

## Introduction

### **BEFORE STARTING INSTALLATION OF YOUR PLAYGROUND, PLEASE READ INSTRUCTIONS THOROUGHLY.**

#### **SITE REQUIREMENTS:**

The Playground system is designed to suit a level site. Should there be any falls or slopes on the site; care should be taken to accommodate the entry and exit points and to maintain the correct height. There should not be more than 3” of drop in grade per every 10’

The site must be inspected for adverse conditions: All sites must be checked for existing utilities such as electricity, gas, water or any other underground hazards. 1-800-DIG-RITE is the number to call to have the services located.

- 1.
2. Roots, rocks, or other natural obstacles that may pose as a trip hazard.
3. Poor drainage areas.
4. Broken glass or foreign objects around building site.

#### **MAINTENANCE:**

As an owner, it is most important that you are aware of your responsibility to insure safe use of your new equipment. It is necessary to install equipment correctly according to the installation instructions provided and inspect the equipment at regular intervals. During inspection, if any part is found damaged or excessively worn, equipment should immediately

be put out of service while the part is replaced. Lack of maintenance will result in premature wear, reduced life expectancy, and possible failure that might result in injury.

All SportsPlay Equipment play events have been engineered to meet all applicable safety guidelines, but if installed improperly, these problems may occur:

- Entrapment gaps (between 3 1/2” and 9”)
- String Entanglements
- Protrusions

Make sure that any bolt end that protrudes more than 2 threads past the face of the nut is trimmed and deburred smoothly. Always double-check your work.

Installation must adhere to the manufacturers assembly manual and all other applicable safety guidelines.

#### **PLAY AREA:**

The area immediately above and around the play structure must be free of any obstructions such as:

- Trees
- Other Play Equipment
- Buildings
- Overhead Power lines

**Make sure the play area has all the required safety surfacing and the minimum fall zones as required by the safety guidelines. These guidelines can be found at [www.cpsc.gov](http://www.cpsc.gov).**

**CHILDREN MUST BE SUPERVISED AT ALL TIMES.  
No playground is safe without adult supervision!**

## Tool and Material Checklist

- To dig holes, the best method is a tractor with an auger. Use a 12" auger bit. No matter what you use, there will be a considerable amount of hand digging as well
- Shovels, long handled spades
- Post hole diggers
- Wheelbarrows
- Large construction bar (generally 5' long).
- Spray paint, to mark ground holes
- Pry bar
- Claw hammers
- Large dead-blow rubber hammers
- Small (3lb) Sledgehammer, to use in blocking the posts
- 7/32", 3/6", 1/8" Allen wrenches: These are very important. Several different types are helpful (socket style, small "L" arm, wrench styles etc.)
- Vise grips, large, regular and needle-nose
- 3/4" and 1/2" and 9/16" sockets, both 1/2" and 3/8" drives
- 6' and 8' stepladders, strong ones
- Extension cords (also duplexes to run more than one cord)
- 1/2" drill and 3/8" drill
- 1/2" and 1/2" drill bits and 1/2" spade bits
- Levels: magnetic torpedo, 4' long etc. (as many as possible)
- Shims and blocks from scrap lumber and a saw to cut sizes on site
- Small, skinny, flat shims are helpful in raising posts etc. 2" by 4" and 2" by 6" and Plywood are also helpful
- Pencils and markers
- String line
- Bar clamp 4'
- Sometimes bracing material is helpful (2" x 4" x 6' studs with sturdy lag bolt/nut combinations)
- Files, sandpaper, wood scraps
- Stones
- Cement
- Surfacing
- One brick per post

## Safety Checklist

Carefully go over each post, deck and component with bare hands very carefully to detect any areas that may be sharp. During installation and handling, there may be areas that were hammered; causing rough areas that may be sharp. Use the following list to check for problem areas:

- Scrapes in metal pieces. Use steel wool, files or sandpaper to smooth.
- Spatter or burrs at all welded locations. Look closely and smooth.
- Scratches on the plastic parts. Look closely and smooth with steel wool.
- Edges and mold lines on plastic and aluminum parts should be smoothed with steel wool or files.
- Slide connection joints, smooth and fill if necessary with outdoor clear caulk sealant. This applies to any small opening that might be a “catch” or entanglement point.
- Sleeve ends, sometimes rough handling will cause rough edges. Sand down rough areas if they exist. Check that screws are seated.
- Vinyl coated parts, check all areas to de-burr.
- Roll pins; make sure they are flush and to not stick out.
- Clamps, when aluminum is hammered, it can cause a rough area. De-burr if necessary.
- Bolt thread protrusions, two threads are maximum protrusion allowed. If more than two threads are visible, cut off and file smooth.
- “T” nuts, should not stick out. Loosen and retighten.
- Black top end caps, smooth down rough areas as necessary.
- If there are any nail or screw heads which are improperly installed (bent or marred) remove and replace.
- Angle irons, check all corners for rough areas – sand if necessary.
- Set Screw, all setscrews should be flush with metal surfaces. Check all and tighten.
- Exposed concrete – all concrete should be poured below grade. Backfill all of the footings with dirt.
- Never ASSUME that hardware was tightened. Check everything.
- Touch up painted areas as needed.

## Quick Guide

**SITE** – Make sure the area of installation is relatively level, free of obstacles and underground utilities. If a slope exists, care must be taken to accommodate entry and exit areas to insure they maintain the correct heights. Call 1-800-DIG-RITE to have a technician check the area for underground utilities. This service is free.

**MATERIAL INVENTORY** – Locate your Component Checklist and the 2d top down drawing included in the instructions. Use both to identify, inventory and best position the parts around the perimeter of the area. If you find damaged or parts missing, contact your SportsPlay Distributor immediately.

**INSTRUCTIONS** – Thoroughly read the instruction booklet BEFORE beginning the installation. Pay special attention to the pages describing post and deck installation. These are the ‘bones’ of your playground. If they are not properly installed, the remaining events will not install correctly. **KEEP THESE INSTRUCTIONS ON FILE.**

**TOOLS** – Locate the Tools Checklist in the instructions. Make sure all necessary tools are available at installation time. If you are using volunteers, send a note to them that includes the tool list. You may be able to borrow most items instead of renting.

**SUPPLIES** – Set your installation date and order supplies from your local building center. You will need some flat

concrete stones for blocking holes, some scrap lumber for bracing and cement. You can figure about 2 80# bags per hole.

**DECK LAYOUT** – Find the grid drawing in the instruction booklet. Decide which way to orient the structure. ALL fall zone measurements MUST be accommodated. Locate the lowest deck on the drawing. You can start laying out the structure by placing the lowest deck on the ground and then double check your measurements. Measure twice, install once! Consult the instruction booklet for post and deck installation instructions.

**BRACING** – As the decks and kick plates are installed, be sure to level the posts and place braces in the holes to keep them from shifting. Periodically, plumb and level all posts as you work your way around the playground.

**COMPONENT INSTALLATION** – Consult the instruction booklet for separate installation instructions for each component on your playground. Begin installing from the lowest deck in a clockwise rotation around the structure back around to the starting deck. Tighten panels as you go, making sure to plumb and level posts.

**VISUAL INSPECTION** – After all components are installed and tight, do a visual inspection to ensure the panels and posts are level, in the proper place, and look good with respect to one another. Once satisfied, you are ready for concrete.

**CONCRETE** – Mix the concrete according to the directions. DO NOT mix directly in the hole. Fill each hole to within 2 inches of the original surface. Crown for drainage, and cure 48 hours.

**SECURE AREA** – Fence off or lock area to insure that NO ONE can play on the playground until it is completely finished. You may consider contacting local law enforcement to inform them of the new installation and ask them to check the area frequently during the night.

**BACKFILL AND CLEANUP** – 48 hours after pouring cement, backfill all of the holes with dirt to the original ground level and make sure the area is free of any tools, hardware, or sharp objects.

**SURFACING** – Use the chart on page 8 to decide how much safety surfacing is required. Before spreading loose fill surfacing, be sure to install a weed barrier outside the fall zone dimension, then spread the safety surfacing.

**LAST THING** – Make one more tour around the playground and physically make sure all hardware is tight.

**OPEN FOR PLAY** – After the safety surfacing is installed and the hardware has been checked for tightness, your playground is ready for play.

**MAINTENANCE** - Consult your instruction booklet for the maintenance checklist. Schedule and complete periodic maintenance checks of the entire playground. If any hardware is worn, or any item missing or broken, close the playground and contact your SportsPlay distributor for replacement parts.

Check resilient surfacing depths, move or add additional surfacing if necessary. Make sure the playground area remains free of obstacles, broken glass or other sharp objects.

## Safety Surfacing/Fall Heights

You must consider the type of safety surfacing you will use before beginning the installation process. There are two general types, organic/loose fill or synthetic unitary. Both materials have advantages and disadvantages and it is likely that your client's budget will dictate the material of choice. Always have all options available as product quality and long-term performance may cause your client to reevaluate their original budget.

When installing a unitary safety surfacing material such as rubber mats or poured-in-place, you will need to pour a concrete slab so that the rubber material can be secured. This type of product cannot be placed on dirt.

If a loose fill surface such as wood chips is selected, you will need to consider containment borders. There are many products to choose from including hard plastic and natural products such as wood. Creosoted railroad ties are NOT recommended. Loose fill materials like wood chips are easily displaced, so 12" deep is generally satisfactory. Also remember that loose fill will compress with repeated use.

Weed mat: Some use a landscaping fabric material that allows drainage but prevents weed growth. Weed mats are installed after the structure is installed but before the resilient surfacing is installed.

Borders: Building borders above ground, below grade, or on grade depends upon the area in which you live. Assuming you must use 12" of resilient surfacing, there are three basic types of installation:

1. 12" below existing grade
2. 6" below and 6" above existing grade
3. 12" above existing grade

The tallest deck on the unit generally defines the maximum fall height of a structure. If upper body equipment (horizontal ladder) is attached, the fall height is then the distance from the highest part of the equipment to the protective surfacing. Refer to the Top Down View to determine the maximum fall height.

Since the structure will be installed at dirt grade, the height of the resilient surfacing must be determined and factored into the height of installation of decks. For example, if the resilient surfacing will be 12" deep, a 3' deck height will actually install at 4'. When the structure is completed and the surfacing is installed, the deck then will be 3' above the level of the resilient surfacing.

## Safety Surfacing Chart

**Table – Critical heights (in feet) of Tested Materials**

Chart taken from The Handbook for Public Playground Safety written by the U.S. Consumer Product Safety Commission (CPSC) page 5 ([www.cpsc.gov](http://www.cpsc.gov)).

Material		Uncompressed Depths		Compressed Depths
	6"	9"	12"	9 "
Wood Chips	4	10	11	10
Double Shredded Bark Mulch	6	10	11	7
Engineered Wood Fibers	6	7	>12	6
Fine Sand	5	5	9	5
Course Sand	5	5	6	4
Fine Gravel	6	7	10	6
Medium Gravel	5	5	6	5
Shredded Tires	10-12	N/A	N/A	N/A

These directions are written based upon a depth of 12" of resilient surfacing.

Do not forget to calculate the compressed resilient surfacing depth needed and adjust your "dirt grade height" accordingly.

## Punch List

### Step 1: Layout

1. Lay square deck on ground in the desired location and measure from all corners to insure there is adequate room. (Refer to Grid Drawing pg. 9)
2. Most installers usually like to orientate the playground so that the entry point of the playground is facing either the sidewalk or the direction from which the children are coming.

### Step 2: Holes

1. Mark the locations of all four post holes by using the center point of each deck corner and marking them with paint or a wooden stake.
2. After the holes are marked, move the deck out of the digging area and dig all four holes per the footing drawing on page 12.
3. Fill or dig the depth of 1 main hole to what is required; this hole will be used to get the other three holes the same depth in reference to each other. Make sure the hole is flat and tamped solid, then place a small piece of plywood or brick in the bottom. You must take this in account when determining the hole depth.
4. Now, if possible, use a transit to maintain the same hole depth on the remaining three holes, if you don't have access to a transit, then park a line on the first post about two inches above the dirt level. Then measure up from the bottom of the post to this mark and mark a line on the other three posts at the same distance. Now use a four-foot level across to each line, raising or lowering

as necessary to make the lines level. Repeat this for the remaining two posts.

### Step 3: Deck and Post Installation

1. Measure 36" plus the amount of safety surfacing you are planning on using (example:  $36" + 12" = 48"$  from the existing ground level). Make a mark on the first post at this measurement and then measure from the bottom of post to this mark and make a mark on the remaining three posts at the same measurement.
2. Install a deck clamp per instruction page 14. Tighten all hardware.
3. Now make sure that you have two other helpers and the required deck clamp hardware.
4. Place all four posts into the holes and let them rest on the hole edges. Now install the deck on two of the deck clamps and install hardware down through the deck and clamp and install the locknut on the bottom. Do not tighten at this point.
5. Next place the other two posts on the deck and install the hardware.
6. It may be necessary to brace the deck and posts with lumber to make sure they stay in place and level. Level all four posts and tighten hardware. Also make sure the deck was installed level.

### Step 4 – Component Installation

1. Begin by installing the transfer assembly to the main deck per instructions page 22.
2. Next install the guard wall with steering wheel per instructions page 30.

3. Now install the Alpha panel per instructions page 34. Level and tighten.
4. Install the triple rail slide per instructions page 28. Make sure water drains out of slide bedway and the slide guard is level, then tighten. Install crawl tunnel per instructions page 26. Level and tighten.

### **Step 5: Concrete**

1. Once all components and posts are tight and level, you may concrete. A good rule of thumb is two 80 lb. bags of concrete per hole. Do not “dry bag” the concrete, always mix per instructions on concrete bag. Be sure to leave concrete about 2” from the top of the ground to allow backfill.
2. Be sure that all splattered concrete is washed off of the posts and components while it is still wet.
3. Block off installation area for at least 48 hours.

### **Step 6: Final after 48 hours**

1. Return in 2 days to backfill concrete, drill and install drive (roll) pins per instructions, and install safety surfacing.
2. Inspect all components to insure the hardware is tight and all panels are level.
3. Make sure all tools and dropped hardware are removed from play area.

Open the playground.

## Trouble Shooting

**Problem:** Incorrect sized hole or no hole where there is supposed to be one.

**Solution:** Use a 1/4" leader drill bit to drill a hole at the desired location. Next, drill larger size hole with correct bit. Usually, when there is a hole missing, it is an oversight, but if it appears that there are several missing holes, re-check your work.

**Problem:** Setscrew missing on clamp or setscrew hole is cross-threaded.

**Solution:** Drill a new hole in the clamp at the correct location with a 5/16" bit, then tap with a 3/8"/16 tap.

**Problem:** A typical 48" long portion of a pipe will not fit correctly, causing the posts to be off level.

**Solution:** First, check to see that the pre-installed setscrews are not installed too far into the clamp making it impossible for the pipe to enter the clamp. Also, make sure that the clamp is not crooked, preventing the pipe ends to enter the clamp all the way. If this is the case, install clamp sideways onto pipe, then attach to post. The pipes enter the clamp a distance of 1 1/4" deep. If the pipe does not enter all the way, then use a rubber hammer to pound a component to the left or right to ensure the pipe ends have dead-ended into clamps. If the problem remains, contact your distributor.

**Problem:** A clamp has already been drilled and has had a roll pin installed and you have to move it.

**Solution:** Using a punch, simply knock the roll pin through the clamp and post then move the clamp.

**Problem:** There is interference between a vertical portion of one component and another vertical portion of another component going into the opposite direction. (For instance, in the case of a tunnel or bubble window that has a vertical spacer bar).

**Solution:** Loosen the spacer bar by loosening the setscrew on it, move it over to make room.

**Problem:** Your posts are out of line.

**Solution:** Unblock your new posts. Check to see if when the deck was installed the posts were not on the center to the corners of the deck. Loosen the hardware and re-line the posts this way. In most cases, you have to back up, loosen hardware, and physically move each post or component that is connected similarly with 48" end pipes. There is a chance that the component was installed so that it was out of center of the 48" posts, which connect it. Loosen the setscrews on these parts; move them back into line, re-block posts. You must work hard to insure that posts are in line and on bubble.

**Problem:** You try to level a part or post and it won't budge, it swings or else bounces back.

**Solution:** Your hardware or blocks are too tight. Loosen the assembly, level and then re-block and re-tighten.

**Problem:** Bolt size in parts box does not match the instructions for the bolt.

**Solution:** If we made an error in sending the wrong hardware, use a correct size from the hardware store and we'll reimburse you.