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HOW TO SELECT A FIELD MARKER

A couple things may be driving you to buy a new athletic field marker; you increased the number of fields being lined, you need to reduce paint supply costs, or your old machine is causing problems.

What should you look for in a new field marker (other than aerosol or chalk markers)? There are several different types of field markers available. The organization doing field operations must assess their capabilities for field marking operations and maintenance before making a field marking purchase. Do you have a dedicated staff for operations and maintenance and can they manage the equipment effectively to reduce any down times during field marking seasons? We've listed some questions and associated answers to help you decide on the appropriate athletic field marker for your organization.

Today the acrylic latex paint field markers are cheaper to operate than an aerosol marker for organization with two or more fields to line on a regular basis. Also the time involved with marking fields will be reduced as some athletic field markers can line a field in one pass versus the two passes normally required of aerosol painters. Your return on investment will be recouped in one to two years by reduced paint supply costs.

So what makes up a quality field marker and the primary capabilities you should be considering? There are three primary capabilities of the athletic field marker to consider: the line spraying operation, the method of powering the field marker, and the platform for performing field marking. Several areas needing your evaluation on different products are performance, versatility, durability, and ease of operation and maintenance.



Model E-100 field marker with Paint Boom Accessory

The field marker spraying operation consists of the plumbing for applying the acrylic latex paint, the assembly for laying down the line, and how the paint and assembly is controlled. Before purchasing an athletic field marker get answers to the following questions.

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- What coverage does this field marker provide, one or two nozzle spraying? You should look for a two-nozzle sprayer that provides opposing nozzles to equally coat the blade of the turf grass in one pass lining.
- How flexible is the field marker for adjusting to different line widths and the height of the grass? The paint shoe assembly should have a horizontal as well as a vertical adjustment that can be easily changed with a hand tool and maintain its setting.
- How does the field marker accommodate rough terrain so straight lines can be achieved? Part of the solution is the spray shoe assembly and whether it is constructed for "floating operations" and can be lifted remotely to avoid obstacles.
- Is the spray shoe assembly observable during operations? As the operator you need visible access to the spraying operations for starting and stopping as well as discovering any problems. The location of the shoe assembly is important when relocating equipment and not running over previous marked lines. The shoe assembly works well when located just behind the front wheel assembly.
- Are the spray nozzles easy to adjust and clean? How does the unit prevent nozzle dripping? The spray shoe assembly should be easily accessible by the operator for cleaning and replacing nozzles with minimal need for tools.
- How are spraying accessories connected to the unit? Most field marking units come standard with a spray wand and extension hose for tight line marking requirements, such as soccer field corners and stencil type operations. The spray wand and hose should not be charged with paint until required by the operator. Other accessories should be easily attached to the unit without tools and impacting normal operations.
- Does the unit come with a means to keep the paint in suspension, such as a tank return line for agitation? You will achieve better performance with a capability to keep the paint agitated during marking operations.



RS-500M Self-propelled Rider, with 33" Mower Deck

Your expenditure on a field marker dictates that the machine operates successfully for many years without significant maintenance costs. Today there are primarily three types of field markers, compressed gas (CO₂), gasoline, and 12-volt battery power units.

- The compressed gas or carbon dioxide powered unit uses a rechargeable canister that will normally mark in the neighborhood of 20 fields before recharging. You need to determine your access to inexpensive compressed gas. The compressed gas is regulated and fed into the paint canister to force the paint to the paint shoe assembly. To resolve any painting problems with this unit requires a pressure discharge and recharge cycle of the paint tank.
- The gasoline-powered units normally have a lawn mower type engine run a compressor that pumps the paint to the paint shoe assembly. So there are two mechanical units that support the field marking operations. These units are typically adapted from the parking lot striping machines that use oil and acrylic based paints.
- The newer approach to field marking is the 12-volt battery power units. These units consist of a deep cycle 12-volt battery with an associated recharging unit and an electric motor with a pump to support field marking operations. The advantage to this new technology is airless operations and ease of maintenance. The electric motor and pump is normally an integrated unit with internal diaphragms and valves. These self-priming pumps were adapted for field marking after years of operation in the agriculture and food processing industries. A fully charged battery will normally support field lining for 8 hours. Resolving field marking problems is quick and easy.



Field Kit for Model E-100
Common Replacement Parts

Many organizations today are being asked to line more fields more often. The field marking unit needs features that reduce operator fatigue, promote easy maneuverability, and provide a rugged construction. Several ergonomic issues need to be addressed and are quickly appreciated by the field marking staff when satisfied. Today more volunteer organizations are charged with field marking responsibilities. These volunteers as well as professional grounds maintenance staff, want to spend minimal time field lining and not expend a lot of their energy.

- How is the handlebar integrated into the field marker? Does the handlebar allow for easy operator control when making course corrections and relocating equipment? This normally dictates a wide handlebar grip about shoulder width and a balanced pivot angle in relationship to the platform. The control of paint operations should be easily accessible near the handlebar grips so operator control doesn't suffer.

- How easily and accurately does the unit move across the field during marking operations? There are several points to consider when evaluating field markers. The platform size and the rolling equipment, namely the tires and bearings, dictate the pushing ease and stability of the walk behind unit. A wider platform provides more stability in rough terrain. Pneumatic tires, in

the neighborhood of 10", on a roller or ball bearings style axle provide for easier pushing. The center of gravity of the machine when fully loaded is important when relocating the field marker during field operations. The lifting of the unit for turning, avoiding painted lines, and obstacles should be easily accomplished by the operator. A unit with a three-wheel design enhances these operations. - How sturdy is the field marker and will it hold up to hours and years of operations? Design and manufacturing methods can improve the longevity of your field marker. The frame of the unit should be made of strong material. Steel is commonly used for strength yet should not be overly heavy. Lighter materials can be used for non-stress areas of the frame. The frame should be protected by rust resistant material such as powder coat paint. Galvanized, stainless, or brass corrosive resistant parts should be used in potential wear areas of the unit such as the paint shoe and nozzle assembly, control valves, and pumping equipment.

- How easy is the unit to clean and maintain? For paint preparations, painting, cleanup the operator should need minimal training. The operational parts of the field marking equipment should be easily accessible with minimal tool requirements for adjustment, cleaning, and repair. With acrylic latex paint the clean up procedure should be quick while thorough to prevent paint residue build up.



Screen Funnel Provided as Standard Equipment

Servicing of any field marking equipment is vital to the organization's operations and use of their resource constrained budgets. The manufacturer of the unit should have parts readily available and answer questions on operations and maintenance. Quick access to parts and the ease of replacing parts should be considered in your organization's maintenance capability. Most units should be maintainable with a minimal of set of tools such as screw-drivers, allen-head wrenches, and adjustable wrenches along with an operator's manual with trouble shooting steps.

We hope this tutorial on how to select field marking equipment has been useful.

Visit Tru Mark Athletic Field Marker's web site at <http://www.AthleticFieldMarker.com> for product, parts, and turfgrass information. Call them at 1-800-553-MARK or send an email to Sales@AthleticFieldMarker.com. Choose Tru Mark Athletic Field Marker for making "Straight Lines in Less Time."