      a. In the second hole for "RADIUS 20".
      b. In the first hole for "RADIUS 10".
5) Replace the **Large Pin** of the **Rod Bending Wrench** and insert it into the **smART Workbench**.

Rod Bending Wrench (RADIUS 20)

Rod Bending Wrench (RADIUS 10)

Small Pin (in second hole for "RADIUS 20")

Small Pin (in second hole for "RADIUS 10")
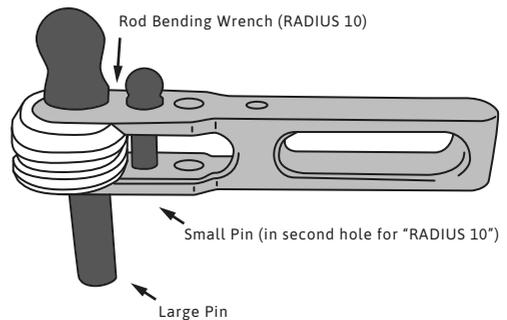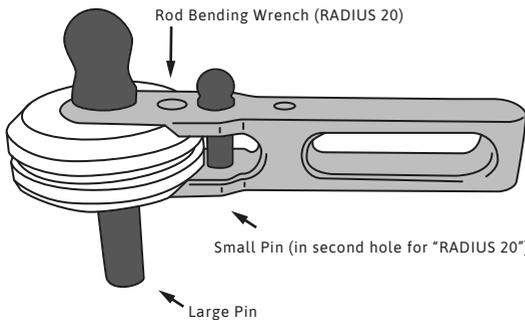
Large Pin

Large Pin

Now you're ready to use the **Rod Bending Wrench**:

1) Take the rod you wish to bend and thread it between the **Large Pin** and the **Small Pin** of the **Rod Bending Wrench**.
2) Depending on which **Diameter Circle** you are using, the rod will either rest in the **Main Rod Channel** ("RADIUS 10") or against the outside wall of the **Main Rod Channel** ("RADIUS 20").

Rod

Rod Bending Wrench (RADIUS 20)

Rod

Rod Bending Wrench (RADIUS 10)

3) Use the degrees marked on your smART Workbench along with the markers on your **Diameter Circle** to bend your rod to the desired shape.

Degree Measurer
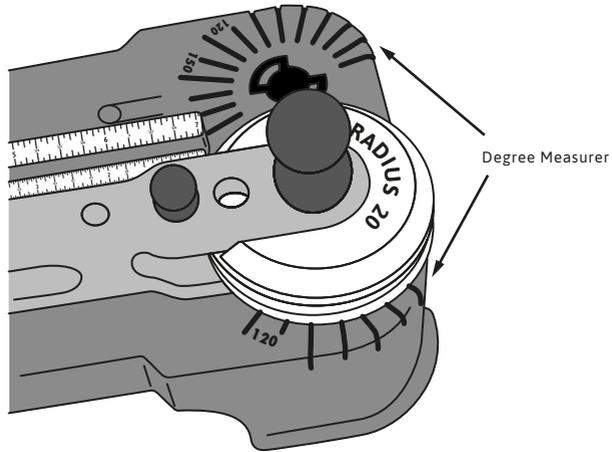
4) With one hand holding the smART Workbench, use the other hand to rotate the **Rod Bending Wrench** to the desired bend. Once the desired bend is achieved, pull your rod out and continue with your project.

**NOTE:** Use the orange-colored measuring surface when measuring to bend a rod.

CONNECT:

To connect the cut and bent rods when building a project, use any of the various connectors:

Connector
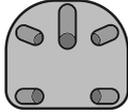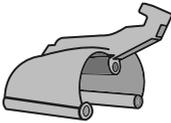
Rod

Rod

Rod

Rod
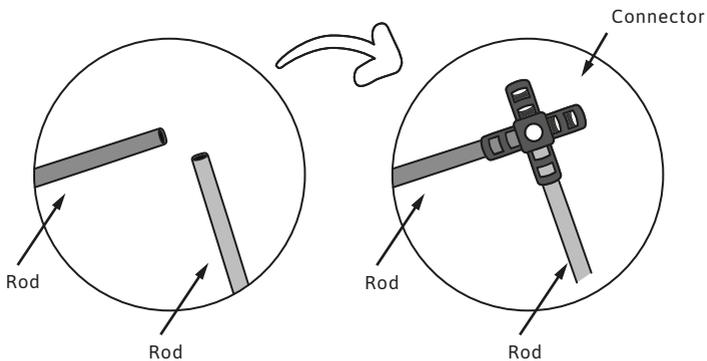
CONTENTS

- 1 smART Workbench.
- 30 ready-to-cut aluminum rods - 15 Black, 10 Blue, 5 Silver.
- 150+ assorted connectors.
- Free smART STIX™ app.
- User manual.

CONNECTORS INCLUDED

NAME	IMAGE	QUANTITY
A1		26
A2		23
A3		8
B		8
C3		8
C4		14
D		11
E		16
F		37
G		8
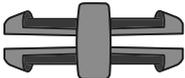
PARTS INCLUDED
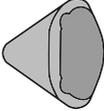
NAME	IMAGE	QUANTITY
FP1		1
FP2		1
S1		1
S2		1
S3		1
S4		1
S5		3

PARTS INCLUDED

HC - Helicopter

NAME	IMAGE	QUANTITY
HC1		1
HC2		1
HC3		1
HC4		1
HC5		1
HC6		1
HC7		1
HC8		1
HC9		1
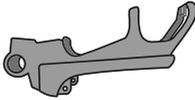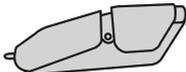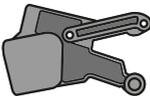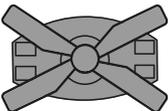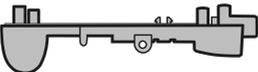
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Playing Smart.

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