

REVIEW **HO**

# Heljan Container Terminal arrives from Walthers

*Operate your intermodal facility just like the prototype*

Review and Photos by Todd Gillette and Stephen M. Priest

Operating Container Crane,  
MSRP: \$750.00

Made by Heljan and imported by:  
Walthers, Inc.  
P.O. Box 3039 • Milwaukee, WI 53218  
800-487-2467 • Fax: 800-807-2647  
www.walthers.com

**T**HE movement of containers is big business for railroads and ocean shipping companies alike. The industry of shipping product worldwide is aided by the standardized container system that allows a shipment to be moved from truck to ship to rail to truck to dock, all without being unloaded.

Several sizes of containers exist including 20-, 40-, 45-, 48-, and 53-foot lengths.

They are all standardized and interlockable/stackable. Not only have container sizes increased, but also the overall number of containers moving about the world is staggering in its number. An important part of this constant ebb and flow of containers is the machinery used to load and unload them from their various transportation systems.

A variety of machines lift and place the containers from ships to trains and

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ultimately to trucks. Special skeletal trailers are used under the container that convert it for highway use by

providing it with a frame, wheels, and hitch.

Larger oceanside facilities specialize in

the transfer of containers between rail, ships, and trucks while most land-locked facilities simply hand off the containers between rail and trucks. Generally speaking, the larger and busier the container facility, the larger and more capable is the lift machinery in that facility. Several static models of lift equipment have been available allowing you to hint at container movement, but not until now has a

mass produced, fully assembled working model been made available.

## Walthers/Heljan's Operating Container Crane

This impressive animated facility should be a welcome addition to the ever-growing category of intermodal, beyond just the standard trains, Z vans, and containers previously available. In fact, nothing like this has ever been manufactured before. The mostly assembled facility allows you to quickly create a container terminal for your railroad, and I mean terminal. With a few add-on pavement bases you can literally create an operating terminal of any length and configuration. However, the standard kit ships with two modular pavement bases giving your starting project an overall size of about 13 by 18 inches.

This project was originally conceived and designed by Roco but not put into

commercial production until Heljan recognized the potential appeal of such an interactive and animated machine. You can finally operate your container/intermodal facility like the prototype. The animation possibilities are endless, including the use of more than one gantry crane in your facility — each acting independently of the other.

The heavy orange container crane and its separate components arrived carefully packed in a rather large box that revealed a preassembled lateral crane and its supporting gantry. Close attention to the clearly written instruction manual during unpacking and assembly will be rewarded by the relative ease that it goes from the box to fully operational. Some assembling and placing of separate components is required in order to complete the crane and base as a working unit. This assembly mainly consists of configuring the paved base, fitting together the two crane



The massive size of this model is clearly represented by the semi trucks parked beneath it. Watching the gantry move is impressive and adding extra base plate sections can increase the size of the facility. Up to three gantry cranes can be used to create a very busy terminal. Power for the crane is supplied via the base rail. The container can be rotated 180 degrees by the hoist. It is fascinating to watch.



Because of its unique remote control capabilities, this container crane can be used in any intermodal facility or shipside dock. With a little modification any container can be lifted, moved, and placed on the base plate. The digital controlled crane has adjustable speed steps like locomotive decoders. This allows the crane to be adjusted to the likes of any operator. The crane uses two built-in, programmable decoders, one for the gantry and one for the crane/hoist. The lack of visible wiring makes the structure very believable and with a little weathering, the gantry would look right at home on even the best detailed railroads. Note the functioning lights on the crane; these can be controlled as well.



The all-metal gantry is completely remote controlled. An electromagnet in the hoist can be positioned over a container and the crane can then be used to move that container onto a car, truck, or onto the base plate. The animation built into the crane allows the container to be moved side-ways, rotated 180 degrees, and carried down the length of the base plate.





The crane ships with a pre-wired control box that allows the user to interface with the crane. The NSEW controls the back and forth movement of the gantry and the sideways motion of the crane. The S&G buttons activate the spotlight and Gantry LEDS. The M button activates the electromagnet used to lift the containers. The F is an option button that combines with other buttons to activate the hoist, etc.

pieces, followed by some simple wiring.

The paved base, molded in plastic with the crane rails installed, required most of the assembly time, but was very well designed. Once the assembly of the base was complete, the crane and gantry are simply placed on the rails. Two sections of the paved base are included but more can be added if needed.

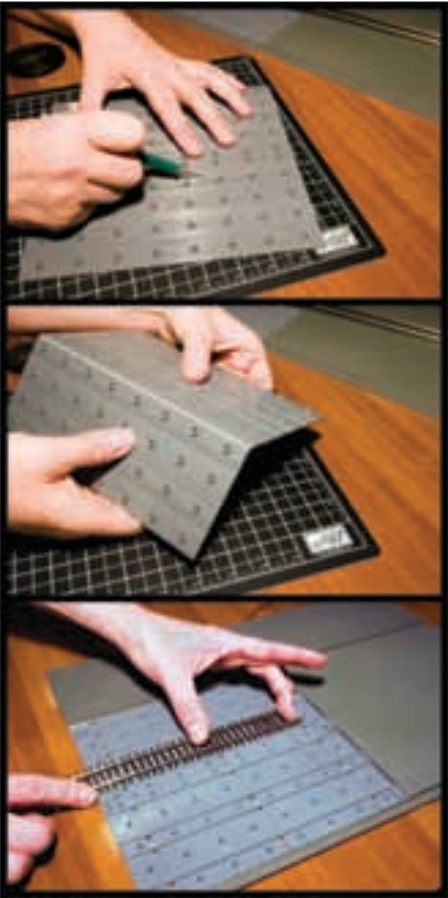
Another interesting feature of this modular system is that the base can be user configured to serve from

none to five tracks. The base is cast with track guides, interlocking pins, and easy-to-configure cutting lines that allow quick and precise modification of the pavement. Road pieces are cut into three sections and attached following installation of the track and, along with the beveled end panels, are cast the color of asphalt. Two cuts will create the two

edge pieces and the strip that goes down the center of the track.

The pavement subassemblies

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One of the great design features of this base system is its score and snap design. Heljan created flexibility in the facility by allowing the end user to choose the location or locations of rail service trackwork. I used Walthers Code 83 flextrack to serve my facility and the entire process of adding that track took less than 20 minutes. Simply separate the upper and lower plates from each other, choose your track location, and score and snap the upper plate into separate pieces. The process removes a thin strip of plastic that will be occupied by the rail so four cuts are needed. The finished product is two side pieces and one track center piece. Plastic press-fit “nubs” hold and align the upper plate while keeping the track in alignment as well. A great design!

ment edges a perfect 90 degrees and asphalt is seldom close, usually creating a rounded irregular edge.

To take advantage of its modular design, I wish I had about a dozen sections of the paved base with rail just to see how long it would have taken to unload an entire stack train!

The construction of this largely metal structure is great, and weighing in at over two pounds it provides a solid feel not always associated with small-scale modeling. This weight was designed into the product in order to provide good electrical contact between the rail and the gantry. The DC and its associated DCC signal are passed to the structure from the gantry rail imbedded in the pavement sections just the way that locomotives receive their digital packets from the track. Motors and electronics are built into each separate component and a very nice feature is wiring that is completely hidden inside the crane supports, leaving the carefully detailed look of the model unblemished.

It is very difficult to tell that this machine is powered until it starts to move. This disguising was especially noticeable on the gantry floodlights and operator crane spotlights, which add tremendously to the terminal’s look of

authenticity and realism. You would never know they were functional until they illuminate at the push of a button. The designers even took the time to utilize both brilliant white LEDs and their yellowish counterparts that mimic the mercury vapor and halogen lighting often used on the prototype. That is a nice touch.

### Riding That Crane

The lateral crane, which rides on top of the gantry and the gantry itself are made of metal that have been fitted with plastic subassemblies. Small screws are used to hole the cast metal components together. They are visible but not overly distracting. A quick touch of orange paint or some weathering will quickly hide them. These subassemblies, along with the neatly executed painting and lettering, provide the detail and accurate cross section needed to make the gantry appear scale.

The stairways, handrails, walkways, and container lift mechanisms are all injection-molded plastic. I found them to be believable in their scale but I would have liked to see them painted or cast in a different color. As they are, they appear to be add-ons to the structure rather than an integral part of it. However, a little weathering would quickly tone down this visual impairment and blend the dissimilar components together.

The crane is DCC compatible and uses 14 to 16 volts (DC or AC) rated at 2.5 Amps to operate. Convenient screw terminals are provided on the control box for all wiring, making the assembly of the gantry a job that does not require a soldering iron. A separate power pack or a regulated power supply would be ideal in this situation. Amazingly enough, the entire crane receives all of its commands and instructions from just two wires! These wires connect to the rails that the gantry rides on and, although they are built into the provided modular pavement sections, it would be possible to lay your own rail for the gantry, taking care to match the gauge of the gantry's wheels. Configuring the electronics is very straightforward.

The heart of the Container terminal



A cut of cars is spotted beneath the crane in preparation for an off-load of the containers. Although the Heljan Crane is only set up to work with 20-foot containers, metal strips can be placed inside of larger containers and inside of piggyback trailers allowing them to be moved as well. Prototypical exactness suffers when moving larger containers and piggyback trailers because the lift crane that contains the electromagnet is fixed at 20 feet. Piggyback trailers require bottom or sill lifting, and overhead lift equipment is always fitted with retractable arms that reach under the trailer to lift it. Remember that up to 5 tracks can be cut into the base, potentially creating a very busy facility.

is the controller, which is designed for a very intuitive feel and can control up to three container cranes. Its compact, 4.5 x 3.5 x 1 inch dimensions allow for both freestanding and hand-held operation. The large diamond-shaped directional button controls both back and forth gantry movement (labeled East and West) and crane movement across the gantry (labeled North and South) and these motions can be performed simultaneously.

The slow, smooth movements of the crane across the gantry and the gantry back and forth on its rails reveal a convincing scale speed. Used in conjunction with the "F" button, the North/South buttons also raise and lower the

hoist while the East/West buttons rotate it 180 degrees. The "M" button is toggled to activate/deactivate the magnet, while the "S" and "G" buttons activate the spotlights and gantry lights, respectively.

Also included is a switch on the back of the controller that permits its orientation to match the directional movement of the crane. So, if you move from one side of the gantry to the other, a flick of the switch will reorient your movements with those of the crane. A little practice is all that is needed to gain command of the variety of possible movements of this crane. One other neat feature of the crane is its ability to rotate 180 degrees. This allows you, the crane operator, to spin a container around end

for end prior to loading it.

Since the crane is assigned an address like a locomotive, it can also be operated by an existing DCC system. Interestingly enough, even in the absence of a separate DCC command station, the controller can also be used to operate locos featuring DCC decoding. Other possibilities for controlling the gantry crane and its many functions include using a gaming joystick connected directly into the control module and also linking the unit to a computer using software currently under development. The movements of the crane, gantry, and hoist can be adjusted separately in nine steps of speed, while acceleration/deceleration programming can be applied to the crane and gantry motors. Overall this is a very versatile yet very easy to operate controlling system.

### Final Observations

One slight disappointment in the model is its lack of piggyback handling equipment capable of picking up a trailer. Although a steel plate could be installed inside of a piggyback trailer for electro-magnetic, lifting a set of operable lift arms would be more realistic as pig trailers are lifted from their bottom sills not their top corners. Hence the facility is specifically designed for containers only.

In lieu of actually "gripping" containers with a "spreader," the hoist uses an electromagnet in conjunction with magnetic metal strips fitted inside the tops of the containers. Besides the two compatible containers included, you can also modify your own containers by simply adding metal strips creating a large fleet of interchangeable containers for your double stack fleet. The use of the magnetic hoist allows for a slight margin of error in picking up containers and also allows for the use of virtually any comparably sized containers. The smooth motion of the motors and mechanisms enables the operator to easily load, unload, and stack containers in a precise manner after only minimal practice. And is it ever fun to operate! You'll be hooked and in the intermodal business in no time. 