

# **DCS<sup>™</sup> REMOTE COMMANDER**

## Instruction Manual

PLEASE READ THE MANUAL BEFORE USE AND SAVE  
[WWW.MTHTRAINS.COM](http://WWW.MTHTRAINS.COM)

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**CAUTION: ELECTRICALLY OPERATED PRODUCT:**

Recommended for Ages 14 and up. Not recommended for children under 14 years of age without adult supervision. As with all electric products, precautions should be observed during handling and use to prevent electric shock.

**WARNING:** When using electrical products, basic safety precautions should be observed, including the following:

- Read this manual thoroughly before using this device.
- M.T.H. recommends that all users and persons supervising use examine the hobby transformer and other electronic equipment periodically for conditions that may result in the risk of fire, electric shock, or injury to persons, such as damage to the primary cord, plug blades, housing, output jacks or other parts. In the event such conditions exist, the train set should not be used until properly repaired.
- Do not operate your layout unattended. Obstructed accessories or stalled trains may overheat, resulting in damage to your layout.
- This train set is intended for indoor use. Do not use if water is present. Serious injury or fatality may result.
- Do not operate the hobby transformer with damaged cord, plug, switches, buttons or case.

This product may be protected by one or more of the following patents: 6,019,289; 6,280,278; 6,281,606; 6,291,263; 6,457,681; 6,491,263; 6,604,641; 6,619,594; 6,624,537; 6,655,640.

# INSTALLING THE DCS REMOTE COMMANDER AND CONNECTING POWER

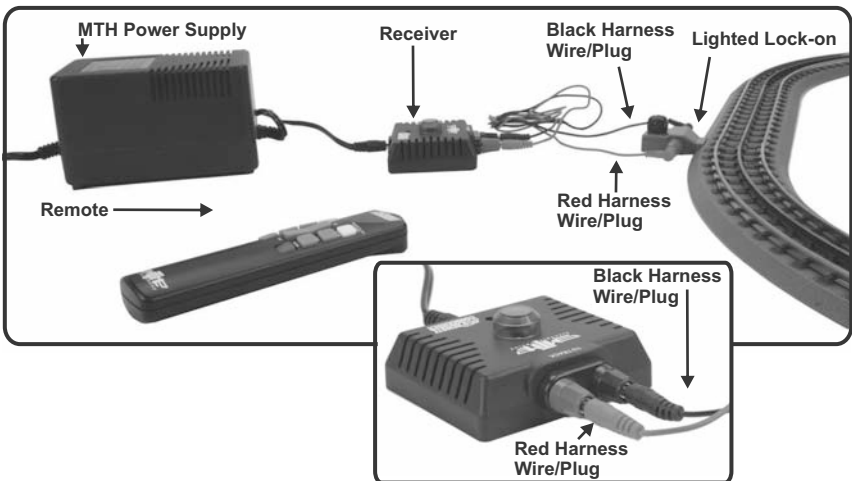
## O-Gauge Installation

The DCS Remote Commander set includes a handheld Remote and Receiver. You will need to supply your own power source by using one of the following MTH AC Power Supplies from one of your MTH RTR train sets, or the separate sale Z-1000 AC power supply (Item No. 40-1000A).

- Z-500 AC Power Supply
- Z-750 AC Power Supply
- Z-1000 AC Power Supply

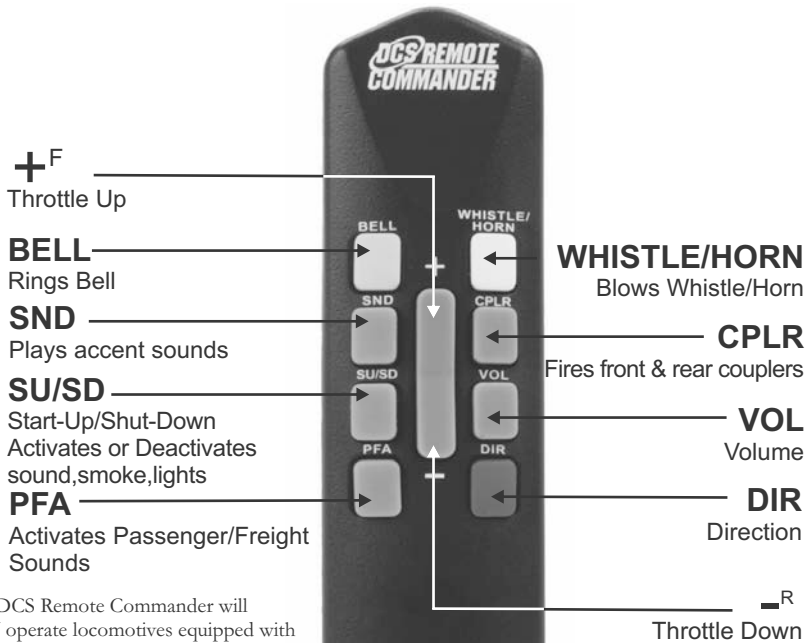
To install the DCS Remote Commander and power supply please use the following instructions:

1. Ensure the power supply is unplugged.
2. Install two AA batteries (not included) into the Remote. You will need a small screw driver.
3. Plug the power supply (Z-500, Z-750, or Z-1000) barrel jack into the port labeled “Power” on the Receiver. Using the RealTrax Wire Harness plug the color-coded wires from the Receiver to the Lighted Lock-on.
4. Make sure that the engine and cars are properly assembled and coupled on the track and then plug the power supply (Z-500, Z-750, or Z-1000) into any 110 volt AC wall outlet. You will know that you have power to the receiver and the track if you see the green LED atop the Receiver and the green light atop the Lighted Lock-on will come on. Subsequent pushes of any buttons on the remote will cause the green LED atop the Receiver to blink, indicating it is receiving the signal.  
**NOTE: Power must be applied as described above or the DCS Remote Commander will not control or operate your train.**



# BASIC OPERATION

After making sure everything is properly assembled and power has been applied as instructed, aim the Remote at the Receiver and press the **SU/SD** Button on the Remote. (NOTE: Because this is an infrared line-of-sight remote, you must aim the remote at the receiver in order to send signals to the track.). Once pressed the Engine start up sound will begin as well as the lights and smoke unit will turn on. Now press the **+** end of the Remote's Throttle Control and the train will start to move forward. Each time you press the **+** end of the Throttle Control the train will move faster and faster. Please see the Operating Buttons Using the Handheld Remote for more information on using the Remote to operate the train.



\* The DCS Remote Commander will ONLY operate locomotives equipped with M.T.H. Proto-Sound 2.0 and 3.0 systems. Locomotives equipped with Proto-Sound 2.0 must be the 3 volt model. The 3-volt model can be distinguished by its square battery charging jack typically found on the bottom of the locomotive or under any removable hatches on the top of the body.

Locomotives will ONLY operate with the DCS Remote Commander if they are set to the factory default settings. If the Factory default settings must be reset, the reset procedure - in some cases - can be done with the Remote Commander by following the procedure on page 7 of this manual. If that procedure fails to reset the locomotive, then a conventional transformer (like the M.T.H. Z-500, Z-750, Z-1000 or Z-4000) can be used by pressing the bell and whistle buttons in the order described on page 7 of this manual.

## Operation Buttons Using the Remote Handheld

**START UP/SHUT DOWN (SU/SD)**- Pressing this button will start your engine. Its lights, sound and smoke (if equipped) will turn on when pressed once and off when pressed again (if the train is already on).

**Throttle Control (+ and -)** (center rocker) – After START UP, quickly pressing and releasing the + end of the Throttle Control allows you to increase the speed of your locomotive in 1mph increments. Holding the + end of the Throttle Control down without releasing it will bring the engine up to top speed in about 7 seconds. Pressing and holding the – end of the Throttle Control for about 7 seconds will allow you to gradually bring your speed down until your engine reaches a complete stop. Quickly pressing and releasing the + or – end of the Throttle Control will increase or reduce your locomotives speed by 1 mph increments.

**PFA** – Pressing this button will activate the Passenger or Freight announcements on your engine. Pressing it again will shut the feature off. (See the instructions later in this manual for the PFA operational sequence.)

**BELL** – Pressing and releasing this button will turn on the bell sound in your engine. Press and release the button again to shut it off.

**Whistle/Horn** – Pressing and holding this button will play the whistle or horn sound on your engine. Release the button and whistle sound will decay just like the real thing. Also, depending upon how long you hold the button, once you release it the engine will play up to three different whistle endings

**CPLR** – Pressing this button will activate the operating coupler sound and functions. Within 2 seconds of pressing the CPLR button you must then press either the + (front coupler) or – (rear coupler). Doing so will trigger the coupler sound effect.

**VOL** – Selecting the volume button and then pressing either the + or – allows you to set your engine at any volume you desire.

**SND** – Pressing the sound button once will initiate a host of different idle sound effects on your engine. These randomly generated idle sound effects only work when the train is in a neutral or stopped position.

**DIR** – Pressing this button will bring your engine to a gradual stop and then sit at 0mph in the opposite direction it was traveling. After the engine has come to a complete stop, press the + end of the Throttle Control to start the engine moving in the opposite direction and to increase its speed.

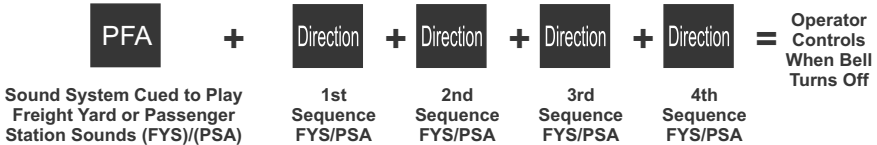
**NOTE:** If your locomotive is so equipped, the smoke unit is not controlled by this remote. In order to turn the smoke unit off/on you must first disconnect power from the track, manually turn the smoke unit control to the “OFF” or “ON” position, full counter-clockwise or some degree of clockwise position, and reapply power. (Small screwdriver may be required for this operation)

# O-GAUGE OPERATION

## Freight Yard Sounds (FYS) or Passenger Station Announcements (PSA):

Your PS2 or PS3 engine is equipped with a sound package of either freight yard or passenger station sounds that you can play. Each sequence described below will play as long as it is left on, randomly generating sounds, but be sure to allow approximately 30 seconds between the button pushes described below to allow the FYS/PSA sufficient time to run through each sequence.

- To cue the sound system to play the FYS/PSA, press the PFA Button on the remote.
- Press the Direction button once to stop the engine. This will trigger the first sequence of FYS/PSA. Use the Direction button to trigger the sounds, and Proto-Sound 2.0 has disabled operator control over the Horn/Whistle and Bell buttons until the full FYS/PSA sequence is complete.
- After waiting about 30 seconds for that sequence to run, press the Direction button again to trigger the second sequence of FYS/PSA.
- After about 30 seconds, press the Direction button again to trigger the third FYS/PSA sequence.
- Again, after allowing about 30 seconds for that sequence to run, press the Direction button one more time to trigger the fourth and final FYS/PSA sequence.
- The FYS/PSA will continue, and within a few seconds, the engine will start and move out on its own at the current throttle setting, in the same direction it was traveling when you began the sequence. Once the bell turns off, the operator regains control of the transformer's Bell and Horn/Whistle buttons and can ring the bell or blow the horn/whistle as usual.



## Tips on Using FYS/PSA

- You can terminate FYS/PSA at any time by pressing the PFA Button on the remote.
- You do not have to be in Forward to use FYS/PSA. At the conclusion of the full sequence, the train will pull away from the station in whatever direction you were going when you activated the feature.
- FYS/PSA can be triggered from Neutral. It will operate the same as if triggered while in motion except that, at the conclusion of the FYS/PSA, the engine will depart in the next direction of travel, as opposed to the direction it was traveling before entering Neutral.

## Proto-Coupler™ Operation

This locomotive is equipped with one or more coil-wound Proto-Couplers for remote uncoupling action. Because Proto-Couplers are controlled through the Proto-Sound® 2.0 or 3.0 microprocessor, they do not require an uncoupling track section or modification to your layout to function. You can fire a coupler from neutral or while in motion.

# O-GAUGE OPERATION

## Rear Coupler

To fire the rear coupler, press the **CPLR** Button on the remote and then press the **-** end of the throttle control. The sound of the liftbar and air line depletion will play, and the knuckle will be released.



## Front Coupler

To fire the front coupler (if your engine has one), press the **CPLR** Button on the remote and then press the **+** end of the throttle control. The sound of the liftbar and air line depletion will play, and the knuckle will be released.



## Speed Control

M.T.H. engines equipped with Proto-Sound® 2.0 and 3.0 have speed control capabilities that allow the engine to maintain a constant speed up and down grades and around curves, much like an automobile cruise control. You can add or drop cars on the run, and the engine will maintain the speed you set.

## Reset to Factory Default

From the factory your engine is set to run with the DCS Remote Commander System at the factory default. If for some reason your engine address changes, the engine must be reset to factory default in order to operate from your DCS Remote Commander. The factory defaults can be reset with a DCS Remote Commander, DCS system, DCS Commander, or at your local dealer. Proto-Sound® 3.0 engines built in late 2014 on can be reset with the DCS Remote Commander by pressing the sound button [**SND**], followed by the direction button [**DIR**], and lastly [**-**] on the center rocker. This will factory reset the engine even if it is not on the correct address. When using a DCS Commander or a DCS System, follow the reset instructions in those device's operating manuals.

The Proto-Sound 3.0 Factory Reset feature can also be activated using a conventional transformer equipped with a whistle and bell button (ie: M.T.H. Z-1000) by following sequences of Bell and Horn button pushes described below. To use these buttons to activate features rather than to blow the horn or ring the bell, you should tap the buttons very quickly with a 1/2-second pause between button presses. You may need to practice your timing to make this work smoothly.



## Automatic Sounds

The following sound effects automatically play in your PS2 or PS3 equipped engine:

**Squealing Brakes:** This sound plays anytime the engine speed decreases rapidly.

**Cab Chatter:** This sound play when the engine idles in neutral.

**Engine Start-up and Shut-down:** This sound plays when the engine is initially powered on or is powered off for five seconds or more.

# O-GAUGE OPERATION

## DCS Remote Commander Troubleshooting Guide

The following Guide will help you trouble shoot your DCS Remote Commander handheld remote with O-Gauge Engines.

<b>Symptom</b>	<b>Solution</b>
Engine has no sound	Ensure SU/SD has been pressed. Press the VOL button then press + on the throttle control to raise the volume
Engine's coupler will not fire	1. Ensure the model has coil-wound proto-couplers. 2. Press the CPLR button then press + or - on the throttle control within 2 seconds to fire the front (+) or rear (-) coupler.
Engine only plays first PFA sequence sounds	Press the DIR button to cycle through all four PFA sequences
Engine Volume is not adjusting when the throttle control is pressed	Press the VOL button then press + or - on the throttle control within 2 seconds to raise or lower engine volume
Idle sounds are not playing when the SND button is pressed	Engine must be standing still to play the Idle Sounds
Engine does nothing when Start-Up is pressed	Engine address must be set to factory default. The engine must be reset to factory defaults using either a DCS System or a DCS Commander.
Green light on receiver is not flashing when a button is pressed on the handheld remote	Replace the batteries in the handheld remote with two fresh "AA" batteries. Be sure the remote is generally pointing toward the receiver base within 20 feet. Remove red lens and make sure IR receiver is centered.



# Service & Warranty Information

## How to Get Service Under the Terms of the Limited One-Year Warranty

When you suspect an item is defective, please check the operator's manual for standard operation and troubleshooting techniques that may correct the problem. Additional information may be found on the M.T.H. Website. Should you still require service, follow the instructions below to obtain warranty service. First, e-mail, write, call or fax a M.T.H. Authorized Service Center (ASC) in your area to obtain Repair Authorization. You can find the list of ASCs on the M.T.H. Website, [www.mthtrains.com](http://www.mthtrains.com). Authorized Service Centers are required to make warranty repairs on items sold only from that store; all other repairs may-- or may not be done at the store's own discretion. If you did not purchase the item directly from the ASC, you will need to select a National Authorized Service Center (NASC). These centers are compensated by M.T.H. to perform warranty service for any customer whose repair qualifies for warranty service. A list of NASC retailers can be located on the M.T.H. Website or by calling 410-381-2580. Should the warranty no longer apply, you may choose either an ASC or NASC retailer to service your M.T.H. Product. A reasonable service fee will be charged.

**CAUTION:** Make sure the product is packed in its original factory packaging including its foam and plastic wrapping material to prevent damage to the merchandise. There is no need to return the entire set if only one of the components is in need of repair unless otherwise instructed by the Service Center. The shipment must be prepaid and we recommend that it be insured. A cover letter including your name, address, daytime phone number, e-mail address (if available), Return Authorization number (if required by the service center, a copy of your sales receipt and a full description of the problem must be included to facilitate the repairs. Please include the description regardless of whether you discussed the problem with a service technician when contacting the Service Center for your Return Authorization.

Please make sure you have followed the instructions carefully before returning any merchandise for service. Authorized M.T.H. Service Centers are independently owned and operated and are not agents or representatives of M.T.H. Electric Trains. M.T.H. assumes no responsibility, financial or otherwise, for material left in their possession, or work done, by privately owned M.T.H. Authorized Service Centers.

If you need assistance at any time email MTH Service at [service@mth-railking.com](mailto:service@mth-railking.com), or call 410 381-2580.

### Limited One-Year Warranty

All M.T.H. products purchased from an M.T.H. Authorized Retailer are covered by this warranty provided the product was manufactured within five years of the date of purchase. This warranty is for the original purchaser and is non-transferable.

See our website [www.mthtrains.com](http://www.mthtrains.com) to identify an M.T.H. Authorized Retailer near you.

M.T.H. products may be registered online in advance of warranty work at [www.mthtrains.com/warranty](http://www.mthtrains.com/warranty). The original sales receipt and the conditions below must be met regardless of whether the product is registered on the M.T.H. website in order to obtain warranty service.

M.T.H. products manufactured within five years from the date of purchase are warranted for one year against defects in material or workmanship, excluding wear items such as light bulbs, pick-up rollers, batteries, smoke unit wicks, and traction tires. We will repair, replace, or credit (at our option) the defective part without charge for the parts or labor if the following conditions are met: (1) the item is returned to an M.T.H. Authorized Service Center\* (ASC) or M.T.H. National Authorized Service Center (NASC) or M.T.H. Electric Trains Service Department, (2) was manufactured within the previous five years and (3) was purchased within one year of the original date of purchase from an M.T.H. Authorized Retailer. Products manufactured after the five year cutoff from the date of purchase are not covered under any warranty by M.T.H. Electric Trains. The manufacture date of an item can be verified on the item's detail page "shipping date field" on the M.T.H. website ([www.mthtrains.com](http://www.mthtrains.com)). This warranty does not cover damages caused by improper care, handling, or use. Transportation costs incurred by the customer are not covered under this warranty.

Items sent for repair must be accompanied by a return authorization number, a description of the problem, and a copy of the original sales receipt from an M.T.H. Authorized Retailer, which gives the date of purchase. If you are sending this product to an Authorized Service Center, contact that Center for their return authorization.

This warranty gives you specific legal rights, and you may have other rights that vary from state to state. Specific questions regarding the warranty may be forwarded to M.T.H. Directly.

\* Authorized Service Centers (ASC) are only obligated to provide warranty service for any consumer who has purchased the specific M.T.H. item from them that requires service work.

Service Department:  
M.T.H. Electric Trains  
7020 Columbia Gateway Drive  
Columbia MD 21046-1532