# Building Structures Clinic Series

By Jeremy Brown

## Building Structures 101:  Into to building simple kits

This class covers the basic skills for building a simple plastic structure without adding extra parts and or details.  i.e. building the kit as it is in the box.

## Building Structures 102:  Lets Get Detailed

This class will cover adding details to a structure to make a simple/ordinary kit to an eye catching master piece.  Also we will be covering additional tips on constructing medium to difficult kits such as wood & metal kits along with highly complex plastic kits.

## Building Structures 201:  Kit Bashing

This class will cover the basic techniques on how to kit-bash a structure to get the perfect building for a certain industry.

## Building Structures 202:  Scratch Building

This class will cover how to scratch build a structure.

# Building Structures 101
## Intro to building kits

### Intro:
This class will be covering the basic skills for building a simple structure without adding extra parts and or details.  i.e. building the kit as it is in the box

### Which Building do I use?
Use building "footprints" cut out of cardboard or file folders to see if a peculiar building will fit your needs for a certain industry.

### Tools:
The following is a list of tools that I use for building structures:
- Tweezers
  - Swiss Style Watchman:  Swiss Style Watchmaker's Tweezer
  - Boley Style GG Tweezers:  Boley Style GG Tweezer
  - Cross Locking, Self-Closing:  Cross Locking, Self-Closing Tweezer
  - Cross Locking, Heat-Resistant:  Cross Locking, Heat-Resistant Angled Tweezer
  - Ear Polypus:  Ear Polypus, 5-1/2 Inch
  - Heat Sink Soldering:  Heat Sink Soldering Tweezer
- Metal File Set
  - Plastic Part set
  - Metal Part set
    - 5-1/2" Long, Cut #2 Needle Files -- 12 Assorted Files, Pouch (271-55607) -- Walthers Model Railroading
- Nail Files (from Sallies Beauty Supply)
  - 100/180 grit – black  Tropical Shine - Colossal Collection Nail File Coarse Black
  - 220/320 grit – blue  Tropical Shine - Colossal Collection Nail File Medium Blue
  - 400/600 grit – pink  Tropical Shine - Colossal Collection Nail File Fine Pink
- Small Screwdriver Set
  - To include both standard and phillips heads
    - Precision Screwdriver Set - 33 Piece
- Pin Vice
    - Pin Vise / Drill Bit Set
- Tweezer Sprue Cutter
    - Tweezer Sprue Cutter, Despruing Tweezer
- Drill Bits
  - #61-80 set
    - 20-piece Drill Bit Set with Plastic Index, #61 - #80
- Dental Picks
    - 5-piece Probe Set
- Black Soft Grip Knife
    - Black Soft Grip Knife
- Knife Blades
  - 100pk #11 Blades:  No. 11 Blade (Pkg. of 100)
  - Chisel Blade:  Chisel Blade Replacements | X-ACTO #17 Blade - Lightweight Chiseling Blade

- Sand Paper
  - Testors Hobby Sanding Film
    - [Sandpaper -- 5 Grades: Course, Medium, Fine, Extra-Fine, Ultra-Fine (704-8802) -- Walthers Model Railroading](#)
- Pliers/Kippers Set
  - Craftsman 5 piece Mini-Pliers Set
    - [Craftsman -5 pc. Mini-Pliers Set](#)
- The Chopper II
  - Northwest Short Line
    - [The Chopper II (53-694) -- Walthers Model Railroading](#)
- Scissors
  - Regular Sewing Scissor
  - Small Sewing Scissor
  - Castroviejo Straight Jaw Scissor:  [Castroviejo Straight Jaw Scissor](#)
- Round Toothpicks
- Aluminum Foil
- X-acto Square
  - 3x4 Square Ruler
    - [3 x 4 Square Ruler For Accurate Gradations - X-ACTO](#)
  - 3" Triangle Ruler
    - [3 Inch Triangle Ruler | Cutting Tools - X-ACTO Knives](#)
- Protractor
- Model Railroad Scale Ruler
    - [Scale Ruler -- HO, S and O Scales (230-711) -- Walthers Model Railroading](#)
- Xuron Shears
    - [Shears -- Track Cutter (791-90028) -- Walthers Model Railroading](#)
- Compass (for making circles)
- Weights
- Cutting Board
- Airbrush System
  - Paasche
  - Badger
  - Air Compressor
    - Hose
    - Air Dryer (Harbor Freight)
    - Desiccant Filter (Harbor Freight)
- Glue
  - Tenax 7R
  - Faller Expert Cement
- Head Band Magnifier
    - [Lighted Head Band Magnifier -- 1.8x, 2.3x, 3.7x, 4.8x (230-999) -- Walthers Model Railroading](#)

## Before Assembly:

- Take the entire kit out of the box and review all of the sprues to familiarize yourself with the different parts.
  - Note: take care when removing the contents of the box, sometime small parts will fall off of the sprues and be loose in the box.
- Read and understand all of the instructions.
- Decide what colors you want to paint your structure. Such as I want the bricks to be Foquel Rust, windows to be Model Master SAC bomber green, Roof Foquel Black and such.
  - NEVER just assemble the building without painting it even if the plastic is the colors that you want. You will have a much more eye pleasing structure if you paint it first.


## Kit Assembly:

- Begin by assembling parts that will be painted the same color.
- Carefully remove parts from the sprues by using the Tweezer Sprue Cutters
- Now file each piece to remove any access plastic that remains from where the part was attached to the sprue.
  - Note: always start with a fine file and if needed use the coarser files. Remember once the plastic is removed you can't put it back on!
- If you are working on wall pieces, i.e. DPM kit, you need to sand/file the sides to make sure you get a completely "square" wall. Also be careful you don't sand a side of the wall that has details on it (brick outline)
- Once your pieces are filed, you are ready to assemble them. Glue pieces that will be painted the same color together using Tenax 7R or Faller Expert Cement. Sometimes you will need to give it some time to dry before adding more pieces to the same element. Such as putting together a DPM kit. You glue only two walls together at a time.
- Once you have painted all of your "same color parts" you can finish completing the kit.
  - Note: Do NOT put the windows in at this time.
- Once you have your structure completely assembled, spray your building with a dull coat or clear flat coat paint.
- After the Clear Coat is dry, you can begin to installing the windows to your kit. However, if you want frosted windows, just spray the inside of the kit with the dull coat to give your windows this "frosted" look.

Now you have a completed kit/industry to help complete the scenery on your layout!

Notes: