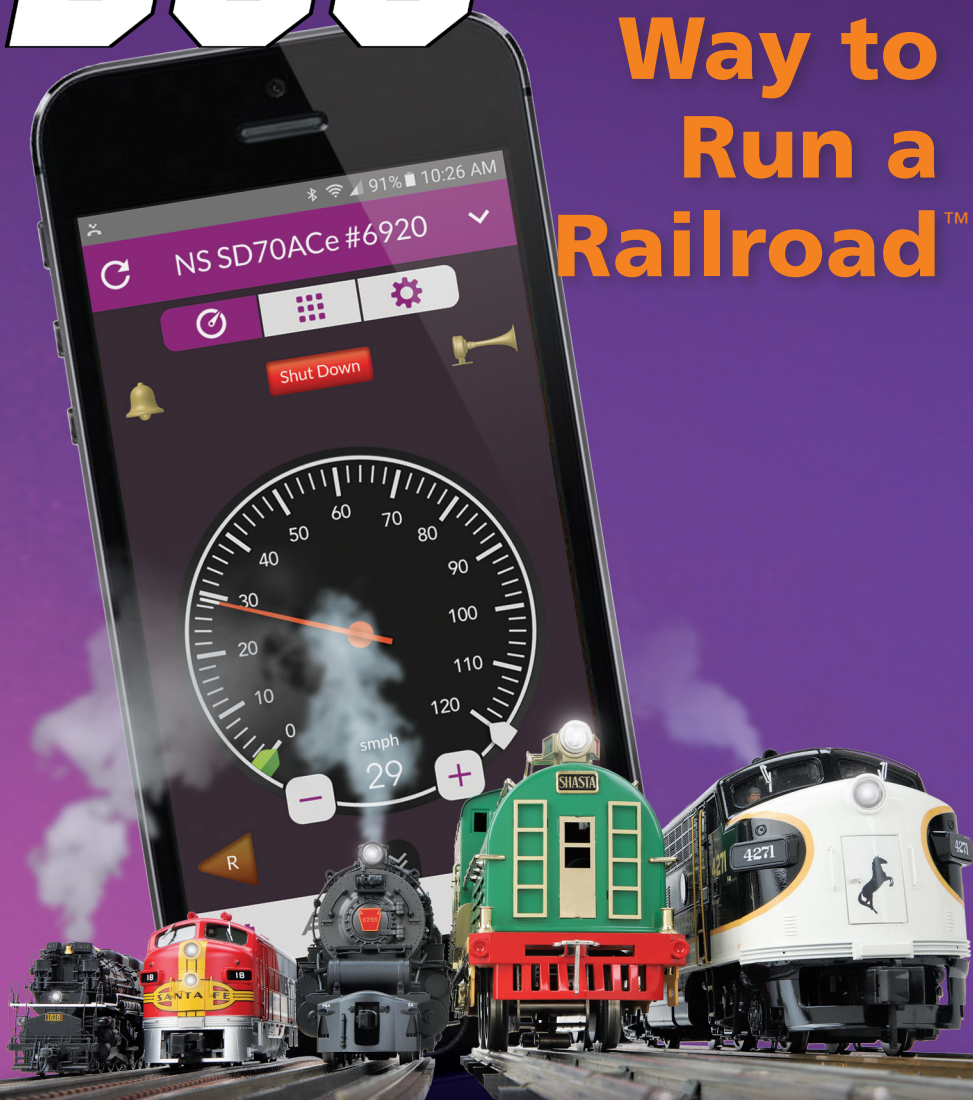


DCS™

Simply
the Best
Way to
Run a
Railroad™



Digital Command System

by M.T.H. Electric Trains™

www.mthtrains.com



DCS is the **EASIEST-TO-USE, MOST INTUITIVE** command control system you can buy.

It works with **ANY iOS OR ANDROID SMART PHONE OR TABLET** or the optional DCS Remote Control.

It can be **UPGRADED FOR FREE** over the Internet.

It can **DO MORE** for less money than other command control systems.

It's why you'll have **MORE FUN** operating your trains than ever before.

It can **RUN OVER 7000 M.T.H. PROTO-SOUND® 2.0 & 3.0 LOCOMOTIVES** and every Lionel TMCC®, EOB, or Legacy™ locomotive ever made — and run 99 of them at the same time, on the same track, independently, in command mode.

It can also **RUN ALL CONVENTIONAL AC or DC LOCOMOTIVES** without the purchase of any additional hardware.

With the addition of an Accessory Interface Unit (AIU), it can **OPERATE ANY ACCESSORY OR SWITCH**. It can **CREATE SCENES AND ROUTES** that are triggered with one push of a button.



Your Smart Device

WHAT CAN YOUR REMOTE DO?

What is Command Control?

In conventional model train operation, an AC or DC transformer varies track voltage to adjust engine speed and direction. Command systems such as DCS, however, put a constant voltage on the track (around 18 volts for DCS) and vary speed by telling each engine how much of that voltage to use.

Unlike conventional control, command control allows different engines to do different things, even when they are on the same track — like run at different speeds, go in different directions, or make different sounds. You can even combine several engines into a “lashup,” working together under a single throttle.



DCS App Primary Engine Screen

How it works: In the DCS system, commands such as speed, direction, and sound control are sent as radio signals from a smart device or handheld controller to a receiver, which translates those radio signals into digital information. That digital signal is sent through the rails and picked up only by the appropriate engine — telling it to go, for example, 37 miles per hour, blow the whistle, or smoke more heavily.

M.T.H. Railroading App

With the DCS App, any Apple or Android smart device can run trains on your layout and control switches and accessories too, with the Premium version of the App and an Accessory Interface Unit (AIU).

When friends visit, they can download any version of the App on their phone or tablet and run trains as well. Each visitor can run their own train.

Our App isn't limited to just DCS control either. With it, you can access special pages on the M.T.H. website, see the latest news and catalogs, and shop for M.T.H. products.

See How Easy It Is To Add App Control To Your Layout



Check Out The Video:
www.mthtrains.com/dcs2018

Try the App for Free, Upgrade for \$5 or \$25

Download the Apple or Android App from iTunes or Google Play



Free Version

- Control up to 3 locomotives simultaneously
- Operate bell, whistle/horn and station sounds
- Activate couplers
- Control volume, smoke and headlights

Standard Version (\$5)

- Control up to 99 locomotives simultaneously
- Control all Free features
- Adjust engine-specific sounds and features
- Configure maximum speeds

Premium Version (\$25)

- Control all Free and Standard features
- Control switches and accessories with AIU
- Build lashups
- TMCC/Legacy control
- Conventional control

DCS with Proto-Sound Locomotives:*

The Richest Set of Features in Model Railroading

DCS, in combination with the Proto-Sound 2.0 and later sound and control system found in every M.T.H. locomotive, offers more realism, more excitement, and more variety than any other locomotive control system in any scale. Here's just a partial preview of the fun you can have:

COMMAND CONTROL

Operate up to 99 DCS or Lionel TMCC, Legacy or EOB-equipped engines independently at the same time on the same track.

SWITCH AND ACCESSORY CONTROL

Add one or more optional AIUs (Accessory Interface Units) to control switches and accessories from your smart device or DCS handheld.

PROGRAMMABLE LAYOUT OPERATION

Record up to 90 minutes of DCS speed, direction, sound, and accessory commands as a program that your layout can repeat on demand. Use this feature to run trains automatically on one part of your railroad while you manually control another area.

VIVID ENGINE SOUNDS

Proto-Sound engines feature crystal-clear digital sounds. We strive to make our sounds as authentic as possible, using the characteristic whistle for a particular steam engine, for example, or motor sound for a particular diesel. With the Standard or Premium DCS App, you can tune each engine to your preference by individually adjusting bell, horn or whistle, and steam chuff or diesel motor volume — and play a steam engine quillable whistle as if you were pulling the whistle cord!

STATION SOUNDS

Proto-Sound passenger engines include Passenger Station Proto-Effects™, a complete arrival and departure sequence you can activate from your smart device. In most cases, the station sequence features an actual name train pulled by that particular engine. Freight engines include Freight Yard Proto-Effects, a symphony of freight terminal sounds.

**Proto-Sound 2.0 or later*



BRAKE SOUNDS

Engine brakes squeal whenever you throttle back sharply or pull into a station. You can also trigger brake sounds with the Brake button in DCS.

ATMOSPHERIC SOUNDS

Crew conversations, the whoosh of a steam engine opening its cylinder cocks, and a host of other atmospheric sounds play automatically at random — or can be activated manually from your smart device or DCS handheld.

SMOKE

Proto-Sound engines feature fan-driven ProtoSmoke™, the most powerful smoke system in the hobby. Like a real steam engine, Proto-Sound steamers feature puffs of smoke and steam chuff sounds synchronized with the drive wheels, to portray the drama of a steam engine slowly chuffing and puffing as it pulls out of a station and gets up to speed. Many diesels have diesel exhaust smoke. You can even vary the intensity remotely with the smoke “volume” control in DCS.

LIGHTING EFFECTS

Proto-Sound 3.0 locomotives feature prototypical Rule 17 lighting, including a variety of realistic lighting effects. Depending on the locomotive, these may include constant-brightness headlights, illuminated number boards, lighted marker lamps, and alternating ditch lights.

MULTIPLE UNIT (LASHUP) CONTROL

Just like the prototype, you can double- or triple-head nearly any combination of Proto-Sound 2.0 and 3.0 locomotives, and operate them together as a single engine. Add or drop helper engines, or bring a train into the station with a mainline engine and then have a switcher break up the consist.

SPEED CONTROL

Set engine speed in one-scale-mile-per-hour (smph) increments, from a 3 smph crawl to 120 smph. Like the cruise control on a car, Proto-Speed Control™ keeps your train moving at the speed you select, regardless of hills and curves.

SIMPLICITY

Unlike other manufacturers, we use the same Proto-Sound sound and control system in every one of our locomotives, from introductory train sets to massive articulated steamers. This means that virtually all M.T.H. engines built since 2000, when we introduced Proto-Sound 2.0 — as well as Lionel TMCC, Legacy and EOB-equipped engines — can be run together from the same DCS smart device. And when you're running with friends, each of you can use your own smart device at the same time.



Get into DCS

This is all you need to get started

1. **DCS EXPLORER** WIFI TRACK INTERFACE UNIT

Run up to 3 Proto-Sound 2.0 or later M.T.H. trains from multiple smart devices

The DCS Explorer receives commands from your smart phone or tablet and sends them through the track to the engine you've selected.



DCS Explorer Track Interface Unit

50-1035 \$149.95

Included at no extra charge in M.T.H. Ready-to-Run train sets



2. **AC or DC Power Supply**



40-560 \$44.95

DCS Explorer Power Supply

Included with M.T.H. Ready-to-Run train sets; powers 1 train

OR

Z-1000 100-Watt AC Power Brick

Powers up to 3 trains and accessories



40-1000a \$89.95

OR

Your existing AC or DC power supply*

*Up to 6 amps, UL-approved and over-load-protected

on a Budget

3. Your Smart Device with the **free** version of the DCS App

Primary Engine Screen

Touch or drag to activate sound and control features



Engine Start Up or Shut Down

Horn or Whistle

Bell

Speed

*Drag speedometer needle **OR***

Touch to adjust speed in one-mile-per-hour increments

Direction

Swipe to change screens

Invite your friends

With our free App and their own smart device, you can all run trains at the same time.

Secondary Engine Screen



Couplers

Open front or rear

Headlights On/Off

Smoke On/Off

Engine Sounds Mute

Station Sounds

Doppler Effect

Simulates sound of train approaching and passing

Volume

Walk around

The DCS WiFi signal has up to 100' range, far greater than Bluetooth — and it's much faster, allowing for seamless switching between locomotives.

Upgrade to the full DCS System

as your railroad empire grows

- **Run up to 99 engines** with M.T.H. and Lionel command control at the same time*
- **Use multiple smart devices** and M.T.H. and Lionel handheld controllers simultaneously**
- **Remotely control switches and accessories** from the same smart devices and DCS handhelds****
- **Tune each M.T.H. engine's sounds** to your personal preference*
- **Access the entire range** of Proto-Sound sounds and features***
- **Run virtually any lashup** of Proto-Sound engines from a single throttle***
- **Run trains automatically** by recording and playing back up to 90 minutes of DCS commands***
- **Broadcast music**, recorded sounds or your own voice from individual engines***

1. **WTIU** DCS WiFi Command System 2 50-1039 \$399.95



The full DCS Digital Command System is an all-encompassing network of components that brings true interactive wireless control to a model railroad. Users utilize their own smart device — iOS or Android — and an intuitive app to run multiple tracks, hundreds of trains and control switches and accessories. Bi-directional communication between locomotives and the system's WTIU WiFi Track Interface Unit makes adding and programming locomotives simple and easy. No more ID numbers to remember and no complex icons to decipher. It's fast, it's easy and it's fun!

The all-new WTIU combines a wifi module and a track interface unit into one unit. Featuring four channels, the new WTIU can now control conventional DC locomotives by varying DC power to the track, allowing the user to control command and non-command equipped locomotives on the same track at the same time. The WTIU sets up in seconds and doesn't require a home WiFi system to operate. It can control accessories and switches when connected to the separately sold AIU Accessory Interface Unit and can receive commands from an unlimited number of smart devices.

- **Requires an iOS or Android Smart Device**
- **Broadcasts Its Own WiFi Signal**
- **No Home WiFi Needed**
- **4 Input/Output Channels**
(Requires Separately Sold AC or DC Power Supplies)
- **Does not Support Existing DCS Remote Control Handheld Unit**



2. APP Download the App

Download the Free M.T.H. Railroaders app, and upgrade to the option that fits your needs.

Free Version

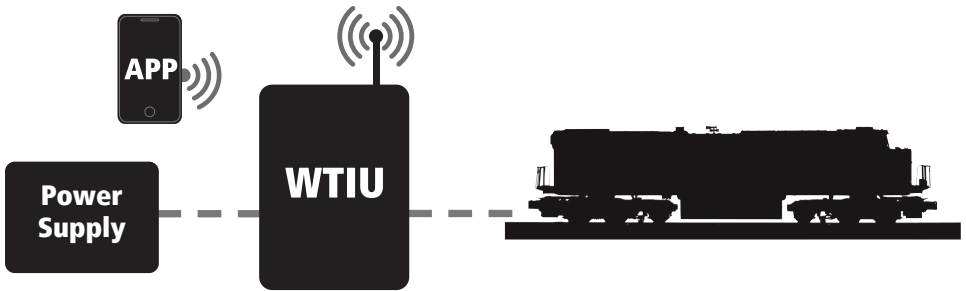
- Control up to 3 locomotives simultaneously
- Operate bell, whistle/horn and station sounds
- Activate couplers
- Control volume, smoke and headlights

Standard Version (\$5)

- Control up to 99 locomotives simultaneously
- Control all Free features
- Adjust engine-specific sounds and features
- Configure maximum speeds

Premium Version (\$25)

- Control all Free and Standard features
- Control switches and accessories with AIU
- Build lashups
- TMCC/Legacy control
- Conventional control



3. AIU Accessory Interface Unit

50-1004

\$119.95



The AIU controls up to 10 track switches and 10 accessories, by receiving commands that you send to the TIU and sending them to the appropriate device. Up to 5 AIUs can be linked to a single TIU.

Additional Items

TIU/TMCC-Legacy 6' Connector Cable
50-1032 \$24.95

12-Port Terminal Block
50-1014 \$27.95

6' Mini-to-Mini Cable
50-1009 \$9.95

24-Port Terminal Block
50-1020 \$37.95

**With Standard or Premium App or DCS Handheld*

***With Premium App*

****With Premium App or DCS Handheld*

*****With AIU and Premium App or DCS Handheld*

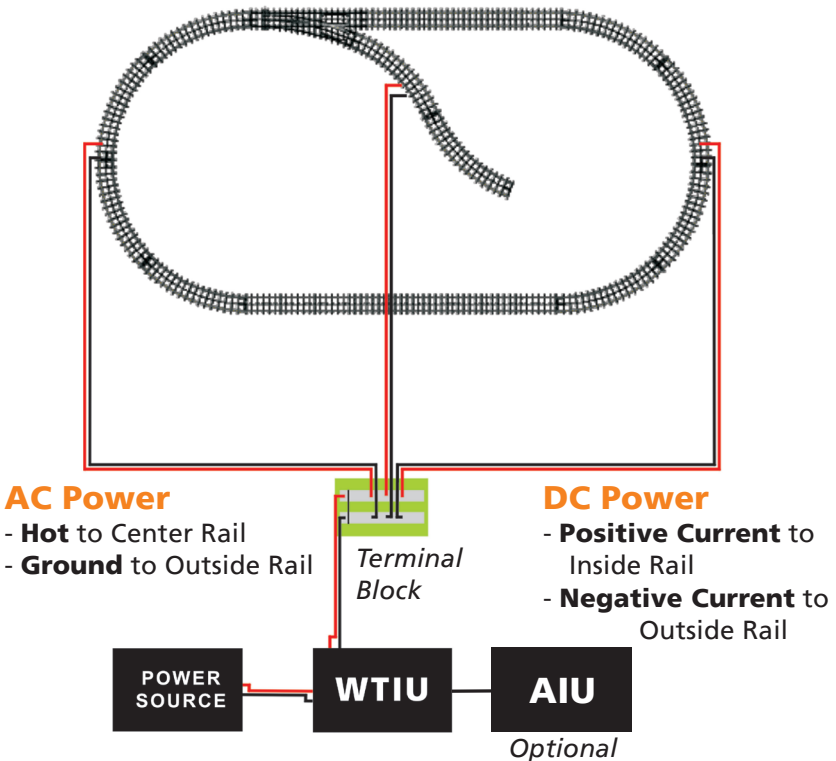
Simple, Easy Setup!

The DCS System is simple to hook up. You'll have trains running in just minutes using the handheld or the App!

Each TIU Fixed Input Channel can handle either AC or DC power. You can even mix and run one channel with DC power and the other with AC. This makes it easy to run M.T.H. HO Proto-Sound 3.0 equipped trains using the same TIU you use to run all other M.T.H. Proto-Sound 2.0 or later locomotives.

Each TIU Variable Input Channels accept AC power from virtually all AC power supplies, including all M.T.H. AC transformers like the Z-4000, Z-1000, Z-750 and Z-500.

Once you've got power into the TIU, run the outbound channels directly to the track or to a terminal block for larger layouts. We recommend wiring the channels to the track in 15' sections to best distribute power and the DCS digital signal. Full details are explained in the DCS User Guide.



Simply the best way to run a railroad — in any scale or gauge

HO Gauge

- More features than any other command system
- Simpler, more intuitive setup and operation than DCC
- Easy multiple-unit operation — power a conventional train with any combination of Proto-Sound 3.0 locomotives

mthtrains.com/mth-ho

S Gauge

- Operate up to 99 Proto-Sound 3.0 S Gauge locomotives from M.T.H. in Command Mode at the same time.
- Run any AC powered S Gauge locomotive from other manufacturers in conventional mode

mthtrains.com/mth-s



One-Gauge

- Run your entire backyard empire from a single handheld remote or smart device
- Double- or triple-head any combination of Proto-Sound 2.0 or later locomotives in command mode or any DC powered G Gauge locomotive from other manufacturers in conventional mode.

mthtrains.com/mth-g

O Gauge

- Operate any combination of Proto-Sound 2.0 or 3.0 and Lionel TMCC or Legacy engines simultaneously on the same track — using just a DCS smart device or both DCS and Lionel remotes
- Run any conventional AC-powered engine ever made — no additional hardware required
- Run 2-rail scale engines equipped with Proto-Scale 3-2™, a unique M.T.H. feature that allows an engine to operate on 2-rail or 3-rail track under AC or DC power

mthtrains.com/mth-ogauge
mthtrains.com/mth-oscale

Tinplate

- Have more fun running tinplate than a child of the 1920s or '30s ever dreamed of
- Run any conventional AC-powered engine ever made — no additional hardware required

mthtrains.com/tinplate

RUN ANY AC POWERED TRAIN*



DCS is the only truly universal control system for AC model trains. It offers an all-in-one solution for running engines equipped with M.T.H. or Lionel command control alongside conventional AC-powered locomotives — even those from model railroading's earliest days!

DCS can run a classic or modern Lionel and American Flyer locomotives including those equipped with Lionel Trainmaster or Legacy electronics on the same track at the same time as an M.T.H. Proto-Sound 2.0 or 3.0 locomotive.

DCS can run conventional or analog DC powered HO or G scale locomotives alongside M.T.H. Proto-Sound 2.0 or 3.0 locomotives on the same track at the same time.

DCS even allows for **simultaneous control of Lionel engines with the Lionel command remote and DCS engines with the DCS App** — on the same track at the same time.

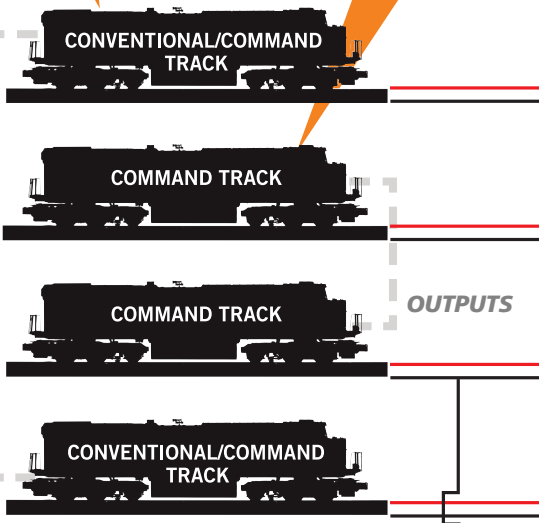
DCS — Simply the Best Way to Run a Railroad



6-14295 Lionel
#990 Legacy
Command Set

User-controlled **variable voltage** power is output from the **2 Variable Channels** for controlling conventional AC or DC powered locomotives including original M.T.H. Proto-Sound models, older Lionel or American Flyer AC models or DC powered HO and G Scale locomotives. These tracks can also control Proto-Sound 2.0 or 3.0 locomotives and Lionel Trainmaster or Legacy locomotives in command mode at the same time.

Constant voltage power is output from the **2 Fixed Channels** based on the power provided to the Input Channels. These tracks are for command-equipped trains (Proto-Sound 2.0 or 3.0, Lionel TMCC or Legacy).



**Legacy
Command Base**

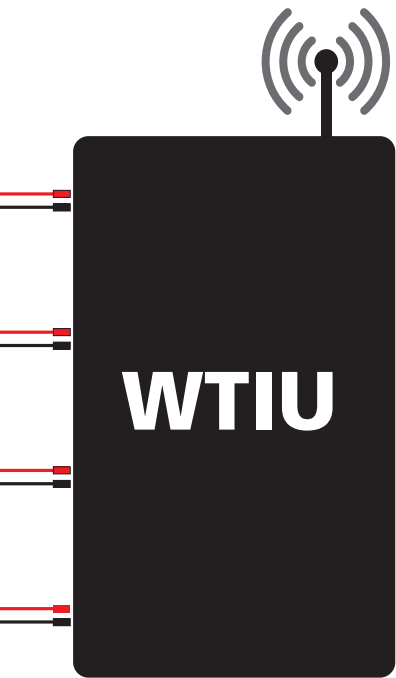
SER2



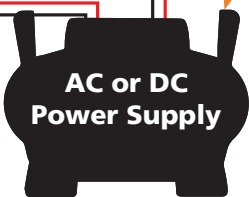
6-81499 Lionel
LCS DB-9 Cable w/
Power Supply



6-81326 Lionel
LCS Serial Converter 2
(SER2)



INPUTS



Any Input channel can be powered by a conventional AC transformer like the 40-4000 M.T.H. Z-4000 transformer or any DC output power supply



50-1037 DCS Transformer/ Barrel Jack Male Adapter Cable



50-1032 M.T.H. TIU/TMCC-Legacy 6' Connector Cable



Any Input channel can be powered by an AC power brick like the 40-1000A M.T.H. Z-1000 Power Supply

*Requires Premium App or DCS Handheld Controller

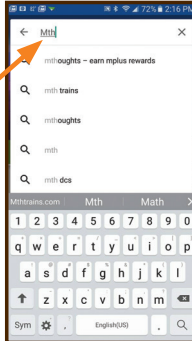
Install and Operate on your Smartphone

STEP 1: Download The App

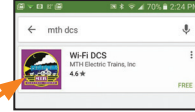
1. Install the MTH DCS app from the App Store or Google Play.



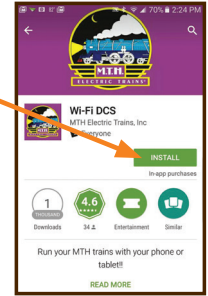
2. Search for "MTH DCS."



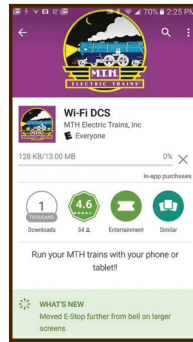
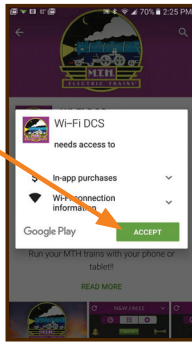
3. Click on the Wi-Fi DCS icon



4. Then select INSTALL.



5. Accept any permission requests

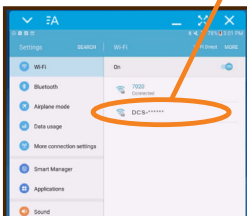


6. Wait for App to install. Do not open it yet.

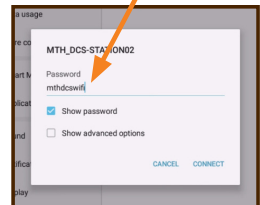
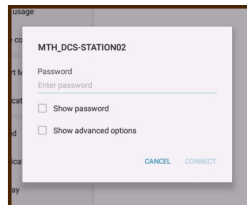
STEP 2: Connect Your Phone To The DCS WIU

1. Go to settings and select "WiFi"

2. Select the wifi source that begins with "MTH_DCS--"



3. Key in the password: mthdcswifi



4. Connect

the **FREE DCS App** with the **DCS WIU**

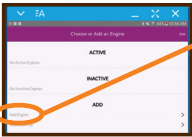
STEP 3: Start Running Trains



1. Open the App, and click on "Run My Trains"



2. Click "Choose or Add an Engine" to go to the Add Engine Screen

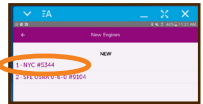


3. Click "Add Engine"



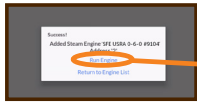
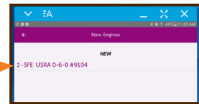
4. Click "Add MTH Engine"

5. Select the first engine from the engine list



6. Select Add Another Engine

7. Select remaining engine in the engine list



8. Select Run Engine

9. Start up engine



All items' graphic features and content are subject to change after publication. All product features may be verified on their retail packages. M.T.H. Electric Trains is in no way affiliated with any of the railroads featured in this catalog.

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Traditions™, ScaleTrax™, RealTrax®, Z-500™, Z-750™, Z-4000®, Z-1000™, DCS ...simply the best way to run a railroad™, Remote Commander™, DCSTM and the MTH Numbering System and all others indicated throughout this catalog.

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M.T.H.'s DCS Digital Command System has received U.S. Patent No. 6,457,681.

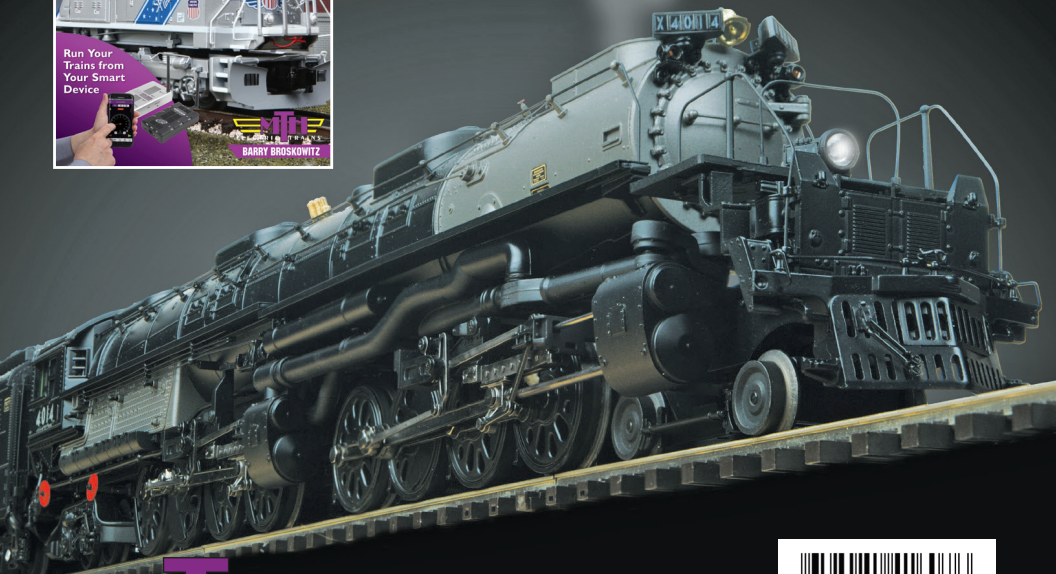
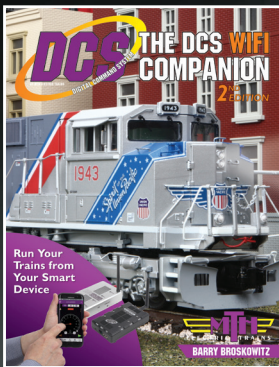
M.T.H.'s Proto-Sound 2.0 system has received U.S. Patent No's 6,457,681 B1 (sound system), 6,457,681 B1 (Proto-Speed Control), 6,604,641 (Proto-Coupler), 6,280,278 (Proto-Smoke). M.T.H.'s RealTrax has received U.S. Patent No. 6,019,289. M.T.H.'s ScaleTrax switches have received U.S. Patent No. 6,491,263. M.T.H.'s Z-4000 Transformer has received U.S. Patent No's. 6,281,606 & 6,624,537. M.T.H.'s Proto-Scale 3-2 has received U.S. Patent No. 6,662,917

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Learn More About It!

- **Try it** at your local **M.T.H. Authorized Retailer**
- Visit **mthtrains.com/DCS** and download the DCS Operator's Manual, the DCS Explorer User Guide and other **free** DCS resources
- Purchase the **DCS WiFi Companion** (242 pp., \$34.95)



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